

KA-900

ALL TERRAIN CRANE

SPECIFICATION

(Lattice fly jib version)

■ CRANE SPECIFICATION

Performance

| | |
|-------------------------------------|---|
| Maximum rated lifting capacity: | 90 metric tons × 2.8m (over rear) 82 metric tons × 3.0m (360°) |
| Boom length: | 11.8m – 45.0m (5 section) |
| Fly jib length (OPTION): | 10.0m/18.0m (2 section, offset 0°, 25° & 45°) |
| Maximum lifting height: | Boom 45.8m (45.0m Boom) Jib 64.4m (45.0m Boom + 18.0m fly jib offset 0°) |
| Boom derricking angle: | -2° – 83° |
| * Boom derricking time: | 70sec. (-2° – 83°) |
| * Boom extending time: | 98sec. (11.8m – 45.0m) |
| * Hoisting line speed (winch up) | |
| Main winch: | 122m/min. (at 4th layer) |
| Auxiliary winch: | 122m/min. (at 4th layer) |
| * Hoisting hook speed (winch up) | |
| Main winch (parts of line; 15): | 8.1m/min. (at 4th layer) |
| Auxiliary winch (parts of line; 1): | 122m/min. (at 4th layer) |
| * Slewing speed: | 1.95min ⁻¹ |
| * Speed: | Subject to no load |

Hoisting Ropes

| | |
|------------------|------|
| Main winch; | |
| Diameter: | 18mm |
| Length: | 225m |
| Auxiliary winch; | |
| Diameter: | 18mm |
| Length: | 145m |

Hydraulic System

| | |
|-------------------------|--|
| Oil pump: | Double variable axial plunger pump and 2 gear pumps |
| Hoisting motor: | Axial plunger type |
| Slewing motor: | Axial plunger type |
| Cylinder: | Double acting type |
| Control valve: | 3 position 4 way double acting with integral check and relief valves |
| Oil reservoir capacity: | 850lit. |

Winch System

| | |
|-------------------------------|---|
| Main winch & Auxiliary winch: | Driven by axial plunger type hoisting motor with planetary gear reduction. Controlled independently by respective operating lever. Equipped with automatic brake. |
|-------------------------------|---|

Engine for superstructure

| | |
|---------------|--|
| Maker: | VOLVO PENTA |
| Model: | TD730VE |
| Type: | Turbo-charged in line 6 cylinder, 4 stroke diesel engine with direct injection |
| Displacement: | 6730cc |
| Max. power: | 150kW at 2250 min ⁻¹ |
| Max. torque: | 800N · m at 1450 min ⁻¹ |
| | Power ratings acc. to ISO3046 without fan |

NOTE: The engine emission is in accordance with 97/68/EC.

| | |
|---------------------|-------------------|
| Electric system: | 24V |
| Alternator: | 24V - 55A |
| Battery: | (12V - 120AH) × 2 |
| Fuel tank capacity: | 250 lit. |

Safety devices

| | |
|----------------------|--|
| Safe load indicator: | KATO ACS (Automatic Crane Stopper) Multivision system. Include following display & functions |
| | Safety margin bar graph display |
| | Safety percentage digital indication |
| | Boom operation status display |
| | Outrigger setting status display |
| | Slewing direction display |
| | Boom length bar graph display |
| | Display of function icons |
| | Maximum hoist height digital indication |
| | Actual load digital indication |
| | Limit load digital indication |
| | Boom length digital indication |
| | Boom angle digital indication |
| | Working radius digital indication |
| | Number of parts of line indication |
| | Jib offset angle digital indication |
| | Error code indication |
| | Outside audible warning device |
| | Voice alarm (option) |
| | Working area restriction mode (Working range limit mode) |
| | Target mode |
| | Counter weight position indication |
| | Mass of counter weight display |
| | Mechanical slewing lock |
| | Mechanical slewing brake |
| | Boom falling prevention device (on Derrick & Tele) |
| | Hoisting limiter |
| | Automatic winch brake |
| | Irregular winding prevention device |
| | Winch drum lowering limiter |
| | Joy stick control safety stop system |
| | Hydraulic safety valves |
| | Outrigger lock device |
| | Engine oil pressure warning lamp |
| | Battery charge warning lamp |
| | Coolant temperature warning lamp |
| | Coolant level warning lamp |
| | Fuel level warning lamp |
| | Slewing warning lamp |
| | Winch drum turning indication device |
| | Hydraulic oil return filter warning lamp |
| | Hydraulic oil temperature warning lamp |

Standard equipment

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|---|
| Oil cooler |
| 20ton Hook |
| 6.5ton Hook (for Aux. winch) |
| Rooster sheave |
| Aux. winch |
| Tea table |
| Fully adjustable operator's seat |
| Floor carpet |
| Side mirror |
| Sun shade, Roll-in type for roof window |
| Sun visor |
| Front windscreen wiper & washer (2 speed wiper) |
| Roof window wiper & washer (2 speed wiper) |
| Working light (2 lamps) |
| Powered window (with closing switch from outside) |
| Lamp for access step |
| 24V-power outlet |

Option

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|--------------------------------------|
| Amplifier |
| English voice alarm of ACS. |
| 10m/18m Lattice fly jib |
| Air-conditioner (with cold/warm box) |
| FM/AM Radio |
| 90ton & 45ton Hook |

RATED LIFTING CAPACITY (Main boom)

Based on * ISO 4305 * BS 1757:1986 * DIN 15019-2

With additional counterweight; 15ton

| Outriggers fully extended (7.4m) | | | | | | |
|----------------------------------|------------|-----------------|------------|------------|------------|------------|
| Working radius (m) | 11.8m Boom | | 20.1m Boom | 28.4m Boom | 36.7m Boom | 45.0m Boom |
| | Over rear | 360° full range | | | | |
| 2.8 | 90.00 | 82.00 | 40.00 | | | |
| 3.0 | 85.00 | 82.00 | 40.00 | 25.00 | | |
| 3.5 | 76.00 | 75.00 | 40.00 | 25.00 | | |
| 4.0 | 68.00 | 68.00 | 40.00 | 25.00 | | |
| 4.5 | 60.00 | 60.00 | 40.00 | 25.00 | 15.00 | |
| 5.0 | 54.00 | 54.00 | 40.00 | 25.00 | 15.00 | |
| 6.0 | 43.50 | 43.50 | 38.40 | 25.00 | 15.00 | 9.00 |
| 7.0 | 36.50 | 36.50 | 34.20 | 25.00 | 15.00 | 9.00 |
| 8.0 | 31.20 | 31.20 | 30.90 | 23.40 | 15.00 | 9.00 |
| 9.0 | | | 26.70 | 21.00 | 15.00 | 9.00 |
| 10.0 | | | 23.30 | 19.00 | 15.00 | 9.00 |
| 11.0 | | | 20.20 | 17.30 | 15.00 | 9.00 |
| 12.0 | | | 17.80 | 15.80 | 14.00 | 9.00 |
| 14.0 | | | 13.65 | 13.40 | 11.90 | 9.00 |
| 16.0 | | | 10.80 | 10.60 | 10.20 | 9.00 |
| 18.0 | | | | 8.50 | 8.90 | 8.10 |
| 20.0 | | | | 6.75 | 7.90 | 7.20 |
| 22.0 | | | | 5.40 | 6.55 | 6.40 |
| 24.0 | | | | 4.30 | 5.45 | 5.70 |
| 26.0 | | | | | 4.50 | 5.10 |
| 28.0 | | | | | 3.75 | 4.30 |
| 30.0 | | | | | 3.05 | 3.65 |
| 32.0 | | | | | 2.50 | 3.05 |
| 34.0 | | | | | 2.00 | 2.60 |
| 36.0 | | | | | | 2.15 |
| 38.0 | | | | | | 1.75 |
| 40.0 | | | | | | 1.45 |
| 42.0 | | | | | | 1.15 |
| Standard hook | for 90ton | for 90ton | for 45ton | for 45ton | for 20ton | for 20ton |
| Hook mass | 1000kg | 1000kg | 430kg | 430kg | 270kg | 270kg |
| Parts of line | 15 | 15 | 7 | 4 | 3 | 3 |
| Critical boom angle | — | — | — | — | — | — |

(Unit : Metric ton)

Based on * ISO 4305 * BS 1757 : 1986 * DIN 15019-2

With additional counterweight; 10ton

| Outriggers fully extended (7.4m) | | | | | | |
|----------------------------------|------------|-----------------|------------|------------|------------|------------|
| Working radius (m) | 11.8m Boom | | 20.1m Boom | 28.4m Boom | 36.7m Boom | 45.0m Boom |
| | Over rear | 360° full range | | | | |
| 2.8 | 90.00 | 82.00 | 40.00 | | | |
| 3.0 | 85.00 | 82.00 | 40.00 | 25.00 | | |
| 3.5 | 74.00 | 74.00 | 40.00 | 25.00 | | |
| 4.0 | 64.00 | 64.00 | 40.00 | 25.00 | | |
| 4.5 | 56.00 | 56.00 | 40.00 | 25.00 | 15.00 | |
| 5.0 | 50.00 | 50.00 | 40.00 | 25.00 | 15.00 | |
| 6.0 | 40.50 | 40.50 | 38.40 | 25.00 | 15.00 | 9.00 |
| 7.0 | 34.00 | 34.00 | 34.00 | 25.00 | 15.00 | 9.00 |
| 8.0 | 28.80 | 28.80 | 28.80 | 23.40 | 15.00 | 9.00 |
| 9.0 | | | 24.80 | 21.00 | 15.00 | 9.00 |
| 10.0 | | | 20.95 | 19.00 | 15.00 | 9.00 |
| 11.0 | | | 17.80 | 16.55 | 15.00 | 9.00 |
| 12.0 | | | 15.30 | 14.50 | 14.00 | 9.00 |
| 14.0 | | | 11.60 | 11.35 | 11.85 | 9.00 |
| 16.0 | | | 9.05 | 8.85 | 9.65 | 9.00 |
| 18.0 | | | | 6.85 | 7.95 | 8.10 |
| 20.0 | | | | 5.35 | 6.50 | 6.85 |
| 22.0 | | | | 4.15 | 5.25 | 5.75 |
| 24.0 | | | | 3.15 | 4.25 | 4.85 |
| 26.0 | | | | | 3.45 | 4.05 |
| 28.0 | | | | | 2.70 | 3.35 |
| 30.0 | | | | | 2.10 | 2.75 |
| 32.0 | | | | | 1.60 | 2.25 |
| 34.0 | | | | | 1.15 | 1.75 |
| 36.0 | | | | | | 1.35 |
| 38.0 | | | | | | 1.00 |
| Standard hook | for 90ton | for 90ton | for 45ton | for 45ton | for 20ton | for 20ton |
| Hook mass | 1000kg | 1000kg | 430kg | 430kg | 270kg | 270kg |
| Parts of line | 15 | 15 | 7 | 4 | 3 | 3 |
| Critical boom angle | — | — | — | — | — | — |

(Unit : Metric ton)

Note: The rated lifting capacity of the rooster sheave is the rated lifting capacity of the boom minus the mass of all attached slings etc. to the boom, with an upper limit of 6,500kg.

[The hook for use with the rooster sheave is the 6.5ton hook (mass 150kg) with one part of line.]

RATED LIFTING CAPACITY (Main boom)

Based on * ISO 4305 * BS 1757 : 1986 * DIN 15019-2

With additional counterweight; 5ton

| Outriggers fully extended (7.4m) | | | | | | |
|----------------------------------|------------|-----------------|------------|------------|------------|------------|
| Working radius (m) | 11.8m Boom | | 20.1m Boom | 28.4m Boom | 36.7m Boom | 45.0m Boom |
| | Over rear | 360° full range | | | | |
| 2.8 | 85.00 | 82.00 | 40.00 | | | |
| 3.0 | 82.00 | 82.00 | 40.00 | 25.00 | | |
| 3.5 | 70.00 | 70.00 | 40.00 | 25.00 | | |
| 4.0 | 61.00 | 61.00 | 40.00 | 25.00 | | |
| 4.5 | 53.00 | 53.00 | 40.00 | 25.00 | 15.00 | |
| 5.0 | 47.00 | 47.00 | 40.00 | 25.00 | 15.00 | |
| 6.0 | 38.00 | 38.00 | 38.00 | 25.00 | 15.00 | 9.00 |
| 7.0 | 31.50 | 31.50 | 30.40 | 25.00 | 15.00 | 9.00 |
| 8.0 | 26.50 | 26.50 | 25.00 | 21.80 | 15.00 | 9.00 |
| 9.0 | | | 21.00 | 18.40 | 15.00 | 9.00 |
| 10.0 | | | 17.70 | 15.75 | 15.00 | 9.00 |
| 11.0 | | | 14.90 | 13.55 | 13.85 | 9.00 |
| 12.0 | | | 12.75 | 11.75 | 12.20 | 9.00 |
| 14.0 | | | 9.50 | 8.85 | 9.50 | 9.00 |
| 16.0 | | | 7.10 | 6.75 | 7.50 | 7.80 |
| 18.0 | | | | 5.05 | 5.95 | 6.35 |
| 20.0 | | | | 3.70 | 4.75 | 5.15 |
| 22.0 | | | | 2.65 | 3.80 | 4.20 |
| 24.0 | | | | 1.75 | 2.90 | 3.40 |
| 26.0 | | | | | 2.20 | 2.75 |
| 28.0 | | | | | 1.60 | 2.20 |
| 30.0 | | | | | 1.05 | 1.70 |
| 32.0 | | | | | | 1.25 |
| 34.0 | | | | | | 0.85 |
| Standard hook | for 90ton | for 90ton | for 45ton | for 45ton | for 20ton | for 20ton |
| Hook mass | 1000kg | 1000kg | 430kg | 430kg | 270kg | 270kg |
| Parts of line | 15 | 15 | 7 | 4 | 3 | 3 |
| Critical boom angle | — | — | — | — | 25° | 36° |

(Unit : Metric ton)

Based on * ISO 4305 * BS 1757 : 1986 * DIN 15019-2

Without additional counterweight

| Outriggers fully extended (7.4m) | | | | | | |
|----------------------------------|------------|-----------------|------------|------------|------------|------------|
| Working radius (m) | 11.8m Boom | | 20.1m Boom | 28.4m Boom | 36.7m Boom | 45.0m Boom |
| | Over rear | 360° full range | | | | |
| 2.8 | 84.00 | 82.00 | 40.00 | | | |
| 3.0 | 78.00 | 78.00 | 40.00 | 25.00 | | |
| 3.5 | 66.00 | 66.00 | 40.00 | 25.00 | | |
| 4.0 | 57.00 | 57.00 | 40.00 | 25.00 | | |
| 4.5 | 50.00 | 50.00 | 40.00 | 25.00 | 15.00 | |
| 5.0 | 44.00 | 44.00 | 40.00 | 25.00 | 15.00 | |
| 6.0 | 36.00 | 36.00 | 31.65 | 25.00 | 15.00 | 9.00 |
| 7.0 | 28.80 | 28.80 | 25.10 | 21.50 | 15.00 | 9.00 |
| 8.0 | 22.30 | 22.30 | 20.45 | 17.65 | 15.00 | 9.00 |
| 9.0 | | | 17.00 | 14.50 | 14.70 | 9.00 |
| 10.0 | | | 14.10 | 12.05 | 12.45 | 9.00 |
| 11.0 | | | 11.75 | 10.10 | 10.65 | 9.00 |
| 12.0 | | | 9.85 | 8.50 | 9.20 | 9.00 |
| 14.0 | | | 6.95 | 6.10 | 6.95 | 7.25 |
| 16.0 | | | 4.90 | 4.35 | 5.25 | 5.65 |
| 18.0 | | | | 3.05 | 3.95 | 4.40 |
| 20.0 | | | | 2.00 | 2.95 | 3.45 |
| 22.0 | | | | 1.15 | 2.15 | 2.65 |
| 24.0 | | | | | 1.45 | 2.00 |
| 26.0 | | | | | | 1.40 |
| Standard hook | for 90ton | for 90ton | for 45ton | for 45ton | for 20ton | for 20ton |
| Hook mass | 1000kg | 1000kg | 430kg | 430kg | 270kg | 270kg |
| Parts of line | 15 | 15 | 7 | 4 | 3 | 3 |
| Critical boom angle | — | — | — | 25° | 43° | 50° |

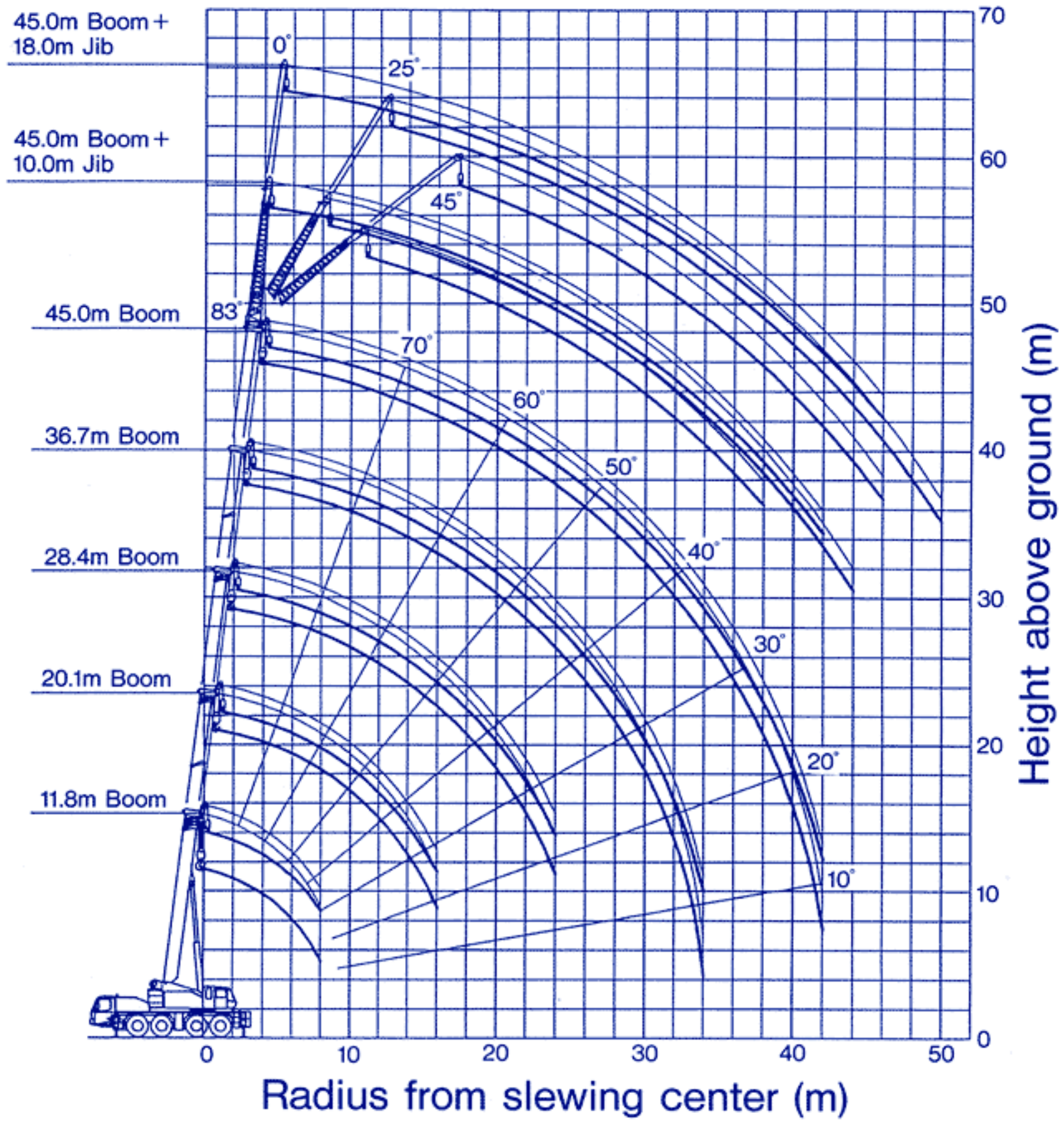
(Unit : Metric ton)

Note:

The rated lifting capacity of the rooster sheave is the rated lifting capacity of the boom minus the mass of all attached slings etc. to the boom, with an upper limit of 6,500kg.

[The hook for use with the rooster sheave is the 6.5ton hook (mass 150kg) with one part of line.]

WORKING RANGE



Note: 1. This diagram does not include deflection of Boom and Jib.
2. The outriggers are fully extended with a 15t counterweight in this diagram.

جرثقیل پارمیس

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