

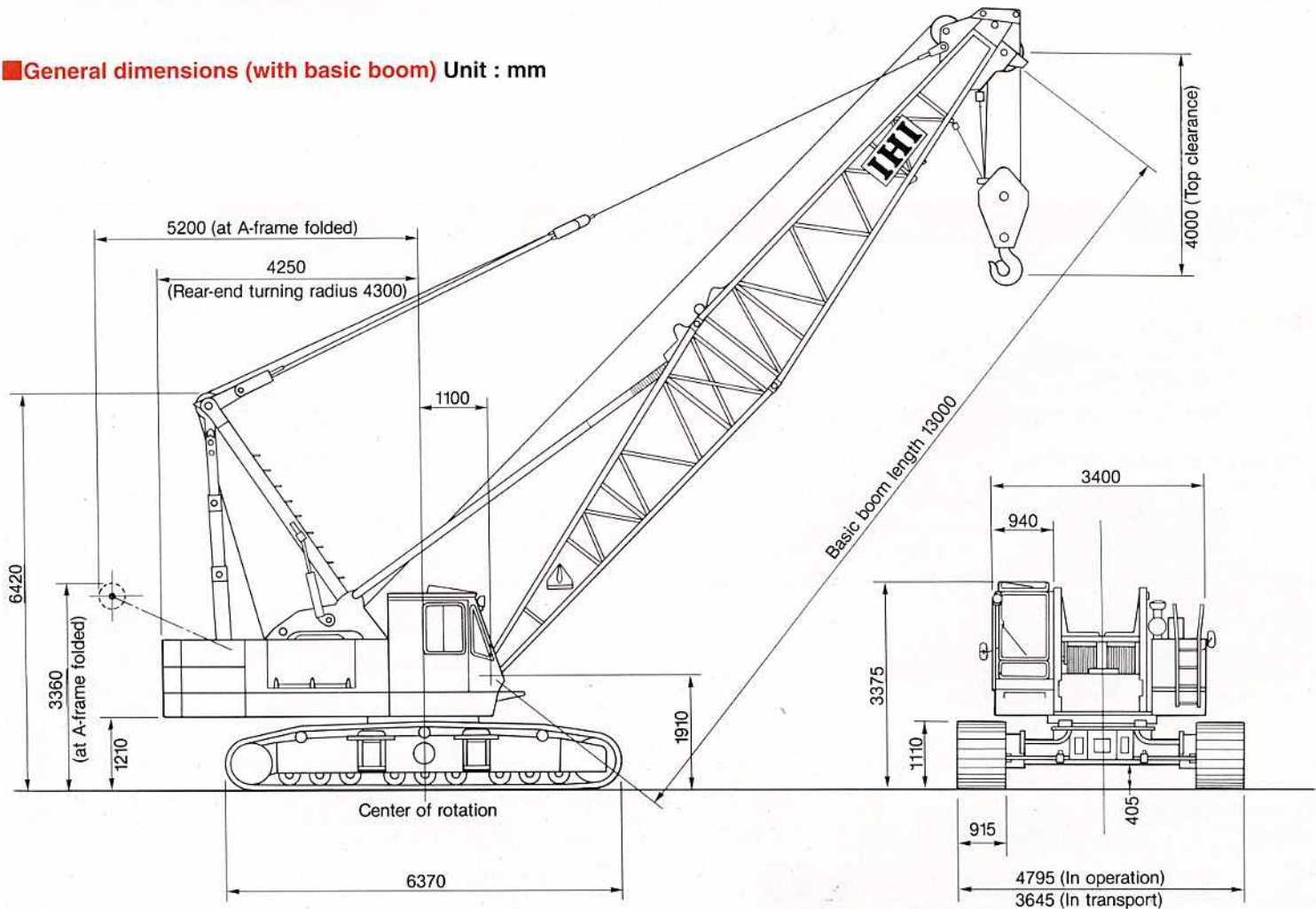
CCH800-3

IHI

Fully Hydraulic Crawler-Spanner Crane

Lifting capacity (JIS) **80** metric tons

■ General dimensions (with basic boom) Unit : mm



- Introducing IHI's Model CCH800-3 a new high performance machine and a top class spanner crane.
- Superior versatility for wide-ranging application and operability on land and at sea.
- Double wing drum arrangement enables heightened work efficiency and realizes unrivalled maximum rope speed of 100m/min.
- Low center of gravity design and spanner mechanism assure reliability and safety during operation.
- Wider working range is secured with 90° to 60° luffing tower post angles, while tower jib angle of 80° enables work within a minimal radius.
- Advanced mechanism ensures unrivalled performance efficiency.

■ Specifications

Performance	
Swing speed	3.0 rpm
Travel speed	1.5 km/h
Gradeability	30% (17°)
Operating system	
Control system	Hydraulic control
Drive system	Hydraulic drive
Drum type	Independent drive dual drums on single shaft
Swing system	Swing bearing
Hydraulic pump	Variable displacement axial plunger pump × 3, Gear pump × 1
Engine	
Model	Hino EP100T
Type	4-cycle, water cooled, direct fuel injection diesel
No. of cylinders – bore × stroke	6-120 mm × 130 mm
Total displacement	8.821 ℓ
Rated output	230 PS / 2100 rpm (with turbocharger)
Max. torque	71 kg·m / 1400rpm
Fuel consumption rate	172 g/PS·h (at rated output)
Fuel tank capacity	350 ℓ

Note : The travel speed changes depending on the load.

Ishikawajima Construction Machinery Co., Ltd.

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
 - Work light 24 V × 80 W × 2
 - Room light 24 V × 20 W × 1
- Safety device
 - Automatic stop for hook overwinding
 - Automatic stop for boom overwinding
 - Telescopic boom limit stop
 - Swing lock
 - Main and Aux. drum lock
 - Safety valve for hydraulic circuit
 - Counter balance valve
 - Control lever locking device
- Other standard accessories
 - Windshield wiper
 - Roof glass wiper
 - Sunvisor
 - Reclining operator's seat

Indicated
bar graph
in OK monitor

- Floor mat
- Steps for operator's cab (foldable type)
- Radio
- Cigarette lighter
- Ash tray
- Rearview mirrors (R/L)
- Horn
- Swing warning flasher
- Travel warning flasher
- Low-noise cab
- Wire mesh boom walkway (for inner boom)
- Fuel filling pump
- "A" frame erecting device
- Steps for operator's cab
- Jack devices for dismantling.

Optional equipment

- Moment limiter (Overload prevention)
- Yellow rotary light
- Wireless phone
- Bullhorn
- Combustion type heater
- Spark arrester
- Electrical type level indicator

- Level vial
- Fire extinguisher
- Monitor TV (watching rear, left and drum)
- Drum rotation roller
- Drum mirror
- Catwalk
- Large size tool box (installed on car body)
- Third drum
- 10 m basic jib, 3 m, 6 m insert jib with pendant rope
- Reeving winch
- Digging depth / Lift indicator
- Anemometer
- Airplane warning lamp
- Boom point clearance lamp
- Drum light
- Work light on boom
- Work light for rear direction
- Rope guard for boom top surface
- 3 m, 6 m, 9 m, insert boom with pendant rope
- 1 m jib
- 50 ton, hook block (3 sheaves)
- 30 ton, hook block (1 sheave)
- 10 ton, hook block (for jib)
- Air conditioner

Crane

CCH800-3

Specifications

Maximum lifting load × working radius	80 ton × 4.0 m	
Maximum boom length with jib	71 m (49 m boom + 22 m jib)	
Rope speed	Boom hoist and lowering	68 m/min
	Load hoist and lowering	High speed 100 m/min Low speed 50 m/min
	Jib load hoist and lowering	High speed 100 m/min Low speed 50 m/min
Part line	Boom hoist	12 part line
	80 ton hook	8 part line
	10 ton hook	1 part line
Counterweight	25 ton (9 + 8 + 8 ton)	
Total weight (with 13m basic boom)	81.5 ton	
Average ground bearing pressure	0.75 kg/cm ²	

Note 1. The rope speed changes depending on the load.

Boom and Jib Combination

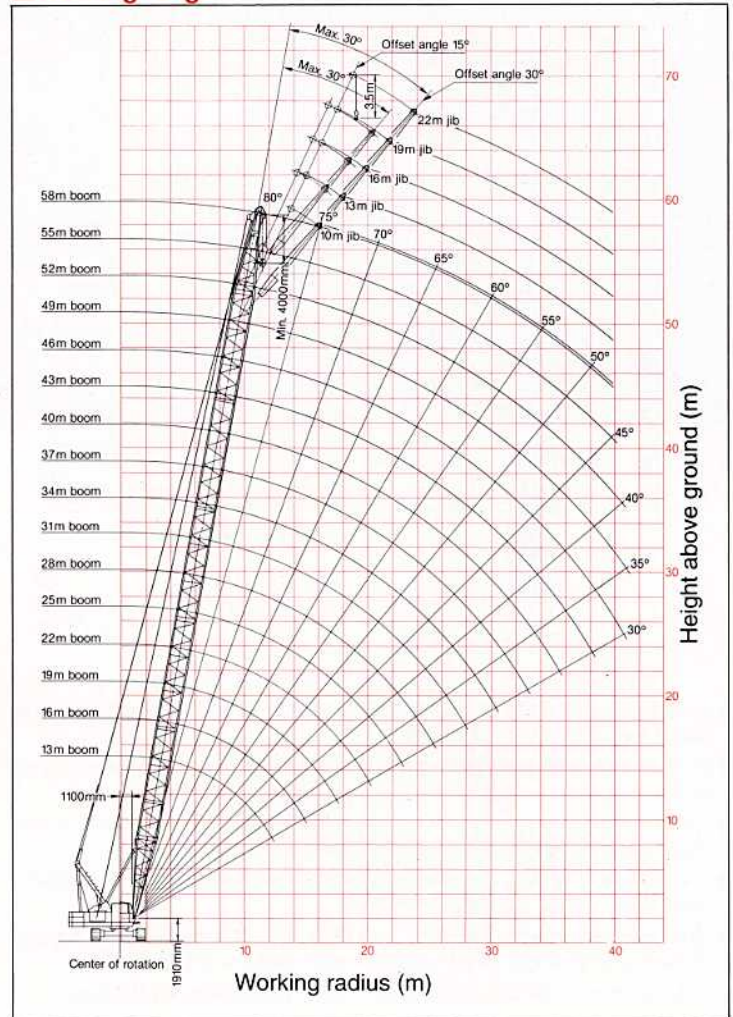
(●: Available combination)

Jib length (m)	Boom length (m)															
	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58
1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
10								●	●	●	●	●	●	●	●	●
13								●	●	●	●	●	●	●	●	●
16								●	●	●	●	●	●	●	●	●
19								●	●	●	●	●	●	●	●	●
22								●	●	●	●	●	●	●	●	●

Wire rope

Place of use	Rope diameter (mm)	Guaranteed strength (ton)	Rope type
Load hoist	φ 26	56.8	T7 × 7 + 6 × Fi (29) performed regular Z lay
Boom hoist	φ 20	30.0	6 × Fi (29) IWRC performed regular Z lay
Boom suspension	φ 34	104.0	T7 × 7 + 6 × WS (36) IWRC performed regular Z lay
Jib hoist	φ 26	56.8	T7 × 7 + 6 × Fi (29) IWRC performed regular Z lay
Jib suspension	φ 28	59.3	6 × Fi (29) IWRC performed regular Z lay
Jib strut suspension	φ 28	59.3	6 × Fi (29) IWRC performed regular Z lay

Working range



■ Boom and Jib boom composition (Standard)

(unit : m)

Boom length	Boom composition
13	6.5 (Inner) + 6.5 (Outer)
16	6.5 + 3 + 6.5
19	6.5 + 6 + 6.5
22	6.5 + 9 + 6.5
25	6.5 + 3 + 9 + 6.5
28	6.5 + 6 + 9 + 6.5
31	6.5 + 9 + 9 + 6.5
34	6.5 + 3 + 9 + 9 + 6.5
37	6.5 + 6 + 9 + 9 + 6.5
40	6.5 + 9 + 9 + 9 + 6.5
43	6.5 + 3 + 9 + 9 + 9 + 6.5
46	6.5 + 6 + 9 + 9 + 9 + 6.5
49	6.5 + 9 + 9 + 9 + 9 + 6.5
52	6.5 + 3 + 9 + 9 + 9 + 9 + 6.5
55	6.5 + 6 + 9 + 9 + 9 + 9 + 6.5
58	6.5 + 3 + 6 + 9 + 9 + 9 + 9 + 6.5

Jib boom length	Jib boom composition
1	1 (Aux. jib)
10	4.5 (Inner) + 5.5 (Outer)
13	4.5 + 3 + 5.5
16	4.5 + 3 + 3 + 5.5
19	4.5 + 3 + 6 + 5.5
22	4.5 + 3 + 3 + 6 + 5.5

Note : Above compotion is in case ordered 58 m boom + 22 m jib boom.

■ Rated lifting loads

(Unit : metric ton)

Working radius (m)	Boom length (m)															
	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58
4.0	80.0															
4.5	72.0	71.9														
5.0	60.0	59.9	59.8													
6.0	45.0	44.9	44.8	44.7	44.6											
7.0	36.0	35.9	35.8	35.7	35.6	35.5	35.4									
8.0	29.5	29.4	29.3	29.2	29.1	29.0	28.9	28.8	28.7							
9.0	25.0	24.9	24.8	24.7	24.6	24.5	24.4	24.3	24.2	24.1	24.0		20.6			
10.0	21.8	21.7	21.6	21.5	21.4	21.3	21.2	21.1	21.0	20.9	20.8	20.7	16.0			
12.0	17.2	17.1	17.0	16.9	16.8	16.7	16.6	16.5	16.4	16.3	16.2	16.1	13.0	15.9	15.8	15.0
14.0		14.1	14.0	13.9	13.8	13.7	13.6	13.5	13.4	13.3	13.2	13.1	10.8	12.9	12.8	12.7
16.0			11.8	11.7	11.6	11.5	11.4	11.3	11.2	11.1	11.0	10.9	9.1	10.7	10.6	10.5
18.0				10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	7.8	9.0	8.9	8.8
20.0				8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	6.7	7.6	7.5	7.4
22.0					7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	5.8	6.5	6.4	6.3
24.0						6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.1	5.6	5.5	5.4
26.0							5.7	5.6	5.5	5.4	5.3	5.2	4.5	4.9	4.8	4.7
28.0							5.1	5.0	4.9	4.8	4.7	4.6	4.0	4.3	4.2	4.1
30.0								4.5	4.4	4.3	4.2	4.1	3.5	3.8	3.7	3.6
32.0									3.9	3.8	3.7	3.6	3.0	3.3	3.2	3.1
34.0										3.3	3.2	3.1	2.6	2.8	2.7	2.6
36.0										3.0	2.8	2.7	2.3	2.5	2.3	2.2
38.0											2.6	2.5	2.0	2.2	2.0	1.9
40.0												2.2		1.9	1.7	1.6

Note :

- Above rated loads are based on firm level ground, within 78% of tipping load at any point 360° around the machine 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 line of gravity of the load.
- The weight of the hook block and other lifting devices must be considered to be a part of the load.
80 ton hook block ---- 1.1 ton
50 ton hook block ---- 0.7 ton
30 ton hook block ---- 0.6 ton
10 ton hook block ---- 0.4 ton (for jib boom)
- Crawler frame and A-frame should also be extended before working.

- When the jib boom fitted, actual loads that can be lifted with the hook block for main hoist should be reduced the following weight from the rated loads shown in table below (the weight to be deducted includes that of the auxiliary hoist hook block).

Jib boom length (m)	1.0	10	13	16	19	22
Weight to be deducted (ton)	0.6	1.7	2.1	2.5	3.0	3.5

- Depending on the number of part lines, rated lifting load is limited as follows:
1-part line ---- up to 10 ton 5-part line ---- up to 50 ton
2-part line ---- up to 20 ton 6-part line ---- up to 60 ton
3-part line ---- up to 30 ton 7-part line ---- up to 70 ton
4-part line ---- up to 40 ton 8-part line ---- up to 80 ton

- The rated load for jib should not exceed the value in the table below.

(Unit : metric ton)

Jib offer angle	jib boom length					
	1m	10m	13m	16m	19m	22m
15°	10	10	8	8	5	5
30°	10	5	5	5	3.5	3.5

- The angle formed by the extension line of the main boom and center line of the jib boom should not exceed 30° under loaded condition.
- 1m aux. jib can be installed to 13 to 52 m main boom. The rated loads for the 1m aux. jib must be reduced 0.5 ton from rated lifting loads of the main boom. However do not exceed 10 ton.

Specifications

Maximum lifting load × working radius		15 ton × 13.5 m
Maximum hook lift above ground		74.6 m (44 m post + 34 m jib)
Rope speed	Load hoist and lowering	High speed 100 m/min Low speed 50 m/min
	Load hoist and lowering	68 m/min
	Jib hoist and lowering	50 m/min
Part line	15 ton hook	2 part line
	10 ton hook	1 part line
	Post hoist	12 part line
	Jib hoist	8 part line
Counterweight		30 ton (9 + 8 + 8 + 5 ton)
Total weight (with 44 m post, 34 m jib and 15 ton hook)		97.7 ton
Average ground bearing pressure		0.89 kg/cm ²

Note 1. The rope speed changes depending on the load.

Post / Jib composition

(Unit : metric ton)

Post length	Post composition
26	6.5 (Inner) + 9 + 9 + 1.5 (Outer)
29	6.5 + 9 + 9 + 3 + 1.5
32	6.5 + 9 + 9 + 6 + 1.5
35	6.5 + 9 + 9 + 9 + 1.5
38	6.5 + 9 + 9 + 3 + 9 + 1.5
41	6.5 + 9 + 9 + 6 + 9 + 1.5
44	6.5 + 9 + 9 + 3 + 6 + 9 + 1.5

Jib length	Jib composition
19	4.5 (Inner) + 6 + 8.5 (Outer)
22	4.5 + 9 + 8.5
25	4.5 + 3 + 9 + 8.5
28	4.5 + 6 + 9 + 8.5
31	4.5 + 3 + 6 + 9 + 8.5
34	4.5 + 3 + 3 + 6 + 9 + 8.5

• Above composition is in case ordered 44m post + 34m jib.

• Post can be use common with crane boom except 1.5m outer post.

Tower Crane lifting loads

(Unit : metric ton)

Post length (m)	Jib length (m)					
	26~44m	26~44m	29~44m	32~44m	35~44m	38~44m
Working radius (m)	19	22	25	28	31	34
5.9	15.0					
6.4	15.0	15.0				
7.0	15.0	15.0	15.0			
7.5	15.0	15.0	15.0	14.0		
8.0	15.0	15.0	15.0	14.0	13.0	
8.5	15.0	15.0	15.0	14.0	13.0	12.0
?	?	?	?	?	?	?
13.5	15.0	15.0	15.0	14.0	13.0	12.0
14.0	14.5	14.5	14.5	14.0	13.0	12.0
15.0	13.2	13.2	13.2	13.2	12.4	11.5
16.0	12.0	12.0	12.0	12.0	12.0	10.9
18.0	10.3	10.3	10.3	10.3	10.3	9.9
20.0	8.9	8.9	8.9	8.9	8.9	8.9
22.0	7.9	7.9	7.9	7.9	7.9	7.9
24.0	7.1	7.1	7.1	7.1	7.1	7.1
26.0	6.4	6.4	6.4	6.4	6.4	6.4
28.0	5.9	5.9	5.9	5.9	5.9	5.9
30.0	29.0mX5.5	5.4	5.4	5.4	5.4	5.4
32.0		5.0	5.0	5.0	5.0	5.0
34.0			4.6	4.6	4.6	4.6
36.0			35.0mX4.5	4.3	4.3	4.3
38.0				4.1	4.1	4.1
40.0					3.8	3.8
42.0					41.0mX3.7	3.6
44.0						43.9mX3.5

Note :

- All rated loads are based on firm level ground, within 78% of tipping load at any point 360° around the machine and with front stability of 1.15 or more.
- The weight of the hook block and other lifting devices must be considered to be a part of the load. 30 ton hook block 800 kg 10 ton hook block 400 kg
15 ton hook block 800 kg
- All rated loads are based on structural strength factor.
- Minimum and maximum working radius should not exceed following conditions.
Minimum working radius Post angle 90°, Jib angle 80°
Maximum working radius Jib angle 10° at post angle 80° under loaded condition.

Tower Post and Jib Combination

(●: Available combination)

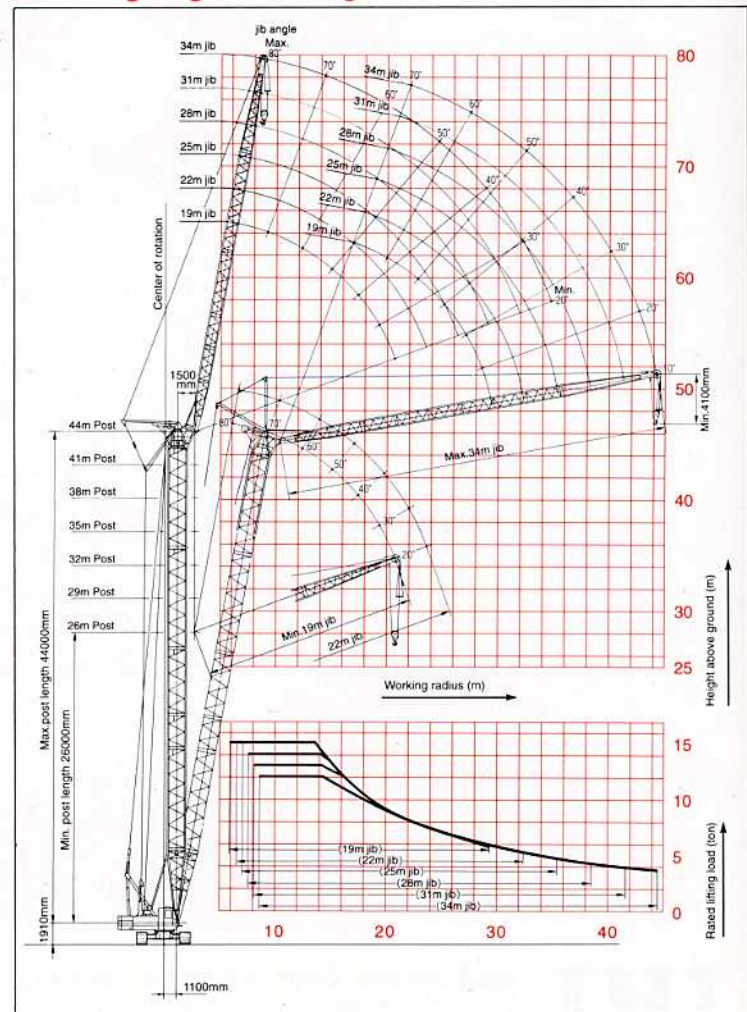
Jib length (m)	Post length (m)							Min. working radius (m)	Max. working radius (m)
	26	29	32	35	38	41	44		
19	●	●	●	●	●	●	●	5.9	29.0
22	●	●	●	●	●	●	●	6.4	32.0
25		●	●	●	●	●	●	7.0	35.0
28			●	●	●	●	●	7.5	38.0
31				●	●	●	●	8.0	41.0
34					●	●	●	8.5	43.9

Note : Additional weight (5 ton) is unnecessary when the post length is 41m or shorter.

Wire rope

Place of use	Rope diameter (mm)	Guaranteed strength (ton)	Rope type
Load hoist	φ 26	59.6	19 × 39 × 7 Tough-nuflex
Tower jib	φ 26	49.9	6 × Fi (29) IWRC performed regular Z lay
Tower post	φ 20	30.0	6 × Fi (29) IWRC performed regular Z lay
Tower jib suspension	φ 31.5	74.9	6 × Fi (29) IWRC performed regular Z lay
Jib strut suspension	φ 31.5	74.9	6 × Fi (29) IWRC performed regular Z lay
Tower post suspension	φ 34	104.0	T7 × 7 + 6 × WS (36) IWRC performed regular Z lay

Working range and Lifting load curve



Specifications

Maximum dumping height above ground (m)	35.0 m (22 m Boom + 2.5 m ³ Bucket)	
Rated lifting load (Bucket + load) (ton)	10 ton	
Rope speed	Bucket closing	Hi : 100 / Lo : 50 m/min
	Bucket holding	Hi : 100 / Lo : 50 m/min
	Boom hoist and lowering	68 m/min
Part line	Bucket closing	6 part line (for all types of bucket)
	Bucket holding	1 part line (for all types of bucket)
	Boom hoist and lowering	12 part line
Counterweight	25.0 ton (9 + 8 + 8 ton)	
Total weight (22 m boom + 2.5 m ³ bucket)	88.0 ton	
Average ground bearing pressure	0.80 kg/cm ²	

Note 1. The rope speed changes depending on the load.

Wire rope

Place of use	Rope diameter (mm)	Guaranteed strength (ton)	Rope type
Bucket closing	φ26	56.8	T7 × 7 + 6 × Fi (29) IWRC performed regular Z lay
Bucket holding	φ26	56.8	T7 × 7 + 6 × Fi (29) IWRC performed regular Z lay
Boom hoist	φ20	30.0	6 × Fi (29) IWRC performed regular Z lay
Boom suspension	φ34	104.0	T7 × 7 + 6 × WS (36) IWRC performed regular Z lay
Hydraulic tagline	φ10	5.5	6 × 19 fiber core performed regular Z lay

Bucket specifications

Classification	Type	Capacity (m ³)	Weight (ton)	Purpose
STD	GP	2.5	5.0	General digging, heavy material handling
OPT	HD	1.6	6.2	Heavy-duty digging (dredging)
OPT	WR	3.0	4.5	Medium-weight material handling (Apparent specific gravity : 1.2 ~ 1.5)
OPT	WR	4.0	4.0	Lightweight material handling (Apparent specific gravity : less than 1.2)
OPT	WR	5.0	4.0	Lightweight material handling (Apparent specific gravity : less than 1.0)

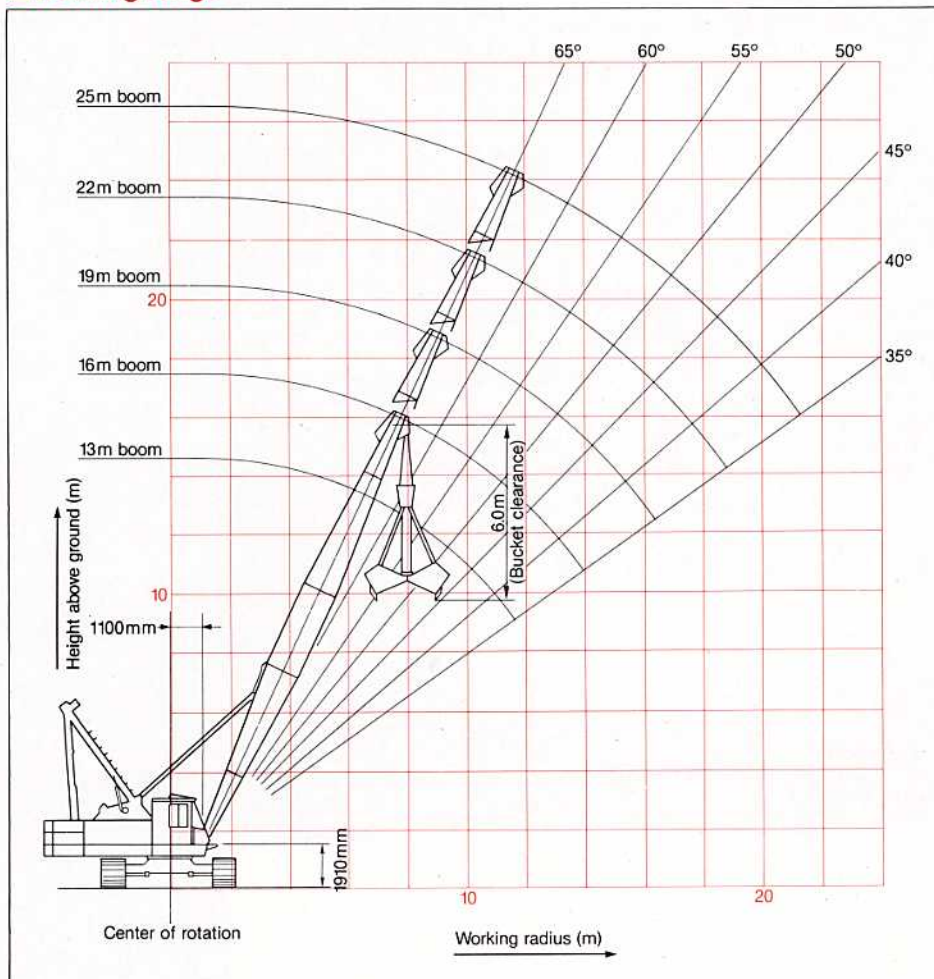
*Bucket type : GP.....general-purpose, HD.....heavy-duty, WR.....wide rehandling

Working range

Boom length (m)	13				16				19				22				25			
	35°	45°	55°	65°	35°	45°	55°	65°	35°	45°	55°	65°	35°	45°	55°	65°	35°	45°	55°	65°
Working radius (m)	11.5	10.0	8.2	6.2	14.0	12.1	10.0	7.5	16.4	14.3	11.7	8.8	18.9	16.4	13.4	10.0	21.4	18.5	15.1	11.3
Rated lifting load (ton)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.5	9.8	10.0	10.0	7.1	8.6	10.0	10.0
Max. dumping height (m)	3.0	4.8	6.3	7.5	4.8	6.9	8.8	10.2	6.5	9.1	11.3	13.0	8.2	11.2	13.7	15.7	9.9	13.3	16.2	18.4
Max. digging depth (m)	32.0	30.2	28.7	27.5	30.2	28.1	26.2	24.8	28.5	25.9	23.7	22.0	26.8	23.8	21.3	19.3	25.1	21.7	18.8	16.6

- Allowable lifting load indicates upper limit of bucket weight + load during clamshell work. To avoid exceeding this value, select bucket appropriate for type of load.
- Maximum dumping height is for a standard 2.5 m³ bucket.
- Maximum digging depth is decided by standard rope length of bucket closing and holding.

Working range





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