

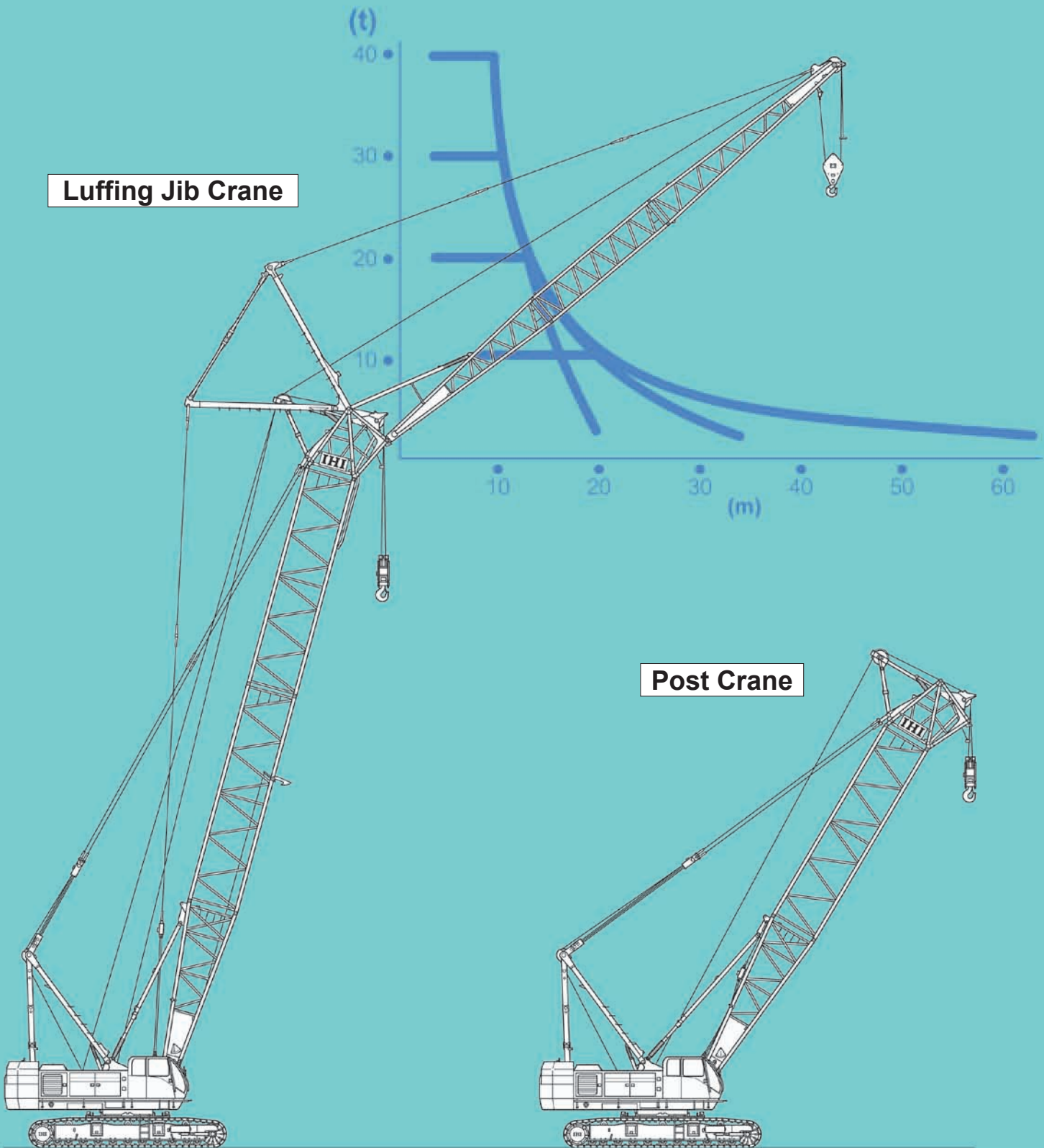
CCH1000

Fully Hydraulic Crawler Crane

Lifting capacity 120 metric tons



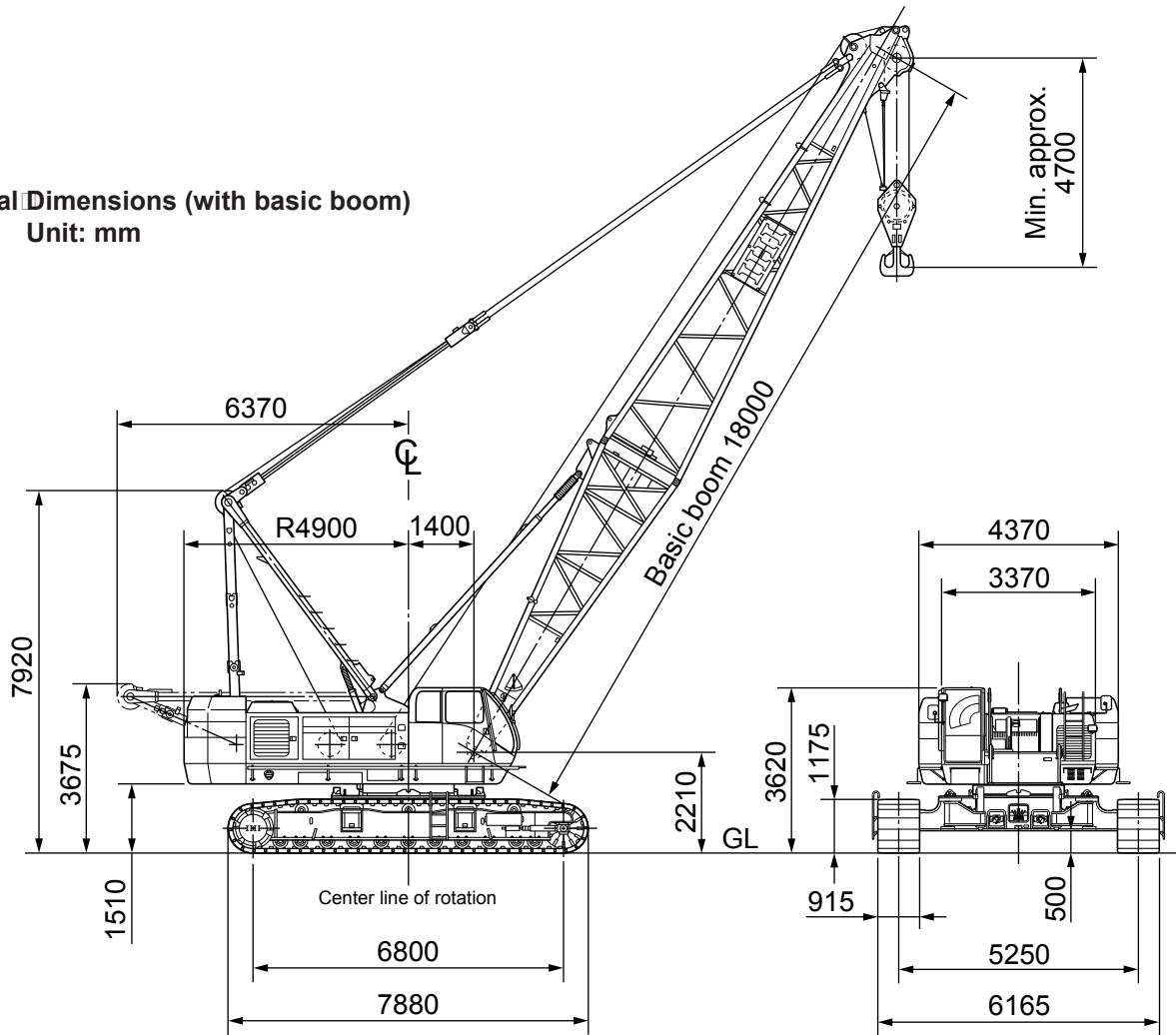
Luffing Jib Crane



Post Crane

Note:
Main and Jib hook blocks may not be operated simultaneously.

■ **General Dimensions (with basic boom)**
Unit: mm



■ **Specifications**

Performance	
Swing speed	2.2 rpm
Travel speed	* 1.5/1.0 km/h (0.93/0.62 mph)
Gradeability	30% (Approx. 16.7° with 18m Boom and 120ton hook block)
Engine	
Make	HINO MOTOR
Model	K13C-UV (with turbo) diesel engine 4-cycle, water cooled, overhead valve
Type	Direct injection diesel engine
Total piston displacement	12.882 L
Rated output	320 PS/2000 rpm
Fuel tank capacity	450 L
Battery	12 V x 150 AH x 2 pcs.
Load hoist system (Main and Aux.)	
Hydraulic motor	Variable displacement axial piston type
Reduction gear	Two-stage planetary gear and single stage spur gear
Hoist drum	Tandem drums driven independently by hydraulic motor, lagging type with lebus grooved drum.
Clutch	Internal expanding band type
Brake	External contracting type
Drum lock	Ratchet lock
Hydraulic pump	Variable displacement axial piston type x 2 Gear pump x 3
Boom hoist system	
Motor	Axial piston type
Reduction gear	One stage planetary gear + One stage spur gear
Hoist drum	Lebus grooved drum
Brake	Automatic spring-loaded hydraulically released wet type multi-disk
Drum lock	Ratchet lock

* Travel speed changes depending on the load.

■ **Standard Equipment**

- **Instrument for crane**
 - Engine tachometer (Hour meter)
 - Hydraulic oil pressure gauge (for control circuit)
 - Fuel level gauge
 - Engine coolant thermo indicator
 - Engine oil pressure indicator
 - Hydraulic oil thermo indicator
 - **Lighting for crane**
 - 2-Work light (24v x 80w)
 - 1-Room light (24v x 10w)
 - **Safety device**
 - Automatic stop for hook overwinding
 - Automatic stop for boom overwinding
 - Telescopic boom limit stop
 - Swing lock
 - Main and auxiliary drum lock
 - Boom hoist drum lock
 - 2nd. boom stop device (82° non-resettable)
 - Clutch engage pin on main and auxiliary winch
 - Safety valve for hydraulic circuit
 - Counter balance valve
 - Control lever locking device
 - **Other standard accessories**
 - Front windshield wipers (intermittent, w/washer)
 - Roof wipers (intermittent, w/washer)
 - Survivor
 - Sun shade
 - Strage pouch
 - Tool box
 - Reclining operator's seat
 - Floor mat
- indicated bar graph in OK monitor
- Jack device for dismantling
 - Lateral cylinders for dismantling crawler
 - Steps for operator's cab
 - Radio
 - Cigarette lighter
 - Ash tray
 - Large rear view mirrors (right/left)
 - Signal horn
 - Electric fuel filling pump
 - Swing warning flasher
 - Travel warning flasher
 - High "A" frame erecting device
 - Low-noise cab
 - Bronze tinted glass
 - Wire mesh boom workway (for inner boom)
 - Foot rest
 - Electric type engine throttle
 - Foot pedal-type engine throttle
 - Automatic engine deceleration
 - Ultra low speed control
 - Hydraulic assist brake for main and aux. winch
 - Winch mode selector for main and aux. winch
 - Rope guide roller on outer boom
 - Plug socket
 - Loud speaker
 - Emergency engine stop switch
 - OK monitor

Specifications

Max. Lifting capacity x working radius	120 metric tons x 5.0m	
Max. boom length	75m	
Max. boom length, (main + jib)	88m (63m boom+25m jib)	
Rope speed	Main drum hoist/lowering	* 100~50/50~25 m/min
	Aux. drum hoist/lowering	* 100~50/50~25 m/min
	Boom drum hoist/lowering	* 60~30 m/min
Part line	Hook block capacity x Part line	120ton x 10
	Hook block capacity x Part line	11ton x 1
	Boom drum hoist/lowering part line	14
Counterweight	50ton	
Total operating weight (with 18m boom)	121.5ton (Approx.)	
Average ground bearing pressure	0.92kgf/cm ²	

* The rope speed changes depending on the load.

Combination of Boom and Jib (●: Available combination)

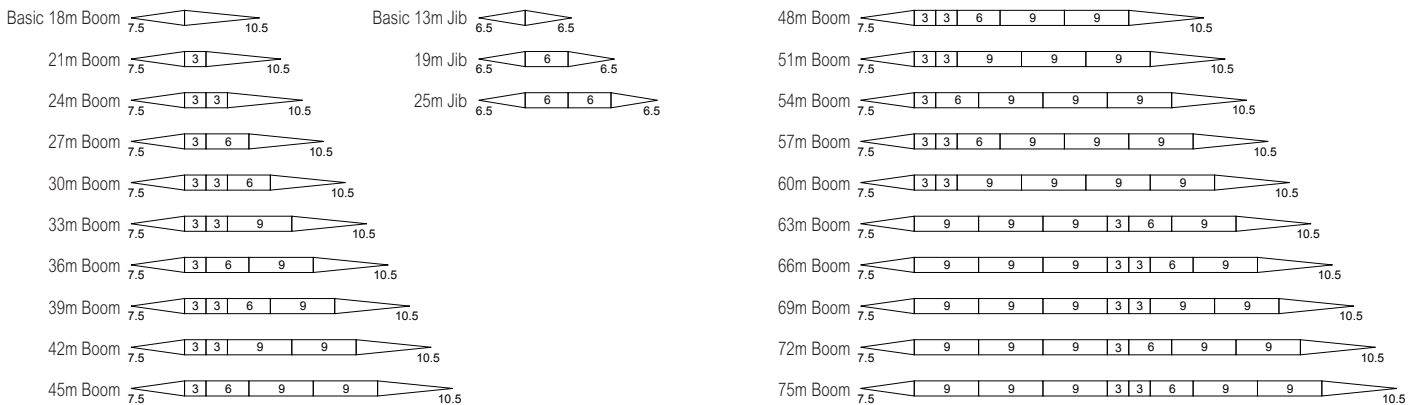
Jib length (m)	Boom length (m)																	
	18-24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72	75
Auxiliary	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
13			●	●	●	●	●	●	●	●	●	●	●	●	●	●		
19			●	●	●	●	●	●	●	●	●	●	●	●	●	●		
25			●	●	●	●	●	●	●	●	●	●	●	●	●	●		

Wire rope

Place of use	Rope diameter (mm)	Guaranteed strength (ton)	Rope type
Load hoist	φ 26	61.0	A
Boom hoist	φ 22	36.3	B
Boom suspension	φ 31.5	74.9	C
Jib load hoist	φ 26	61.0	A
Jib Boom suspension	φ 28	59.3	C
Jib strut suspension	φ 28	59.3	C

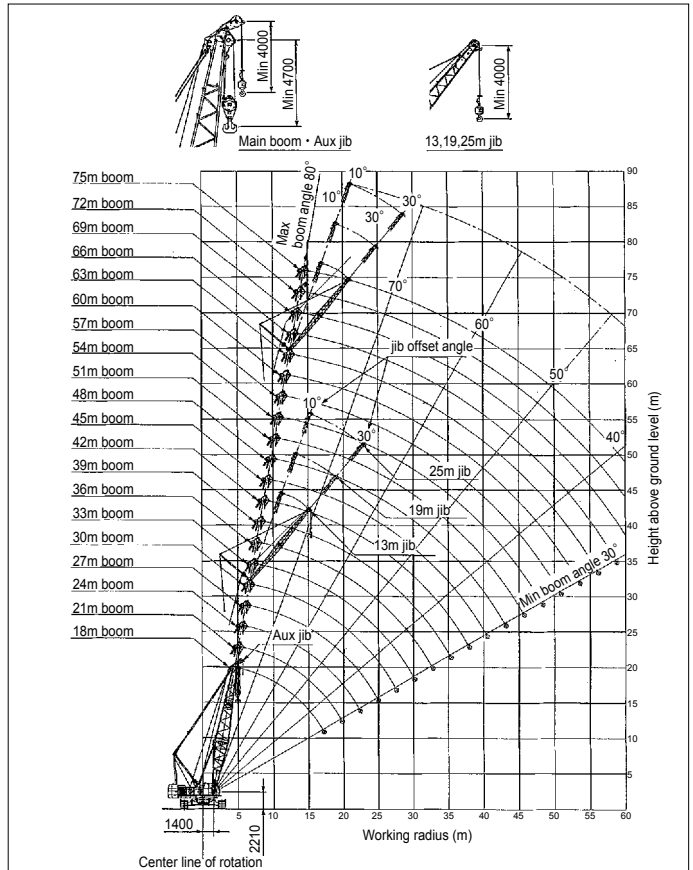
Rope type A: PS(19)+39 x P-7
 B: IWRC 6 x WS(31)
 C: IWRC 6 x Fi(29)

Boom & Jib combination



Note: 1. Compositions shown are for maximum length at time of delivery.
 2. Required middle suspension for boom length 63m and longer.
 3. Boom can be converted into a post for tower crane operation by replacing top section.

Working range (No load condition)

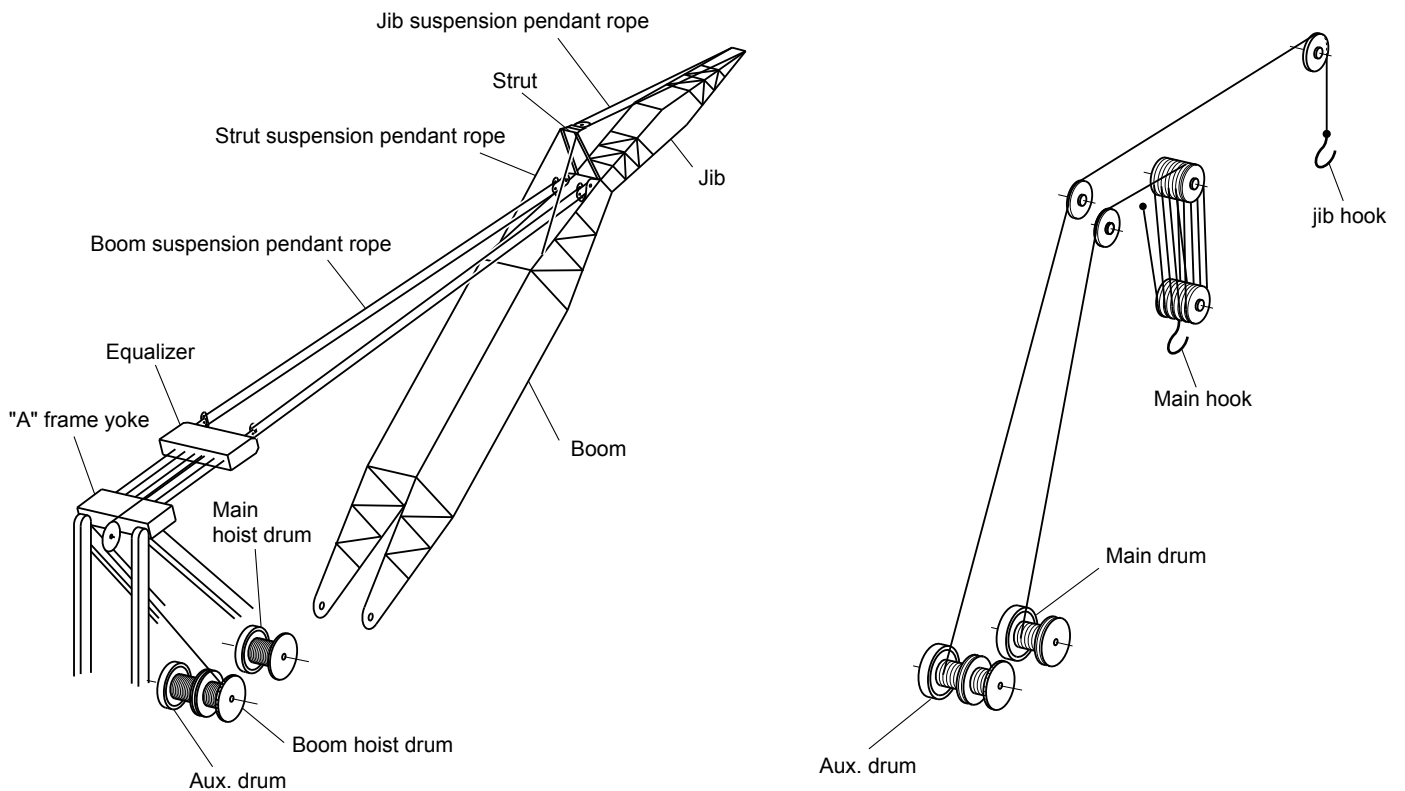


■ Main boom rated lifting loads

(Unit: metric ton)

Boom length (m) Working radius (m)	18.0	21.0	24.0	27.0	30.0	33.0	36.0	39.0	42.0	45.0	48.0	51.0	54.0	57.0	60.0	63.0	66.0	69.0	72.0	75.0	
5.0	120.0																				
5.5	106.7	90.0																			
6.0	97.0	90.0	80.0	70.0																	
7.0	83.3	81.2	75.0	7.2m x 70.0	7.1m x 60.0	7.6m x 50.0															
8.0	71.7	71.5	67.5	64.0	60.0	50.0	8.1m x 50.0	8.6m x 40.0													
9.0	60.6	60.0	59.7	57.5	54.1	9.5m x 50.0	50.0	40.0	9.2m x 40.0	9.7m x 40.0											
10.0	51.8	51.6	51.5	51.0	48.8	47.4	46.0	11.3m x 40.0	11.2m x 40.0	11.0m x 40.0	10.2m x 30.0	10.7m x 30.0	11.2m x 28.3	11.8m x 28.1							
12.0	40.6	40.4	40.3	40.2	40.0	39.2	38.4	37.8	37.5	37.1	30.0	30.0	28.3	28.1	12.3m x 20.0	12.8m x 20.0	13.3m x 19.0	13.8m x 16.0			
14.0	32.9	32.7	32.6	32.5	32.3	32.2	32.1	31.9	31.8	31.7	14.1m x 30.0	30.0	28.3	28.1	20.0	20.0	19.0	16.0	14.4m x 14.5	14.9m x 13.0	
16.0	27.6	27.4	27.3	27.2	27.0	26.9	26.8	26.6	26.5	26.4	26.3	26.2	25.1	24.9	20.0	17.4m x 20.0	19.0	16.0	14.5	13.0	
18.0	17.2m x 25.1	23.4	23.3	23.2	23.0	22.9	22.8	22.6	22.5	22.4	22.3	22.2	22.0	21.9	20.0	19.2	17.9	16.0	14.5	13.0	
20.0		19.7m x 20.8	20.2	20.1	19.9	19.8	19.7	19.5	19.4	19.3	19.2	19.1	18.9	18.8	18.2	17.5	16.7	15.2	13.6	11.6	
22.0			17.8	17.7	17.5	17.4	17.3	17.1	17.0	16.9	16.8	16.7	16.5	16.4	16.3	15.8	15.3	14.2	12.6	10.4	
24.0			22.3m x 17.5	15.8	15.6	15.5	15.4	15.2	15.1	15.0	14.9	14.8	14.6	14.5	14.4	14.2	13.8	13.0	11.6	9.4	
26.0				24.9m x 15.0	13.9	13.8	13.7	13.5	13.4	13.3	13.2	13.1	12.9	12.8	12.7	12.5	12.3	11.9	10.5	8.4	
28.0					27.5m x 12.9	12.5	12.4	12.2	12.1	12.0	11.9	11.8	11.6	11.5	11.4	11.2	11.0	10.9	9.6	7.6	
30.0						11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.4	10.3	10.2	10.0	9.8	9.7	8.7	6.9	
32.0						30.1m x 11.2	10.2	10.0	9.9	9.8	9.7	9.6	9.4	9.3	9.2	9.0	8.8	8.6	7.8	6.2	
34.0							32.7m x 9.9	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.1	7.9	7.6	7.1	5.5	
36.0								35.3m x 8.6	8.2	8.1	8.0	7.9	7.7	7.6	7.5	7.3	7.1	6.7	6.4	5.0	
38.0									37.9m x 7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.6	6.4	5.9	5.7	4.4	
40.0										6.8	6.7	6.6	6.4	6.3	6.2	6.0	5.8	5.2	5.0	3.9	
42.0											40.5m x 6.7	6.2	6.1	5.9	5.8	5.7	5.5	5.3	4.6	3.5	
44.0												43.1m x 5.9	5.6	5.4	5.3	5.2	5.0	4.8	4.2	3.0	
46.0													45.7m x 5.2	4.9	4.8	4.7	4.5	4.3	3.7	2.6	
48.0														4.5	4.4	4.3	4.1	3.8	3.2	2.2	
50.0															48.3m x 4.5	4.0	3.9	3.7	3.4	2.4	
52.0																50.9m x 3.9	3.6	3.4	2.9	2.0	
54.0																	53.5m x 3.4	3.1	2.5	2.0	

- Notes
- Above rated loads are based on firm level ground, within 78% of tipping load at any point 360° throughout and with front stability of 1.15 or more.
 - Working radius is horizontal distance from center of rotation to a vertical line through the center of gravity of the load.
 - The weight of the slings, hook block(s) and auxiliary lifting devices must be considered to be a part of the load.
Hook block
120ton capacity...1.60ton 60ton capacity...1.15ton
50ton capacity...0.95ton 30ton capacity...0.75ton
11ton capacity...0.40ton
 - Jib boom can be fitted to main boom in the following combinations.
- | Jib length(m) | Auxiliary | 13.0 | 19.0 | 25.0 |
|----------------|-----------|-----------|-----------|-----------|
| Boom length(m) | 18.0~72.0 | 30.0~63.0 | 30.0~63.0 | 30.0~63.0 |
- When jib boom is fitted actual loads that can be lifted with main hook block should be reduced according to the above chart (the weights include that of the auxiliary hook block).
- | Jib length(m) | Auxiliary | 13.0 | 19.0 | 25.0 |
|----------------------------|-----------|------|------|------|
| Weight to be deducted(ton) | 0.70 | 2.80 | 3.30 | 3.90 |
- High "A" Frame should be extended before working.
 - The rated loads for the Auxiliary jib must be reduced 0.7 ton from same radius of rated lifting loads of the main boom which installed the jib.
The rated loads for the 13m jib~25m jib are same as main boom's one which installed jib.(Ref Jib rated lifting loads)
However do not exceed below limit.
- | Jib length(m) | Auxiliary | 13.0 | | 19.0 | | 25.0 | |
|--------------------------------------|-----------|------|-----|------|-----|------|-----|
| Jib offset angle Limited loads (ton) | — | 10° | 30° | 10° | 30° | 10° | 30° |
| | 11.0 | 11.0 | 8.5 | 10.0 | 6.5 | 6.5 | 4.5 |
- The rated load for Jib when the main hook is installed must be reduced by the total weight of the main hook and jib hook.
 - Depending on the number of part lines, rated lifting load is limited as follows:
1Part line...up to 12ton 2Part line...up to 24ton
3Part line...up to 36ton 4Part line...up to 48ton
5Part line...up to 60ton 6Part line...up to 72ton
7Part line...up to 84ton 8Part line...up to 96ton
9Part line...up to 108ton 10Part line...up to 120ton
 - Rated loads shown in bold lines are based on structural strength factors.



Luffing Tower Crane

CCH1000

Specifications

Max. lifting capacity x working radius		20metric tons x 14m
Max. lift above ground level		92m(51.25m post+44m jib)
Rope speed	Main drum hoist/lowering	* 100~50/50~25m/min
	Post hoist/lowering	* 60~30m/min
	Jib hoist/lowering	* 100~50/50~25m/min
Part line	Main drum hoist	Hook block capacity x Part line 20ton x 2
	Post hoist	Hook block capacity x Part line 11ton x 1
	Jib hoist	14
	Jib hoist	8
Counterweight		50ton
Total operating weight (with 51.25m post+44m jib+20ton hook)		135.5ton(Approx.)
Average ground bearing pressure		1.03kgf/cm ²

Note: The rope speed changes depending on the load.

Combination of post and Jib, post angle

Post length(m)	27.25	30.25	33.25	36.25	39.25	42.25	45.25	48.25	51.25
Jib length (m)									
23	●	●	●	●	●	●	●	●	●
26	●	●	●	●	●	●	●	●	●
29		●	●	●	●	●	●	●	●
32			●	●	●	●	●	●	●
35				●	●	●	●	●	●
38					●	●	●	●	●
41						●	●	●	●
44							●	●	●

Note: ●:Possible combination

Wire Rope

Place of use	Rope diameter (mm)	Guaranteed strength (t)	Rope type
Hook hoist	φ 26	61.0	PS(19)+39 x P·7
Post hoist	φ 22	36.3	IWRC6 x WS(31)
Jib hoist	φ 26	57.8	T IWRC6 x WS(31)
Post suspension	φ 31.5	74.9	IWRC6 x Fi(29)
Jib suspension	φ 34	86.7	IWRC6 x Fi(29)
Strut suspension	φ 34	86.7	IWRC6 x Fi(29)

Note: Wire rope length to be decided according to the ordered boom length.

Post Composition

Post length(m)	Post Composition(m)
27.25	7.5(inner)+ *9+9+1.75(outer)
30.25	7.5+ *9.0+3.0+9.0+1.75
33.25	7.5+ *9.0+6.0+9.0+1.75
36.25	7.5+ *9.0+9.0+9.0+1.75
39.25	7.5+ *9.0+3.0+9.0+9.0+1.75
42.25	7.5+ *9.0+6.0+9.0+9.0+1.75
45.25	7.5+ *9.0+3.0+6.0+9.0+9.0+1.75
48.25	7.5+ *9.0+6.0+6.0+9.0+9.0+1.75
51.25	7.5+ *9.0+3.0+6.0+6.0+9.0+9.0+1.75

Notes
1. 9.0m insert post (*9.0) is installed to the middle equalizer guide rail.
2. 3.0m~9.0m insert post including jib strut suspension pendant rope.

Jib Composition

Jib length(m)	Jib Composition(m)
23	8(inner)+6+9(outer)
26	8+3+6+9
29	8+3+9+9
32	8+6+9+9
35	8+9+9+9
38	8+3+9+9+9
41	8+6+9+9+9
44	8+3+6+9+9+9(outer)

Working range (No load condition)

