KATO NK-500E-V

Based on
* BS 1757 : 1986
* DIN 15019-2
* 75% of tipping loads

RATED LIFTING CAPACITY (1)

(Unit ; Metric ton)

Outriggers fully extended with front jack - 360° full range
Outriggers fully extended without front jack - over side and over rear

Working radius (m)	10.8 m Boom	14.45m Boom	18.1 m Boom	21.75m Boom	25.4 m Boom	32.7 m Boom	40.0 m Boom
3.0	50.50	28.00	28.00	24.00			
3.5	42.20	28.00	28.00	24.00	18.00		
4.0	37.00	28.00	28.00	24.00	18.00		
4.5	33.00	28.00	28.00	24.00	18.00		
5.0	30.20	28.00	28.00	24.00	18.00	13.00	
5.5	27.50	26.50	25.60	23.20	18.00	13.00	
6.0	25.00	24.00	23.50	21.50	18.00	13.00	
6.5	22.70	22.30	21.80	19.90	18.00	13.00	7.50
7.0	20.70	20.30	20.00	18.40	16.80	13.00	7.50
7.5	18.90	18.60	18.50	17.10	15.70	13.00	7.50
8.0	17.40	17.10	17.00	15.90	14.80	12.30	7.50
8.5	15.95	15.70	15.60	14.65	14.00	11.60	7.50
9.0	14.35	14.20	14.10	13.50	13.20	11.00	7.50
9.5		12.85	12.70	12.55	12.45	10.50	7.50
10.0		11.70	11.55	11.45	11.40	10.00	7.30
11.0		9.75	9.60	9.50	9.45	9.10	6.80
12.0		8.20	8.10	8.00	7.95	8.30	6.30
13.0		7.00	6.85	6.75	6.70	7.55	5.90
14.0			5.85	5.75	5.70	6.50	5.50
16.0			4.25	4.15	4.10	4.95	4.70
18.0				3.00	2.95	3.75	4.00
20.0				2.10	2.05	2.80	3.30
22.0					1.30	2.10	2.55
23.0					1.00	1.80	2.25
24.0						1.50	2.00
26.0						1.05	1.50
28.0						0.65	1.10
30.0							0.75
31.0							0.60

Standard hook	for 50.5 ton				for 20 ton		
Hook weight	500 kg				270 kg		
Parts of line	12	7	7	6	5	4	3
Critical boom angle	—	—	—	—	—	25°	35°

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- *75% of tipping loads

RATED LIFTING CAPACITY (1)

(Unit ; Metric ton)

Outriggers fully extended with front jack - 360° full range
Outriggers fully extended without front jack - over side and over rear

Working radius (m)	10.8 m Boom	14.45m Boom	18.1 m Boom	21.75m Boom	25.4 m Boom	32.7 m Boom	40.0 m Boom
3.0	50.50	28.00	28.00	24.00			
3.5	42.20	28.00	28.00	24.00	18.00		
4.0	37.00	28.00	28.00	24.00	18.00		
4.5	33.00	28.00	28.00	24.00	18.00		
5.0	30.20	28.00	28.00	24.00	18.00	13.00	
5.5	27.50	26.50	25.60	23.20	18.00	13.00	
6.0	25.00	24.00	23.50	21.50	18.00	13.00	
6.5	22.70	22.30	21.80	19.90	18.00	13.00	7.50
7.0	20.70	20.30	20.00	18.40	16.80	13.00	7.50
7.5	18.90	18.60	18.50	17.10	15.70	13.00	7.50
8.0	17.40	17.10	17.00	15.90	14.80	12.30	7.50
8.5	15.95	15.70	15.60	14.65	14.00	11.60	7.50
9.0	14.35	14.20	14.10	13.50	13.20	11.00	7.50
9.5		12.85	12.70	12.55	12.45	10.50	7.50
10.0		11.70	11.55	11.45	11.40	10.00	7.30
11.0		9.75	9.60	9.50	9.45	9.10	6.80
12.0		8.20	8.10	8.00	7.95	8.30	6.30
13.0		7.00	6.85	6.75	6.70	7.55	5.90
14.0			5.85	5.75	5.70	6.50	5.50
16.0			4.25	4.15	4.10	4.95	4.70
18.0				3.00	2.95	3.75	4.00
20.0				2.10	2.05	2.80	3.30
22.0					1.30	2.10	2.55
23.0					1.00	1.80	2.25
24.0						1.50	2.00
26.0						1.05	1.50
28.0						0.65	1.10
30.0							0.75
31.0							0.60

Standard hook	for 50.5 ton				for 20 ton		
Hook weight	500 kg				270 kg		
Parts of line	12	7	7	6	5	4	3
Critical boom angle	—	—	—	—	—	25°	35°

KATO NK-500E-V

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RATED LIFTING CAPACITY (2)

(Unit ; Metric ton)

Outriggers intermediately extended without front jack - 360° full range
Outriggers fully extended without front jack - over front

Working radius (m)	10.8 m Boom	14.45m Boom	18.1 m Boom	21.75m Boom	25.4 m Boom	32.7 m Boom	40.0 m Boom
3.0	32.00	28.00	28.00	24.00			
3.5	32.00	28.00	28.00	24.00	18.00		
4.0	32.00	28.00	28.00	24.00	18.00		
4.5	26.30	25.00	24.00	22.00	18.00		
5.0	19.90	19.70	19.40	18.00	16.50	13.00	
5.5	15.75	15.55	15.30	15.20	15.00	13.00	
6.0	12.80	12.60	12.40	12.30	12.25	11.80	
6.5	10.60	10.45	10.25	10.15	10.10	10.60	7.50
7.0	8.95	8.75	8.60	8.50	8.45	9.45	7.50
7.5	7.60	7.45	7.25	7.15	7.10	8.10	7.50
8.0	6.50	6.35	6.20	6.10	6.05	7.00	7.50
9.0	4.80	4.70	4.55	4.45	4.40	5.30	6.00
10.0		3.50	3.35	3.25	3.20	4.10	4.70
11.0		2.55	2.40	2.35	2.30	3.15	3.75
12.0		1.80	1.70	1.60	1.60	2.40	2.95
13.0						1.80	2.35
14.0						1.30	1.85
15.0							1.40
Standard hook	for 50.5 ton				for 20 ton		
Hook weight	500 kg				270 kg		
Parts of line	12	7	7	6	5	4	3
Critical boom angle	—	—	*40°*	*51°*	*58°*	*62°*	*66°*

KATO NK-500E-V

Based on
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* DIN 15019-2
* 75% of tipping loads

RATED LIFTING CAPACITY (3)

(Unit ; Metric ton)

Outriggers fully extended with front jack - 360° full range
Outriggers fully extended without front jack - over side and over rear

40m Boom + 9.2m Jib							40m Boom + 15m Jib						
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Boom angle (°)	Offset 5°		Offset 25°		Offset 45°	
	Working radius (m)	Load (t)	Working radius (m)	Load (t)	Working radius (m)	Load (t)		Working radius (m)	Load (t)	Working radius (m)	Load (t)	Working radius (m)	Load (t)
81.0	8.90	3.50	11.80	2.30	13.80	1.25	*81.0*	10.70	2.50	15.50	1.20	18.80	0.70
79.0	10.90	3.50	13.50	2.30	15.35	1.25	*80.0*	11.75	2.50	16.40	1.20	19.55	0.70
78.0	11.80	3.50	14.35	2.30	16.20	1.24	*79.0*	12.85	2.50	17.35	1.20	20.40	0.69
77.0	12.70	3.32	15.20	2.23	17.00	1.22	*78.0*	14.00	2.50	18.30	1.19	21.25	0.69
76.0	13.50	3.13	16.00	2.16	17.80	1.20	*77.0*	15.00	2.35	19.20	1.16	22.10	0.68
75.0	14.40	2.97	16.80	2.09	18.55	1.18	*76.0*	15.95	2.22	20.00	1.13	22.90	0.67
74.0	15.25	2.82	17.65	2.02	19.30	1.17	*75.0*	16.90	2.10	20.95	1.10	23.70	0.65
72.0	16.85	2.55	19.25	1.89	20.80	1.13	*74.0*	17.85	1.98	21.85	1.07	24.50	0.64
70.0	18.50	2.33	20.90	1.76	22.25	1.10	*72.0*	19.75	1.78	23.60	1.03	26.15	0.63
68.0	20.05	2.14	22.40	1.65	23.70	1.07	*70.0*	21.50	1.61	25.35	0.98	27.75	0.61
66.0	21.60	1.97	23.90	1.56	25.20	1.05	*68.0*	23.40	1.48	27.05	0.94	29.25	0.60
64.0	23.15	1.83	25.30	1.47	26.55	1.03	*66.0*	25.10	1.36	28.70	0.91	30.75	0.58
62.0	24.65	1.71	26.75	1.38	27.90	1.01	*64.0*	26.85	1.26	30.30	0.88	32.15	0.57
60.0	26.15	1.51	28.20	1.30	29.25	0.99	*62.0*	28.45	1.16	31.85	0.85	33.55	0.56
59.0	26.85	1.38	28.85	1.26	29.90	0.98	*60.0*	30.05	1.08	33.35	0.81	34.90	0.56
58.0	27.45	1.23	29.50	1.15	30.50	0.97	*58.0*	31.70	1.01	34.75	0.77	36.25	0.55
56.0	28.75	1.02	30.75	0.94	31.70	0.90	*57.0*	32.40	0.90	35.40	0.75	36.85	0.55
54.0	30.00	0.80	31.90	0.75	32.80	0.72	*56.0*	33.05	0.80	36.10	0.70	37.50	0.54
52.0	31.15	0.60	33.05	0.58	33.80	0.57	*54.0*	34.40	0.60	37.40	0.55	38.65	0.54
Standard hook	for 4 ton						Standard hook	for 4 ton					
Hook weight	120 kg						Hook weight	120 kg					
Parts of line	1						Parts of line	1					
Critical boom angle	*51°*						Critical boom angle	*53°*					

KATO NK-500E-V

Based on
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* DIN 15019-2
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RATED LIFTING CAPACITY (4)

(Unit ; Metric ton)

Outriggers intermediately extended without front jack - 360° full range
Outriggers fully extended without front jack - over front

40m Boom + 9.2m Jib							40m Boom + 15m Jib						
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Boom angle (°)	Offset 5°		Offset 25°		Offset 45°	
	Working radius (m)	Load (t)	Working radius (m)	Load (t)	Working radius (m)	Load (t)		Working radius (m)	Load (t)	Working radius (m)	Load (t)	Working radius (m)	Load (t)
81.0	8.90	3.50	11.80	2.30	13.80	1.25	*81.0*	10.70	2.50	15.50	1.20	18.80	0.70
79.0	10.90	3.50	13.50	2.30	15.35	1.25	*80.0*	11.75	2.50	16.40	1.20	19.55	0.70
78.0	11.80	3.43	14.35	2.30	14.85	1.24	*79.0*	12.85	2.50	17.35	1.20	20.40	0.69
77.0	12.45	2.88	15.15	2.22	16.20	1.22	*78.0*	14.00	2.50	18.30	1.19	21.25	0.69
76.0	13.20	2.44	15.85	1.92	17.00	1.20	*77.0*	14.90	2.20	19.20	1.16	22.10	0.68
75.0	13.95	2.06	16.60	1.63	18.55	1.18	*76.0*	15.70	1.87	20.00	1.13	22.90	0.67
74.0	14.80	1.73	17.30	1.40	19.30	1.17	*75.0*	16.60	1.58	20.95	1.09	23.75	0.65
Standard hook	for 4 ton						Standard hook	for 4 ton					
Hook weight	120 kg						Hook weight	120 kg					
Parts of line	1						Parts of line	1					
Critical boom angle	*73°*						Critical boom angle	*74°*					

KATO NK-500E-V

Based on
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RATED LIFTING CAPACITY (5)

(Unit ; Metric ton)

Outriggers fully retracted (blocked on vertical cyls.) - 360° full range

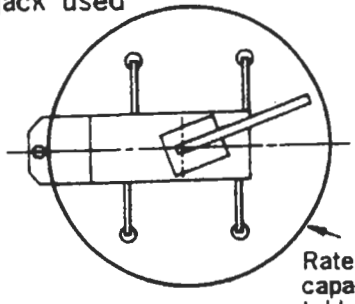
Working radius (m)	10.8m Boom
3.0	8.00
3.5	6.40
4.0	5.10
4.5	4.20
5.0	3.40
5.5	2.80
6.0	2.30
6.5	1.90
7.0	1.60
7.5	1.25
8.0	1.00
Standard hook	for 50.5 ton
Hook weight	500 kg
Parts of line	12

KATO PERFORMANCE DIAGRAM

1. Performance of this machine varies depending on usage of the outriggers and the front jack as traced in the figure below. Therefore, refer to a correct rated lifting capacity table corresponding to each working status.
2. When slewing from high to low performance side, operation must be conducted based on the low performance.

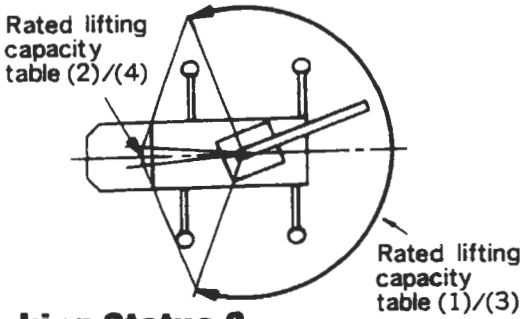
Working Status 1

Outriggers extended fully
Front jack used



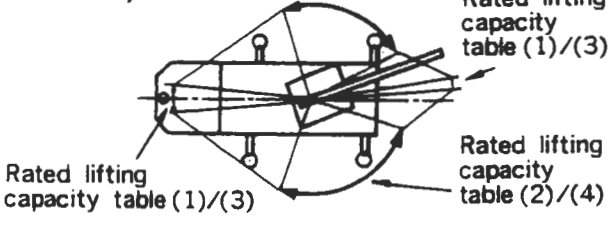
Working Status 2

Outriggers extended fully



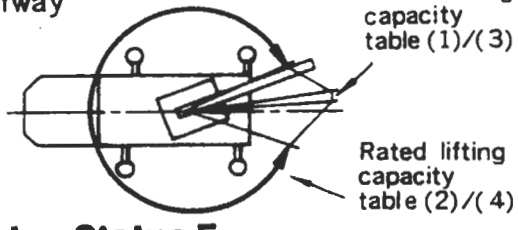
Working Status 3

Outriggers extended halfway
Front jack used



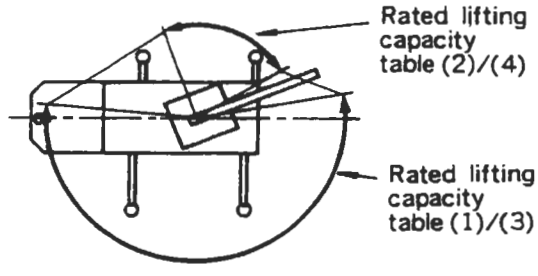
Working Status 4

Outriggers extended halfway



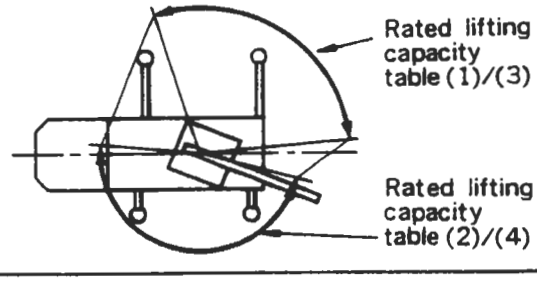
Working Status 5

Left-side outriggers extended fully
Right-side outriggers extended halfway
Front jack used



Working Status 6

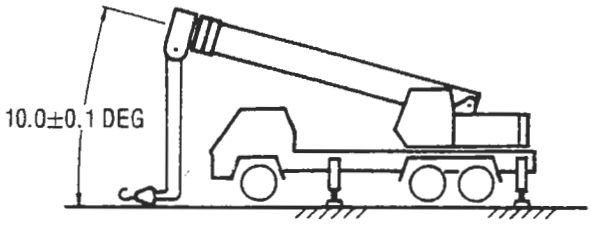
Right-side outriggers extended fully
Left-side outriggers extended halfway



PREOPERATIONAL CHECKS OF ACS

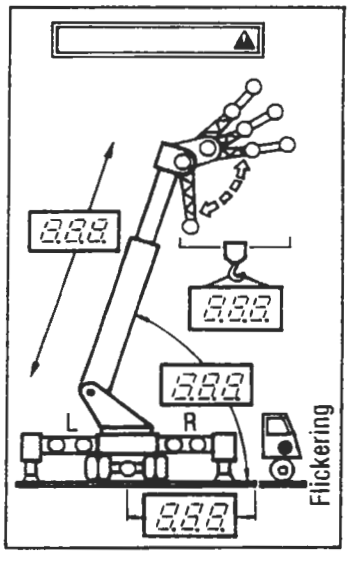
1. Make sure that the crane is set horizontal. Set the outrigger setting status selecting switch according to the set status of the outriggers, and confirm that no error is indicated on the ACS display.

2. Retract the boom completely, lower the hook onto the ground and set the boom at an angle of 10.0±0.1 degrees (boom must be located on the front).



3. Set the boom operation selecting switch at ⚠. Confirm that the front jack lamp flickers, the safety indicator lamp and all ⚠ lamps light up, " 8.8.8. " appears on all displays and an alarm is emitted.
If a boom length and a boom angle are indicated instead of " 8.8.8. ", boom length and angle should be set again.

4. Derrick/lower the boom, hoist the winch and extend the boom in order to confirm that the crane does not move.



5. Set the boom operation selecting switch at the desired working status, and confirm the status of outriggers and the outrigger setting status indicator lamp.

* The above checks must be performed on firm level ground with standard lifting equipments and the jib housed.
* If an abnormality is found at the time of preoperational checks, please report it to KATO's representative.

CAUTION

1. The rated lifting capacities are the maximum load guaranteed on a firm level ground and include the weight of hook block and other lifting equipment. The capacities enclosed with bold lines are based on the structural strength of machine and the others are based on the stability of machine.

2. The working radii as given in the table are the actual values including the deflection of the boom. Therefore, operate the machine based on the working radius. However, the working radii shown for jib operations are based on the values obtained when the boom is fully extended(40 m).
   Jib operations should be performed on the basis of boom angle only, regardless of boom length when the boom is not fully extended.

3. The rated lifting capacities for the rooster sheave are equivalent to the rated lifting capacities for the main boom to a maximum of 4000 kg.
   At all times the weight of all lifting equipment in use(including main hook block suspended from boom head)forms part of load and must be subtracted from the rated lifting capacity.

4. If the boom length exceeds the specified value, the rated lifting capacities for the boom length above and below the present boom length should be referred to, and the crane should be operated within the smaller lifting capacity.

5. When using the main boom with the jib installed, 2000 kg plus the weight of hook block and other lifting equipment, etc., should be subtracted from the rated lifting capacities.
   When performing the above operation, do not use the rooster sheave.

6. Critical boom angles for each boom length are shown on bottommost line of lifting capacity table.
   If the boom angle is lowered to less than the critical boom angle, the machine will tip over without load. Therefore, never lower the boom below these angles.

7. The standard number of parts of line is shown in the rated lifting capacity table.
   When the standard number of parts of line is not used, the minimum number of parts of line is determined so that weight per part will not exceed 4000 kg.

8. Over front lifting performance is inferior to over side and over rear lifting performance. Great care should be taken when transferring from over side to over front since there is a danger of overloading.

9. Free fall is adopted in principle to lower the hook only.
   If it is necessary to lower a load by free fall, its weight should be less than 20% of the rated lifting capacity and abrupt braking should not be allowed.

10. The rated lifting capacities do not account for wind on lifted load or boom.
    Do not operate this machine at wind speed of 10 m/sec. or more.

11. The machine will tip over or be damaged if operated with a load exceeding that specified in the rated lifting capacity table or not conforming to correct handling.
    If such trouble occurs, the machine will not be guaranteed.