

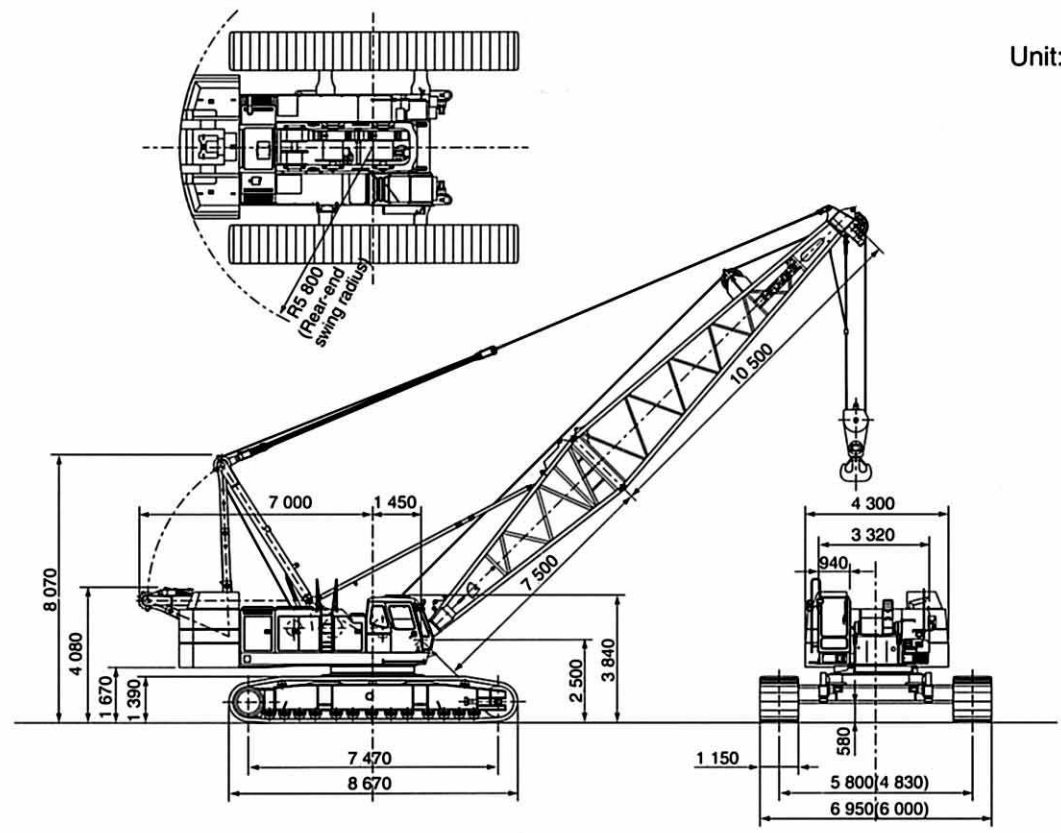
SPECIFICATIONS

HITACHI CX1800

HYDRAULIC CRAWLER CRANE

Max. Lifting Capacity: 180 000 kg

■ Dimensions



Unit: mm

Dimensions shown in parentheses are with tracks retracted.

■ Specifications

Maximum rated load	ton x m	180 x 5.0
Basic boom length	m	18
Max. boom length	m	87
Jib length	m	13 ~ 37
Max. boom with jib length	m	72 +37
Main hoist drum	m/min	110/62/31*
Aux. hoist drum	m/min	110/62/31*
Boom hoist drum	m/min	27 x 2 (2 Drums)*
Swing speed	min ⁻¹ (rpm)	1.9/1.1 (1.9/1.1)
Travel speed	km/h	1.2/0.8*
Gradeability	% (°)	30 (16)
Engine model		ISUZU A-6RB1T
Rated power	kW/min ⁻¹ (PS/rpm)	221/2 000 (300/2 000)
Ground pressure	kPa (kgf/cm ²)	89.2 (0.91)
Operating weight	ton	168 (Equipped with 18 m boom and 180 ton capacity hook)

NOTE: Data expressed above are in SI units (International system of Unit), followed by data in conventional units in parentheses.

* Data in the crane mode will vary with the load.

■ Crane Ratings (Main boom in 360° working area, without mast)
78% Tipping Load (JIS Rating)

Unit: metric ton

Working radius (m)	Boom length (m)															
	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63
5.0	180.0															
5.5	166.0	5.6x162.5														
6.0	155.0	154.4	6.1x152.6													
6.5	146.0	145.7	145.5	6.6x144.7												
7.0	140.0	139.6	139.4	139.2	7.1x125.0	7.6x112.5										
8.0	115.0	114.6	114.4	114.2	114.1	112.5	8.2x100.0	8.7x97.3								
9.0	99.5	99.0	98.8	98.7	98.5	98.4	98.2	96.4	9.2x87.5	9.7x81.3						
10.0	85.3	84.8	84.6	84.4	84.2	84.1	83.9	83.8	83.6	80.5	10.2x74.0	10.8x67.9	11.3x62.1	11.8x56.9		
12.0	66.1	65.6	65.3	65.2	64.9	64.8	64.6	64.5	64.3	64.2	64.0	63.8	61.0	56.6	12.3x52.3	12.9x47.5
14.0	53.8	53.2	53.0	52.8	52.5	52.4	52.1	52.1	51.8	51.7	51.6	51.4	51.3	51.0	50.3	46.3
16.0	44.7	44.7	44.4	44.2	43.9	43.7	43.5	43.4	43.2	43.1	42.9	42.7	42.6	42.3	42.1	42.0
18.0	17.2x39.5	38.4	38.1	37.8	37.5	37.4	37.1	37.0	36.8	36.7	36.5	36.3	36.2	35.9	35.7	35.5
20.0		19.8x33.3	33.3	33.0	32.7	32.5	32.2	32.1	31.9	31.8	31.6	31.3	31.3	31.0	30.7	30.6
22.0			29.5	29.2	28.8	28.7	28.4	28.2	28.0	27.9	27.7	27.5	27.4	27.1	26.8	26.7
24.0			22.4x28.7	26.1	25.7	25.5	25.2	25.1	24.9	24.8	24.5	24.3	24.2	23.9	23.7	23.5
26.0				25.0x24.8	23.2	23.0	22.7	22.5	22.3	22.2	21.9	21.7	21.6	21.3	21.1	20.9
28.0					27.6x21.5	20.9	20.5	20.4	20.1	20.0	19.8	19.5	19.4	19.1	18.9	18.7
30.0						19.1	18.7	18.5	18.3	18.1	17.9	17.7	17.6	17.2	17.0	16.8
32.0						30.2x18.9	17.2	17.0	16.7	16.6	16.3	16.1	15.9	15.6	15.4	15.2
34.0							32.8x16.6	15.6	15.3	15.2	14.9	14.7	14.6	14.2	14.0	13.8
36.0								35.4x14.8	14.2	14.0	13.7	13.5	13.3	13.0	12.8	12.6
38.0									13.1	12.9	12.6	12.4	12.2	11.9	11.7	11.5
40.0										12.0	11.7	11.4	11.3	11.0	10.7	10.5
42.0										40.6x11.7	10.9	10.6	10.4	10.1	9.8	9.6
44.0											43.2x10.4	9.8	9.7	9.3	9.1	8.8
46.0												45.8x9.2	9.0	8.6	8.3	8.0
48.0													8.4	7.9	7.6	7.3
50.0													48.4x8.2	7.3	7.0	6.7
52.0														51.0x7.0	6.4	6.1
54.0															53.6x6.0	5.5
56.0																5.0
56.2																5.0

■ Crane Ratings (Main boom in 360° working area, with mast)
78% Tipping Load (JIS Rating)

Unit: metric ton

Working radius (m)	Boom length (m)														
	45	48	51	54	57	60	63	66	69	72	75	78	81	84	87
9.7	87.5														
10.0	85.5	10.2x75.0	10.8x74.3	11.3x62.5	11.8x62.3										
12.0	65.7	65.6	65.4	62.5	62.1	12.3x57.3	12.9x50.0	13.4x48.2	13.9x44.1						
14.0	52.9	52.8	52.6	52.5	52.4	52.2	50.0	47.8	44.0	14.4x39.8	14.9x35.4	15.5x32.1			
16.0	44.0	43.9	43.7	43.5	43.4	43.2	43.0	42.8	38.8	34.9	31.8	29.0	16.5x26.3	17.0x23.4	
18.0	37.5	37.3	37.1	37.0	36.8	36.6	36.4	36.4	36.3	36.2	33.9	30.9	28.1	25.7	23.0
20.0	32.5	32.3	32.1	31.9	31.8	31.6	31.3	31.3	31.2	31.1	31.1	29.9	27.2	24.8	22.1
22.0	28.5	28.3	28.1	27.9	27.8	27.6	27.3	27.3	27.2	27.1	27.1	26.9	26.3	24.0	21.3
24.0	25.3	25.1	24.9	24.7	24.5	24.3	24.0	24.0	23.9	23.8	23.8	23.6	23.4	23.1	20.6
26.0	22.6	22.4	22.2	22.0	21.8	21.6	21.3	21.3	21.2	21.1	21.1	20.9	20.6	20.4	19.8
28.0	20.4	20.2	19.9	19.7	19.6	19.4	19.1	19.1	19.0	18.8	18.8	18.6	18.4	18.1	18.1
30.0	18.5	18.2	18.0	17.8	17.7	17.4	17.2	17.2	17.0	16.9	16.9	16.7	16.4	16.2	16.2
32.0	16.8	16.6	16.4	16.2	16.0	15.8	15.5	15.5	15.4	15.2	15.2	15.0	14.7	14.5	14.5
34.0	15.4	15.2	15.0	14.7	14.6	14.3	14.0	14.0	13.9	13.8	13.7	13.5	13.3	13.0	13.0
36.0	14.2	13.9	13.7	13.5	13.3	13.1	12.8	12.8	12.6	12.5	12.4	12.2	12.0	11.8	11.8
38.0	13.1	12.8	12.6	12.4	12.2	11.9	11.6	11.6	11.5	11.4	11.3	11.1	10.8	10.5	10.5
40.0	12.1	11.8	11.6	11.4	11.2	11.0	10.6	10.6	10.5	10.4	10.3	10.0	9.7	9.4	9.4
42.0	40.6x11.8	11.0	10.7	10.5	10.3	10.1	9.8	9.8	9.6	9.4	9.3	9.0	8.7	8.4	8.7
44.0		43.2x10.5	9.9	9.7	9.5	9.3	8.9	8.9	8.7	8.5	8.4	8.1	7.8	7.5	7.4
46.0			45.8x9.3	9.0	8.8	8.5	8.1	8.1	7.8	7.7	7.6	7.3	6.9	6.6	6.6
48.0				8.4	8.1	7.8	7.4	7.4	7.1	6.9	6.8	6.5	6.2	5.9	5.8
50.0				48.4x8.3	7.4	7.1	6.7	6.7	6.4	6.2	6.1	5.9	5.5	5.3	5.1
52.0					51.0x7.1	6.5	6.1	6.1	5.8	5.6	5.5	5.2	4.9	4.6	4.5
54.0						53.6x6.1	5.5	5.5	5.2	5.1	4.9	4.6	4.3	4.0	3.9
56.0							5.0	5.0	4.7	4.5	4.4	4.1	3.8	3.5	3.4
58.0							56.2x5.0	4.5	4.2	4.0	3.9	3.6	3.3	3.0	2.9
60.0								58.8x4.3	3.8	3.6	3.4	3.2	2.8	2.5	2.4
62.0									61.4x3.5	3.2	3.0	2.7	2.4	2.1	2.0
64.0										2.8	2.6	2.3	2.0		
66.0											2.3	2.0			
66.6												2.2			

- NOTES:
- The rated loads shown do not exceed 78% of tipping load with the machine on firm level ground, and are not less than 1.15 times over-front stability stipulated by the mobile crane construction standards.
 - To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main hook, from figures shown above.
 - Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.
 - Figures described as ○○X○○ in the tables indicate working radius (m) x rated load (ton).
 - The counterweight is 67.1 ton.
 - Be sure to fully extend the side frames before operating the machine.
 - Correlations between the number of hoist rope reevings, maximum rated loads, hook weights are shown in the table below.

Hook capacity (ton)	Hook weight (ton)	Maximum rated load (ton)													
		14	13	12	11	10	9	8	7	6	5	4	3	2	1
180	2.30	180.0	162.5	150.0	137.5	125.0	112.5	100.0	87.5	75.0	-	-	-	-	-
100	1.40	-	-	-	-	-	-	100.0	87.5	75.0	62.5	50.0	-	-	-
60	1.20	-	-	-	-	-	-	-	-	60.0	50.0	37.5	25.0	-	-
25	0.85	-	-	-	-	-	-	-	-	-	-	-	25.0	-	-
13	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	13.0

■ Crane Boom Construction

Booms length (m)	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	81	84	87	
Lower boom (7.5 m)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Upper boom (10.5 m)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Types of boom inserts	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I
Boom insert 3 m (B)		1		1		1		1		1		1		1		1		1		1		1		1	
Boom insert 3 m	1		2	1	1		2	1	1		2	1	1		2	1	1		2	1	1		2	1	1
Boom insert 6 m				1	1	1	2	2	2	2	1	1	2	2	1	1	2	2	3	3	3	3	3	3	3
Boom insert 9 m									1	1	1	2	2	2	2	3	3	3	3	2	2	3	3	3	3
Boom insert 12 m																1	1	1	2	2	2	2	2	2	2
Boom mast required																									
Boom mast available																									
Boom (jib available)																									
Boom (aux. jib available)																									

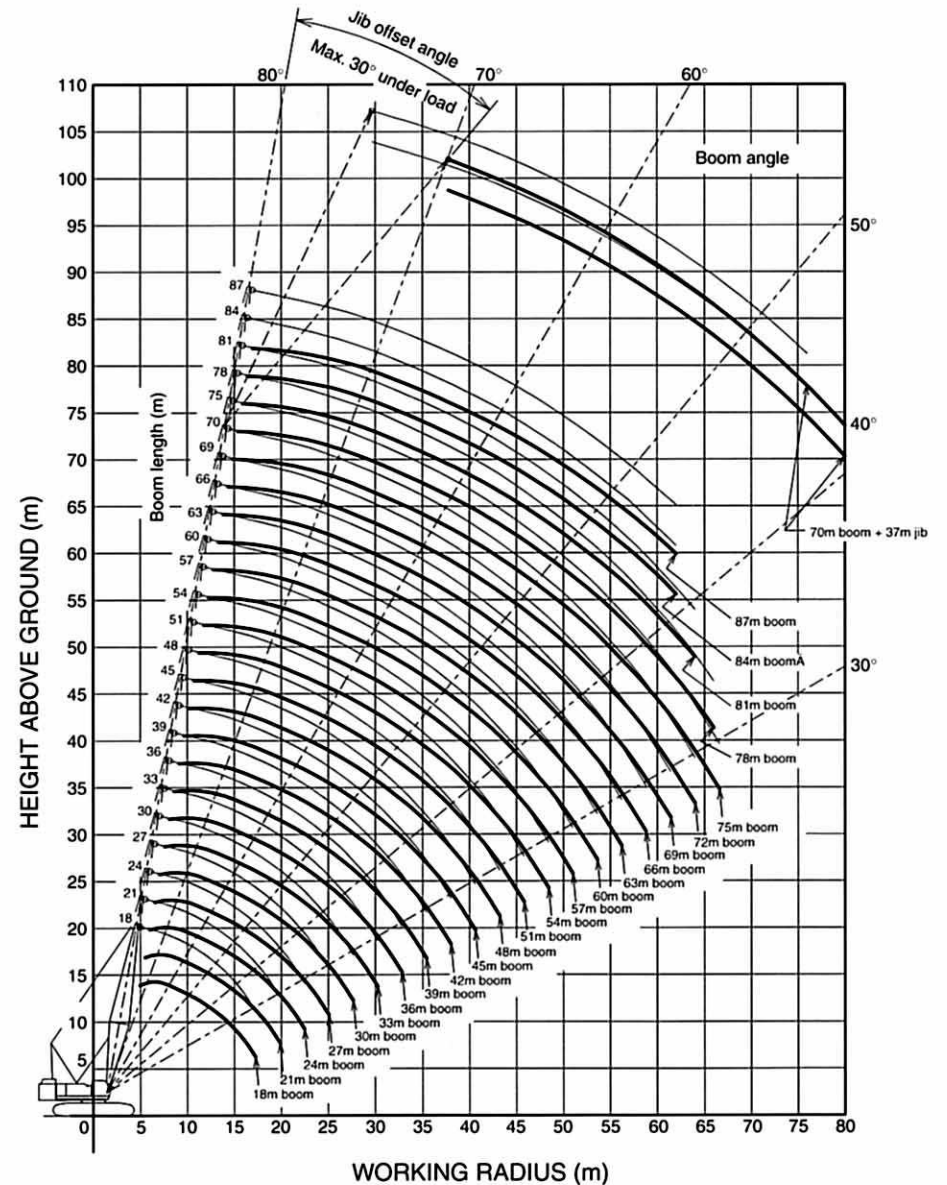
■ Crane Jib Construction

Jib length (m)	13	19	25	31	37
Lower jib (5 m)	1	1	1	1	1
Upper jib (5 m)	1	1	1	1	1
Jib insert 3 m	1	1	1	1	1
Jib insert 6 m		1	2	3	4

Types of Boom Inserts

- I: For crane boom
- II: For crane transformed from tower crane
- NOTE: When crane is transformed from tower crane by using lower boom of 66 m or longer, the following boom inserts are required.
 - 66 ~ 69 m boom = 12 m x 1
 - Boom of 72 m or longer = 12 m x 2

■ Working Ranges



■ Component Weights and Dimensions for Transport

Components	Weight (ton)	Quan.	Length X Width X Height (m)			Remarks	
Basic machine	Basic machine	33.90	1	7.12	X 3.40	X 3.15	Excluding ropes, gantry (H, L), track beam, and self-loading device
	Basic machine	40.70	1	8.84	X 3.40	X 3.56	Including ropes, gantry (H, L), and bridge. Excluding track beam and self-loading device.
	Track beam	5.70	2	6.00	X 0.55	X 0.55	
	Side frame (one side)	19.40	2	8.67	X 1.15	X 1.39	
	Self-loading device	0.38	4	0.80	X 0.75	X 0.91	Including float
	Gantry (H)	3.60	1	7.70	X 1.67	X 0.72	Including hanger
	Gantry (L)	0.30	2	1.70	X 0.30	X 1.12	Including cylinder
	Counterweight (A)	18.00	1	4.30	X 1.79	X 0.84	
	Counterweight (B)	16.80	1	4.29	X 1.79	X 0.62	
	Counterweight (C)	5.30	1	1.33	X 1.07	X 0.70	
	Counterweight (D)	8.30	1	1.73	X 1.30	X 0.70	
	Counterweight (E)	8.30	1	1.73	X 1.30	X 0.70	
	Counterweight (F)	5.20	1	1.57	X 1.06	X 0.75	
	Counterweight (G)	5.20	1	1.57	X 1.06	X 0.75	
Crane front	Lower boom 7.5 m	3.10	1	7.72	X 2.47	X 2.50	
	Upper boom 10.5 m	3.20	1	10.94	X 2.24	X 2.29	
	Boom backstop	0.14	2	5.45	X 0.26	X 0.26	
	Bridge	0.51	1	2.10	X 0.69	X 0.33	
	Boom mast	1.54	1	10.17	X 1.36	X 1.19	
	Boom insert 3 m (A)	0.88	1	3.14	X 2.47	X 2.40	
	Boom insert 3 m (B)	1.38	1	3.14	X 2.47	X 2.59	
	Boom insert 6 m	1.22	1	6.14	X 2.47	X 2.40	
	Boom insert 9 m	1.62	1	9.14	X 2.47	X 2.36	
	Boom insert 12 m	1.92	1	12.14	X 2.47	X 2.36	
	Lower jib 5 m	0.30	1	5.11	X 1.24	X 0.97	
	Upper jib 5 m	0.45	1	5.43	X 1.24	X 1.37	
	Jib insert 3 m	0.15	1	3.08	X 1.25	X 1.09	
	Jib insert 6 m	0.26	1	6.08	X 1.25	X 1.09	
	Jib mast	0.55	1	6.14	X 1.10	X 0.62	
	Aux. jib	0.39	1	2.22	X 1.04	X 1.43	
	180 ton hook	2.30	1	2.35	X 0.92	X 0.93	
	100 ton hook	1.40	1	2.13	X 0.75	X 0.54	
	60 ton hook	1.20	1	2.12	X 0.74	X 0.35	
	25 ton hook	0.85	1	1.74	X 0.74	X 0.38	
13 ton hook	0.50	1	1.18	X 0.47	X 0.47		

■ Standard Equipment

BASIC MACHINE

Undercarriage

- Crawler-type undercarriage (with 1 150 mm shoes)

Upperstructure

- | | | |
|--|---|-----------------------------------|
| • Front lights (2 pcs) | • Ladder (right) | • Electric accelerator grip |
| • Rearview mirrors (left and right) | • Undercover (at upperstructure bottom) | • Gantry hoist cylinders |
| • Boom hoist drum check mirror | • Cab climbing step | • Boom foot pin assembling device |
| • Centralized lubrication system (for gantry and swing circle) | • Ultra slow speed controller | • Drum rotation sensing system |
| • Electric refuel device | • Slow boom hoisting stop | • 67.1 ton counterweight |
| | • Constant swing speed controller | • Standard tool kit |

Cab

- | | | |
|--|-----------------------------------|--|
| • Intermittent wipers (front and roof windows) | • Air conditioner | • Cigarette lighter |
| • Washers (front and roof windows) | • Floor mat | • Ashtray |
| • Rolled sunshade (roof window) | • Room light | • Brake mode selector switch (interlocked) |
| • Sunvisor | • Auto-tuning clock radio (AM/FM) | • Electric tilt-type stand |

Safety Devices

- | | | |
|--|-------------------------------|--------------------------------|
| • Swing lock | • Swing alarm (buzzer & lamp) | • Pilot control shut-off lever |
| • Drum pawl lock (main/auxiliary hoist and boom hoist) | • Fail safe brake system | • Before-work check monitor |

FRONT ATTACHMENTS

Crane

- | | | |
|---|------------------------------------|--|
| • 18 m basic boom (lower 7.5 m, upper 10.5 m) | • 180 ton hook | • Moment limiter |
| • Boom stop | • Main hoist rope (φ28 mm x 370 m) | • Overhoist prevention device (main hook, boom hoist, secondary) |
| • Boom angle indicator | • Boom hoist rope (φ22 mm x 350 m) | |

Clamshell

- | | | |
|---|--|--|
| • 18 m basic boom (lower 7.5 m, upper 10.5 m) | • Open/close and suspend rope disengagement prevention device (for tubular chord boom) | • Suspend rope (φ28 mm x 110 m)* |
| • Boom stop | • Open/close rope (φ28 mm x 120 m)* | • Hydraulic tagline (φ10 mm x 55 m rope included) and Boom hoist rope (φ22 mm x 350 m) |
| • Boom angle indicator | | |

* Open/close and suspend ropes are determined based on 33 m boom length and 12 m digging depth.

These specifications are subject to change without notice. Illustrations show the standard models, and may or may not include optional equipment, accessories, and all standard equipment.

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