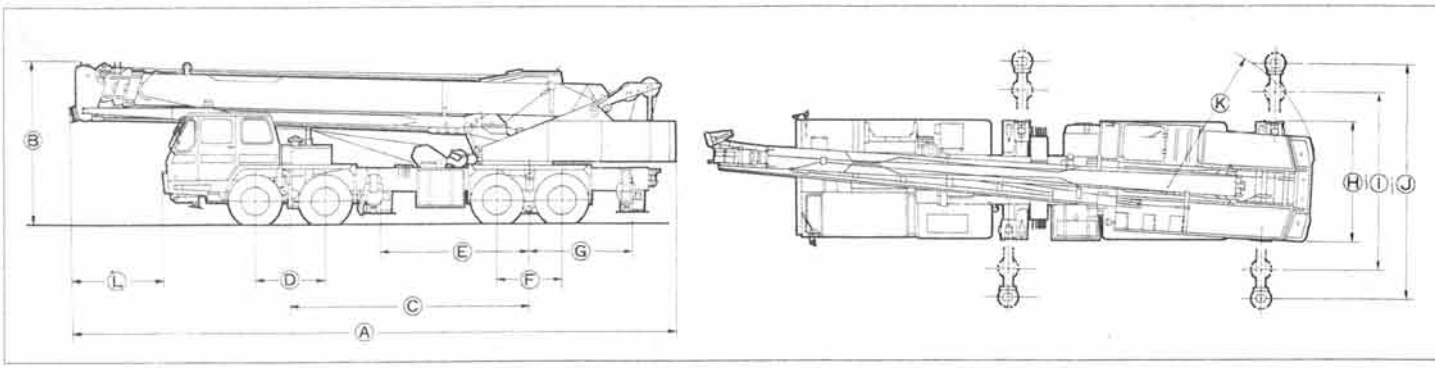
KATO

NK-300E-v

FULLY HYDRAULIC TRUCK CRANE

SPECIFICATION



Carrier name and model	A	B	C	D	E	F	G	H	I	J	K	L
Mitsubishi KS305RLA	12,580	3,450	5,000	1,450	3,100	1,350	2,150	2,500	4,100	6,100	3,395	1,800
Nissan Diesel KG45SXL	12,580	3,450	4,940	1,520	3,100	1,300	2,100	2,500	4,100	6,100	3,395	1,630

(Unit : mm)

CRANE SPECIFICATION

Performance

Maximum rated lifting capacity	: 30 metric tons × 3.0m
Boom length	: 10.5m ~ 33m (4 section)
Fly jib length	: 8.7m ~ 14.5m (2 section)
Max. lifting height	: 32.8 m (Boom) 47.3 m (33 m Boom + 14.5 m jib offset 5°)
Boom derricking angle	: −3° ~ 80°
Boom derricking time	: 53 sec. (−3° ~ 80°)
Boom extending time	: 110 sec. (10.5m ~ 33m)
Hoisting line speed	
Main winch	: 110m/min. (at 4th layer)
Auxiliary winch	: 95m/min. (at 2nd layer)
Hoisting hook speed	
Main winch (part of line; 10)	: 11.0m/min. (at 4th layer)
Auxiliary winch (part of line; 1)	: 95.0m/min. (at 2nd layer)
Slewing speed	: 2.6 r.p.m. (Speed: Subject to no load)

Hoisting Ropes

Main winch;	Type	: 4 × F (a + 40) (Non-rotating type)
	Diameter	: 16mm
	Length	: 180m
Auxiliary winch;	Type	: 4 × F (a + 40) (Non-rotating type)
	Diameter	: 16mm
	Length	: 105m

Hydraulic System

Oil pump	: 4 section gear type
Hoisting motor	: Axial plunger type
Slewing motor	: Axial plunger type
Cylinder	: Double acting type
Control valve	: 3 position 4 way double acting with integral check and relief valves
Oil reservoir capacity	: 420 lit.

Superstructure

Hoisting mechanism	: Hydraulic motor-driven, gear reduction type (automatic brake system) single winch x 2
Slewing mechanism	: Ball bearing type
Boom derricking mechanism	: Direct-acting cylinder type
Outrigger system	: Hydraulic, vertically supporting with float and vertical cylinder in single unit
Front jack (option)	: Hydraulic, vertically supporting with float and vertical cylinder in single unit
Crane cab	: All steel welded construction

Winch system

Main winch & Auxiliary winch	: Driven by axial plunger type hoisting motor through built-in gear reduction. Controlled independently by respective operating lever. Equipped with automatic brake. With free fall device

Safety Devices

Microcomputer type ACS fully automatic overload protection device (Moment Limiter)
Boom falling safety device, Overhoist prevention device, Drum lock device, Automatic winch brake, Irregular winding prevention device, Hydraulic safety valve, Outrigger lock device, Slewing lock device

Option

Oil cooler, Front jack, Voice alarm device for ACS, Heater, fan and radio for crane cabin

RATED LIFTING CAPACITY

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

Note: Front jack is optional.

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

Working radius (m)	10.5 m Boom	14.2 m Boom	18 m Boom	21.7 m Boom	25.5 m Boom	29.2 m Boom	33 m Boom
2.5	30.00	20.00	16.00				
3.0	30.00	20.00	16.00				
3.5	25.40	20.00	16.00	12.00			
4.0	22.90	20.00	16.00	12.00	11.50		
4.5	21.00	20.00	16.00	12.00	11.50		
5.0	19.40	18.40	16.00	12.00	11.50	9.00	
6.0	16.20	15.30	13.70	12.00	11.50	9.00	7.00
7.0	13.70	12.65	11.95	11.00	10.00	9.00	7.00
8.0	11.15	10.65	10.55	10.20	8.90	8.20	7.00
8.5	10.25	9.70	9.65	9.65	8.45	7.80	6.60
9.0		8.80	8.80	9.20	8.05	7.45	6.25
10.0		7.30	7.15	7.65	7.30	6.75	5.70
12.0		5.10	4.95	5.40	5.65	5.65	4.80
12.5		4.70	4.55	5.05	5.25	5.45	4.55
13.0			4.20	4.65	4.90	5.05	4.45
14.0			3.55	4.00	4.25	4.40	4.10
16.0			2.55	2.95	3.20	3.40	3.50
18.0				2.20	2.45	2.65	2.80
20.0				1.65	1.85	2.05	2.20
22.0					1.40	1.60	1.70
24.0						1.20	1.35
26.0						0.90	1.00
27.5						0.70	0.85
29.0							0.65
31.0							0.45
Standard hook	for 30 ton						
Hook weight	300 kg						
Parts line	10	8		4			
Critical boom angle	—	—	—	—	—	—	—

(Unit: Metric ton)

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

Working radius (m)	10.5 m Boom	14.2 m Boom	18 m Boom	21.7 m Boom	25.5 m Boom	29.2 m Boom	33m Boom
2.5	25.00	20.00	16.00				
3.0	25.00	20.00	16.00				
3.5	25.00	20.00	16.00	12.00			
4.0	22.90	20.00	16.00	12.00	11.50		
4.5	17.35	16.20	16.00	12.00	11.50		
5.0	14.00	13.60	13.45	12.00	11.50	9.00	
5.5	11.60	11.40	11.20	12.00	11.50	9.00	
6.0	10.00	9.80	9.60	10.20	10.10	9.00	7.00
6.5	8.50	8.50	8.15	8.95	9.10	9.00	7.00
7.0	7.55	7.25	7.15	7.80	8.10	8.30	7.00
7.5	6.50	6.40	6.20	6.85	7.25	7.35	7.00
8.5	5.00	4.95	4.85	5.40	5.75	5.85	5.80
9.0		4.35	4.30	4.80	5.10	5.25	5.30
10.0		3.45	3.35	3.85	4.10	4.30	4.40
12.0		2.10	1.95	2.45	2.70	2.90	3.05
12.5		1.70	1.70	2.15	2.40	2.65	2.80
13.0			1.40	1.90	2.15	2.40	2.55
14.0			0.95	1.40	1.70	1.95	2.10
15.0			0.55	1.05	1.30	1.55	1.75
16.0				0.70	1.00	1.20	1.40
17.0				0.40	0.70	0.95	1.10
18.0					0.45	0.70	0.85
19.0						0.45	0.60
20.0							0.40
Standard hook	for 30 ton						
Hook weight	300 kg						
Parts line	10	8		4			
Critical boom angle	—	—	—	25°	35°	42°	47°

(Unit: Metric ton)

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

Boom angle (°)	33 m Boom + 8.7 m Jib					
	Offset 5°		Offset 17°		Offset 30°	
	Working radius (m)	Load (t)	Working radius (m)	Load (t)	Working radius (m)	Load (t)
80.0	8.0	3.00	9.6	2.20	11.3	1.60
76.0	11.0	3.00	12.5	2.20	14.0	1.60
74.0	12.5	2.72	14.0	2.05	15.3	1.54
70.0	15.3	2.26	16.6	1.78	18.0	1.45
66.0	18.0	1.92	19.2	1.57	20.4	1.30
62.0	20.5	1.68	21.8	1.38	22.8	1.17
58.0	23.0	1.48	24.1	1.24	25.0	1.06
56.0	24.0	1.28	25.2	1.18	26.0	1.02
54.0	25.1	1.08	26.3	1.00	27.1	0.98
50.0	27.2	0.74	28.2	0.70	29.0	0.67
46.0	29.2	0.47	30.1	0.44	30.7	0.43
43.0	30.6	0.30	31.5	0.30	32.0	0.30
Standard hook	for 3 ton					
Hook weight	60 kg					
Parts line	1					
Critical boom angle	40°					

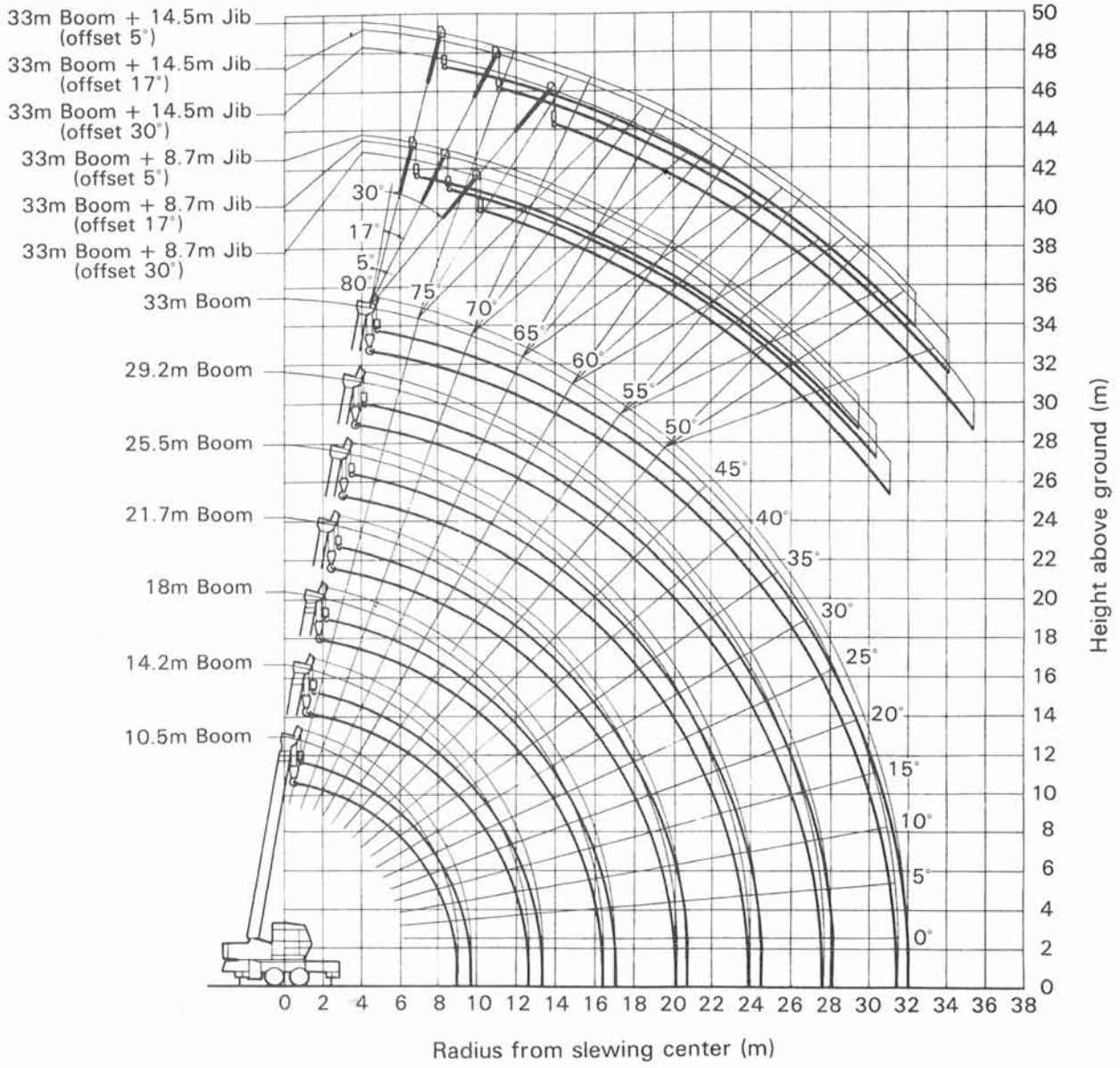
(Unit: Metric ton)

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

Boom angle (°)	33 m Boom + 14.5 m Jib					
	Offset 5°		Offset 17°		Offset 30°	
	Working radius (m)	Load (t)	Working radius (m)	Load (t)	Working radius (m)	Load (t)
80.0	9.9	2.00	12.5	1.30	15.1	0.90
77.7	12.0	2.00	14.5	1.30	16.9	0.90
76.3	13.2	1.85	15.7	1.24	18.0	0.90
72.0	16.4	1.50	19.0	1.06	21.2	0.81
68.0	19.5	1.25	22.0	0.91	24.0	0.74
64.0	22.6	1.06	24.8	0.79	26.6	0.67
60.0	25.4	0.90	27.4	0.70	29.1	0.60
56.0	28.0	0.77	29.9	0.64	31.5	0.55
52.0	30.7	0.66	32.4	0.57	33.7	0.52
51.0	31.2	0.61	33.0	0.55	34.2	0.51
50.4	31.6	0.57	33.3	0.52	34.5	0.50
48.0	32.9	0.45	34.5	0.40	35.6	0.38
46.0	33.9	0.35	35.2	0.33	36.5	0.30
Standard hook	for 3 ton					
Hook weight	60 kg					
Parts line	1					
Critical boom angle	42°					

(Unit: Metric ton)

WORKING RANGE



NOTE: Deflection of boom and jib excluded.