

IHI

CCH500T

Heavy-Duty General-Purpose Telescopic Crane

Lifting capacity (JIS) **50** metric tons



***Uplifting the productivity
to the maximum extent by fully
utilizing advantages provided
by the telescopic boom
and crawler drive design.***

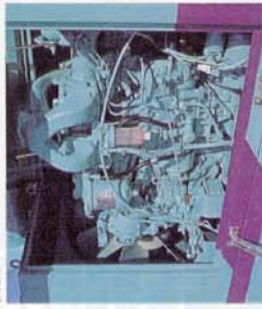
Model with low-noise treatment

Ishikawajima Construction Machinery Co., Ltd.

The CCH500T Heavy-Duty Telescopic Crane—Almighty, General-Purpose Lifting Power Making Any Task Easy, from Lifting to Foundation Work and to Clamshell Operation.

Assembly and disassembly of the CCH500T is easy and quick, and does not require large space on the jobsite. Crawler drive design assures a low ground pressure, enabling it to demonstrate the huge lifting power on soft ground. In addition, the CCH500T has a built-in power take-off which can easily drive attachments including hydraulic vibratory breaker and hydraulic auger for boosted operating economy. Manoeuvrability is also enhanced by the crawler drive system which does not need outriggers to maintain machine stability during lifting operation.

Overwhelming lifting power
The sophisticated hydraulic system can convert almost all of the engine power of 215 ps at 2000 rpm to hydraulic power, making the CCH500T an exceptional crawler crane boasting the greatest lifting capacity in its class.



145 ps power take-off
Hydraulic power is usable through the power take-off. This makes it easy to drive the hydraulic vibratory breaker or hydraulic auger for foundation works.



All boom extension/retraction and elevation controls are at your command.
Boom extension and retraction are made easily and freely thanks to the three hydraulic cylinder design. It also allows synchronized extension/retraction of the 2nd and 3rd booms by lever controls, and enables four-stage independent extension/retraction by the pushbutton control.

34-meter 4-stage telescopic boom—the longest in its class
4-stage telescopic booms have a box-section configuration and is made of high-tensile strength steel. The resultant sturdiness allows them to extend/retract in a range from the shortest 11.2m to the longest 34.0m, enabling the CCH500T to tackle with a versatile range of lifting requirements.



Dual drums system assures smooth winding.
The main and auxiliary hoist drums are arranged on inline, individual shaft driven by hydraulic motor. Rope speed is adjustable and inching operation is also possible. Automatic fail-safe brake or free fall operation with manual foot brake pedal is selectable.



Third drum (option)
The third drum with manual clutch and foot brake assisted by static hydraulic system can be mounted on as the optional equipment. Since the hoisting/lowering rope speed varies according to the load, the optimum line speed matching the particular operation is obtainable.

Comfortable, wide operator cab
The 940mm-wide cab conforms to the international standards. It has wide front, rear and side windows, plus the skylight. The rear and side sliding windows improve ventilation and the lift-up front windshield can be stored in the ceiling.



Operator-Oriented Functions for High Operational Stability

Moment limiter mechanism
When the load exceeds 90% of the rated value, the caution buzzer issues an alarm intermittently. It continues to alert when the load reaches 100% and the crane operation is automatically stopped.



Service brake, swing parking brake and swing lock
The service brake is provided for securing stable swing, and the swing parking brake and the swing lock are provided for securing safety while the machine is not in operation or when it travels for relocation.

Throttle pedal
In addition to the throttle control lever, the throttle pedal is also available for engine controlling.

Automatically applied travelling brake
Travel brakes are automatically engaged when the travel control levers are set in neutral.

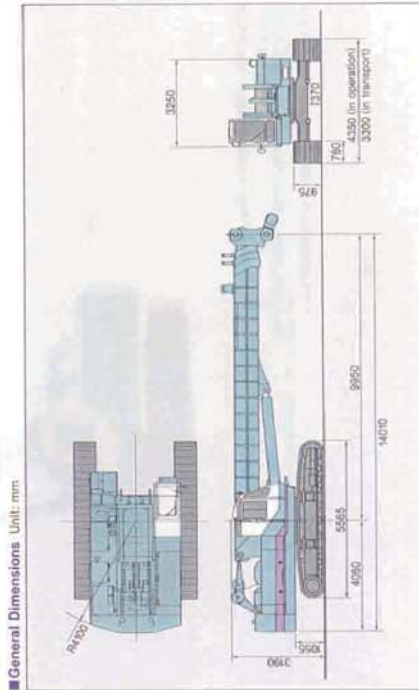
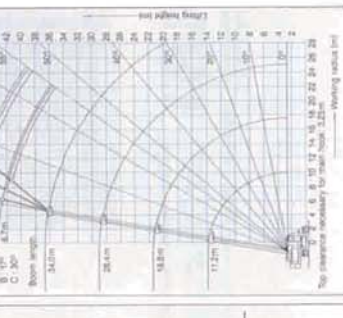
Efficient half clutch engagement
Sophisticated integration of two drums on a single shaft enables to accomplish efficient lifting operation. Thanks to the unique brake drum cooling system, bucket operation that needs frequent half-braking operation can be efficiently performed.

Flat crawler shoes
These wide shoes provides an immense ground contact area, making it possible to stably relocate on the jobsite while the leader is being lifted up.

OK monitor
The OK monitor is installed on the instrument panel box in the operator cab, allowing the operator to instantly check all operating conditions of the crane unit.

Total Power Control™ hydraulic system
This sophisticated hydraulic system enables to fully utilize engine output in accordance with the load imposed on each hydraulic pump.

Quiet operation
For considering the operating conditions on a busy street or in the night time, the engine and hydraulic equipment are insulated to reduce the noise level as low as 63dBA (at 30m distance from the surface of the machine).



Specifications

Performance	
Max. lifting load × working radius	50 ton × 3.7m
Max. lifting height	33m
Boom length	11.2 – 34m (4 stages)
Hoisting/Lowering rope speed of main and auxiliary drums	*40m/80m/min.
Hoisting/Lowering rope speed of third drum (option)	*62m/min.
Boom hoist speed	67sec./-3°-80°
Boom extension speed	125sec./11.2-34m
Swing speed	2.6rpm
Travel speed	1.5km/h
Gradeability	40% (22°)
Crane unit	
Control method	Hydraulic control
Drive method	Hydraulic drive
Hydraulic pumps	Axial piston pump × 2 Gear pump × 3
Total weight	55.8 tons
Average ground bearing pressure	0.67kg/cm ²
Engine	
Model	Hino EP100T
Rated output	215ps/2000rpm
Type	Direct-injection, turbocharged diesel
Hydraulic drive system	
Hydraulic power available at power take-off	250kg/cm ² × 260l/min. (150kg/cm ² × 440l/min.)

*The values change depending on the load.

Rated Lifting Loads Unit: metric ton

Working radius (m)	Boom length (m)			
	11.2	18.8	26.4	34.0
3.7	50.00	30.00		
4.0	43.50	30.00		
4.5	36.00	30.00	21.00	
5.0	31.50	27.00	21.00	
5.5	28.00	24.00	19.00	
6.0	25.00	21.20	17.60	9.00
7.0	20.00	17.50	15.20	9.00
8.0	16.00	14.50	13.10	9.00
9.0	13.00	12.30	11.40	9.00
10.0	9.95m × 11.2	10.40	9.90	9.00
11.0		9.00	8.60	8.20
12.0		7.80	7.50	7.30
13.0		6.80	6.60	6.60
14.0		6.00	5.80	6.00
15.0		5.30	5.00	5.30
16.0		4.70	4.30	4.70
18.0		17.55m × 3.70	3.20	3.60
20.0			2.30	2.80
22.0			1.60	2.10
24.0			1.00	1.60
26.0			25.15m × 0.70	1.10
28.0				28.00m × 0.30

Rated Lifting Loads (with jib option) Unit: metric ton

Boom angle	34 m boom + 6.7 m jib						34 m boom + 11.0 m jib					
	5° offset		17° offset		30° offset		5° offset		17° offset		30° offset	
	R	W	R	W	R	Wj	R	W	R	W	R	W
80°	8.3	3.00	9.8	2.50	10.9	2.00	9.6	2.00	11.9	1.60	13.8	1.00
78°	9.7	2.85	11.2	2.50	12.2	2.00	11.2	1.90	13.4	1.60	15.3	1.00
77°	10.4	2.80	11.9	2.50	12.9	2.00	11.9	1.85	14.1	1.60	16.6	1.00
75°	11.8	2.70	13.2	2.50	14.2	2.00	13.4	1.75	15.6	1.50	17.4	1.00
70°	15.1	2.35	16.5	2.20	17.6	2.00	17.1	1.55	19.2	1.30	20.8	0.90
65°	18.3	2.05	19.6	2.00	20.5	1.80	20.6	1.35	22.6	1.10	24.1	0.80
60°	21.4	1.75	22.6	1.75	23.3	1.60	24.0	1.15	25.8	0.90	27.2	0.70
55°	24.2	1.50	25.4	1.50	26.0	1.40	27.2	0.95	28.8	0.75		

*R shows the working radius.

*W shows the rated lifting loads.

Notes and cautions for Rated Lifting Loads tables for crane and jib

- All rated lifting loads (throughout 360°, within 78° of tipping load, forward stability factor over 1.15) shown are based on the machine being on a firm, level and uniform supporting surface without travelling.
 - The weight of hook blocks and slings or auxiliary lifting devices shall be included as part of the rated lifting loads.
Main hook (50 ton).....490kg
Jib hook (5 ton).....120kg
 - The rated lifting loads are limited as shown in the table below depending on the number of part lines and the type of wire ropes employed.
- | | | | |
|---------|---------|---------|----------|
| 5 tons | 1 part | 30 tons | 6 parts |
| 10 tons | 2 parts | 35 tons | 7 parts |
| 15 tons | 3 parts | 40 tons | 8 parts |
| 20 tons | 4 parts | 45 tons | 9 parts |
| 25 tons | 5 parts | 50 tons | 10 parts |
- The rated lifting loads of the 0.55m jib (top-sheave) are determined as the following.
 - The rated lifting loads of the jib (top-sheave) should not exceed 5 tons. For the working radius and the rated lifting loads of the jib (top-sheave), the table of rated lifting loads of the main boom should be used.
 - The working radius is the distance from the center of swing to the center of hook.
 - The total weight of the main hook and the jib hook must be reduced from the rated lifting loads when lifting by the jib hook while the main hook and the jib hook are attached.
 - The 1500kg of the jib with the jib hook and the weight of the main hook and slings or auxiliary lifting devices must be reduced from the rated lifting loads when lifting by the main hook while the 6.7-11.0m jib with the jib hook is attached.

● The rated lifting loads of the jib are determined by the boom angle. The diagram shows the working range of the 34m main boom with the 6.7m-11.0m jib. The working radius shown is the reference only.

● The standard number of part lines for each boom length is as shown below.

Boom length	11.2 m	18.8 m	26.4 m	34.0 m
No. of part lines	10	8	6	4

