

# ALLTERR KA-1300SL

## 【SPECIFICATION】

### ■ CRANE Specification

Description	KATO FULLY HYDRAULIC ALL TERRAIN CRANE	
Model	KA-1300SL	
Maximum lifting capacity	130ton × 2.5m	
Boom length	11.8m — 52.0m (6 section)	
SL jib length	9.2m—26.6m (4 section)	
Hoisting line speed (winch up)	Main winch	115m / min. (at 4th layer)
	Auxiliary winch	115m / min. (at 4th layer)
Hoisting hook speed (winch up)	Main winch	(Parts of line; 19) : 6m / min. (at 4th layer)
	Auxiliary winch	(Parts of line; 1) : 115m / min. (at 4th layer)
Boom derricking angle	-1.8° — 85°	
Boom derricking time	68s / -1.8° — 85°	
Boom extending speed	11.8m — 52.0m / 158s	
Slewing speed	High	1.8min <sup>-1</sup>
	Low	0.95min <sup>-1</sup>
Speed / Time	Subject to no load	

#### ● Equipment and structure

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.	
Counterweight	17ton (15.8ton + 1.2ton base section) Hydraulic removal system	
Outriggers	Type	Hydraulic H-beam type (2section)
	Extension width	8,400mm (Fully extended)
		7,400mm (Intermediately extended)
		6,400mm (Intermediately extended)
		5,400mm (Intermediately extended)
4,400mm (Intermediately extended)		
3,400mm (Fully retracted)		
Wire rope for hoisting	Main winch	Diameter: 20mm × Length: 280m
	Auxiliary winch	Diameter: 20mm × Length: 170m

#### ● Engine

Maker	Mitsubishi
Model	6D16-TLE2A
Type	4 cycle, 6 cylinders, water cooled, direct injection turbo-charged diesel engine with intercooling
Piston displacement	7.54L
Max. power	140kW at 2200min <sup>-1</sup>
Max. torque	725N·m at 1600min <sup>-1</sup>
Electric system	24V
Batteries	115F51 × 2
Fuel tank capacity	250L

#### ● Hydraulic system

Oil pump	Double variable axial plunger pump and 2 gear pumps	
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	1075L	

#### ● Safety devices

ACS (Automatic Crane System with voice alarm), Working range limit mode, Outrigger status detector, Boom derricking / telescoping holding valve, Overhoist prevention device, Drum lock device, Winch holding valve, Automatic winch brake, Winch drum rope tension roller, Outrigger lock pins, Slewing lock, Slewing brake, Hydraulic safety valves, Side mirror, Winch drum turning indication device, Engine oil pressure warning device, Battery charge warning device, Coolant temperature warning device, Coolant level warning device, Fuel level warning device, Hydraulic oil return filter warning device, Hydraulic oil temperature warning device, ACS outside indicator, Slewing voice alarm, Stanchion on boom

#### ● Operator's cab

All steel welded construction, 1 person, Rubber mounted, Tilttable (approx.15°), Air conditioner (with cold/warm box), Cigarette lighter, Front windscreen wiper & washer, Roof window wiper & washer, Tea table, Access step light, AM/FM Radio, Floor mat, Power Window (external closing switch), Sun visor, Fire extinguisher

#### ● Standard equipment

Boom dismount device, Slewing upper structure dismount device, Hydraulic oil cooler, Working light (on table and cab), Searchlight, Winch view camera, Hook for 130 / 70 ton, Hook for 50 ton, Hook for 7.8 ton

#### ● Optional equipment

PA system, Anemometer, Door visor

### ■ CARRIER Specification

Maker	KATO
Model	KA5160
● Carrier Specification (Only carrier)	
Maximum traveling speed	75km/h
Grade ability (tan θ)	0.60 (computed at G.V.W. = 36,620kg)
Minimum turning radius	10.4m

#### ● General dimensions (Only carrier)

Overall length	13,230mm	
Overall width	2,990mm	
Overall height	2,750mm	
Wheel base	2,750+1,650+1,850+1,650=7,900mm	
Treads	Front	2,500mm
	Rear	2,500mm
Gross vehicle weight	36,620kg	
Front axle	17,360kg (1 <sup>st</sup> and 2 <sup>nd</sup> Axles)	
Rear axle	19,260kg (3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> Axles)	

#### ● General dimensions (Fully equipped)

Overall length	14,565mm
Overall width	2,990mm
Overall height	4,000mm

#### ● Engine

Maker	Mercedes-Benz	
Model	OM502LA (on Highway EURO 3)	
Type	4 cycle, 8 cylinders, water cooled, direct Injection turbo-charged diesel engine with intercooling	
Piston displacement	15.927L	
Max. power	390kW at 1,800min <sup>-1</sup>	
Max. torque	2,400N·m at 1,080min <sup>-1</sup>	
Torque converter	Engine mounted 3 elements 1 stage (with lock up clutch)	
Transmission	Remote mounted full automatic 5 forward & 1 reverse speed	
Axles	All axles steered 1 <sup>st</sup> , 2 <sup>nd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> axles driven and have planetary gears reduction and differential lock Inter-axle differential lock on 4 <sup>th</sup> axle	
Suspension	Hydro-pneumatic suspension Hydraulic locking device with suspension cylinder	
Brake system	Service brake	2 circuit brake 10 wheels servo-air brake, all axles are equipped with disc brakes
	Parking brake	Spring applied, electrically air released parking brake (2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> Axles)
	Auxiliary brake	Engine brake (Compression brake), Exhaust brake, Hydraulic retarder
Steering	Semi-integral hydraulic power steering of front two axles and automatic steering of the 3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> axles	
Tire size	10 tires, 445 / 95 R25 177E ROAD	
Electric system	24V	
Batteries	145G51 × 2	
Fuel tank capacity	500L	
Driver's cab	All steel welded construction, 2 persons	

#### ● Safety devices

Emergency steering device, Engine over speed alarm, Three-point seat belt (Driver), Suspension lock, Electric adjustable side mirrors, Warning reflector, Engine management & warning system, Transmission management & warning system, Radiator coolant level warning device, Low air warning device, Brake light / parking light disconnection warning device, Rear view camera, Brake wear indicator

#### ● Standard equipment

Adjustable steering wheel, Air conditioner, Power Window, Adjustable suspension seat, Tachograph, Sun visor, Centralized lubricating system, Air dryer, AM/FM Radio, Towing hook (front and rear, eye type), Discharge head lamp

#### ● Optional equipments

Air heater

# KATO BOOM LIFTING CAPACITIES

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

(Unit: Metric ton)

<b>Specification A1</b> Outriggers fully extended (8.4 m) - 360° full range, with counterweight								
Working radius (m)	11.8 m Boom Heavy Load Unit	11.8 m Boom	19.8 m Boom	27.88 m Boom	35.9 m Boom	44.0 m Boom	48.0 m Boom	52.0 m Boom
2.5	130.0	70.0						
3.0	120.0	70.0	50.0					
3.5	110.0	70.0	50.0					
4.0	101.0	70.0	50.0	35.0				
4.5	89.0	70.0	50.0	35.0				
5.0	79.5	70.0	50.0	35.0	24.0			
6.0	64.5	64.5	50.0	35.0	24.0			
7.0	54.0	54.0	50.0	35.0	24.0	17.0	14.0	
8.0	46.0	46.0	46.0	35.0	24.0	17.0	14.0	12.0
9.0	40.0	40.0	40.0	35.0	24.0	17.0	14.0	12.0
10.0			35.5	33.7	24.0	17.0	14.0	12.0
12.0			27.6	27.6	23.2	17.0	14.0	12.0
14.0			21.0	20.9	20.7	15.8	14.0	12.0
16.0			16.4	16.3	18.0	14.0	14.0	12.0
18.0				13.0	14.6	12.6	13.1	12.0
20.0				10.3	12.0	11.5	11.7	11.0
22.0				8.1	9.9	10.5	10.4	9.8
24.0				6.4	8.1	9.2	9.3	8.8
26.0					6.7	7.7	8.1	7.9
28.0					5.4	6.5	6.8	7.1
30.0					4.4	5.4	5.8	6.1
32.0					3.5	4.5	4.9	5.2
34.0						3.7	4.1	4.4
36.0						3.1	3.4	3.7
38.0						2.5	2.8	3.1
40.0						1.9	2.3	2.5
42.0						1.4	1.8	2.1
44.0							1.3	1.6
46.0								1.1
Critical boom angle (°)	—	—	—	—	—	—	16	22
Parts of line	19	10	7	5	4	4	4	4
Standard hook	for 130t	for 70t	for 50t	for 50t	for 50t	for 50t	for 50t	for 50t
Hook mass (t)	1.3	0.9	0.6	0.6	0.6	0.6	0.6	0.6

(Unit: Metric ton)

<b>Specification B1</b> Outriggers fully extended (8.4 m) - 360° full range, with counterweight stowed in carrier								
Working radius (m)	11.8 m Boom Heavy Load Unit	11.8 m Boom	19.8 m Boom	27.88 m Boom	35.9 m Boom	44.0 m Boom	48.0 m Boom	52.0 m Boom
2.5	103.0	70.0						
3.0	103.0	70.0	50.0					
3.5	94.1	70.0	50.0					
4.0	86.3	70.0	50.0	35.0				
4.5	77.4	70.0	50.0	35.0				
5.0	68.7	70.0	50.0	35.0	24.0			
6.0	55.6	60.2	50.0	35.0	24.0			
7.0	46.2	50.2	46.5	35.0	24.0	17.0	14.0	
8.0	39.2	42.8	39.5	35.0	24.0	17.0	14.0	12.0
9.0	33.7	37.0	34.1	33.9	24.0	17.0	14.0	12.0
10.0			29.7	29.5	24.0	17.0	14.0	12.0
12.0			22.3	22.2	23.2	17.0	14.0	12.0
14.0			15.5	15.4	17.5	15.8	14.0	12.0
16.0			11.1	11.1	13.0	14.0	14.0	12.0
18.0				8.1	9.9	11.0	11.3	11.6
20.0				5.7	7.6	8.6	9.0	9.3
22.0				3.8	5.8	6.9	7.2	7.5
24.0				2.4	4.3	5.4	5.8	6.1
26.0					3.0	4.1	4.5	4.8
28.0					2.0	3.1	3.5	3.8
30.0					1.2	2.3	2.6	2.9
32.0						1.5	1.9	2.2
34.0							1.3	1.6
Critical boom angle (°)	—	—	—	—	28	39	43	47
Parts of line	19	10	7	5	4	4	4	4
Standard hook	for 130t	for 70t	for 50t	for 50t	for 50t	for 50t	for 50t	for 50t
Hook mass (t)	1.3	0.9	0.6	0.6	0.6	0.6	0.6	0.6









## Notes for the Lifting Capacity Chart

- The lifting capacity chart indicates the maximum loads which can be lifted by the crane provided it is level and standing on firm, level ground. The values include the mass of hook and all other slings etc. The values enclosed with thick lines in the lifting capacity chart are determined by the structural strength of the crane, and the other values are determined by the crane's stability.
- The lifting capacity is classified into the following lifting performance groups A1 to C6 depending on the outrigger extension width and the counterweight mounting state.

Performance classification

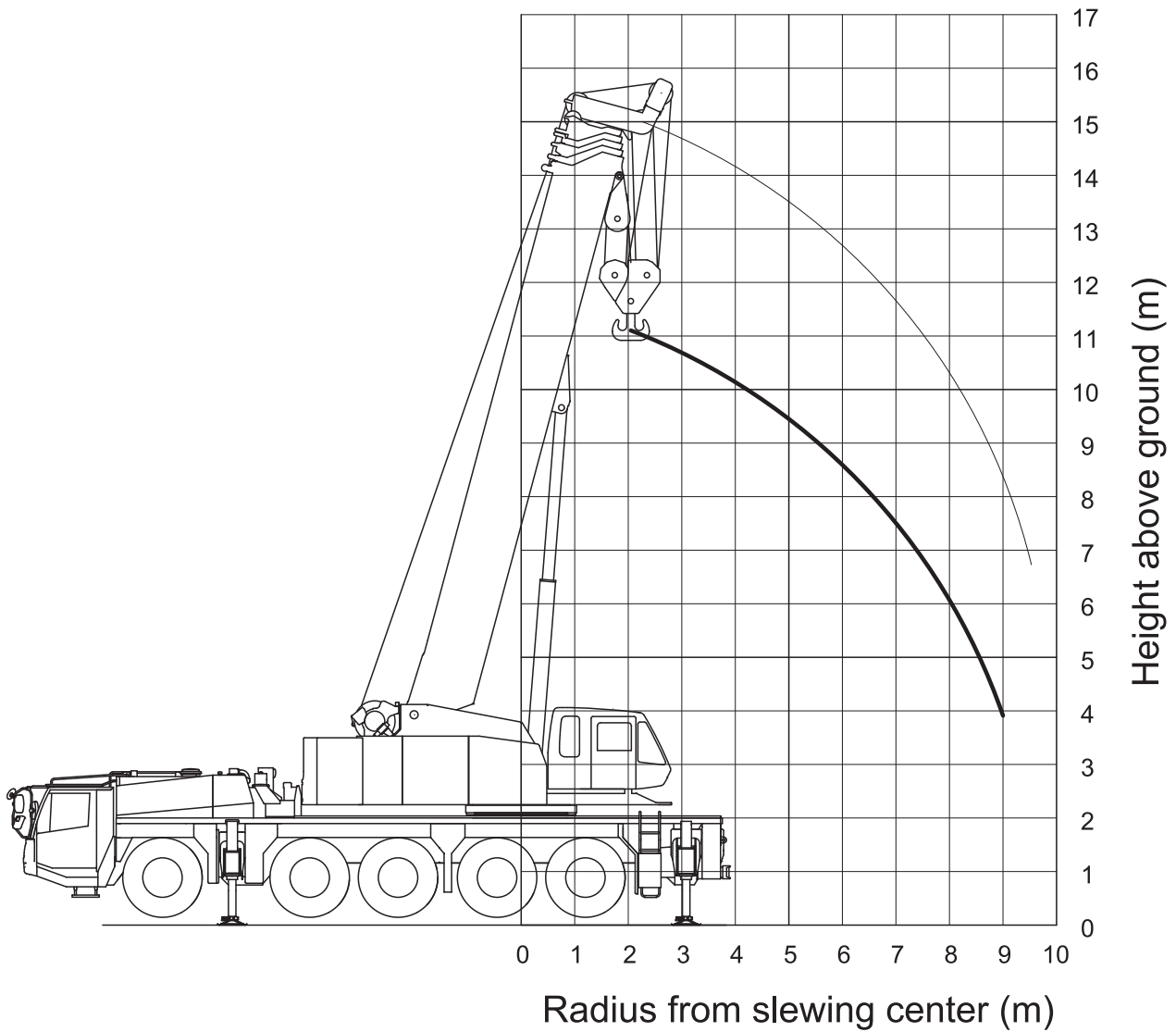
	Outrigger extension width	Counterweight mounting state		
		Mounted to crane	Stowed in carrier	No
Over side	8.4m	A 1	B 1	C 1
	7.4m	A 2	B 2	C 2
	6.4m	A 3	B 3	C 3
	5.4m	A 4	B 4	C 4
	4.4m	A 5	B 5	C 5
	3.4m	A 6	B 6	C 6
Front and rear sides	-	A 1	B 1	C 1

Table of Performance Range Depending on Boom Condition

Operation of boom and rooster sheave	A1 to A6, B1 to B6, C1 to C6
Operation of SL jib and boom with SL jib	A1 to A5, B1 to B3, C1 to C2

- The working radius described in the lifting capacity chart is based on the actual values of boom and jib including deflection. Always use the working radius as standard during crane operation.
- The SL jib working radius is the value for crane operation by mounting the SL jib to the 44.0, 48.0 or 52.0 m boom. For jib operation with any other boom length, use the boom angle as standard instead of working radius.
- If the boom length, boom angle, working radius, SL jib length or SL jib angle exceeds the specified value, conduct the operation according to the smaller value of lifting capacity for the relevant specified value and that for the next specified value.
- The critical boom angle in each operation is shown in the lifting capacity chart. Since a smaller angle than the critical boom angle may cause to tip over even with no load, take care sufficiently.
- When operating the boom with the SL jib mounted, subtract 7.6 ton in addition to the mass of sling etc. from the lifting capacity for boom. In this condition, do not use the rooster sheave.
- If you operate the crane with the rooster sheave, subtract the mass of all attached slings etc. to the boom from the figure in the boom lifting capacity chart, with an upper limit of 7.8 ton. Then further subtract the mass of 7.8 ton hook (250kg) and its slings from the figure above, which will be the lifting capacity for the work with the rooster sheave.
- Use the heavy load unit (130 ton hook with sheave bracket) when operating the crane loading with more than 70 ton.
- The standard number of parts of line for each boom length are indicated in the lifting capacity chart. If you work with a non-standard number of parts of line, take 76.4 kN (7.8 tf) as the maximum load on any part of the wire rope.
- Crane operation is permissible up to a wind speed of 10 m/s. Even in relatively light wind conditions, extra care should be taken when handling loads presenting large wind catching areas.
- The machine will tip over or be damaged if operated with a load exceeding that specified in the lifting capacity chart or not handled correctly. If such trouble occurs, the machine will not be guaranteed.

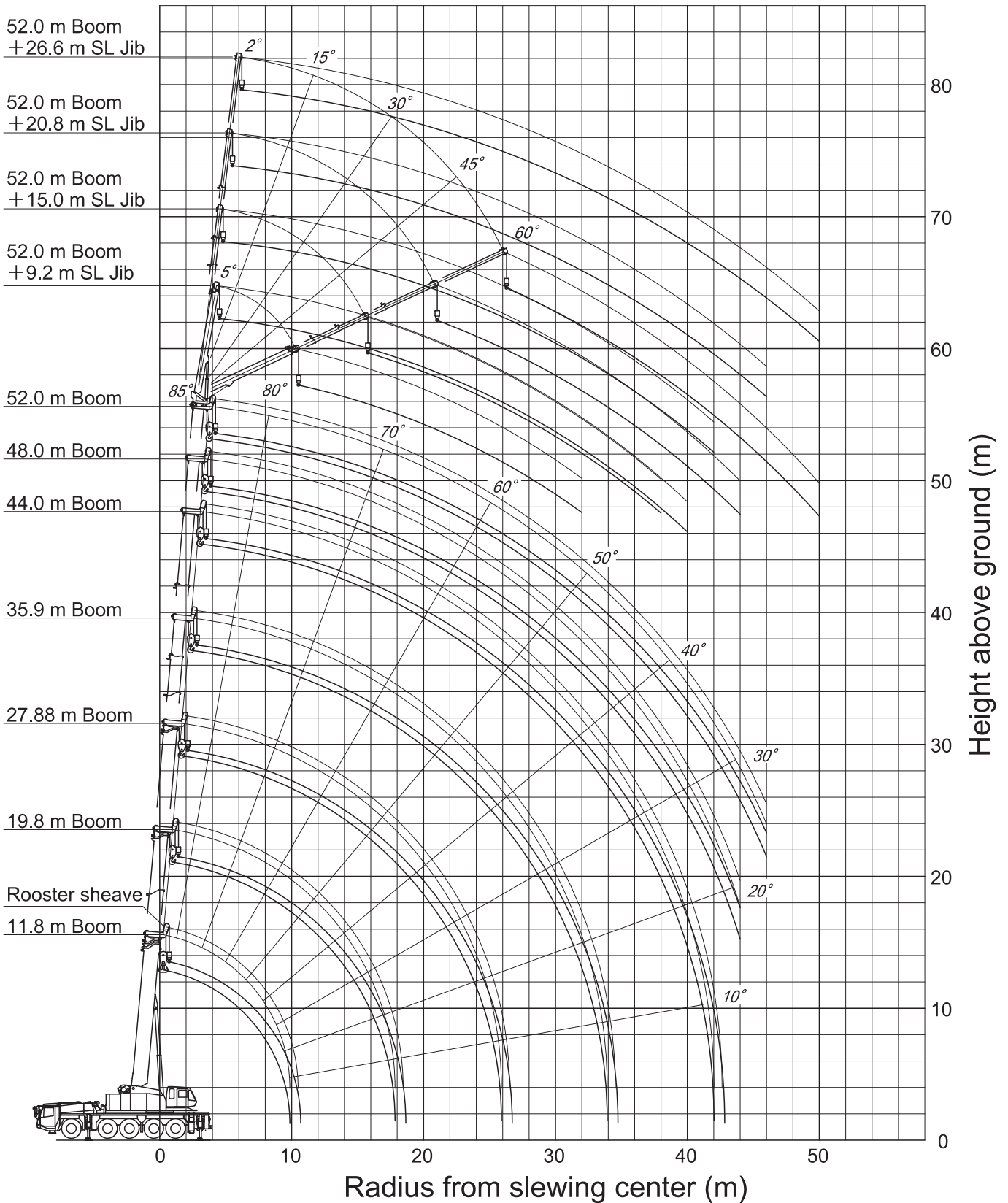
# Working ranges for crane with heavy load unit



Note: This diagram does not include deflection of Boom.

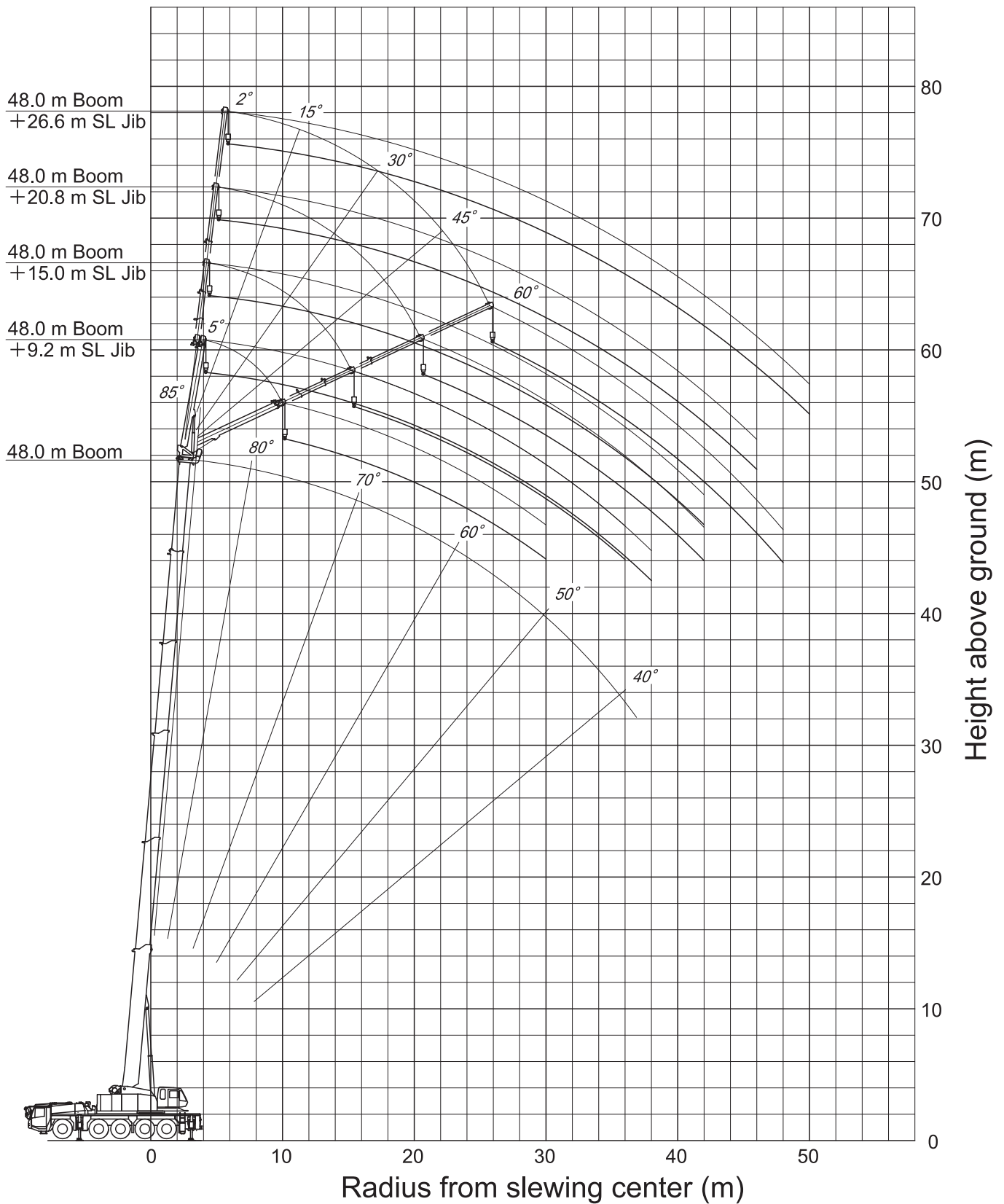


# Super Luffing Jib (SL Jib) WORKING RANGE [52.0 m Boom + 9.2 m - 26.6 m SL Jib]



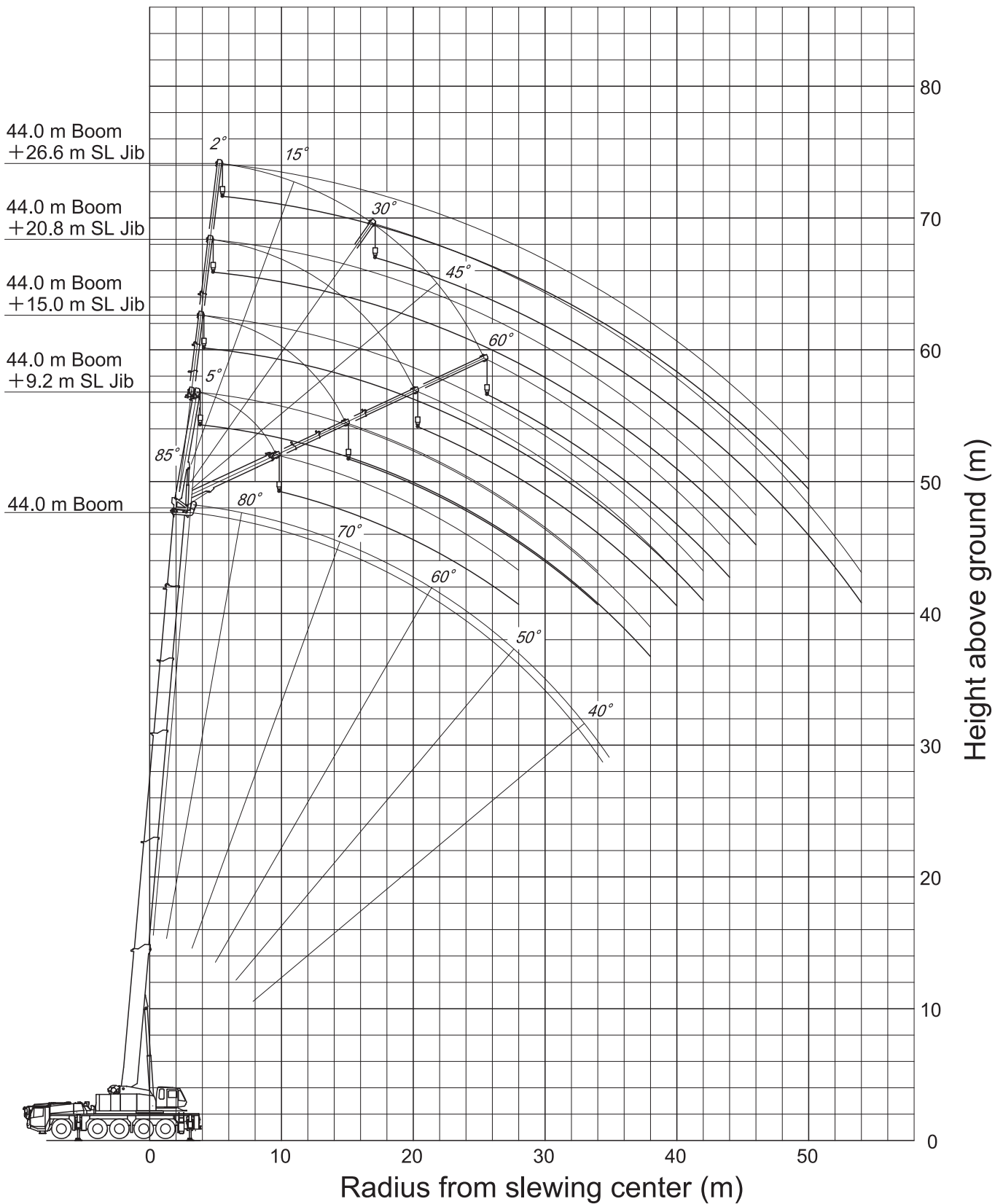
Notes: 1. This diagram does not include deflection of Boom and SL jib.  
2. This diagram is for Specification A1.

# Super Luffing Jib (SL Jib) WORKING RANGE [48.0 m Boom + 9.2 m - 26.6 m SL Jib]



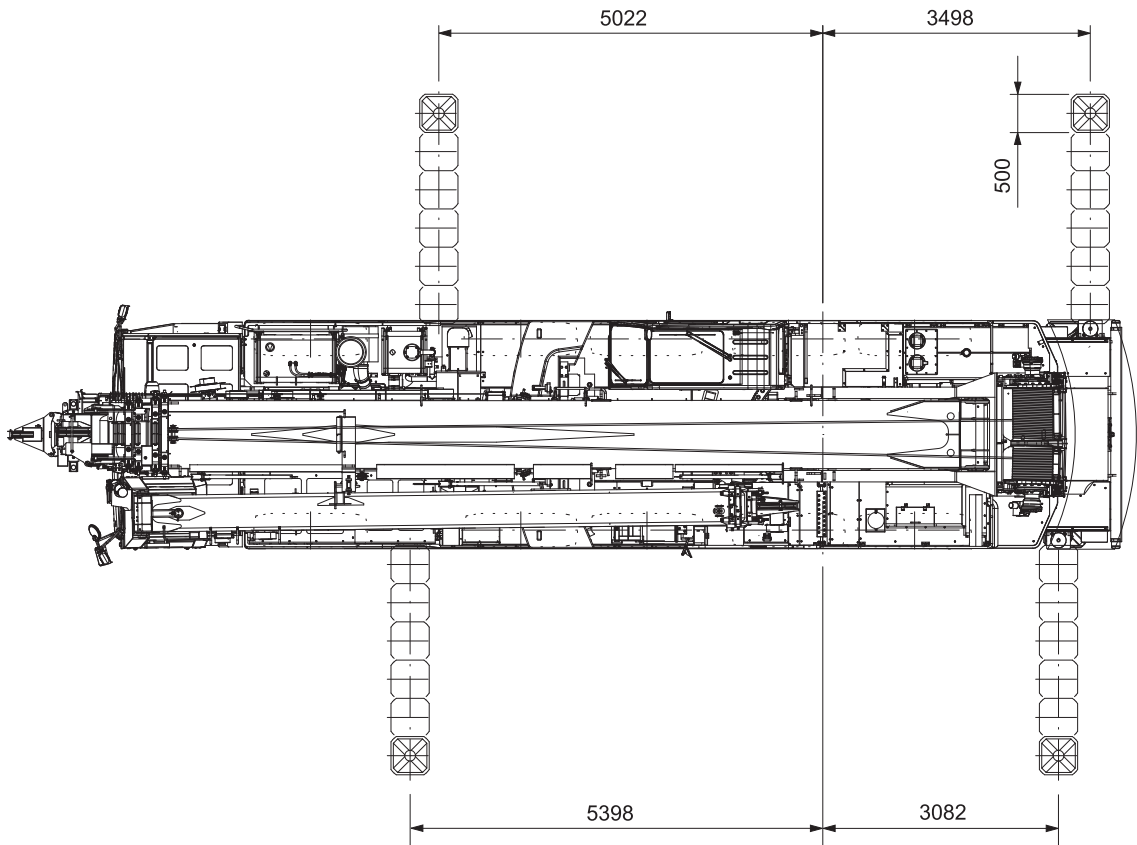
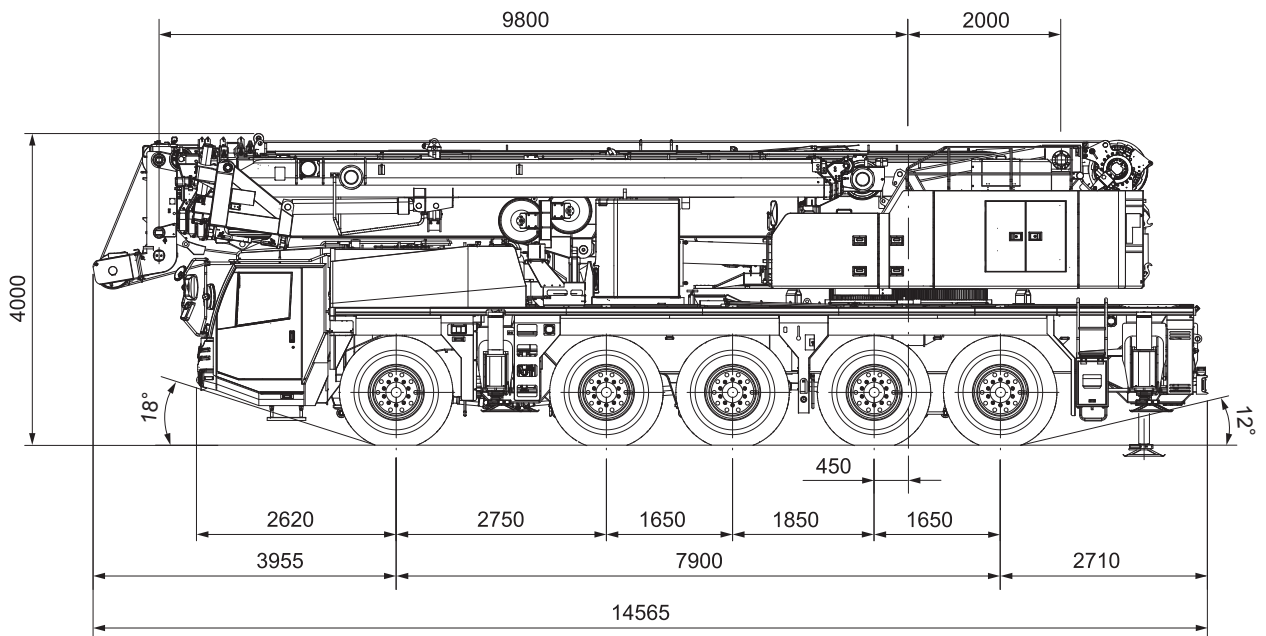
Notes: 1. This diagram does not include deflection of Boom and SL jib.  
2. This diagram is for Specification A1.

# Super Luffing Jib (SL Jib) WORKING RANGE [44.0 m Boom + 9.2 m - 26.6 m SL Jib]



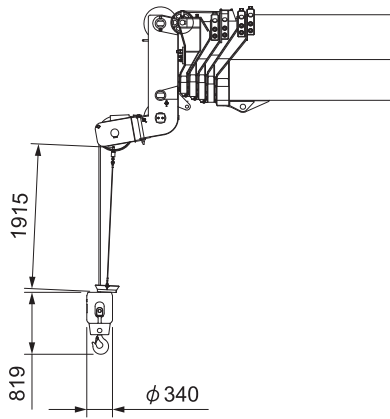
Notes: 1. This diagram does not include deflection of Boom and SL jib.  
2. This diagram is for Specification A1.

# Overall view

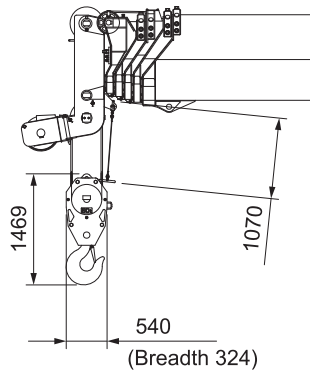


Reduced scale: 1/100 unit(mm)

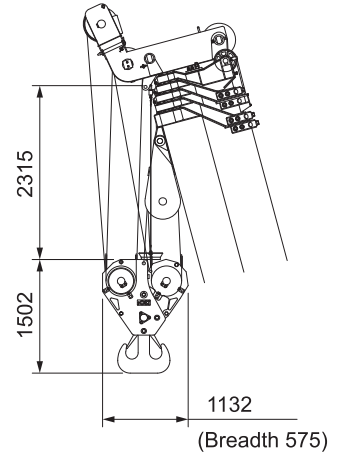
# Overall view



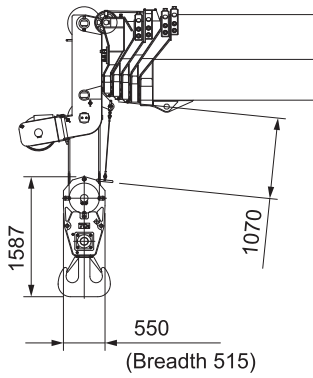
7.8 ton hook



50 ton hook

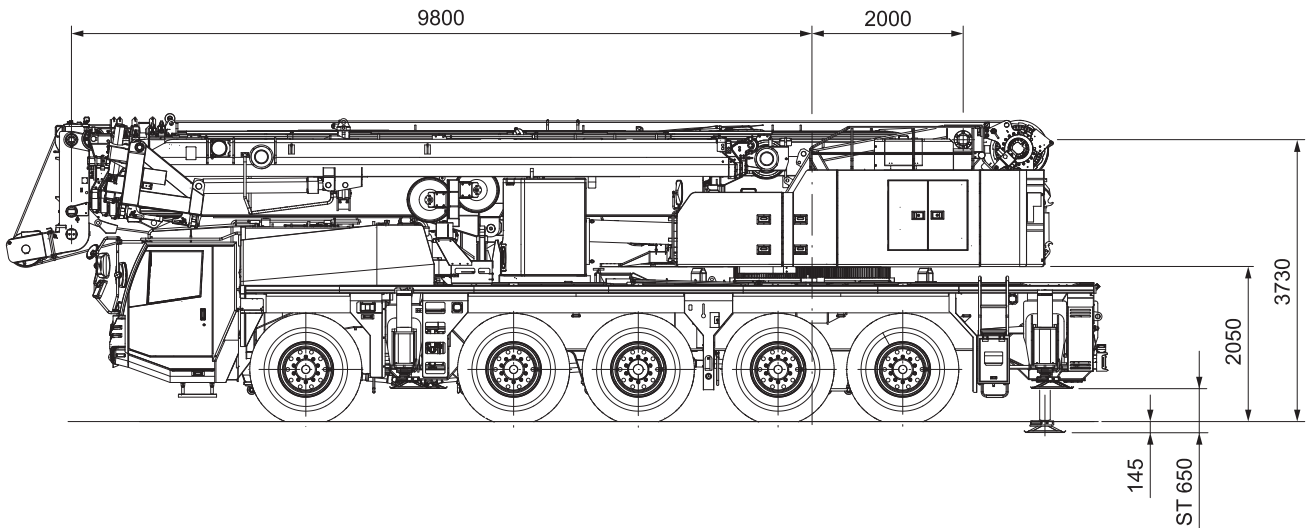


130 ton hook



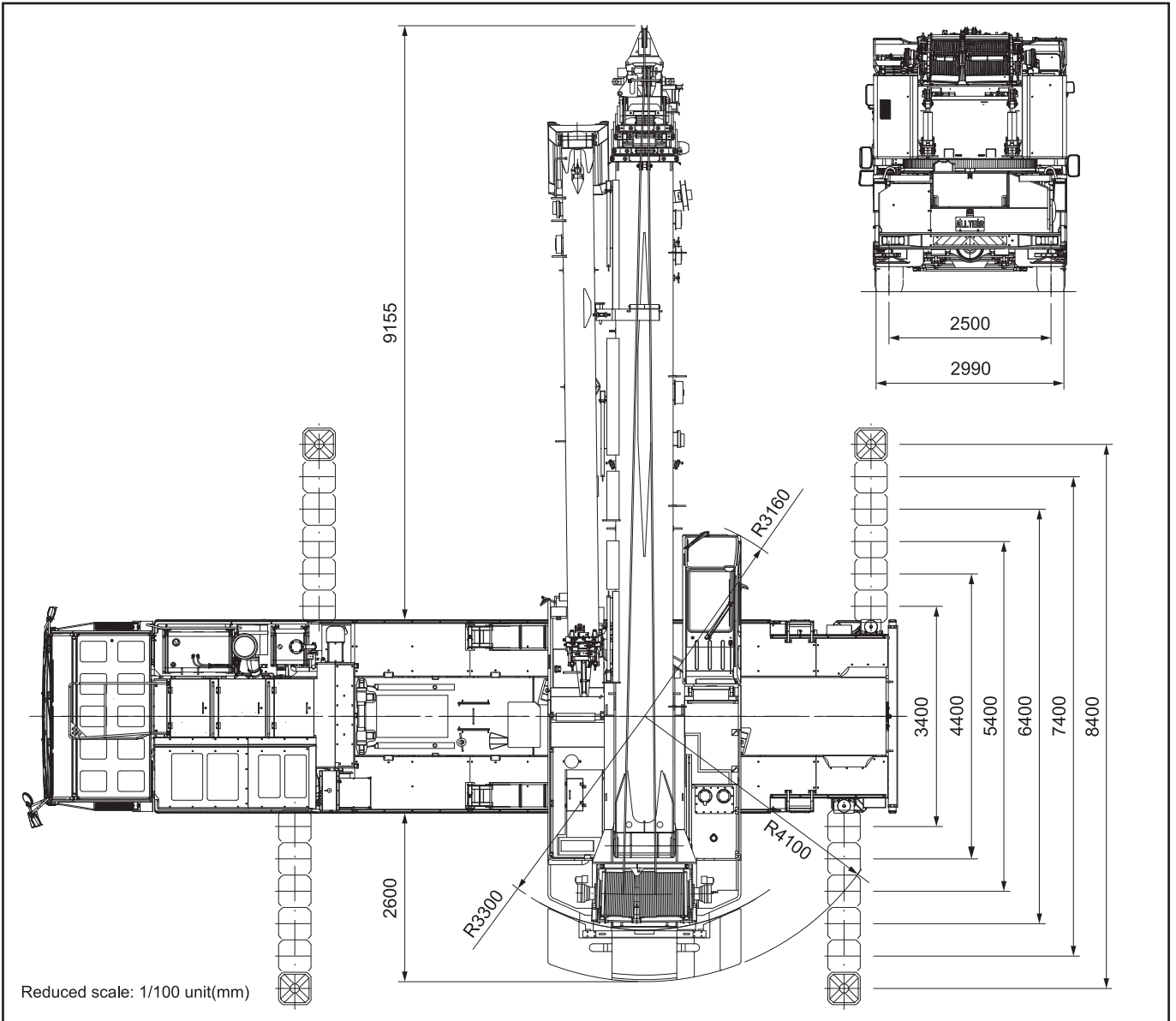
70 ton hook

Boom derricking / lowering angle  
0° - 85°

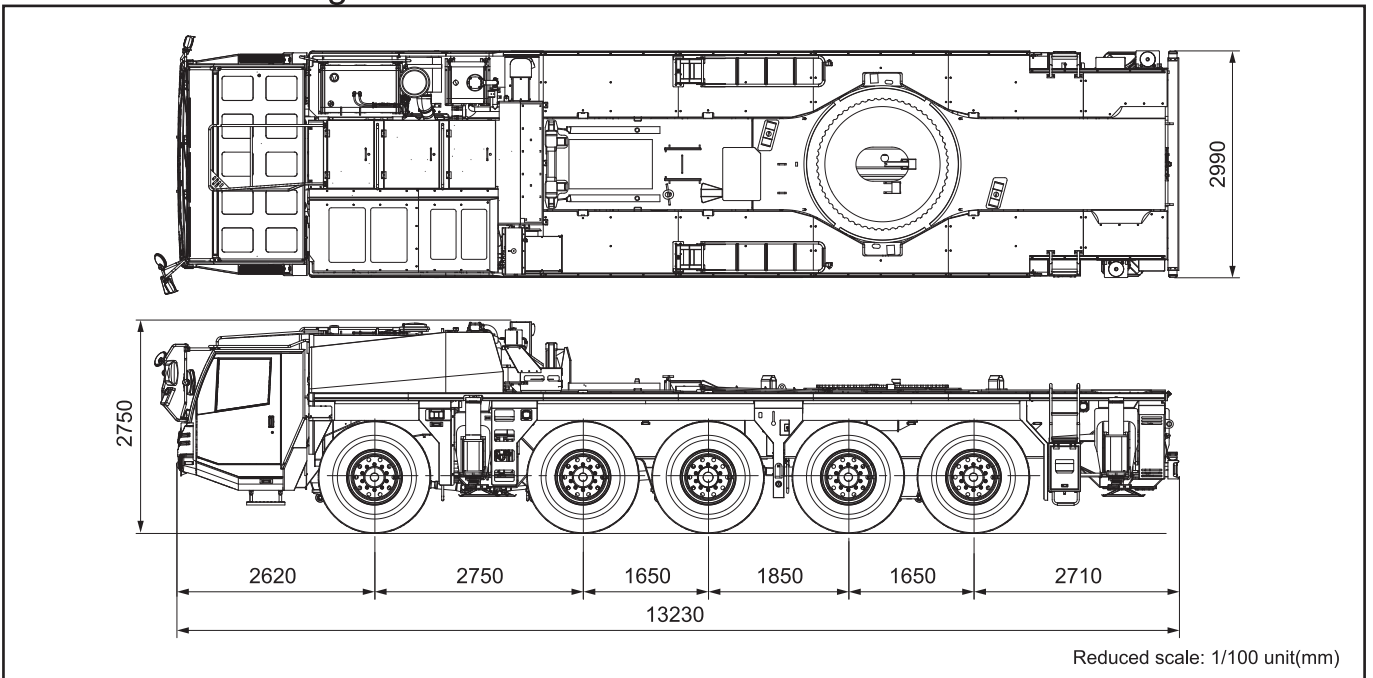


Reduced scale: 1/100 unit(mm)

Overall view

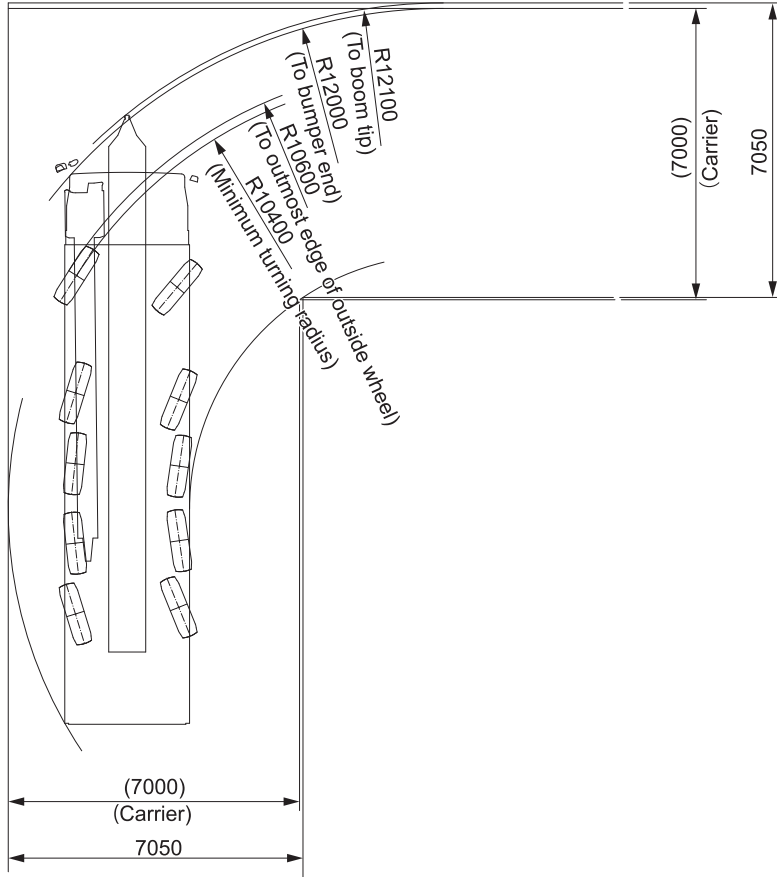


Public road driving conditions

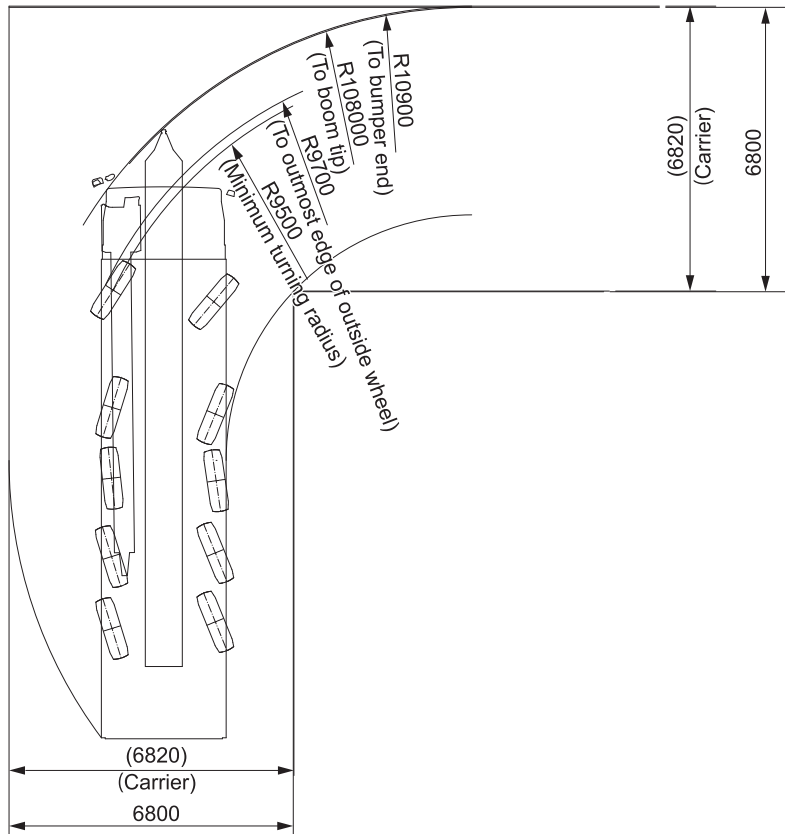


■ Minimum right - angle passage width for machine with jib

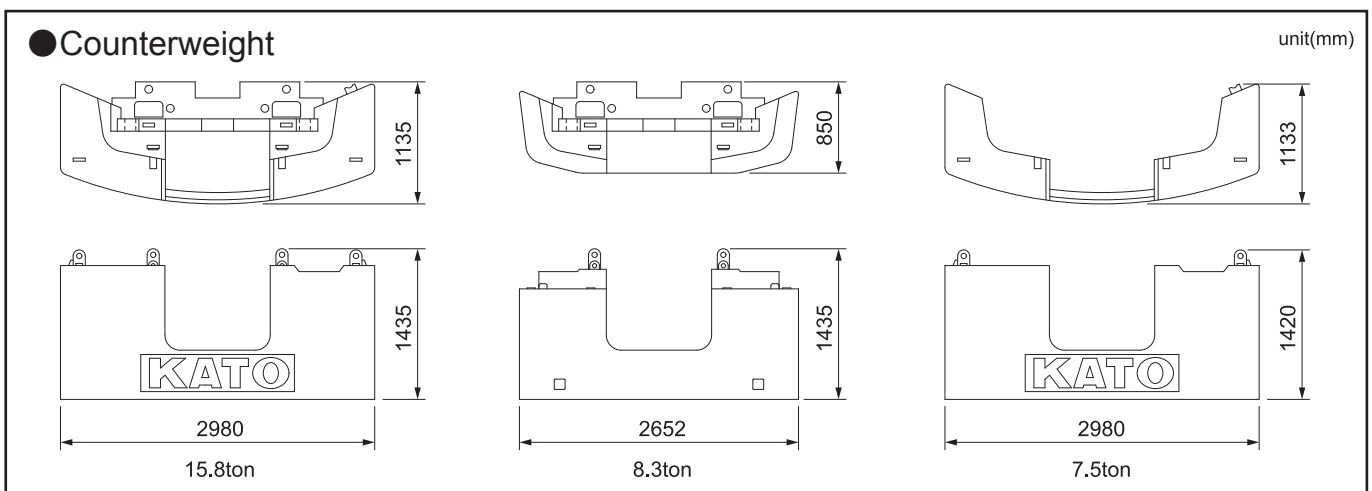
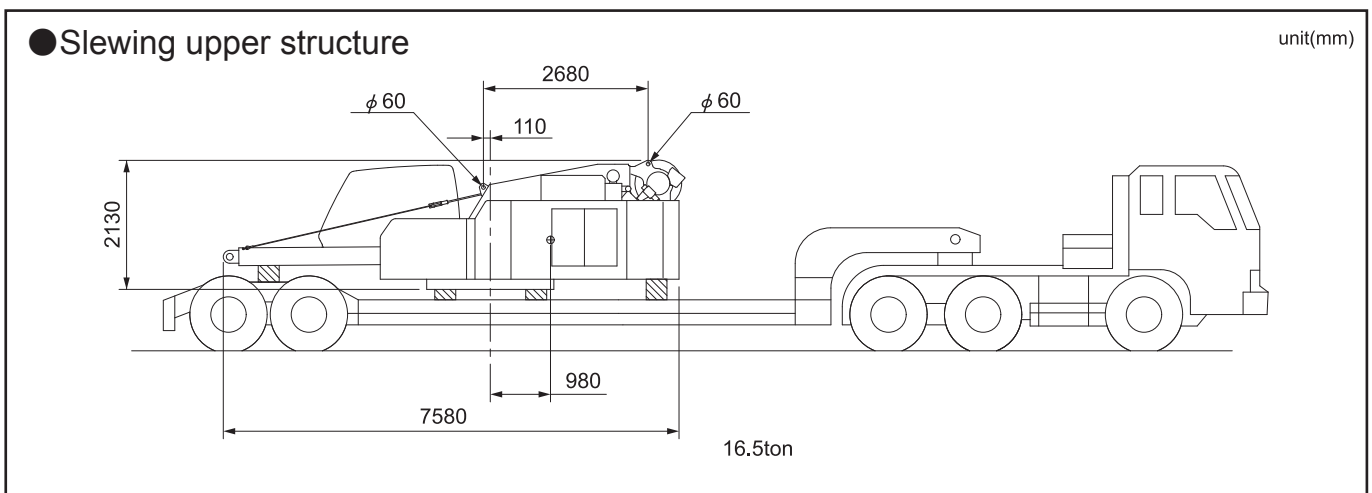
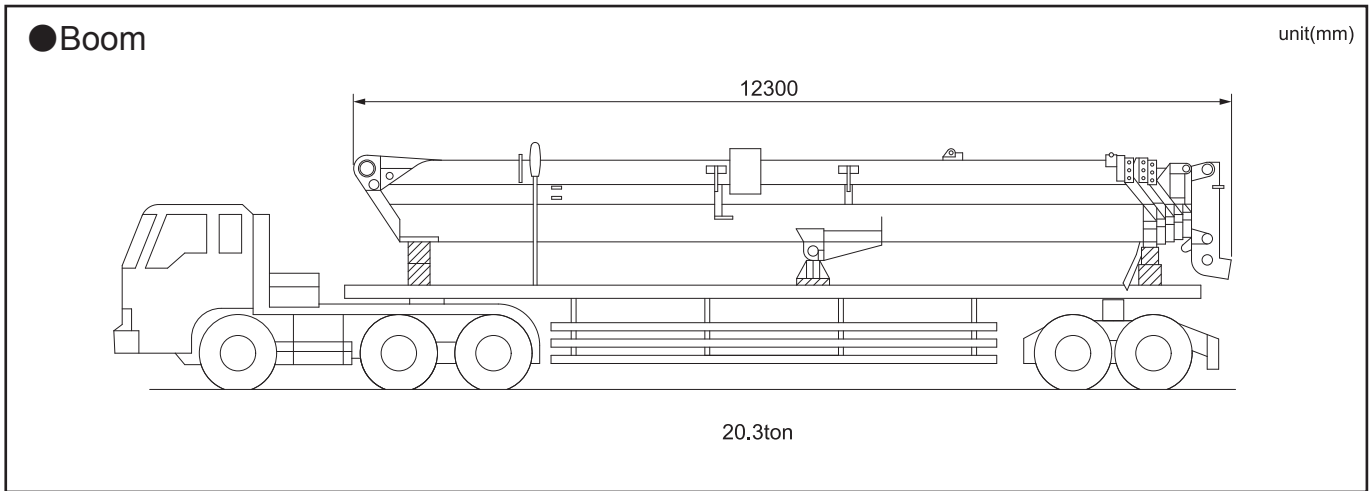
● When driving within work site



● When driving within work site (8-wheel steering)



## ■ Dimensions and weight



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

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We acquired the "ISO 9001" certification which is an international standard for quality assurance.