KOBELCO

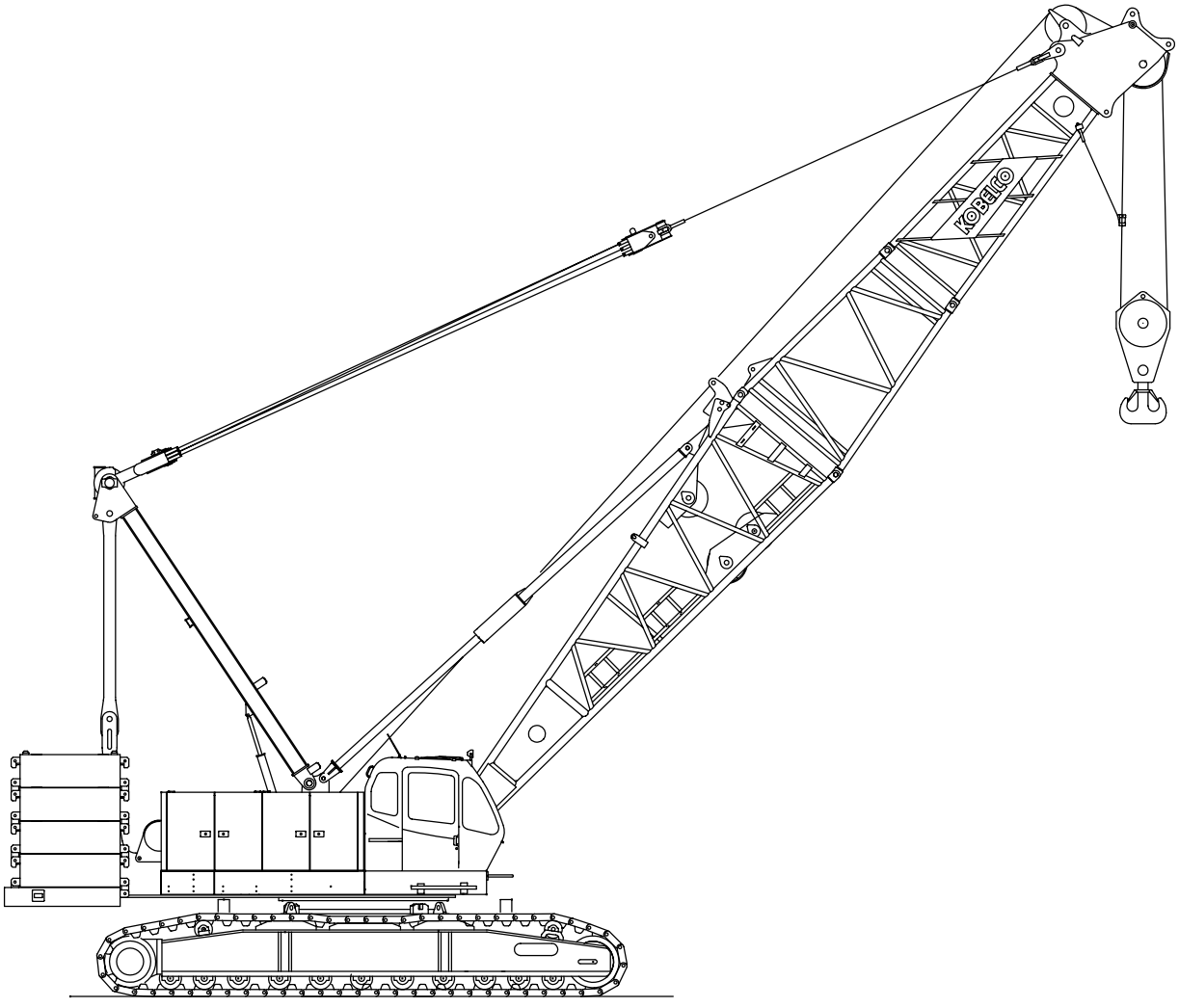
HYDRAULIC CRAWLER CRANE

CK1600

Max. Lifting Capacity: 160 US Tons

Max. Boom Length: 250 ft

Max. Boom + Jib Length: 200 ft + 100 ft



SPECIFICATIONS FOR CK1600 CRAWLER CRANE

The Kobelco CK1600 Crawler Crane is designed from the ground up for reliable operation, convenient maintenance and easy transport.
Please consult your Kobelco distributor for additional information regarding specifications, operating parameters and maintenance requirements.

1. GENERAL DESCRIPTION

Type Crawler mounted, fully revolving
Maximum lifting capacity 320,000 lbs (145,200 kg)
(at 15' operating radius, with 50' boom)
Basic boom length 50' (15.2 m)
Maximum boom length 250' (76.2 m)
Maximum boom & jib length
200' + 100' (61.0 m + 30.5 m)

2. GENERAL DIMENSIONS

Height to top of cab 11' 9" (3.57 m)
Width of upper machine with operator's cab
10' 6" (3.20 m)
Radius of rear end (counterweight) 18' 1" (5.50 m)
Counterweight ground clearance 4' 5" (1.34 m)
Center of rotation to boom foot pin 4' 7" (1.40 m)
Height from ground to boom foot pin 8' 4" (2.53 m)
Height over gantry (raised) 25' 11" (7.89 m)
Overall length of crawler 25' 11" (7.89 m)
Center to center of tumblers 12' 7" (6.89 m)
Overall width of crawlers 21' 9" (6.62 m)
Show width 48" (1.22 m)
Ground clearance of carbody 19" (0.48 m)

3. WORKING WEIGHT

Type of Counterweight	Light	Standard
Working Weight	273,000 lbs (124,000 kg)	306,000 lbs (139,000 kg)
Ground Bearing Pressure	10.5 psi	11.7 psi
Gradeability	30%	30%

Calculations to determine working weight ground bearing pressue and gradeability include the weight of the base machine, 50' boom and hook block.

4. WORKING SPEED

Line speeds based on single line, no load and first layer of rope on the drum.

Hoist line speed (front and rear drum)
390 ~ 10 ft/min (120 ~ 3 m/min)
Lowering line speed (front and rear drum)
390 ~ 10 ft/min (120 ~ 3 m/min)
Boom hoist line speed
157 ~ 7 ft/min (48 ~ 2 m/min)
2 minutes: 250 ft (76.2 m) boom raise 0 to 80 degree
Boom lowering line speed
157 ~ 7 ft/min (48 ~ 2 m/min)
Swing speed 2.1 rpm (2.1 min^{-1})
Travel speed (High / Low) 0.81 / 0.56 mph
(1.3 / 0.9 km/hour)

5. UPPER MACHINERY

5.1 Power plant

Diesel engine, make and model
Mitsubishi 6D24-TLA2K (Comply with EPA "Tier 2")
No. of cylinders 6
Bore X stroke 5.13" X 5.90" (130 mm X 150 mm)
Cycles 4
Total displacement 729 cu.in (11,945 cm^3)
Rated output SAE GROSS 332 HP / 2,000 rpm
(247 kW / 2,000 min^{-1})
Maximum torque 930 lbs-ft / 1,400 rpm
(1,261 Nm / 1,400 min^{-1})
Starter 24 Volts / 7.0 kW
Alternator 24 Volts / 80 Amp
Batteries
Two 12 volt, 136 AH capacity parallel connected.
Radiator
Corrugated type core, thermostatically controlled.
Throttle
Twist grip type hand throttle, electrically controlled.
Air cleaner
Dry type with replaceable paper element.
Fuel tank capacity 106 US gal. (400 liters)
Lube oil filter
Full flow and by-pass type with spin off type cartridge.
Fuel filter Heavy duty with spin off type cartridge.

5.2 Hydraulic pumps

All driven from heavy duty pump drive.
Load hoist and propel 2 Piston pumps
Boom hoist 1 Piston pump
Swing 1 Piston pump
Control system and auxiliary 2 Gear pumps
Break cooling system 2 Gear pumps

5.3 Counterweight

Light Weight

one (1) base counterweight (A) and eight (8) side counterweights (B) 105,800 lbs(48,000 kg)

Standard Weight

In addition Standard Weight, add optional Additional Weight

one (1) base counterweight (A), eight (8) side counterweight (B) and two side counterweights (C) 116,820 lbs (53,000 kg)

two (2) carbody weight 22,050 lbs (10,000 kg)

Additional weight consosts of two (2) side counterweights (B) and two (2) carbody weights.

Description		Light	Standard
Base Counterweight (A)		1	1
Side Counterweight (B)		8	8
Side Counterweight (C)		0	2
Carbody Counterweight		0	2
Total Weight	Upper	105,800 lbs (48,000 kg)	116,820 lbs (53,000 kg)
	Lower	None	22,050 lbs (10,000 kg)

Side coutnerweight (C) and Carbody weight is set as Additional Weight (Optional)

5.4 Gantry

This high folding type gantry is fitted with a sheave frame for boom hoist reeving. Hydraulic lift is standard. It provides full up, full down positions with linkage.

5.5 Operator's cab

Totally enclosed from weather, this full-vision cab has safety glass all around. The adjustable, high-backed seat with armrest is standard, allowing operators to customize the position. Auxiliary controls and instruments are on a side mounted console. A signal horn, windshield wipers, air conditioner are all standard features.

5.6 Controls

At operator's right are console-mounted adjustable short levers for the front and rear drum and the boom hoist control. Beside the operator's seat on the right are two short levers for propel control, individual speed shifts for front drum, rear drum and boom drum. At the operator's left are the console mounted swing lever, knobs for front and rear drum, boom drum pawls, engine start / stop key. A swing brake control switch and signal horn button are on the swing lever.

5.7 Electric system

All wiring corded for easy serving, individual fused branch circuit.

5.8 Hydraulic system

Maximum pressure rating 4,640 psi (32.0 MPa)

Cooling Oil to air heat exchanger

Filtration

Full flow filters with replaceable paper elements

5.9 Boom hoist

Powered by hydraulic motor through planetary reducer.

Drum

Single drum.
Grooved for 20.0 mm dia. wire rope.

Brake

A spring set, hydraulically-released, multiple-disc holding brake is mounted inside the boom hoist motor and is operated through a counter-balance valve. An external ratchet is fitted for locking the drum.

5.10 Front drum

Powered by hydraulic motor through planetary reducer.

Drum

26.2" (666 mm) P.C.D. X 26.5" (672 mm) Lg.
Grooved for 26 mm dia. wire rope.

Brake

A spring set, hydraulically-released, multiple-disc holding brake is mounted inside the hoist motor and is operated through a counter-balance valve. An external ratchet is fitted for locking the drum.

Free-Fall (Optional)

Wet-type disk brake free-fall is mounted inside the drum.

5.11 Rear drum

Powered by hydraulic motor through planetary reducer.

Drum

26.2" (666 mm) P.C.D. X 26.5" (672 mm) Lg.
Grooved for 26 mm dia. wire rope.

Brake

A spring set, hydraulically-released, multiple-disc holding brake is mounted inside the hoist motor and is operated through a counter-balance valve. An external ratchet is fitted for locking the drum.

Free-Fall (Optional)

Wet-type disk brake free-fall is mounted inside the drum.