

IHI

NIK 900T

All-Purpose Telescopic Crane



Max. boom length

30.3 meters

Max. lifting capacity

90 metric tons

World's Largest Class Fully Hydraulic

Meets the demands of foundation construction jobs with maximum lifting capacity of 90 metric tons!

OPERABILITY



Complicated Operations Made Smooth and Simple

Boom extension/contraction and erection can be operated independently of other movements. Since extension/contraction and erection can be done simultaneously in a single combined movement, it's easy to precisely set up the positions of front attachments. Boom erection can be done using the control lever or left foot pedal so it's possible to combine with other complicated movements.

Minimal Fatigue Operating Position

Rotating lever is located close to the operator's seat so even long hours of operating can be done with much less fatigue. The engine throttle can be controlled using either the rotating grip on the lever or the right foot pedal so you can freely choose which according to your current task.

Operator's Seat with Wide View in Any Direction

The front side of the operator's cab features curved glass windows from top to bottom to ensure great visibility in all directions. Also by keeping the height of the engine room as low as possible, it's able to maintain a clear view to the rear and to the left of the operator's seat as well.

Comfortable Operator's Cab

The cab has a width of 940 mm, so you can operate in a quiet, spacious environment. External air intake type air conditioner compatible with HCFC alternative refrigerants is equipped as standard.

USABILITY

Class Leading Boom Length of 30.3 m

Taking advantage of the long reach that's tops in its class, as well as the telescopic boom's ability to freely extend/contract, this crane accommodates a wide variety of work situations.



Stable and Agile Footwork



Thanks to the robust crawler unit, you can count on quick and stable traveling on uneven terrain. Incorporates a spanner mechanism to enable a slim 3200mm width for easier transport. The compact body is among the smallest in its class, with a tail swing radius of 4400mm. It really shows its worth in tight construction spaces.

Powerful Winch Ready to Perform

Equipped with a powerful winch equivalent to a lattice boom crane. High-power design to handle digging jobs too. And since it's full horse power driven, engine output can be efficiently used.

Accommodates a Variety of Construction Methods

Standard-equipped with large capacity hydraulic PTO (27.4 – 19.1MPa/250 – 470L/min) capable of driving various different equipment, which can be removed from the end of the first boom. It can be used as the power source for vibro or auger for a wide range of applications. A high-performance third winch drum (option) with free fall can also be installed.



Telescopic Crawler Crane



TRANSPORTABILITY

Advantages of Telescopic Boom

The freely expanding/contracting telescopic boom requires no boom joint. This not only contributes to reduced assembly/disassembly time on site, but also helps to minimize the number of trucks needed to transport so you can greatly reduce set-up costs. Also there is no need for boom storage space while not in use.

Counterweight Automatic Loading (option)

Using the mechanism that's on the main body, you can easily and precisely load the counterweight even if there is no crane for it. Operation is controlled using a pendant type electrical remote control, so the operator can safely load with visual confirmation.



SAFETY

Switching of Winch Brake

Switching of the Winch Brake mode (auto brake mode / pedal activated mode) is done using the key switch. To disable free fall, remove the key to assure safety. Even when using free fall with the key inserted, an interlock mechanism ensures that the brake circuit is not released unless the operator actually steps on the brake pedal. Safety is doubly assured.

Alarm to Alert Those in the Vicinity

When the engine is turned on, during travel operations and rotate operations, an alarm is sounded to alert those around you. If unnecessary, it's possible to choose the no-alarm mode. For travel and rotate operations, you can switch to a buzzer sound as well. The rotate flashers also help to visibly alert people during rotate operations.

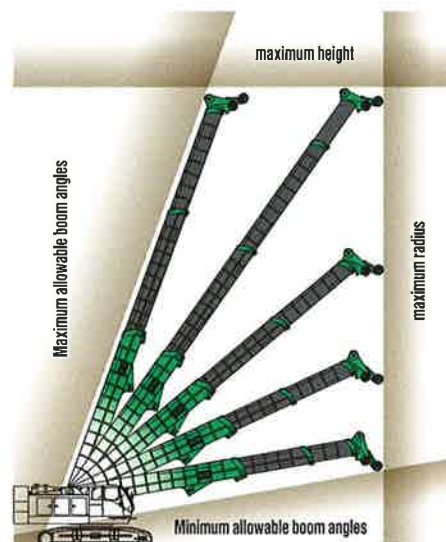
Moment Limiter to Advise Safe Lifting

- When the weight of hoisted cargo surpasses 90% of maximum load it sounds an alarm, and at 100% it automatically stops the crane.
- Digital display makes it easy to understand the operating status.
- Audible messages alert operational status (switchable to buzzer).
- Auto stop when transporting, disabling of alarm is done using key switch for safety.
- During foundation work, possible to select "Foundation Mode" only for the warning using the key switch.



Work Area Setting Function (Adopted for Moment Limiter)

It's possible to set beforehand the maximum and minimum allowable boom angles, as well as maximum radius and maximum height. A warning is sounded before these levels are surpassed, and the crane automatically stops. (Warning-only setting is also available.) Especially helpful in cases where there are height limitations or obstacles.



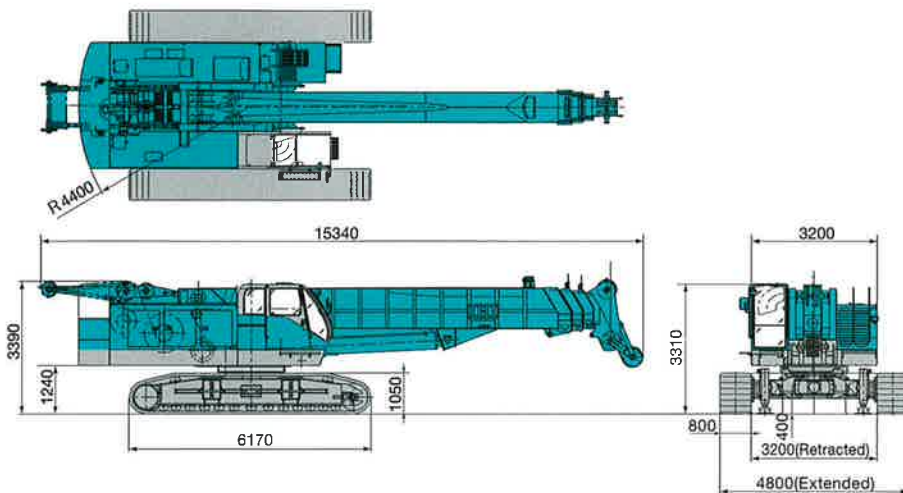
Seat Lock Mechanism and Auto Operation Drum Lock

The Seat Lock mechanism senses when the operator leaves the seat; when no weight is sensed the limit switch automatically goes OFF and all operations are stopped. The Drum Lock mechanism automatically locks the drum when the engine starter key is turned OFF, helping to eliminate any chance of forgetting to lock the drum.

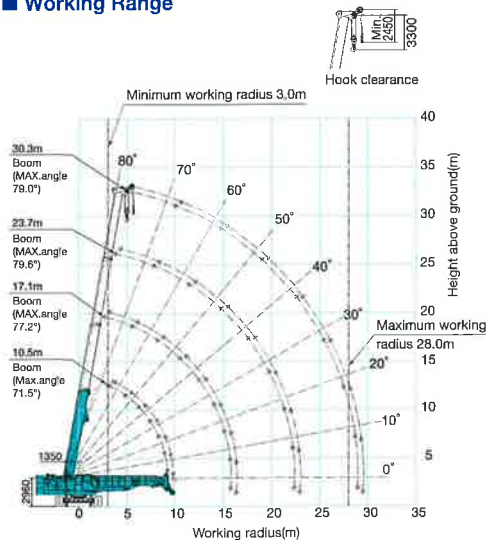
Eco-friendliness and safety

For a better work-site environment, the NIK900T is designed to comply with low noise regulations for construction equipment specified by Japanese Ministry of Land, Infrastructure and Transport.

■ Dimensions(Unit : mm)



■ Working Range



■ Crawlers extended (With 24.5 ton counterweight) Unit : t

Boom length(m)	10.5		17.1		23.7		30.3	
Working radius(m)	Load	Boom angle	Load	Boom angle	Load	Boom angle	Load	Boom angle
3.00	90.00	71.5						
3.50	80.00	68.5	42.00	77.2				
4.00	70.00	65.4	42.00	75.4	34.00	79.6		
4.50	60.00	62.2	42.00	73.7	34.00	78.3		
5.00	53.00	58.9	42.00	71.9	34.00	77.1		
5.50	47.00	55.4	42.00	70.1	34.00	75.8	26.00	79.0
6.00	42.00	51.7	42.00	68.2	34.00	74.6	26.00	78.0
7.00	34.00	43.6	34.00	64.5	34.00	72.0	26.00	76.1
8.00	27.50	33.5	27.50	60.5	28.00	69.4	26.00	74.1
9.00	22.00	17.2	23.00	56.5	23.50	66.7	22.00	72.1
10.00	9.15m x 21.00	0	19.50	52.1	19.50	64.0	19.50	70.1
12.00			14.50	42.4	15.00	58.4	15.00	65.9
14.00			11.30	30.0	11.50	52.3	12.00	61.6
16.00			15.75m x 9.00	0	9.50	45.6	10.00	57.1
18.00					7.50	38.0	8.50	52.4
20.00					6.00	28.5	7.00	47.3
22.00					4.40	12.8	5.50	41.7
24.00					22.35m x 4.30	0	4.50	35.3
26.00							3.50	27.6
28.00							2.50	16.6

■ Crawlers extended (No counterweight) [Special specification] Unit : t

Boom length(m)	10.5		17.1	
Working radius(m)	Load	Boom angle	Load	Boom angle
3.00	45.00	71.5		
3.50	45.00	68.5	25.00	77.2
4.00	43.80	65.4	25.00	75.4
4.50	33.70	62.2	25.00	73.7
5.00	27.00	58.9	25.00	71.9
5.50	22.30	55.4	22.30	70.1
6.00	18.80	51.7	18.80	68.2
7.00	13.90	43.6	13.90	64.5
8.00	10.60	33.5	10.60	60.5
9.00	8.30	17.2	8.30	56.5
10.00	9.15m x 8.00	0	6.60	52.1
12.00			3.90	42.4
14.00			2.10	30.0

Notes

- All rated loads are based on the machine being operated on a firm, level, uniformly supporting surface ground, at any point of 360° around the machine within 76% of tipping load and forward stability factor over 1.15.
- Working radius is the horizontal distance from the center of rotation to the vertical line through the center of gravity of the load.
- To determine lifting capacities, the weight of all lifting devices such as hooks must be reduced from the rated loads. When both main hook and auxiliary hook are attached, the weight of both hooks must be reduced.
- Depending on the number of part lines, rated loads are limited as follows.

90 ton hook	1.25 ton	15 ton hook	0.43 ton
50 ton hook	0.65 ton	7 ton hook	0.22 ton
35 ton hook	0.50 ton		

1 part line	7.0 ton	8 part lines	54.0 ton
2 part lines	14.0 ton	9 part lines	60.0 ton
3 part lines	21.0 ton	10 part lines	66.0 ton
4 part lines	28.0 ton	11 part lines	72.0 ton
5 part lines	35.0 ton	12 part lines	78.0 ton
6 part lines	42.0 ton	13 part lines	84.0 ton
7 part lines	48.0 ton	14 part lines	90.0 ton

5. The standard number of part lines for each boom length is as follows.

Boom length (m)	10.5	17.1	23.7	30.3	Top sheave
No. of part lines	14	6	5	4	1

■ Specifications

Main specification	
Slewing speed	2.4min ⁻¹ (2.4rpm)
Travel speed	1.4/0.9 km/h
Gradeability	30% (16.7°)
Lifting performance	
Max. lifting capacity x working radius	90t x 3.0m
Max. lifting height	29.0m
Rope speed (Main & Aux. drums)	100/70 m/min
Rated line pull	7.0 tf
Boom length	10.5 - 30.3m
Boom extension speed	115 sec.
Boom angle	-1° - 80°
Boom hoisting speed	70 sec.

Superstructure	
Drive system	Hydraulic
Hydraulic pump	3 axial piston pumps, 3 gear pumps
Counterweight	24.5t
Total operating weight	87.5t
Average ground bearing pressure	94kPa (0.96kgf/cm ²)
Engine	
Make	Hino Motors
Model	K13C-UV
Type	6-cylinder, water-cooled, turbocharged, direct fuel injection type diesel engine
Rated power output	275kw/2,000min ⁻¹ (374PS/2,000rpm)
Displacement	12.882 lit.
Hydraulic power system	
Power take off	27.4Mpa (280kgf/cm ²) x 250L/min 19.1Mpa (195kgf/cm ²) x 470L/min

- Please carefully read the manual before operating machines, and please use it correctly and safely.
- Photographs appearing in the catalog were taken for publication and may differ in some cases from actual objects. Specifications are subject to change without notice due to technical improvements or modifications.

IHI IHI Construction Machinery Limited

3174 Showa-machi, Kanazawa-ku, Yokohama, Kanagawa 236-8611 Japan
Tel: +81-(45)-276-1252 Fax: +81-(45)-276-2583



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