TADANO GR500EXL ROUGH TERRAIN CRANE

51TON
BOOM 42M

ASIA® GROUP
ASIAGROUP

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TADANO

Provisional specifications

TADANO ROUGH TERRAIN CRANE

MODEL : GR-500EXL

(Right-hand steering)

GENERAL DATA

CRANE CAPACITY		51,000 kg at 2.5 m (50,000 kg at 3.0 m)
BOOM		5-section, 11.1 m — 42.0 m
DIMENSION		
Overall length	approx.	13,395 mm
Overall width	approx.	2,960 mm
Overall height	approx.	3,865 mm (Boom Angle:-1°)
	approx.	4,040 mm (Boom Angle:LEVEL)
MASS		
Gross vehicle mass	approx.	38,300 kg
-front axle	approx.	18,500 kg
-rear axle	approx.	19,800 kg
PERFORMANCE		
Max. traveling speed	computed	48 km/h
Gradeability (tan θ)	computed	65 % (at stall)
		*30 %

* Machine should be operated within the limit of engine crankcase design (17° : MITSUBISHI 6M60-TL).

Specifications are subject to change without notice.

CRANE SPECIFICATIONS

MODEL	GR-500EXL
CAPACITY	51,000 kg at 2.5 m (50,000 kg at 3.0 m)
BOOM	Five section full power partially synchronized telescoping boom of hexagonal box construction with 2 sheaves at boom head. The synchronization system consists of a double acting telescope cylinder, extension cables and retraction cables. Hydraulic cylinder fitted with holding valves. Fully retracted length. . . . . 11.1 m Fully extended length. . . . . .42.0 m Extension speed. . . . . .30.9 m in 146 s
JIB	Two staged telescopic boom extension. Triple offset ($5^o/25^o/45^o$) type. Stows alongside base boom section.. Single sheave at jib head. Length. . . . . .8.0 m and 12.7 m
SINGLE TOP (AUXILIARY BOOM SHEAVE)	Single sheave. Mounted to main boom head for single line work.
ELEVATION	By a pair of double-acting hydraulic cylinders, fitted with holding valve. Boom angle . . . . . –1° to 80.5^o Boom raising speed. . . . . 20° to 60° in 30 s
HOIST - Main winch	Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and hoisting. Equipped with automatic brake (Neutral brake) and counterbalance valve. Controlled independently of auxiliary winch. Single line pull. . . . . 44.1 kN {4,500 kgf} Single line speed. . . . . 132 m/min (at the 4th layer) Wire rope. . . . . No-spin type Diameter x length. . . . . .16 mm x 225 m
HOOK BLOCK (Optional) - 51 t capacity	6 sheaves, swivel type hook with safety latch.
HOOK BLOCK (Optional) - 25 t capacity	3 sheaves, swivel type hook with safety latch.

HOIST -
Auxiliary winch

Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and hoisting. Equipped with automatic brake (Neutral brake) and counterbalance valve. Controlled independently of main winch.

Single line pull. . . . . 44.1 kN {4,500 kgf}
Single line speed. . . . . 124 m/min (at the 3rd layer)
Wire rope. . . . . No-spin type
Diameter x length. . . . . .16 mm x 117 m

HOOK BLOCK -
4.5 t capacity

Swivel type hook with safety latch for single line use.

SLEWING

Hydraulic axial piston motor driven through planetary speed reducer.
Continuous 360° full circle slewing on ball bearing slew ring.
Equipped with manually locked/released slewing brake.

Slewing speed. . . . . 2.1 min^{-1} {rpm}

HYDRAULIC SYSTEM

Pumps. . . . . 2 variable piston pumps for telescoping, elevating and winches.
Tandem gear pump for steering, slewing and optional equipment.

Control valves. . . . .Multiple valves actuated by pilot pressure with integral pressure relief valves.

Circuit. . . . . Equipped with air cooled type oil cooler.
Oil pressure appears on AML display for main circuit.

Hydraulic oil tank capacity. . .
approx. 690 liters

Filters. . . . . Return line filter

CRANE CONTROL

By 4 control levers for slewing, boom hoist, main winch, boom telescoping or auxiliary winch with a control pedal for boom telescoping based on ISO standard layout. Control lever stands can change neutral positions and tilt for easy access to cab.

CAB

Both crane and drive operations can be performed from one cab mounted on rotating superstructure. One sided one-man type, steel construction with sliding door access and tinted safety glass windows opening at side. Door window is powered control.
Operator's 3 way adjustable seat with headrest and armrest.
Air conditioner (Hot water heater and cooler).

TADANO Automatic Moment Limiter (Model: AML-C)

Main unit in crane cab gives audible and visual warning of approach to overload. Automatically cuts out crane motions before overload. With working range (load radius and/or boom angle and/or tip height and/or slewing range) limit function.
Automatic Speed Reduction and Slow Stop function on slewing.
Following functions are displayed.

- Load as percentage
- Number of parts of line of rope
- Boom angle
- Boom length
- Load radius
- Outriggers position
- On-tire indicator
- Actual hook load
- Permissible load
- Boom position indicator
- Potential hook height
- Slewing angle
- Main hydraulic oil pressure
- Jib length and jib offset angle (only when jib operation)

OUTRIGGERS

Hydraulically operated H-type outriggers. Each outrigger controlled simultaneously or independently from the cab.
Equipped with sight level gauge. Floats mounted integrally with the jacks retract to within vehicle width.
All cylinders fitted with pilot check valves.
Crane operation with different extended length of each outrigger.
Equipped with extension width detector for each outrigger.

Extended width
Maximum.. . . . . 7,000 mm
Middle. . . . . 6,500 mm
Middle. . . . . 5,000 mm
Minimum. . . . . 2,480 mm
Float size (Diameter). . . . . 400 mm

COUNTERWEIGHT

Integral with swing frame
Mass. . . . . 5,300 kg

NOTE : Each crane motion speed is based on unladen conditions.

CARRIER SPECIFICATIONS

TYPE	Rear engine, right-hand steering, driving axle 2-way selected type (by manual switch). 4 x 2 front drive 4 x 4 front and rear drive
FRAME	High-tensile steel, all welded mono-box construction.
ENGINE	Model. . . . MITSUBISHI 6M60-TL Type. . . . . 4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine. Piston displacement. . . . . 7,545 cm^3 Bore x stroke. . . . . 118 mm x 115 mm Max. output. . . . . .200 kW at 2,600 min^{-1} {rpm} Max. torque. . . . . .785 N-m at 1,400 min^{-1} {rpm}
TRANSMISSION	Electronically controlled full automatic transmission. Torque converter driving full powershift with driving axle selector. 6 forward and 2 reverse speeds. 4 speeds - High range - 2 wheel drive ; 4 wheel drive 4 speeds - Low range - 4 wheel drive
AXLES	Front. . . . . Full floating type, steering and driving axle with planetary reduction. Rear. . . . . Full floating type, steering and driving axle with planetary reduction. inter-wheel differential lock.
STEERING	Hydraulic power steering controlled by steering wheel. Three steering modes available: 2-wheel front 4-wheel coordinated 4-wheel crab
SUSPENSION	Front. . . . . Semi-elliptic leaf springs Rear. . . . . Semi-elliptic leaf springs.
BRAKE SYSTEM	Service/Emergency. . . Air over hydraulic disc brakes on all 4 wheels. Parking…Spring applied-air released brake acting on input shaft of f ront axle. Auxiliary. . .Electro-pneumatic operated exhaust brake.
ELECTRIC SYSTEM	24 V DC. 2 batteries of 12 V - 120 Ah capacity.
FUEL TANK CAPACITY	300 liters
TIRES	Front.....505/95R25, Single x 2 Air pressure: 800 kPa Rear.....505/95R25, Single x 2 Air pressure: 800 kPa
TURN RADIUS	Min. turning radius (at center of extreme outer tire) 2-wheel steering. . . . . 10.7 m 4-wheel steering. . . . . 6.3 m

EQUIPMENT

STANDARD EQUIPMENT

Automatic moment limiter (AML)
External lamp (AML)
Pendant type over-winding cutout
Winch automatic fail-safe brake
Winch drum rotation indicator (Audible and Visual type)
Winch drum mirror
Hook safety latch
Pilot check valves
Holding valves
Counterbalance valves
Hydraulic pressure relief valves
Slewing brake
Slewing lock
Boom angle indicator
Boom telescoping foot pedal
Outrigger extension width detector
Air conditioner (Hot water heater and cooler)
Sight level gauge
Hydraulic oil cooler
Electric windshield wiper and washer
Roof window wiper and washer
Power window (Cab door)
Tachometer/Speedometer
3 way adjustable cloth seat with headrest and armrest
Cab floor mat
Sun visor (Front and roof)
Automatic drive system
Transmission neutral position engine start
Overshift prevention
Parking braked travel warning
Tilt-telescope steering wheel
Back-up alarm
Air cleaner dust indicator
Air dryer
Water separator with filter
Engine over-run alarm
Inter wheel differential lock (Rear)
Towing eyes - front and rear
Telematics (machine data logging and monitoring system) with - HELLO-NET via internet (availability depends on countries)
Fuel consumption monitor
Eco mode system
Working Light.

OPTIONAL EQUIPMENT

Over-unwinding prevention
Cable follower
Emergency steering
Tire inflation kit
Hook block – 51 t capacity (6 sheaves, swivel type with safety latch. Mass : approx. 460 kg)
Hook block – 25 t capacity (3 sheaves, swivel type with safety latch. Mass : approx. 280 kg)
Attachment sheave for over 47 t capacity
Anemometer
Beacon lamp
Electric greaser
Seat belt

HOISTING PERFORMANCE

Layer	Main or auxiliary hoist	Main drum grooved lagging	auxiliary drum grooved lagging
	0.32 m drum	16 mm wire rope	16 mm wire rope
	Line pulls - Available	Total wire rope	Total wire rope
	N (kgf)	Meters	Meters
1st	56,600 (5,710)	41.8	29.1
2nd	51,600 (5,210)	87.1	60.7
3rd	47,100 (4,760)	135.9	94.8
4th	43,600 (4,400)	188.2	131.4
5th	40,400 (4,080)	244.1	170.5
6th[1]	37,600 (3,800)	303.5	212.1

[1]Seventh layer of wire rope are not recommended for hoisting operations.

RATED LIFTING CAPACITIES
ISO 4305

ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD
360° ROTATION (Unit: x 1,000 kg)

A / B	11.1 m		15.0 m		18.8 m				26.6 m				34.3 m				38.1 m		42.0 m	
	C		C		C		C		C		C		C		C		C		C	
2.5	67.6	51.0																		
3.0	64.7	50.0	71.8	30.0	75.9	20.0	75.6	13.0												
3.5	61.7	45.0	69.7	30.0	74.5	20.0	74.0	13.0												
4.0	58.6	41.6	67.6	30.0	72.9	20.0	72.6	13.0												
4.5	55.4	37.7	65.5	30.0	71.3	20.0	70.9	13.0	77.2	13.0	77.2	13.0								
5.0	52.1	33.5	63.3	29.5	69.7	20.0	69.3	13.0	76.2	13.0	76.1	13.0								
5.5	48.5	30.9	61.1	27.4	68.0	20.0	67.6	13.0	75.1	13.0	74.9	13.0								
6.0	44.7	27.5	58.8	25.6	66.3	20.0	65.9	13.0	74.0	13.0	73.8	12.3	78.5	13.0	78.1	8.0				
6.5	40.6	24.8	56.5	24.0	64.8	19.7	64.2	13.0	73.0	13.0	72.7	11.6	77.8	13.0	77.3	8.0				
7.0	36.1	22.5	54.1	22.1	63.0	18.4	62.5	13.0	71.9	13.0	71.5	11.0	76.9	13.0	76.6	8.0				
7.5	31.0	20.5	51.6	20.1	61.3	17.3	60.7	13.0	70.7	13.0	70.3	10.5	76.3	12.7	75.7	8.0	77.5	8.0		
8.0	24.7	18.8	49.0	18.4	59.5	16.4	58.9	13.0	69.7	13.0	69.2	10.0	75.4	12.1	75.0	8.0	76.8	8.0	78.5	8.0
9.0			43.4	15.7	55.9	14.6	55.2	13.0	67.4	12.9	66.8	9.1	73.6	11.1	73.3	7.5	75.4	8.0	77.3	8.0
10.0			37.1	12.8	51.6	12.6	51.3	13.0	65.0	11.6	64.4	8.3	71.8	10.2	71.5	6.8	73.9	7.4	76.1	8.0
11.0			29.6	10.6	47.5	10.4	47.1	12.5	62.5	10.5	61.9	7.6	70.0	9.3	69.7	6.2	72.3	6.8	74.7	7.4
12.0			19.1	8.8	43.0	8.6	42.6	10.7	60.0	9.6	59.4	7.0	68.2	8.6	67.8	5.7	70.7	6.2	73.3	6.8
13.0					38.0	7.3	37.6	9.2	57.4	8.2	56.8	6.5	66.4	7.9	66.0	5.2	69.1	5.8	71.9	6.3
14.0					32.3	6.2	32.0	8.1	54.5	7.0	54.1	6.0	64.5	7.4	64.1	4.8	67.5	5.3	70.4	5.9
16.0					15.1	4.3	15.1	6.3	48.8	5.3	48.4	5.3	60.6	5.8	60.2	4.1	64.1	4.6	67.4	5.1
18.0									42.5	4.0	42.1	4.7	56.4	4.5	56.2	3.6	60.6	4.0	64.5	4.5
20.0									35.2	3.1	34.8	4.2	52.1	3.5	51.9	3.2	57.0	3.6	61.3	3.85
22.0									26.0	2.35	25.6	3.5	47.3	2.75	47.3	2.8	53.2	3.1	57.9	3.1
24.0									8.6	1.7	8.6	2.9	42.3	2.1	42.3	2.5	49.2	2.7	54.3	2.5
26.0													36.8	1.65	36.8	2.2	44.8	2.1	50.7	2.0
28.0													30.1	1.25	30.3	2.0	39.9	1.7	46.7	1.55
30.0													21.5	0.9	21.8	1.7	34.5	1.3	42.6	1.2
32.0																	28.2	1.0	37.9	0.9
34.0																	20.1	0.7	32.8	0.6
D	0																		27	

Telescoping conditions (%)

Telescoping mode	I, II	I	I	II	I	II	I	II	II	I, II
2nd boom	0	50	100	0	100	0	100	0	50	100
3rd boom	0	0	0	33	33	66	66	100	100	100
4th boom	0	0	0	33	33	66	66	100	100	100
Top boom	0	0	0	33	33	66	66	100	100	100

LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS FULLY EXTENDED
7.3 m SPREAD 360° ROTATION

A / C	11.1 m		15.0 m		18.8 m				26.6 m				34.3 m				38.1 m			
	B		B		B		B		B		B		B		B		B			
0°																				
Telescoping mode	I, II		I		I		II		I		II		I		II		II			

A :Boom length(m)
B :Load radius(m)
C :Loaded boom angle (°)
D :Minimum boom angle (°) for indicated length (no load)

RATED LIFTING CAPACITIES

ISO 4305

ON OUTRIGGERS FULLY EXTENDED 7.0 m SPREAD
360° ROTATION

C	42.0 m Boom + 8.0 m Jib					
	5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80	9.7	4.5	12.3	3.37	13.8	2.2
79	10.7	4.5	13.2	3.25	14.6	2.2
78	11.7	4.5	14.0	3.13	15.5	2.2
77	12.7	4.5	14.9	3.02	16.3	2.18
76	13.6	4.27	15.7	2.92	17.1	2.15
74	15.3	3.87	17.4	2.73	18.7	2.1
72	17.0	3.53	19.0	2.55	20.3	2.05
70	18.6	3.25	20.6	2.39	21.8	2.0
68	20.2	2.97	22.1	2.25	23.3	1.91
65	22.6	2.62	24.4	2.06	25.4	1.8
63	24.1	2.42	25.9	1.96	26.8	1.73
60	26.3	2.15	28.0	1.82	28.8	1.64
58	27.8	1.92	29.4	1.74	30.1	1.58
55	29.7	1.51	31.3	1.37	31.9	1.3
53	31.0	1.27	32.5	1.14	33.0	1.09
50	32.8	0.95	34.2	0.85	34.6	0.82
47	34.5	0.68	35.8	0.6	36.1	0.58
45	35.6	0.52	36.8	0.46		

C	42.0 m Boom + 12.7m Jib					
	5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80	11.3	2.8	14.9	1.4	17.7	1.0
79	12.3	2.8	15.9	1.4	18.6	1.0
78	13.3	2.8	16.8	1.4	19.4	1.0
77	14.2	2.8	17.8	1.4	20.3	1.0
76	15.3	2.8	18.7	1.4	21.1	1.0
74	17.1	2.8	20.5	1.4	22.8	1.0
72	19.0	2.65	22.3	1.4	24.4	1.0
70	20.9	2.43	24.0	1.4	26.0	1.0
68	22.7	2.23	25.7	1.36	27.6	1.0
65	25.4	1.98	28.2	1.29	29.8	1.0
63	27.1	1.84	29.8	1.26	31.3	1.0
60	29.6	1.66	32.1	1.21	33.3	1.0
58	31.2	1.56	33.6	1.18	34.7	1.0
55	33.5	1.24	35.7	1.13	36.5	0.99
53	34.9	1.01	37.1	0.96	37.7	0.89
50	36.7	0.73	38.8	0.71	39.3	0.66
47	38.5	0.49	40.4	0.49	40.8	0.46

ON OUTRIGGERS FULLY EXTENDED 7.0 m SPREAD
360° ROTATION

C	38.1 m Boom(telescoping mode I) + 8.0 m Jib					
	5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80	8.6	4.5	11.2	3.37	12.8	2.2
79	9.5	4.5	12.0	3.25	13.5	2.2
78	10.4	4.5	12.8	3.13	14.3	2.2
77	11.2	4.5	13.5	3.02	15.0	2.18
76	12.0	4.27	14.3	2.92	15.8	2.15
74	13.6	3.87	15.8	2.73	17.2	2.1
72	15.1	3.53	17.3	2.55	18.6	2.05
70	16.6	3.25	18.7	2.39	20.0	2.0
68	18.1	2.97	20.1	2.25	21.3	1.91
65	20.3	2.62	22.2	2.06	23.3	1.8
63	21.7	2.42	23.5	1.96	24.5	1.73
60	23.7	2.15	25.5	1.82	26.3	1.64
58	25.0	2.0	26.7	1.74	27.5	1.58
55	27.0	1.81	28.5	1.6	29.2	1.51
53	28.2	1.7	29.7	1.51	30.2	1.44
50	30.0	1.53	31.3	1.4	31.7	1.35
47	31.6	1.37	32.9	1.28	33.2	1.23
45	32.7	1.19	33.9	1.12	34.0	1.08
43	33.7	1.04	34.8	0.98		
40	35.1	0.84	36.1	0.79		
37	36.4	0.67	37.2	0.63		
35	37.3	0.57	38.0	0.54		
33	38.0	0.48	38.7	0.46		
30	39.1	0.36				

C	38.1 m Boom(telescoping mode I) + 12.7 m Jib					
	5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80	10.2	2.8	13.9	1.4	16.7	1.0
79	11.1	2.8	14.8	1.4	17.5	1.0
78	12.0	2.8	15.6	1.4	18.3	1.0
77	12.9	2.8	16.5	1.4	19.1	1.0
76	13.8	2.8	17.3	1.4	19.9	1.0
74	15.5	2.8	19.0	1.4	21.4	1.0
72	17.3	2.65	20.6	1.4	22.8	1.0
70	19.0	2.43	22.2	1.4	24.3	1.0
68	20.6	2.23	23.8	1.36	25.7	1.0
65	23.1	1.98	26.0	1.29	27.7	1.0
63	24.6	1.84	27.5	1.26	29.0	1.0
60	26.9	1.66	29.6	1.21	30.9	1.0
58	28.4	1.56	30.9	1.18	32.1	1.0
55	30.6	1.43	32.9	1.13	33.8	0.99
53	31.9	1.35	34.1	1.09	34.9	0.98
50	33.9	1.24	35.9	1.04	36.4	0.97
47	35.7	1.14	37.5	0.99	37.8	0.94
45	36.9	1.01	38.5	0.93	38.7	0.88
43	38.0	0.87	39.5	0.81		
40	39.4	0.7	40.8	0.65		
37	40.8	0.54	42.0	0.51		
35	41.7	0.46	42.7	0.43		
33	42.5	0.38	43.4	0.36		

ON OUTRIGGERS FULLY EXTENDED 7.0 m SPREAD
360° ROTATION

C	34.3 m Boom(telescoping mode I) + 8.0 m Jib					
	5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80	7.5	4.5	10.2	3.5	11.8	2.2
79	8.3	4.5	10.9	3.5	12.5	2.2
78	9.1	4.5	11.6	3.5	13.2	2.2
77	9.9	4.5	12.4	3.46	13.8	2.18
76	10.7	4.5	13.1	3.36	14.5	2.15
74	12.2	4.5	14.4	3.17	15.8	2.1
72	13.7	4.29	15.8	3.01	17.1	2.05
70	15.1	3.98	17.1	2.86	18.3	2.01
68	16.4	3.71	18.4	2.72	19.6	1.98
65	18.4	3.37	20.3	2.53	21.3	1.93
63	19.7	3.18	21.6	2.43	22.5	1.9
60	21.6	2.91	23.3	2.28	24.2	1.87
58	22.9	2.75	24.5	2.2	25.2	1.85
55	24.6	2.47	26.1	2.09	26.8	1.83
53	25.7	2.16	27.2	1.95	27.7	1.82
50	27.3	1.76	28.6	1.6	29.1	1.53
47	28.7	1.43	30.0	1.31	30.3	1.25
45	29.7	1.24	30.9	1.14	31.1	1.09
43	30.6	1.07	31.7	0.99		
40	31.9	0.85	32.9	0.78		
37	33.1	0.66	34.0	0.61		
35	33.9	0.55	34.7	0.51		
33	34.6	0.45	35.3	0.41		

C	34.3 m Boom(telescoping mode I) + 12.7 m Jib					
	5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80	9.1	2.8	12.9	1.4	15.8	1.0
79	9.9	2.8	13.7	1.4	16.5	1.0
78	10.8	2.8	14.5	1.4	17.2	1.0
77	11.6	2.8	15.3	1.4	17.9	1.0
76	12.4	2.8	16.1	1.4	18.6	1.0
74	14.0	2.8	17.6	1.4	20.0	1.0
72	15.6	2.65	19.1	1.4	21.4	1.0
70	17.2	2.43	20.5	1.4	22.7	1.0
68	18.7	2.26	22.0	1.36	24.0	1.0
65	21.0	2.04	24.0	1.29	25.8	1.0
63	22.4	1.92	25.4	1.26	27.0	1.0
60	24.6	1.77	27.3	1.21	28.7	1.0
58	25.9	1.68	28.6	1.18	29.8	1.0
55	27.9	1.57	30.3	1.13	31.3	0.99
53	29.2	1.5	31.5	1.12	32.3	0.98
50	31.0	1.42	33.1	1.09	33.7	0.98
47	32.7	1.19	34.6	1.06	35.0	0.98
45	33.8	1.03	35.6	0.93	35.8	0.88
43	34.8	0.88	36.4	0.8		
40	36.2	0.69	37.6	0.63		
37	37.5	0.52	38.7	0.48		
35	38.3	0.43	39.4	0.39		

C : boom angle (°)
R : Load radius (m)
W : Rated lifting capacity (Unit:×1,000 kg)

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NOTES FOR "ON OUTRIGGERS" TABLE

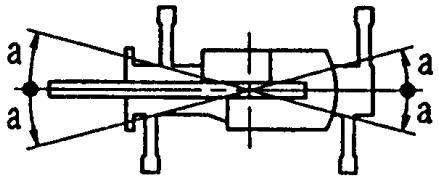
1. Rated lifting capacities shown in the table are based on condition that crane is set on firm level surface. Those above thick lines are based on crane strength and those below, on its stability.
2. Rated lifting capacities based on crane stability are according to ISO 4305.
3. The mass of the hook (460 kg for 51 t capacity, 280 kg for 25 t capacity,100 kg for 4.5 t capacty), slings and all similarly used load handling devices must be considered as part of the load and must be deducted from the lifting capacities.
4. For rated lifting capacity of single top, reduce the rated lifting capacities of relevant boom according to a weight reduction for auxiliary load handling equipment. Capacities of single top shall not exceed 4,500 kg including main boom hook mass and the net capacity must be so reduced.
5. Standard number of parts of line for each boom length is as shown below. Load per line should not surpass 44.1 kN {4,500 kgf} for main winch and auxiliary winch.

Boom length	11.1 m	11.1 m to 15.0 m		15.0 m to 18.8 m		18.8 m to 42.0 m	Single top Jib
Telescoping mode	I,II	I	II	I	II	I,II	I,II
Number of parts of line	*13/12	8	4	6	4	4	1

The lifting capacity data stowed in the AUTOMATIC MOMENT LIMITER (AML) is based on the standard number of parts of line listed in the chart.
Maximum lifting capacity is restricted by the number of parts of line of AUTOMATIC MOMENT LIMITER (AML).
*With attachment sheave (When the lifting capacity is over 47,000 kg).

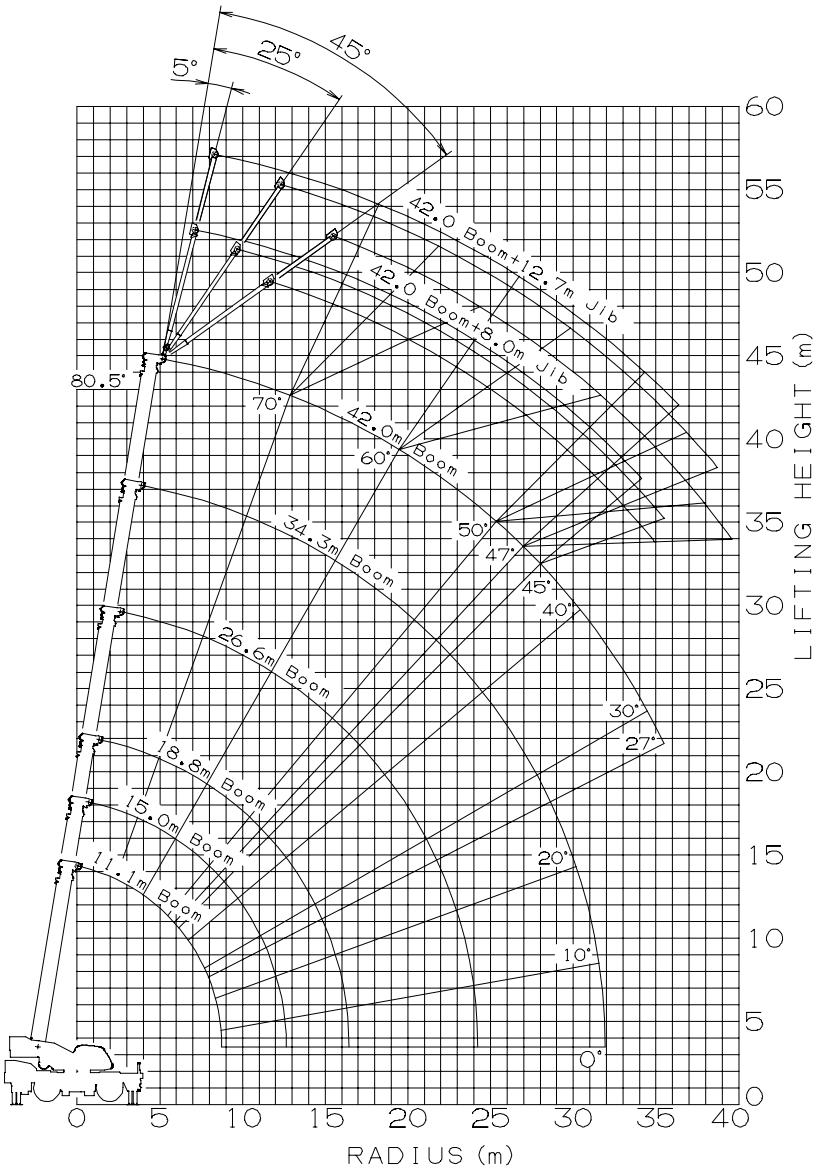
6. The lifting capacity for over-side area differs depending on the outrigger extension width. Work with the capacity corresponding to the extension width. The lifting capacities for over-front and over-rear areas are for “outriggers fully extended”. However, the areas (angle **a**) differ depending on the outrigger extension width.

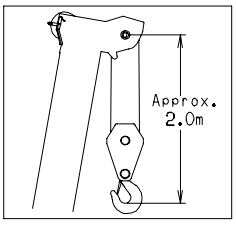
Outriggers extended width	6.5 m (middle)	5.0 m (middle)	2.48 m (minimum)
Angle **a**^{o}	45	25	5

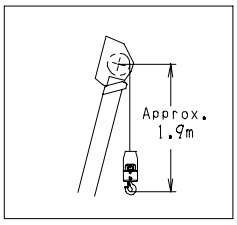


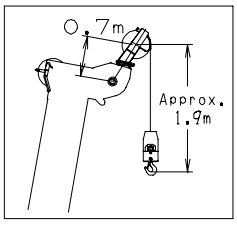
WORKING RANGE CHART

Telescoping mode I



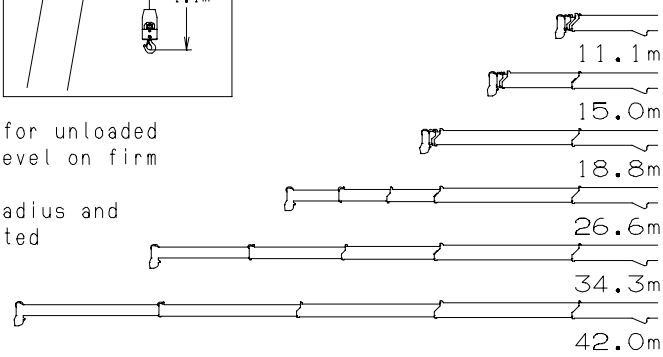






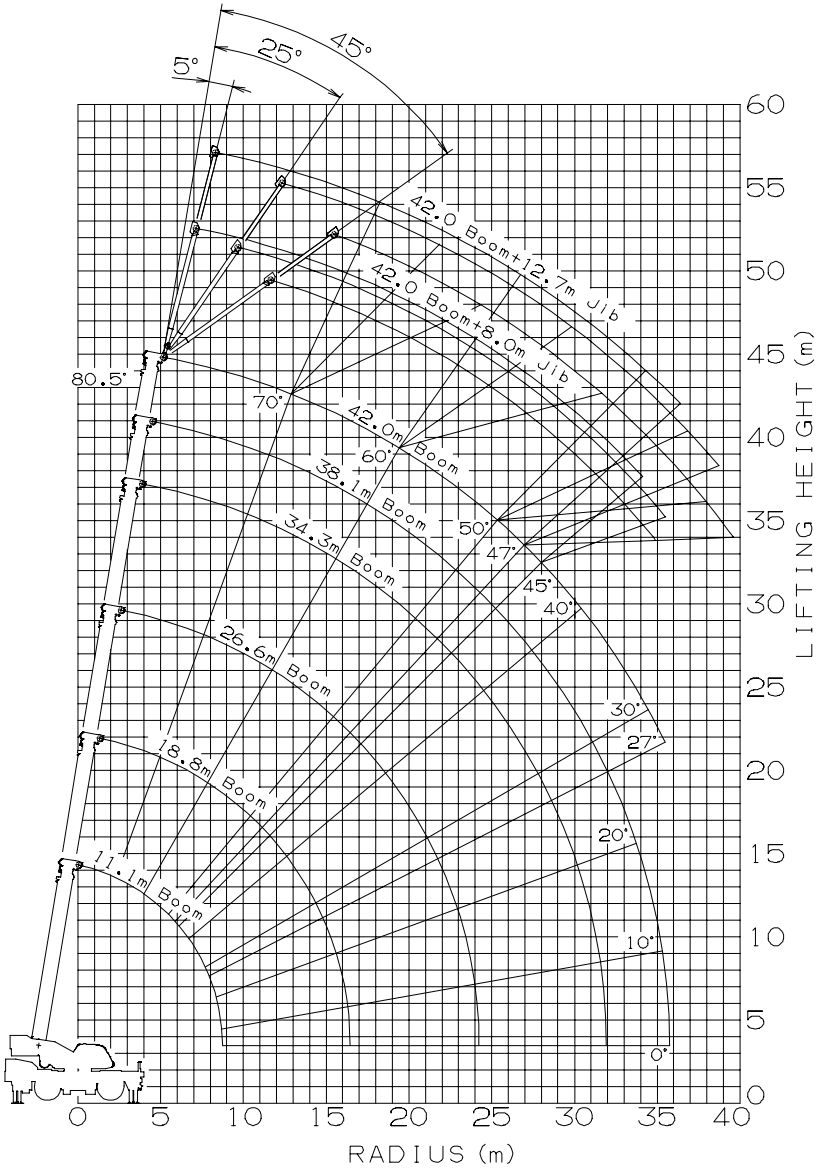
NOTE: 1. Boom and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface.
Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

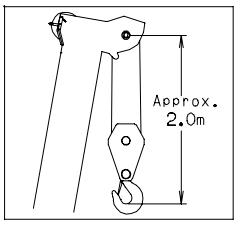
Boom Length

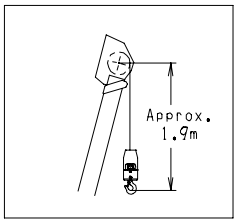


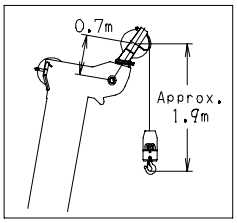
WORKING RANGE CHART

Telescoping mode Ⅱ



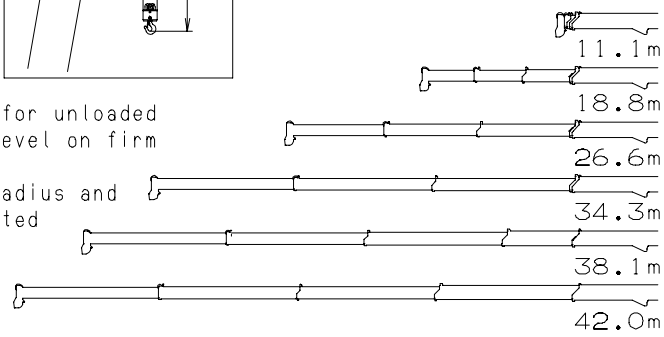






NOTE: 1. Boom and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface.
Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

Boom Length



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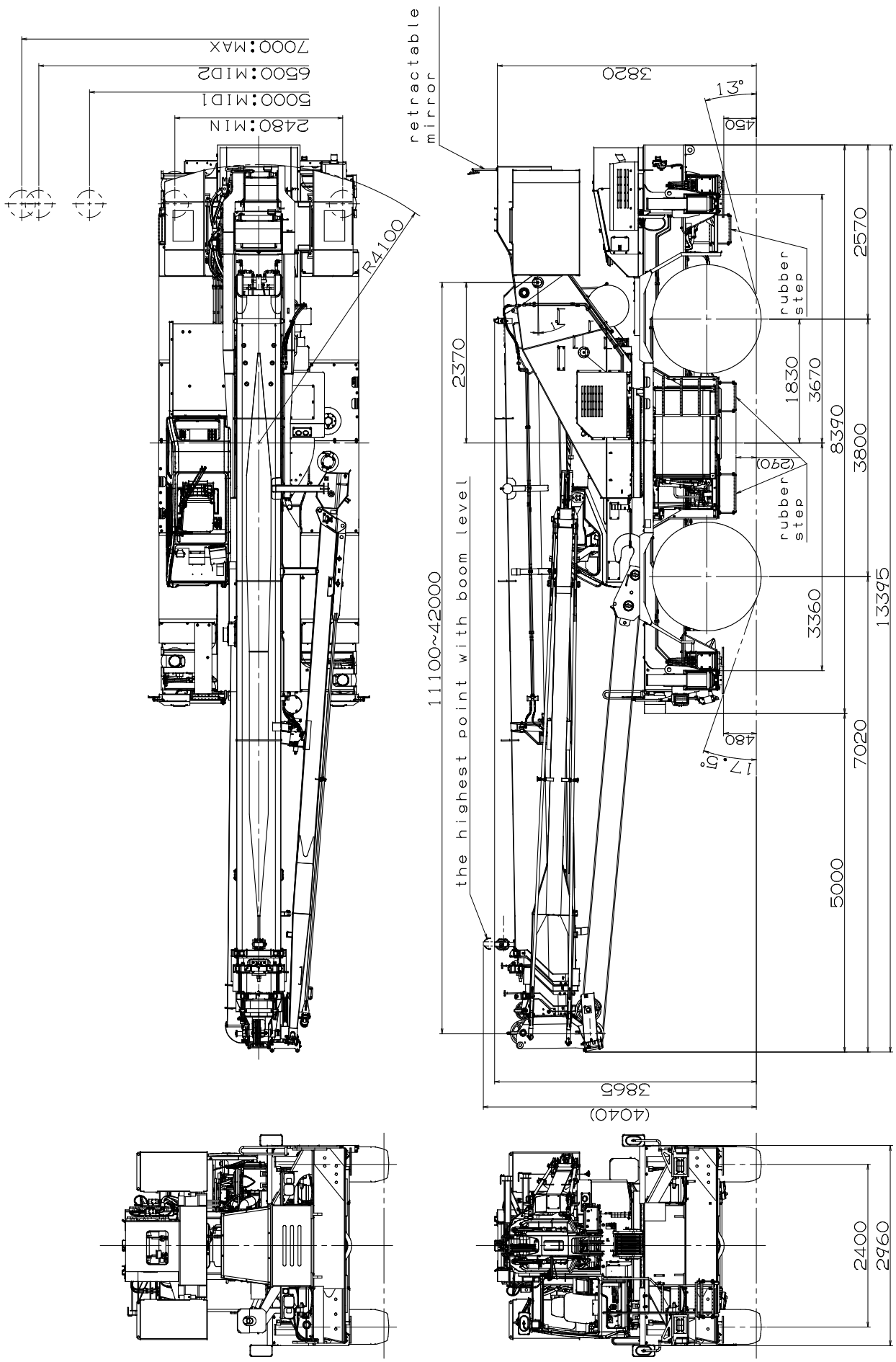
DIMENSIONS



Note:Dimension is with boom angle at -1° unless otherwise specified.

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