HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK





Max. Lifting Capacity: 50 Metric Tons at 3.8 Meters

Max. Boom Length: 51.8 Meters

Specifications

- A mega-powered crane equipped with precision control capability.
- Engine Speed Sensing (ESS) System makes efficient 100% use of engine power for steady, effortless operation.
- Powerful engine and strong line pull make light work of heavy-duty tasks such as diaphragm wall construction.
- Precise, full hydraulic control gives crane performance ideal for construction tasks demanding high precision.
- Powerful winch first layer maximum line pull of 17 tons, and wide, large-diameter drum with maximum rope capacity of 32 m at first layer.
- Maximum line speed of 100 m/min for main and auxiliary winches.

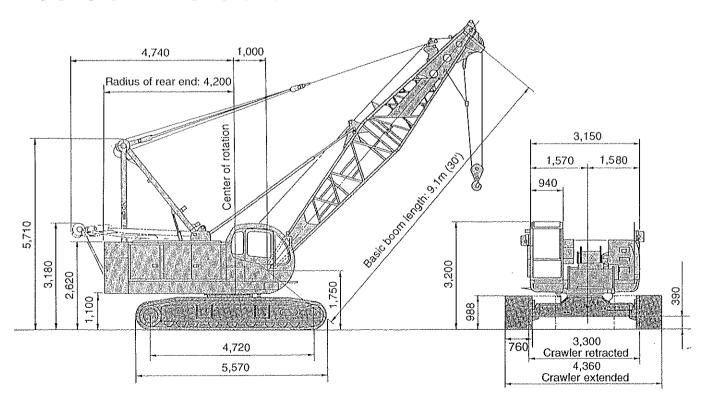
TIONG WOON CRANE & TRANSPORT PTE. LTD.

NO. 15 PANDAN CRESCENT SINGAPORE 128470

TEL: 261 7888 (12 LINES) FAX: 777 4544

General Dimensions

Unit: mm



Specifications

Upper machinery



Power pl	ant
Model	Mitsubishi 6D16-TE1
Type	Water-cooled, direct fuel injection,
	with turbocharger

	with turbocharger
No. of cylinder	4
Bore and stroke	118 mm x 115 mm
Displacement	
Rated power180	PS (132.4 kW) at 2,150 rpm
•	(JIS D1005)
Max. torque 70 kg-	m at 1,600 rpm (JIS D1005)
Cooling system	Liquid, recirculating bypass
Starter	
Generator	
Cycles	4
Radiator	Plate fin type core,
	thermostatically controlled
Air cleaner Dry type witl	n replaceable paper element
Fuel tank capacity	350 liters
Batteries Two 12V,	150 A-hr capacity batteries,
	series connected
Print and and an interest of the following the first of the following the first of	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

Electrical system All wiring corded for easy servicing, individual fused branch circuits.



Hydraulic system

Pumps: All three variable displacement pumps are driven by heavy-duty pump drive. One of these pumps is used in the right propel circuit

and hook hoist circuit, and can acommodate an optional third circuit. Another is used in the left propel circuit and hook hoist circuit. The third variable displacement pump is used in the swing circuit. In addition, one gear pumps are used in the control system and auxiliary equipment. One of these serves the clutch and brakes.

Control: Full-flow hydraulic control system for infinitely variable pressure to front and rear drums, and boom hoist. Controls respond instantly to the touch, delivering smooth function operation.

Pressure:

Load hoist, boom hoist	
and propel system	315 kg/cm ²
Swing system	260 kg/cm ²
Control system	
Reservoir capacity	
Cooling: Oil-to-air heat exchanger	

Filtration: Suction strainer, return filter, and drain filters



Boom hoisting system

Powered by a hydraulic axial piston motor through a planetary reducer.

Brake: A spring-set, hydraulically released

multiple-disc brake mounted on the boom hoist motor and operated through a control valve. Safety pawl (external ratchet) are fitted for locking the drum. **Drum:** Single drum, grooved for 16mm dia. wire rope.

Line speed: Single line on first drum layer Hoisting (max.)65n



Load hoist system

Tandem drums powered by two hydraulic axial piston motors, through planetary reducers.

Clutches: Internally expanding band

clutches, 711 mm dia, x 102 mm wide

Brakes: Brake valves and externally contracting, spring set, hydraulically released band brakes, with positive and negative actuation. 900 mm dia. x 120 mm. Safety pawls (external rachet) for locking drums. Both positive and negative brake systems are available. Air cooling fins on brake drum.

Drums: (front and rear): 462 mm P.C.D. x 522 mm wide drums, each grooved for 22 mm wire rope. Rope capacity of 175 m working length and 278 m storage length.



Swing system

Swing unit: Powered by hydraulic axial motor driving spur gears through a planetary reducer, the swing system provides 360°

rotation.

Swing speed3.7 rpm

Swing brake: A spring-set, hydraulically released multiple-disc brake mounted on swing motor.

Swing circle: Single-row ball bearing with an internal cut swing gear.

Swing lock: Two-position pin-in-hole lock (manually engaged)



Operator's cab

Totally enclosed, full-vision cab fitted with safety glass and a sliding front window. A fully adjustable, high-backed seat with a

head rest and arm rests permits operators to set ideal working position. An air conditioner, FM/AM radio, signal horn, cigarette lighter, windshield wipers, washers, and floor mat are standard features.



Controls

In front of the operator are foot pedals for front and rear drum brakes. At the operator's right are console-mounted adjustable

short levers for front and rear drum control, boom hoist control lever and positive/negative brake select switchs for front and rear drum brakes. Beside the operator's seat on the right are two short levers for propel control. At the operator's left are: a consolemounted swing lever, an optional third drum control lever, and front and rear drum pawl control switches; switches for ignition, engine stop, a down speed adjusting knobs for front drum, rear drum and boom hoist drum. Creep speed control switch for hoist is on the hoist lever. A swing brake switch and a signal horn button are on the swing lever.

Lights: Two front flood lights and one cab inside light

Check & Safety Monitor

Gauges: Fuel, water temperature for engine, hour

meter, optional tacho meter

Warning lamps: Engine oil pressure, hydraulic oil pressure, water temperature, battery charge, air cleaner and engine oil filter

Safety devices: Function lock lever, hook over-hoist alarm and shut-off switch, boom over-hoist limit switch, boom angle indicator, signal horn, boom hoist and front and rear drum locks, swing lock, free-fall warning lamps, free-fall interlock brakes, travel locking lever, boom back stops, hook safety latch and optional load moment limiter (overload protection device) are provided.



Gantry

Folding type, fitted with sheave frame for boom hoist reeving, lowers toward rear onto cab roof. Hydraulic lift is standard. Full up,

full down positions with linkage.

Counterweight

Three-piece stack

Total weight 17,000 kg



Tools

Tool set and accessories for routine machine maintenance are provided.

Lower machinery

Carbody: Steel-welded carbody with axles.

Crawler: Side frames can be hydraulically extended for wide-track operation or retracted for transportation. Extension cylinders operated with a valve in the upper control system. Crawler belt tension adjusted with hydraulic jack and maintained by shims between idler block and frame.

Crawler drive: Independent hydraulic propel drive is built into each side frame, each with a hydraulic motor propelling a driving tumbler through a planetary gear box.

Crawler brakes: Brake valves and spring-set, hydraulically released multiple-disc parking brakes are built into each propel drive.

Steering mechanism: A hydraulic propel system provides both skid steering (driving one track only) and counter-rotating steering (driving tracks in opposite directions).

Track rollers: 9 lower rollers and 2 upper rollers are fitted to each side frame, sealed and maintenance-free.

Shoes:

Number	. 59 each side
Standard flat shoe width	760 mm
Max. travel speed:	
High range	2.2 km/h
Low range	1.4 km/h
Max. gradeability: 40%	

Crane attachment



Boom:

Welded lattice construction using tubular, high-tensile steel cords with pin connections between sections.

Max. lifting capacity	50,000 kg
Basic boom length	9.1m (30')
Max. boom length	51.8m (170')



Jib (optional):

Welded lattice construction using tubular, high-tensile steel cords with pin connections between sections.

	Secretary Fixed jib/coxes or
Max. lifting capacity	6,600 kg
Max. jib length	15.2 m (50')
Max. total length (Boom length + jib length)	42.7 m (140') + 15.2 m (50')



Hook blocks

A range of hook blocks can be specified, with a safety latch.

Lifting capacity	50tons	:32tons	19tons	6.6tons báll/hóok	6.6toris: Liabt wt
No. of sheaves	5	3	2	1	0
Weight (kg)	650	500	400	160	60

Diameter of wire ropes

Standard:

Hook hoist	22 mm
Aux. hoist	22 mm
Boom hoist (12-part line)	16 mm
Boom pendants (2-part line)	30 mm
Optional:	
Jib hook hoist	22 mm
Jib back stay pendants (2-part line)	20 mm
Boom hoist reeving: 12 parts of 16 mm dia. wire	e rope
Boom backstops: recommended for all boom le	ngths

Line pull (for crane, diaphram wall bucket)

	Max-permissible i	Max, available
Front:	6,600 kg	17,000 kg
Rear:	6,600 kg	17,000 kg



Weight

Operating weight:

Approx. 52,600 kg

(including 9.1 m (30 ft) boom and 50-ton hook block)

Ground pressure: 0.68 kg/cm² with 760 mm shoes

Notes:

- 1. Operating radius is the horizontal distance from the centerline of rotation to a vertical line through the centerline of gravity of the load.
- 2. Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, winds, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).
- 3. Capacities do not exceed 75% of minimum tipping loads. Some of the rated crane loads are based on the structural strength, and overload could damage the boom, jib and frame, etc. without tipping.
- 4. Areas on rated crane load table where no rating are shown, operation is not intended or approved.
- 5. The loads can be lifted actually is obtained by deducting weight of hook block, slings and all other load handling accessories from the rated crane load.
- 6. For arrangements of the boom, jib and guy lines and reevings of the boom hoist rope, strictly observe the instruction of the operator's manual.
- 7. Gantry must be in fully raised position for all operations.
- 8. Hook block capacity and weight (metric ton).

759

809

709

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60

Capacily of hooks	-50 tori	32 ton:	191011	6 6/ton (half-s hook):	6.6 tón (swivel- y⊋hock)	
Weight (metric ton)	0.65	0.5	0.4	0.16	0.06	l

9. Max. hoisting load

No. of parts of line : *	1.0	W/250	2 500000	4	5 .
Max. load (metric ton)	6.6	13.2	19.8	26.4	33.0
No. of parts of line	6	7.	8	AVELO A	4425
Max. load (metric ton)	39.6	46.2	50.0		

10. When lifting over boom point with jib or auxiliary sheave, rated loads for the boom must be deducted as shown below.

Jib length	6.1 (20)	91	12.24	(50)	Aux.
m (ft)		(30)	(40)	(50)	sheave
Deduct (metric ton)	1.1	1.4	1.6	1.9	0.46

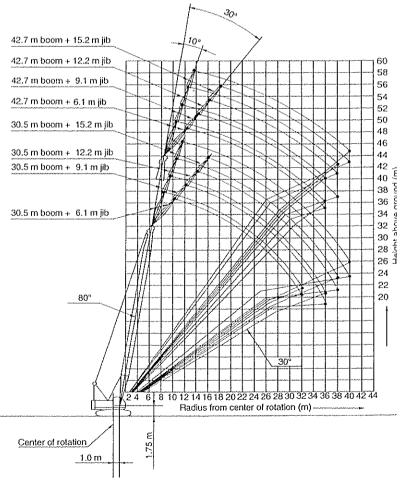
- 11. The total loads that can be lifted over a jib is limited by rated jib loads. The total load that can be lifted over an auxiliary sheave is limited by rated aux. sheave load. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
- 12. Boom lengths for jib mounting are 30.5 m (100') to 42.7 m (150).
- 13. An aux, sheave cannot be used on 51.8m (170') boom length.
- 14. Insert boom with lug is required for jib mounting.

Working Ranges

9.1 m boom

58 56 51.8 m boom 54 52 48.8 m boom 50 45.7 m boom 48 46 42.7 m boom 44 39.6 m boom 42 40 36.6 m boom 38 33.5 m boom 36 34 30.5 m boom 32 30 27.4 m boom 28 24.4 m boom Height above ground (m) 26 24 21.3 m boom 22 18.3 m boom 20 18 15.2 m boom 16 12.2 m boom

Fixed Jib Working Range



10 Q 8

Boom Lifting Capacities

Unit: metric ton

Boom rated loads in metric tons for 360° working area

Crawlers fully extended

Domitengh Obelaling 70/00 radius (m)	(00)	12-2 (40)	152 150)	18.8 (60)	21/31 7(70)	24.40 (80)	27.4 (90)	(3015 (100)	33.5 (40):	36.6 (120)	39,6 (180)	(12.7) (140)	(157) (150)	48.6 (160)	51.8 (170)	Boom length or (f) Operating
3.5	50.0/3.5	50.0/3.5					11000.67	6,909			11 10 12	i i i i i i i i i i i i i i i i i i i		2.612	<u> </u>	3.5
3.8	50.0	50.0							-incoming and			404,114	A Maria Mari		*****************	3.8
4.0	49.0	48.9	48.8/4.0	41.8/4.5	NAME:		5-10.76		92.63					1.77	400	4.0
5.0	35.1	35.0	35.0	34.9	34.8/5.0	29.7/5.6		1					12302501135			5,0
6.0	26.4	26.4	26.3	26.3	26.2	26.2	26.0/6.1	23.0/6.6	3 B 124	1941.U2		NO.		Childy		6.0
7.0	21.1	21.0	21.0	20.9	20.9	20.8	20.8	20.7	19.8/7.2	18,0/7.7						7.0
8.0	17.5	17.5	17.4	17.4	17.3	17:3	17.2	: 17.2	17.1	17.1	16.9/8.2	15,3/8,7	19.12. 1	\$450 HS	Miner	8.0
9.0	14.9	14.9	14.8	14.8	14.7	14,7	14.6	14.6	14.5	14.5	14.4	14.4	13.2/9.3	13.2/9.8		9.0
10.0	14.7/9.1	13.0	12,9	12.9	12.8	12.8	12:7	12.7	12.6	12:6	12.5	12.5	12.4	12.4	11.5/10.3	10.0
12.0		10.5/11.7	10.1	10.1	10.0	10.0	9.9	9.9	9.8	9.8	9.7	9.7	9.6	9.6	9.5	12.0
14.0			8.3	8.3	8.2	8.2	8.1	8.1	8.0	8.0	7,9	7,9	7.8	7.8	7.7	14.0
16.0			8.0/14.4	7.0	6.8	6.8	6.7	6.7	6.6	6.6	6.5	6.5	6.4	6.4	6.3	16.0
18.0				6.4/17.0	5.9	5.8	5.7	5,7	5,6	5.6	5.5	5.4	5.4	5.3	5.2	18,0
20.0					5.2/19.7	5.0	4.9	4.9	4.9	4.8	4.8	4.6	4.5	4.4	4.3	20.0
22.0		no na	11/2/19/19/			4,4	4.3	4,2	4.1	4.1	4,0	3.9	3.9	3.8	3.6	22.0
24.0						4.3/22.3	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.2	3.1	24.0
26.0	. 17-14	化物线					3.6/24.9	3.2	3.2	3.1	3.0	2.9	2.8	2.8	2.6	26,0
28.0								2.9/27.6	2.8	2.8	2.6	2.5	2.5	2.3	2.2	28.0
30.0	2014/162 2014/2020		2.5.7	/ St. 11.5	10 Nr.	1 1 40			2.5	. 2.4	2.3	, 2.2	↑ 2.1	2.0	1.8	30.0
32.0									2.5/30.2	2.2	2.0	1.9	1.8	1.6	1.5	32.0
34.0		Unitary Second		5373x1434 1224441		20 4 7 7 8 9 1 20 7 7 8 9 9	SUCTONING POPERATE	Magazia Magazia	10 27 (6.2%) 10 27 (6.2%)	2.1/32.9	1.7	1.6	1.5	1.3	1.2/34.0	34.0
36.0											1.5/35.5	1.3	1.2	1.1/36.0		36.0
38,0	6 (46 A)							27 (66 (65) 14 2-8 2	14 40 A.S. 14 KALVA			1.1/38.5	1.1/37.0			38.0

Note: Ratings shown in ____ are determined by of the strength the boom or other structual components.

Boom Arrangement

Arrangement A: 3.0m + 6.1 m + 9.1 m insert boom

Boom le	ngth	- Boom arrangements
	m ((i)) <i>y</i>	
9,1	(30)	Base-Tip
12.2	(40)	Base-A-Tip
15.2	(50)	Base-B-Tip Base-A-A-Tip
18.3	(60)	Base-A-B-Tip, Base-C-Tip
21.3	(70)	» Base-A-C-Tip, Base-B-B-Tip, Base-A-A-B-Tip
24.4	(80)	Base-B-C-Tip, Base-A-B-B-Tip, Base-A-A-C-Tip
27.4	(90) 👙	Base-A-B-C-Tip, Base-B-B-Tip, Base-A-A-B-B-Tip,
	STATE AND	Base-C-C-Tip
30.5	(100)	Base-B-B-C-Tip, Base-A-B-B-Tip, Base-A-A-B-C-Tip,
		Base-A-C-C-Tip

Base =5.1m(17'), Tip=4.0m(13') Inserts: A = 3.0 m (10'), B =6.1 m (20'), C = 9.1m (30')

Boom length	Boom arrangement
33.5 (110)	Base-B-C-C-Tip, Base-A-B-B-C-Tip,
1965年6月1日 - 1965年	Base-A-A-G-C-Tip
36.6 (120)	Base-A-B-C-C-Tip, Base-A-A-B-B-C-Tip,
	Base-B-B-B-C-Tip
39.6 (130)	Base B.B.C.C-Tip, Base-A-A-B-C-C-Tip,
190 C. WASH 178 W.	G Base A B-B-B-C-Tip! Processing and the second sec
42.7 (140)	Base-A-A-B-B-B-C-Tip, Base-A-B-B-C-C-Tip
45.7 (150)	Base-A-A-B-B-C-C-Tip, Base-B-B-B-C-C-Tip
48.8 (160)	Base-A-B-B-B-C-C-Tip
51.8 (170)	Base-A-A-B-B-B-C-C-Tip

Arrangement B: 3.0m + 6.1 m insert boom

Boom le	ngth!	Boom arrangement
9.1	(30)	Pase Tipe 46
12.2	(40)	Base-A-Tip
15.2	(50)	Base B-Tip, Base A-A-Tip
18.3	(60)	Base-A-B-Tip
21.3	(70)	Base-B-B-Tip, Base-A-A-B-Tip
24.4	(80)	Base-A-B-B-Tip
27.4	(90)	Base-B-B-B-Tip, Base-A-A-B-B-Tip

Base =5.1m(17'), Tip=4.0m(13') Inserts: A = 3.0 m (10'), B =6.1 m (20'), C = 9.1m (30')

Boom length's	a) Boom arrangement
4.25-45-01(0).24	Middle Control of the
. 30.5 (100)%	Base-A-A-A-B-B-Tip, Base-A-B-B-Tip
33.5 (110)	Base-B-B-B-Tip, Base-A-A-B-B-B-Tip
36.6 (120).	Base-A-B-B-B-B-Tip; Base-A-A-A-B-B-B-Tip
39.6 (130)	Base-B-B-B-B-B-Tip, Base-A-A-B-B-B-Tip
42.7 (140) ii	Base A-B-B-B-B-B-Tip, Base A-A-A-B-B-B-B-Tip
45.7 (150)	Base-B-B-B-B-B-B-Tip, Base-A-B-B-B-B-B-Tip
48.8 (160)	Base A-B-B-B-B-B-Tip, Base A-A-A-B-B-B-B-B-Tip
51.8 (170)	Base-A-A-B-B-B-B-B-B-Tip

Fixed Jib Lifting Capacities



Unit: metric ton

Jib rated loads in metric tons for 360° working area (Jib offset angle 10°/with 19-ton main hook)

Crawlers fully extended

Boom length . m(ti)		. 30/5	((60)	117*	4.44	331	(110)	4		1336	(120),	li t	444	39.0	3(130)			42,	7)(1,40)	44.
as ar alb length. Badius (m. artik	6 JL 120	947 (30)	(12.2) 1140)	15.2 ⁷ (50)	6 dia 201)9.1 N(30)	12/2 (40)	(50)	61. 201.	(30)	(1212 (40)	152 (60)	6.6 (20)	-9,1 (30)	12.2 (40)	(15,2) (50)	(20) (20)	-9.j. *(30)-	(40) (40)	152 (50)
жен э 9	6.6	Vietas.	65.65	2.3	6.6	11-21-4	in to took		23601274	351.33	15,118	Jan de	100	ware.	s Francisco	Marijuvija	or account	100	je sto jih ita	A VEGET
10	6.6	6.6			6.6	6.6			6.6				6.6							
4/37 12 12 The same	6.6	6,6	6.0	5.2	6.6	6.6	¥6.0	5.2	46.6	6.6	% 6.0		₫6.6	6.6		160	√6.6∌	∮ 6.6 ∮		0 14 Lgs
14	6.6	6.6	6.0	5.2	6.6	6.6	6.0	5.2	6.6	6.6	6.0	5.2	6.6	6.6	6.0	5.2	6.6	6.6	6.0	5.2
16	6.2	6.4	6.0	5.2	6.0	6.2	6.0	5.2	6.0	6.2	6.0	5.2	5.8	6.1	6.0	5.2	5.8	6.0	6.0	5.2
18	5.1	5.3	5.4	5.2	5.0	5.2	5.3	5.2	4.9	5.1	5.2	5.2	4.8	5.0	5.1	5.2	4.7	4.9	5.0	5.1
20	4.3	4.4	4.6	4.7	4.2	4.3	4.5	4.6	4.1	4.3	4.4	4.5≾	74.0	4.1	4.3	4.4	3.9	4.0	4.2	4.3
22	3.6	3.8	3.9	4.0	3.5	3.7	3.8	3.9	3.4	3.6	3.7	3.8	3.3	3.5	3.6	3.7	3.2	3.4	3.5	3.6
24	3.1	3.2	3.4	3.4	3,0	3.1	3.3	3.3	2.9	3.0	3.2	3.2	2.7	2.9	-3.0	3.1	2.7	2.8	ੈ3:0°	3.0
26	2.6	2.8	2.9	3.0	2.5	2.7	2.8	2.9	2.4	2.6	2.7	2.8	2.3	2.4	2.6	2.7	2.2	2.4	2.5	2.6
28	2.2	2.4	2.5	2.6	2.1	2.3	2.4	2,5	2.0	2.2	2.3	2.4	1.8	, 2.0	2.2	2.3	1.7	.1.9	2.1	2.2
30	1.9	2.1	2.2	2.3	1.7	1.9	2.1	2.1	1.6	1.8	2.0	2.0	1.4	1.6	1.8	1.9	1.3	1.5	1.7	1.8
32 / 32	//1,6	ી.7∌	1.9	2.0	1.4	1,6	1.7	1.8	1.3	1.5	1.6	1.7	\$1.1	1.3	1.4	1,5	6,55	1.2	1.3	1.4
34		1.4	1.6	1.7	1.1	1.3	1.4	1.5		1.2	1.3	1.4			1.1	1.2				1.1
36	WXX	1,2	%1.3	1,4			1.2	1.3	iii thiy	(4/2) (4)	F 10%	111	1316/201	-X.(2)	60° 20	50,000	A.K.	10000	CAOST	0.6845
38			1.1	1.2								L		<u> </u>		<u></u>	<u></u>	<u></u>	<u></u>	

Note: Ratings shown in ____ are determined by the strength of the boom or other structual components.

Jib rated loads in metric tons for 360° working area (Jib offset angle 30°/with 19-ton main hook)

Crawlers fully extended

Boom length m(f)	(FL-14)	130	ridon.			778a's	(410)3	71.67	<i>ር</i> የሃም ፍ	4.36.6	3 (120).			39.6	(130).	A 705	745	42	(1,40)	17.7
Radius (m) m (ft)	(6.1 (20)-	(30)	(12.2° (40)	-15"2 (50)-	6.1 (20)	(30)	12.2 (40)	15.2' (50)	76.1 1 (20),	9 f) (30):	-12.2 - (40)	16'2' (50)	61° (20)	i9.1; (30)	1221 1(40)	15.2 (50)	61.1 (20)	9.1°2 (30)3	.12.2 ₃ *(40)	•15.2 (50)
12	6.6	1.54 (1)	60.45		6.6		AUT I	183763	6.6	100 JA	A V	V12460	6.6	KEN S	10. 554 K			12 Sy 18 S		474 Ew
14	6.6	6.0			6.6	6.0			6.6	6.0			6.6	6.0			6.6			
(3.4% × 16)	6.2	6.0%	े4.3	3,7	6.1	6.0	4.3		(.6:1).	∢6,0%	4.3	1. 1	6.0	6.0	4.3		ំ5.9	5,3	\$0.884	VENT.
18	5.1	5.4	4.3	3.7	5.1	5.3	4.3	3.7	5.0	5.3	4.3	3.7	4.9	5.2	4.3	3.7	4.8	5.1	4.3	3.7
20	4.3	4,6	4.3	3.7	4.2	4.5	4.3	3.7	4.2	4.4	4.3	3.7	4.1	4.3	4.3	3.7	4.0	4,3	4,3	3.7
22	3.7	3.9	4.1	3.7	3.6	3.8	4.0	3.7	3.5	3.7	3.9	3.7	3.4	3.6	3.9	3.7	3.3	3.6	3.8	3.7
24	់ូ3:1.:	3.3	∂3,5 ⟨	3.7	3.0	3.2	3,4	3.6	2,9	3.2	3.4	3.5	2.8	3.1	3.3	3.4	2.8	3.0	3.2	3.4
26	2.6	2,8	3.0	3.2	2.5	2.8	2.9	3.1	2,5	2.7	2.9	3.0	2,4	2.6	2.8	2.9	2.3	2.5	2.7	2.9
28	72.37	2.4	2.6	2.8	2.2	⊴2,4)2.5 h	2.7	2,1	42.3°	2,5	2.6	2.0	2.2	2.4	2.5	-1.9	2.1	∮2 <u>:</u> 3 ∤	2.4
30	1.9	2.1	2.3	2.4	1.8	2.0	2.2	2.3	1.7	1.9	2.1	2.2	1.6	1.8	2.0	2.1	1.5	1.7	1.9	2.1
32	(1,6	1.8	2.0	2,1	1.5	1.7	1.9	2.0	1.4	1.6	1.8	1,9	1.2	1.5	1.7	1,8	//1.1 \(\)	1,4	1.6	1.8
34		1.5	1.7	1.8	1.2	1.4	1.6	1.7	1.1	1.3	1.5	1.6		1.1	1.4	1.5			1.3	1.5
36	\$ 50 Y	1.2	1.4	1.6	No.	1.1%	1.3	1.5	1044.0	6.2	1.2	1.4	X XX	4 (4 %) W	£1.1 ₃	1,2.	16, 748, 2	100		1.1
38			1.2	1.3				1.2				1.1				l .				
40 🗥	\$ 050V	1697/55	enik m	্বে:পঞ্	K. Sec.	v4/88	Nave		May 15	特勒	9.505	4 C. 437		100/65	6.00	9.7	4.0,614	-876	(3.30)	AL VIEW

Note: Ratings inside shown in ____ are determined by the strength of the boom or other structual components.

Jib Arrangement

1918 MAZ	THE SALE	
700		oil attailgement
6.1	(20)	Base-Tip
9.1	(30)	Base-A-Tip
12,2	(40)	Base B-Tip
15.2	(50)	Base-A-B-Tip

Base =3.0m(10'), Tip=3.0m(10') Inserts: A =3.0 m (10'), B =6.10 m (20')

Note:

- 1. Jib may be used with main boom lengths from 30.5 m (100') to 42.7 m (140').
- 2. An insert boom with lugs is required for jib attachment.
- Actual hoistable loads using jib can be calculated by deducting the total weight of jib hook and slings and all other load handling accessories from jib ratings.

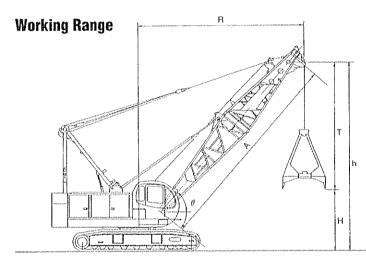
Clamshell ratings in metric tons for 360° working area

Crawlers fully extended

Boom len	gth 👙 🖟	m (lt)	NA.	6:47/65	9.1	(30)			12.2	(40)	使为为	1379	<i>-</i> 15.2	(50)	60 F 1/3		∜18.3	(60)	
Boom and	gle	(°)	θ	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55	65
Operating	radius	(m)	A .	8.7	7.7	6.5	5.2	11.2	9,9	8.3	6.5	13.7	12.0	10.0	7.7	16.2	14.2	11.8	9,0
Ŧ,	3	0.8	Life Committee Carrie Committee and a	0.9	2.2	3.2	4.1	2.7	4.3	5.7	6.9	4.4	6.5	8.2	9.6	6.2	8.6	10.7	12.4
je (ede (1.0		0.9	2.2	3.2	4.1	2.7	4.3	5.7	6,9	4.4	6.5	8.2 🔩	9.6	6.2	8.6	10.7	12.4
ping (m)	(m.	1,2	14	0.5	1.8	2.8	3.7	2.3	3.9	5.3	6.5	4.0	6.1	7.8	9.2	5.8	8.2	10.3	12.0
- Tag	- TO	1.6		0.6	1.9	2.9	₹3.8	2.4	4.0	5.4	6.6	4.1	6.2	7.9	%9:3	ੁ5.9 ∉	8.3	10.4	12.1
Boom poi	nt height	(m)	h	6.7	8.0	9.0	9.9	8.5	10.1	11.6	12.7	10.2	12.3	14.0	15.4	12.0	14.4	16.5	18.2
Rated loa	d	(ton)	11488		10000		Batty	de domin			5	,5			10.00			经外类	

- Working radius is the horizontal distance between the center of rotation and the bucket's center of gravity.

 2. Total weight of bucket and materials must not exceed rated load.
- Bucket capacity (m³) x specific gravity of material (ton/m³) + bucket weight (ton):≨rated load
- Rated load must not be exceeded, even when using bucket of different capacity for sepa-rate task.
- Bucket unit weight must not exceed 3.1 tons. Bucket weight must also be decreased according to operating cycle and bucket lowering height.
 Rated loads are determined by degree of stability. During simultaneous operations of boom and swing, rapid acceleration or deceleration must be avoided. Particular care is required with long boom longths.
 The 1.6 m² bucket is for loading operations.



Clamshell Bucket

Bücket capacity (m²)	Approximate & weight (ton)	Bucket clearance (m).
0.8	2.1	3.3
1.0	2.5	3.3
图表现现为1.2位于2006	3.1	
1.6	2.8	3.6

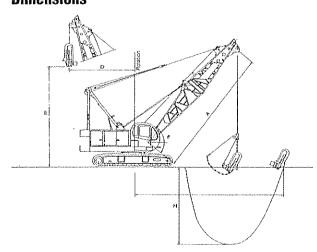
Dragline

Dragline ratings in metric tons for 360° working area

Crawlers fully extended

À	Boom length in (ft)		12.2 (40)	an parker parket	o reversioner	15:2 (50)			18,3 (60)	
F	Boom angle (*)	30	40	50	30	40	50	30	40	50
D	Dumping radius (m)	12.0 · . · .	10.9	9,4	14.7	13.2	11,9	17.8	15.5	13.3
E	Max. dumping height (m)	5.1	6.8	8.3	6.6	8.8	10.7	8.1	10.8	13.0
å	Max. digging reach (m):	16.8	15.3	13.3	20.2	18.3	15.7	23.6	21,3	18.2
Н	Max. digging (m)	9.4	8.2	6.6	12.0	10.5	8.6	11.1	8.5	6.2
· · · · · · · · · · · · · · · · · · ·	Rated load (ton)	6.6	6.6	6.0 40	⊕ 4.9	r⊁ ⊁6,3 % #	6.6	4.0	34.8724	6.0%

Dimensions



- Note:
 1. Dimension G may vary considerably depending on digging conditions and the skill of the operator.
 2. Dimension H may vary depending on digging material.
 3. Above ratings are for combined weights of bucket, accessories, and material.
 4. Maximum boom length recommended for dragline operation is 18.3m (60°).
 5. A 10.5-ton counterweight should be attached for dragline operation.
 6. Maximum allowable bucket weight is 2.1 tons.
 7. Maximum allowable digging bucket size: Heavy-duty type: 1.5 m³ Light-duty type: 2.0 m³

Luffing tower attachment



Luffing tower:

Welded lattice construction using tubular, high-tensile steel cords with pin connections.

Max. lifting capacity	12 tons at 10 m
Basic tower length	21.0 m (69')
Lower tower length*	5.1 m (17)
Tower cap length	0.6 m (2')
Max. luffing tower length	39.3 m (129')



Jib:

Welded lattice construction using tubular, high-tensile steel cords with pin connections between sections.

Basic jib length	16.8 m (55')
Max. luffing jib length	29.0 m (95')



Hook blocks

A range of hook block can be specified, with a safety latch.

Lifting capacity	19 tons	6.6 tons (ball hook)
No. of sheave	1	0
Weight (kg)	400	160

Diameter of wire ropes

Hook hoist	22 mm
Jib. hoist (9-part line)	22 mm
Tower hoist (12-part line)	16 mm
Tower guy line (2-part line)	30 mm
Upper jib guy line (2-part lîne)	28 mm
Lower jib guy line (2-part line)	28 mm



Weight

Operating weight:

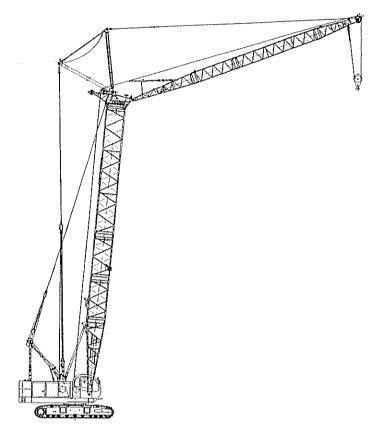
Approx. 56,400 kg

(including 21.0 m (69 ft) tower, 16.8 m (55 ft)

jib, and 19 ton hook block)

Ground pressure: 0.73 kg/cm² with 760 mm shoes

Luffing tower configuration



Luffing Tower Lifting Capacities

BM 500

Notes:

- Operating radius is the horizontal distance from the centerline of rotation to a vertical line through the centerline of gravity of the load.
- 2. Rated loads included in the charts are the maximum allowable freely suspended loads at a given tower length, tower and jib angle and load radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).
- Capacities do not exceed 75% of minimum tipping loads.
 Some of the rated crane loads are based on the structural strength, and overload could damage the tower, jib and frame, etc. without tipping.
- 4. Areas on rated crane load table where no rating are shown, operation is not intended or approved.
- The load which can be lifted actually is obtained by deducting weight of hook block, slings and all other load handling accessories from the rated crane load.
- For arrangements of the tower, jib and guy lines and reevings of the tower hoist rope and jib hoist rope, strictly observe the instruction of the operator's manual.

- 7. A pillow plate must be used in the front end of the crawlers when erecting or lowering 39.3 m (129') tower.
- 8. Hook block capacity and weight (metric ton)

Lifting capacity	19.tons	6.6 tons (ball hook)
No. of sheave	1	0
Weight (ton)	0.4	0.16

9. Max. hoisting load

No. of parts of line	HAMBARA	1 12.
Max. load (metric ton)	6.6	12.0

- 10. For combinations of 19-ton hook with 16.8 m (55') jib, or 6.6-ton ball hook with 19.8 m jib, the jib tip weight (300 kg) must be attached to the upper tip of the jib.
- 11. The 6.6 ton ball hook must not be used with 16.8 m (55') jib.

Tower Arrangement

Arrangement A: 3.0 m + 6.1 m + 9.1 m insert tower

Tower length	Tower arrangement
(4) *(6 ± m (0) 1 ×	
21.0 - (69)	BaseA-A-C-Cap
24.1 (79)	Base-A-B-C-Cap
27.1 (89)	Base-A-C-C-Cap, Base-A-A-B-C-Cap
30.2 (99)	Base-A-B-B-C-Cap, Base-A-A-C-C-Cap
33.2 (109)	Base-A-A-B-B-C-Cap, Base-A-B-C-C-Cap
36.3 (119)	Base-A-A-B-C-C-Cap, Base-A-B-B-B-C-Cap
9 (39.3 (129)	Base-A-A-B-B-B-C-Cap, Base-A-B-B-C-C-Cap

Base = 5.1m (17'), Cap= 0.6 m (2') Inserts: A = 3.0 m (10'), B = 6.1 m (20'), C = 9.1 m (30')

Arrangement B: 3.0 m + 6.1 m insert tower

Tower i	ength,	I V v., Tower arrangement
11.	m (ji)	
21.0	(69)	BaseA-B-B-Cap
24.1	(79)	Base-A-A-B-B-Cap
27.1	(89)	Base-A-A-A-B-B-Cap, Base-A-B-B-B-Cap
30.2	(99)	Base-A-A-B-B-Cap
33.2	(109)	Base A-A-A-B-B-B-Cap, Base A-B-B-B-B-Cap
36.3	(119)	Base-A-B-B-B-Cap
39.3	(129)	Base-A-A-A-B-B-B-B-Cap, Base-A-B-B-B-B-B-Cap

Base = 5.1m (17'), Cap = 0.6 m (2') Inserts: A = 3.0 m (10'), B = 6.1 m (20'), C = 9.1 m (30')

Jib Arrangement

Jib length	Jib arrangements v
1.42 (* m.lji)(*)	
₹ 46.8 € (55) S	Base-A-B-Tip
19.8 (65)	Base-A-A-B-Tip, Base-B-B-Tip
22.9 (75)	Base-A-B-B-:Tip
25.9 (85)	Base-B-B-B-Tip, Base-A-A-B-B-Tip
29.0 (95)	Base-A-B-B-Tip

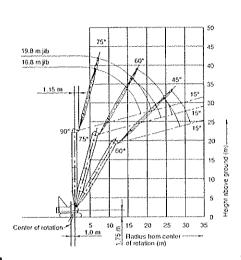
Base = 3.1 m (10'), Tip = 4.6 m (15') Inserts: A = 3.0 m (10'), B = 6.1 m (20')

Tower and Jib Combinations and Allowable Tower Angle

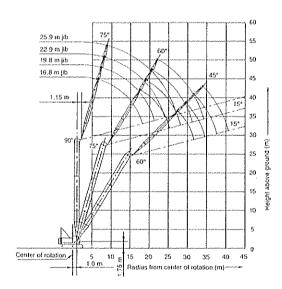
Tovera Cenomia			22.9mi 755	25 9 m l	-29 0±0;- (95) ¦ib	Pillow
21.0 m (69)	90%-60%		<u>^~\</u>	200 - 200 (200		X
24.1 m (79')	90° - 60°	90° - 60°	90° - 60°	•	•	X
27.1 m (89')	90° - 60°	90° - 60°	90% - 60%	90°-60°	er atvarra	X
30.2 m (99')	90° - 60°	°03 - °09	90° - 60°	90° - 70°	90° - 70°	×
33.2m (109')	90%-60%	90° - 70°	90°-70°	90° - 70°	90° - 70%	48,43 X 145, 14
36.3m (119')	90° - 70°	90° - 70°	90° - 70°	90° - 70°	90° - 70°	X
39.3m (129')	90%-70%	.90° - 70°	90%:70%	90%-80%	90% > 80%	
19-ton hook	0	0	Ö	0	0	-
Ball hook	×	0	0	*O'	350	

Luffing Tower Working Ranges

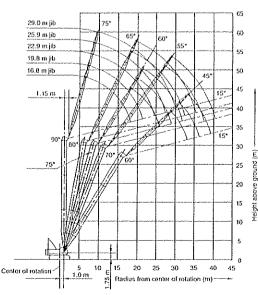
Tower Length: 21.0 m



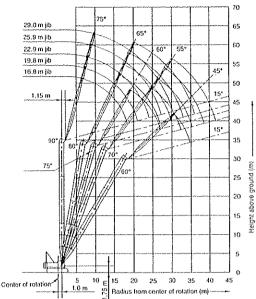
Tower Length: 27.1 m



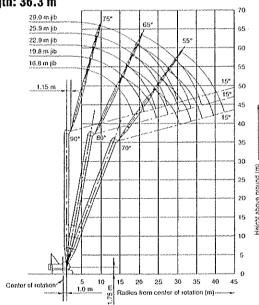
Tower Length: 30.2 m



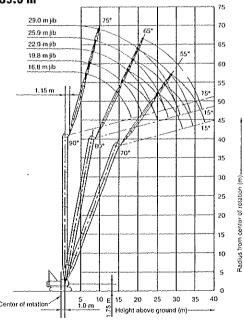
Tower Length: 33.2 m



Tower Length: 36.3 m



Tower Length: 39.3 m



Luffing Tower Lifting Capacities

Unit: metric ton

Luffing tower rated loads in metric tons for 360° working area

Crawlers fully extended

		(), (<u>)</u> (), ()	7 6/ 210	m (69°). T	ower 👈						m/(79)). f			(00)	00.00	Operating
Operating	14/7/16	8 m (55)	lb (c	19	θ'ŋi (65')	Jib.	16	3 m (55)	Jib	191	3 nv (65))	Jibk (* 34.)	(V. 22).	9 m (75') .	Jib / Est	radius
(m)	135.00 T	ower and	DAYAKO	ekonsul.	wer and 4.75°	0/37/41 609	onsz.	ower ang	60°		ower and	es Const	907	wer angl	60%	(n)
6.5	12.0/6.5		WOON	esva Ausoric	PK1.94	essanvesu.	12.0/6.5	1 - 14 M T T T T	NAMES OF	997,93	NATION AND	V 19 19				6.5
7.0	12.0	*1.104421.40	see alekaning	12.0/7.3	20018 1 7.219	228 142 86 8 C 2 A 5 C	12.0		2 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	12.0/7.3			Milder Arian			7.0
8.0	12.0	1778706		\$12.0\s	建筑		/12.0		多多等	∤12,0 %		有多数	11,5/8,1	医磷脂合物	1458184	√3 ≥8,0 ∉ ₃ ,∉
9.0	12.0			12.0			12.0			12.0			11.2			9.0
10,0	12.0	130 30100	13.17	11.8		ille la de	12.0	學就學問題	123949	11.8	2 P 48	24994	11.0	生物质素	1.5745.45	/* 10.0×**
12.0	10.7			10.5			10.7			10.5			10.3			12.0
14.0	9.6	6,9/15,9	Advanta.	9,4			9.6		地的流	為9.4章			9.2			14.0
16.0	8.2	6.9		8.1	6.1/17.5		8.2	6.3/16.7		8.1	······································	<u></u>	8.1			16.0
18.0	ਜ਼ 6.2 ਂ	6.0 4	10 J. 10	7.1	5,9	and diffe	6.2	. 5.8	33.75%27	7.2	5.6/18.3	2009/00/00	7.2	5,0/19.8	1915	18.0
20.0	5.5/18.3	5.2		5.9	5.2		5.5/18.3	5.1		5.9	5.0		6.3	4.9		20.0
22.0	规学性	4.7	\$105 P.T.	4.6/21.3	4,6		W. SA	୍ୟ 5 ୁ	激性意	4,6/21:3	4.4	PWN.	5.3	4.4	25.00.00	22.0
24.0		4.2/23.7	3.5/24.4		4.1			4.0	3.0/25.9		4.0		4.1	3,9		24.0
26.0	1211/2	(E) (St.) (E)	3.2	納納納	3.7	3,1/26.5	469年以後	3.9/24.5	₩3:05	450年21年。	3.6	10/12/0	3.9/24:2	3.5	的复数形式	26.0
28.0		de anticipa incipa servicia de de la constante	2.9		3.6/26.7	2.8			2.7		3.3/27.5	2.6/28.0		3.2		28.0
30:0			2.8/28,7			2.6	The state of		2.5		1000 to 1000 to	2.4		2.9	2.3/30.2	30.0
32.0				anni anni anni anni anni		2.4/31.6			2.4/30.2			2.2		2.9/30.4	2.1	32.0
34.0	机械的	\$12.58 P. CO.	2416:50	Approximation	5.6453	140745	4.46.44 6.41	34.34	#.B.Q		desci.	2.1/33.2	4.50		2.0	34,0
36.0					I									<u></u>	1.8	36.0
38.0	659	PASSIVAL	4000	k iyak	化等均原	36666	1840 E &	35,677	307 C.	350200	5,1278	2,491-531	College Solve	1890 N	1.8/36.1	38,0

Note: Ratings shown in [__] are determined by the strength of the boom or other structual components.

Luffing tower rated loads in metric tons for 360° working area

Crawlers fully extended

3849394894	77:73.00	59 <i>6841</i>	5939361)	\$ (# 15 K)	107:37:2	/ 885574S	m (89') T	ower.	127/2/20	1445-5 3 8	\$1:55.65V)	1000	
Operating	> €16	8 m (55')	Jib: A-V	VXV [9:	8/m (65))				JIB W/	742,725	9 m (85 ¹)	Jib 747	Operating
radius		ower aho						wer ang		90/21	ower and	lê Ş.Ş.	for radius
v/2 (m)	V/90°/	%75%	£60%	7.90% d	75	60%	₩ 90°#\	75° /r.	7 60%	/\90°(\)	2/152 1	7.60°23	(m) (c. c.
je 46.5 /4 /5	12.0/6.5	在 在	naire.	BAR GER	March 1	508 494 33	in const	477 374		Edin A	A. Stopen	100	6.5
7.0	12.0			12.0/7.3					· reserve and red described in				7.0
8.0	12.0	11.00		∵12.0	States	na ka	11.5/8/1	4444	armitta.	8.6/8.9	Zviše(čij.)	115 A. C.	8.0
9.0	12.0			12.0			11.2			8.6			9.0
10.0	/12.0		film): Asia	11.8			11.0	AN WORD	可以多数特殊	8.4	\$ 767		10.0
12.0	10.7			10.4			10.3	·		8.2		ng mangangan ang kalimit kalimi	12.0
14.0	9.5			9.3			9.2		259-53	7.7			14.0
16.0	8.2	5.8/17.5		8.1			8.1			7.1		nun an ann an ann an an ann an an an an an	16.0
18.0	6.2	- 5.6	avaara i	7.2	5.1/19.0		7.2			6.5			18.0
20.0	5.5/18.3	4.9		5.9	4.8		6.3	4.6/20.6		5.9			20.0
22:0	5 5 5	4.4	is sile in	4.6/21.3	4.3	te se se se se	5.3	A 4.2 m	N 150 (19)	5,3 %	4,1/22.1	61.644	22.0
24.0		3.9	***************************************		3.8		4.1	3.8		4.7	3.7		24.0
26.0		3.6/25.3	2,5/27.4	HW WAY	3.5		3.9/24.2	3.4	December 1	4,0	3.3	995063	26.0
28.0	. 2 - 2000 200 - 12		2.5		3.1	2.1/29.6		3.1		3.3/27.2	3.0		28.0
30.0	1171 - M.D. Frib	70,000	2.2	2501:3741E712	3,1/28.3	2.1		2.8	1.8/31.7		2.7	NO BOOK	30.0
32.0			2.0/31.7			2.0		2.7/31.2	1.8		2.5	1.5/33.9	
34.0			Par 202 Print			1.8	(F47) 240 (C		1.7		2.3	1.5	34.0
36.0						1.7/34.7			1.6		2.3/34.2	1.4	36.0
(F) 38.0 (1196		i i i i i i i i i i i i i i i i i i i	in a second	2.455.754	44.13		\$ 8 Kg	40 Mg 187	1,4/37.6	1000	A Total	<u></u>	38.0
40.0												1.2	40.0
42.0	D41344	Pa 150 A	7480195	ALIANO .	PER SAN	adations.	10000	建数数据	1.04892541	和 南流	A GLAVES	1:1/40,6	42.0

Note: Ratings shown in ____ are determined by of the strength the boom or other structual components.



Unit: metric ton

Luffing tower rated loads in metric tons for 360° working area

Crawlers fully extended

(146,244)	(Y.)	Aller A	(Maria	1.043	i XXVII.	200 VAS	30,2	m (99') T	ower wa	gaar.	(KA)		vi vid	A. (1.12)	100	Operation
Operating (ZXX.16	8 m (55')	Jib					(m((75))								radius
(m)	Park A. J.	ower ang	60"		werang	A Company of the Company of the	902	wer and	67 (A) W	aras yan	weraud Wenesc	1709	3 900 F	A ROSA)	7.7090A	(m)
6.5	12.0/6.5	10 (2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	, ov	e due	10 M 10 M 10	unio in Sint	Potential Cons	3 3 4 3 4 5 1 4 5	9 11 23	era era era	offert in the second	NECESTAL SECTION	2.257 (MC) 41		080/5049	6.5
7.0	12.0	20012510305	(84)(48), 103, 27)	12.0/7.3	******	10405 8 15 - 55 22	21.22.3.12.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2			3.2.2.2.11.2.11.	33					7.0
8.0 8.0	√12.0	fank de	ilika Pisa	(2.0	17 6 6 7 7	シタンス シタンス	11.5/8.1			8.6/8.9	Zew III.	21 - 1 d d 1 d 1 d 1 d 1 d 1 d 1 d 1 d 1		73, 78		8.0
9.0	12.0	a and a same and a same and a same a sam		12.0			11.2			8.6			6.2/9.7	************	an region to the first	9.0
	%12:0, _#	Alegany).		∞1,1 _x 8	Webster	Live Am	11,0	Carrier Week	oriedans ja	8.4	તેમ મનુદેખ ફેઇન દે	J. F. W. 18	6.2	andres of site of		10.0
12.0	10.6		See Service of Se	10.4	Josephine Carte	michael Carles	10.3	ม.อริเครียกจะไว้จั	552-47516484	8.2	30.1319.45W.2	1800/03 RF013	6.2	********	.wsuasasid	12.0 14.0
14.0	9.5	i just	344 <u>3</u> 4	%9.3 [%]		V6784V66	9.2	VALUE DIE		7.7 7.1	1,481040	STATE AND THE		<u> </u>	98. S. USA	16.0
16.0	8.2 6.2	'E GHO'A	525,500 51 12	8.1 7.2	4.7/19.8	735g(3255 35	8.1 7.2	AS 30 (N. 1-244)	69744399		5.5/18.3	476381400		5.0/19.6	735 jan	18.0
18.0 20.0	5.5/18.3	5.3/18.0 4.7	F\$142 (1.4.2.2)	5.9	4.6	<u> </u>	6.3	4.2/21.4	0.210000	5.9	4.9	1,25-11,553-5	4.6	4,9	1,72793	20.0
22.0	0.0/10.0	4.2	467 XX	4.6/21.3		10000000	5.3	4.0	9.71.61	5.3	4.4	1720703343	4.2	4.3	Sare Screen	22.0
24.0	5607-020-0320-0	3.8	CONTRACTOR CONTRACTOR		3.7		4.1	3.6	33345-5-657	4.7	3.9	والمراجعة والمتحددة	3.8	3,9		24.0
26.0	AND U.S.	3.4	Marine P	66 ge/25190g	3.3	illa San R	3.9/24,2	, 3.3	in the contraction	4.0	3,5	2,6/27.3	3.5	3.5		26.0
28.0		3.4/26.1	2.0/28.9		3.0			3.0		3.3/27.2	3.2	2.5	3.2	3.1	2.3/29.0	28.0
< 30.0⊁ [©]	10.69		2.0		2,9/29:1	f	學學學歷	ी 2.7 %	Q+13/44/	建建筑	2.9	2.3	2.8	i., 2,9 va	2.2	30.0
32.0		100 Zard (1772 h)	1.8	177 C 123 C (1982 1 175 C)	o suconiera con	1.7	1 (N Sec 20)	2.5/32.0		0.8830844883	2.7	2.1	2.8/30.1	2.6	2.0	32.0 34.0
34.0	3045005	[1024 F20]	1.6/33.3			115	\$-X-\$4X	SPERING	1.3		2,6/32/4	1.8	0396485W	2,4 2.3/35.3	1.7	36.0
36.0	50000X1000	32,984,03000	long varies	3517877	ESTATALE.	1.4	1.gl (8) 4 (5)2	(% 5.70 \$)	1.3	0.343943	66787233	1.6/37.4	age to g	23.0703.0	1.6	38.0
38.0 40.0	211,1651,1927	57 10 15 344	MGE 1519	46.63 163 / i		150,00,2	1487	245 (S. 8883)	1,1/39.0	434 9/8/314 DV	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,,,,,,,,,			1.5	40.0
40.0	in a few line	K.CANTI	17.166	Children Constitution	4,100	101 ALA 21	(318.05)	1,0300			1.0207	1219A	100000000000000000000000000000000000000	7 17 5 5 5 4 Y	1.3/40.4	42.0

Note: Ratings shown in ___ are determined by the strength of the boom or other structual components.

Luffing tower rated loads in metric tons for 360° working area

Crawlers fully extended

			13-17-Vg	WHAT	re Viet	19:40 (9)	\$ ⁶ 683.2	m'(109')	Tower(;)	(4) (4)	(4)		XY/April	SANSAR.	974	が現代のは
Operating	≨5.₹16.	8',m (55')	Jib 💘	. (2)/19.	8 m (65)	Jib ² ²⁴	22	9 in.(75'),	Jlb 🏋	X, 25	9 m (85')	Jb 72.4	29	0 m (95')	QIR (XVV)	W Operating
a radius // c		ower angl		A A ST	ower and	e/		ower and	e (3,44)	6Ye9YI)	ower and	lexy.vy	WAT.	ower and	e <i>r-g</i> s	/ radius
:# (m) > \$	€√90°¢	5.75° \$	603	90%	2 80%	70°	90%	80	7,70%	**90%	K 80% Y	70°	90%	₹ 083	~:70°;/	s.c.s. (m) s.v.s.
6.5	12,0/6.5		Maria e	18 July 1		National					4.00					6.5
7.0	12,0			12.0/7.3												7.0
8.0, 4/2	12.0≪	9651E46	ni kaz	12.0	\$11.00 PM		11.5/8.1	m ter eta	Seattle Sea	8.6/8,9	PATE COTE		透弧磁		Grander (8.0
9.0	12.0			12.0			11.2			8.6			6.2/9.7			9.0
₹ 10,0° ₹	12.0	到5000000		11.8		35,44	11.0			8.3			6.2	Patricks.		10.0
12.0	10.6			10.4			10.3			8.0			6.2		No. 18 U.S. C.P.	12.0
14.0	9.5			9.3		30° NF (-/)	9.2	1001821/11/201		7.7	1200	No.	6,0	725 (1902)	\$1400.604	7 8 14.0
16.0	8.2			8.1	6.4/16.3		8.1	5,7/17.6		7.1	.,		5.6		C and a Calenda	16.0
18.0	6.2	4.8/19.1	(8) (4) (8)	.7.2	5.6	*1.00 (A) (A)	7,2	5,6	are see	6.4	5.2/18.9		5.1	918.41		18.0
20.0	5.5/18.3	4.5		5.9	4.9		6.3	4.9		5.8	4.8		4.6	4.7/20.1		20.0
∮ ⊕22.0 ∞ ∜	gaja sira	44.0 A	(Joje je	4.6/21.3	4.4	4.44	5.3	4.3	1121121	, 5,3	@ 4.2	40.0	4.2	4:2	\$1.46 (A.EE)	22.0
24.0		3.6			3.9	2.9/24.8	4.1	3.9		4.7	3.8		3.8	3.7		24.0
26.0	26 (S)	3.2	3.500		3.6	2.8	3,9/24,2	< 3.5 H	2.6/26/6	4.0	-/3.4	2577 years	3.5	3.4	Xeryza.	26.0
28.0		3.1/26.9			3.4/27.0	2.5		3.2	2.4	3.3/27.2	3.1	2.2/28.3	3.1	3.0		28.0
30.0	A HERBY LANGE	gunga esticado	1,5/30,5	carrelier (1)	2 14/80	2.3	· Mickey [19]	2.9/30.0	2.2	1 深山野田	2.8	2.1	2.8	2.8	2.0/30.1	30.0
32.0			1.5			2.1			2.0		2.6	1.9	2.8/30.1	2.5	1.9	32.0
34.0	2.5	1	1.3			2.0/32.6		500 CA	, 1,9	100	2.5/32,9			2,3,	1.7	34.0
36.0			1.2/34.8						1.7/35.5		1	1.6		2.2/35.9	1.5	36.0
\$38.0 P	weeks to park	e-Marke	的影響等的	50 km/2	X 13 M	30 (6) (4 de			A FREE	2004 (A.)	a Balley	1,5.	342 (200.00)	35,47,68	3.1,4	38.0
40.0												1.3/38.5			1.3	40.0
42.0	5(核學)/整定的	NEW YORK	04 W.A.		240M	BARAGA	SHANNEN	27983	a valoue	(福州)	(cho 株)	Warmen's	14441	\$* (Rg. 194	1.1/41.4	42.0

Note: Ratings shown in ____ are determined by the strength of the boom or other structual components.



Unit: metric ton

Luffing tower rated loads in metric tons for 360° working area

Crawlers fully extended

	1000	X			4.000		36.3	'm' (119').	Fowers .		Direction of	4.44	1.000	% io. (\$	7533	
A Operating	16.	8 m (55')	Jib.	Sec. 19.	8 m (65')	Jibe <i>t, is</i> t	A 22.	9 m (751)	Jib 💎	W 25	9 m (85')	Jj63-14A	<i>?</i> ∤ ₹29.0	*****	****	Operation
radius		iwer ang	Acres and the second		The same of the same of the same	Samuel Contract Contract	and the second second		and the second second		śwer, ang	Charles Charles and a contract of		wer angl	****	radius va
*(, , (m) * , ,)		80%	6170%E	90%	80%	70°33	¥,9034±	₹ 80° ×	70%	₩ 90£	Ø 800 €	70%	0690%)	¥ (8Q%).	70	(c.6(m)-c.c.
of # 6.5	12.0/6.5	\$8000 M	#/sc/16#63	70°, S(\$'95000')	3000	20.567		91/2/20		6 8 PH - 18	1000000	MENAGE.	#U#U#U	E 1865 (1865)	160900000	変象 6.5 の例
7.0	12.0	Sent Tax of L	20010403707386570	11.4/7.3	Notes and the second	V.E.S. FREEZE	Pallocea Process	935-Wrist 5/180 (C	98 o 21 a 4 da	eacanavar	58501807636283	KANDONENIN	981150800 SV-1	mana ayasani	Kerimoren	7.0 5 8.0
8.0	12.0	£268487	74,54,842.00	11.4	1072/07/20		10:4/8:4		4384.Vic	8.6/8.9 8.5		3 7 32	6.2/9.7	330000	1024/194/30	9.0
9.0	12.0 12.0	OMERCANO.	Yake wkeye	11.4	7.8554V/A9	V. 182 45 76 E	(10:1)	130 04 204	35.3905/259	8.3	July 1887	Na 19748-18	6.21	11817 #12.7h.	2514/14/19	10.0
12.0	10.6	981. 38% 48-10		10.4	35726	100 VANS.	10.1		Abertagrasers.	8.0	2001-27-575	CA 034 19961	6.2	(V/25/A).65A.3		12.0
(1, 14.0		6.7/15.5	RAWN.	9.3	2.4.2	100	9.2			7.7		8 3 (38).	6.0	4.35	2.8.8	14.0
16.0	8.2	6.5	3.91 3.91 3831	8.1	6.0/16.8	-41-10-17-18-18-18-18-18-18-18-18-18-18-18-18-18-	8.1	ETSELOSS, ASIA	136.788	7.1		2011/21/05/8021/2/6	5.6		25333281.62	16.0
€ 018.0 1	6.2	, 5.6	Chigal Say	7.2	್5,5,∉	(2) ¥ \$	泰7:2 🕏	5,4/18.1	A SVB	6.4	4.8/19.6		√5.f	N)AUANZ	1000	18.0
20.0	5.5/18.3	4.9		5.9	4.8		6.3	4.7		5.8	4.6			4.4/20.7		20.0
22.0		×4.4	37978	4.6/21.3	4.3	154 W. W.	5.3	4.2		5.3	4.1		4.2	4.1	YASTRACTICS.	22.0
1 040		~~~~	7	1100		************	minima marinnina.	- Liver ministricion maior	333.70							
24.0		3.9	2.9/24.1	11015-110	3,8	2.5/25.9	4.1	3.8		4.7	3.7		3.8	3.6		24.0
26,0		~~~~~~~~~~	2.9/24.1 2.7	77P7 OF 28	3.8 3.5	2.5	menione interior	3.8 3.4	2,2/27,6	4.7 //3,9	3.7 3.3	1000	3.5	3.6 3.3		24.0 26.0
26.0 28.0		3.9	2.9/24.1 2.7 2.4	1417-01-38	3,8	2.5 2.3	4.1	3.8 3.4 3.1	2,2/27.6 2,2	4.7	3.7 3.3° 3.0	1.9/29.4	3.5 3.1	3.6 3.3 2.9	4.0103.3	24,0 26,0 28,0
26.0 28.0 30.0		3.9	2.9/24.1 2.7 2.4 2.2		3.8 3.5	2.5 2.3 2.1	4.1	3.8 3.4 3.1 2.8	2\2/27.6 2.2 2.0 <	4.7 //3,9	3.7 3.3 3.0 2.7	∜1.9 ∕	3.5 3.1 2.8	3.6 3.3 2.9 2.7	1,6/31,1	24.0 26.0 28.0 30.0
26.0 28.0 30.0 32.0		3.9	2.9/24.1 2.7 2.4	1417-01-38	3.8 3.5	2.5 2.3 2.1 1.9	4.1 3.9/24:2	3.8 3.4 3.1	2,2/27,6 2,2 2,0 1,9	4.7 //3,9	3.7 3.3 3.0 2.7 2.5	1.9 1.7	3.5 3.1	3.6 3.3 2.9 2.7 2.5	1.6	24.0 26.0 28.0 30.0 32.0
26.0 28.0 30.0 32.0 34.0		3.9	2.9/24.1 2.7 2.4 2.2	1417-01-38	3.8 3.5	2.5 2.3 2.1	4.1	3.8 3.4 3.1 2.8	2,2/27,6 2,2 2,0 1,9	4.7 //3,9	3.7 3.3 3.0 2.7	1.9 1.7 1.6	3.5 3.1 2.8	3.6 3.3 2.9 2.7 2.5 2.2	1.6 4,1.5 %	24.0 26.0 28.0 30.0 32.0 34.0
26.0 28.0 30.0 32.0 34.0 36.0		3.9	2.9/24.1 2.7 2.4 2.2	1417-01-38	3.8 3.5 3.2/27.6	2.5 2.3 2.1 1.9 1.7/33,6	4.1 3.9/24.2	3.8 3.4 3.1 2.8	2,2/27,6 2,2 2,0 1,9 1,7 1,5	4.7 3.9 3.3/27.2	3.7 3.3 3.0 2.7 2.5 2.3/33,5	1.9 1.7 1.6 1.4	3.5 3.1 2.8 2.8/30.1	3.6 3.3 2.9 2.7 2.5 2.2 2.1	1.6 (1.5 % 1.3	24.0 26.0 28.0 30.0 32.0 34.0 36.0
26.0 28.0 30.0 32.0 34.0		3.9	2.9/24.1 2.7 2.4 2.2	1417-01-38	3.8 3.5 3.2/27.6	2.5 2.3 2.1 1.9	4.1 3.9/24:2	3.8 3.4 3.1 2.8	2,2/27,6 2,2 2,0 1,9	4.7 //3,9	3.7 3.3 3.0 2.7 2.5	1.9 1.7 1.6	3.5 3.1 2.8 2.8/30.1	3.6 3.3 2.9 2.7 2.5 2.2	1.6 4,1.5 %	24.0 26.0 28.0 30.0 32.0 34.0

Note: Ratings shown in ___ are determined by of the strength the boom or other structual components.

Luffing tower rated loads in metric tons for 360° working area

Crawlers fully extended

Spill on the	77. 7 39.3 m (129°).Tower													
Operating /	<i>0/√/</i> 16.	8 m (55')	Jib	· 19.	8 m (65))	Jib/77/7	1/2/22	9 m (75)	Jlb	25.9m (85)) jib 🕆	29.0 m	(95') Jib	Operating,
₹7 radius	/ / To	ower ang	e/ (*)	Tower angle			Tower angle			Tower	angle:	Tower angle		radius 🖟
₹₹Ç (m).	904	. 208 V	770°	90%	7 80%	70%	90%	/ 80°°	70%	90"	7.80° 7	90%	" 80°	(m)
6.5	11,4/6.5	\$154,5450	Tracy rains yes					(2) 12 6						6.5
7.0	11.4			9.5/7.3										7.0
8.0.	11.4	. Ka	100	9,5			8.1/8.1		95 A	6.7/8.9				8.0
9.0	11.4			9.5			8.1			6.7		6.2/9.7		9.0
¥./~ √10.0 · / ₀ /1	11.0	จึงพระสน	25克/26K	§9,5	13 1W 33	28 J. A.	6.8.1%		0.6	6.7	a propanjeta	6.2	1000	10.0
12.0	10.4			9.5			8.1			6.7		6.2		12.0
14,0	9.5%			9.2	30319	See Fig. 19.	%8,1 å.	\$ 15.89	Grigor Sin	6.7	\$ B. A. A. A.	6.0	1. 18 18 18	14.0
16.0	8.2	6.2/16.0		8.1	5.6/17.3		8.1			6.7		5.6		16.0
. 18.0	6.2	5.4	9.00	7.2	5.3	101.30	7.2	5.0/18.6	57 (n. 50)	6.4	4.5/19.9	5.0	100	18.0
20.0	5.5/18.3	4.8		5.9	4.7		6.3	4.6		5.8	4.5	4.6	4.1/21.2	20.0
22.0		4.2		4.6/21.3	4.1		5.3	41		5.3	4.0	4.2	3.9	22.0
24.0		3.8	2.4/25.1		3.7		4,1	3.6		4.7	3.5	3.8	3.5	24.0
£‰√26.0 ·/ _√ ∖		3.5/25.1	2,4	Na Paris	3.3	2,1/26:9	3,9/24.2	3.3		3.9	3.2	3.4	3,1/4	26.0%
28.0			2.2		3.0	2.1	-	3.0	1.8/28.6	3.3/27.2	2.9	3.1	2.8	28.0
30.0	OF ASS	ÇAĞAÇÎV	2.0	37/44	3.0/28:1	1.9	的多数	2.7	41.8	rā n	2.6	_2.8 ∵	∂(2.6) §	30.0 %
32.0			1.7/31.7			1.7		2.6/31.0	1.6		2.4	2.8/30.1	2.3	32.0
34.0	是被逐渐发	25 M 25 A	3.67 % (100	S. 4.1.	1.5	7. Y 18 P 19 19 19 19 19 19 19 19 19 19 19 19 19		1.4	1000	2.2/34.0	18728	*2.2	34:0
36.0						1.3/34.7			1.3				2.0	36.0
# 38.0°		3/8/27	11/13/				60 P. W. W. W. C.	77.14 %	1.1/37.6		4 (5)	400	1,9/36.9	- 38.0

Note: Ratings shown in ____ are determined by the strength of the boom or other structual components.

KOBELCO

HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK **BM 500**

Address inquiries to:

RICON PRIVATE LIMITED

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NOTE: Due to our policy of continual product improvement, all designs and specifications are subject to change without advance notice.



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