

TK550

Telescopic Crawler Crane

Max. Lifting Capacity : 55t × 3.0m

Comply with Japanese Construction Codes for Mobile Cranes.

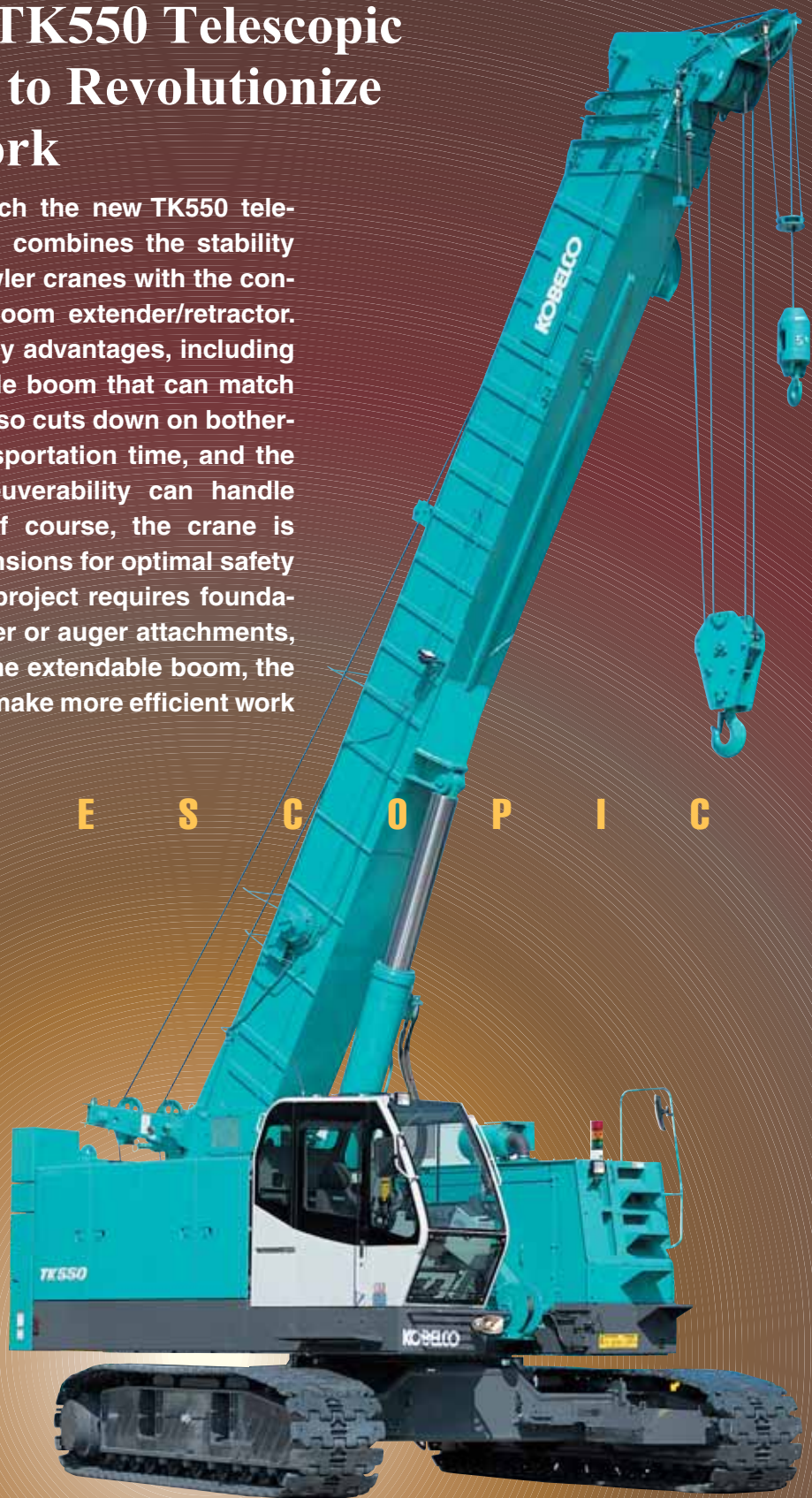
TELESCOPIC
CRAWLER
CRANE

Strong Design from To

Presenting the TK550 Telescopic Crawler Crane to Revolutionize Foundation Work

KOBELCO is proud to launch the new TK550 telescopic crawler crane, which combines the stability and lift power unique to crawler cranes with the convenience of an automatic boom extender/retractor. The TK550 model offers many advantages, including the flexibility of an adjustable boom that can match any worksite conditions. It also cuts down on bothersome boom setup and transportation time, and the compact design and maneuverability can handle rough terrain with ease. Of course, the crane is designed with the best dimensions for optimal safety and efficiency. Whether the project requires foundation work using vibro-hammer or auger attachments, or material handling using the extendable boom, the TK550's innovative features make more efficient work possible.

T E L E S C O P I C



* Photos in this catalog may contain optional equipment such as tagline and tool box.

Top to Bottom

5 Key Features:

- 1● Newly designed high-strength telescopic boom
- 2● Excellent stability and lifting capacity
- 3● Features and performance suited for foundation work
- 4● Optimal dimensions and mass for superior mobility
- 5● Wide range of safety features



Equipped with Telescopic Boom Featuring High Strength and Rigidity

■ Operability That Only a Telescopic Boom Can Deliver

The automatic boom extender/retractor easily adjusts the length of the boom to match working conditions, making the crane ideal for material handling.

● Boom Length : 9.97 ~ 30.1m

■ High-Strength Boom Handles Tough Foundation Work with Ease

The boom's strong structure was designed to accommodate demanding foundation work with electric vibro-hammers and augers. Each boom section is outfitted with a cylinder extender/retractor with a four-part design and an extra-long support sheath for high rigidity. This maintains high strength from the base to the top, and also ensures that each section is reinforced.

■ Boom Features Both Light Weight and High Stability

Despite its light weight, the boom features both high strength and high rigidity, supported by crawlers that deliver solid traction and 360-degree stability.

ITCS

[ITCS], or the Intelligent Total Control System, refers to an advanced computerized system used to operate the machine with coordinated control.

PERFORMANCE

High Stability Ensures Dependable Performance

■ Dependable Performance

● Max. Lifting Capacity : **55t × 3.0m**

● Rated Line Pull :

Main : **44.1kN {4.5tf}** Auxiliary : **49.0kN {5.0tf}**

● Max. Line Pull *1 (Referential Performance) :

Main, Aux. : **83.3kN {8.5tf}** Third*2 : **49.5kN {5.1tf}**

*1 : Single line on first drum layer *2 : Third drum is option.

● Max. Lifting Height : **30.7m**

■ High Line Speed

Main : **125m/min** (4th layer) Auxiliary : **110m/min** (2nd layer)

■ Plenty of Lifting Power

Features a lifting capacity of 3.3t in the frequently used 20m working radius. Maintains a maximum lifting capacity of 14t with a fully extended boom in a 6.5m radius.

● Lifting Capacity in a 20m Working Radius (4 sections) : **3.3t**

● Maximum Working Radius for Lifting 14t (4 sections) : **6.5m**

■ Ample Lifting Capacity on Sites with Height Restrictions

The minimum boom length of just 9.97m, and the innovation of placing the winch behind the boom base, provide a high lifting capacity even on sites with height restrictions, such as under elevated structures.

● Height Restriction : 7m ● Height Restriction : 9m

17t × 7.1m **22.5t × 6.2m**

■ Compact Body with Rear Swing Radius of About 3.8m

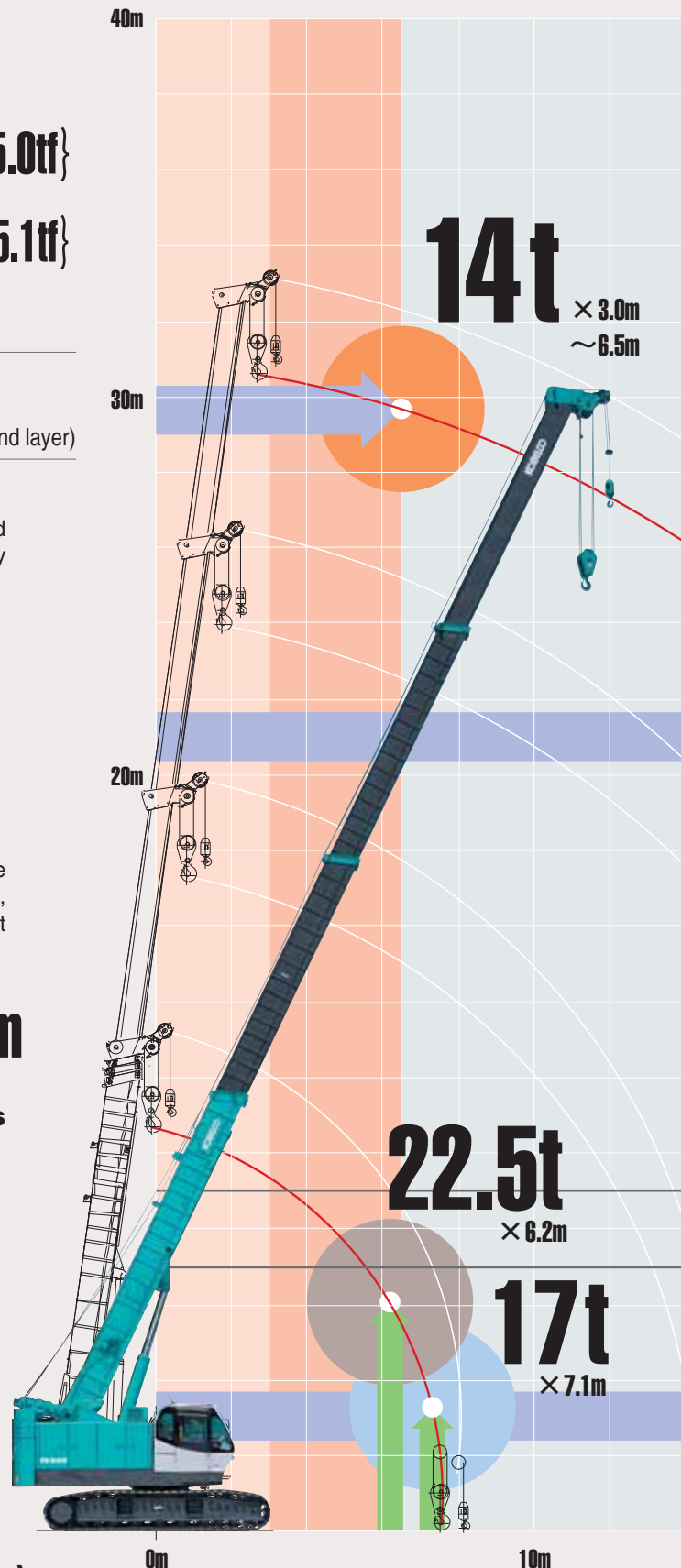
■ Lifting Capacity with Intermediate Counterweight (Optional)

Standard rated load is set with 12t counterweights. Moreover, to accommodate weight restrictions on such sites as wharves, the machine can be set to a rated load that reflects use with the intermediate 8t counterweight only or without counterweights. This feature comes with an automatic counterweight inspection system for safety.

■ Maintains a 0.75t Lifting Capacity with a Fully Extended Boom on 0° Degree Even When Only an Intermediate Counterweight Is Used. (Optional rated load setting is necessary)

■ The Second and Third Weights Can Be Removed with a Truck-Mounted Crane.

● First weight : 8.0t / Second weight : 1.7t / Third weight : 2.3t



PERFORMANCE

Attachments for All Types of Foundation Work

High Stability Accommodates a Wide Operational Area

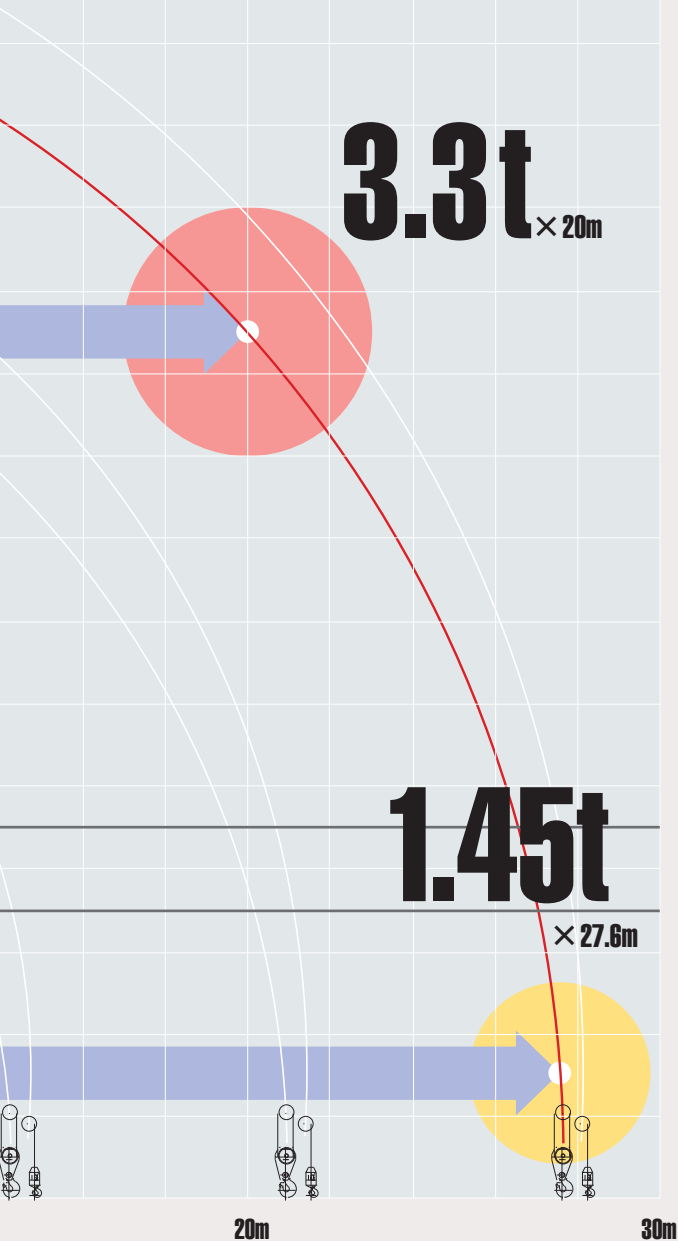
Delivers a maximum working radius of 27.6m, with a horizontal lifting capacity of 1.45t with a fully-extend boom. The minimum working radius with a fully extended boom is 3.0m.

●Maximum Working Radius

1.45t × 27.6m (4 sections)

3.3t × 20m

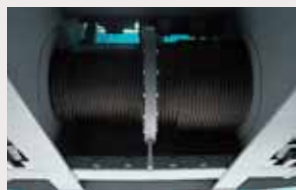
1.45t × 27.6m



Lifting Power to Match Any Heavy-Duty Operations

Features a lifting capacity of 10.15t at a 10m working radius for foundation work, ideal for work that requires vibro-hammer or auger attachments. The lifting capacity of 22t x 6m (when the second and third boom sections are fully extended) is well-suited to vibro-hammer operations.

Drum and Rope Settings Ideal for Foundation Work



Extra-wide grooved drums have a maximum spooling capacity of 23 coils per layer on both the main and auxiliary winches. The drums' large diameters and ample capacity minimize

spooling accidents and damage to the wire rope, ensuring durability. The wire rope is a 18mm in diameter, making it ideal for a wide range of attachments.

Optional Hydraulic Outlet Available for Various Attachments

Four optional hydraulic outlets are available: one each for auger 1 and 2, one for vibro-hammers, and one for four-spool valves. The two for augers come equipped with a hydraulic oil flow select switch.



* Photo shows tagline and hydraulic outlet for auger 2.

Optional Hydraulic Outlet Fitted with Pump Mode Selector



With the flick of a switch, the operator can modify the horsepower distribution from the pumps to optimize performance for crane, auger, or vibro-hammer operations, respectively.

Loaded with a 55,000kcal/h Large-Capacity Oil Cooler

The oil cooler's ample capacity can easily accommodate operations even when attachments are being used.

TRANSPORT

Ease of Transport Makes Set-Up More Convenient

■ Designed for Easy Transport.

Overall height **3.385m**

Operating weight (Standard specification) **49.98t**

Overall length : **12m**

Counterweight **8.0t + 1.7t + 2.3t**

Overall width **4.36m**
↑↓ In case of axle extension adaptor installed
3.2m

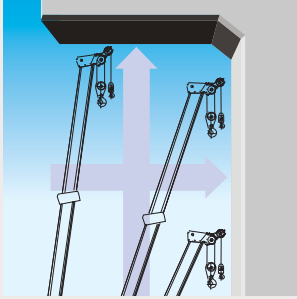
■ Telescopic Boom Requires No Assembly/Disassembly

The automatic extender/retractor saves time and effort, thereby maximizing time spent on the project at hand. There's no need to allot space to assemble, disassemble, and store the boom. On-site safety is also increased, as there is no potential for an accident during boom assembly/disassembly.

■ Counterweight Removal Device (Optional) for Optimal Operability.

Safety and Comfort Give the Operator Peace of Mind.

ICS ■ Operational Range Limiter



By setting the parameters of boom angle (upper and lower limits), boom top height, and operating radius, the operator can limit the range in which the boom operates. A warning buzzer sounds and the machine stops automatically whenever those limits are approached. This mechanism has proved successful on wheel cranes, and can be used not only to prevent contact, but also to increase efficiency in repetitive tasks.

ICS ■ Engine Start-Up Safety Mechanism Prevents Accidental Operation

If the engine is started with the operation levers engaged, a safety mechanism prevents the winch and boom from moving. Only by returning the lever to neutral can operations begin.

ICS ■ Crawler Confirmation Switch



This feature prevents the crane from toppling if the boom or swing is mistakenly operated when the crawlers are being retracted. When the crawlers are in retraction mode (the load will not be displayed on the overload prevention mechanism), lowering the switch to 'confirmation' for two seconds will put it into crawler extender mode. A voice will prompt reconfirmation.

■ Three-Stage Procedure Helps Prevent Freefall Malfunction

To activate freefall, three separate steps must be taken : the freefall switch must be turned on, the freefall lock key must be released, and the freefall interlock must be released.



To prevent the load from accidentally dropping because of operator error, do not use freefall during lifting work.

ICS ■ Multi-Display Monitor Identifies Potential Machine Trouble in Real Time



The LCD multi-display shows a malfunction log (including fuel, hydraulic oil, cooling water, etc.) for 16 items, and its self-diagnostic function monitors a total of 41 items, including electrical malfunctions involving solenoid valves, sensors, etc.

ICS ■ Automatic Counterweight Inspection (Optional)

This optional safety feature provides security when operating the machine with intermediate (8t) or no counterweights. It automatically senses the number of counterweights being used and resets the rated load specifications accordingly to prevent overload.

■ Monitoring Cameras (Optional)



Cameras monitor the drums to help the operator catch potential accidents, such as spooling malfunctions, in their early stages. The cameras also monitor the rear of the machine to ensure the safety of workers

nearby. The images are displayed on an easy-to-see, easy-to-use monitor screen.

■ Roomy 940mm Wide Cab Ensures Operator Comfort



- Comfortable cab has wide frontal visibility and clear upper visibility
- Pressurized climate control with external air intake reduces dust
- Cloth-covered seat that tilts and reclines
- AM/FM radio with automatic selection and clock
- Tempered green glass windows
- Storage box

● Gate lock prevents accidental operation when the operator enters or leaves the cab ● Swing flashers warn surrounding workers when the machine is swinging ● Boom length display is installed on the right side of the boom ● Directional markings on the crawlers ● Leveling gauge

SPECIFICATIONS

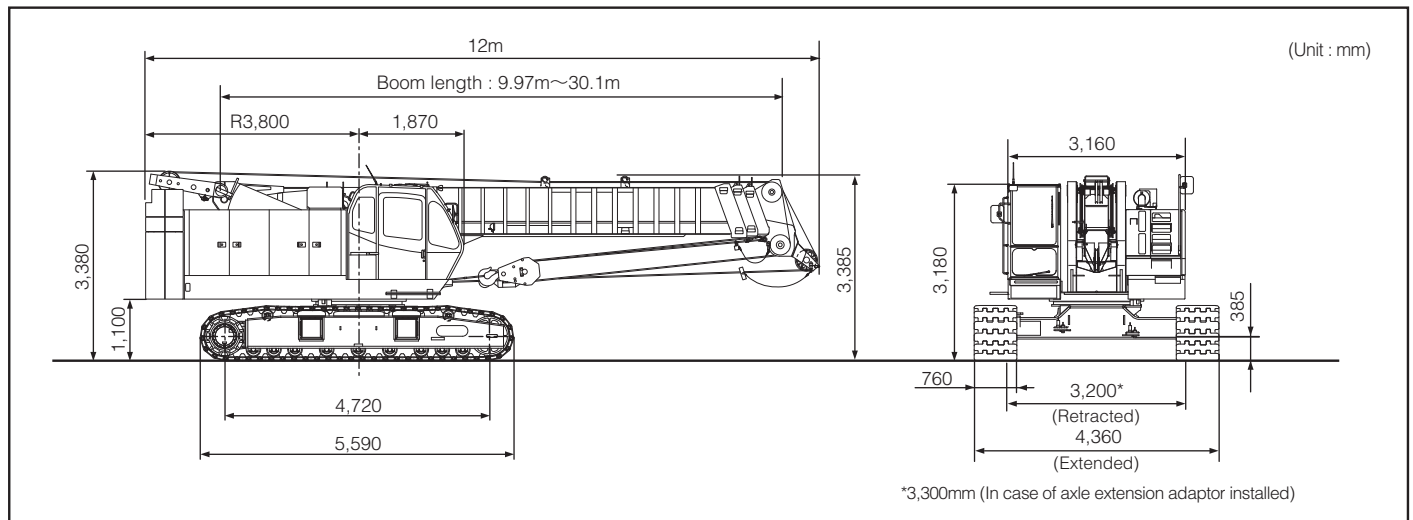
MODEL		TK550-1E
PERFORMANCE		
Max. Rated Load		
9.97m boom	t x m	55.0 x 3.0 (12-lines)
16.7m boom	t x m	28.0 x 5.0 (6-lines)
23.4m boom	t x m	22.0 x 6.0 (5-lines)
30.1m boom	t x m	14.0 x 6.5 (4-lines)
Aux. Sheave (max.)	t	5.0 (single line)
Boom Length	m	9.97 to 30.1
Main Hook Max. Height	m	30.7
Main Hook Max. Operating Radius	m	27.6
Line Speed		
Main	m/min	125 (at 4th layer)
Aux.	m/min	110 (at 2nd layer)
Third (optional)	m/min	100 (at 3rd layer)
Boom Telescoping Speed	sec/m	120/20.1
Boom Raising Speed	sec/degree	64/0 to 82.5
Swing Speed	min ⁻¹ {rpm}	2.3 {2.3}
Travel Speed	km/h	1.9/1.2
Operating Weight	t	49.98
Ground Pressure	kPa {kgf/cm ² }	68.3 {0.70}
Gradeability	%	30
Rated Line Pull		
Main	kN {tf}	44.1 {4.5}
Aux.	kN {tf}	49.0 {5.0}
Third (optional)	kN {tf}	29.4 {3.0}
Max. Line Pull*1 (Referential Performance)		
Main	kN {tf}	83.3 {8.5}
Aux.	kN {tf}	83.3 {8.5}
Third (optional)	kN {tf}	49.5 {5.1}
ENGINE		
Model		MITSUBISHI 6D16-TLE2A
Engine Output	kW/min ⁻¹ {PS/rpm}	147/2,000 {200/2,000}
WIRE ROPE		
Main	mm x m	18dia. x 180 IWRC6 x Ws (26) anti twist rope
Aux.	mm x m	18dia. x 80 IWRC6 x Ws (26) anti twist rope
Third (optional)	mm x m	16dia. x 80 IWRC6 x Fi (29) anti twist rope

Units are SI units. { } indicates conventional units.

All speeds indicated are for unloaded operation and will change depending on the load.

*1 : Single line on first drum layer.

GENERAL DIMENSIONS



Note: This catalog may contain photographs of machines with specifications, attachments and optional equipment not certified for operation in your country. Please consult KOBELCO for those items you may require. Due to our policy of continual product improvements all designs and specifications are subject to change without advance notice.

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