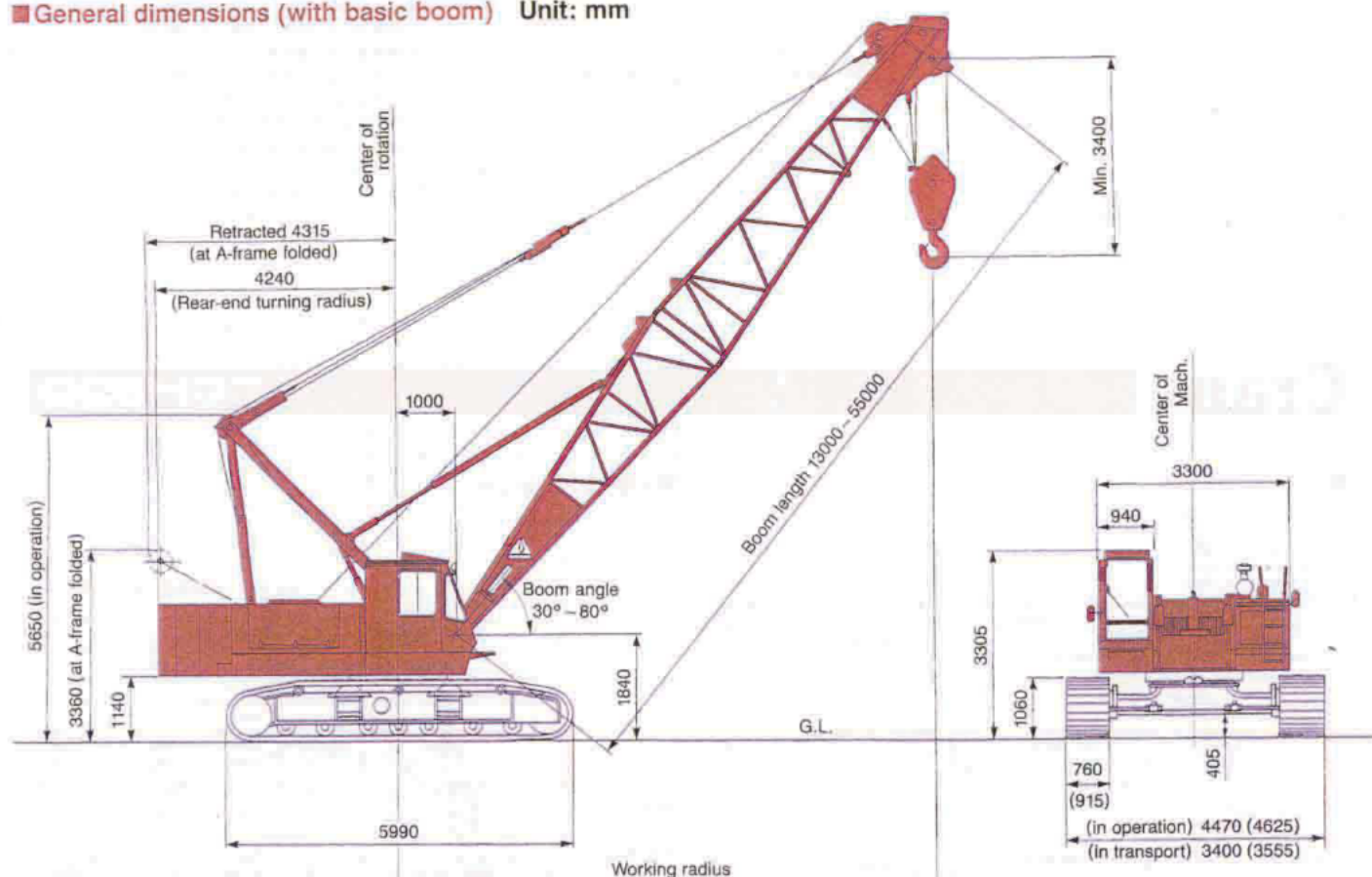


DCH800

Fully Hydraulic Crawler-Spanner Crane

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

■ General dimensions (with basic boom) Unit: mm



Figures shown in () indicate dimensions installed 915mm shoe as option.

The world is our stage. IHI Technology-on land or sea.

DCH800: a muscular crawler crane, the kind of machine that can be equipped with the proper attachments and used at nearly any foundation or digging job at most construction sites. This hard-worker does equally well on land or water—excellent for the heavy construction needed for harbors, for example.

The superstructure is equipped with a lattice boom that uses an independently arranged two-drum-on-a-single-shaft (DOUBLE WING) system with a maximum lifting capacity of 80 tons and a drum winding speed 70 meters per minute. And the big diesel puts out 230ps, maximum, at 2,100rpm.

Operations are 100% hydraulic, to take full advantage of the power of this machine. Further, hydraulic spanner crawlers are used to provide the safe stability operators want when working. And its turning radius is a mere 4.24 meters, a definite improvement.

The crawler frame itself is as compact as possible, and can be transported with a trailer.

Heavy equipment benefits from the application of IHI technology: Witness the multi-purpose, multi-use, fully hydraulic DCH800 crawler crane.

■ Specifications

Performance	
Swing speed	3.0rpm
Travel speed	* 1.5km/h
Gradeability	40% (22°)
Operation system	
Power source	Hydraulic
Transmission system	Hydraulic
Drum type	Independent two drum on single shaft (DOUBLE WING)
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 injection diesel
Cylinder bore stroke	6-120mm × 130mm
Total displacement	8.821ℓ
Rated output	230PS/2100rpm
Max. torque	71 kg·m/1400rpm
Rated fuel consumption rate	172g/PS·h
Fuel tank capacity	350ℓ

Note: Speed marked " *" will be changed to the loads given.

Ishikawajima Construction Machinery Co., Ltd.

■ Standard equipment

- Instruments
 - Engine tachometer (hour meter)
 - Hydraulic oil pressure gauge
 - Hydraulic oil temperature
 - Coolant temperature
 - Engine lubrication oil pressure
 - Fuel gauge
- Lighting equipment
 - Working light 24V × 80W
 - Room light 24V × 20W
- Safety equipment
 - Hook overwinding prevention device (automatic stop)
 - Boom overwinding prevention device (automatic stop)
 - Telescopic boom limit stop
 - Swing lock
 - Drum lock for main hoist, auxiliary hoist and boom (ratchet/pawl type)
 - Hydraulic relief valve
 - Counterbalance valve
- Other standard equipment
 - Cab heater (hot water type)

indicated in
OK monitor

Windshield wiper
Roof glass wiper
Sun visor
Reclining operator's seat
Radio
Cigarette lighter
Ashtray
Rear view mirror (R/L)
Signal horn
Electric fuel filling pump
Swing warning flasher
Low-noise operator's cab
Wire mesh boom walkway (for inner boom)
Step to operator's cab (foldable type)
A-frame erecting device

■ Optional equipment & accessories

Moment limiter (overload prevention)
Warning at 90% of rated load
Stop automatically at 100% of rated load
Warning at optionally setting boom angle
Yellow rotary light
Wireless phone

Bullhorn
Cab cooler
Combustion type cab heater (in lieu of hot water type)
Spark arrester
915mm shoe
Working light on boom
Name plate (both side of outer boom)
Wire mesh walk way on boom back (outer and insert boom)
3m, 6m, 9m insert boom with pendant rope
10m basic jib boom, 3m, insert boom with pendant rope
1m auxiliary jib
10 ton hook block (for jib boom)
30 ton hook block (1 shave)
50 ton hook block (3 shaves)
Large size tool box (W × H × L):
350mm × 400mm × 1100mm
Crawler frame fixing device to pontoon
3rd drum
Hydraulic type tag line

Crane

DCH800

■ Specifications

Maximum lifting load x working radius		80 ton x 3.7 m
Basic boom length		13.0m
Max. boom length		55.0m
Max. length of boom + fly jib		62.0m (46.0m + 16.0m)
Rope speed	Boom hoisting and lowering	* 68m/min
	Load hoisting and lowering	* High speed 70m/min, * Low speed 35m/min
	Jib load hoisting and lowering	* High speed 70m/min, * Low speed 35m/min
Part lines	Boom hoisting	12-part lines
	80 ton hook	8-part lines
	10 ton hook	1-part line
Counterweight		23.0 tons
Crane total weight (with 13m boom and 80 ton hook block)		Approx. 75.4 tons
Average ground bearing pressure		0.87kg/cm ²

Note: The rope speed depends on the load.

■ Wire rope

Place of use	Rope diameter (mm)	Guaranteed strength (t)	Rope type
Main hoisting	φ26	56.8	D
Boom hoisting	φ20	30.0	C
Boom suspension	φ40	120.0	C
Aux. hoisting	φ26	56.8	D
Jib boom suspension	φ28	59.3	E
Jib strut suspension	φ28	59.3	E

Note: Wire rope shall be supplied at suitable length to boom length.

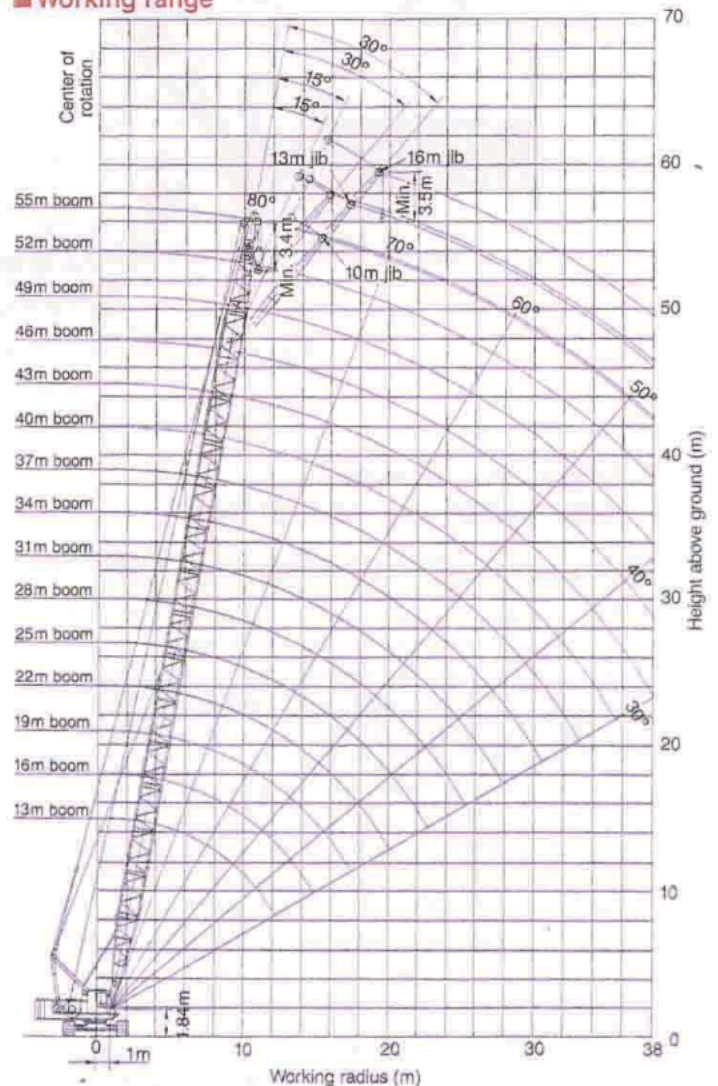
Rope type

C 6 × F1 (29) IWRC, regular Z lay.

E 6 × F1 (25) IWRC, regular Z lay.

D T7 × 7 + 6 × F1 (29) IWRC, regular Z lay.

■ Working range



■ Boom & Jib composition

Unit: m

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

Unit: m

Jib length	Jib 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

■ Combination of main and jib boom

●: applicable

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

■ Rated lifting loads

Unit: Metric ton

Working radius (m)	Boom length (m)														
	13.0	16.0	19.0	22.0	25.0	28.0	31.0	34.0	37.0	40.0	43.0	46.0	49.0	52.0	55.0
3.7	80.0														
4.0	75.0														
4.5	70.5	64.0													
5.0	58.8	58.6	56.0												
5.5	50.3	50.2	50.1	50.0											
6.0	43.9	43.8	43.7	43.6	43.5										
7.0	35.0	34.8	34.7	34.6	34.5	34.4	34.3								
8.0	28.9	28.8	28.7	28.6	28.5	28.4	28.3	28.2	28.1						
9.0	24.6	24.5	24.4	24.3	24.2	24.1	24.0	23.9	23.8	23.7	23.5				
10.0	21.4	21.3	21.2	21.1	21.0	20.9	20.8	20.7	20.6	20.5	20.4	19.0	17.2		
12.0	16.8	16.7	16.6	16.5	16.4	16.3	16.2	16.1	16.0	15.9	15.8	15.7	14.9	12.7	
14.0		13.6	13.5	13.4	13.3	13.2	13.1	13.0	12.9	12.8	12.7	12.6	12.5	10.7	9.6
16.0			11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	10.4	9.5	8.3
18.0				9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.5	7.3
20.0				8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	6.4
22.0					7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	5.5
24.0						6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	4.8
26.0							5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.2
28.0								4.8	4.7	4.6	4.5	4.4	4.3	4.2	3.6
30.0									4.3	4.2	4.1	4.0	3.9	3.8	3.2
32.0										3.8	3.7	3.6	3.5	3.4	2.6
34.0											3.3	3.2	3.1	3.0	2.2
36.0												2.8	2.7	2.6	1.8
38.0													2.5	2.4	1.4

Note:

- Above rated loads are based on firm level ground, within 78% of tipping load at any points 360° through out and with front stability of 1.15 or more.
- Working radius is horizontal distance from center of rotation to a vertical line through the centerline 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..... 1,100kg
 - 50 ton hook block..... 700kg
 - 30 ton hook block..... 600kg
 - 10 ton jib hook..... 400kg
- The following weights must be subtracted from the rated load when lifting by the main hook while the jib hook is attached:

- 1.0m aux. jib..... 600kg
- 10.0m jib boom..... 1,700kg
- 13.0m jib boom..... 2,100kg
- 16.0m jib boom..... 2,500kg

5. Recommended hoist cable parts:

For loads up to: Use: For loads upto: Use:

- 10 tons—1-part line
- 20 tons—2-part line
- 30 tons—3-part line
- 40 tons—4-part line
- 50 tons—5-part line
- 60 tons—6-part line
- 70 tons—7-part line
- 80 tons—8-part line

- 1.0m aux. jib can be attached to 13.0m to 52.0m main boom. While the jib is attached, available lifting capacity is, 500kgs less of the rated lifting capacity of main boom.
- The total weight of the main hook and the jib hook must be subtracted from the rated load when lifting with the jib hook while the main hook is attached.

- Crawler frame and A-frame should also be extended before working.
- The allowable load when lifting by a jib at a radius from the center of rotation of the machine is the same load that may be lifted by the main boom with the boom lowered to that radius, but is not to exceed the following:

Unit: Metric ton

Jib length	1m	10m	13m	16m
15° jib offset	10	8.0	6.5	5.5
30° jib offset	10	5.0	4.0	3.0

- The offset angle formed by the extended centerline of the main boom and the centerline of the jib should not exceed 30° when a load is lifted.

Specifications

Maximum lift above ground		18.3m (25m boom + 2.5m ³ bucket)
Allowable gross weight		10.0t
Boom length	Basic	13.0m
	Standard	22.0m
	Recommend max.	25.0m
Standard bucket	Capacity	2.5m ³
	Weight	5.0t
	Application	General digging
Rope speed	Bucket hoisting and lowering	* 70/35m/min
	Bucket opening and closing	* 70/35m/min
	Boom hoisting and lowering	* 69m/min
Part lines	Bucket hoisting and lowering	1-part line (for all types of buckets)
	Bucket opening and closing	6-part lines
	Boom hoisting and lowering	12-part lines
Counterweight		23.0 tons
Total weight (22m boom + 2.5m ³ bucket)		Approx. 81.3 tons
Average ground bearing pressure		0.94 kg/cm ²

Note: The rope speed changes depending on the load.

Wire rope

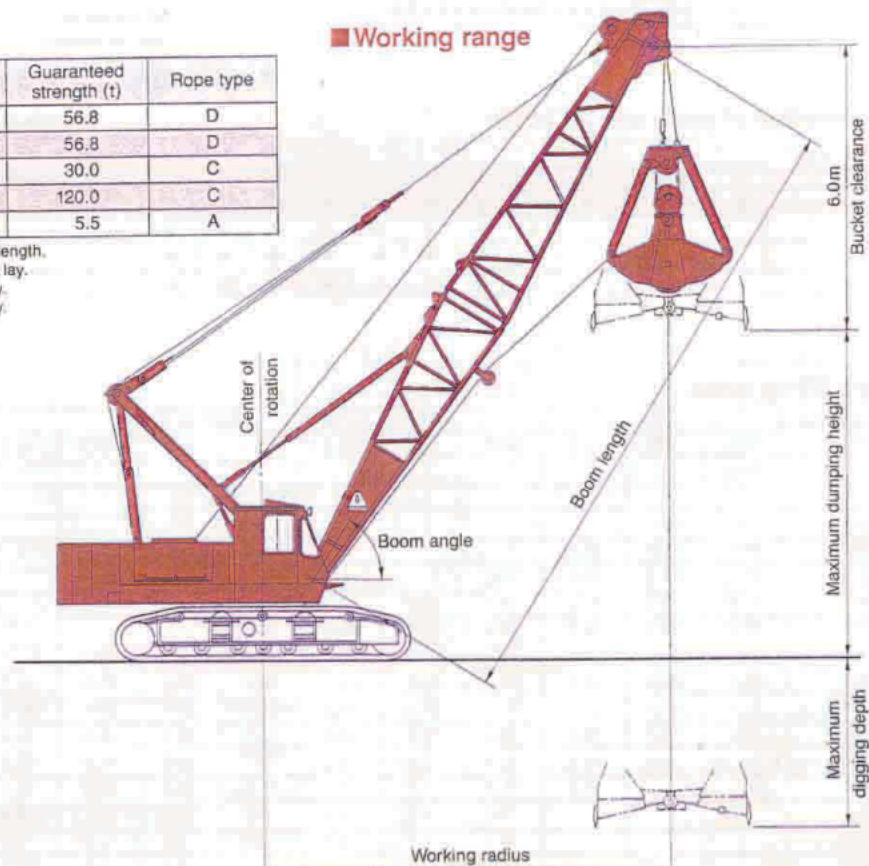
Place of use	Rope diameter (mm)	Guaranteed strength (t)	Rope type
Bucket hoisting and lowering	φ26	56.8	D
Bucket opening and closing	φ26	56.8	D
Boom hoisting and lowering	φ20	30.0	C
Boom suspension	φ40	120.0	C
Tag line	φ10	5.5	A

Note: Wire rope shall be supplied at suitable length to boom length.
 Rope type A..... 6×19 fibercore, regular Z lay.
 C..... 6×Fi (29) IWRC, regular Z lay.
 D..... T7×7+6×Fi (29) IWRC, regular Z lay.

Bucket Specifications

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

Working range



Working range and allowable loads

Unit: Metric ton

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)	11.4	9.9	8.1	6.1	13.9	12.0	9.9	7.4	16.3	14.2	11.6	8.7	18.8	16.3	13.3	9.9	21.3	18.4	15.0	11.2
Rated lifting load (t)	10	10	10	10	10	10	10	10	10	10	10	10	8.2	9.8	10	10	6.8	8.3	10	10
Maximum dumping height (m)	2.9	4.7	6.2	7.4	4.7	6.8	8.7	10.1	6.4	9.0	11.2	12.9	8.1	11.1	13.6	15.6	9.8	13.2	16.1	18.3
Maximum digging depth (m)	32.1	30.3	28.8	27.6	30.3	28.2	26.3	24.9	28.6	26.0	23.8	22.1	26.9	23.9	21.4	19.4	25.2	21.8	18.9	16.6