KATO

CITYRANGE SUPERBOOM CR-130Rf PREMIUM CITYRANGE

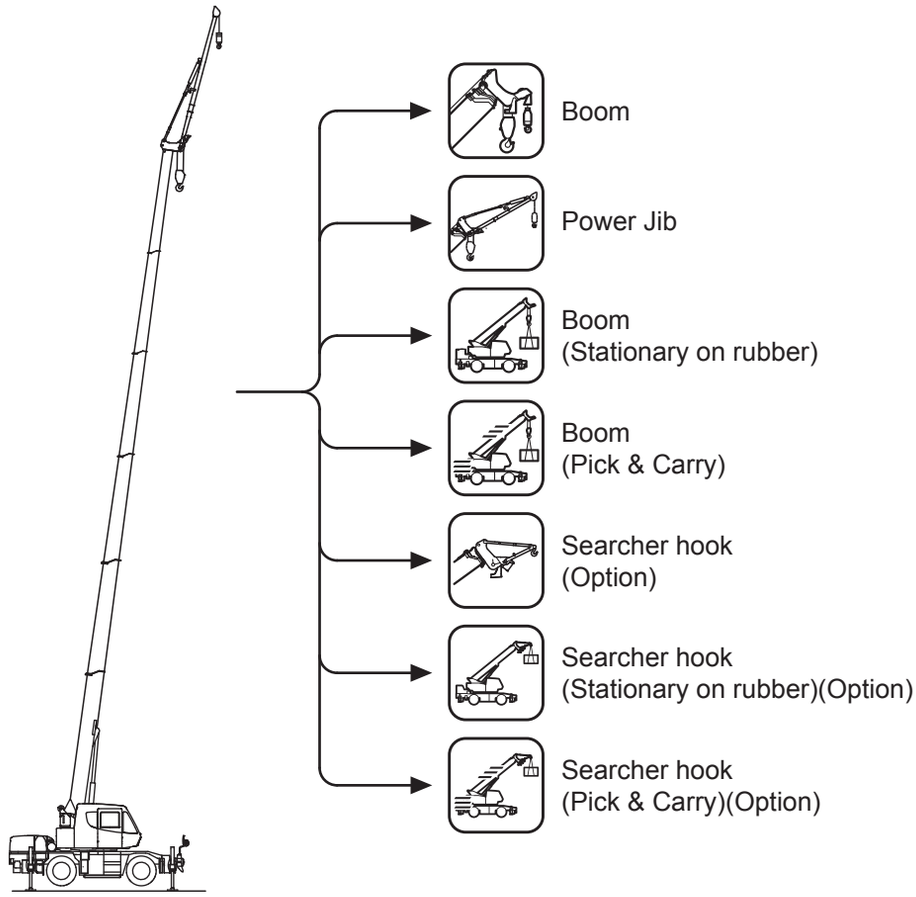


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【SPECIFICATION】

■CRANE

Description		City range crane with maximum lifting capacity 13 ton
●Crane specification		
Maximum rated lifting capacity		5.3 m Boom 13,000kg × 1.7 m (Parts of line : 8)
		9.04 m Boom 6,000kg × 4.0 m (Parts of line : 4)
		12.78 m Boom 6,000kg × 4.0 m (Parts of line : 4)
		16.52 m Boom 5,000kg × 4.5 m (Parts of line : 4)
		20.26 m Boom 4,700kg × 4.0 m (Parts of line : 4)
		24.0 m Boom 3,200kg × 5.5 m (Parts of line : 4)
		3.6 m Jib 1,600kg × 75° (Parts of line : 1)
		5.5 m Jib 1,000kg × 70° (Parts of line : 1)
		Rooster 1,800kg (Parts of line : 1)
		Searcher hook 3,000kg
Boom length		5.3m — 24.0m
Jib length		3.6m — 5.5m
Searcher hook		0.8m
Maximum rated lifting height		24.8m (Boom)
		30.3m (Jib)
Hoisting line speed (winch up)	Main winch	118m / min (at 5th layer)
	Auxiliary winch	106m / min (at 3rd layer)
Hoisting hook speed (winch up)	Main winch	(Parts of line : 8) 14.75m / min (at 5th layer)
	Auxiliary winch	(Parts of line : 1) 106.00m / min (at 3rd layer)
High-speed lowering Rope speed	Main winch	160m / min (at 3rd layer)
	Auxiliary winch	160m / min (at 3rd layer)
Boom derricking angle		-7.5° — 82°
Boom derricking time		29s / -7.5° — 82°
Boom extending speed		5.3m — 24.0m / 64s
Slewing speed		2.4min^{-1}
Tail slewing radius		1,600mm
●Equipment and structure		
Boom type		Round-shaped, 6-section hydraulically telescopic type (the 2nd and 3rd boom sections at the same time, the 4th, 5th and 6th boom sections at the same time)
Jib type		2 sections (2nd section of draw-out type) Hydraulic stepless tilting type (offset angles 5° — 60°)
Searcher hook type		2 positions (high/low) selectable
Boom extension/ retraction equipment		Two hydraulic cylinders and wire ropes used together
Boom derricking/lowering equipment		One hydraulic cylinder of direct acting type with pressure-compensated flow control valve
Jib derricking/lowering equipment		Hydraulic cylinder
Winch system Main & Auxiliary winches		Two units of Single winch, Planetary gear reduction type (built-in negative brake) with Automatic brake, High/Low speed switching system and Hydraulic compensated flow control valve.
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	4,750mm (Fully extended)
		4,300mm (Intermediately extended)
		3,700mm (Intermediately extended)
		2,700mm (Intermediately extended)
		1,640mm (Completely retracted)
Wire rope for hoisting	Main winch	Diameter: 11.2mm × Length: 132m
	Auxiliary winch	Diameter: 11.2mm × Length: 65m
●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 (With Hydraulic compensated flow control valve)
Cylinder		Double acting type
Oil reservoir capacity		150L
●Safety devices		
		ACS (Automatic Crane System with Voice alarm), ACS outside indicator (LED), Slewing automatic stop system, Working range limit mode, Outrigger status detector, Electronical horizontal detector, Boom derricking / telescoping holding valve, Jib derricking holding valve, Overhoist prevention device, Winch holding valve, Automatic winch brake, Winch drum roller, Winch drum turning indication device, Winch over unwinding device, Hydraulic safety valves, Outrigger lock pins, Slewing warning lamp, Hydraulic oil temperature warning device, Seat switch
●Standard equipment		
		Working light (LED) on boom, slewing table and cab, Winch view camera, Hook for 13 ton, Hook for 1.8 ton
●Operator's cab		
		All steel welded construction, 1 person, Rubber mounted, Adjustable steering wheel, Adjustable seat with suspension, Air conditioner, Power Window (external closing switch), Front windscreen wiper & washer (2 speed wiper), Roof window wiper & washer, AM/FM Radio, Interior lamp (LED), Step lamp (LED), Accessory socket (24V), USB socket (output 5V-2.4A x 2), Floor mat, Entry key system, K-COR (KATO Crane Operation Recorder)
●Optional equipment		
		PA system, Door visor, Lunch table, Air heater, Searcher hook

■CARRIER

●Carrier specification		
Maximum traveling speed		55km/h
Grade ability		60 % (computed at G.V.W. = 13.745kg)
Minimum turning radius (center of extreme outer tire)		6.5 m (2 wheel steer)
		3.92 m (4 wheel steer)
●Engine		
Model		HINO J05E-UM (EU Stage 4)
Type		4 cycle, 4 cylinders, water cooled, direct injection turbo-charged diesel engine with intercooling
Piston displacement		5.123L
Max. power		129kW at 2,500min^{-1}
Max. torque		540N·m at 1,600min^{-1}
Diesel Fuel recommended by KATO must be used		
●Equipment and structure		
Drive system		Switches between 2 wheel drive (4×2) and 4 wheel drive (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
Axles	Front	Planetary, drive/steer type
	Rear	Planetary, drive/steer type
Suspension	Front	Taper-leaf spring, Hydraulic locking device with suspension cylinder
	Rear	Taper-leaf spring, Hydraulic locking device with suspension cylinder
Brake system	Service	Air-over hydraulic disk brake on 4 wheels (front and rear independent circuit)
	Parking	Spring applied, electrically air released parking brake mounted on front axle, internal expanding type
	Auxiliary	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	275 / 80 R22.5 151 / 148J
	Rear	275 / 80 R22.5 151 / 148J
Fuel tank capacity		250 L
Batteries		(12V-100Ah) ×2
●Safety devices		
		Emergency steering device, Rear wheel steering lock system (automatic), Brake fluid leak warning device, Service brake lock, Suspension lock, Engine overspeed alarm, Electrically retractable side view mirrors, Left front view camera, Rear view camera on table (wired), Clearance sonar system, Radiator coolant level warning device, Low air warning device, Boom guard,
●Standard equipment		
		Hydraulic oil cooler, LED head lamp
●Optional equipment		
		Wheel stopper, Way side lamp, Side marker lamp, Rear view camera (Wireless, mounted on carrier), Aluminum outrigger plate and storage, Resin outrigger plate and storage

■GENERAL Dimensions

Overall length		7,465mm
Overall width		1,995mm
Overall height		2,870mm
Wheel base		2,750mm
Treads	Front	1,680mm
	Rear	1,680mm
Passenger capacity		One person
Gross vehicle weight	Gross weight	approx. 13,745kg (without Optional equipments)
	Front axle	approx. 6,795kg (without Optional equipments)
	Rear axle	approx. 6,950kg (without Optional equipments)

- 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.

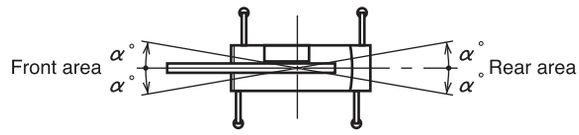
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■Notes for the lifting capacity chart

●When the outriggers are used

1. 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.
   The values in the chart are values with the main and auxiliary hooks removed and main and auxiliary wire ropes stowed for searcher hook operation.
   [13 ton hook (mass: 90kg), 1.8 ton hook (mass: 25kg)]
   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.
2. 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.
3. The jib working radii are based on the jib mounted on the end of the 16.52m or 24.0m boom. If the boom is at any other length (more than 16.52m and less than 24.0m), use the boom angle for the 24.0m boom alone as the criterion.
   If the boom length is less than 16.52m, use the boom angle for the 16.52m boom alone as the criterion.
4. Do not operate the jib when the outriggers are completely retracted.
5. 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.

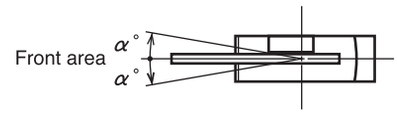


Outrigger extension status	Intermediate extension (4.3m)	Intermediate extension (3.7m)	Intermediate extension (2.7m)	Complete retraction
Area α°	25	25	15	3

6. 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 1,800kg.
   [The hook for use with the rooster sheave is the 1.8 ton hook (mass: 25kg) with one part of line.]
7. If the boom length, boom angle, working radius and/or jib angle exceeds the rated value, use the lifting capacity for the rated value or for the next one, whichever gives the smaller lifting capacity.
8. If you are working with the boom while the jib is rigged, subtract 600 kg 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 5 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.
9. If you are working with the boom while the searcher hook is rigged, subtract 60 kg plus the mass of all attached hook, slings, etc. to the boom from each lifting capacity of the boom.
10. The lifting load with which you can extend or retract the boom during searcher hook operation may become smaller than the lifting capacity depending on the conditions such as the oil pressure, boom angle, lubricating state to the boom, etc.
11. 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.
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 15.7 kN (1.6 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. The boom guard must be removed during crane operation.
16. If you work with a load in excess of the lifting capacity or use incorrect working procedures, you are risking damaging the crane or tipping it over. In such cases, the crane will not be guaranteed.

●When the outriggers are not used

1. 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 suspension cylinder completely retracted. The values in the chart include the mass of the main hook and slings.
   The values in the chart are values with the main and auxiliary hooks removed and main and auxiliary wire ropes stowed for searcher hook operation.
   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: 900kPa (9.0 kgf/cm^2)]
2. 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.
3. 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.

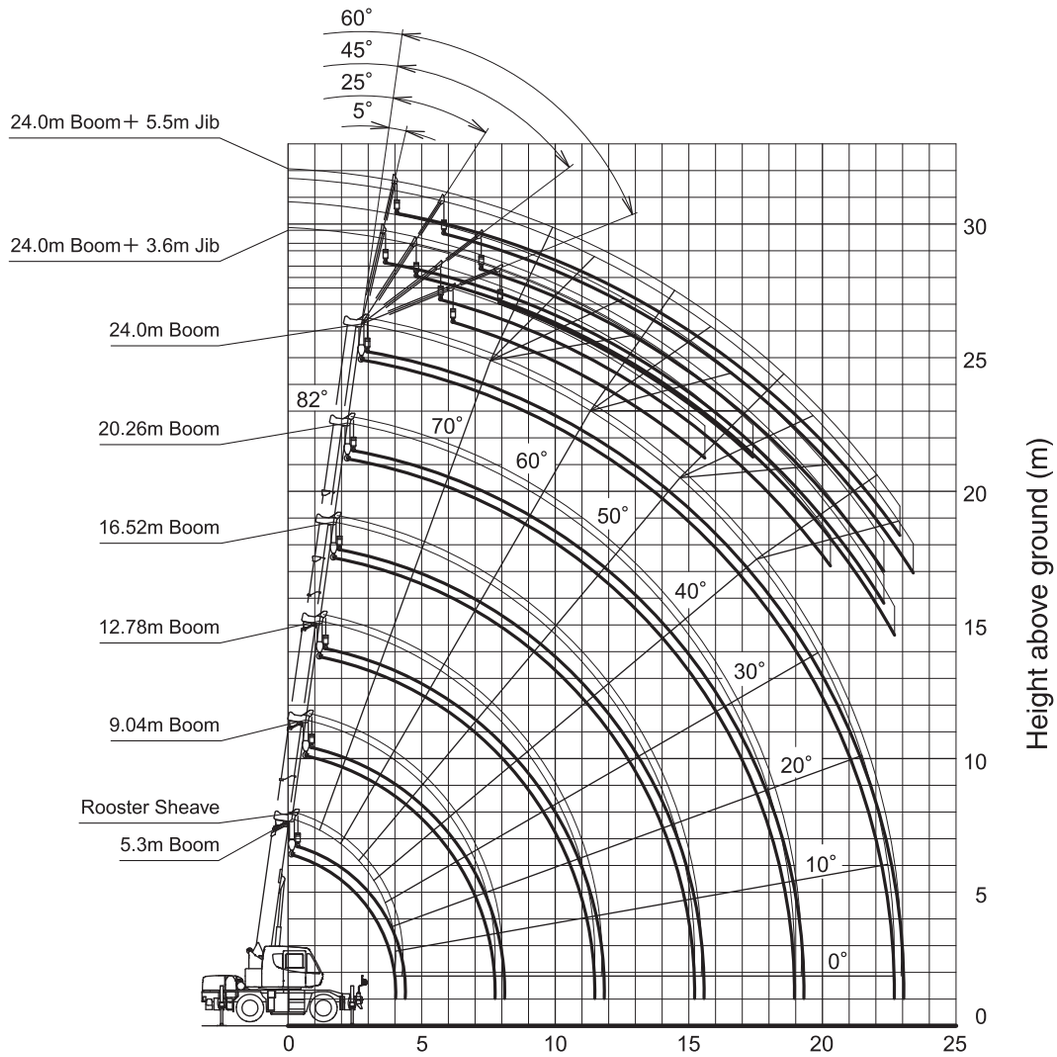


Crane operation	Stationary crane-on-rubber operation	Pick and carry operation
Area α°	1	1

4. 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 1,800kg.
   [The hook for use with the rooster sheave is the 1.8 ton hook (mass: 25kg) with one part of line.]
5. Work within the capacity indicated in the lifting capacity chart.
6. For stationary crane-on-rubber operation, the parking brake and service brake lock device must be engaged.
7. For pick and carry operation, the high/low speed switch must be switched to "ON" (low range) and the shift lever set to speed 1.
8. 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.
9. Never operate the crane during pick and carry operation. The slewing brake must be applied.
10. 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.
11. The lifting load with which you can extend or retract the boom during searcher hook operation may become smaller than the lifting capacity depending on the conditions such as the oil pressure, boom angle, lubricating state to the boom, etc.
12. 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.
13. 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 15.7 kN (1.6 tf) per wire rope respectively.
14. High-speed winch operation should only be performed to allow descent of the hook alone. Avoid sudden lever operation.
15. 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.
16. The boom guard must be removed during crane operation.
17. If you work with a load in excess of the lifting capacity or use incorrect working procedures, you are risking damaging the crane or tipping it over. In such cases, the crane will not be guaranteed.

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■WORKING RANGE

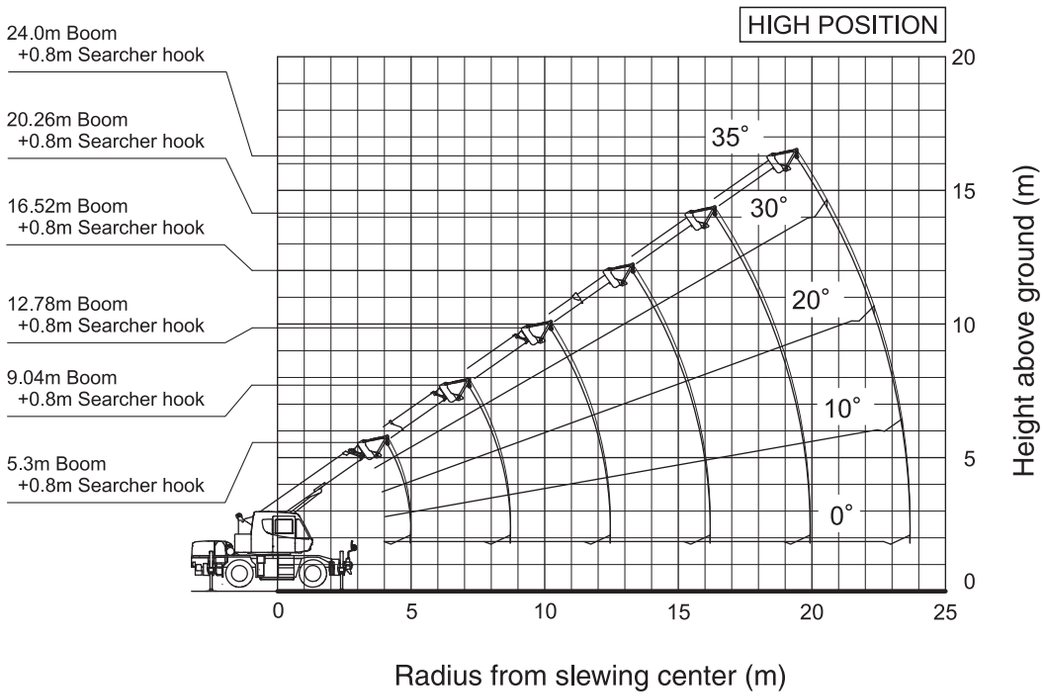


Notes:

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

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■WORKING RANGE

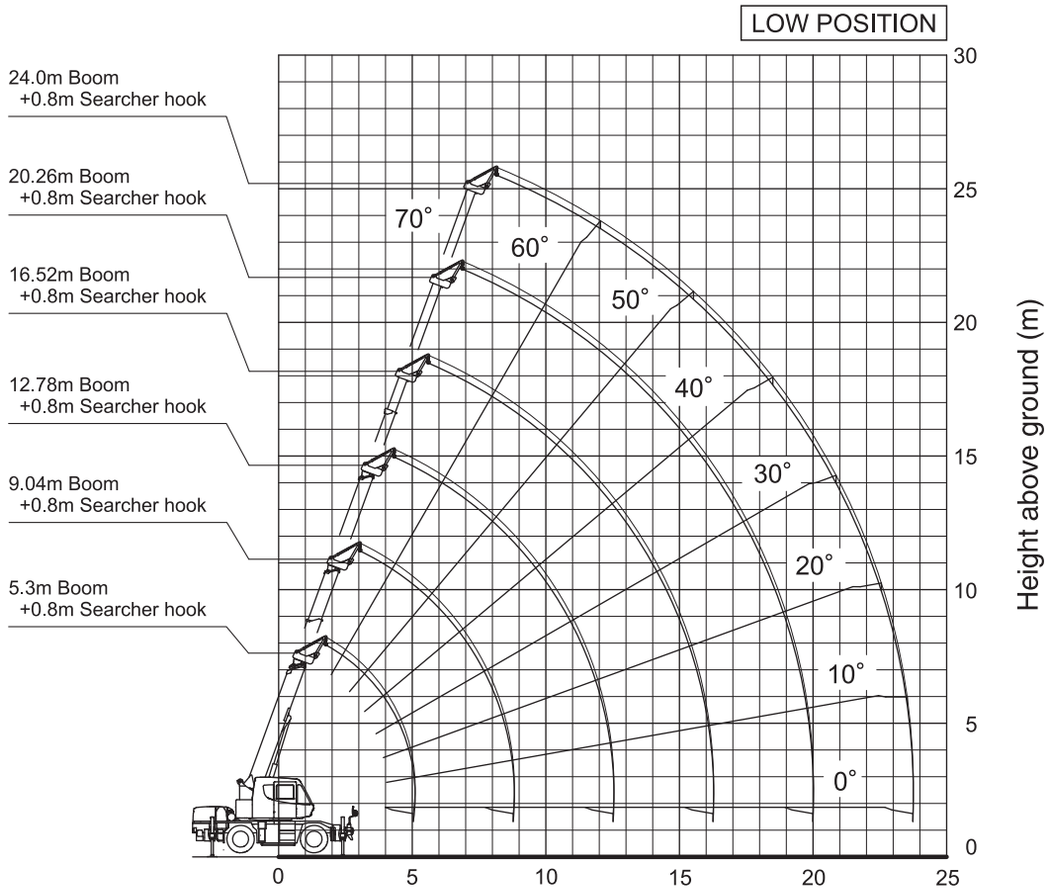


Notes:

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

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■WORKING RANGE



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■RATED LIFTING CAPACITY

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

5.3m — 24.0m Boom

	 (4.75m)						 (4.3m)						 (3.7m)						 (2.7m)						 (1.64m)					
Working radius (m)	Outriggers fully extended (4.75m) - 360° full range						Outriggers intermediately extended (4.3m) - over side						Outriggers intermediately extended (3.7m) - over side						Outriggers intermediately extended (2.7m) - over side						Outriggers completely retracted (1.64m) - over side (H-type outrigger only)					
	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom
1.5	13.00	6.00	6.00				13.00	6.00	6.00				12.00	6.00	6.00				12.00	6.00	6.00				8.00	6.00	6.00			
1.7	13.00	6.00	6.00				13.00	6.00	6.00				12.00	6.00	6.00				12.00	6.00	6.00				7.00	6.00	6.00			
2.0	12.00	6.00	6.00	5.00			12.00	6.00	6.00	5.00			12.00	6.00	6.00	5.00			12.00	6.00	6.00	5.00			5.60	5.40	5.00	4.70		
2.5	10.00	6.00	6.00	5.00			10.00	6.00	6.00	5.00			10.00	6.00	6.00	5.00			8.50	6.00	6.00	5.00			3.80	3.80	3.60	3.50		
3.0	8.20	6.00	6.00	5.00	4.70		8.20	6.00	6.00	5.00	4.70		8.20	6.00	6.00	5.00	4.70		6.00	6.00	6.00	5.00	4.70		2.80	2.80	2.70	2.70	2.60	
3.5	7.00	6.00	6.00	5.00	4.70	3.20	7.00	6.00	6.00	5.00	4.70	3.20	7.00	6.00	6.00	5.00	4.70	3.20	4.70	4.70	4.60	4.50	4.40	3.20	2.10	2.10	2.00	2.10	2.10	2.10
4.0	6.10	6.00	6.00	5.00	4.70	3.20	6.10	6.00	6.00	5.00	4.70	3.20	6.10	6.00	6.00	5.00	4.70	3.20	3.70	3.70	3.70	3.70	3.70	3.20	1.60	1.60	1.55	1.70	1.70	1.75
4.5		5.50	5.40	5.00	4.50	3.20		5.50	5.40	5.00	4.50	3.20		5.10	5.10	5.00	4.50	3.20		3.00	3.00	3.10	3.10	3.00		1.25	1.20	1.40	1.40	1.45
5.0		5.00	4.90	4.60	4.05	3.20		5.00	4.90	4.60	4.05	3.20		4.40	4.40	4.50	4.05	3.20		2.40	2.40	2.60	2.70	2.70		0.95	0.95	1.10	1.20	1.25
5.5		4.50	4.40	4.20	3.70	3.20		4.50	4.40	4.20	3.70	3.20		3.80	3.70	3.90	3.70	3.20		2.00	2.00	2.20	2.30	2.30		0.75	0.75	0.90	1.00	1.05
6.0		4.10	4.00	3.80	3.40	3.00		4.10	4.00	3.80	3.40	3.00		3.20	3.20	3.40	3.40	3.00		1.70	1.70	1.85	2.00	2.05		0.60	0.55	0.75	0.80	0.90
6.5		3.70	3.65	3.50	3.15	2.80		3.65	3.60	3.50	3.15	2.80		2.80	2.75	2.95	3.05	2.75		1.40	1.40	1.60	1.70	1.75		0.40	0.35	0.60	0.65	0.75
7.0		3.35	3.30	3.20	2.90	2.60		3.20	3.15	3.20	2.90	2.60		2.40	2.35	2.55	2.70	2.50		1.20	1.20	1.40	1.50	1.55		0.25		0.45	0.55	0.60
8.0		2.70 (7.7m)	2.90	2.70	2.50	2.25		2.65 (7.7m)	2.45	2.60	2.50	2.25		1.95 (7.7m)	1.80	2.00	2.10	2.15		0.90 (7.7m)	0.85	1.05	1.15	1.20						
9.0			2.25	2.30	2.20	1.95			1.90	2.10	2.20	1.95			1.40	1.60	1.70	1.75			0.60	0.80	0.90	0.95						
10.0			1.80	2.05	1.95	1.75			1.50	1.70	1.85	1.75			1.05	1.25	1.35	1.45			0.35	0.55	0.65	0.75						
11.0			1.45	1.70	1.75	1.55			1.20	1.40	1.55	1.55			0.80	1.00	1.10	1.20				0.40	0.50	0.60						
12.0			1.35 (11.4m)	1.40	1.50	1.40			1.10 (11.4m)	1.15	1.30	1.35			0.70 (11.4m)	0.80	0.90	1.00				0.25	0.35	0.45						
13.0				1.15	1.30	1.25				0.95	1.10	1.15				0.65	0.75	0.85					0.20	0.30						
14.0				0.95	1.10	1.15				0.80	0.90	1.00				0.50	0.60	0.70						0.20						
15.0				0.80	0.90	1.00				0.65	0.75	0.85				0.40	0.50	0.55												
16.0					0.79	0.85					0.65	0.70					0.40	0.45												
17.0					0.68	0.74					0.55	0.60					0.30	0.35												
18.0					0.58	0.64					0.45	0.50						0.30												
19.0					0.51 (18.8m)	0.55					0.35 (18.8m)	0.40																		
20.0						0.47						0.35																		
21.0						0.41						0.30																		
22.5						0.32																								
Critical boom angle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*23°*	*36°*	—	—	*19°*	*32°*	*44°*	*50°*	—	*20°*	*54°*	*61°*	*66°*	*70°*
Standard hook	For 13 ton						For 13 ton						For 13 ton						For 13 ton						For 13 ton					
Hook mass	90kg						90kg						90kg						90kg						90kg					
Parts of line	8	4	4	4	4	4	8	4	4	4	4	4	8	4	4	4	4	4	8	4	4	4	4	4	8	4	4	4	4	4

(Unit: Metric ton)

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

16.52m Boom+3.6m Jib

(4.75m)								
Outriggers fully extended (4.75m) - 360° full range								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	2.9	1.60	4.1	1.50	4.9	1.00	5.3	0.65
80	3.6	1.60	4.7	1.50	5.5	1.00	5.9	0.65
75	5.2	1.60	6.3	1.48	7.1	1.00	7.4	0.65
70	6.9	1.60	7.9	1.37	8.6	0.98	8.8	0.65
65	8.5	1.60	9.4	1.25	9.9	0.96	10.1	0.65
60	10.0	1.50	10.8	1.15	11.3	0.95	11.4	0.65
55	11.4	1.34	12.1	1.07	12.5	0.94		
50	12.7	1.22	13.3	1.01	13.6	0.93		
45	14.0	1.08	14.5	0.95	14.6	0.92		
40	15.0	0.90	15.5	0.86				
35	16.1	0.74	16.3	0.74				
30	16.8	0.65	17.1	0.64				
25	17.5	0.56	17.7	0.56				
20	18.0	0.50						
15	18.5	0.45						
10	18.7	0.43						
5	18.9	0.41						
Critical boom angle	4°		24°		44°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(4.3m)								
Outriggers intermediately extended (4.3m) over side								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	2.9	1.60	4.1	1.50	4.9	1.00	5.3	0.65
80	3.6	1.60	4.7	1.50	5.5	1.00	5.9	0.65
75	5.2	1.60	6.3	1.48	7.1	1.00	7.4	0.65
70	6.9	1.60	7.9	1.37	8.6	0.98	8.8	0.65
65	8.5	1.60	9.4	1.25	9.9	0.96	10.1	0.65
60	10.0	1.50	10.8	1.15	11.3	0.95	11.4	0.65
55	11.4	1.34	12.1	1.07	12.5	0.94		
50	12.7	1.11	13.3	1.01	13.6	0.93		
45	13.9	0.88	14.5	0.84	14.6	0.84		
40	15.0	0.71	15.5	0.68				
35	16.0	0.58	16.3	0.58				
30	16.8	0.48	17.1	0.47				
25	17.5	0.41	17.7	0.40				
20	18.0	0.35						
15	18.5	0.31						
10	18.7	0.29						
5	18.9	0.27						
Critical boom angle	4°		24°		44°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(3.7m)								
Outriggers intermediately extended (3.7m) over side								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	2.9	1.60	4.1	1.50	4.9	1.00	5.3	0.65
80	3.6	1.60	4.7	1.50	5.5	1.00	5.9	0.65
75	5.2	1.60	6.3	1.48	7.1	1.00	7.4	0.65
70	6.9	1.60	7.9	1.37	8.6	0.98	8.8	0.65
65	8.5	1.60	9.4	1.25	9.9	0.96	10.1	0.65
60	10.0	1.40	10.8	1.15	11.3	0.95	11.4	0.65
55	11.4	1.04	12.1	0.97	12.5	0.93		
50	12.7	0.78	13.3	0.75	13.6	0.72		
45	13.9	0.60	14.5	0.56	14.6	0.57		
40	15.0	0.46	15.5	0.44				
35	16.0	0.34	16.3	0.33				
30	16.8	0.24	17.0	0.24				
25	17.5	0.19	17.7	0.18				
Critical boom angle	24°		24°		44°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

16.52m Boom+3.6m Jib

(2.7m)								
Outriggers intermediately extended (2.7m) over side								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	2.9	1.60	4.1	1.50	4.9	1.00	5.3	0.65
80	3.6	1.60	4.7	1.50	5.5	1.00	5.9	0.65
75	5.2	1.60	6.3	1.48	7.1	1.00	7.4	0.65
70	6.9	1.60	7.9	1.37	8.6	0.98	8.8	0.65
65	8.5	1.08	9.4	0.95	9.9	0.90	10.1	0.65
60	10.0	0.71	10.8	0.64	11.2	0.63	11.4	0.60
55	11.3	0.47	12.1	0.42	12.5	0.41		
50	12.6	0.27	13.3	0.24	13.6	0.24		
Critical boom angle	49°		49°		49°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

16.52m Boom+5.5m Jib

(4.75m)								
Outriggers fully extended (4.75m) - 360° full range								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	3.3	1.00	5.1	1.00	6.4	0.65	7.0	0.40
80	4.0	1.00	5.8	1.00	7.1	0.65	7.6	0.40
75	5.8	1.00	7.6	0.90	8.7	0.63	9.2	0.40
70	7.7	1.00	9.2	0.81	10.2	0.60	10.6	0.40
65	9.5	1.00	10.9	0.74	11.7	0.58	11.9	0.40
60	11.1	0.99	12.3	0.69	13.1	0.56	13.2	0.40
55	12.7	0.91	13.7	0.64	14.3	0.55		
50	14.1	0.81	15.1	0.61	15.5	0.55		
45	15.4	0.75	16.3	0.59	16.5	0.55		
40	16.6	0.69	17.3	0.57				
35	17.7	0.65	18.2	0.56				
30	18.6	0.56	19.0	0.55				
25	19.4	0.47	19.6	0.47				
20	19.9	0.43						
15	20.4	0.38						
10	20.6	0.36						
5	20.8	0.34						
Critical boom angle	4°		24°		44°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(4.3m)								
Outriggers intermediately extended (4.3m) over side								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	3.3	1.00	5.1	1.00	6.4	0.65	7.0	0.40
80	4.0	1.00	5.8	1.00	7.1	0.65	7.6	0.40
75	5.8	1.00	7.6	0.90	8.7	0.63	9.2	0.40
70	7.7	1.00	9.2	0.81	10.2	0.60	10.6	0.40
65	9.5	1.00	10.9	0.74	11.7	0.58	11.9	0.40
60	11.1	0.99	12.3	0.69	13.1	0.56	13.2	0.40
55	12.7	0.91	13.7	0.64	14.3	0.55		
50	14.1	0.81	15.1	0.61	15.5	0.55		
45	15.4	0.75	16.3	0.59	16.5	0.55		
40	16.6	0.62	17.3	0.57				
35	17.7	0.51	18.2	0.49				
30	18.6	0.42	18.9	0.41				
25	19.4	0.34	19.6	0.34				
20	19.9	0.29						
15	20.4	0.25						
10	20.6	0.23						
5	20.8	0.21						
Critical boom angle	4°		24°		44°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

16.52m Boom+5.5m Jib

(3.7m)								
Outriggers intermediately extended (3.7m) over side								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	3.3	1.00	5.1	1.00	6.4	0.65	7.0	0.40
80	4.0	1.00	5.8	1.00	7.1	0.65	7.6	0.40
75	5.8	1.00	7.6	0.90	8.7	0.63	9.2	0.40
70	7.7	1.00	9.2	0.81	10.2	0.60	10.6	0.40
65	9.5	1.00	10.9	0.74	11.7	0.58	11.9	0.40
60	11.1	0.99	12.3	0.69	13.1	0.56	13.2	0.40
55	12.7	0.90	13.7	0.64	14.3	0.55		
50	14.1	0.68	15.1	0.61	15.5	0.55		
45	15.4	0.52	16.3	0.48	16.5	0.48		
40	16.6	0.38	17.3	0.37				
35	17.6	0.28	18.1	0.28				
30	18.5	0.21	18.9	0.20				
Critical boom angle	29°		29°		44°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(2.7m)								
Outriggers intermediately extended (2.7m) over side								
Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	3.3	1.00	5.1	1.00	6.4	0.65	7.0	0.40
80	4.0	1.00	5.8	1.00	7.1	0.65	7.6	0.40
75	5.8	1.00	7.6	0.90	8.7	0.63	9.2	0.40
70	7.7	1.00	9.2	0.81	10.2	0.60	10.6	0.40
65	9.4	0.95	10.9	0.74	11.7	0.58	11.9	0.40
60	11.1	0.62	12.3	0.55	13.1	0.51	13.2	0.40
55	12.6	0.40	13.7	0.36	14.3	0.33		
50	14.0	0.23	15.1	0.20	15.5	0.19		
Critical boom angle	49°		49°		49°		59°	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

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Not exceed 75% of static tipping loads

24.0m Boom+3.6m Jib

(4.75m)

Outriggers fully extended (4.75m) - 360° full range

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.4	1.60	5.8	1.50	6.5	1.00	6.8	0.65
80	5.2	1.60	6.4	1.50	7.2	1.00	7.4	0.65
75	7.8	1.60	8.7	1.17	9.5	0.93	9.6	0.65
70	10.1	1.25	11.1	0.98	11.6	0.85	11.8	0.65
65	12.3	1.05	13.1	0.88	13.6	0.77	13.8	0.65
60	14.3	0.90	15.1	0.76	15.6	0.70	15.6	0.65
55	16.3	0.72	17.0	0.64	17.4	0.64		
50	18.1	0.57	18.7	0.51	18.9	0.53		
45	19.7	0.42	20.4	0.40	20.3	0.40		
40	21.1	0.30	21.6	0.29				
35	22.3	0.22	22.7	0.20				
Critical boom angle	*34°*		*34°*		*44°*		*59°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(4.3m)

Outriggers intermediately extended (4.3m) over side

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.4	1.60	5.8	1.50	6.5	1.00	6.8	0.65
80	5.2	1.60	6.4	1.50	7.2	1.00	7.4	0.65
75	7.8	1.60	8.7	1.17	9.5	0.93	9.6	0.65
70	10.1	1.25	11.1	0.98	11.6	0.85	11.8	0.65
65	12.3	1.05	13.1	0.88	13.6	0.77	13.8	0.65
60	14.3	0.87	15.1	0.76	15.6	0.70	15.6	0.65
55	16.2	0.60	16.9	0.55	17.3	0.53		
50	18.0	0.43	18.6	0.41	18.8	0.40		
45	19.6	0.30	20.2	0.27	20.3	0.27		
40	21.0	0.19	21.5	0.18				
Critical boom angle	*39°*		*39°*		*44°*		*59°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(3.7m)

Outriggers intermediately extended (3.7m) over side

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.4	1.60	5.8	1.50	6.5	1.00	6.8	0.65
80	5.2	1.60	6.4	1.50	7.2	1.00	7.4	0.65
75	7.8	1.60	8.7	1.17	9.5	0.93	9.6	0.65
70	10.1	1.25	11.1	0.98	11.6	0.85	11.8	0.65
65	12.2	0.90	13.1	0.77	13.6	0.77	13.8	0.65
60	14.2	0.59	15.0	0.54	15.5	0.54	15.5	0.54
55	16.0	0.37	16.8	0.33	17.2	0.33		
50	17.8	0.20	18.5	0.18	18.7	0.18		
Critical boom angle	*49°*		*49°*		*49°*		*59°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

24.0m Boom+3.6m Jib

(2.7m)

Outriggers intermediately extended (2.7m) over side

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.4	1.60	5.8	1.50	6.5	1.00	6.8	0.65
80	5.2	1.60	6.4	1.50	7.2	1.00	7.4	0.65
75	7.8	1.20	8.7	1.05	9.5	0.93	9.6	0.65
70	10.0	0.72	10.9	0.65	11.5	0.62	11.7	0.56
65	11.9	0.41	12.9	0.35	13.4	0.34	13.6	0.33
Critical boom angle	*64°*		*64°*		*64°*		*64°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

24.0m Boom+5.5m Jib

(4.75m)

Outriggers fully extended (4.75m) - 360° full range

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.8	1.00	6.9	1.00	8.2	0.65	8.6	0.40
80	5.6	1.00	7.6	1.00	8.9	0.65	9.2	0.40
75	8.4	1.00	10.1	0.85	11.2	0.63	11.5	0.40
70	11.1	1.00	12.4	0.72	13.4	0.58	13.6	0.40
65	13.4	0.81	14.7	0.61	15.6	0.52	15.6	0.40
60	15.6	0.69	16.8	0.55	17.5	0.48	17.4	0.40
55	17.7	0.58	18.8	0.49	19.3	0.45		
50	19.6	0.49	20.5	0.44	20.8	0.41		
45	21.2	0.38	22.0	0.36	22.3	0.36		
40	22.9	0.26	23.4	0.26				
Critical boom angle	*39°*		*39°*		*44°*		*59°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(4.3m)

Outriggers intermediately extended (4.3m) over side

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.8	1.00	6.9	1.00	8.2	0.65	8.6	0.40
80	5.6	1.00	7.6	1.00	8.9	0.65	9.2	0.40
75	8.4	1.00	10.1	0.85	11.2	0.63	11.5	0.40
70	11.1	1.00	12.4	0.72	13.4	0.58	13.6	0.40
65	13.4	0.81	14.7	0.61	15.6	0.52	15.6	0.40
60	15.5	0.69	16.8	0.55	17.5	0.48	17.4	0.40
55	17.6	0.54	18.7	0.49	19.2	0.45		
50	19.5	0.38	20.4	0.36	20.7	0.35		
45	21.0	0.27	21.8	0.25	22.1	0.25		
Critical boom angle	*44°*		*44°*		*44°*		*59°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

24.0m Boom+5.5m Jib

(3.7m)

Outriggers intermediately extended (3.7m) over side

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.8	1.00	6.9	1.00	8.2	0.65	8.6	0.40
80	5.6	1.00	7.6	1.00	8.9	0.65	9.2	0.40
75	8.4	1.00	10.1	0.85	11.2	0.63	11.5	0.40
70	11.1	1.00	12.4	0.72	13.4	0.58	13.6	0.40
65	13.4	0.75	14.7	0.61	15.6	0.52	15.6	0.40
60	15.4	0.52	16.7	0.45	17.5	0.42	17.4	0.40
55	17.4	0.31	18.6	0.28	19.1	0.28		
50	18.5	0.22	19.5	0.21	20.0	0.20		
Critical boom angle	*51°*		*51°*		*51°*		*59°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

(2.7m)

Outriggers intermediately extended (2.7m) over side

Boom angle (°)	Offset 5°		Offset 25°		Offset 45°		Offset 60°	
	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)	Working radius (m)	Load (ton)
82	4.8	1.00	6.9	1.00	8.2	0.65	8.6	0.40
80	5.6	1.00	7.6	1.00	8.9	0.65	9.2	0.40
75	8.4	1.00	10.1	0.85	11.2	0.63	11.5	0.40
70	10.8	0.66	12.3	0.55	13.3	0.48	13.6	0.40
65	12.9	0.36	14.4	0.30	15.3	0.26		
Critical boom angle	*64°*		*64°*		*64°*		*69°*	
Standard hook	For 1.8 ton							
Hook mass	25kg							
Parts of line	1							

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RATED LIFTING CAPACITY

■When outriggers are not used

Working radius (m)	Stationary on rubber						Pick & carry (less than 2km/h)						Working radius (m)
	5.30m Boom		9.04m Boom		12.78m Boom		5.30m Boom		9.04m Boom		12.78m 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	
1.5	3.60	2.80	3.60	2.80	3.60	2.80	3.20	2.00	3.20	2.00	3.20	2.00	1.5
2.0	3.40	2.80	3.40	2.80	3.40	2.80	3.00	2.00	3.00	2.00	3.00	2.00	2.0
2.5	3.10	2.15	3.10	2.10	3.10	2.05	2.80	1.55	2.75	1.50	2.65	1.45	2.5
3.0	2.65	1.60	2.60	1.55	2.55	1.50	2.40	1.10	2.30	1.05	2.20	1.00	3.0
3.5	2.30	1.25	2.20	1.20	2.10	1.10	2.00	0.85	1.90	0.75	1.80	0.65	3.5
4.0	2.00	0.90	1.90	0.80	1.70	0.70	1.70	0.60	1.65	0.50	1.50	0.40	4.0
4.5			1.60	0.50	1.40	0.40			1.40	0.30	1.25		4.5
5.0			1.30		1.10				1.15		1.00		5.0
5.5			1.10		0.95				0.95		0.85		5.5
6.0			0.90		0.80				0.80		0.70		6.0
7.0			0.50		0.50				0.45		0.45		7.0
Critical boom angle	—	—	*26°*	*54°*	*52°*	*66°*	—	—	*26°*	*54°*	*52°*	*68°*	Critical boom angle
Standard hook	For 13 ton						For 13 ton						Standard hook
Hook mass	90kg						90kg						Hook mass
Parts of line	4						4						Parts of line

(Unit: Metric ton)

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■RATED LIFTING CAPACITY searcher hook are used

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

5.3m — 24.0m Boom

LOW POSITION

Working radius (m)	(4.75m) Outriggers fully extended (4.75m) - 360° full range						(4.3m) Outriggers intermediately extended (4.3m) - over side						(3.7m) Outriggers intermediately extended (3.7m) - over side						(2.7m) Outriggers intermediately extended (2.7m) - over side						(1.64m) Outriggers completely retracted (1.64m) - over side (H-type outrigger only)					
	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom
1.8	3.00						3.00						3.00						3.00						3.00					
2.0	3.00						3.00						3.00						3.00						3.00					
2.5	3.00						3.00						3.00						3.00						2.77					
3.0	3.00						3.00						3.00						3.00						2.16					
3.5	3.00	3.00					3.00	3.00					3.00	3.00					3.00	3.00					1.72	1.35				
4.0	3.00	3.00					3.00	3.00					3.00	3.00					3.00	2.85					1.41	1.05				
4.5	3.00	3.00	3.00				3.00	3.00	3.00				3.00	3.00	3.00				2.75	2.40	2.05				1.17	0.87	0.65			
5.0	3.00	3.00	3.00				3.00	3.00	3.00				3.00	3.00	3.00				2.29	2.05	1.75				0.99	0.70	0.55			
5.5	3.00 (5.1m)	3.00	3.00				3.00 (5.1m)	3.00	3.00				3.00 (5.1m)	3.00	2.90				2.21 (5.1m)	1.76	1.51				0.95 (5.1m)	0.56	0.42			
6.0		3.00	3.00	3.00				3.00	3.00	3.00				2.84	2.54	2.50				1.52	1.30	1.30				0.44	0.32	0.35		
6.5		3.00	3.00	3.00				3.00	2.95	2.90				2.46	2.23	2.20				1.33	1.12	1.15				0.34	0.22	0.30		
7.0		3.00	3.00	3.00	2.90			2.77	2.62	2.60	2.55			2.15	1.98	1.99	1.95			1.16	0.97	1.02	1.00			0.25		0.22		
8.0		2.57	2.49	2.54	2.50			2.17	2.10	2.13	2.10			1.69	1.58	1.62	1.60			0.89	0.73	0.79	0.80							
9.0		2.18 (8.75m)	2.00	2.12	2.10	1.95		1.84 (8.75m)	1.68	1.77	1.77	1.70		1.42 (8.75m)	1.27	1.33	1.34	1.30		0.72 (8.75m)	0.53	0.61	0.65	0.65						
10.0			1.63	1.76	1.78	1.75			1.37	1.49	1.50	1.45			1.02	1.10	1.12	1.10			0.35	0.47	0.50	0.50						
11.0			1.34	1.47	1.53	1.52			1.11	1.24	1.28	1.28			0.80	0.91	0.94	0.95			0.20	0.35	0.39	0.41						
12.0			1.11	1.24	1.31	1.32			0.91	1.04	1.10	1.10			0.63	0.76	0.79	0.81				0.25	0.30	0.32						
13.0			1.01 (12.45m)	1.06	1.13	1.15			0.83 (12.45m)	0.87	0.94	0.96			0.56 (12.45m)	0.62	0.67	0.69					0.20	0.25						
14.0				0.89	0.97	1.02				0.73	0.81	0.83				0.50	0.56	0.58												
15.0				0.76	0.83	0.89				0.61	0.69	0.73				0.40	0.47	0.50												
16.0				0.64	0.72	0.77				0.51	0.58	0.63				0.32	0.39	0.42												
17.0				0.63 (16.1m)	0.62	0.67				0.50 (16.1m)	0.50	0.55				0.31 (16.1m)	0.30	0.35												
18.0					0.54	0.58					0.42	0.47					0.25	0.29												
19.0					0.46	0.50					0.35	0.40					0.20	0.24												
20.0					0.40 (19.8m)	0.44					0.30 (19.8m)	0.34						0.19												
21.0						0.38						0.29																		
22.0						0.33						0.24																		
23.0						0.28						0.20																		
23.5						0.26																								
24.0																														
Critical boom angle	—	—	—	—	—	—	—	—	—	—	—	*13°*	—	—	—	—	*15°*	*32°*	—	—	*26°*	*41°*	*48°*	*56°*	—	*35°*	*58°*	*63°*		

(Unit: Metric ton)

HIGH POSITION

Working radius (m)	(4.75m) Outriggers fully extended (4.75m) - 360° full range						(4.3m) Outriggers intermediately extended (4.3m) - over side						(3.7m) Outriggers intermediately extended (3.7m) - over side						(2.7m) Outriggers intermediately extended (2.7m) - over side						(1.64m) Outriggers completely retracted (1.64m) - over side (H-type outrigger only)					
	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom
1.8																														
2.0																														
2.5																														
3.0																														
3.5																														
4.0	3.00 (4.2m)						3.00 (4.2m)						3.00 (4.2m)						3.00 (4.2m)						1.25 (4.2m)					
4.5	3.00						3.00						3.00						2.69						1.13					
5.0	3.00 (4.95m)						3.00 (4.95m)						3.00 (4.95m)						2.30 (4.95m)						0.98 (4.95m)					
5.5																														
6.0																														
6.5																														
7.0		3.00 (7.2m)						2.55 (7.2m)						2.00 (7.2m)						1.05 (7.2m)										
8.0		2.54						2.14						1.66						0.86										
9.0		2.19 (8.7m)						1.84 (8.7m)						1.42 (8.7m)						0.71 (8.7m)										
10.0			1.50 (10.3m)						1.25 (10.3m)						0.90 (10.3m)						0.30 (10.3m)									
11.0			1.32						1.09						0.76						0.24									
12.0			1.10						0.89						0.62															
13.0			1.00 (12.45m)	0.95 (13.4m)					0.81 (12.45m)	0.75 (13.4m)					0.55 (12.45m)	0.55 (13.4m)														
14.0				0.87						0.71						0.49														
15.0				0.74						0.60						0.39														
16.0				0.63	0.65 (16.4m)					0.50	0.50 (16.4m)					0.31	0.35 (16.4m)													
17.0				0.61 (16.2m)	0.61					0.48 (16.2m)	0.48					0.29 (16.2m)	0.30													
18.0					0.52						0.41						0.25													
19.0					0.45	0.45 (19.5m)					0.34	0.35 (19.5m)					0.19													
20.0					0.39 (19.9m)	0.43					0.29 (19.9m)	0.33																		
21.0						0.37						0.28																		
22.0						0.32						0.23																		
23.0						0.27						0.19																		
23.5						0.26																								
24.0						0.24 (23.6m)																								
Critical boom angle	—	—	—	—	—	—	—	—	—	—	—	*11°*	—	—	—	—	*13°*		—	—	*23°*				—					

(Unit: Metric ton)

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■LIFTING CAPACITIES searcher hook are used with boom extendable/retractable

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

5.3m — 24.0m Boom

LOW POSITION

Working radius (m)	(4.75m) Outriggers fully extended (4.75m) - 360° full range						(4.3m) Outriggers intermediately extended (4.3m) - over side						(3.7m) Outriggers intermediately extended (3.7m) - over side						(2.7m) Outriggers intermediately extended (2.7m) - over side						(1.64m) Outriggers completely retracted (1.64m) - over side (H-type outrigger only)					
	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom
1.8	3.00						3.00						3.00						3.00						3.00					
2.0	3.00						3.00						3.00						3.00						3.00					
2.5	3.00						3.00						3.00						3.00						2.77					
3.0	3.00						3.00						3.00						3.00						2.16					
3.5	3.00	3.00					3.00	3.00					3.00	3.00					3.00	3.00					1.72	1.35				
4.0	3.00	3.00					3.00	3.00					3.00	3.00					3.00	2.85					1.41	1.05				
4.5	3.00	3.00	3.00				3.00	3.00	3.00				3.00	3.00	3.00				2.75	2.40	2.05				1.17	0.87	0.65			
5.0	3.00	3.00	3.00				3.00	3.00	3.00				3.00	3.00	3.00				2.29	2.05	1.75				0.99	0.70	0.55			
5.5	3.00 (5.1m)	3.00	3.00				3.00 (5.1m)	3.00	3.00				3.00 (5.1m)	3.00	2.90				2.21 (5.1m)	1.76	1.51				0.95 (5.1m)	0.56	0.42			
6.0		3.00	2.85	3.00				3.00	2.85	3.00				2.84	2.54	2.50				1.52	1.30	1.30				0.44	0.32	0.35		
6.5		3.00	2.70	3.00				3.00	2.70	2.90				2.46	2.23	2.20				1.33	1.12	1.15				0.34	0.22	0.30		
7.0		3.00	2.60	3.00	2.90			2.77	2.60	2.60	2.55			2.15	1.98	1.99	1.95			1.16	0.97	1.02	1.00			0.25		0.22		
8.0		2.57	2.40	2.54	2.50			2.17	2.10	2.13	2.10			1.69	1.58	1.62	1.60			0.89	0.73	0.79	0.80							
9.0		2.18 (8.75m)	1.95	2.12	2.10	1.70		1.84 (8.75m)	1.68	1.77	1.77	1.70		1.42 (8.75m)	1.27	1.33	1.34	1.30		0.72 (8.75m)	0.53	0.61	0.65	0.65						
10.0			1.50	1.76	1.78	1.60			1.37	1.49	1.50	1.45			1.02	1.10	1.12	1.10			0.35	0.47	0.50	0.50						
11.0			1.08	1.47	1.53	1.45			1.08	1.24	1.28	1.28			0.80	0.91	0.94	0.95			0.20	0.35	0.39	0.41						
12.0			0.70	1.24	1.31	1.19			0.70	1.04	1.10	1.10			0.63	0.76	0.79	0.81				0.25	0.30	0.32						
13.0			0.51 (12.45m)	1.06	1.13	1.02			0.51 (12.45m)	0.87	0.94	0.96			0.51 (12.45m)	0.62	0.67	0.69					0.20	0.25						
14.0				0.89	0.97	0.88				0.73	0.81	0.83				0.50	0.56	0.58												
15.0				0.76	0.83	0.76				0.61	0.69	0.73				0.40	0.47	0.50												
16.0				0.64	0.72	0.66				0.51	0.58	0.63				0.32	0.39	0.42												
17.0				0.63 (16.1m)	0.62	0.58				0.50 (16.1m)	0.50	0.55				0.31 (16.1m)	0.30	0.35												
18.0					0.54	0.50					0.42	0.47					0.25	0.29												
19.0					0.46	0.44					0.35	0.40					0.20	0.24												
20.0					0.40 (19.8m)	0.38					0.30 (19.8m)	0.34						0.19												
21.0						0.32						0.29																		
22.0						0.27						0.24																		
23.0						0.22						0.20																		
23.5						0.19																								
24.0																														
Critical boom angle	—	—	—	—	—	—	—	—	—	—	—	13°	—	—	—	—	15°	32°	—	—	26°	41°	48°	56°	—	35°	58°	63°			

(Unit: Metric ton)

HIGH POSITION

Working radius (m)	(4.75m) Outriggers fully extended (4.75m) - 360° full range						(4.3m) Outriggers intermediately extended (4.3m) - over side						(3.7m) Outriggers intermediately extended (3.7m) - over side						(2.7m) Outriggers intermediately extended (2.7m) - over side						(1.64m) Outriggers completely retracted (1.64m) - over side (H-type outrigger only)					
	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom
1.8																														
2.0																														
2.5																														
3.0																														
3.5																														
4.0	3.00 (4.2m)						3.00 (4.2m)						3.00 (4.2m)						3.00 (4.2m)						1.25 (4.2m)					
4.5	3.00						3.00						3.00						2.69						1.13					
5.0	3.00 (4.95m)						3.00 (4.95m)						3.00 (4.95m)						2.30 (4.95m)						0.98 (4.95m)					
5.5																														
6.0																														
6.5																														
7.0		3.00 (7.2m)						2.55 (7.2m)						2.00 (7.2m)						1.05 (7.2m)										
8.0		2.54						2.14						1.66						0.86										
9.0		2.19 (8.7m)						1.84 (8.7m)						1.42 (8.7m)						0.71 (8.7m)										
10.0			1.40 (10.3m)						1.25 (10.3m)						0.90 (10.3m)						0.30 (10.3m)									
11.0			1.10						1.09						0.76						0.24									
12.0			0.62						0.62						0.62															
13.0			0.42 (12.45m)	0.95 (13.4m)					0.42 (12.45m)	0.75 (13.4m)					0.42 (12.45m)	0.55 (13.4m)														
14.0				0.87						0.71						0.49														
15.0				0.74						0.60						0.39														
16.0				0.63	0.65 (16.4m)					0.50	0.50 (16.4m)					0.31	0.35 (16.4m)													
17.0				0.61 (16.2m)	0.61					0.48 (16.2m)	0.48					0.29 (16.2m)	0.30													
18.0					0.52						0.41						0.25													
19.0					0.45	0.40 (19.5m)					0.34	0.35 (19.5m)					0.19													
20.0					0.39 (19.9m)	0.38					0.29 (19.9m)	0.33																		
21.0						0.32						0.28																		
22.0						0.27						0.23																		
23.0						0.21						0.19																		
23.5						0.18																								
24.0						0.17 (23.6m)																								
Critical boom angle	—	—	—	—	—	—	—	—	—	—	—	11°	—	—	—	—	13°		—	—	23°				—					

(Unit: Metric ton)

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

RATED LIFTING CAPACITY searcher hook are used

■When outriggers are not used

LOW POSITION

Working radius (m)	Stationary on rubber					Pick & carry (less than 2km/h)					Working radius (m)
	5.30m Boom		9.04m Boom		12.78m Boom	5.30m Boom		9.04m Boom		12.78m Boom	
	Over front	360° full range	Over front	360° full range	Over front	Over front	360° full range	Over front	360° full range	Over front	
1.8	3.00	3.00				3.00	2.30				1.8
2.0	3.00	3.00				3.00	2.30				2.0
2.5	3.00	2.45				3.00	1.85				2.5
3.0	3.00	1.90				2.65	1.40				3.0
3.5	2.60	1.55	2.40	1.30		2.25	1.10	2.10	0.95		3.5
4.0	2.30	1.20	2.10	1.00		1.95	0.90	1.75	0.70		4.0
4.5	2.00	0.85	1.80	0.70	1.60	1.70	0.65	1.50	0.50	1.35	4.5
5.0	1.70	0.50	1.50		1.30	1.40		1.30		1.10	5.0
5.5			1.30		1.15			1.10		0.95	5.5
6.0			1.10		1.00			0.95		0.80	6.0
7.0			0.70		0.70			0.65		0.55	7.0
8.0											8.0
9.0											9.0
13.0											13.0
16.0											16.0
17.0											17.0
Critical boom angle	—	—	*35°*	*58°*	*54°*	—	*26°*	*35°*	*58°*	*54°*	Critical boom angle

(Unit: Metric ton)

HIGH POSITION

Working radius (m)	Stationary on rubber					Pick & carry (less than 2km/h)					Working radius (m)
	5.30m Boom		9.04m Boom		12.78m Boom	5.30m Boom		9.04m Boom		12.78m Boom	
	Over front	360° full range	Over front	360° full range	Over front	Over front	360° full range	Over front	360° full range	Over front	
1.8											1.8
2.0											2.0
2.5											2.5
3.0											3.0
3.5											3.5
4.0	2.15 (4.2m)	1.05 (4.2m)				1.70 (4.2m)	0.65 (4.2m)				4.0
4.5	2.00	0.85				1.55	0.55				4.5
5.0	1.70 (4.95m)	0.5 (4.95m)				1.40 (4.95m)	0.45 (4.95m)				5.0
5.5											5.5
6.0											6.0
7.0			0.80 (7.2m)					0.55 (7.2m)			7.0
8.0			0.50					0.40			8.0
9.0											9.0
13.0											13.0
16.0											16.0
17.0											17.0
Critical boom angle	—	—	*16°*			—	—	*16°*			Critical boom angle

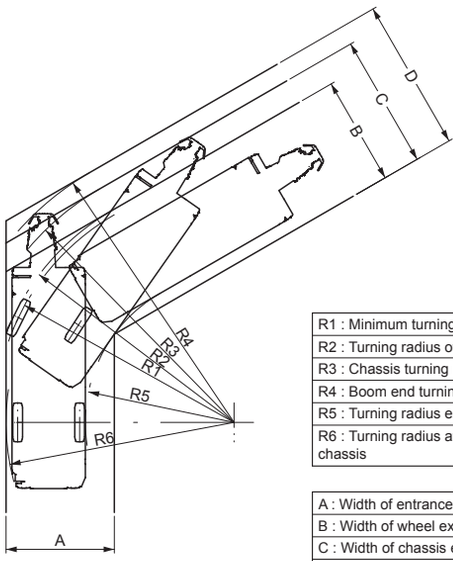
(Unit: Metric ton)

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■Minimum path width

● 60°

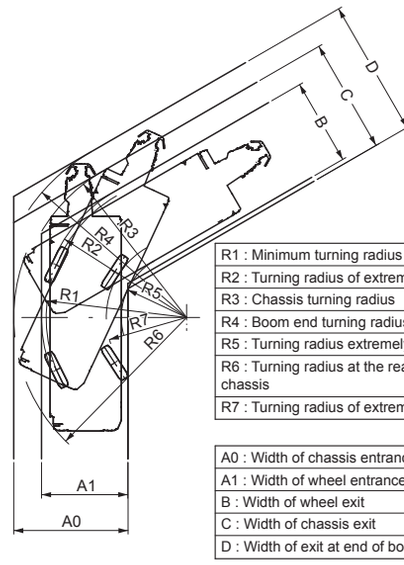
Right turn in two-wheel steering mode



R1 : Minimum turning radius	6.50m
R2 : Turning radius of extremely outer tire	6.64m
R3 : Chassis turning radius	7.31m
R4 : Boom end turning radius	7.83m
R5 : Turning radius extremely chassis inner	4.03m
R6 : Turning radius at the rear end of the chassis	6.19m

A : Width of entrance	2.94m
B : Width of wheel exit	2.94m
C : Width of chassis exit	3.61m
D : Width of exit at end of boom	4.13m

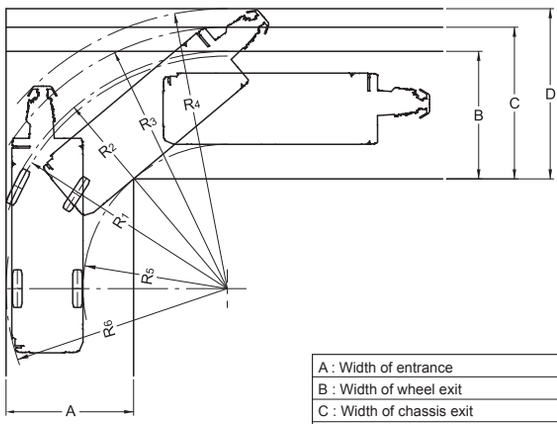
Right turn in 4-wheel steering mode



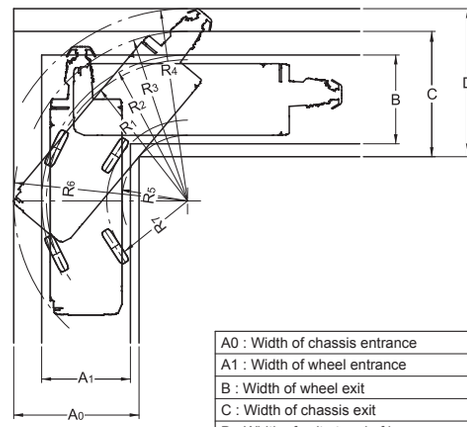
R1 : Minimum turning radius	3.92m
R2 : Turning radius of extremely outer tire	4.06m
R3 : Chassis turning radius	4.71m
R4 : Boom end turning radius	5.34m
R5 : Turning radius extremely chassis inner	1.82m
R6 : Turning radius at the rear end of the chassis	4.83m
R7 : Turning radius of extremely inner tire	2.25m

A0 : Width of chassis entrance	3.20m
A1 : Width of wheel entrance	2.41m
B : Width of wheel exit	2.41m
C : Width of chassis exit	3.20m
D : Width of exit at end of boom	3.83m

● 90°

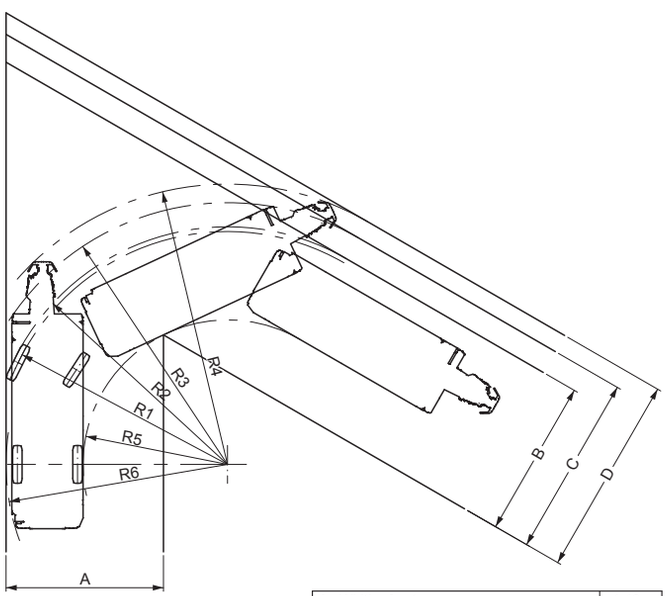


A : Width of entrance	3.57m
B : Width of wheel exit	3.57m
C : Width of chassis exit	4.24m
D : Width of exit at end of boom	4.76m

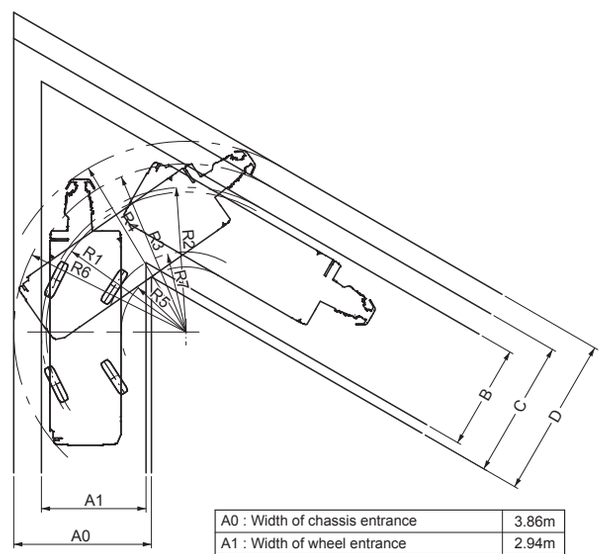


A0 : Width of chassis entrance	3.49m
A1 : Width of wheel entrance	2.47m
B : Width of wheel exit	2.47m
C : Width of chassis exit	3.49m
D : Width of exit at end of boom	4.12m

● 120°



A : Width of entrance	4.40m
B : Width of wheel exit	4.40m
C : Width of chassis exit	5.07m
D : Width of exit at end of boom	5.59m

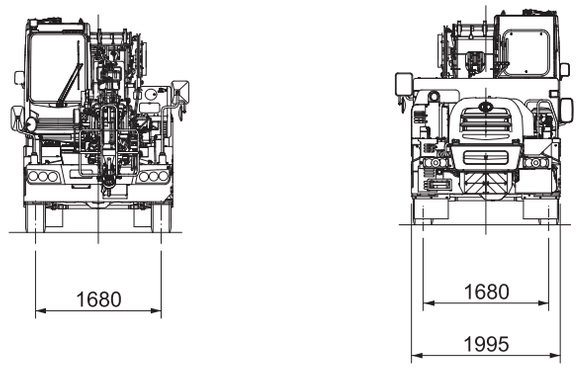


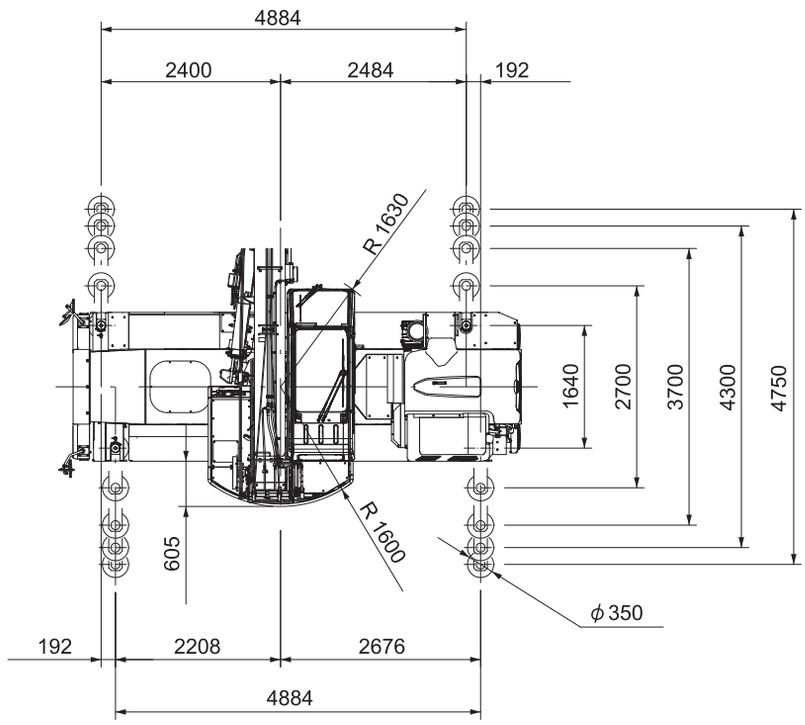
A0 : Width of chassis entrance	3.86m
A1 : Width of wheel entrance	2.94m
B : Width of wheel exit	2.94m
C : Width of chassis exit	3.86m
D : Width of exit at end of boom	4.49m

Note: The above values are based on calculations.

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■Overall view





Reduced scale: 1/100 Unit (mm)

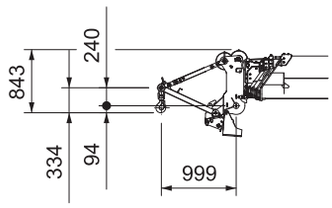
* : Indicates the dimension when the boom is horizontal

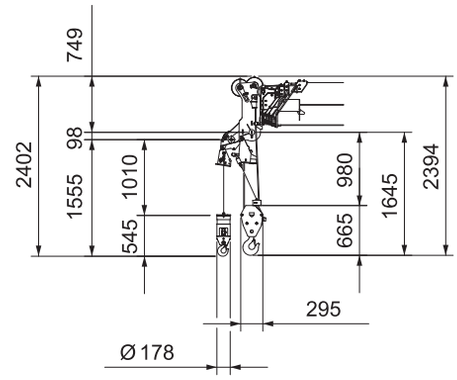
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■Overall view

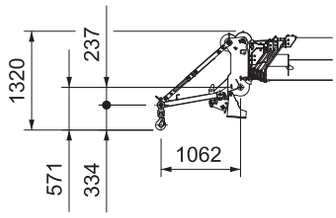
Searcher hook (option)

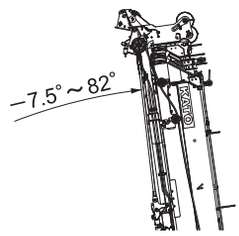
High position

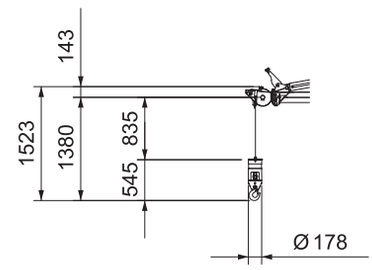


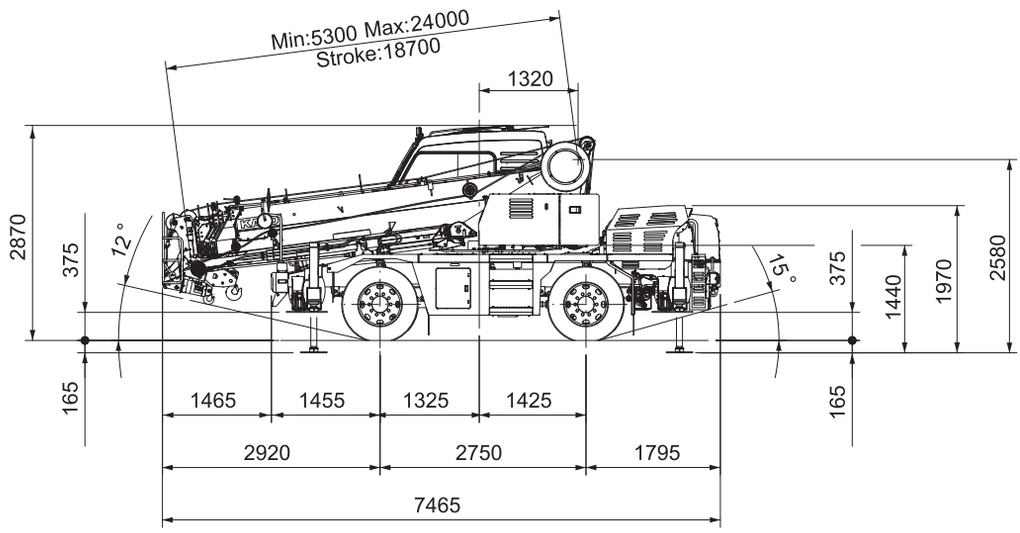


Low position









Ramp break over angle: 23°
When the suspension is locked, the height shall be the overall height: - 30 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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