

ROUGH TERRAIN CRANE**RK500****SPECIFICATIONS**

Max. Lifting Capacity: **51 tons x 2.9 m**

Max. Boom Length: **39.0 m**



KOBELCO CONSTRUCTION MACHINERY CO., LTD.

SPECIFICATIONS

UPPER STRUCTURE



SWING UNIT

A hydraulic piston motor drives the swing pinion through a deck-mounted planetary gear reducer for 360° continuous rotation.

Hydraulic flow into the swing motor is controlled by a manual valve in the swing circuit. The brake valve allows the operator to select free or automatic braking when the swing control lever is set in neutral.

SWING PARKING BRAKE: manual disc brake

SWING GEAR: Internal spur gear

SLEWING RING: Integral with the swing gear, with a single row of ball bearings.

SWNG SPEED: 2.4 min⁻¹



WINCHES

Mounted side by side, power hoisting and lowering with inching capability. Hydraulic motor drive, spur gear reduction, and counterbalance valve.

BRAKES

Band type, with negative brake.

DRUMS

Main hoist: 380 mm P.C.D. x 446 mm width

Aux. hoist: 380 mm P.C.D. x 446 mm width

WIRE ROPES

Main hoist	18 mm dia. x 220 m	IWRC 6 X Fi (29) c/o hard twist rope 4 x F (39) c/o anti twist rope (Europe area)
Aux. hoist	18 mm dia. x 120 m	IWRC 6 X Ws (26) c/o hard twist rope 4 x F (39) c/o anti twist rope (Europe area)

LINE SPEED

Main hoist: 122 (high)/52 (low) m/min (at 4th layer)

Aux. hoist: 105 (high)/45 (low) m/min (at 2nd layer)

BOOM HOIST

One-double acting hydraulic cylinder with holding valve.



BOOM TELESCOPE

Full power telescoping by two hydraulic cylinders with holding valves and telescoping assistance cables for the boom tip section.

CONTROLS

Four adjustable hand control levers for swing, main winch, auxiliary winch (with pedal), and boom hoist (with pedal). These can be tilted in three neutral positions and stored in their bases when not in use.

Other controls include: one short lever for swing parking brake; one lever for telescope; one lever for telescope change; one lever for transmission gear selection; swing lock pin; throttle control; and one travel brake pedal.



OPERATOR'S CAB

All-weather, wide-view cab with safety glass, sliding door; roll-down window, and sashless roof window with wiper. Adjustable driver's seat with seat belt.

SAFETY DEVICES (Standard)

Moment limiter (auto-stop)	Multi-display
Swing range limit device	Working range limit device
Swing automatic stop device	Overhoist prevention device (auto-stop)
Base machine inclination meter	Interceptive lever lock for on and off
Outrigger extension width automatic detecting device	Auxiliary brake for operating
Swing lock device	Safety lock lever
Hydraulic safety valve	Sling wire lock
Boom telescoping default operation prevention device	Boom telescope safety device
Boom hoist safety device	Check & Safety Monitor
Winch drum safety device	Swing alarm lamps
Outrigger safety device	Anti-slip seat

HYDRAULIC SYSTEM



PUMPS

2 variable plunger pumps and 3 gear pumps

1st pump : Boom hoist, boom telescope, and winch assist

2nd pump: Outriggers, and winch system

3rd pump : Swing and steering

4th pump : Pilot circuits for the clutches and negative brake cylinders, air conditioner.

5th pump : Steering assist, power set jib

MOTORS : .. 3 plunger motors power the main hoist, the auxiliary hoist, and the swing.

CONTROL VALVES

Upper

One 5-stack valve : Winch, boom telescope, and boom hoist

One 4-stack valve : Clutch and brake

One 1-stack valve : Swing

Lower

Solenoid valves : Outriggers and suspension-lock system.

One 2-stack valve : Steering

OIL RESERVOIR : 575 liters

CARRIER



TYPE

4-wheel drive (4WD), with 2-wheel drive (2WD) select for high speed mode.

MAX. TRAVEL SPEED: 49 km/h or 45 km/h

GRADEABILITY: $\tan \theta$ 0.6 (31°)

PASSENGER: 1 person



OUTRIGGERS

Type: Hydraulic H-type outriggers.

Control: Eight double-acting hydraulic cylinders provide independent horizontal and vertical movement for each outrigger. Outriggers can be set from inside the cab or at the side of the carrier.

Outrigger extension	7.4m	6.8m	5.4m	4.1m	2.55m
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ENGINE

MITSUBISHI 6D24-TCE2/6D24-TCUA (Europe), intercooled, turbocharged, water-cooled diesel engine with 4 cycles, 6 cylinders, and direct injection.

Max. output	257 kW at 2,200 min ⁻¹
	242 kW at 2,000 min ⁻¹ (Europe area)
Max. torque	1,323 N·m at 1,500 min ⁻¹
	1,255 N·m at 1,400 min ⁻¹ (Europe area)

Displacement 11,945 cc

ELECTRICAL SYSTEM

24-volt DC system with two 12-volt batteries

FUEL TANK

Capacity 300 liters

TORQUE CONVERTER

3 element, single-stage, 2 phases, torque converter with fully automatically controlled lock-up clutch.

TRANSMISSION

3-speed for forward and 1-speed for reverse with high-low shift.

BRAKES

Service: Hydraulic and air booster disc brakes on all wheels.

Auxiliary: Torque converter lock-up linked electronic control exhaust brake, with fluid-type retarder.

Parking: Propel shaft brake internal expansion type with auxiliary brake for crane operation.



STEERING

Hydraulic power steering system with emergency steering device and about-face steering compensation device.

Steering modes:

Normal: 2W (front)	Rear: 2W (rear)
Cramp: 4W	Crab: 4W

SUSPENSION

Fully automatic steering, front and rear axles are fitted with hydro-pneumatic suspension with suspension-lock system.

FRONT/REAR AXLES

Fully floating drive-steer type axles.



AXLE LOADING

Gross-Vehicle Weight	38,495 kg
Front-Vehicle Weight	19,245 kg
Rear-Vehicle Weight	19,250 kg

TIRES

Front/Rear: 505/95 R25 183E ROAD

LIGHTS

Headlights	License plate light
Clearance light	Directional lights
Parking lights	Back light

SAFETY DEVICES

Emergency steering device
Rear steering auto-lock
Suspension lock device
Engine overrun warning buzzer
Check & Safety Monitor
Boom mirror
Reverse travel buzzer

ATTACHMENTS



BOOM

Boom consists of a boom base and four power telescoping sections. The first sections extended separately as do the 2nd and section 3rd, 4th and 5th sections synchronized. All-welded, high tensile strength steel box construction.

Max. rated lifting capacity: 51.0 metric ton x 2.9 m

Fully retracted length 10.2 m

Fully extended length 39.0 m

Boom raising angle: 0° to 82.5°

Boom raising time: 60.0 sec

Boom telescoping time: 120 sec / 28.8 m



JIB

Compressed truss, 2-step drawing up type jib extendable to stored alongside boom. Jib swing down under the boom and set out. Jib offsets 5°, 17°, and 30° with suspension rods.

Jib length 9.0 m/15.0 m

AUXILIARY SHEAVE

The auxiliary sheave permits one-part line operation.



HOOK BLOCK

5-sheave, 50 metric ton block (double-sheave 25 metric ton block), with safety latch for main hoist, 4.5 metric ton hook with swivel and safety latch for aux. hoist.

LIFTING CAPACITIES

NOTES:

OPERATION WITH OUTRIGGERS

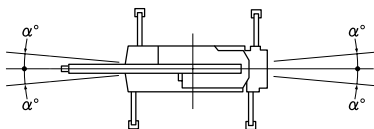
1. Rated load do not exceed 78% of the tipping loads with machine set horizontally on a firm and level ground, satisfy the specified stability over the front, and include weight of hook block(s) and other handling accessories. Ratings shown in \square are based on the machine's structural strength, and others are determined by the machine's stability.
2. The working radius given in the charts allow for loaded boom deflection. Always operate the machine on the basis of actual operating radius.
3. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted load to obtain the weight that can be lifted.

Hooks	51-ton	25-ton	4.5-ton
Weight	400 kg	300 kg	90 kg

4. Maximum outrigger extension is 7.4 m. Three intermediate extension positions are also provided at 6.8 m, 5.4 m and 4.1 m. Minimum outrigger extension is 2.55 m.

Over-the-front area

Over-the-rear area



Outrigger extension	6.8m	5.4m	4.1m	Min. outrigger extension
α°	33°	28°	20°	5°

5. Rated load in the over-the-side whole around various depending on the extension position of outriggers. Therefore, crane operation must be performed based on the rating chart corresponding to each extended outrigger position.
6. To determine load ratings that fall between those shown in the charts, proceed as follows:
 - a) For boom lengths not listed use rating for next longer boom length or next shorter boom length, whichever is smaller.
 - b) For load radii not shown, use rating for next larger radius.
7. Ratings of the auxiliary sheave are the same as main boom ratings, but should not exceed 4,500 kg. Ratings of the auxiliary sheave are calculated by deducting 51-ton hook weight (400 kg) or 25-ton hook weight (300 kg) from main boom ratings.
8. Jib operation must be based on the main boom angle.
9. Ratings of the boom with extended jib are calculated by deducting 1,800 kg at 9.0m jib or 2,100 kg at 15.0m jib besides the weight of 25-ton hook block and the sling wire from rated loads. At this time, do not use the auxiliary sheave.
10. In such a condition not shown in the rating chart, operation is impossible. Lowering the boom over critical degrees leads to overturn even with no load. Be careful extremely.
11. Standard hoist reevings are shown bellow. Rated single-line pull must not exceed 4,500 kg.

Boom length	10.2m	17.4m	24.6m	31.8m	39.0m	Jib aux. sheave
Hook	51-ton		25-ton		4.5-ton	
No. of reeving	12	6	5	4	4	1

12. In lifting load operation in an oblique direction (direction toward the outrigger), sometimes the outrigger float in the diagonal side against the lifted load may be raised depending on a condition. This is caused by torsional rigidity and deflection of the carrier frame, and stability is not lost. The stability of this machine in operation within the rating is secured in the condition that the machine is set horizontally on a level and firm ground.

OPERATION WITHOUT OUTRIGGERS (ON TIRES)

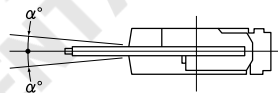
1. Rated load do not exceed 78% of the tipping loads with machine set horizontally on a firm and level ground, satisfy the specified stability over the front, and include weight of hook block(s) and other handling accessories. Ratings shown in \square are based on the machine's structural strength, and others are determined by the machine's stability. Tire specified air pressure is set to 800kPa (8.0 kgf/cm²)
2. The working radius given in the charts allow for loaded boom deflection. Always operate the machine on the basis of actual operating radius.
3. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted load to obtain the weight that can be lifted.

Hooks	51-ton	25-ton	4.5-ton
Weight	400 kg	300 kg	90 kg

*Tire specified air pressure: 800kPa (8.0 kgf/cm²)

4. Load ratings differ for over-the-front and over-the-side operation. Care must e taken to avoid overload when swinging a load from an over-the-front position to an over-the-side position.

Over-the-front area



On tires	Stationery	Pick & carry
α° (FRONT)	1°	1°

5. Ratings of the auxiliary sheave are the same as main boom ratings, but should not exceed 4,500 kg. Ratings of the auxiliary sheave are calculated by deducting 51-ton hook weight (400 kg) or 25-ton hook weight (300 kg) from main boom ratings.
6. Parking brake and auxiliary operation brake must be applied during stationary load lifting.
7. Pick and carry operations must be done in the low travel mode.
8. During pick and carry operations, keep the load close to the ground to avoid swaying, and travel no faster than 2.0 km/h. Avoid cornering, sudden starts (acceleration), and sudden braking. Boom must be centered over the front area.
9. Do not operate the crane functions while carrying the load.
10. Standard hoist reevings are shown bellow. Single-line load must not exceed 4,500 kg.

Boom length	10.2m	17.4m	24.6m	Jib aux. sheave
Hook	51-ton		25-ton	
No. of reeving	12	6	5	4

BOOM LIFTING CAPACITIES

RK500

Main Boom Lifting Capacities with Outriggers

Unit: metric ton

MAIN	With outriggers in 7.4m position 360° swing area					With outriggers in 6.8m position Over the side					With outriggers in 5.4m position Over the side					With outriggers in 4.1m position Over the side				
	Boom length in meters					Boom length in meters					Boom length in meters					Boom length in meters				
	10.2	17.4	24.6	31.8	39.0	10.2	17.4	24.6	31.8	39.0	10.2	17.4	24.6	31.8	39.0	10.2	17.4	24.6	31.8	39.0
Operating radius (m)																				
2.9	51.00					51.00					45.00					40.00				
3.0	50.00	28.00	20.00			50.00	28.00	20.00			45.00	28.00	20.00			40.00	28.00	20.00		
3.2	45.00	28.00	20.00	14.00		45.00	28.00	20.00	14.00		43.30	28.00	20.00	14.00		37.30	28.00	20.00	14.00	
3.5	41.00	28.00	20.00	14.00		41.00	28.00	20.00	14.00		41.00	28.00	20.00	14.00		33.20	28.00	20.00	14.00	
3.75	38.90	28.00	20.00	14.00		38.90	28.00	20.00	14.00		38.90	28.00	20.00	14.00		30.00	28.00	20.00	14.00	
4.0	37.00	28.00	20.00	14.00		37.00	28.00	20.00	14.00		37.00	28.00	20.00	14.00		27.00	28.00	20.00	14.00	
4.5	33.50	28.00	20.00	14.00	7.60	33.50	28.00	20.00	14.00	7.60	33.50	28.00	20.00	14.00	7.60	22.00	23.00	20.00	14.00	7.60
5.0	30.20	28.00	20.00	14.00	7.60	30.20	28.00	20.00	14.00	7.60	30.20	28.00	20.00	14.00	7.60	18.50	18.50	17.00	14.00	7.60
5.5	27.50	26.10	20.00	14.00	7.60	27.50	26.10	20.00	14.00	7.60	25.00	24.00	20.00	14.00	7.60	15.70	15.30	14.90	14.00	7.60
6.0	25.00	24.40	20.00	14.00	7.60	25.00	24.40	20.00	14.00	7.60	21.15	20.85	18.50	14.00	7.60	13.30	13.00	12.80	12.70	7.60
6.5	22.70	22.40	18.70	14.00	7.60	22.70	22.40	18.70	14.00	7.60	17.90	17.60	16.65	14.00	7.60	11.40	11.10	11.00	11.50	7.60
7.0	20.70	20.60	17.60	13.50	7.60	20.70	20.60	17.60	13.50	7.60	15.45	15.15	15.05	13.50	7.60	9.90	9.60	9.50	10.40	7.60
7.2	11.50	19.80	17.15	13.30	7.60	11.50	19.80	17.15	13.30	7.60	11.50	14.40	14.25	13.30	7.60	9.40	9.10	9.00	9.90	7.60
7.5		18.90	16.60	13.00	7.60		18.90	16.60	13.00	7.60		13.15	13.15	13.00	7.60		8.40	8.30	9.20	7.60
8.0		17.50	15.60	12.50	7.60		17.50	15.60	12.50	7.60		11.65	11.55	12.00	7.60		7.40	7.30	8.20	7.60
8.5		16.20	14.70	11.90	7.60		15.60	14.70	11.90	7.60		10.40	10.25	11.00	7.60		6.55	6.45	7.30	7.60
9.0		15.00	13.90	11.30	7.60		13.75	13.90	11.30	7.60		9.30	9.15	10.00	7.60		5.80	5.70	6.55	7.00
9.5		14.00	13.10	10.80	7.60		12.40	12.50	10.80	7.60		8.35	8.20	9.10	7.60		5.20	5.10	5.90	6.35
10.0		13.10	12.30	10.30	7.60		11.20	11.25	10.30	7.60		7.50	7.35	8.30	7.60		4.65	4.55	5.35	5.80
11.0		11.00	10.90	9.40	7.10		9.30	9.30	9.40	7.10		6.20	6.00	6.90	7.10		3.70	3.60	4.40	4.80
12.0		9.30	9.20	8.65	6.60		7.85	7.65	8.65	6.60		5.15	4.95	5.80	6.10		2.95	2.85	3.60	4.05
13.0		7.90	7.75	8.00	6.15		6.70	6.35	7.40	6.15		4.25	4.05	4.90	5.40		2.30	2.15	3.00	3.40
14.0		6.75	6.60	7.40	5.75		5.75	5.40	6.40	5.75		3.50	3.30	4.20	4.65		1.70	1.55	2.45	2.90
14.4		4.00	6.20	7.00	5.60		4.00	5.00	6.05	5.60		3.25	3.05	3.95	4.40		1.50	1.30	2.25	2.70
15.0			5.65	6.50	5.35			4.55	5.60	5.35			2.65	3.60	4.05			1.00	1.95	2.45
16.0			4.90	5.70	5.00			3.90	4.85	5.00			2.10	3.10	3.55				1.50	2.00
17.0			4.25	5.00	4.70			3.35	4.25	4.70			1.65	2.60	3.10				1.10	1.60
18.0			3.70	4.40	4.40			2.80	3.75	4.20			1.20	2.15	2.70				0.75	1.25
19.0			3.20	3.90	4.20			2.35	3.25	3.75			0.85	1.75	2.35					0.95
20.0			2.70	3.45	4.00			2.00	2.85	3.35				1.40	2.00					0.70
21.0			2.30	3.05	3.55			1.65	2.50	3.00				1.10	1.65					
21.6			2.05	2.90	3.30			1.45	2.30	2.80				0.95	1.50					
22.0				2.75	3.15				2.15	2.65				0.85	1.35					
23.0				2.40	2.80				1.85	2.35				0.60	1.10					
24.0				2.05	2.55				1.55	2.05					0.85					
25.0				1.75	2.30				1.30	1.75					0.65					
26.0				1.50	2.00				1.05	1.50					0.50					
27.0				1.25	1.75				0.85	1.30										
28.0				1.05	1.55				0.65	1.10										
28.8				0.90	1.40					0.95										
29.0					1.35					0.90										
30.0					1.15					0.70										
31.0					1.00					0.55										
32.0					0.85															
33.0					0.70															
34.0					0.55															
Min. boom angle	0°	0°	0°	0°	0°	0°	0°	0°	14°	30°	0°	0°	28°	36°	43°	0°	0°	45°	50°	55°

MAIN	With outriggers in min. position		
	Over the side		
	Boom length in meters		
Operating radius (m)	10.2	17.4	24.6
2.9	16.00		
3.0	16.00	12.00	11.00
3.2	16.00	12.00	11.00
3.5	16.00	12.00	11.00
3.75	15.40	12.00	11.00
4.0	14.00	12.00	11.00
4.5	11.30	10.90	10.80
5.0	9.30	9.05	8.90
5.5	7.80	7.55	7.45
6.0	6.60	6.40	6.25
6.5	5.65	5.45	5.30
7.0	4.85	4.65	4.55
7.2	4.55	4.40	4.25
7.5		4.00	3.90
8.0		3.45	3.30
8.5		2.95	2.80
9.0		2.50	2.35
9.5		2.05	1.90
10.0		1.65	1.50
11.0		0.95	0.80
12.0			
Min. boom angle	0°	39°	57°

BOOM LIFTING CAPACITIES

Main Boom Lifting Capacities without Outriggers

Unit: metric ton

MAIN	Stationary						Pick & Carry (under 2 km/h)					
	360° swing area			Over the front			360° swing area			Over the front		
	Boom length in meters			Boom length in meters			Boom length in meters			Boom length in meters		
	Operating radius (m)	10.2	17.4	24.6	10.2	17.4	24.6	10.2	17.4	24.6	10.2	17.4
3.0	12.00	10.00	5.50	20.00	15.00	10.50	8.00	6.50	4.50	14.50	10.50	8.00
3.5	9.10	8.50	5.50	20.00	15.00	10.50	8.00	6.50	4.50	14.50	10.50	8.00
3.75	8.05	7.50	5.50	20.00	15.00	10.50	8.00	6.50	4.50	14.50	10.50	8.00
4.0	7.20	6.65	5.50	20.00	15.00	10.50	7.20	6.50	4.50	14.50	10.50	8.00
4.5	5.70	5.25	5.00	17.40	15.00	10.50	5.70	5.30	4.50	12.50	10.50	8.00
5.0	4.50	4.15	4.00	15.50	15.00	10.50	4.50	4.20	4.20	11.00	10.50	8.00
5.5	3.60	3.25	3.15	14.00	13.70	10.50	3.60	3.30	3.25	10.00	10.50	8.00
6.0	2.80	2.55	2.45	12.80	12.40	10.50	2.80	2.60	2.45	9.10	9.50	8.00
6.5	2.20	1.95	1.85	11.70	11.30	9.50	2.20	2.00	1.90	8.40	8.60	8.00
7.0	1.70	1.45	1.35	10.70	10.30	8.70	1.70	1.50	1.40	7.80	7.80	7.25
7.2	1.50	1.25	1.15	10.20	9.90	8.35	1.50	1.30	1.20	7.50	7.50	7.00
7.5		1.05	0.95		9.40	7.90		1.10	1.00		7.10	6.65
8.0		0.70	0.65		8.60	7.30		0.75	0.65		6.50	6.05
8.5					7.70	6.80					5.85	5.50
9.0					6.80	6.30					5.30	5.00
9.5					6.05	5.75					4.80	4.55
10.0					5.40	5.25					4.30	4.10
11.0					4.35	4.20					3.60	3.35
12.0					3.50	3.35					3.00	2.75
13.0					2.80	2.65					2.45	2.25
14.0					2.20	2.10					2.00	1.80
14.4					2.00	1.90					1.80	1.65
15.0						1.60						1.40
16.0						1.20						1.05
17.0						0.85						0.75
Min. boom angle	0°	54°	65°	0°	0°	37°	0°	54°	65°	0°	0°	37°

JIB LIFTING CAPACITIES

Jib Lifting Capacities with Outriggers

Unit: metric ton

7.4 M		With outriggers in 7.4m position (360° swing area)			
		9.0 m jib			
Boom angle	Jib angle: 5°		Jib angle: 17°	Jib angle: 30°	
	To 36m	36m to 39m			
82°	3.50	3.50	2.80	2.20	
75°	3.50	3.50	2.80	2.20	
72°	3.50	3.22	2.55	2.03	
70°	3.42	2.95	2.34	1.92	
66°	2.88	2.45	2.02	1.72	
60°	2.33	1.92	1.70	1.49	
57°	2.11	1.70	1.54	1.38	
56°	2.01	1.62	1.48	1.33	
55°	1.85	1.50	1.40	1.26	
54°	1.70	1.36	1.27	1.17	
50°	1.18	0.88	0.82	0.79	
47°	0.87	0.60	0.55	0.53	
45°	0.69	0.43	0.39	0.38	
44°	0.60	0.35			
Min. boom angle	44°	44°	45°	45°	
		15.0 m jib			
82°	2.40		1.75	1.25	
78°	2.40		1.75	1.25	
75°	2.30		1.65	1.20	
72°	2.08		1.55	1.15	
70°	1.93		1.47	1.12	
66°	1.69		1.29	1.02	
60°	1.40		1.10	0.89	
56°	1.25		1.01	0.83	
55°	1.16		0.99	0.81	
54°	1.06		0.97	0.79	
53°	0.98		0.88	0.78	
50°	0.70		0.63	0.56	
47°	0.45		0.41	0.36	
46°	0.38				
Min. boom angle	46°		47°	47°	

6.8 M		With outriggers in 6.8m position (Over the side)			
		9.0 m jib			
Boom angle	Jib angle: 5°		Jib angle: 17°	Jib angle: 30°	
	To 36m	36m to 39m			
82°	3.50	3.50	2.80	2.20	
78°	3.50	3.50	2.80	2.20	
75°	3.50	3.50	2.80	2.20	
72°	3.50	3.22	2.55	2.03	
70°	3.42	2.95	2.34	1.92	
66°	2.88	2.45	2.02	1.72	
62°	2.50	2.05	1.80	1.56	
60°	2.26	1.85	1.70	1.49	
58°	1.88	1.63	1.50	1.36	
55°	1.41	1.19	1.12	1.04	
52°	1.02	0.82	0.77	0.72	
48°	0.61	0.40	0.35	0.34	
47°	0.52	0.30			
44°	0.28				
Min. boom angle	44°	47°	48°	48°	
		15.0 m jib			
82°	2.40		1.75	1.25	
78°	2.40		1.75	1.25	
75°	2.30		1.65	1.20	
72°	2.08		1.55	1.15	
70°	1.93		1.47	1.12	
66°	1.69		1.29	1.02	
62°	1.49		1.16	0.93	
58°	1.24		1.05	0.86	
57°	1.16		1.03	0.84	
56°	1.04		0.95	0.83	
53°	0.71		0.64	0.58	
50°	0.44		0.38	0.35	
48°	0.28				
Min. boom angle	48°		50°	50°	

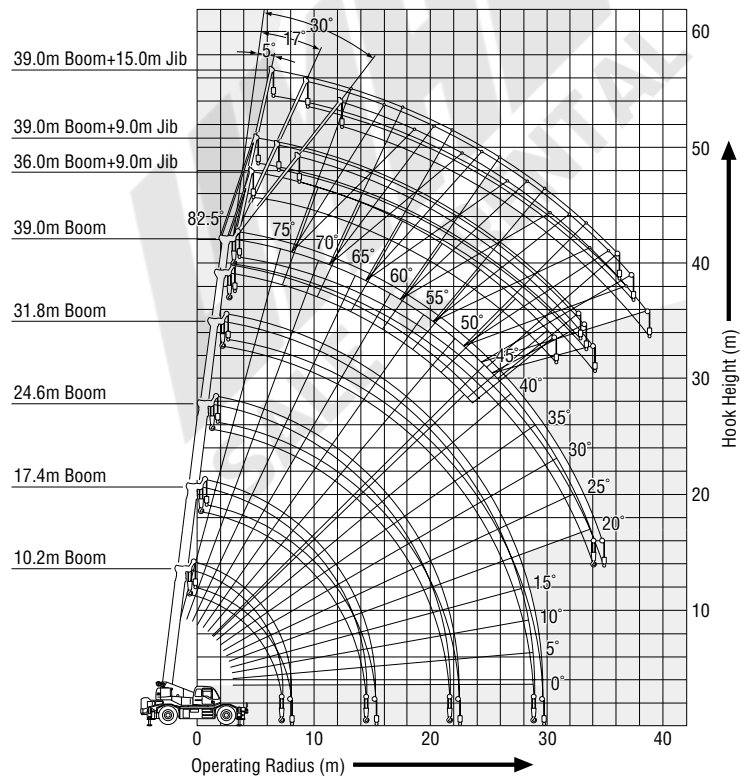
Jib Lifting Capacities with Outriggers

Unit: metric ton

5.4 M		With outriggers in 5.4m position (Over the side)			
		9.0 m jib			
Boom angle	Jib angle: 5°		Jib angle: 17°	Jib angle: 30°	
	To 36m	36m to 39m			
82°	3.50	3.50	2.80	2.20	
78°	3.50	3.50	2.80	2.20	
75°	3.50	3.50	2.80	2.20	
70°	3.42	2.95	2.34	1.92	
68°	2.86	2.52	2.16	1.81	
66°	2.28	2.03	1.80	1.72	
64°	1.81	1.60	1.48	1.40	
60°	1.06	0.91	0.85	0.77	
57°	0.63	0.50	0.44	0.39	
56°	0.51	0.40	0.31		
54°	0.28				
Min. boom angle	54°	56°	56°	57°	
		15.0 m jib			
82°	2.40		1.75	1.25	
78°	2.40		1.75	1.25	
75°	2.30		1.65	1.20	
70°	1.93		1.47	1.12	
68°	1.81		1.38	1.07	
66°	1.69		1.29	1.02	
65°	1.46		1.21	0.99	
64°	1.31		1.13	0.97	
62°	0.98		0.83	0.74	
58°	0.47		0.38	0.33	
57°	0.36				
Min. boom angle	57°		58°	58°	

4.1 M		With outriggers in 4.1m position (Over the side)			
		9.0 m jib			
Boom angle	Jib angle: 5°		Jib angle: 17°	Jib angle: 30°	
	To 36m	36m to 39m			
82°	3.50	3.50	2.80	2.20	
78°	3.50	3.50	2.80	2.20	
75°	3.50	3.50	2.80	2.20	
74°	3.38	3.05	2.59	2.11	
72°	2.56	2.25	1.92	1.68	
70°	1.91	1.65	1.41	1.22	
68°	1.38	1.15	0.98	0.84	
66°	0.95	0.73	0.61	0.51	
65°	0.75	0.55			
62°	0.28				
Min. boom angle	62°	65°	66°	66°	
		15.0 m jib			
82°		2.40	1.75	1.25	
78°		2.40	1.75	1.25	
75°		2.30	1.65	1.20	
73°		2.15	1.59	1.16	
72°		1.83	1.41	1.15	
71°		1.57	1.26	1.02	
69°		1.11	0.88	0.73	
66°		0.57	0.43	0.30	
Min. boom angle		66°	66°	66°	

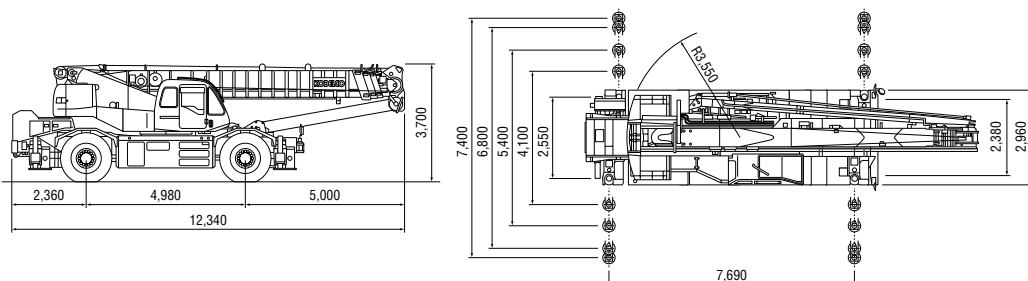
Working Ranges



*Boom/jib bending is not involved in figure of working ranges.

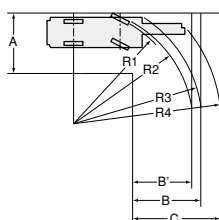
DIMENSIONS

RK500



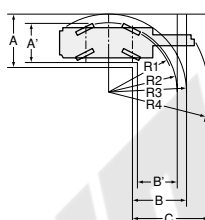
TURNING RADIUS

2-Drive Steering (Front)



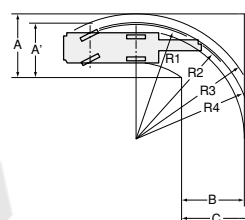
R1	Minimum turning radius	10.90m
R2	Tire clearance with cab	11.22m
R3	Carrier clearance	12.04m
R4	Boom clearance	13.42m
A	Entrance width (carrier)	6.23m
B	Exit width (carrier)	6.23m
B'	Exit width (tires)	5.41m
C	Exit width (boom)	7.61m

4-Drive Steering



R1	Minimum turning radius	6.10m
R2	Tire clearance with cab	6.43m
R3	Carrier clearance	7.21m
R4	Boom clearance	8.88m
A	Entrance width (carrier)	5.16m
A'	Entrance width (tires)	3.79m
B	Exit width (tires)	5.16m
B'	Exit width (carrier)	3.79m
C	Exit width (boom)	6.83m

2-Drive Steering (Rear)



R1	Minimum turning radius	10.90m
R2	Tire clearance with cab	11.22m
R3	Carrier clearance	12.05m
R4	Boom clearance	10.34m
A	Entrance width (carrier)	6.20m
A'	Entrance width (tires)	5.37m
B	Exit width (carrier)	6.20m
C	Exit width (boom)	6.40m

STANDARD EQUIPMENT

Engine tachometer
Tachograph
Hourmeter
Engine over running alarm
Paper-element air cleaner
Three working lights
Remote back mirror
Horn
Towing hooks (one front, one rear)
Outrigger plates
Oil cooler
Cab heater/defroster
Air conditioner
Operation Manual: one set

OTHER AMENITIES

Radio
Cigarette lighter
Ashtray
Sun visor
Floor mat
Windshield wiper/washer

OPTIONAL EQUIPMENT

Extra hydraulic oil cooler for hydraulic system

Note: Due to our policy of continual product improvements all designs and specifications are subject to change without advance notice.

KOBELCO CONSTRUCTION MACHINERY CO., LTD.

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6. SPECIFICATIONS AND TABULATED DATA

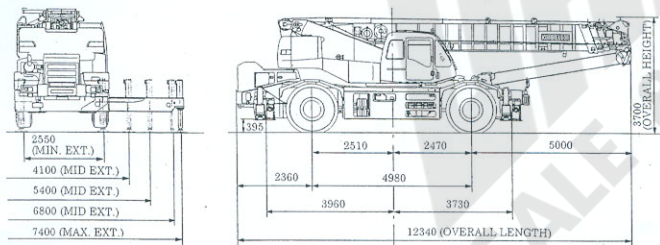
6.1 SPECIFICATIONS

The data described here are for reference. Since described values may sometimes be different from those of the actual machine, use these data for reference only.

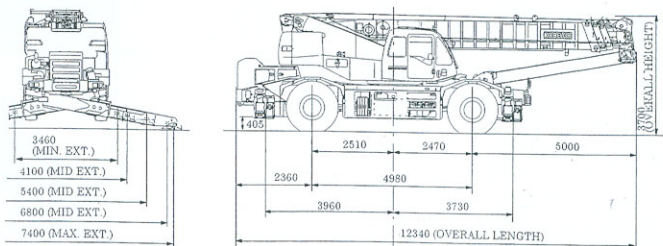
6.1.1 GENERAL DIMENSIONS

General dimension [Unit: mm]

1. MACHINE WITH H-TYPE OUTRIGGERS



2. MACHINE WITH X-TYPE OUTRIGGERS



6.1.2 GENERAL SPECIFICATIONS

1. CRANE PERFORMANCE

Rated crane loads	10.2m boom	51,000kg × 2.9m (12 parts)
	17.4m boom	28,000kg × 5.0m (6 parts)
	24.6m boom	20,000kg × 6.0m (5 parts)
	31.8m boom	14,000kg × 6.5m (4 parts)
	39.0m jib	7,600kg × 10.0m (1 part)
	9.0m jib	3,500kg × 75° (1 part)
	15.0m jib	2,400kg × 77° (1 part)
	Auxiliary sheave	4,500kg (1 part)
Main boom length	m	10.2 - 39.0
Jib length	m	9.0 - 15.0
Max. lifting height: main hook/aux. hook	m	40.1/54.6
Main winch line speed: high/low	m/min	122/52 (4th layer)
Aux. winch line speed: high/low	m/min	105/45 (2nd layer)
Boom extending speed	sec/m	120.0/28.8
Boom raising speed	sec/deg	60.0/0° - 82.5°
Swing speed	rpm	2.4

2. CRANE MAIN MECHANISM

Type of main boom	Box type, 5 sections, 2nd/3rd singly and 4th/5th simultaneously telescoping.	
Type of jib	Compressed truss and box type, 2nd drawing out type. Power set jib, 3 step variable tilt type (5°/17°/30°). Sky tilt jib (optional): hydraulically steplessly tilting type (5° to 45°).	
Boom telescopic system	Direct push by double act. hydr. cyls (triple) with use of wire ropes.	
Boom hoist system	Direct push by double act. hydr. cyl. (single).	
Winch system	2 set hydr. motor drive, spur gear reduction. With flow control valve of pressure compensating type. High speed (2 pumps flow) and low speed (1 pump) automatic change. Independent 2 winches with automatic brake and free fall.	
Swing system	Hydr. motor drive, planetary gear reduction type. Free/lock selector type, with hand brake attached.	
Outriggers	Type	All hydraulic type, H-type or X-type.
	Extending width m	7.4/6.8/5.4/4.1/2.55 (min. H-type) 3.46 (min. X-type).

3. WIRE ROPES

Main winch wire rope	mm φ × m	18 × 220/IWRC6 × Fi (29) C/O hard to twist rope
Auxiliary winch wire rope	mm φ × m	18 × 120/IWRC6 × WS (26) C/O hard to twist rope

4. HYDRAULIC SYSTEM

Type of hydraulic pump	2 tandem (variable plunger) and 3 tandem gear pumps
Capacity of hydraulic oil tank	575

5. SAFETY DEVICES

	Moment limiter, swing automatic stop device, multi-display, overhoist preventive device, working range limit device (with swing range limit), outrigger ext. width automatic detecting device, check and safety monitor, auxiliary brake for work, sling wire lock, winch drum lock device, swing lock device, hydraulic safety valve, boom telescope wrong operation preventive device, outrigger safety device, boom hoist safety device, boom telescope safety device, free fall interlock device, interceptive lever lock for on and off, basic machine inclination meter, antislip seat, swing warning lamp, swing voice alarm.
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6. PERFORMANCE OF CARRIER

Maximum traveling speed	km/h	49
Turning radius, 2W steer/4W steer	m	10.9/6.1
Gradeability	tan θ (deg.)	0.6 (31°)
Engine	Model	Mitsubishi 6D24-TCE2
	Kind	Water cooled, 4cycle, 6cyls, direct inject. type with inter cooler, diesel
	Total displacement	cc 11,945
	Max. output	PS/rpm 350/2,200
	Max. torque	kg · m/rpm 135/1,400

7. MAJOR MECHANISM OF CARRIER

Traveling drive type		4WD (4×4)/2WD (4×2) selecting type
Torque converter		3 element, 1 step, 2 phases Electronic control, full automatic with lock-up clutch.
Transmission	Model	Electronic control, full automatic shift.
	No. of speed change gear	3 speed forward/1 speed reverse (with high/low shift).
Reduction unit form		Axle 2 step reduction type.
Axle front wheel/rear wheel		All floating type.
Steering	Form	Engine rpm induction type all hydraulic type power steering. With emergency steering and reverse steering correcting device.
	Mode	Normal (front 2W), cramp (4W), crab (4W) and rear (rear 2W)
Brake	Main service brake	With hydr. air booster, disc type 4 wheel brake, with fluids type retarder, and electro-control exhaust brake linked with torque converter lock-up.
	Parking brake	Propel shaft brake internal expansion type with aux. brake for work.
Suspension		Hydr-pneumatic suspension (with hydr. lock cylinder).
Fuel tank capacity		300
Tires (front wheel and rear wheel)		505/95 R25 183E ROAD

8. CARRIER SAFETY DEVICES

	Emergency steering device, rear steering auto. lock, suspension lock device, engine overrun warning device, check and safety monitor, boom mirror, reverse voice alarm, left turn voice alarm.
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9. DIMENSIONS WHEN TRAVELING

Overall length	mm	12,340
Overall width	mm	2,960
Overall height	mm	3,700
Wheelbase (axle distance)	mm	4,980
Tread front wheel/rear wheel	mm	2,380/2,380

10. TOTAL WEIGHT

Total load	kg	38,495
Front axle load	kg	19,245
Rear axle load	kg	19,250

11. SEATING CAPACITY

	1 person
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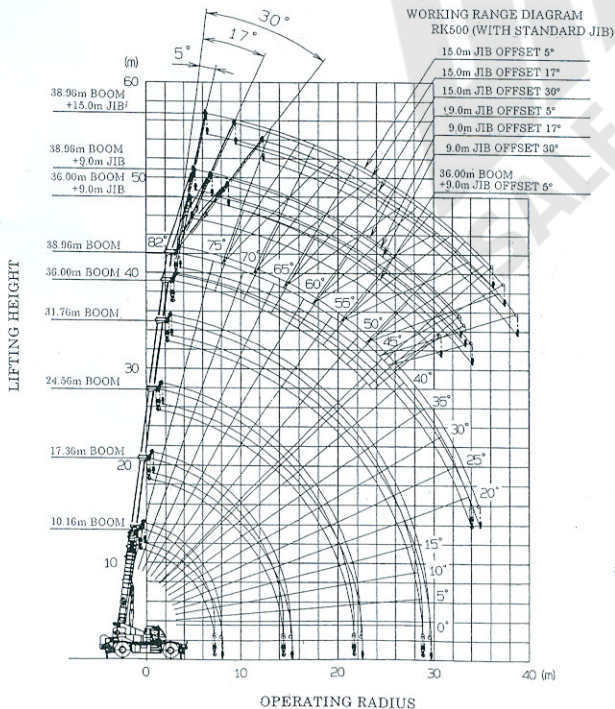
6.2 OPERATING RADIUS-LIFTING HEIGHT DIAGRAM

The diagram shows the relations between the operating radius and lifting height and between the boom length and boom hoisting angle.

1. This diagram does not include the boom deflection. Since the actual operating radius is somewhat extended from that shown in this diagram due to deflection of the boom, be careful.
2. The operating radius is the horizontal distance from the centerline of rotation to a vertical line through the centerline of gravity of the load.
3. When estimating a lifting height above the ground, make allowance for sling wire length.

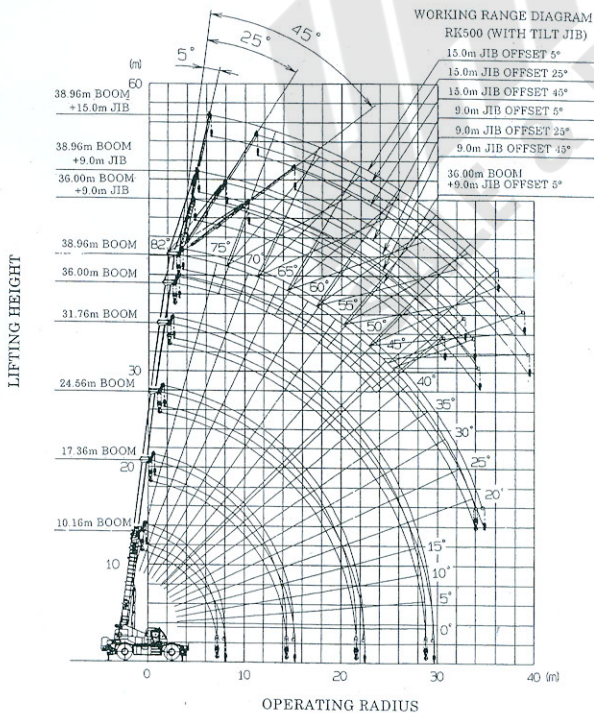
6.2.1 WORKING RANGE DIAGRAM (STANDARD JIB)

(NOTE) This diagram does not include deflection of the boom and jib.



6.2.2 WORKING RANGE DIAGRAM (TILT JIB)

(NOTE) This diagram does not include deflection of the boom and jib.



6.3. RATED CRANE LOAD TABLE

1. BOOM RATED LOADS (ton) WITH OUTRIGGERS USED

Boom Length Operating Radius(m)	Outriggers Max (7.4m) Extended (Whole around)					Outriggers Mid. (6.8m) Extended (Over side)					Outriggers Mid. (5.4m) Extended (Over side)					Outriggers Mid. (4.1m) Extended (Over side)					Outriggers Min. Extended (Over side)		Boom Length Operating Radius(m)	
	10.2	17.4	24.6	31.8	39.0	10.2	17.4	24.6	31.8	39.0	10.2	17.4	24.6	31.8	39.0	10.2	17.4	24.6	31.8	39.0	10.2	17.4		24.6
2.9	51.00					51.00					45.00					40.00					16.00			2.9
3.0	50.00	28.00	20.00			48.00	28.00	20.00			43.00	28.00	20.00			37.00	28.00	20.00			16.00	12.00	11.00	3.0
3.2	45.00	28.00	20.00	14.00		41.00	28.00	20.00	14.00		41.00	28.00	20.00	14.00		33.00	28.00	20.00	14.00		16.00	12.00	11.00	3.2
3.5	41.00	28.00	20.00	14.00		38.00	28.00	20.00	14.00		38.00	28.00	20.00	14.00		30.00	28.00	20.00	14.00		16.00	12.00	11.00	3.5
3.75	38.00	28.00	20.00	14.00		36.00	28.00	20.00	14.00		36.00	28.00	20.00	14.00		27.00	28.00	20.00	14.00		14.00	12.00	11.00	3.75
4.0	37.00	28.00	20.00	14.00		37.00	28.00	20.00	14.00		37.00	28.00	20.00	14.00		27.00	28.00	20.00	14.00		14.00	12.00	11.00	4.0
4.5	33.00	28.00	20.00	14.00		33.00	28.00	20.00	14.00		33.00	28.00	20.00	14.00		22.00	28.00	20.00	14.00		14.00	12.00	11.00	4.5
5.0	30.00	28.00	20.00	14.00		30.00	28.00	20.00	14.00		30.00	28.00	20.00	14.00		22.00	28.00	20.00	14.00		14.00	12.00	11.00	5.0
5.5	27.50	28.00	20.00	14.00		27.50	28.00	20.00	14.00		27.50	28.00	20.00	14.00		20.00	28.00	20.00	14.00		14.00	12.00	11.00	5.5
6.0	25.00	24.00	20.00	14.00		25.00	24.00	20.00	14.00		25.00	24.00	20.00	14.00		17.00	28.00	20.00	14.00		14.00	12.00	11.00	6.0
6.5	22.00	22.00	18.00	12.00		22.00	22.00	18.00	12.00		22.00	22.00	18.00	12.00		13.00	28.00	20.00	14.00		14.00	12.00	11.00	6.5
7.0	20.00	20.00	16.00	10.00		20.00	20.00	16.00	10.00		20.00	20.00	16.00	10.00		13.00	28.00	20.00	14.00		14.00	12.00	11.00	7.0
7.2	19.00	19.00	15.00	9.00		19.00	19.00	15.00	9.00		19.00	19.00	15.00	9.00		12.00	28.00	20.00	14.00		14.00	12.00	11.00	7.2
7.5	18.00	18.00	14.00	8.00		18.00	18.00	14.00	8.00		18.00	18.00	14.00	8.00		11.00	28.00	20.00	14.00		14.00	12.00	11.00	7.5
8.0	17.00	16.00	12.00	6.00		17.00	16.00	12.00	6.00		17.00	16.00	12.00	6.00		10.00	28.00	20.00	14.00		14.00	12.00	11.00	8.0
8.5	16.00	14.70	11.00	5.00		16.00	14.70	11.00	5.00		16.00	14.70	11.00	5.00		9.00	28.00	20.00	14.00		14.00	12.00	11.00	8.5
9.0	15.00	13.00	11.00	4.00		15.00	13.00	11.00	4.00		15.00	13.00	11.00	4.00		8.00	28.00	20.00	14.00		14.00	12.00	11.00	9.0
9.5	14.00	12.00	10.00	3.00		14.00	12.00	10.00	3.00		14.00	12.00	10.00	3.00		7.00	28.00	20.00	14.00		14.00	12.00	11.00	9.5
10.0	13.00	12.00	10.00	2.00		13.00	12.00	10.00	2.00		13.00	12.00	10.00	2.00		6.00	28.00	20.00	14.00		14.00	12.00	11.00	10.0
11.0	12.00	11.00	9.00	1.00		12.00	11.00	9.00	1.00		12.00	11.00	9.00	1.00		5.00	28.00	20.00	14.00		14.00	12.00	11.00	11.0
12.0	11.00	9.00	8.00	0.50		11.00	9.00	8.00	0.50		11.00	9.00	8.00	0.50		4.00	28.00	20.00	14.00		14.00	12.00	11.00	12.0
13.0	10.00	9.00	8.00	0.25		10.00	9.00	8.00	0.25		10.00	9.00	8.00	0.25		3.00	28.00	20.00	14.00		14.00	12.00	11.00	13.0
14.0	9.00	8.00	7.00	0.15		9.00	8.00	7.00	0.15		9.00	8.00	7.00	0.15		2.00	28.00	20.00	14.00		14.00	12.00	11.00	14.0
14.4	4.00	2.00	2.00	0.00		4.00	2.00	2.00	0.00		4.00	2.00	2.00	0.00		1.00	28.00	20.00	14.00		14.00	12.00	11.00	14.4
15.0	5.65	6.50	5.00	3.50		5.65	6.50	5.00	3.50		5.65	6.50	5.00	3.50		4.00	28.00	20.00	14.00		14.00	12.00	11.00	15.0
16.0	4.90	5.70	5.00	3.00		4.90	5.70	5.00	3.00		4.90	5.70	5.00	3.00		3.00	28.00	20.00	14.00		14.00	12.00	11.00	16.0
17.0	4.25	5.00	4.70	2.50		4.25	5.00	4.70	2.50		4.25	5.00	4.70	2.50		2.00	28.00	20.00	14.00		14.00	12.00	11.00	17.0
18.0	3.70	4.40	4.40	2.00		3.70	4.40	4.40	2.00		3.70	4.40	4.40	2.00		1.50	28.00	20.00	14.00		14.00	12.00	11.00	18.0
19.0	3.20	3.90	3.90	1.50		3.20	3.90	3.90	1.50		3.20	3.90	3.90	1.50		1.00	28.00	20.00	14.00		14.00	12.00	11.00	19.0
20.0	2.70	3.40	3.40	1.00		2.70	3.40	3.40	1.00		2.70	3.40	3.40	1.00		0.75	28.00	20.00	14.00		14.00	12.00	11.00	20.0
21.0	2.30	3.00	3.00	0.50		2.30	3.00	3.00	0.50		2.30	3.00	3.00	0.50		0.50	28.00	20.00	14.00		14.00	12.00	11.00	21.0
21.6	2.05	2.90	3.00	0.25		2.05	2.90	3.00	0.25		2.05	2.90	3.00	0.25		0.25	28.00	20.00	14.00		14.00	12.00	11.00	21.6
22.0	2.75	3.15				2.75	3.15				2.75	3.15				0.75	28.00	20.00	14.00		14.00	12.00	11.00	22.0
23.0	2.40	2.80				2.40	2.80				2.40	2.80				0.50	28.00	20.00	14.00		14.00	12.00	11.00	23.0
24.0	2.05	2.55				2.05	2.55				2.05	2.55				0.25	28.00	20.00	14.00		14.00	12.00	11.00	24.0
25.0	1.75	2.30				1.75	2.30				1.75	2.30				0.10	28.00	20.00	14.00		14.00	12.00	11.00	25.0
26.0	1.50	2.00				1.50	2.00				1.50	2.00				0.00	28.00	20.00	14.00		14.00	12.00	11.00	26.0
27.0	1.25	1.75				1.25	1.75				1.25	1.75				0.00	28.00	20.00	14.00		14.00	12.00	11.00	27.0
28.0	1.05	1.55				1.05	1.55				1.05	1.55				0.00	28.00	20.00	14.00		14.00	12.00	11.00	28.0
28.8	0.90	1.40				0.90	1.40				0.90	1.40				0.00	28.00	20.00	14.00		14.00	12.00	11.00	28.8
29.0	0.70	1.30				0.70	1.30				0.70	1.30				0.00	28.00	20.00	14.00		14.00	12.00	11.00	29.0
30.0	0.50	1.10				0.50	1.10				0.50	1.10				0.00	28.00	20.00	14.00		14.00	12.00	11.00	30.0
31.0	0.30	0.90				0.30	0.90				0.30	0.90				0.00	28.00	20.00	14.00		14.00	12.00	11.00	31.0
32.0	0.10	0.70				0.10	0.70				0.10	0.70				0.00	28.00	20.00	14.00		14.00	12.00	11.00	32.0
33.0	0.00	0.50				0.00	0.50				0.00	0.50				0.00	28.00	20.00	14.00		14.00	12.00	11.00	33.0
34.0	0.00	0.25				0.00	0.25				0.00	0.25				0.00	28.00	20.00	14.00		14.00	12.00	11.00	34.0
Max. Boom Length	0°	0°	0°	0°	0°	0°	0°	0°	14°	30°	0°	0°	25°	38°	43°	0°	0°	45°	50°	55°	39°	57°	Min. Boom Length	