

TK550

Model TK550-1E

TELESCOPIC CRAWLER CRANE

Max. Lifting Capacity : 55t × 3.0m Comply with Japanese Construction Codes for Mobile Cranes.

GENERAL SPECIFICATION

Model		TK550-1E	
Weight			
Operating weight		t	49.98
Ground pressure		kPa{kgf/cm ² }	68.3{0.70}
Crane Performance			
Max. rated load	9.97m boom	t×m	55.0×3.0 (12-lines)
	16.7m boom	t×m	28.0×5.0 (6-lines)
	23.4m boom	t×m	22.0×6.0 (5-lines)
	30.1m boom	t×m	14.0×6.5 (4-lines)
	Aux. sheave (max.)	t×m	5.0 (1-line)
Main boom length		m	9.97～30.1
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)
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 (Referential performance)	Main	kN{tf}	83.3{8.5}
	Aux.	kN{tf}	83.3{8.5}
	Third (optional)	kN{tf}	49.5{5.1}
Boom telescoping speed		sec/m	120/20.1
Boom raising speed		sec/degree	64/0～82.5
Swing speed		min ⁻¹ {rpm}	2.3{2.3}
Boom Structure			
Main boom		Four section, box construction, 2nd and 3rd simultaneously telescoping, 4th independently telescoping	
Boom hoist device		Direct forced type by double acting hydraulic cylinder (one)	
Boom telescoping device		Direct forced type by double acting hydraulic cylinder (three)	
Load hoist device		Hydraulic motor drive with spur gear reduction with auto-brake, independent 2 winches, with free-fall function	
Swing device		Hydraulic drive motor with planetary gear reduction with hand brake, swing neutral-free or neutral-brake selector type	
Wire Rope			
Main winch		mm×m	18dia.×180 IWRC6×Ws (26) anti twist rope
Aux. winch		mm×m	18dia.×80 IWRC6×Ws (26) anti twist rope
Third winch (optional)		mm×m	16dia.×80 IWRC6×Fi (29) anti twist rope
Hydraulic Device		2 variable plunger pumps + 3 pumps (2 variable plunger pumps + 1 gear pump)	
Hydraulic oil tank		ℓ	610
Upper Structure			
Engine	Model	MITSUBISHI 6D16-TLE2A	
	Type	Water cooled, 4 cycle, 6 cysl, direct injection diesel with turbocharger, intercooler	
	Total displacement	ℓ	7.545
	Max. output	kW/min ⁻¹ {PS/rpm}	147/2,000{200/2,000}
	Max. torque	N·m/min ⁻¹ {kgf·m/rpm}	804/1,600{82/1,600}
Fuel tank	ℓ	270	
Lower Structure			
Propel system		Hydraulic motors, planetary reducer, direct drive, shoe-in-type	
Travel speed		km/h	1.9/1.2
Gradeability		%	30

Units are SI units. { } indicates conventional units.

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► LIFTING CAPACITY

► Note

(1) Rated load do not exceed 78% of the tipping loads with machine set horizontally on a firm and level ground, safety the specified stability over the front, and include weight of hook block (s) and other handling accessories.

Ratings shown in are based on the machine's structural strength, and others are determined by the machine's stability.

Hooks	55t	25t	5t	5t (light)
Weight	400kg	300kg	90kg	40kg

Note : 5t light swivel ball hook is option.

(2) Rated loads shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions out-of-level. Operating speeds or any other condition that could be detrimental to the safe operation of this equipment, the operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.

(3) Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load. Operating radius given in the charts allow for loaded boom deflection and reduce lifted loads and operating speeds accordingly.

(4) Both crawlers should be fully extended.

(5) The ratings of the auxiliary sheave are the same as the main boom ratings, but should not exceed 5,000kg. Ratings of the auxiliary sheave are calculated by deducting from the main boom ratings 55t hook weight (400kg) with the main boom extended ranging from 9.97m to 16.7m, and 25t hook weight (300kg) with the main boom extended over 16.7m up to its maximum length.

(6) To determine load ratings that fall between those shown in the charts, proceed as follows :

- For boom lengths not listed use rating for next longer boom length or next shorter boom length, whichever is smaller.
- For load radii not shown, use rating for next larger radius.

(7) At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.

(8) Standard hoist reevings are shown below. Rated single-line pull must not exceed 4,500kg.

Boom length	9.97m	16.7m	23.4m	30.1m
Hook	55t		25t	
No. of reeving	12	6	5	4

(9) In order to prevent a load from falling down to mistake of operation, do not use free-fall in crane operation.

► With 12 t counterweight

(Unit : metric ton)

Working radius (m)	Boom length (m)	9.97	16.7	23.4	30.1	Boom length (m)	Working radius (m)
3.0		55.00	28.00	22.00	14.00		3.0
3.5		50.00	28.00	22.00	14.00		3.5
4.0		42.50	28.00	22.00	14.00		4.0
4.5		36.50	28.00	22.00	14.00		4.5
5.0		31.65	28.00	22.00	14.00		5.0
5.5		26.90	26.65	22.00	14.00		5.5
6.0		23.35	23.10	22.00	14.00		6.0
6.5		20.55	20.30	20.15	14.00		6.5
7.0		18.25	18.00	17.85	13.50		7.0
7.5		12.50	16.15	16.00	13.00		7.5
8.0			14.60	14.45	12.50		8.0
8.5			13.30	13.15	12.00		8.5
9.0			12.30	12.00	11.50		9.0
9.5			11.25	11.00	11.00		9.5
10.0			10.40	10.15	10.70		10.0
11.0			9.00	8.70	9.20		11.0
12.0			7.80	7.55	8.05		12.0
13.0			6.80	6.60	7.10		13.0
14.0			6.00	5.80	6.25		14.0
14.2			5.80	5.65	6.10		14.2
15.0				5.10	5.60		15.0
16.0				4.55	5.00		16.0
17.0				4.05	4.50		17.0
18.0				3.60	4.05		18.0
19.0				3.25	3.65		19.0
20.0				2.90	3.30		20.0
20.9				2.60	3.05		20.9
22.0					2.75		22.0
24.0					2.20		24.0
26.0					1.75		26.0
27.6					1.45		27.6
Min. boom angle		0°	0°	0°	0°		Min. boom angle

Ratings shown in are determined by the strength of the boom or other structural components.

► With 8 t counterweight (optional setting)

(Unit : metric ton)

Working radius (m) \ Boom length (m)	9.97	16.7	23.4	30.1	Boom length (m) \ Working radius (m)
3.0	55.00	28.00	22.00	14.00	3.0
3.5	50.00	28.00	22.00	14.00	3.5
4.0	40.45	28.00	22.00	14.00	4.0
4.5	32.25	28.00	22.00	14.00	4.5
5.0	26.70	26.45	22.00	14.00	5.0
5.5	22.65	22.40	22.00	14.00	5.5
6.0	19.55	19.35	19.15	14.00	6.0
6.5	17.15	16.95	16.75	14.00	6.5
7.0	15.25	15.00	14.85	13.50	7.0
7.5	12.50	13.35	13.20	13.00	7.5
8.0		12.05	11.90	12.50	8.0
8.5		10.95	10.80	11.35	8.5
9.0		9.95	9.80	10.40	9.0
9.5		9.10	8.95	9.50	9.5
10.0		8.35	8.20	8.75	10.0
11.0		7.15	7.00	7.50	11.0
12.0		6.15	6.00	6.50	12.0
13.0		5.35	5.20	5.70	13.0
14.0		4.65	4.50	5.00	14.0
14.2		4.55	4.40	4.85	14.2
15.0			3.95	4.40	15.0
16.0			3.45	3.90	16.0
17.0			3.00	3.45	17.0
18.0			2.60	3.10	18.0
19.0			2.25	2.75	19.0
20.0			1.90	2.45	20.0
20.9			1.65	2.15	20.9
22.0				1.85	22.0
24.0				1.35	24.0
26.0				1.00	26.0
27.6				0.75	27.6
Min. boom angle	0°	0°	0°	0°	Min. boom angle

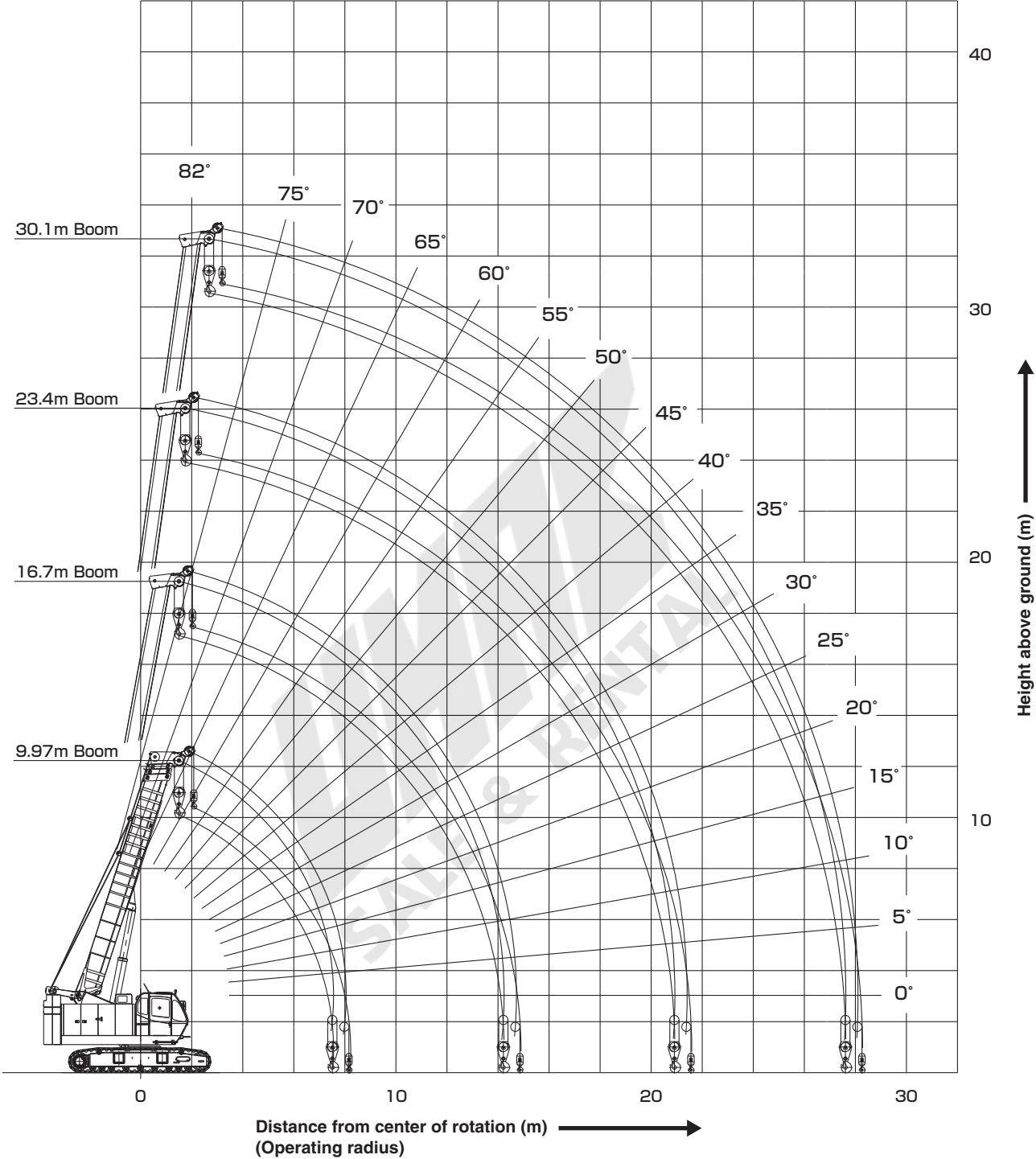
Ratings shown in are determined by the strength of the boom or other structural components.

► Without counterweight (optional setting)

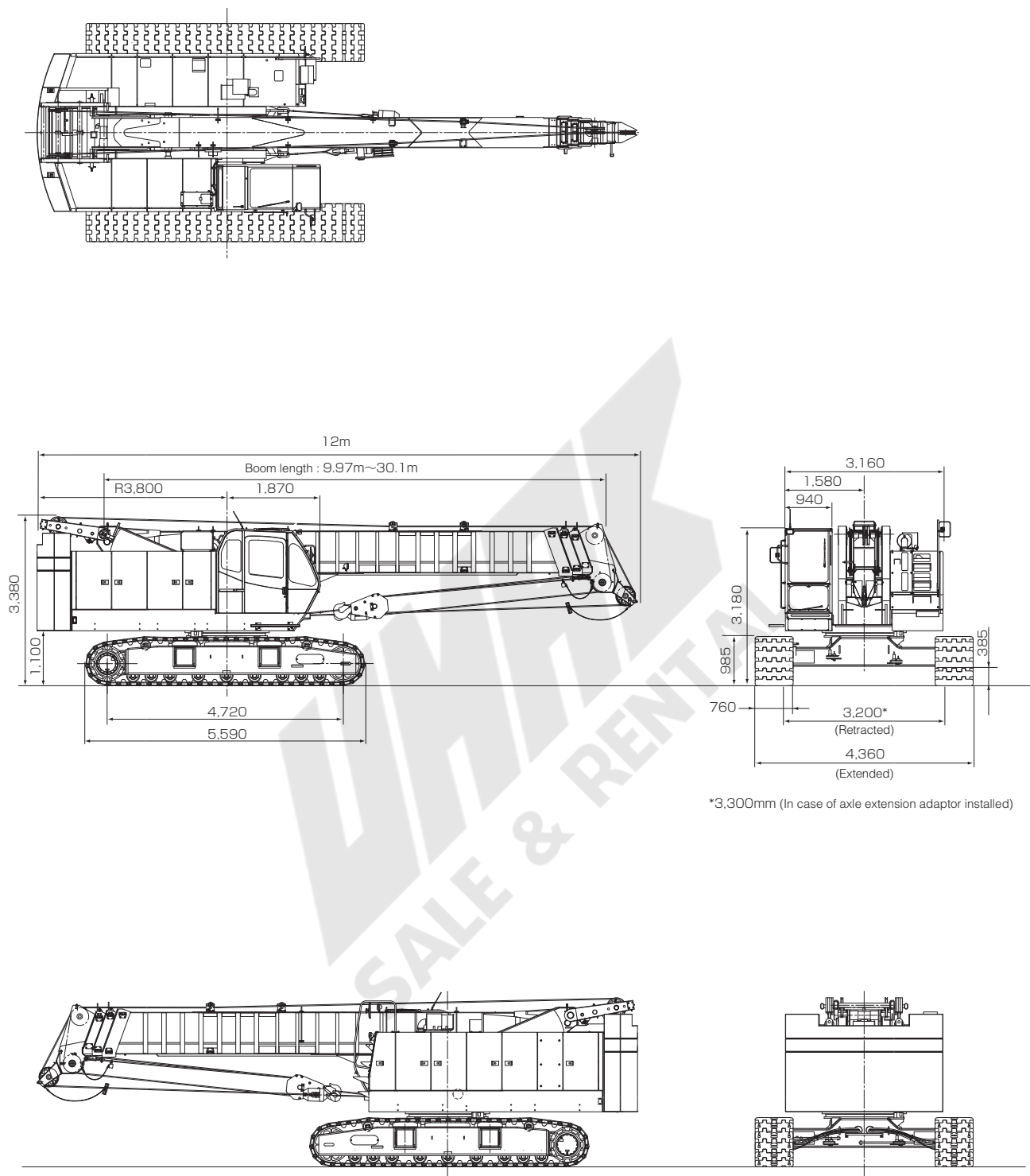
(Unit : metric ton)

Working radius (m) \ Boom length (m)	9.97	16.7	Boom length (m) \ Working radius (m)
3.0	18.00	18.00	3.0
3.5	18.00	18.00	3.5
4.0	18.00	18.00	4.0
4.5	18.00	18.00	4.5
5.0	16.30	16.10	5.0
5.5	13.70	13.50	5.5
6.0	11.70	11.50	6.0
6.5	10.20	9.90	6.5
7.0	8.90	8.70	7.0
7.5	7.90	7.60	7.5
8.0		6.80	8.0
8.5		6.00	8.5
9.0		5.40	9.0
9.5		4.80	9.5
10.0		4.40	10.0
11.0		3.60	11.0
12.0		3.00	12.0
13.0		2.40	13.0
14.0		1.90	14.0
14.2		1.80	14.2
Min. boom angle	0°	0°	Min. boom angle

► **WORKING RANGES** (Unit : m)



► **GENERAL DIMENSIONS** (Unit : mm)



STANDARD EQUIPMENT

Upper Structure/Lower Structure
Counterweight : 12.0t (8.0t + 1.7t + 2.3t)
760mm shoe crawlers
170F51 battery
Electric hand throttle grip
Side deck (for cab) : 300mm (W) x 970mm (L)
Anti-slip sheet
Tools (for routine maintenance)
Lubrication device
Tool box (equipped on right-side guard)
Three front working lights
Two back mirrors
Cab
Air conditioner
Convenient compartment
Cup holder
AM/FM Radio
Ashtray
Cigarette lighter
Intermittent windshield wiper with window washer (roof, front and lower front window)
Sun visor
Roof blind
Tinted glass
Floor mat (cloth)
Foot pedal cover (rubber)
Shoe tray

Safety Device
Over-load prevention device (auto stop function)
Release prevention key for hook over-hoist prevention device
LCD Multi-display (shows gauges and warning signs)
Hook over-hoist auto-stop device
Operating zone limit device
Safety lever lock
Lever lock switch (main, aux., boom hoist, and telescoping)
Propel lever lock
Manual drum safety pawl (main, aux.)
Negative brake in lever neutral-position (main, aux., travel)
Service brake pedal lock (main, aux.)
Lamp for neutral-free/brake select switch (main, aux.)
Neutral-free/brake select switch (main, aux.)
Neutral brake release prevention key (main, aux.)
Brake activating device for engine stop
Hydraulically safety valve
Boom telescoping default operation prevention device (Automatic)
Boom telescoping safety device
Boom hoist safety device
Over hook limit device
Sling wire lock
Horn
Swing lock pin
Swing flashers
Swing warning buzzer
Voice alarm for travel/swing (over hoist, over load, crawler extension)
Level gauge

OPTIONAL EQUIPMENT

Third drum : wire rope 16dia. x 80m, with free-fall
4-spool valve : Max. discharge pressure 17.2MPa{175kgf/cm ² } Max. discharge flow 40liters/min
Outlet for Vibro : Max. output 50kW{68PS} Max. discharge pressure 27.5MPa{280kgf/cm ² } Max. discharge flow 110liters/min
No.1 Outlet for Auger : Max. output 78/45kW{106/61PS} Max. discharge pressure 24.5MPa{250kgf/cm ² } Max. discharge flow 190/110 liters/min (with oil flow select switch)
No.2 Outlet for Auger : Max. output 93/50kW{126/68PS} Max. discharge pressure 24.5MPa{250kgf/cm ² } Max. discharge flow 300/150 liters/min (with oil flow select switch)
Hydraulic tagline : 10dia. x 45m
Lifting capacity set : 8t counterweight/without counterweight
Swing neutral brake : cannot select swing neutral free
5t light swivel ball hook : 40kg
Wire rope loose prevention device (main, aux., third)

Trans-lifter
Counterweight self-removal device
Foot acceleration : right hand
Boom hoist pedal : right hand (not available to equip with foot acceleration)
Engine rpm fix switch : 4-steps
Cab roof guard
Cab front upper/lower guard
Side catwalk (without handrail) : 300mm (W) x 3,330mm (L)-right hand/4,090mm (L)-left hand
Color monitoring camera (backward) with monitor
Monitoring camera for main/aux. with lightning
Overload alarm lamp (3 colors, square shape)
One way call
Electric fuel pump
Tool box (equipped in lower frame) : not available to equip with Trans-Lifter simultaneously.
Fire extinguisher
Electric fan

※No. 1 Outlet for Auger and Outlet for Vibro cannot be installed simultaneously. ※There are two types of Outlets for Vibro, but cannot be installed simultaneously.

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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KOBELCO CRANES CO., LTD.

17-1, Higashigotanda 2-chome, Shinagawa-ku, Tokyo 141-8626 JAPAN

Tel: +81-3-5789-2130 Fax: +81-3-5789-3372

URL: <http://www.kobelco-cranes.com/>

Inquiries To: