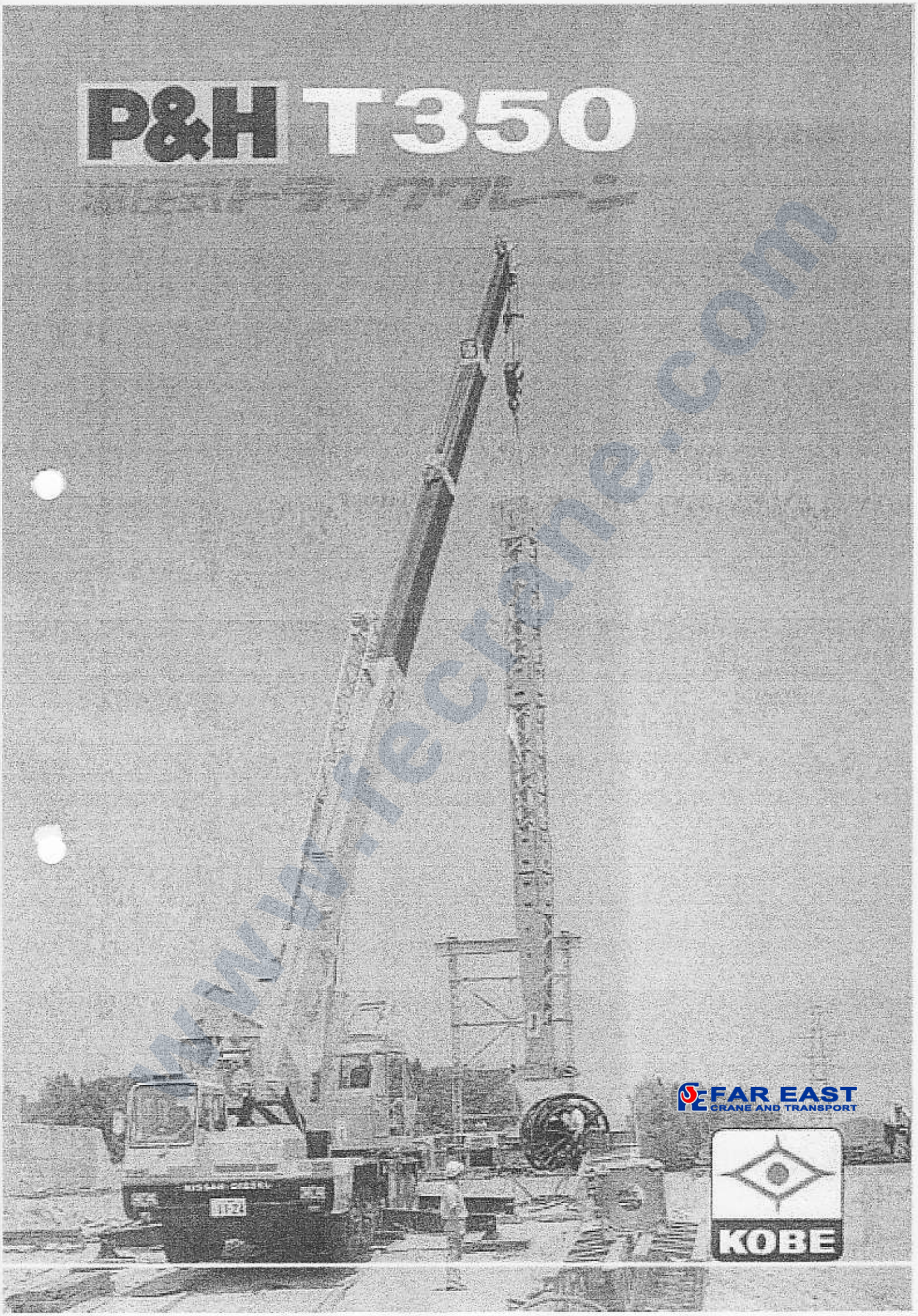
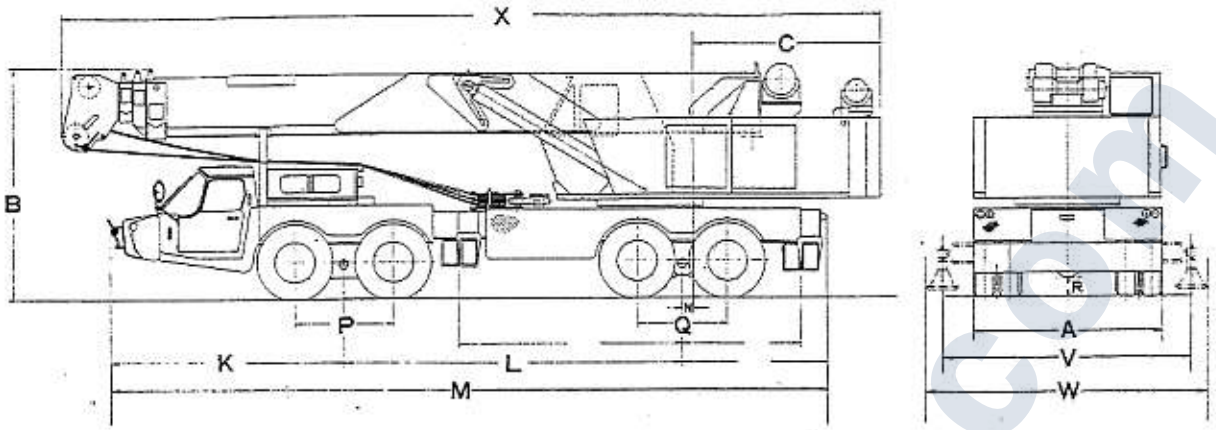
P&H T350



FAR EAST
CRANE AND TRANSPORT

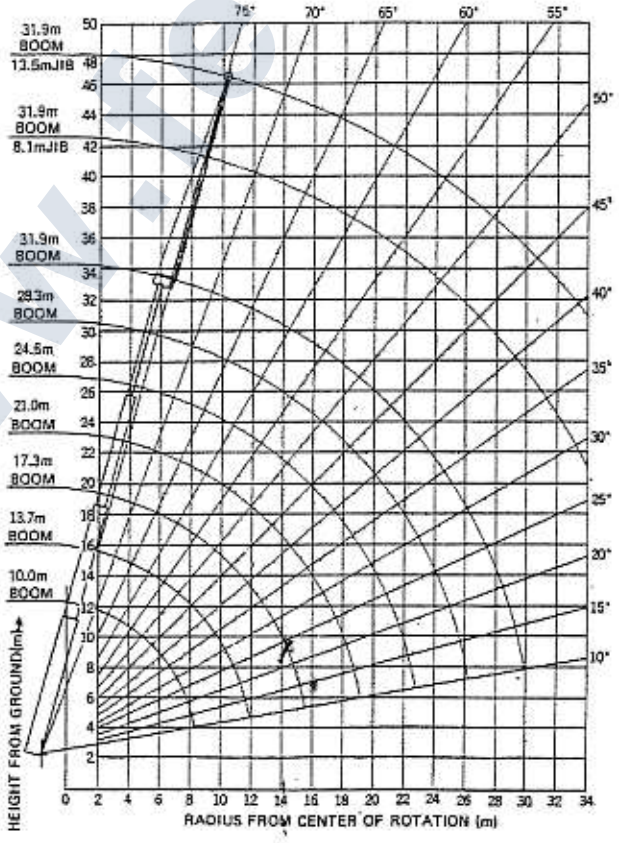
KOBE



GENERAL DIMENSIONS

A. Overall width..... 9'-2⅜" (2.81 m)
B. Overall height .....11'-5⅝" (3.50 m)
C. Tail swing .....11'-3⅜" (3.45 m)
K. Center of front bogie to front of carrier .....11'-3⅜" (3.45 m)
L. Center of front bogie to center of rear bogie (wheel base) ...16'-4⅞" (5.00 m)
M. Overall length of carrier.....34'-5¾" (10.51 m)
N. Center of rear bogie to center of rotation ..... 1'-6⅞" (0.48 m)

P. Distance between axles (front)..... 4'-9⅛" (1.45 m)
Q. Distance between axles (rear) ..... 4'-5⅜" (1.35 m)
R. Ground clearance..... 0'-11⅛" (0.28 m)
V. Effective length of outriggers .....17'-11" (5.46 m)
W. Overall length of outriggers .....19'-9" (6.02 m)
X. Overall length in travelling condition...40'-4¼" (12.30 m)
Working weight.....92,500 lbs (42,000 kg)



BASIC MACHINE

UPPER MACHINERY AND HYDRAULIC EQUIPMENT

POWER PLANT :
Diesel : Mitsubishi 6DB10CT turbo charged, 4 cycle, 6 cylinders.
Max. horse power .....170 hp/2,000 rpm
Max. torque .....477 ft-lbs (66 kg-m)/1,300 rpm

THROTTLE : Twist grip on swing lever.

PUMP DRIVE ASSEMBLY : 3 station power transmission.

HYDRAULIC PUMPS : 3 double vane type pumps for 5 independent hydraulic circuits.
For main winch circuit, one pump boosts to the other pump for speeding up.

FUEL TANK CAPACITY : .....92.5 Gallons (350 ℓ)

HYD. OIL TANK CAPACITY : .....280 Gallons (1,060 ℓ)

SWING UNIT : Hydraulic motor, driving through deck mounted gear reducer, 360° continuous rotation .....2.5 rpm

SWING BRAKE : Disc type mounted on swing reduction unit, manually controlled.

SLEWING RING : Double row roller bearing swing circle—internal spur swing gear—integral.

COUNTERWEIGHT : Power removable with aux. winch .....6,600 lbs (3,000 kg)

CAB : Compact full vision operators' cab is fully enclosed for working in all weather, 6 operating control levers, brake pedals for main and auxiliary winches and acceleration pedals are conveniently arranged for the operator's comfort and efficiency.

EQUIPMENT : Tachometer, hourmeter, hydraulic oil temperature gauge, engine gauge, fuel gauge, oil pressure gauge, ammeter and water temperature gauge.

CARRIER

MAKE AND MODEL : Mitsubishi K351 (8×4) carrier.

POWER PLANT : Mitsubishi 8DC20W diesel engine, 4 cycle, V-8 cylinders.
Max. horse power .....250 hp/2,200 rpm
Max. torque .....644 ft-lbs (89 kg-m)/1,200 rpm

FUEL TANK : .....53 Gallons (200 ℓ)

CLUTCH : Single dry disc.

TRANSMISSION : 5 speed forward, 1 reverse.

AUX. TRANSMISSION : 2 speed.

BRAKE :
SERVICE—Air actuated internal expanding brakes on all eight wheels with Maxi safety brakes on rear.
PARKING—Mechanical disc type on propeller shaft.

AXLE :
FRONT—Mitsubishi.
REAR —Mitsubishi planetary axle.
Single reduction at axle center and planetary drive at wheel hub to four sets of dual wheels.

SUSPENSION :
FRONT—Alloy steel semi-elliptic laminated type springs.
REAR —Solid bogie mounted with torque rods.

STEERING : Ball and nut type with power booster.

FRAME : Box section frame members of high tensile steel between outrigger housings. Heavy reinforced channel ahead of front outriggers.

TIRES : Twelve 12:00×20—18 P.R.

CAB : Full vision, two seat low sylhouetle type, right hand drive.

OUTRIGGERS : Manual valve controlled P&H type hydraulic outriggers.
Carrier engine PTO drives hydraulic pump for outriggers only.
8 double acting hydraulic cylinders for independent horizontal and vertical motion of each beam .....standard

OUTRIGGER HOUSINGS: Two independent housings, front and rear, pin connected and removable, ...standard

OUTRIGGER BEAMS: High tensile steel box, full length reinforced, jack screw at beam ends.

LIGHT: Dual head lights, tail lights, stop lights, directional signal lights front and rear, licence plate lights, cab inside light, 24 volt electrical system.

EQUIPMENT: Front bumper, full fenders, skirts, running boards, hood, frame decking, bostrom seat, 2×12 volt batteries, horn, rear view mirror, air tank with hose extension and tire inflating valve, illuminated instrument panel with speedometer, ammeter, air pressure gauge, fuel gauge, oil pressure gauge, water temperature indicator, low pressure indicator light, tachometer, towing hooks in front, air brake valve, tools and accessories.

PERFORMANCE: Gross vehicle weight with jib and counterweight .....92,500 lbs (42,000 kg)

Condition @ full load...speed ranges		% of grade
on highway*	5.0~33.8 mph (8.0~54.1 km/h)	17.0~1.5%
off highway**	3.7~16.2 mph (5.9~25.9 km/h)	25.0~2.7%

*Auxiliary transmission in high range.
**Auxiliary transmission in low range.

Min. turning radius.....30'-8" (12 m)

CRANE ATTACHMENT

BOOM: All welded high tensile steel plate box type construction in 4 sections...boom base section and 3 telescopic sections.

Three telescopic boom sections can be extended and retracted simultaneously.

Length fully retracted.....32'-10" (10.0 m)
Length fully extended.....104'-8" (31.9 m)
Telescoping speed
Retract.....180 sec.
Extend .....180 sec.

Four boom point sheaves with roller bearings.....standard

HOOK BLOCK: 35 metric ton, 3 sheaves with swivel hook and safety latch.....standard

JIB BOOM: All welded high tensile steel plate box construction in two sections.

Effective length.....26'-8"~44'-4".....optional (8.1 m~13.5 m)

JIB HOOK: 4.0 metric ton for single jib line .....optional

HYDRAULIC CYLINDERS:

2—double acting hydraulic cylinders for boom hoist.
3—double acting hydraulic cylinders for boom telescoping.
Each cylinders equipped with integral safety holding valve.

Boom hoisting speed (0°~75°) .....29 sec.
Boom lowering speed (75°~0°) .....31 sec.

MAIN WINCH: Mounted at foot of boom base section.

Independent hydraulic winch with free fall.....standard
Motor driven, power up and down, planetary gear with integral automatic brake.
Max. cable capacity.....540 ft. (164.7 m)
Hoist line speed (at 4th layer of drum)
Hoisting .....197 fpm (60.0 m)
Lowering.....197 fpm (60.0 m)
Max. single line pull .....16,000 lbs (7,260 kg)
Hoist wire rope.....(20ϕ) IWRC 6×Fi (22+7)

AUXILIARY WINCH: Independent hydraulic winch with free fall.

Motor driven, power up and down, planetary gear with integral automatic brake.
Max. cable capacity .....650 ft (198.3 m)
Aux. hoist line speed
Hoisting.....165 fpm (50 m/min)
Lowering .....165 fpm (50m/min)
Max. single line pull .....9,500 lbs (4,310 kg)
Jib hoist wire rope ...(14ϕ) IWRC 6×Fi (22+7)

AXLE LOAD:

With jib, and counterweight		
Front axle	30,100 lbs	(13,670 kg)
Rear axle	62,400 lbs	(28,330 kg)
Total	92,500 lbs	(42,000 kg)
Without counterweight		
Front axle	32,600 lbs	(14,800 kg)
Rear axle	53,300 lbs	(24,200 kg)
Total	85,900 lbs	(39,000 kg)
Without counterweight and outrigger housings		
Front axle	31,300 lbs	(14,210 kg)
Rear axle	44,400 lbs	(20,160 kg)
Total	75,700 lbs	(34,370 kg)

SAFETY DEVICES: Boom angle indicator, over hoist alarm bell, relief valves to prevent over-pressure to hydraulic circuits, safety holding valves for boom hoist and telescope cylinders, spring set fail-safe automatic brake locks for main and auxiliary drums and manual controlled hydraulic actuated swing lock.

RATED LIFTING CAPACITIES 35t P&H

Working radius (m)	Over rear & side				
	With outriggers				Without outriggers
	10.5m Boom	17.7m Boom	24.9m Boom	32.0m Boom	10.5m Boom
3.0	35.00	23.50			8.00
4.0	30.00	23.50			5.10
4.5	27.60	23.50	15.00		4.20
5.0	25.20	21.80	15.00		3.40
6.0	21.60	18.90	15.00	10.00	2.30
6.5	18.40	17.70	15.00	10.00	1.90
6.8	17.00	17.00	14.60	10.00	1.75
7.0	16.20	16.20	14.30	10.00	1.60
8.0	13.15	13.25	12.80	10.00	1.00
8.1	12.90	13.00	12.65	10.00	
8.7	11.55	11.65	11.85	9.40	
9.0	11.00	11.10	11.25	9.15	
10.0		9.35	9.50	8.30	
11.0		7.90	8.05	7.60	
12.0		6.75	6.95	6.95	
13.0		5.80	6.00	6.00	
14.0		5.00	5.20	5.20	
16.0		3.85	3.95	4.00	
18.0			3.00	3.10	
20.0			2.20	2.40	
22.0			1.70	1.85	
23.0			1.50	1.60	
24.0				1.35	
26.0				0.95	
28.0				0.66	
29.0				0.45	

(in metric ton)

Rated lifting capacities of rooster sheave is equal to that of the main boom and the limit is 4,000kg. When the lifting equipments, etc., are fixed to the main boom, the weight of them as well as the weight of the rooster sheave's lifting equipments, shall be subtracted from the rated lifting capacity.

king radius (m)	With outriggers Over front			
	10.5m Boom	17.7m Boom	24.9m Boom	32m Boom
3.0	20.00	13.00		
4.0	16.77	13.00		
4.5	15.26	13.00	8.00	
5.0	13.85	11.92	8.00	
6.0	11.58	10.10	8.00	5.00
6.5	9.56	9.34	8.00	5.00
6.8	8.77	8.92	7.55	5.00
7.0	8.31	8.47	7.36	5.00
8.0	6.44	6.61	6.49	5.00
8.2	6.14	6.33	6.32	5.00
9.0	5.18	5.35	5.57	4.43
10.0		4.31	4.54	4.02
11.0		3.45	3.63	3.65
12.0		2.75	2.92	3.02
13.0		2.14	2.35	2.40
14.0		1.62	1.85	1.93
15.0		1.26	1.42	1.52
16.0		0.95	1.05	1.19
17.0			0.74	0.88
18.0			0.48	0.62

(in metric ton)

Boom angle	Over rear & side			
	With outriggers			
	32m boom + 8.9m jib			
	Jib offset 5°		Jib offset 30°	
	Working radius (m)		Working radius (m)	
80°	9.0	4.00	12.0	2.00
75.8°	11.8	4.00	14.9	2.00
74°	13.0	3.70	16.1	2.00
71.3°	14.8	3.26	17.8	2.00
68°	17.0	2.85	19.8	1.84
66°	18.4	2.63	21.0	1.74
64°	19.7	2.44	22.1	1.66
61.9°	21.0	2.30	23.3	1.57
60°	22.0	2.00	24.4	1.51
58°	23.2	1.73	25.5	1.45
56°	24.3	1.48	26.5	1.25
54°	25.1	1.28	27.5	1.06
52°	26.3	1.08	28.4	0.89
50°	27.3	0.91	29.2	0.75
47°	28.8	0.66	30.4	0.53
44.2°	30.5	0.35	31.5	0.38
43.1°			32.0	0.30

(in metric ton)

Boom angle	Over rear & side			
	With outriggers			
	32m boom + 14.8m jib			
	Jib offset 5°		Jib offset 30°	
	Working radius (m)		Working radius (m)	
80°	11.0	2.70	16.0	1.20
78.6°	12.0	2.70	17.3	1.20
77°	13.1	2.46	18.2	1.20
75°	14.7	2.23	19.6	1.20
72.2°	16.8	2.01	21.7	1.20
70°	18.6	1.82	23.4	1.13
66°	21.7	1.55	26.1	1.01
62°	24.5	1.34	28.6	0.97
58°	27.1	1.15	31.0	0.94
56°	28.4	1.08	32.0	0.93
54.2°	29.5	1.03	33.0	0.79
52°	30.8	0.82	34.1	0.64
50°	32.0	0.67	35.0	0.52
47.9°	33.5	0.46	36.0	0.38
46.1°	34.0	0.40		

(in metric ton)

NOTE:

1) The rated lifting capacities of front lifting are less than the rear and side lifting capacities. Since there is a possibility to cause an overload, be careful when to slew the crane from the side lift to the front lift.
2) The jib and rooster sheave work, and not fully extended outrigger operation shall not be performed in the front area.