## **Hydraulic Crawler Crane**



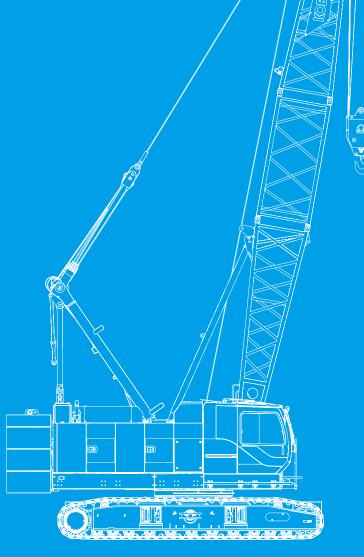
900

Max. Lifting Capacity: 100  $t^*$  x 3.6 m / 90 t x 3.9 m\*

Max. Crane Boom Length: 61.0 m

Max. Fixed Jib Combination: 51.8 m + 18.3 m

\* The value are theorical result.
\* Auxiliary sheave is necessary.





Model: CKS900



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### **SPECIFICATIONS**



#### **Power Plant**

Model: HINO J08E-VM

Type: 4 cycle, water-cooled, vertical in-line 6, direct injection,

turbo-charger, intercooler

Displacement: 7,684 liters

Rated power: 213 kW/2,100 min<sup>-1</sup>

Max. Torque: 1,017 N·m/1,600 min<sup>-1</sup>

Cooling System: Water-cooled

Starter: 24V-5kW

Radiator: Corrugated type core, thermostatically controlled Air cleaner: Dry type with replaceable paper element Throttle: Twist grip type hand throttle, electrically actuated

Fuel filter: Replaceable paper element

Batteries: Two 12V x 136 Ah/5HR capacity batteries, series

connected

Fuel tank capacity: 400 liters



#### **Hydraulic System**

Main pumps: 3 variable displacement piston pumps

**Control:** Full-flow hydraulic control system for infinitely variable pressure to all winches, propel and swing. Controls respond instantly to the touch, delivering smooth function operation.

Cooling: Oil-to-air heat exchanger (plate-fin type)

Filtration: Full-flow and bypass type with replaceable element

Max. relief valve pressure:

Load hoist, boom hoist and propel system: 31.9 MPa

Swing system: 27.5 MPa Control system: 5.4 MPa Hydraulic Tank Capacity: 440 liters



#### **Boom Hoisting System**

Powered by a hydraulic motor through a planetary reducer. **Brake:** A spring-set, hydraulically released multiple-disc brake is mounted on the boom hoist motor and operated through a counter-balance valve.

**Drum Lock:** External ratchet for locking drum **Drum:** Single drum, grooved for 16mm dia. wire rope

**Line Speed:** Single line on first drum layer **Hoisting/Lowering:** 70 to 2 m/min

Boom hoisting/lowering: 16 mm x 150 m

Boom guy line: 30 mm

Boom backstops: Required for all boom length



#### **Load Hoisting System**

Front and rear drums for load hoist powered by a hydraulic variable plunger motors, driven through planetary reducers.

Negative Brake: A spring-set, hydraulically released multipledisc brake is mounted on the hoist motor and operated through

a counter-balance valve. (Positive free fall brake is optional)

Drum Lock: External ratchet for locking drum

#### **Drums:**

#### **Front Drums:**

614 mm P.C.D x 617 mm wide drum, grooved for 26 mm wire rope. Rope capacity is 240 m working length and 360 m storage length.

**Rear Drum:** 614 mm P.C.D x 617 mm, grooved for 26 mm wire rope. Rope capacity is 165 m working length and 360 m storage length.

Diameter of wire rope

Main winch: 26 mm x 240 m Aux. winch: 26 mm x 165 m Third winch: 22 mm x 145 m

Line Speed\*:

Hoisting/lowering: 120 to 3 m/min

Line Pull:

Max. Line Pull\*: 208 kN {21.2 ft} (Referential performance)

Rated Line Pull: 112 kN {11.4 ft}

\*Single line on first drum layer



#### **Swing System**

Swing unit is powered by hydraulic motor driving spur gears through planetary reducer, the swing system provides  $360^{\circ}$  rotation.

Swing parking brakes: A spring-set, hydraulically released

multiple-disc brake is mounted on swing motor.

Swing circle: Single-row ball bearing with an integral internally

cut swing gear.

Swing lock: Manually, four position lock for transportation

Swing Speed: 4.0 min<sup>-1</sup>



#### **Upper Structure**

Torsion-free precision machined upper frame. All components are located clearly and service friendly. Engine will with low noise level.

Counterweight: 31.9 ton



#### **Cab & Control**

Totally enclosed, full vision cab with safety glass, fully adjustable, high backed seat with a headrest and armrests, and intermittent wiper and window washer (skylight and front window).

#### Cab fittings:

Air conditioner, convenient compartment (for tool), cup holder, cigarette lighter, sun visor, roof blind, tinted glass, floor mat, footrest, and shoe tray



#### **Lower Structure**

Steel-welded carbody with axles. Crawler assemblies can be hydraulically extended for wide-track operation or retracted for transportation. Crawler belt tension is maintained by hydraulic jack force on the track-adjusting bearing block.

Carbodyweight: 14.4 ton

**Crawler drive:** Independent hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic motor propelling a driving tumbler through a planetary gear box. Hydraulic motor and gear box are built into the crawler side frame within the shoe width.

**Crawler brakes:** Spring-set, hydraulically released 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 each track in opposite directions).

Track rollers: Sealed track rollers for maintenance-free

operation.

Shoe (flat): 800 mm wide each crawler

Max. gradeability: 40%



#### Weight

Including upper and lower machine, 31.9 ton counterweight and 14.4 ton carbody weight, basic boom (or basic boom + basic jib), hook, and other accessories.

Weight: 90.1 ton

Ground pressure: 101 kPa



#### **Attachment**

#### Boom & Jib:

Welded lattice construction using tubular, high-tensile steel chords with pin connection between sections.

#### Boom and Jib length

	Min. Length	Max. Length
	(Min. combination)	(Max. combination)
Crane Boom	12.2 m	61.0 m
Fixed Jib	24.4 m + 9.1 m	51.8 m + 18.3 m

#### Main Specifications (Model: CKS900)

Crane Boom	
Max. Lifting Capacity	100 t * x 3.6 m / 90 t x 3.9 m *3
Max. Length	61.0 m
Fixed Jib	
Max. Lifting Capacity	10.9 t x 18.0 m
Max . Combination	51.8 m + 18.3 m
Main & Aux. Winch	
Max. Line Speed (1st layer)	120 m/min
Rated Line Pull (Single line)	112 kN {11.4 tf}
Wire Rope Diameter	26 mm
Wire Rope Length	240 m (Main), 165 m (Aux)
Brake Type (free fall)	Wet-type multiple disc brake (Optional)
Working Speed	
Swing Speed	4.0 min <sup>-1</sup> {rpm}
Travel Speed	1.7/1.1 km/h
Power Plant	
Model	HINO J08E-VM
Engine Output	213 kW/2100min <sup>-1</sup>
Fuel Tank	400 liters

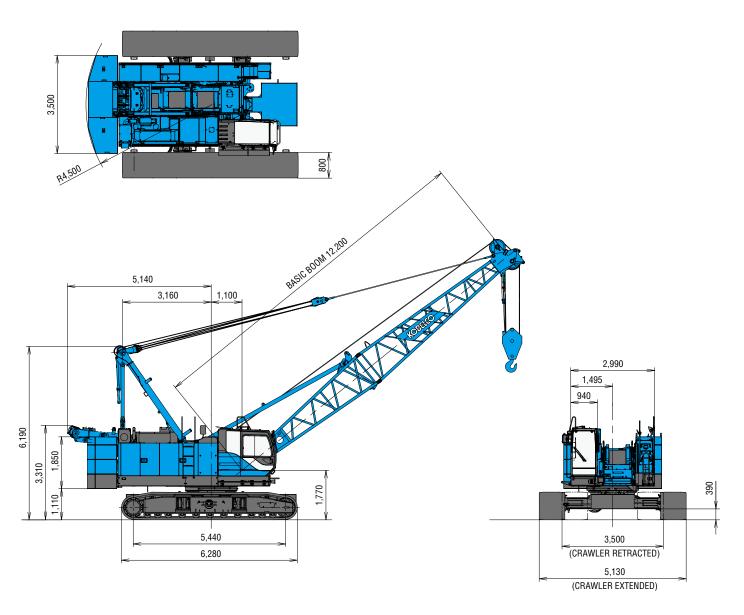
Hydraulic System	
Main Pumps	3 variable displacement
Max. Pressure	31.9 MPa {325 kgf/cm <sup>2</sup> }
Hydraulic Tank Capacity	440 liters
Self-Removal Device	
	Counterweight/self-removal device
	(Option)
Weight	
Operating Weight	90.1 t *1
Ground Pressure	101 kPa
Counterweight	31,900 kg
Transport Weight	41,360 kg *2

Units are SI units. { } indicates conventional units.

Line speeds in table are for light loads. Line speed varies with load.

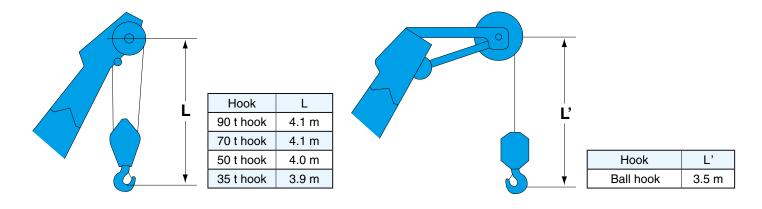
- \*1 Including upper and lower machine, 31.9 ton counterweight, 14.4 ton carbody weight, basic boom, hook, and other accessories.
- \*2 Base machine with boom base, gantry, crawlers, and wire ropes (front/boom hoist)
- \*3 Auxiliary sheave is must.
- \* The value are theorical result.

(Unit: mm)



This catalog may contain photographs of machines with specifications, attachments and optional equipment.

### **Limit of Hook Lifting**



## **BOOM AND JIB ARRANGEMENTS**

### **Crane Boom Arrangements**

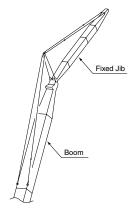
Boom length m (ft)	Boom arrangement
12.2 (40)	<b>₽</b> T→
15.2 (50)	<b>※</b> ■ 10 T
18.3 (60)	* B 10 10 T
21.3 (70)	★ ■ 10 20 1
24.4 (80)	* B 10 10 20 T  B 40A T  B 20 20 T
27.4 (90)	* B 10 20 20 T
30.5 (100)	* B 10 10 20 20 T  B 10 10 40A T  B 20 40A T
33.5 (110)	₩ B 10 20 40A T
36.6 (120)	B     10     10     20     40A     T       B     40     40A     T       B     20     20     40A     T
39.6 (130)	₩ B 10 20 20 40A T B 10 40 40A T

Boom length m (ft)	Boom arrangement
42.7 (140)	# B 10 10 20 20 40A T  B 10 10 40 40A T  B 20 40 40A T
45.7 (150)	★ B 10 20 40 40A T
48.8 (160)	# B 10 10 20 40 40A T  B 20 20 40 40A T  B 40A T
51.8 (170)	# B 10 20 20 40 40A T
54.9 (180)	Image: Second content of the conte
57.9 (190)	★ B 10 20 40 40 40 T
61.0 (200)	★ ■ 10   10   20   40   40   40   40   40   40   4

Symbol	Boom Length	Remarks
В	5.8 m	Boom Base
	6.4 m	Boom Top
10	3.0 m	Insert Boom
20	6.1 m	Insert Boom
40	12.2 m	Insert Boom
40A	12.2 m	Insert Boom with lug

mark shows the boom insert with lug attached and the guy line installing position when the fixed jib is used.

### **Fixed Jib Arrangements**



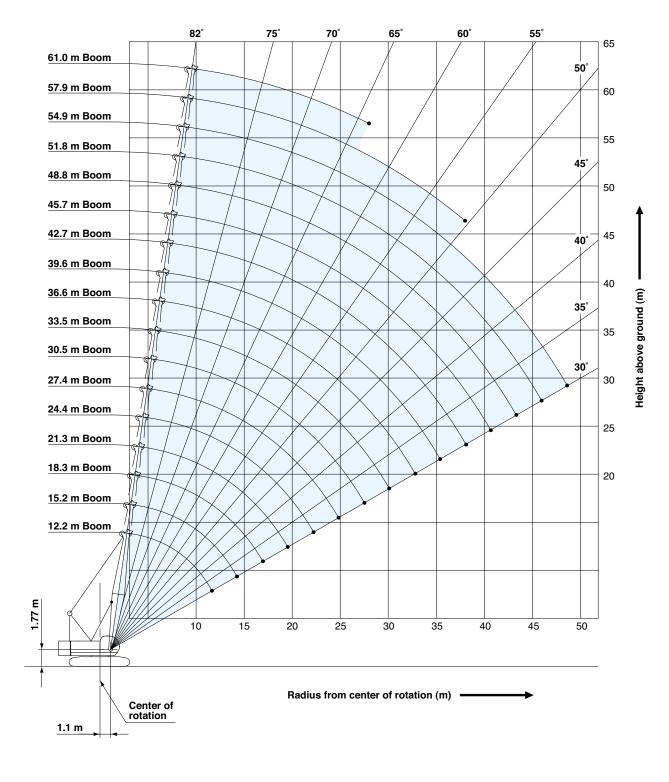
Crane boom length	Jib length m (ft)	Jib arrangement
	9.1 (30)	4.6/\\4.6
24.4 m ~ 51.8 m	12.2 (40)	B  10  T
	15.2 (50)	B 20 T
	18.3 (60)	B 20 10 T

Symbol	Jib Length	Remarks
В	4.6 m	Jib Base
	4.6 m	Jib Top
10	3.0 m	Insert Jib
20	6.1 m	Insert Jib

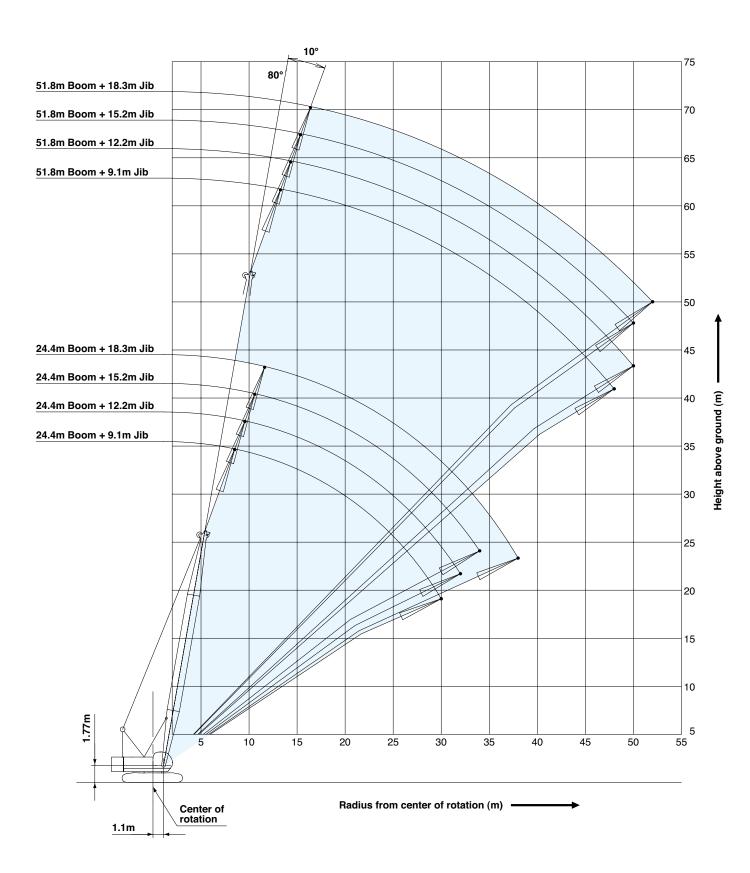
 $<sup>\</sup>mbox{\%}$  mark shows the standard boom arrangement which make the boom arrangement of less than the each boom length possible.

 $<sup>\</sup>circ$  mark shows the installing of the cable roller for the insert boom.

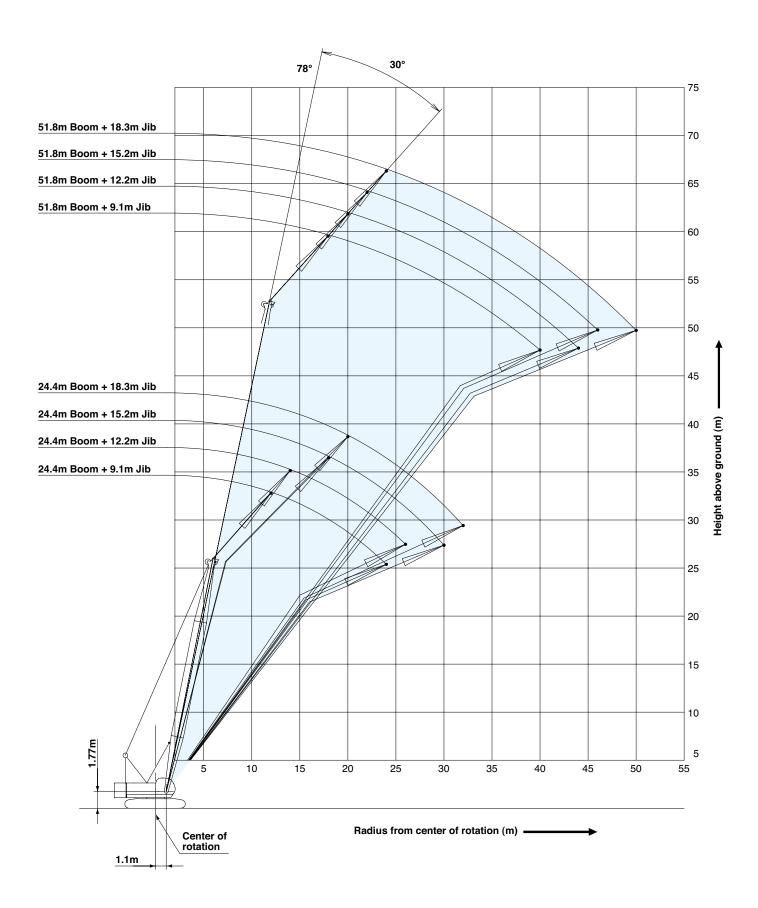
### **Crane Boom**



### Fixed Jib 10°



### Fixed Jib 30°



### SUPPLEMENTAL DATA

- Ratings according to EN13000.
- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load
- Deduct weight of hook block (s), slings and all other load handling accessories from main boom ratings shown.
- Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment.

The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.

- Ratings are for operation on a firm and level surface, up to 1 % gradient.
- At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
- •Boom inserts and guy lines must be arranged as shown in the "operator's manual".
- ·Boom hoist reeving is 12 part line.
- Gantry must be in raised position for all conditions.
- ·Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not laterally.
- Ratings inside of boxes \_\_\_\_\_ are limited by strength of materials.
- •The minimum rated load is 1.4 (ton).
- Crawler frames must be fully extended for all crane operations.

#### (Crane boom lifting)

•The total load that can be lifted is the value for weight of main hook block, slings, and all other load handling accessories deducted from crane boom ratings shown.

#### (Fixed jib lifting)

- The total load that can be lifted is the value for weight of jib hook block, slings, and all other load handling accessories deducted from fixed jib ratings shown.
- •The availability of fixed jib mounting
  - On crane boom: Range 24.4 m to 51.8 m.

#### <Reference Information>

#### Main hoist loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	112	224	335	447	559
Maximum Loads (t)	11.4	22.8	34.2	45.6	57.0

No. of Parts of Line	6	7	8
Maximum Loads (kN)	671	779	883
Maximum Loads (t)	68.4	79.4	90.0

#### **Auxiliary hoist loads**

No. of Parts of Line	1
Maximum Loads (kN)	108
Maximum Loads (t)	11.0

Weight of hook block										
Hook Block	90 t	70 t	50 t	35 t	Ball Hook					
Weight (t) 1.3 0.9 0.85 0.7 0.3										

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

#### Assembling the counterweight

31.9 ton counterweight
14.4 ton carbody weight
(standard type)

No.4		No.5
	No.3	
	No.2	
	No.1	

Counterweights



Carbody weights

#### Assembling the counterweight

(Equipped with self removal device) 31.3 ton counterweight 14.4 ton carbody weight (optional type)

No.4		No.5
No.2		No.3
	No.1	

Counterweights

Carbody weights

 The lifting capacity does not change due to the type of counterweights (standard or optional).

Crane Boom Lifting Capacities Carbo													
										Unit	t: metric ton		
Boom length Working (m) radius (m)	12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	Boom length (m) Working radius (m)		
3.6	100.0*										3.6		
3.9	90.0	89.9	89.7								3.9		
4.0	89.0	88.9	88.7	4.3m/68.4							4.0		
4.5	79.6	79.5	79.4	68.4	4.7m/68.4						4.5		
5.0	72.1	71.9	71.8	68.4	67.6	5.1m/57.0					5.0		
5.5	65.8	65.7	65.5	63.6	60.6	57.0	5.6m/54.0				5.5		
6.0	60.5	60.3	59.9	57.5	54.9	52.7	50.5	45.6	6.4m/41.9	6.8m/34.2	6.0		
7.0	48.6	48.5	48.4	48.1	46.2	44.5	42.9	41.5	40.0	34.2	7.0		
8.0	39.9	39.8	39.7	39.9	39.8	38.5	37.2	36.1	35.0	33.9	8.0		
9.0	33.8	33.7	33.6	33.8	33.6	33.6	32.8	31.9	31.0	30.1	9.0		
10.0	29.3	29.2	29.1	29.2	29.1	29.0	28.9	28.5	27.7	27.0	10.0		
12.0	11.8m/22.9	22.9	22.8	22.9	22.8	22.7	22.6	22.6	22.5	22.3	12.0		
14.0		18.8	18.6	18.8	18.6	18.5	18.4	18.4	18.3	18.3	14.0		
16.0		14.4m/18.1	15.7	15.8	15.7	15.6	15.5	15.4	15.3	15.3	16.0		
18.0			17.0m/14.5	13.7	13.5	13.4	13.3	13.2	13.1	13.1	18.0		
20.0				19.6m/12.2	11.8	11.7	11.6	11.5	11.4	11.4	20.0		
22.0					10.5	10.4	10.2	10.2	10.0	10.0	22.0		
24.0					22.3m/10.3	9.3	9.1	9.1	8.9	8.9	24.0		
26.0						24.9m/8.8	8.2	8.2	8.0	8.0	26.0		
28.0							27.6m/7.6	7.4	7.2	7.2	28.0		
30.0								6.8	6.6	6.5	30.0		
32.0								30.2m/6.7	6.0	6.0	32.0		
34.0									32.9m/5.8	5.5	34.0		
36.0										35.5m/5.1	36.0		
Reeves	8	8	8	6	6	5	5	4	4	4	Reeves		

Boom length Working (m) radius (m)	42.7	45.7	48.8	51.8	54.9	57.9	61.0	Boom length (m) Working radius (m)
7.0	7.3m/31.9	7.7m/28.0						7.0
8.0	31.4	27.8	8.1m/22.1	8.5m/19.2				8.0
9.0	29.2	26.2	20.8	18.6	16.2	9.4m/13.9	9.8m/11.8	9.0
10.0	26.2	24.5	19.5	17.4	15.2	13.4	11.7	10.0
12.0	21.7	21.2	17.3	15.4	13.3	11.7	10.2	12.0
14.0	18.1	18.0	15.5	13.8	11.9	10.4	9.0	14.0
16.0	15.2	15.1	14.1	12.4	10.7	9.3	8.0	16.0
18.0	12.9	12.9	12.8	11.4	9.7	8.4	7.2	18.0
20.0	11.2	11.2	11.1	10.4	8.9	7.6	6.5	20.0
22.0	9.9	9.8	9.8	9.6	8.1	7.0	5.9	22.0
24.0	8.7	8.7	8.6	8.5	7.5	6.4	5.4	24.0
26.0	7.8	7.7	7.7	7.6	6.9	5.9	4.9	26.0
28.0	7.0	7.0	6.9	6.8	6.4	5.4	4.5	28.0
30.0	6.4	6.3	6.3	6.1	6.0	5.0	4.1	30.0
32.0	5.8	5.7	5.7	5.6	5.4	4.6	3.8	32.0
34.0	5.3	5.2	5.1	5.0	4.9	4.3	3.4	34.0
36.0	4.8	4.8	4.7	4.6	4.4	4.0	3.2	36.0
38.0	4.4	4.4	4.2	4.1	4.0	3.6	2.9	38.0
40.0	38.1m/4.4	4.0	3.9	3.8	3.6	3.3	2.6	40.0
44.0		40.8m/3.9	43.4m/3.3	3.1	3.0	2.8	2.1	44.0
48.0				46.1m/2.8	2.5	2.2	1.7	48.0
52.0					48.7m/2.4	51.4m/1.8		52.0
Reeves	4	4	2	2	2	2	2	Reeves



Ratings according to EN13000.

Ratings shown in \_\_\_\_\_ are determined by the strength of the boom or other structural components. Lifting capacities may vary depending on hook used or with/without auxiliary sheave.

 $<sup>^{\</sup>star}$  The value are theorical result.

				fting ( Ingle	_		(With	out N	lain H	look l	Block	) Co		ght: 31.9 t ght: 14.4 t
	ני	ib Oi	iset A	uigie	: 10 )								Uni	t: metric ton
Во	om length (m)		24	1.4			27	7.4			30	).5		Boom length (m)
J	ib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
	9.0	10.9												9.0
	10.0	10.9				10.9				10.9				10.0
	12.0	10.9	10.9	9.0		10.9	10.9	9.0		10.9	10.9			12.0
	14.0	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	14.0
l	16.0	10.9	10.5	8.7	7.7	10.9	10.9	9.0	7.9	10.9	10.9	9.0	8.1	16.0
	18.0	10.9	9.5	7.8	6.8	10.9	10.2	8.3	7.2	10.9	10.6	8.7	7.5	18.0
l	20.0	10.3	8.6	7.1	6.2	10.2	9.2	7.5	6.5	10.1	9.7	7.9	6.8	20.0
۽ا	22.0	9.0	7.8	6.5	5.6	8.9	8.4	6.9	5.9	8.8	8.9	7.2	6.2	22.0 ≤
radius (m)	24.0	8.0	7.2	5.9	5.1	7.9	7.7	6.3	5.4	7.8	8.0	6.6	5.7	24.0 Working radius (m) 26.0 30.0 (m)
adin	26.0	7.2	6.7	5.5	4.7	7.1	7.1	5.8	5.0	7.0	7.1	6.2	5.3	26.0
Į g	28.0	6.5	6.2	5.1	4.4	6.4	6.5	5.4	4.6	6.3	6.4	5.7	4.9	28.0
Working	30.0	5.9	5.8	4.8	4.1	5.8	5.9	5.1	4.3	5.7	5.8	5.4	4.6	30.0 5
>	32.0		5.5	4.5	3.8	5.3	5.4	4.8	4.1	5.2	5.3	5.1	4.3	32.0 <sup>3</sup>
	34.0			4.2	3.6		4.9	4.5	3.8	4.7	4.8	4.8	4.0	34.0
	36.0				3.4			4.3	3.6		4.4	4.5	3.8	36.0
	38.0				3.2			4.1	3.4		4.0	4.1	3.6	38.0
	40.0								3.2			3.8	3.4	40.0
	42.0												3.3	42.0
	44.0												3.1	44.0
1							1			1				

Во	om length (m)		33	3.5			36	6.6			39	9.6		Boom length (m)
J	ib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
	12.0	10.9	10.9			10.9				10.9				12.0
	14.0	10.9	10.9	9.0	8.1	10.9	10.9	9.0		10.9	10.9	9.0		14.0
	16.0	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	16.0
	18.0	10.9	10.9	9.0	7.8	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	18.0
	20.0	10.0	10.1	8.3	7.1	9.9	10.0	8.6	7.4	9.8	9.9	9.0	7.7	20.0
	22.0	8.7	8.8	7.6	6.5	8.6	8.7	8.0	6.8	8.5	8.6	8.2	7.0	22.0
	24.0	7.8	7.8	7.0	6.0	7.5	7.7	7.3	6.2	7.4	7.6	7.7	6.5	24.0
	26.0	7.0	7.0	6.5	5.5	6.7	6.9	6.8	5.8	6.6	6.8	6.9	6.0	26.0
E	28.0	6.2	6.3	6.0	5.1	6.1	6.2	6.2	5.4	6.0	6.1	6.1	5.6	28.0 §
Working radius (m)	30.0	5.6	5.7	5.6	4.8	5.5	5.5	5.7	5.0	5.4	5.4	5.6	5.2	28.0 Working radius (m) 30.0 34.0 (m)
120	32.0	5.1	5.2	5.2	4.5	5.0	5.0	5.1	4.7	4.8	4.9	5.0	4.9	32.0 ਡੂ
ķi	34.0	4.7	4.7	4.8	4.2	4.5	4.6	4.7	4.4	4.4	4.5	4.5	4.6	34.0
۱ŏ	36.0	4.2	4.3	4.4	4.0	4.1	4.2	4.2	4.2	4.0	4.1	4.1	4.2	36.0 ∄
	38.0	3.9	4.0	4.0	3.8	3.8	3.8	3.9	3.9	3.7	3.7	3.8	3.8	38.0
	40.0		3.7	3.7	3.6	3.4	3.5	3.6	3.6	3.3	3.4	3.4	3.5	40.0
	42.0			3.4	3.4		3.2	3.3	3.3	3.0	3.1	3.2	3.2	42.0
	44.0				3.2			3.0	3.1		2.7	2.9	2.9	44.0
	46.0								2.8			2.6	2.7	46.0
	48.0								2.4			2.2	2.4	48.0
	50.0												2.1	50.0
1	Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

#### Note:

Ratings according to EN13000.

Reeves

Ratings shown in \_\_\_\_\_ are determined by the strength of the boom or other structural components. Lifting capacities may vary depending on hook used or with/without auxiliary sheave.

Please refer rated chart in operator's cabin.

Reeves

			Jib Lii fset A	_	_		(With	out N	lain H	look I	Block	) Co Carb		ght: 31.9 t ght: 14.4 t
	10		1961 P	ligie	. 10 )								Un	it: metric ton
Во	om length (m)		42	2.7		45.7					48	3.8		Boom length (m)
J	ib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
	14.0	10.9	10.9			10.9	10.9			10.9				14.0
	16.0	10.9	10.9	9.0		10.9	10.9	9.0		10.9	10.9			16.0
	18.0	10.9	10.9	9.0	8.1	10.8	10.9	9.0	8.1	10.8	10.9	9.0	8.1	18.0
	20.0	9.6	9.8	9.0	7.9	9.5	9.6	9.0	8.1	9.5	9.6	9.0	8.1	20.0
	22.0	8.4	8.5	8.5	7.3	8.3	8.4	8.5	7.6	8.2	8.4	8.5	7.8	22.0
	24.0	7.3	7.5	7.6	6.7	7.2	7.4	7.5	7.0	7.2	7.3	7.4	7.2	24.0
	26.0	6.5	6.7	6.7	6.3	6.4	6.5	6.7	6.5	6.3	6.5	6.6	6.7	26.0
	28.0	5.8	5.9	6.0	5.8	5.7	5.8	5.9	6.0	5.7	5.8	5.9	5.9	28.0
Œ	30.0	5.2	5.3	5.4	5.4	5.1	5.2	5.3	5.4	5.1	5.2	5.2	5.3	30.0 ≶
radius	32.0	4.7	4.8	4.9	4.9	4.6	4.7	4.8	4.8	4.6	4.6	4.7	4.8	32.0
	34.0	4.3	4.3	4.4	4.5	4.2	4.2	4.3	4.4	4.1	4.2	4.3	4.3	30.0 Working radius 34.0 36.0
Working	36.0	3.8	3.9	4.0	4.0	3.7	3.8	3.9	3.9	3.7	3.8	3.8	3.9	36.0
No	38.0	3.5	3.6	3.6	3.7	3.5	3.5	3.5	3.6	3.4	3.4	3.5	3.5	38.0 €
	40.0	3.2	3.3	3.3	3.3	3.1	3.2	3.2	3.3	3.0	3.1	3.2	3.2	40.0
	42.0	2.9	3.0	3.0	3.1	2.8	2.9	2.9	3.0	2.8	2.8	2.9	2.9	42.0
	44.0	2.5	2.7	2.8	2.8	2.5	2.6	2.7	2.7	2.5	2.5	2.6	2.6	44.0
	46.0	2.2	2.3	2.5	2.6	2.2	2.3	2.4	2.5	2.2	2.2	2.4	2.4	46.0
	48.0		2.0	2.2	2.3	1.8	2.0	2.1	2.2	1.8	1.9	2.1	2.1	48.0
	50.0			1.9	2.0		1.7	1.8	1.9	1.4	1.6	1.8	1.9	50.0
	52.0				1.7			1.6	1.7			1.5	1.6	52.0
Ш	Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Во	om length (m)		51	.8	
J	ib length (m)	9.1	12.2	15.2	18.3
	14.0	10.9			
	16.0	10.9	10.9		
	18.0	10.7	10.8	9.0	8.1
	20.0	9.4	9.5	9.0	8.1
	22.0	8.1	8.3	8.3	8.0
	24.0	7.1	7.2	7.3	7.4
	26.0	6.2	6.4	6.5	6.6
	28.0	5.6	5.7	5.8	5.8
ΙĒ	30.0	5.0	5.1	5.1	5.2
Working radius	32.0	4.4	4.5	4.6	4.7
gra	34.0	4.0	4.1	4.2	4.2
ř	36.0	3.6	3.6	3.7	3.8
ş	38.0	3.3	3.3	3.4	3.4
	40.0	2.9	3.0	3.0	3.1
	42.0	2.7	2.7	2.8	2.8
	44.0	2.3	2.4	2.5	2.5
	46.0	2.1	2.1	2.2	2.3
	48.0	1.7	1.8	1.9	2.0
	50.0		1.5	1.6	1.7
	52.0				1.5
	Reeves	1	1	1	1

#### Note:

Ratings according to EN13000.

Ratings shown in \_\_\_\_\_ are determined by the strength of the boom or other structural components. Lifting capacities may vary depending on hook used or with/without auxiliary sheave.

			Jib Lif fset A	_			(With	out M	lain H	look I	Block	) Co Carb	ody Wei	ght: 31.9 t ght: 14.4 t	t	
Вс	Unit: metric ton															
	ib length (m)	9.1	12.2	15.2	18.3				18.3	9.1	12.2					
	12.0	9.5												12.0		
İ	14.0	9.3	6.9			9.4				9.5				14.0		
İ	16.0	8.6	6.4			8.9	6.5			9.0	6.7			16.0		
	18.0	8.0	5.9	4.8		8.3	6.1	4.9		8.6	6.2	5.0		18.0		
=	20.0	7.5	5.6	4.5	3.8	7.8	5.7	4.6	3.9	8.0	5.9	4.7	3.9	20.0	<	
] <u>s</u>	22.0	7.1	5.3	4.2	3.6	7.4	5.4	4.3	3.6	7.6	5.6	4.4	3.7	22.0	핡	
Working radius (m)	24.0	6.8	5.0	4.0	3.4	7.0	5.1	4.1	3.4	7.3	5.3	4.2	3.5	24.0	Working radius (m)	
g.	26.0		4.8	3.8	3.2		4.9	3.9	3.2	7.0	5.1	4.0	3.3	26.0	radi	
돌	28.0			3.6	3.0		4.7	3.7	3.0	6.4	4.9	3.8	3.1	28.0	ıs (r	
>	30.0			3.5	2.9			3.6	2.9		4.7	3.7	3.0	30.0	리	
	32.0				2.8			3.5	2.8			3.6	2.9	32.0	İ	
	34.0								2.7				2.8	34.0		
	36.0												2.7	36.0		

1

В	oom length (m)		33	3.5			36	6.6			39	0.6		Boom length (m)
Γ.	lib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
Г	14.0	9.5				9.5								14.0
	16.0	9.3	6.8			9.4				9.5				16.0
	18.0	8.8	6.4			9.0	6.5			9.2	6.6			18.0
	20.0	8.3	6.1	4.8	4.0	8.5	6.2	4.9	4.1	8.8	6.3	4.9		20.0
	22.0	7.9	5.7	4.5	3.8	8.1	5.9	4.6	3.9	8.3	6.0	4.7	3.9	22.0
ء[	24.0	7.5	5.5	4.3	3.6	7.7	5.6	4.4	3.7	7.7	5.7	4.5	3.7	24.0
radius (m)	26.0	7.1	5.2	4.1	3.4	7.0	5.4	4.2	3.5	6.9	5.5	4.3	3.5	26.0 g
adic	28.0	6.4	5.0	3.9	3.2	6.2	5.1	4.0	3.3	6.1	5.2	4.1	3.3	28.0
l g	30.0	5.7	4.8	3.8	3.1	5.6	4.9	3.8	3.2	5.5	5.1	3.9	3.2	30.0
Working	32.0		4.7	3.7	3.0	5.1	4.8	3.7	3.1	5.0	4.9	3.8	3.1	26.0 Working radius (m) 30.0 32.0 (m)
>	34.0			3.5	2.9		4.6	3.6	3.0		4.6	3.7	3.0	34.0
	36.0				2.8			3.5	2.9		4.1	3.6	2.9	36.0
	38.0				2.7			3.4	2.8			3.5	2.8	38.0
	40.0								2.7				2.7	40.0
ĺ	42.0												2.6	42.0
ĺ	Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Note:

Ratings according to EN13000.

Reeves

1

Ratings shown in \_\_\_\_\_ are determined by the strength of the boom or other structural components. Lifting capacities may vary depending on hook used or with/without auxiliary sheave.

1

Please refer rated chart in operator's cabin.

Reeves

1

#### **Fixed Jib Lifting Capacities (Without Main Hook Block)** Counterweight: 31.9 t Carbody Weight: 14.4 t (Jib Offset Angle: 30°) Unit: metric ton Boom length (m) Boom length (m) 42.7 45.7 48.8 Jib length (m) 12.2 15.2 18.3 9.1 12.2 15.2 18.3 9.1 12.2 15.2 18.3 Jib length (m) 9.1 9.5 9.5 16.0 16.0 9.5 9.4 6.7 9.5 18.0 18.0 8.9 5.1 6.5 9.2 20.0 9.1 6.6 5.1 20.0 6.4 4.0 4.0 8.5 4.1 22.0 8.4 4.8 8.4 6.2 4.9 4.9 22.0 6.1 6.3 4.6 5.9 3.8 7.5 4.7 3.9 24.0 24.0 7.6 5.8 3.8 7.6 4.7 6.0 5.7 3.7 26.0 6.7 5.6 4.4 3.6 6.6 4.5 3.7 6.6 5.8 4.5 26.0 4.2 5.5 28.0 6.0 5.4 3.4 5.9 4.3 3.5 5.9 5.6 4.3 3.6 28.0 30.0 5.3 5.2 4.0 3.3 5.3 5.3 4.1 3.3 5.2 5.4 4.1 3.4 30.0 4.9 32.0 4.8 5.0 3.9 3.2 4.8 4.0 3.2 4.7 4.9 4.0 3.3 32.0 radius (m) 34.0 4.4 4.5 3.8 3.1 4.3 4.4 3.9 3.1 4.2 4.4 3.9 3.2 34.0 36.0 3.9 4.1 3.7 3.0 3.9 4.0 3.7 3.0 3.9 3.9 3.8 3.1 36.0 38.0 3.7 3.6 2.9 3.5 3.6 3.6 2.9 3.5 3.6 3.7 3.0 38.0 2.8 40.0 3.5 3.4 3.2 2.9 40.0 2.8 3.4 2.7 2.8 42.0 2.7 3.1 2.9 3.0 42.0 2.6 2.7 2.7 44.0 2.7 44.0 46.0 2.6 46.0 48.0 2.3 48.0 Reeves 1 1 1 1 1 1 1 1 1 1 Reeves

Во	om length (m)		51	.8	
J	ib length (m)	9.1	12.2	15.2	18.3
	18.0	9.5			
	20.0	9.3	6.6		
	22.0	8.5	6.4	5.0	
	24.0	7.5	6.1	4.8	3.9
	26.0	6.6	5.9	4.6	3.8
	28.0	5.9	5.7	4.4	3.6
5	30.0	5.2	5.4	4.2	3.5
Working radius (m)	32.0	4.7	4.8	4.1	3.4
adir	34.0	4.2	4.3	4.0	3.3
ng	36.0	3.7	3.8	3.9	3.2
Į.	38.0	3.3	3.5	3.6	3.1
>	40.0	3.0	3.2	3.3	3.0
	42.0		2.9	3.0	2.9
	44.0		2.6	2.7	2.6
	46.0			2.4	2.4
	48.0				2.2
	50.0				2.0
	Reeves	1	1	1	1

Note:

Ratings according to EN13000.

Ratings shown in \_\_\_\_\_ are determined by the strength of the boom or other structural components.

Lifting capacities may vary depending on hook used or with/without auxiliary sheave.

## SUPPLEMENTAL DATA FOR CLAMSHELL RATING CHART

- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
- Deduct weight of bucket, slings and all other load handling accessories from main boom ratings shown.
- •Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
- Rated loads do not exceed 66% of minimum tipping loads.
- Ratings are for operation on a firm and level surface, up to 1% gradient.
- At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
- •Boom inserts and guy lines must be arranged as shown in the "operator's manual".
- ·Boom hoist reeving is 12 part line.
- Gantry must be in raised position for all conditions.
- ·Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not laterally.
- Crawler frames must be fully extended for all crane operations.

#### (Clamshell bucket lifting)

- •The total load that can be lifted is the value for weight of bucket, slings, and all other load handling accessories deducted from main boom ratings shown.
- •The weight of bucket and materials must not exceed rated load.
- •Optimum bucket should be required according to material. Bucket capacity (m³) x specified gravity of material (ton/m³) + bucket weight (ton) = rated load.
- Bucket weight must also be decreased according to operating cycle and bucket lowering height.
- Rated loads are determined by stability and boom strength.
   During simultaneous operations of boom and swing, rapid acceleration or deceleration must be avoided.
- Do not attempt to cast the bucket while swinging or diagonal draw-cutting.

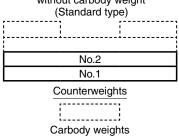
### <Reference Information>

#### Main hoist loads

main noise isaas	
No. of Parts of Line	1
Maximum Loads (kN)	98
Maximum Loads (t)	10.0

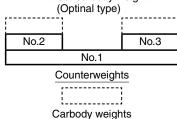
#### Assembling the counterweight

20.5 ton counterweight without carbody weight



#### Assembling the counterweight

(Equipped with self removal device) 19.8 ton counterweight without carbody weight



 The lifting capacity does not change due to the type of counterweights. (Standard or optinal)

> Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

	amsho	Without Ca Crawler F	weight: 20.5 t rbody Weight ully Extended Unit: metric ton					
Boom length Load (m) radius (m)	12.2	15.2	18.3	21.3	24.4			Boom length (m) Load radius (m)
5.0	10.0							5.0
6.0	10.0	10.0						6.0
7.0	10.0	10.0	10.0					7.0
8.0	10.0	10.0	10.0	9.5				8.0
9.0	10.0	10.0	10.0	9.5	8.7			9.0
10.0	9.8	9.7	9.6	9.5	8.7			10.0
11.0	9.1	9.0	8.9	8.8	8.7			11.0
12.0		8.3	8.2	8.1	8.0			12.0
13.0		7.7	7.6	7.5	7.4			13.0
14.0		7.1	7.0	6.9	6.8			14.0
15.0			6.5	6.4	6.3			15.0
16.0			6.1	6.0	5.9			16.0
17.0				5.7	5.6			17.0
18.0				5.4	5.3			18.0
19.0				5.2	5.1			19.0
20.0					4.9			20.0
21.0					4.7			21.0
22.0								22.0
23.0								23.0
24.0								24.0
25.0								25.0
26.0								26.0
27.0								27.0
28.0								28.0
29.0								29.0
30.0								30.0
Reeves	1	1	1	1	1			Reeves

Note:

### SUPPLEMENTAL DATA FOR REDUCED WEIGHTS RATING CHART

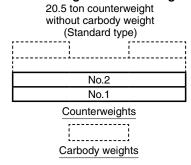
- Ratings according to EN13000.
- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
- Deduct weight of hook block(s), slings and all other load handling accessories from main boom ratings shown.
- Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
- Ratings are for operation on a firm and level surface, up to 1% gradient.
- At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
- •Boom inserts and guy lines must be arranged as shown in the "operator's manual".
- ·Boom hoist reeving is 12 part line.
- · Gantry must be in raised position for all conditions.
- ·Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not laterally.
- Ratings inside of boxes \_\_\_\_\_ are limited by strength of materials.
- •The minimum rated load is 1.4(Ton).
- Crawler frames must be fully extended for all crane operations.

#### (Crane boom lifting)

•The total load that can be lifted is the value for weight of hook block, slings, and all other load handling accessories deducted from main boom ratings shown.

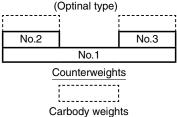
Counterweight	Carbody waight	Boom lenght				
	Carbody weight	Without aux.	With aux.			
20.5 ton	Without	12.2 m $\sim$ 57.9 m	12.2 m $\sim$ 54.9 m			
19.8 ton	Without	12.2 m $\sim$ 57.9 m	12.2 m $\sim$ 54.9 m			

#### Assembling the counterweight



#### Assembling the counterweight

(Equipped with self removal device) 19.8 ton counterweight without carbody weight



 The lifting capacity does not change due to the type of counterweights. (Standard or optinal)

#### <Reference Information>

#### Main hoist loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	112	224	335	447	559
Maximum Loads (t)	11.4	22.8	34.2	45.6	57.0
				-	
No. of Parts of Line	6	7	8		
Maximum Loads (kN)	671	779	883		

79.4

90.0

68.4

#### **Auxiliary hoist loads**

Maximum Loads (t)

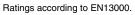
No. of Parts of Line	1
Maximum Loads (kN)	108
Maximum Loads (t)	11.0

Weight of hook block									
Hook Block	90 t	70 t	50 t	35 t	Ball Hook				
Weight (t)	1.3	0.9	0.85	0.7	0.3				

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

	Reduced Weights Rating Charts Crane Boom Lifting Capacities										Counterweight: 20.5 t Without Carbody Weight Crawler Fully Extended Unit: metric ton		
Boom length Load (m) radius (m)	12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6		Boom length (m) Load radius (m)	
3.9	81.2	77.3	71.4									3.9	
4.0	80.2	74.6	69.0	4.3m/59.0								4.0	
4.5	67.1	63.2	59.1	55.8	4.7m/49.9							4.5	
5.0	54.8	54.8	51.6	49.0	46.4	5.1m/42.2						5.0	
5.5	46.2	46.2	45.8	43.7	41.6	39.7	5.6m/37.1					5.5	
6.0	40.0	39.9	39.7	39.4	37.6	36.0	34.5	33.1	6.4m/29.8	6.8m/26.9		6.0	
7.0	31.3	31.2	31.1	30.9	30.6	30.3	29.2	28.2	27.1	26.2		7.0	
8.0	25.7	25.6	25.4	25.4	25.4	25.3	25.2	24.4	23.6	22.8		8.0	
9.0	21.7	21.6	21.4	21.4	21.4	21.4	21.3	21.3	20.8	20.1		9.0	
10.0	18.8	18.6	18.5	18.5	18.5	18.5	18.4	18.3	18.2	18.0		10.0	
12.0	11.8m/15.0	14.5	14.4	14.4	14.4	14.3	14.2	14.2	14.0	13.9		12.0	
14.0		11.9	11.7	11.7	11.7	11.6	11.5	11.4	11.3	11.2		14.0	
16.0		14.4m/11.5	9.8	9.8	9.8	9.7	9.6	9.5	9.4	9.3		16.0	
18.0			17.0m/9.0	8.4	8.3	8.3	8.1	8.1	7.9	7.8		18.0	
20.0				19.6m/7.6	7.2	7.1	7.0	6.9	6.8	6.7		20.0	
22.0					6.4	6.3	6.1	6.1	5.9	5.8		22.0	
24.0					22.3m/6.3	5.6	5.4	5.3	5.2	5.1		24.0	
26.0						24.9m/5.3	4.8	4.8	4.6	4.5		26.0	
28.0							27.6m/4.4	4.3	4.1	4.0		28.0	
30.0								3.8	3.7	3.6		30.0	
32.0								30.2m/3.8	3.3	3.2		32.0	
34.0									32.9m/3.2	2.9		34.0	
36.0										35.5m/2.7		36.0	
38.0												38.0	
40.0												40.0	
44.0												44.0	
Reeves	8	8	8	6	5	4	4	4	4	4		Reeves	

Boom length Load (m) radius (m)	42.7	45.7	48.8	51.8	54.9	57.9	Boom length (m) Load radius (m)
4.5	7.3m/24.1	7.7m/22.2					4.5
5.0	22.0	21.4	8.1m/19.8	8.5m/17.2			5.0
5.5	19.5	18.9	18.3	16.6	14.5	9.4m/12.5	5.5
6.0	17.4	16.9	16.4	15.5	13.5	11.9	6.0
7.0	13.8	13.7	13.5	13.1	11.9	10.4	7.0
8.0	11.1	11.1	11.1	11.0	10.6	9.3	8.0
9.0	9.1	9.1	9.1	9.0	8.9	8.3	9.0
10.0	7.7	7.7	7.7	7.6	7.5	7.4	10.0
12.0	6.6	6.6	6.5	6.4	6.3	6.3	12.0
14.0	5.7	5.7	5.6	5.5	5.4	5.4	14.0
16.0	4.9	4.9	4.9	4.8	4.7	4.6	16.0
18.0	4.3	4.3	4.3	4.2	4.1	4.0	18.0
20.0	3.8	3.8	3.8	3.7	3.6	3.5	20.0
22.0	3.4	3.4	3.4	3.3	3.1	3.0	22.0
24.0	3.1	3.1	3.0	2.9	2.7	2.6	24.0
26.0	2.7	2.7	2.6	2.5	2.3	2.3	26.0
28.0	2.4	2.4	2.3	2.2	2.0	1.9	28.0
30.0	2.1	2.1	2.0	1.9	1.7	1.7	30.0
32.0	38.1m/2.1	1.9	1.8	1.6	1.5	1.4	32.0
34.0		40.8m/1.8	43.4m/1.4				34.0
36.0							36.0
38.0							38.0
40.0							40.0
44.0							44.0
48.0							48.0
52.0							52.0
Reeves	4	2	2	2	2	2	Reeves



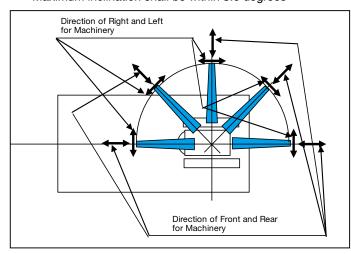
Ratings shown in \_\_\_\_\_ are determined by the strength of the boom or other structural components. Lifting capacities may vary depending on hook used or with/without auxiliary sheave.

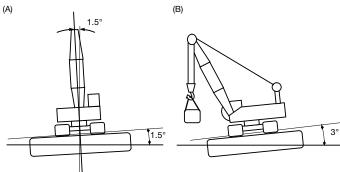
## SUPPLEMENTAL DATA FOR BARGE RATING CHART

- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
- Deduct weight of hook block (s), slings and all other load handling accessories from main boom ratings shown.
- Condition of barge stability this rating chart were determined under the condition below. The stability of barge shall meet below condition. During operation the machinery static inclination against horizontal level.
- (A) Both sides (right & left) of machine

  Maximum inclination shall be within 1.5 degrees
- (B) Front & backward of macine

  Maximum inclination shall be within 3.0 degrees





- · Working area shall be inshore and smooth water.
- Applicable regulations for structure japanese construction codes for mobile crane
- \*\*Regulation of class of shipping (abs, lloyd, bv, nk, etc) are not adapted.
- At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
- Boom inserts and guy lines must be arranged as shown in the "operator's manual".
- ·Boom hoist reeving is 12 part line.
- Gantry must be in raised position for all conditions.
- •Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not laterally.
- Ratings inside of boxes \_\_\_\_\_ are limited by strength of materials.

- •The minimum rated load is 1.4 (ton).
- Crawler frames must be fully extended for all crane operations.
- •The machinery should be fastened to the deck of the barge to prevent tip over and sliding.
- Towing area

Towing area shall be within coastal area and quiet wave condition. Offshore and open sea is not considered for this machinery. Depend on the height of wave, counterweight shall be reduced during towing.

#### (Crane boom lifting)

• The total load that can be lifted is the value for weight of hook block, slings, and all other load handling accessories deducted from main boom ratings shown.

#### <Reference Information>

#### Main hoist loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	112	224	335	447	490
Maximum Loads (t)	11.4	22.8	34.2	45.6	50.0

#### **Auxiliary hoist loads**

No. of Parts of Line	1
Maximum Loads (kN)	108
Maximum Loads (t)	11.0

Weight of Hook Block									
Hook Block	90 t	70 t	50 t	35 t	11 t Ball Hook				
Weight (t)	1.3	0.9	0.85	0.7	0.3				

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

#### Assembling the counterweight

31.9 ton counterweight 14.4 ton carbody weight (Standard type)

•		<u>,                                      </u>
No.4		No.5
	No.3	
	No.2	
	No.1	

Counterweights
Carbody weights

#### Assembling the counterweight

(Equipped with self removal device) 31.3 ton counterweight 14.4 ton carbody weight (Optinal type)



Counterweights
Carbody weights

 The lifting capacity does not change due to the type of counterweights (standard or optinal)

Barge Raiting Chart     Crane Boom Lifting Capacities							Counterweight: 31.9 t Carbody Weight: 14.4 t Crawler Fully Extended Unit: metric tons		
Boom length Load (m) radius (m)		18.3	21.3	24.4	27.4	30.5	33.5	36.6	Boom length (m) Load radius (m)
4.5	4.6m/50.0								4.5
5.0	44.8								5.0
5.5	37.0	40.4							5.5
6.0	31.5	36.9	6.2m/35.5	6.9m/31.4					6.0
7.0	26.7	31.4	31.2	30.9	7.5m/28.1				7.0
8.0	23.0	26.6	26.5	26.4	26.3	8.2m/24.9	8.9m/22.2		8.0
9.0	20.1	22.9	22.8	22.7	22.6	22.5	22.1	9.6m/19.4	9.0
10.0	15.8	20.3	20.2	20.1	20.0	19.9	19.8	19.1	10.0
12.0	11.9	16.1	16.0	15.9	15.8	15.7	15.6	15.5	12.0
14.0	14.4m/10.8	12.6	12.8	12.7	12.6	12.5	12.4	12.3	14.0
16.0		10.4	10.8	10.8	10.7	10.6	10.5	10.4	16.0
18.0		17.0m/8.5	8.7	9.0	9.2	9.1	9.0	8.9	18.0
20.0			19.6m/7.4	7.7	8.0	8.1	8.0	7.9	20.0
22.0				6.5	6.9	7.0	7.0	6.9	22.0
24.0				22.3m/6.3	5.9	6.1	6.2	6.1	24.0
26.0					24.9m/5.5	5.2	5.4	5.3	26.0
28.0						27.6m/4.6	4.6	4.6	28.0
30.0							4.0	4.0	30.0
32.0							30.2m/3.9	3.5	32.0
34.0								32.9m/3.2	34.0
Reeves	5	4	4	3	3	3	2	2	Reeves

Note:

Ratings according to japanese construction codes for mobile cranes and japanese safety ordinance on cranes, etc.

Ratings shown in \_\_\_\_\_\_ are determined by the strength of the boom or other structual components.

Lifting capacities may vary depending on hook used or with/without auxiliary sheave.

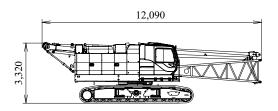
# TRANSPORTATION PLAN

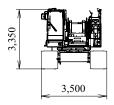
Name	Dimension		Weight (kg)
Base Machine  • Boom base  • Gantry  • Crawler  • Wire rope (Front / boom hoist)	12,090	3,500	41,360
• Gantry • Crawler • Wire rope (Front / rear / boom hoist)	8,210	3,500	39,300
Base Machine • Boom base • Gantry • Wire rope (Front / rear / boom hoist) • Without crawler	12,090	2,990	27,000
• Gantry • Wire rope (Front / rear / boom hoist) • Without crawler	7,700 028 3,500	2,990	24,940
Crawler	6,280	1,040	7,180


## **PARTS AND ATTACHMENTS**

#### **Base Machine**

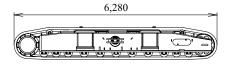
Boom base, Gantry, Crawler, Wire rope (Front/boom hoist) Weight: 41,360 kg Width: 3,500 mm





#### Crawler

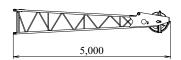
Weight: 7,180 kg





#### **Upper Jib** Weight: 180 kg

800



#### **Lower Jib**

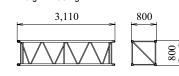
Weight: 200 kg





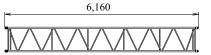
### 3.0 m

Jib Insert Weight: 100 kg



#### 6.1 m **Jib Insert**

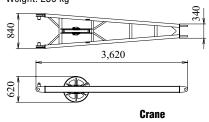
Weight: 180 kg





#### Strut

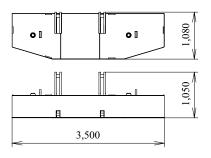
Weight: 250 kg



**Backstop** 

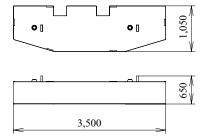
Weight: 270 kg 5,130

## **Counterweight No.1** Weight: 10,540 kg



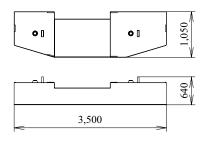
#### Counterweight No.2

Weight: 9,930 kg

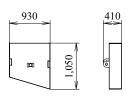


### Counterweight No.3

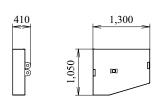
Weight: 8,250 kg



## Counterweight No.4 (L) Weight: 1,280 kg

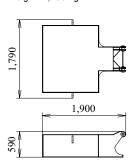


## **Counterweight No.4 (R)** Weight: 1,900 kg



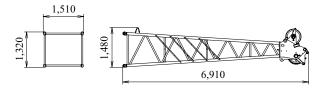
### **Carbody Weight**

Weight: 7,200 kg



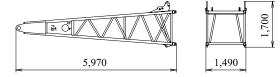
#### **Boom Tip**

Weight: 1,220 kg



#### **Boom Base**

Weight: 1,120 kg



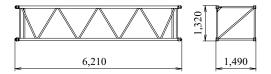
### 3.0 m Boom Insert Weight: 300 kg





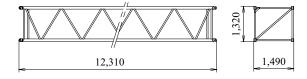
6.1 m **Boom Insert** 

Weight: 510 kg

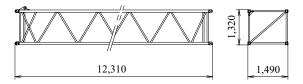


#### 12.2 m **Insert Boom**

Weight: 950 kg

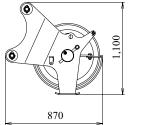


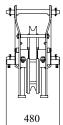
## **Boom Insert (with lug)** Weight: 1,220 kg



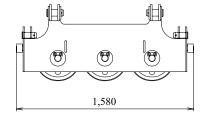
### **Auxiliary Sheave**

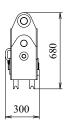
Weight: 195 kg





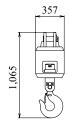
## **Upper Spreader** Weight: 280 kg



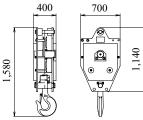


#### **Ball Hook**

Weight: 300 kg

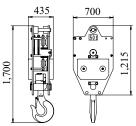


#### 35 t Hook Weight: 700 kg



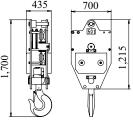
#### 50 t Hook

Weight: 850 kg

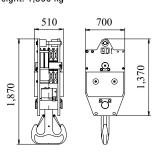


#### 70 t Hook Weight: 900 kg

390 700 1,250 1,820



#### 90 t Hook Weight: 1,300 kg



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