KATO

SR-500L

ROUGH TERRAIN CRANE

【SPECIFICATION】

■CRANE

Description		Rough terrain crane with maximum lifting capacity 51 ton
●Crane specification		
Maximum rated lifting capacity	10.7 m Boom	51,000kg × 2.5 m (Parts of line : 11)
	18.8 m Boom	22,000kg × 7.0 m (Parts of line : 6)
	26.9 m Boom	19,000kg × 5.0 m (Parts of line : 4)
	35.0 m Boom	12,000kg × 8.0 m (Parts of line : 4)
	8.8 m Jib	5,000kg × 75° (Parts of line : 1)
	15.2 m Jib	3,000kg × 78° (Parts of line : 1)
	Rooster	5,000kg
Boom length		10.7m — 35.0m (4-section)
Jib length		8.8m, 15.2m (2-section, offset angles 5° , 25° and 45°)
Maximum rated lifting height		35.6m (Boom)
		51.0m (Jib)
Hoisting line speed (winch up)	Main winch	110 m/min (at 4th layer)
	Auxiliary winch	96 m/min (at 2nd layer)
Hoisting hook speed (winch up)	Main winch	(Parts of line; 7) : 15.7 m/min. (at 4th layer)
	Auxiliary winch	(Parts of line; 1) : 96 m/min. (at 2nd layer)
High-speed lowering Rope speed	Main winch	144m / min (at 4th layer)
	Auxiliary winch	125m / min (at 2nd layer)
Boom derricking angle		-1.0° — 82.0°
Boom derricking time		49s / -1.0° — 82.0°
Boom extending speed		10.7m — 35.0m / 80s
Slewing speed		2.3min^{-1}
Tail slewing radius		4,100mm
●Equipment and structure		
Boom type		Round-shaped, 4-section hydraulically telescopic type (the 2nd, 3rd and 4th boom sections at the same time)
Jib type		2-section (2nd section of draw-out type) (offset angles 5° , 25° and 45°)
Boom extension/ retraction equipment		One hydraulic cylinder and wire ropes used together
Boom derricking/lowering equipment		One hydraulic cylinder of direct acting type with pressure-compensated flow control valve
Winch system Main & Auxiliary winches		Driven by axial plunger type, hoisting motor through planetary gear reduction, Controlled independently by respective operating lever, Equipped with automatic brake
Slewing equipment		Equipped with Hydraulic motor drive and a planetary gear speed reducer (built-in negative brake), Free / Lock change-over type
Slewing bearing		Ball bearing type
Outriggers	Type	Hydraulic H-beam type (with float and vertical cylinder in single unit)
	Extension width	7,000mm (Fully extended)
		6,500mm (Intermediately extended)
		5,000mm (Intermediately extended)
		2,480mm (Completely retracted)
Wire rope for hoisting	Main winch	Diameter: 18mm × Length: 195m
	Auxiliary winch	Diameter: 18mm × Length: 110m
●Hydraulic equipment		
Oil pump		4 pumps, plunger and gear type
Hydraulic motor	Hoisting motor	Axial plunger type
	Slewing motor	Axial plunger type
Control valve		Double acting with integral check and relief valves
Cylinder		Double acting type
Oil reservoir capacity		560L
●Safety devices		
		ACS (Automatic Crane System with voice alarm), Slewing automatic stop system, Outrigger status detector, Boom derricking / telescoping holding valve, Overhoist prevention device, Winch holding valve, Automatic winch brake, Winch drum roller, Hydraulic safety valves, Outrigger lock pins, Slewing lock, Joystick control safety stop system, Hydraulic oil temperature warning device, Hydraulic oil return filter warning device, ACS outside indicator
●Standard equipment		
		Working light (on boom, table and cab), Winch drum turning indication device, Winch over unwinding device, Level gauge, Accessory socket (24V), 34 ton hook, 5 ton hook
●Operator's cab		
		All steel welded construction, 1 person, Rubber mounted, Adjustable steering wheel, Adjustable seat, Seat belt, Cab cooler, Front windscreen wiper & washer (2 speed wiper), Roof window wiper & washer, Floor mat
●Optional equipment		
		Additional hydraulic oil cooler, Slewing warning buzzer, Anemometer, Winch view camera, Cab heater, AM/FM Radio, Fire extinguisher, K.COR (Kato Crane Operation Recorder), 51 ton hook

■CARRIER

●Carrier specification		
Maximum traveling speed		48km/h
Grade ability		56% (computed at G.V.W. = 33970 kg)
Minimum turning radius (center of extreme outer tire)		11.7m (2 wheel steer)
		6.7m (4 wheel steer)
●Engine		
Maker		Mitsubishi
Model		6M60-TL
Type		4 cycle, 6 cylinders, water cooled, direct injection turbo-charged diesel engine with intercooling
Piston displacement		7.545L
Max. power		200kW at 2,600min^{-1}
Max. torque		785N·m at 1,400min^{-1}
Diesel Fuel recommended by KATO must be used		
●Equipment and structure		
Drive system		4×2 / 4×4
Torque converter		Engine mounted 3 elements 1 stage (with lock up clutch)
Transmission		Remote mounted full automatic
Number of speeds		4 forward & 1 reverse speed (with Hi – Low selector)
Axles	Front	Planetary, drive/steer type
	Rear	Planetary, drive/steer type
Suspension	Front & Rear	Taper – leaf spring, Hydraulic locking device with shock absorber
Brake system	Service brake	Air-over hydraulic disk brake on 4 wheels (front and rear independent circuit)
	Parking brake	Spring applied, electrically air released parking brake mounted on front axle
	Auxiliary brake	Exhaust brake, Service brake lock
Steering		Full hydraulic power steering, Completely independent front and rear steering (with automatic rear wheel steering lock system)
Tire size	Front	505 / 95 R25 183E ROAD
	Rear	505 / 95 R25 183E ROAD
Fuel tank capacity		300 L
Batteries		(12V-120Ah) ×2
●Safety devices		
		Emergency steering device, Rear wheel steering lock system (automatic), Brake fluid leak warning device, Service brake lock, Suspension lock (& control switch), Engine overspeed alarm, Radiator coolant level warning device, Air filter service warning device, Low air warning device
●Standard equipment		
		Hydraulic oil cooler, Centralized lubricating system
●Optional equipment		
		Rear view camera, Right side view camera, Yellow rev. light, 23.5-25-32PR Tire

■GENERAL Dimensions

Overall length		13,030mm
Overall width		2,980mm
Overall height		3,595mm
Wheel base		3,800mm
Treads	Front	2,270mm
	Rear	2,270mm
Passenger capacity		One person
Gross vehicle weight	Gross weight	approx. 33,970kg
	Front weight	approx. 17,400kg
	Rear weight	approx. 16,570kg

- Stow the hooks in place before traveling.
- Before you use this machine, read the precautions in the instruction manual thoroughly to operate it correctly.
- KATO products and specifications are subject to improvements and changes without notice.

■RATED LIFTING CAPACITY

Based on ISO 4305
Not exceed 75% of static tipping loads

10.7m — 35.0m Boom

Working radius (m)	 (7.0m)				 (6.5m)				 (5.0m)				 (2.48m)				Working radius (m)
	Outriggers fully extended (7.0m) - 360° full range				Outriggers intermediately extended (6.5m) - over side				Outriggers intermediately extended (5.0m) - over side				Outriggers completely retracted (2.48m) - over side				
	10.7m Boom	18.8m Boom	26.9m Boom	35.0m Boom	10.7m Boom	18.8m Boom	26.9m Boom	35.0m Boom	10.7m Boom	18.8m Boom	26.9m Boom	35.0m Boom	10.7m Boom	18.8m Boom	26.9m Boom	35.0m Boom	
2.5	51.00*				51.00*				51.00*				28.40				2.5
3.0	49.10*	22.00			49.10*	22.00			49.10*	22.00			19.80				3.0
3.5	45.50*	22.00			45.50*	22.00			45.50*	22.00			14.90	15.50			3.5
4.0	42.00*	22.00	19.00		42.00*	22.00	19.00		41.25*	22.00	19.00		11.75	12.70	10.20		4.0
4.5	37.10*	22.00	19.00		37.10*	22.00	19.00		30.50	22.00	19.00		9.55	10.40	8.90		4.5
5.0	32.40	22.00	19.00	12.00	32.40	22.00	19.00	12.00	23.95	22.00	19.00	12.00	7.90	8.75	7.85	6.90	5.0
5.5	28.60	22.00	18.65	12.00	28.60	22.00	18.65	12.00	19.55	20.65	18.65	12.00	6.70	7.45	6.95	6.15	5.5
6.0	25.60	22.00	18.35	12.00	25.60	22.00	18.35	12.00	16.40	17.40	17.15	12.00	5.70	6.40	6.20	5.50	6.0
6.5	23.10	22.00	17.35	12.00	22.55	22.00	17.35	12.00	14.00	14.95	15.25	12.00	4.90	5.55	5.50	4.95	6.5
7.0	21.00	22.00	16.40	12.00	19.20	20.25	16.40	12.00	12.15	13.00	13.30	12.00	4.25	4.90	4.95	4.45	7.0
7.5	19.30	20.25	15.60	12.00	16.65	17.60	15.60	12.00	10.65	11.45	11.75	11.50	3.70	4.30	4.45	4.00	7.5
8.0	16.95	17.85	14.80	12.00	14.65	15.50	14.80	12.00	9.45	10.20	10.50	10.50	3.20	3.80	4.00	3.65	8.0
9.0		14.25	13.50	11.10		12.40	12.70	11.10		8.25	8.55	8.60		3.00	3.20	2.95	9.0
10.0		11.75	12.10	10.10		10.20	10.50	10.10		6.85	7.10	7.15		2.40	2.60	2.40	10.0
11.0		9.90	10.20	9.30		8.60	8.85	8.90		5.75	6.00	6.05		1.85	2.10	1.95	11.0
12.0		8.45	8.75	8.50		7.30	7.55	7.65		4.90	5.10	5.20		1.40	1.65	1.60	12.0
13.0		7.30	7.60	7.60		6.30	6.55	6.65		4.20	4.40	4.45		1.05	1.25	1.25	13.0
14.0		6.40	6.65	6.75		5.50	5.75	5.80		3.60	3.80	3.90		0.75	0.95		14.0
15.0		5.65	5.90	6.00		4.85	5.05	5.10		3.10	3.35	3.40					15.0
16.0		5.00	5.25	5.35		4.30	4.45	4.55		2.70	2.90	2.95					16.0
17.0			4.65	4.75			4.00	4.05			2.50	2.55					17.0
18.0			4.20	4.30			3.55	3.60			2.15	2.25					18.0
19.0			3.75	3.85			3.20	3.25			1.85	1.95					19.0
20.0			3.35	3.45			2.85	2.90			1.60	1.70					20.0
22.0			2.70	2.80			2.25	2.30			1.20	1.25					22.0
24.0			2.20	2.25			1.80	1.85			0.85	0.90					24.0
26.0				1.80				1.45									26.0
28.0				1.45				1.15									28.0
30.0				1.15				0.85									30.0
32.0				0.90				0.65									32.0
Critical boom angle	—	—	—	—	—	—	—	—	—	—	—	*40°*	—	*30°*	*52°*	*65°*	Critical boom angle
Standard hook	For 51 ton*/ For 34 ton	For 34 ton			For 51 ton*/ For 34 ton	For 34 ton			For 51 ton*/ For 34 ton	For 34 ton			For 34 ton				Standard hook
Hook mass	400kg*/ 300kg	300kg			400kg*/ 300kg	300kg			400kg*/ 300kg	300kg			300kg				Hook mass
Parts of line	11*/7	6	4	4	11*/7	6	4	4	11*/7	6	4	4	7	6	4	4	Parts of line

(Unit: Metric ton)

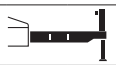
■When outriggers are not used

Working radius (m)	Stationary on rubber						Pick & carry (less than 2km/h)						Working radius (m)
	10.7m Boom		18.8m Boom		26.9m Boom		10.7m Boom		18.8m Boom		26.9m Boom		
	Over front	360° full range	Over front	360° full range	Over front	360° full range	Over front	360° full range	Over front	360° full range	Over front	360° full range	
3.0	19.00	11.00					14.90	8.90					3.0
3.5	17.90	8.40					13.10	7.40					3.5
4.0	15.95	6.65	15.85	7.20			11.65	5.85	12.10	6.40			4.0
4.5	14.35	5.35	14.30	5.90			10.40	4.75	10.85	5.25			4.5
5.0	12.95	4.45	13.00	4.95			9.35	3.90	9.80	4.35			5.0
5.5	11.80	3.70	11.85	4.20			8.40	3.25	8.90	3.70			5.5
6.0	10.75	3.10	10.85	3.60			7.60	2.75	8.10	3.15			6.0
6.5	9.70	2.60	10.00	3.10	7.45	3.25	6.90	2.30	7.40	2.75	7.15	2.85	6.5
7.0	8.50	2.20	9.15	2.70	6.90	2.80	6.30	1.95	6.80	2.35	6.55	2.50	7.0
8.0	6.65	1.60	7.30	2.05	5.95	2.15	5.10	1.40	5.60	1.80	5.60	1.90	8.0
9.0			5.95	1.55	5.20	1.65			4.55	1.35	4.70	1.45	9.0
10.0			4.90	1.15	4.55	1.30			3.80	1.00	3.90	1.15	10.0
11.0			4.15	0.88	4.05	1.00			3.15	0.78	3.30	0.88	11.0
12.0			3.50		3.60	0.75			2.70		2.80	0.66	12.0
13.0			2.95		3.10				2.30		2.40		13.0
14.0			2.55		2.70				1.95		2.05		14.0
15.0			2.15		2.30				1.65		1.70		15.0
16.0			1.80		1.95				1.40		1.35		16.0
17.0					1.65						1.10		17.0
18.0					1.40						0.88		18.0
19.0					1.15						0.70		19.0
20.0					0.98						0.60		20.0
22.0					0.63								22.0
Critical boom angle	—	—	—	*47°*	*28°*	*59°*	—	—	—	*47°*	*35°*	*59°*	Critical boom angle
Standard hook	For 34 ton						For 34 ton						Standard hook
Hook mass	300kg						300kg						Hook mass
Parts of line	4						4						Parts of line

(Unit: Metric ton)

Based on ISO 4305
Not exceed 75% of static tipping loads

35.0m Boom＋8.8m Jib



(7.0m)

Outriggers fully extended (7.0m) - 360˚ full range

Boom angle (˚)	Offset 5˚		Offset 25˚		Offset 45˚	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	6.5	5.00	9.6	4.00	11.7	2.80
80	8.4	5.00	11.3	4.00	13.2	2.80
78	10.2	5.00	12.9	4.00	14.7	2.80
75	12.8	5.00	15.1	3.70	16.9	2.80
73	14.3	4.60	16.6	3.45	18.2	2.80
70	16.4	4.15	18.5	3.20	20.3	2.75
68	17.8	3.85	19.8	3.05	21.5	2.65
65	19.9	3.35	21.7	2.85	23.3	2.50
63	21.2	2.90	23.0	2.60	24.4	2.40
60	23.0	2.35	24.9	2.10	26.0	2.00
58	24.2	2.00	26.1	1.80	27.1	1.75
55	25.9	1.65	27.7	1.50	28.6	1.40
53	27.0	1.40	28.7	1.30	29.5	1.25
50	28.7	1.10	30.2	1.05	30.9	1.00
48	29.7	0.96	31.1	0.91	31.8	0.87
45	31.2	0.74	32.5	0.71	33.0	0.69
43	32.2	0.61	33.4	0.58		
41	33.1	0.50	34.3	0.47		
Critical boom angle	*40˚*		*40˚*		*44˚*	
Standard hook	For 5.0 ton					
Hook mass	120kg					
Parts of line	1					

(6.5m)

Outriggers intermediately extended (6.5m) - over side

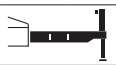
Boom angle (˚)	Offset 5˚		Offset 25˚		Offset 45˚	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	6.5	5.00	9.6	4.00	11.7	2.80
80	8.4	5.00	11.3	4.00	13.2	2.80
78	10.2	5.00	12.9	4.00	14.7	2.80
75	12.8	5.00	15.1	3.70	16.9	2.80
73	14.3	4.60	16.6	3.45	18.2	2.80
70	16.4	4.15	18.5	3.20	20.3	2.75
68	17.6	3.75	19.8	3.05	21.5	2.65
65	19.7	2.90	21.7	2.60	23.2	2.35
63	21.0	2.50	23.0	2.20	24.3	2.05
60	22.8	2.00	24.9	1.75	25.9	1.65
58	24.0	1.70	26.1	1.50	27.0	1.45
55	25.8	1.30	27.7	1.20	28.5	1.15
53	26.9	1.10	28.7	1.00	29.4	1.00
50	28.6	0.86	30.2	0.79	30.8	0.78
48	29.6	0.72	31.1	0.66	31.7	0.65
46	30.6	0.58	32.0	0.54	32.5	0.53
Critical boom angle	*45˚*		*45˚*		*45˚*	
Standard hook	For 5.0 ton					
Hook mass	120kg					
Parts of line	1					

(5.0m)

Outriggers intermediately extended (5.0m) - over side

Boom angle (˚)	Offset 5˚		Offset 25˚		Offset 45˚	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	6.5	5.00	9.6	4.00	11.7	2.80
80	8.4	5.00	11.3	4.00	13.2	2.80
78	10.2	5.00	12.9	4.00	14.7	2.80
75	12.5	4.85	15.1	3.70	16.9	2.80
73	13.9	3.95	16.6	3.10	18.2	2.80
70	16.0	2.95	18.4	2.40	19.9	2.20
68	17.3	2.40	19.6	2.05	21.1	1.85
65	19.4	1.75	21.5	1.50	22.9	1.40
63	20.7	1.40	22.7	1.25	24.0	1.15
60	22.5	1.02	24.5	0.90	25.6	0.85
58	23.7	0.79	25.6	0.71	26.7	0.66
56	24.8	0.61	26.7	0.53	27.7	0.50
Critical boom angle	*55˚*		*55˚*		*55˚*	
Standard hook	For 5.0 ton					
Hook mass	120kg					
Parts of line	1					

35.0m Boom＋15.2m Jib



(7.0m)

Outriggers fully extended (7.0m) - 360˚ full range

Boom angle (˚)	Offset 5˚		Offset 25˚		Offset 45˚	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	8.4	3.00	13.5	2.00	17.0	1.40
80	10.4	3.00	15.2	2.00	18.6	1.40
78	12.4	3.00	16.9	1.95	20.2	1.40
75	15.2	2.90	19.5	1.80	22.5	1.40
73	17.0	2.70	21.2	1.75	23.9	1.40
70	19.6	2.45	23.5	1.65	26.0	1.40
68	21.3	2.30	25.1	1.60	27.4	1.40
65	23.7	2.15	27.3	1.55	29.4	1.35
63	25.2	2.05	28.7	1.50	30.6	1.35
60	27.4	1.75	30.8	1.45	32.4	1.35
58	28.7	1.55	32.0	1.30	33.5	1.25
55	30.7	1.20	33.7	1.05	35.0	1.05
53	32.0	1.05	34.8	0.95	35.9	0.94
50	33.8	0.83	36.4	0.76	37.3	0.76
47	35.5	0.64	37.9	0.59	38.6	0.59
44	37.1	0.48	39.3	0.45		
Critical boom angle	*43˚*		*43˚*		*46˚*	
Standard hook	For 5.0 ton					
Hook mass	120kg					
Parts of line	1					

(6.5m)

Outriggers intermediately extended (6.5m) - over side

Boom angle (˚)	Offset 5˚		Offset 25˚		Offset 45˚	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	8.4	3.00	13.5	2.00	17.0	1.40
80	10.4	3.00	15.2	2.00	18.6	1.40
78	12.4	3.00	16.9	1.95	20.2	1.40
75	15.2	2.90	19.5	1.80	22.5	1.40
73	17.0	2.70	21.2	1.75	23.9	1.40
70	19.6	2.45	23.5	1.65	26.0	1.40
68	21.3	2.30	25.1	1.60	27.4	1.35
65	23.7	2.15	27.3	1.55	29.4	1.35
63	25.1	1.90	28.7	1.50	30.6	1.35
60	27.3	1.45	30.7	1.25	32.3	1.20
58	28.6	1.25	31.9	1.10	33.4	1.05
55	30.5	1.00	33.6	0.88	34.9	0.86
52	32.4	0.77	35.2	0.68	36.3	0.67
49	34.2	0.57	36.8	0.51	37.7	0.51
Critical boom angle	*48˚*		*48˚*		*48˚*	
Standard hook	For 5.0 ton					
Hook mass	120kg					
Parts of line	1					

(5.0m)

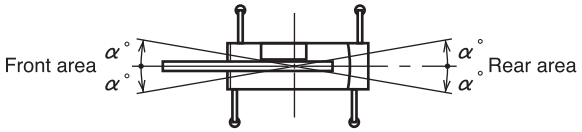
Outriggers intermediately extended (5.0m) - over side

Boom angle (˚)	Offset 5˚		Offset 25˚		Offset 45˚	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	8.4	3.00	13.5	2.00	17.0	1.40
80	10.4	3.00	15.2	2.00	18.6	1.40
78	12.4	3.00	16.9	1.95	20.2	1.40
75	15.2	2.90	19.5	1.80	22.5	1.40
73	17.0	2.70	21.2	1.75	23.9	1.40
70	19.2	2.26	23.5	1.65	26.0	1.40
68	20.6	1.85	24.8	1.44	27.1	1.30
65	23.0	1.35	26.9	1.05	29.1	0.99
62	25.2	0.96	28.8	0.79	30.9	0.73
59	27.3	0.66	30.7	0.55	32.5	0.51
Critical boom angle	*58˚*		*58˚*		*58˚*	
Standard hook	For 5.0 ton					
Hook mass	120kg					
Parts of line	1					

■Notes for the lifting capacity chart

●When the outriggers are used

1. The lifting capacity charts are based on the jib stowed on the boom side.
2. The lifting capacity chart indicates the maximum load which can be lifted by this crane provided it is level and standing on firm level ground. The values in the chart include the mass of the main hook and slings for boom operation, and auxiliary hook and slings for jib operation.
   [51 ton hook (mass: 400kg), 34 ton hook (mass: 300kg),
   5 ton hook (mass: 120kg)]
   Within the chart the figures in the area bordered with a thick line are based on structural limitations while other figures are determined by stability limitations.
3. The working radii are the actual values allowing for boom and jib deflection. Therefore you must always operate the crane on the basis of the working radius.
4. The jib working radius is based on the jib mounted on the end of the 35.0m boom. When operating at other boom lengths, use the boom angle alone as the criterion.
5. Do not operate the jib when the outriggers are completely retracted.
6. The lifting capacities for the over sides vary with the outriggers extension width. Therefore for each outriggers extension condition you should work according the lifting capacity chart. Use the lifting capacity chart of outriggers full extension for both front and rear areas lifting capacities.

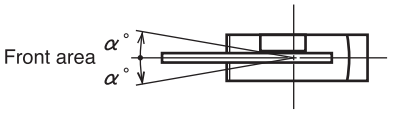


Outrigger extension status	Intermediate extension (6.5m)	Intermediate extension (5.0m)	Complete retraction
Area α°	35	30	3

7. The lifting capacity of the rooster sheave is the lifting capacity of the boom minus the mass of all attached hook, slings etc. to the boom, with an upper limit of 5,000kg.
   [The hook for use with the rooster sheave is the 5 ton hook (mass: 120kg) with one part of line.]
8. If the boom length, boom angle and/or working radius exceeds the rated value, use the lifting capacity for the rated value or for the next one, whichever gives the smaller lifting capacity.
9. If you are working with the boom while the jib is rigged, subtract 3.0 ton plus the mass of all attached hook, slings etc. to the boom from the each lifting capacity of the boom, with an upper limit of 18 ton.
   Do not use the rooster sheave in this situation. And do not operate the boom while the jib is rigged, when the outriggers are completely retracted.
10. In whatever working conditions the corresponding boom critical angle is shown in the chart. The crane can tip over if the boom is lowered below the critical angle even if unloaded. Therefore, never lower the boom below these angles.
11. If you work with 11 parts of line on the hook (with * marked in the lifting capacity chart), use the rooster sheave.
12. The standard parts of line for each boom length are as indicated in the chart. If you work with a non-standard number of parts of line, do not exceed 45.1 kN (4.6 tf) per wire rope respectively.
13. High-speed winch operation should only be performed to allow descent of the hook alone. Avoid sudden lever operation.
14. Crane operation is permissible up to a wind speed of 10m/s. Even in relatively light wind conditions, extra care should be taken when handling loads presenting large wind catching areas.
15. Kato bears no liability whatsoever for damage, crane tipping or other accident caused by crane operations which differ from the directions contained in the instruction manual and the warning labels.

●When the outriggers are not used

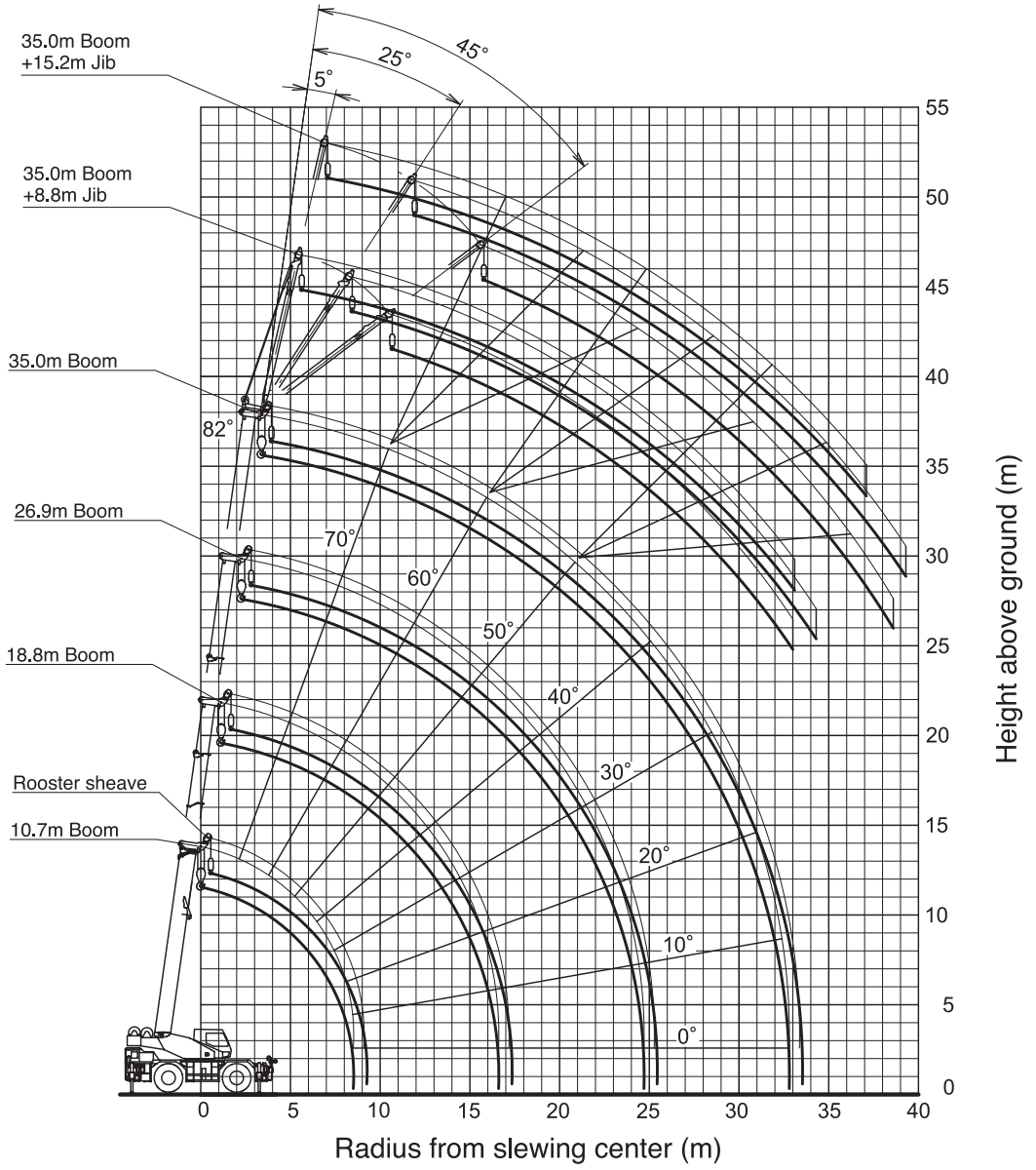
1. The lifting capacity charts are based on the jib stowed on the boom side.
2. The lifting capacity chart indicates the maximum load the crane can lift when its body is level on firm level ground with all tires inflated to the rated pressure and the suspension cylinder completely retracted. The values in the chart include the mass of the main hook and slings. Within the chart the figures in the area bordered with a thick line are based on structural limitations while other figures are determined by stability limitations.
   [Rated tire pressure: 505 / 95 R25: 800kPa (8.0kgf/cm^2),
   23.5-25: 475kPa (4.75kgf/cm^2)]
   If you operate the crane without the suspension cylinders completely retracted, take special care that the crane does not incline and tip over.
3. The working radii are the actual values allowing for boom deflection. Therefore you must always operate the crane on the basis of the working radius.
4. The lifting capacity differs between the front area capacity and the full range capacity. When slewing from the front to the side, take care that the crane could not be over loaded.



Crane operation	Stationary crane-on-rubber operation	Pick and carry operation
Area α°	1	1

5. The lifting capacity of the rooster sheave is the lifting capacity of the boom minus the mass of all attached hook, slings etc. to the boom, with an upper limit of 5,000kg.
   [The hook for use with the rooster sheave is the 5 ton hook (mass: 120kg) with one part of line.]
6. Do not work with the jib or with a boom length of more than 26.9m.
7. For stationary crane-on-rubber operation, the parking brake and service brake lock device must be engaged.
8. For pick and carry operation, the super-slow speed switch must be switched to "ON" and the shift lever set to speed 1.
9. For pick and carry operation, lower the load to just above the ground and keep your speed strictly below 2km/h to avoid swinging the load. Take particular care to avoid sharp turns, sudden starts and stops.
10. Never operate the crane during pick and carry operation. The slewing brake must be applied.
11. If the boom length, boom angle and/or working radius exceeds the rated value, use the lifting capacity for the rated value or for the next one, whichever gives the smaller lifting capacity.
12. The standard parts of line for each boom length are as indicated in the chart. If you work with a non-standard number of parts of line, do not exceed 45.1 kN (4.6 tf) per wire rope respectively.
13. High-speed winch operation should only be performed to allow descent of the hook alone. Avoid sudden lever operation.
14. Crane operation is permissible up to a wind speed of 10m/s. Even in relatively light wind conditions, extra care should be taken when handling loads presenting large wind catching areas.
15. Kato bears no liability whatsoever for damage, crane tipping or other accident caused by crane operations which differ from the directions contained in the instruction manual and the warning labels.

■WORKING RANGE

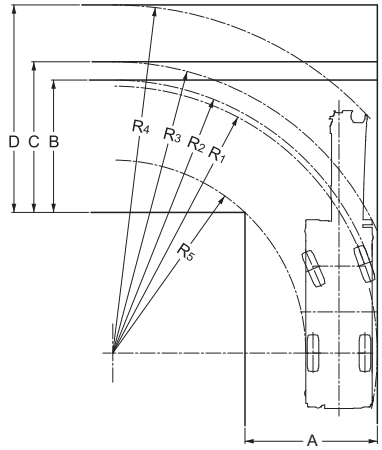


Notes:

1. This diagram does not include deflection of Boom and Jib.
2. The outriggers are fully extended.

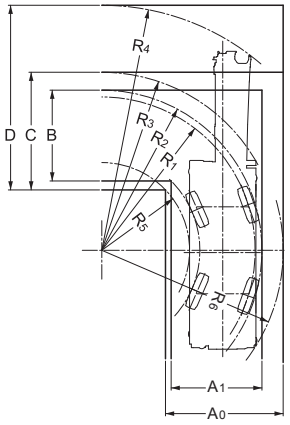
■Minimum path width

●Left turn in two-wheel steering mode



- R_1=11.70m (Minimum turning radius)
- R_2=12.00m (Turning radius of extremely outer tire)
- R_3=12.80m (Chassis turning radius)
- R_4=15.20m (Boom end turning radius)
- R_5=8.40m (Turning radius extremely chassis inner)
- A=5.79m (Width of entrance)
- B=5.79m (Width of wheel exit)
- C=6.59m (Width of chassis exit)
- D=9.07m (Width of exit at end of boom)

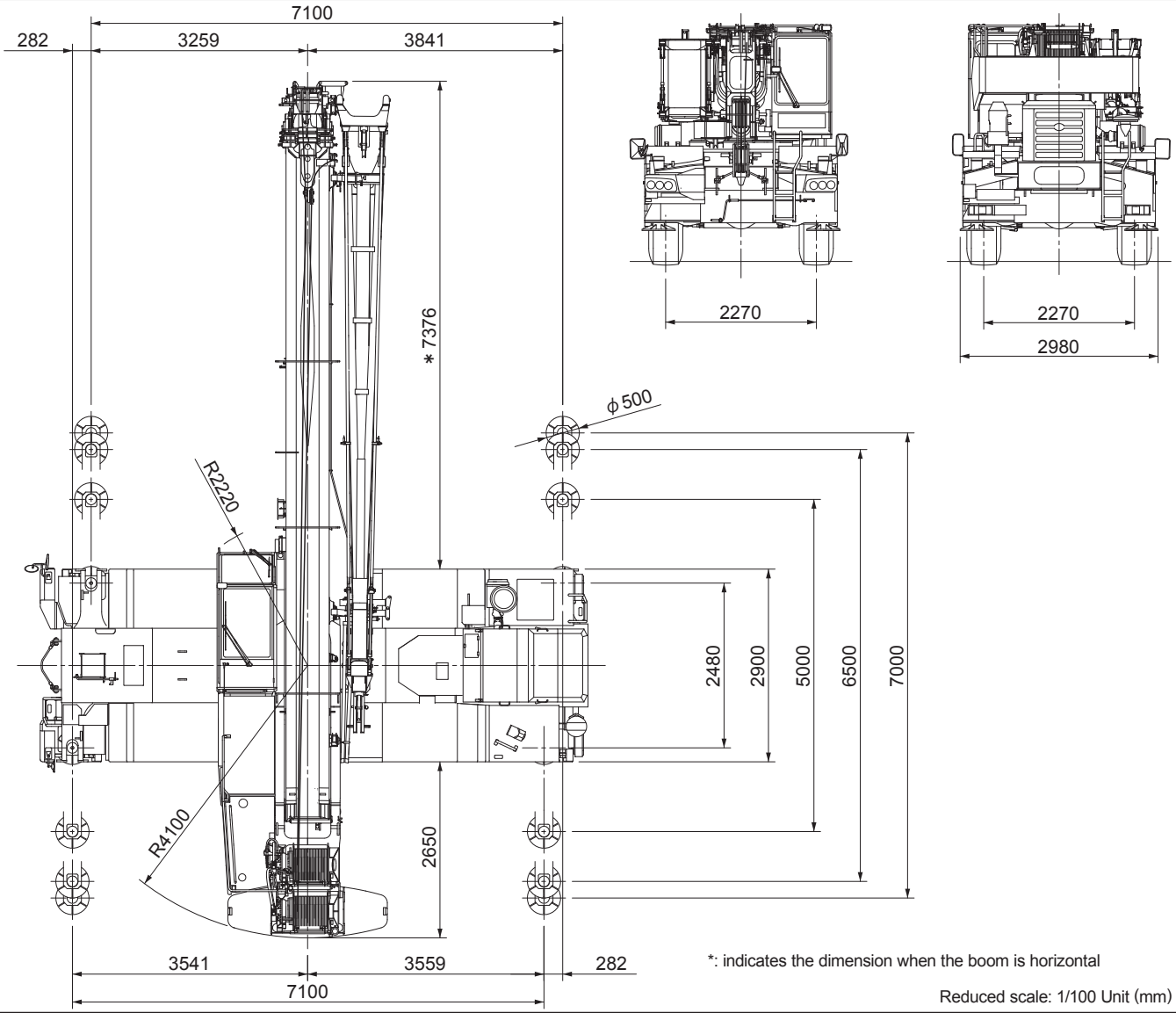
●Left turn in 4-wheel steering mode



- R_1=6.70m (Minimum turning radius)
- R_2=7.00m (Turning radius of extremely outer tire)
- R_3=7.80m (Chassis turning radius)
- R_4=10.70m (Boom end turning radius)
- R_5=3.80m (Turning radius extremely chassis inner)
- R_6=8.00m (Turning radius at the rear end of the chassis)
- A_0=5.20m (Width of chassis entrance)
- A_1=4.00m (Width of wheel entrance)
- B =4.00m (Width of wheel exit)
- C =5.20m (Width of chassis exit)
- D =8.10m (Width of exit at end of boom)

Note: The above values are based on calculations.

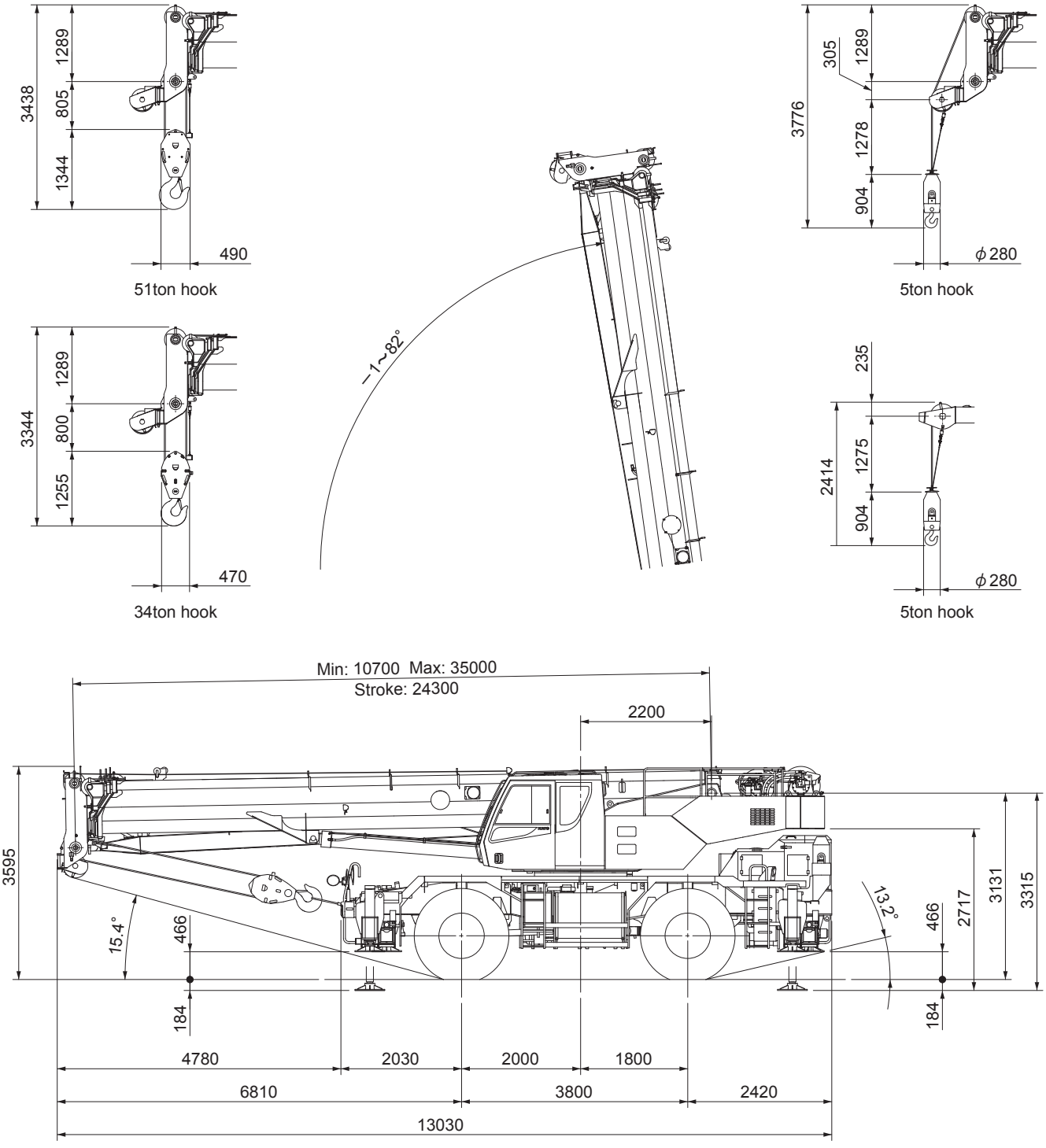
■Overall view



*: indicates the dimension when the boom is horizontal

Reduced scale: 1/100 Unit (mm)

■Overall view



Ramp break over angle: 37°
When the suspension is locked, the height shall be the overall height: - 45 mm.
(Suspension cylinder completely retracted)

Reduced scale: 1/100 Unit (mm)

* KATO products and specifications are subject to improvements and changes without notice.

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