WAGGA MOBILE CRANES & HEAVY HAULAGE

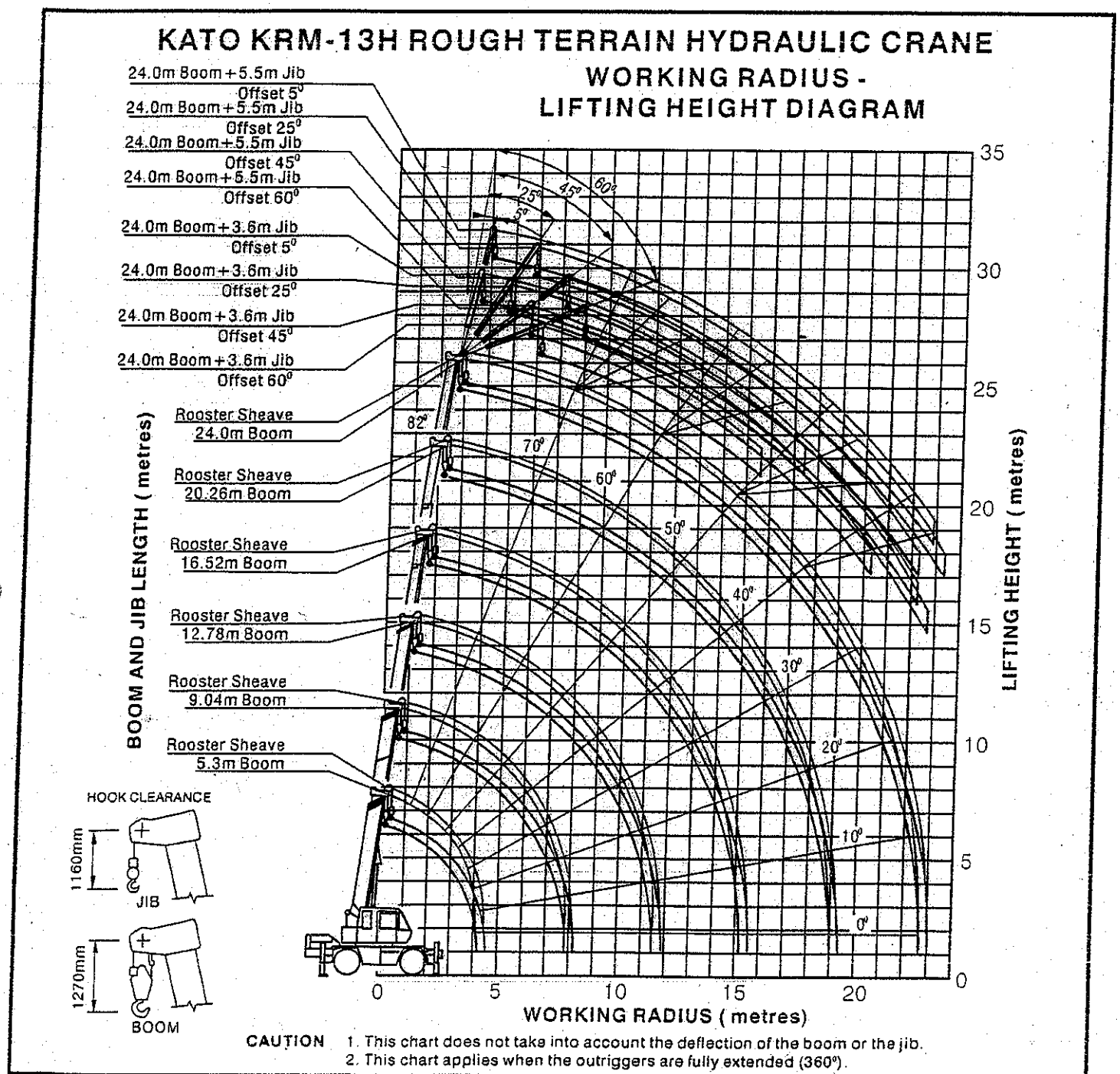
Load Chart For

13 Ton KATO Slew Crane

02 6925 2556
7-9 Pearson Street, Wagga Wagga, NSW 2650

KATO KRM-13H ROUGH TERRAIN HYDRAULIC CRANE

WORKING RADIUS - LIFTING HEIGHT DIAGRAM



CAUTION
1. This chart does not take into account the deflection of the boom or the jib.
2. This chart applies when the outriggers are fully extended (360°).

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KATO KRM-13H 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(m)	OUTRIGGERS AT MAXIMUM EXTENSION (4.75m) (360°)						OUTRIGGERS AT MEDIUM EXTENSION (3.7m) (OVER THE SIDE)						OUTRIGGERS AT MEDIUM EXTENSION (2.7m) (OVER THE SIDE)						OUTRIGGERS AT MINIMUM EXTENSION (1.64m) (OVER THE SIDE)					
	5.3m BOOM	9.04m BOOM	12.78m BOOM	16.52m BOOM	20.26m BOOM	24.0m BOOM	5.3m BOOM	9.04m BOOM	12.78m BOOM	16.52m BOOM	20.26m BOOM	24.0m BOOM	5.3m BOOM	9.04m BOOM	12.78m BOOM	16.52m BOOM	20.26m BOOM	24.0m BOOM	5.3m BOOM	9.04m BOOM	12.78m BOOM	16.52m BOOM	20.26m BOOM	24.0m BOOM
1.5	13,000	6,000	6,000				12,000	6,000	6,000				12,000	6,000	6,000				8,000	6,000	6,000			
1.7	13,000	6,000	6,000				12,000	6,000	6,000				12,000	6,000	6,000				7,000	6,000	6,000			
2.0	12,000	6,000	6,000	5,000			12,000	6,000	6,000	5,000			12,000	6,000	6,000	5,000			5,600	5,400	5,000	4,700		
2.5	10,000	6,000	6,000	5,000			10,000	6,000	6,000	5,000			8,500	6,000	6,000	5,000			3,800	3,800	3,600	3,500		
3.0	8,200	6,000	6,000	5,000	4,700		8,200	6,000	6,000	5,000	4,700		6,000	6,000	6,000	5,000	4,700		2,800	2,800	2,700	2,700	2,600	
3.5	7,000	6,000	6,000	5,000	4,700	3,200	7,000	6,000	6,000	5,000	4,700	3,200	4,700	4,700	4,600	4,500	4,400	3,200	2,100	2,100	2,000	2,100	2,100	2,100
4.0	6,100	6,000	6,000	5,000	4,700	3,200	6,100	6,000	6,000	5,000	4,700	3,200	3,700	3,700	3,700	3,700	3,700	3,200	1,800	1,600	1,550	1,700	1,700	1,750
4.5		5,500	5,400	5,000	4,500	3,200		5,000	5,000	5,000	4,500	3,200		3,000	3,000	3,100	3,100	3,000		1,250	1,200	1,400	1,400	1,450
5.0		5,000	4,900	4,600	4,050	3,200		4,300	4,300	4,400	4,050	3,200		2,400	2,400	2,600	2,700	2,700		950	950	1,100	1,200	1,250
5.5		4,500	4,400	4,200	3,700	3,200		3,700	3,600	3,800	3,700	3,200		2,000	2,000	2,200	2,300	2,300		750	750	900	1,000	1,050
6.0		4,100	4,000	3,800	3,400	3,000		3,100	3,100	3,300	3,300	3,000		1,700	1,700	1,850	2,000	2,050		600	550	750	800	900
6.5		3,700	3,650	3,500	3,150	2,800		2,700	2,650	2,850	2,900	2,750		1,400	1,400	1,600	1,700	1,750		400	350	600	650	750
7.0		3,350	3,300	3,200	2,900	2,600		2,300	2,300	2,500	2,600	2,500		1,200	1,200	1,400	1,500	1,550		250		450	550	600
8.0		2,700 (7.7m)	2,700	2,700	2,500	2,250		1,850 (7.7m)	1,750	1,900	2,000	2,100		900 (7.7m)	850	1,050	1,150	1,200						
9.0			2,200	2,300	2,200	1,950			1,350	1,500	1,600	1,700			600	800	900	950						
10.0			1,800	1,900	1,950	1,750			1,050	1,200	1,300	1,400			350	550	650	750						
11.0			1,450	1,600	1,750	1,560			800	1,000	1,100	1,150				400	500	600						
12.0			1,300 (11.4m)	1,400	1,500	1,400			650 (11.4m)	800	900	950				250	350	450						
13.0				1,200	1,300	1,250				600	750	800					200	300						
14.0				1,000	1,100	1,150				450	600	650						200						
15.0				850	950	1,000				350	450	550												
16.0					800	900					350	450												
17.0					700	800					250	350												
18.0					600	680						250												
19.0					500 (18.8m)	580																		
20.0						480																		
21.0						400																		
22.0						350																		
22.5						320																		
CRITICAL BOOM ANGLE	-	-	-	-	-	-	-	-	-	-	23°	36°	-	-	19°	32°	44°	50°	-	20°	54°	61°	66°	70°

NOTES :

1.0 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.

2.0 Total rated loads below the bold lines do not exceed 75% of tipping load.

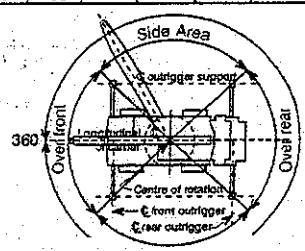
3.0 The weights of the lifting hooks are set out in the chart below, the weight of slings and all similarly used load handling devices must be added to the weight of the load.

CAPACITY OF HOOK	13,000kg	1,800kg
WEIGHT OF HOOK	90kg	25kg

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

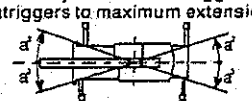
5.0 The working radius details shown in charts 2 & 3 refer to operations with 24 metres of boom. For operations with other boom lengths such operations should be performed on the basis of boom angle only, regardless of boom length.

6.0 The outriggers may be extended and fixed at different settings i.e. fully extended 4.75m and two intermediate settings of 3.7m and 2.7m. The minimum setting is 1.64m.



WORKING RADIUS DIAGRAM

7.0 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(3.7m)	MEDIUM EXTENSION(2.7m)	MINIMUM EXTENSION
Angle a°	25	15	3

NOTES FOR THIS CHART CONTINUED ON CHART 2

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KATO KRM-13H ROUGH TERRAIN HYDRAULIC CRANE

CHART 2

TOTAL RATED LOAD IN KILOGRAMS

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

24.0m BOOM + 3.6m JIB USE 1,800kg HOOK (25kg)

OUTRIGGERS FULLY EXTENDED (4.75m) (360°)

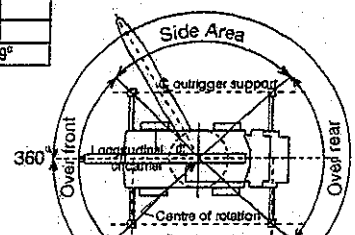
BOOM ANGLE △°	OFFSET 5° Working Radius(m)	OFFSET 5° Load (kg)	OFFSET 25° Working Radius(m)	OFFSET 25° Load (kg)	OFFSET 45° Working Radius(m)	OFFSET 45° Load (kg)	OFFSET 60° Working Radius(m)	OFFSET 60° Load (kg)
82	4.4	1,600	5.8	1,500	6.5	1,000	6.8	650
80	5.2	1,600	6.4	1,500	7.2	1,000	7.4	650
75	7.8	1,800	8.7	1,170	9.5	930	9.6	650
70	10.1	1,250	11.1	980	11.6	850	11.8	650
65	12.3	1,050	13.1	880	13.6	770	13.8	650
60	14.3	900	15.1	760	15.6	700	15.6	650
55	16.3	720	17.0	640	17.4	640		
50	18.1	550	18.7	530	18.9	520		
45	19.7	400	20.4	370	20.3	400		
40	21.1	280	21.6	270				
35	22.3	200	22.7	190				
CRITICAL BOOM ANGLE	34°		34°		44°		59°	

OUTRIGGERS AT MEDIUM EXTENSION (3.7m) (OVER THE SIDE)

BOOM ANGLE △°	OFFSET 5° Working Radius(m)	OFFSET 5° Load (kg)	OFFSET 25° Working Radius(m)	OFFSET 25° Load (kg)	OFFSET 45° Working Radius(m)	OFFSET 45° Load (kg)	OFFSET 60° Working Radius(m)	OFFSET 60° Load (kg)
82	4.4	1,600	5.8	1,500	6.5	1,000	6.8	650
80	5.2	1,600	6.4	1,500	7.2	1,000	7.4	650
75	7.8	1,600	8.7	1,170	9.5	930	9.6	650
70	10.1	1,250	11.1	980	11.6	850	11.8	650
65	12.2	900	13.1	760	13.6	770	13.8	650
60	14.2	590	15.0	540	15.5	530	15.5	540
55	16.0	370	16.8	330	17.2	330		
50	17.8	200	18.5	180	18.7	180		
CRITICAL BOOM ANGLE	49°		49°		49°		59°	

OUTRIGGERS AT MEDIUM EXTENSION (2.7m) (OVER THE SIDE)

BOOM ANGLE △°	OFFSET 5° Working Radius(m)	OFFSET 5° Load (kg)	OFFSET 25° Working Radius(m)	OFFSET 25° Load (kg)	OFFSET 45° Working Radius(m)	OFFSET 45° Load (kg)	OFFSET 60° Working Radius(m)	OFFSET 60° Load (kg)
82	4.4	1,600	5.8	1,500	6.5	1,000	6.8	650
80	5.2	1,600	6.4	1,500	7.2	1,000	7.4	650
75	7.8	1,200	8.7	1,050	9.5	930	9.6	650
70	10.0	720	10.9	650	11.5	820	11.7	560
65	11.9	410	12.9	350	13.4	340	13.6	330
CRITICAL BOOM ANGLE	64°		64°		64°		64°	



WORKING RADIUS DIAGRAM

NOTES :

1.0 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.

2.0 Total rated loads below the bold lines do not exceed 75% of tipping load.

3.0 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.

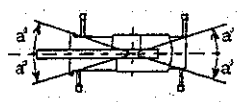
CAPACITY OF HOOK	13,000kg	1,800kg
WEIGHT OF HOOK	90kg	25kg

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

5.0 The working radius details shown in charts 2 & 3 refer to operations with 24 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.

6.0 The outriggers may be extended and fixed at different settings i.e. fully extended 4.75m and two intermediate settings of 3.7m and 2.7m. The minimum setting is 1.64m.

7.0 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(3.7m)	MEDIUM EXTENSION(2.7m)	MINIMUM EXTENSION
Angle a°	25	15	3

8.0 The jib must not be used when the outriggers are at minimum extension.

9.0 The rated load when using the rooster sheave is the boom rated load less the weight of the 1,800kg hook (25kg) or 1,800kg, which ever is less, plus the weight of the main hook (90kg) if it is in place.

10.0 The single top must not be used whilst the jib is in it's operations position.

11.0 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.

12.0 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.

13.0 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.

14.0 Standard number of part lines for each boom length are as shown below. Load per line should not surpass 1,625kg when using a non standard hook.

BOOM LENGTH	5.3m	9.04m	12.78m	16.25m	20.26m	24.0m	SINGLE TOP
NO. OF PART LINES	8	4	4	4	4	4	1

15.0 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.

16.0 Special weather caution: Should wind gusts exceed 10m/sec postpone the operation. Refer to the operation and maintenance manual.

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KATO KRM-13H ROUGH TERRAIN HYDRAULIC CRANE

CHART 3

TOTAL RATED LOAD IN KILOGRAMS

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

24.0m BOOM + 5.5m JIB USE 1,800kg HOOK (25kg)

OUTRIGGERS FULLY EXTENDED (4.75m) (360°)

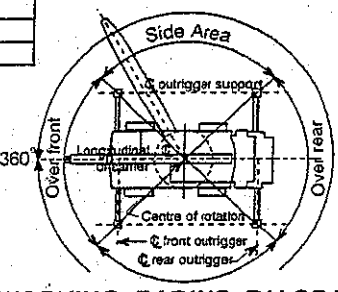
BOOM ANGLE α°	OFFSET 5° Working Radius(m)	OFFSET 5° Load (kg)	OFFSET 25° Working Radius(m)	OFFSET 25° Load (kg)	OFFSET 45° Working Radius(m)	OFFSET 45° Load (kg)	OFFSET 60° Working Radius(m)	OFFSET 60° Load (kg)
82	4.8	1,000	6.9	1,000	8.2	650	8.6	400
80	5.6	1,000	7.6	1,000	8.9	650	9.2	400
75	8.4	1,000	10.1	850	11.2	630	11.5	400
70	11.1	1,000	12.4	720	13.4	580	13.6	400
65	13.4	810	14.7	610	15.6	520	15.6	400
60	15.6	690	16.8	550	17.5	480	17.4	400
55	17.7	580	18.8	490	19.3	450		
50	19.6	490	20.5	440	20.8	400		
45	21.2	360	22.0	340	22.3	350		
40	22.9	230	23.4	240				
CRITICAL BOOM ANGLE	39°		39°		44°		59°	

OUTRIGGERS AT MEDIUM EXTENSION (3.7m) (OVER THE SIDE)

BOOM ANGLE α°	OFFSET 5° Working Radius(m)	OFFSET 5° Load (kg)	OFFSET 25° Working Radius(m)	OFFSET 25° Load (kg)	OFFSET 45° Working Radius(m)	OFFSET 45° Load (kg)	OFFSET 60° Working Radius(m)	OFFSET 60° Load (kg)
82	4.8	1,000	6.9	1,000	8.2	650	8.6	400
80	5.6	1,000	7.6	1,000	8.9	650	9.2	400
75	8.4	1,000	10.1	850	11.2	630	11.5	400
70	11.1	1,000	12.4	720	13.4	580	13.6	400
65	13.4	750	14.7	610	15.6	520	15.6	400
60	15.4	520	16.7	450	17.5	420	17.4	400
55	17.4	310	18.6	280	19.1	280		
52	18.5	220	19.5	210	20.0	200		
CRITICAL BOOM ANGLE	51°		51°		51°		59°	

OUTRIGGERS AT MEDIUM EXTENSION (2.7m) (OVER THE SIDE)

BOOM ANGLE α°	OFFSET 5° Working Radius(m)	OFFSET 5° Load (kg)	OFFSET 25° Working Radius(m)	OFFSET 25° Load (kg)	OFFSET 45° Working Radius(m)	OFFSET 45° Load (kg)	OFFSET 60° Working Radius(m)	OFFSET 60° Load (kg)
82	4.8	1,000	6.9	1,000	8.2	650	8.6	400
80	5.6	1,000	7.6	1,000	8.9	650	9.2	400
75	8.4	1,000	10.1	850	11.2	630	11.5	400
70	10.8	650	12.3	550	13.3	480	13.6	400
65	12.9	360	14.4	300	15.3	260		
CRITICAL BOOM ANGLE	64°		64°		64°		69°	



WORKING RADIUS DIAGRAM

NOTES :

1.0 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.

2.0 Total rated loads below the bold lines do not exceed 75% of tipping load.

3.0 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.

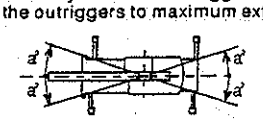
CAPACITY OF HOOK	13,000kg	1,800kg
WEIGHT OF HOOK	90kg	25kg

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

5.0 The working radius details shown in charts 2 & 3 refer to operations with 24 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.

6.0 The outriggers may be extended and fixed at different settings i.e. fully extended 4.75m and two intermediate settings of 3.7m and 2.7m. The minimum setting is 1.64m.

7.0 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(3.7m)	MEDIUM EXTENSION(2.7m)	MINIMUM EXTENSION
Angle a°	25	15	3

8.0 The jib must not be used when the outriggers are at minimum extension.

9.0 The rated load when using the rooster sheave is the boom rated load less the weight of the 1,800kg hook (25kg) or 1,800kg, which ever is less, plus the weight of the main hook (90kg) if it is in place.

10.0 The single top must not be used whilst the jib is in it's operations position.

11.0 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.

12.0 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.

13.0 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.

14.0 Standard number of part lines for each boom length are as shown below. Load per line should not surpass 1,625kg when using a non standard hook.

BOOM LENGTH	5.3m	9.04m	12.78m	16.25m	20.26m	24.0m	SINGLE TOP
NO. OF PART LINES	8	4	4	4	4	4	1

15.0 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.

16.0 Special weather caution: Should wind gusts exceed 10m/sec postpone the operation. Refer to the operation and maintenance manual.

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KATO KRM-13H 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)					
	5.3m BOOM		9.04m BOOM		12.78m BOOM		5.3m BOOM		9.04m BOOM		12.78m BOOM	
	OVER THE FRONT	360°	OVER THE FRONT	360°	OVER THE FRONT	360°	OVER THE FRONT	360°	OVER THE FRONT	360°	OVER THE FRONT	360°
1.5	3,600	2,800	3,600	2,800	3,600	2,800	3,200	2,000	3,200	2,000	3,200	2,000
2.0	3,400	2,800	3,400	2,800	3,400	2,800	3,000	2,000	3,000	2,000	3,000	2,000
2.5	3,100	2,150	3,100	2,100	3,100	2,050	2,800	1,550	2,750	1,500	2,650	1,450
3.0	2,650	1,600	2,600	1,550	2,550	1,500	2,400	1,100	2,300	1,050	2,200	1,000
3.5	2,300	1,250	2,200	1,200	2,100	1,100	2,000	850	1,900	750	1,800	650
4.0	2,000	900	1,900	800	1,700	700	1,700	600	1,650	500	1,500	400
4.5			1,600	500	1,400	400			1,400	300	1,250	
5.0			1,300		1,100				1,150		1,000	
5.5			1,100		950				950		850	
6.0			900		800				800		700	
7.0			500		500				450		450	
CRITICAL BOOM ANGLE	-	-	26°	54°	52°	66°	-	-	26°	54°	52°	66°

NOTES :

1.0 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).

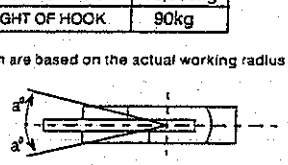
2.0 Total rated load for the crane while stationary on wheels does not exceed 75% of tipping load.

3.0 Total rated load for the crane during pick up and carry operations does not exceed 66.7% of tipping load.

4.0 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	13,000kg
WEIGHT OF HOOK	90kg

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



6.0 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
Angle a°	1°	1°

7.0 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 88°. 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.

8.0 Jib or free fall operations must not be carried out if the boom length is in excess of 12.78m. Should the boom be less than 12.78m and free fall is unavoidable the load must not exceed 20% of the rated load.

9.0 Load ratings with the single top are the same as the main boom ratings but should not exceed 3,600kg. When operating with boom lengths between 5.3m and 12.78m deduct the weight of the 13,000kg hook block (90kg) from the rated load. Whilst operating without outriggers the 12.78m boom length must not be exceeded.

10.0 The parking brake must be applied during lifting while the crane is stationary.

11.0 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 "LOW RANGE".

12.0 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 travelling, take particular care while turning and avoid sudden acceleration and braking.

13.0 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 travelling.

14.0 Standard number of part lines for each boom length are as shown below. Load per line should not surpass 1,625kg. If a non standard hook is used.

BOOM LENGTH	5.3m – 12.78m
NO. OF PART LINES	4
CAPACITY OF HOOK	13,000kg

15.0 Special weather caution: Should wind gusts exceed 10m/sec postpone the operation. Refer to the operation and maintenance manual.

16.0 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.

17.0

HOIST WIRE ROPES	MAIN	TWIST RESISTANT WIRE ROPE 11.2mm X 132m
	AUXILIARY	TWIST RESISTANT WIRE ROPE 11.2mm X 65m

18.0

TYRES	FRONT	MICHELIN 275 / 80R X 22.5 (146J)
	REAR	MICHELIN 275 / 80R X 22.5 (146J)
TYRE PRESSURE	8.75 kg/cm²	