



MODEL: **GR-200EX**

SPEC No.: **GR-200E-3-00101**

DATA FOR OPERATION

NOT TO BE TAKEN AWAY

TADANO LTD.

SPECIFICATIONS

Superstructure		Vehicle	
Model	GR-200EX	Gross vehicle weight	19.960t
Crane name	20.0t hydraulic wheel crane	Overall length	8.310m
Boom length	6.5m~27.5m (6-sections)	Overall width	2.450m
Jib length	4.5m, 6.9m (offset 5°~60°)	Overall height	3.200m
Single top length	0.31m	Wheel base	3.200m
Boom extension time	71s (Extension length 21.0m)	Tread	1.950m
Boom elevation time	30s(-9°~82.5°)	Ground clearance	0.26m (FRAME)
Single line speed (hoist up)		Max. speed	54km/h
Main winch	120m/min (at the 5th layer)	Min. turning radius	2wheel: 10.4m
Auxiliary winch	110m/min (at the 3rd layer)		4wheel: 5.7m
Single line speed (hoist down (reference))		Drive system	4×4/4×2
Main winch		Gradeability	(tan θ) 66%
normal	120m/min (at the 5th layer)	Tires	445/80R25
high-speed	170m/min (at the 5th layer)	Tire inflation	700kPa {7.00kgf/cm ² }
Auxiliary winch			
normal	110m/min (at the 3rd layer)		
high-speed	150m/min (at the 3rd layer)		
Slewing speed	2.6 min ⁻¹ {rpm}		
Outrigger extended width			
Maximum	5.2m		
Middle	4.8m, 4.4m, 3.2m		
Minimum	1.79m		
Outrigger longitudinal interval	5.385m		
Outrigger float size	φ0.4m {0.13m ² }		
Tail swing radius	2.39m		
Max. load on outrigger float	18.7t		
Wire rope			
Main winch	14mm dia.× 155m length		
Auxiliary winch	14mm dia.× 85m length		

ISO GR – 200EX RATED LIFTING CAPACITIES

L(m)	ON OUTRIGGERS FULLY EXTENDED 5.2m SPREAD 360° ROTATION (Unit: x 1000kg)						
	6.5	10.7	14.9	19.1	23.3	27.5	
R(m)	2.5	20.0	12.0	9.0	7.0		
	3.0	16.0	12.0	9.0	7.0		
	3.5	14.0	12.0	9.0	7.0	5.0	3.5
	4.0	12.5	12.0	9.0	7.0	5.0	3.5
	4.5	11.7	11.1	9.0	6.6	4.95	3.5
	5.0	(4.4m)	10.25	8.9	6.35	4.7	3.5
	5.5		9.4	8.2	6.3	4.4	3.35
	6.0		8.8	7.6	6.2	4.2	3.2
	7.0		6.75	6.5	5.8	4.0	2.95
	8.0		5.05	4.95	5.15	3.9	2.8
	9.0		4.35	3.9	4.3	3.7	2.75
	10.0		(8.6m)	3.1	3.45	3.3	2.65
	11.0			2.5	2.85	3.05	2.4
	12.0			2.0	2.35	2.65	2.2
	13.0			1.7	1.95	2.2	2.05
	14.0			(12.8m)	1.6	1.85	1.9
	15.0				1.35	1.55	1.7
	16.0				1.15	1.3	1.45
	17.0				0.95	1.1	1.25
	18.0					0.95	1.1
	19.0					0.75	0.95
	20.0					0.65	0.8
	22.0					0.5	0.5
	24.0					(21.2m)	0.35
A(°)	0°						

L(m)	ON OUTRIGGERS MIDDLE EXTENDED 4.8m SPREAD 360° ROTATION (Unit: x 1000kg)						
	6.5	10.7	14.9	19.1	23.3	27.5	
R(m)	2.5	20.0	12.0	9.0	7.0		
	3.0	16.0	12.0	9.0	7.0		
	3.5	14.0	12.0	9.0	7.0	5.0	3.5
	4.0	12.5	12.0	9.0	7.0	5.0	3.5
	4.5	11.7	11.1	9.0	6.6	4.95	3.5
	5.0	(4.4m)	10.2	8.9	6.35	4.7	3.5
	5.5		9.05	8.2	6.3	4.4	3.35
	6.0		7.65	7.2	6.2	4.2	3.2
	7.0		5.6	5.6	5.65	4.0	2.95
	8.0		4.3	4.25	4.6	3.9	2.8
	9.0		3.7	3.35	3.75	3.7	2.75
	10.0		(8.6m)	2.65	3.05	3.25	2.65
	11.0			2.1	2.5	2.7	2.4
	12.0			1.65	2.05	2.25	2.2
	13.0			1.35	1.65	1.85	2.05
	14.0			(12.8m)	1.3	1.55	1.75
	15.0				1.05	1.3	1.45
	16.0				0.85	1.1	1.25
	17.0				0.7	0.9	1.05
	18.0					0.75	0.9
	19.0					0.6	0.75
	20.0					0.5	0.6
	22.0						0.4
A(°)	0°						

L(m)	ON OUTRIGGERS MIDDLE EXTENDED 4.4m SPREAD 360° ROTATION (Unit: x 1000kg)						
	6.5	10.7	14.9	19.1	23.3	27.5	
R(m)	2.5	20.0	12.0	9.0	7.0		
	3.0	16.0	12.0	9.0	7.0		
	3.5	14.0	12.0	9.0	7.0	5.0	3.5
	4.0	12.5	12.0	9.0	7.0	5.0	3.5
	4.5	11.55	11.1	9.0	6.6	4.95	3.5
	5.0	(4.4m)	9.0	8.25	6.35	4.7	3.5
	5.5		7.6	7.05	6.3	4.4	3.35
	6.0		6.45	6.15	6.15	4.2	3.2
	7.0		4.75	4.75	4.85	4.0	2.95
	8.0		3.6	3.65	3.9	3.9	2.8
	9.0		3.05	2.8	3.15	3.3	2.75
	10.0		(8.6m)	2.2	2.5	2.75	2.65
	11.0			1.7	2.0	2.3	2.4
	12.0			1.3	1.65	1.9	2.0
	13.0			1.05	1.3	1.55	1.7
	14.0			(12.8m)	1.05	1.3	1.45
	15.0				0.85	1.05	1.2
	16.0				0.65	0.85	1.0
	17.0				0.5	0.7	0.8
	18.0					0.55	0.7
	19.0					0.45	0.55
	20.0						0.45
A(°)	0°						

L: Boom length
R: Load radius
A: Minimum boom angle (°)
for indicated length
(no load)

ISO GR-200EX RATED LIFTING CAPACITIES

L(m)	ON OUTRIGGERS MIDDLE EXTENDED 3.2m SPREAD 360° ROTATION (Unit: x 1000kg)					
	6.5	10.7	14.9	19.1	23.3	27.5
R(m)						
2.5	16.0	12.0	9.0	7.0		
3.0	14.15	11.6	9.0	7.0		
3.5	10.2	9.2	7.9	7.0	5.0	3.5
4.0	7.75	7.5	6.5	6.35	5.0	3.5
4.5	6.55	6.25	5.45	5.4	4.95	3.5
5.0	(4.4m)	5.15	4.6	4.65	4.55	3.5
5.5		4.35	3.95	4.05	4.0	3.35
6.0		3.65	3.4	3.55	3.55	3.2
7.0		2.7	2.55	2.75	2.8	2.8
8.0		1.95	1.9	2.15	2.25	2.25
9.0		1.65	1.35	1.65	1.8	1.85
10.0		(8.6m)	0.95	1.3	1.45	1.5
11.0			0.65	0.95	1.15	1.25
12.0			0.35	0.7	0.9	1.0
13.0				0.45	0.65	0.8
14.0				0.3	0.5	0.65
15.0					0.35	0.45
A(°)	0°			33°	42°	49°

L(m)	ON OUTRIGGERS MINIMUM EXTENDED 1.79m SPREAD 360° ROTATION (Unit: x 1000kg)					
	6.5	10.7	14.9	19.1	23.3	27.5
R(m)						
2.5	6.55	5.65	4.7	4.55		
3.0	5.45	4.35	3.65	3.65		
3.5	4.15	3.4	2.85	2.95	2.9	2.8
4.0	3.15	2.7	2.25	2.4	2.4	2.35
4.5	2.6	2.15	1.8	2.0	2.05	2.0
5.0	(4.4m)	1.75	1.4	1.65	1.7	1.7
5.5		1.4	1.1	1.35	1.45	1.45
6.0		1.1	0.8	1.1	1.2	1.25
7.0		0.6	0.4	0.65	0.8	0.9
A(°)	0°			51°	58°	66°

L: Boom length
 R: Load radius
 A: Minimum boom angle (°)
 for indicated length
 (no load)

NOTES

- ◆ Rated lifting capacities based on crane stability are according to ISO 4305.
 - ◆ Rated lifting capacities shown in the chart are based on condition that crane is set on firm level surface.
 - ◆ The weight of handling device such as hook blocks (175kg for 20,000kg capacity, 50kg for 3,200kg capacity), slings, etc., must be considered as part of the load and must be deducted from the lifting capacities.
 - ◆ Rated lifting capacities are based on actual load radius increased by boom deflection. Always watch for load radius.
 - ◆ For lifting capacity of single top, deduct the weight of the load handling equipment from the rated lifting capacity of the boom.
 - ◆ For the lifting capacity of single top, the net capacity shall not exceed 3,200kg including the main boom hook mass attached to the boom.
 - ◆ High-speed down hoisting should be performed without any load on the hook. Be sure to operate the winch levers slowly.
 - ◆ Standard number of part lines for each boom length is as shown below. Load per line should not surpass 2,900kg for main winch and 3,200kg for auxiliary winch.
- | | | | | | | | |
|----------------------|------|-------|-------|-------|-------|-------|------------|
| Boom length | 6.5m | 10.7m | 14.9m | 19.1m | 23.3m | 27.5m | Single top |
| No. of parts of line | 7 | 6 | 4 | 4 | 4 | 4 | 1 |
- ◆ The lifting capacity data stored in the AUTOMATIC MOMENT LIMITTER (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 LIMITTER (AML).
 - ◆ For total rated loads of over-front and over-rear areas, see "Outriggers fully extended". However, the areas differs depending on the outrigger extension width. For details, refer to "CAUTIONS FOR USING THE CRANE (No.1), AML operation".

ISO GR-200EX RATED LIFTING CAPACITIES

Boom angle (°)	ON OUTRIGGERS FULLY EXTENDED 5.2m SPREAD 360° ROTATION															
	27.5m Boom + 4.5m Jib								27.5m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.9	2.0	5.6	2.0	6.7	1.55	7.2	1.2	4.5	1.5	7.0	1.3	8.6	0.82	9.7	0.69
75	8.4	2.0	9.9	1.7	10.8	1.4	11.2	1.15	9.2	1.5	11.5	1.05	12.9	0.75	13.8	0.66
70	11.2	1.95	12.5	1.5	13.4	1.25	13.6	1.1	12.3	1.5	14.3	0.96	15.6	0.72	16.4	0.65
65	13.8	1.65	15.1	1.3	15.8	1.15	16.0	1.1	15.1	1.3	17.0	0.88	18.1	0.69	18.9	0.64
60	16.2	1.35	17.4	1.2	18.1	1.1	18.2	1.1	17.7	1.1	19.6	0.82	20.5	0.67	21.1	0.64
55	18.4	1.0	19.6	0.95	20.1	0.95			20.1	0.89	21.9	0.77	22.7	0.66		
50	20.5	0.73	21.5	0.69	21.9	0.69			22.4	0.64	24.0	0.6	24.6	0.59		
45	22.4	0.5	23.3	0.48	23.5	0.48			24.4	0.44	25.8	0.41	26.1	0.4		
40	24.1	0.32	24.9	0.31					26.2	0.27	27.4	0.27				
35	25.6	0.19	26.2	0.19					27.8	0.16						

Boom angle (°)	ON OUTRIGGERS MIDDLE EXTENDED 4.8m SPREAD 360° ROTATION															
	27.5m Boom + 4.5m Jib								27.5m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.9	2.0	5.6	2.0	6.7	1.55	7.2	1.2	4.5	1.5	7.0	1.3	8.6	0.82	9.7	0.69
75	8.4	2.0	9.9	1.7	10.8	1.4	11.2	1.15	9.2	1.5	11.5	1.05	12.9	0.75	13.8	0.66
70	11.2	1.95	12.5	1.5	13.4	1.25	13.6	1.1	12.3	1.5	14.3	0.96	15.6	0.72	16.4	0.65
65	13.8	1.65	15.1	1.3	15.8	1.15	16.0	1.1	15.1	1.3	17.0	0.88	18.1	0.69	18.9	0.64
60	16.1	1.15	17.4	1.05	18.1	1.05	18.1	1.0	17.7	1.05	19.6	0.82	20.5	0.67	21.1	0.64
55	18.3	0.84	19.5	0.78	20.0	0.76			20.1	0.76	21.9	0.69	22.7	0.66		
50	20.4	0.56	21.4	0.52	21.8	0.51			22.3	0.49	23.9	0.46	24.5	0.45		
45	22.3	0.35	23.2	0.33	23.5	0.32			24.3	0.3	25.7	0.28	26.1	0.28		
40	24.0	0.19	24.8	0.18					26.1	0.16	27.3	0.15				

(R : Load radius (m) W : Rated lifting capacity (Unit : × 1000kg))

ISO GR-200EX RATED LIFTING CAPACITIES

Boom angle  (°)	ON OUTRIGGERS MIDDLE EXTENDED 4.4m SPREAD 360° ROTATION															
	27.5m Boom + 4.5m Jib								27.5m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.9	2.0	5.6	2.0	6.7	1.55	7.2	1.2	4.5	1.5	7.0	1.3	8.6	0.82	9.7	0.69
75	8.4	2.0	9.9	1.7	10.8	1.4	11.2	1.15	9.2	1.5	11.5	1.05	12.9	0.75	13.8	0.66
70	11.2	1.95	12.5	1.5	13.4	1.25	13.6	1.1	12.3	1.5	14.3	0.96	15.6	0.72	16.4	0.65
65	13.6	1.3	15.0	1.15	15.8	1.1	16.0	1.05	15.1	1.3	17.0	0.88	18.1	0.69	18.9	0.64
60	16.0	0.9	17.2	0.82	17.9	0.82	18.0	0.77	17.6	0.87	19.5	0.79	20.5	0.67	21.1	0.64
55	18.2	0.62	19.4	0.58	19.9	0.58			20.0	0.57	21.7	0.51	22.5	0.51		
50	20.3	0.39	21.3	0.36	21.7	0.35			22.2	0.35	23.7	0.3	24.3	0.3		
45	22.2	0.19	23.1	0.18	23.4	0.18			24.2	0.18	25.6	0.13	26.0	0.13		

Boom angle  (°)	ON OUTRIGGERS MIDDLE EXTENDED 3.2m SPREAD 360° ROTATION															
	27.5m Boom + 4.5m Jib								27.5m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.9	2.0	5.6	2.0	6.7	1.55	7.2	1.2	4.5	1.5	7.0	1.3	8.6	0.82	9.7	0.69
75	8.4	1.85	9.9	1.55	10.8	1.4	11.2	1.15	9.2	1.5	11.5	1.05	12.9	0.75	13.8	0.66
70	10.9	1.05	12.3	0.91	13.3	0.85	13.6	0.84	12.4	0.93	14.3	0.78	15.6	0.71	16.4	0.65
65	13.4	0.54	14.7	0.47	15.5	0.44	15.7	0.44	15.0	0.47	16.8	0.4	18.0	0.37	18.7	0.36
60	15.8	0.19	17.0	0.16	17.6	0.15	17.7	0.15	17.5	0.16	19.1	0.12	20.1	0.11	20.7	0.11

(R : Load radius (m) W : Rated lifting capacity (Unit : × 1000kg))

ISO GR-200EX RATED LIFTING CAPACITIES

Boom angle 	ON OUTRIGGERS FULLY EXTENDED 5.2m SPREAD 360° ROTATION															
	23.3m Boom + 4.5m Jib								23.3m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.2	2.0	4.8	2.0	5.9	1.55	6.4	1.2	3.7	1.5	6.1	1.3	7.8	0.82	8.8	0.69
75	6.9	2.0	8.4	1.9	9.3	1.45	9.7	1.15	7.8	1.5	9.9	1.05	11.4	0.75	12.2	0.66
70	9.3	2.0	10.7	1.75	11.5	1.4	11.8	1.1	10.4	1.5	12.4	0.96	13.7	0.72	14.4	0.65
65	11.5	2.0	12.8	1.65	13.6	1.4	13.7	1.1	12.8	1.4	14.7	0.88	15.8	0.69	16.4	0.64
60	13.7	1.85	14.9	1.55	15.5	1.35	15.6	1.1	15.1	1.2	16.9	0.82	17.8	0.67	18.3	0.64
55	15.6	1.4	16.7	1.3	17.3	1.3			17.3	1.05	18.9	0.77	19.7	0.66		
50	17.4	1.05	18.4	1.0	18.8	1.0			19.3	0.96	20.7	0.74	21.3	0.66		
45	19.1	0.82	20.0	0.79	20.2	0.79			21.0	0.71	22.4	0.67	22.8	0.64		
40	20.6	0.61	21.3	0.59					22.7	0.52	23.8	0.5				
35	21.9	0.45	22.5	0.44					24.1	0.38	25.0	0.37				
30	23.1	0.33	23.5	0.32					25.3	0.27	26.1	0.27				
25	24.0	0.24	24.4	0.24					26.4	0.19	26.9	0.19				
20	24.8	0.17														

Boom angle 	ON OUTRIGGERS MIDDLE EXTENDED 4.8m SPREAD 360° ROTATION															
	23.3m Boom + 4.5m Jib								23.3m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.2	2.0	4.8	2.0	5.9	1.55	6.4	1.2	3.7	1.5	6.1	1.3	7.8	0.82	8.8	0.69
75	6.9	2.0	8.4	1.9	9.3	1.45	9.7	1.15	7.8	1.5	9.9	1.05	11.4	0.75	12.2	0.66
70	9.3	2.0	10.7	1.75	11.5	1.4	11.8	1.1	10.4	1.5	12.4	0.96	13.7	0.72	14.4	0.65
65	11.5	2.0	12.8	1.65	13.6	1.4	13.7	1.1	12.8	1.4	14.7	0.88	15.8	0.69	16.4	0.64
60	13.6	1.65	14.9	1.5	15.5	1.35	15.6	1.1	15.1	1.2	16.9	0.82	17.8	0.67	18.3	0.64
55	15.6	1.2	16.7	1.15	17.2	1.1			17.3	1.05	18.9	0.77	19.7	0.66		
50	17.4	0.91	18.4	0.85	18.8	0.84			19.2	0.77	20.7	0.71	21.3	0.66		
45	19.0	0.64	19.9	0.61	20.2	0.61			21.0	0.54	22.3	0.5	22.7	0.48		
40	20.5	0.45	21.3	0.43					22.6	0.37	23.8	0.35				
35	21.9	0.3	22.5	0.29					24.1	0.24	25.0	0.23				
30	23.0	0.19	23.5	0.18					25.3	0.14						

(R : Load radius (m) W : Rated lifting capacity (Unit : × 1000kg))

ISO GR-200EX RATED LIFTING CAPACITIES

Boom angle △ (°)	ON OUTRIGGERS MIDDLE EXTENDED 4.4m SPREAD 360° ROTATION															
	23.3m Boom + 4.5m Jib								23.3m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.2	2.0	4.8	2.0	5.9	1.55	6.4	1.2	3.7	1.5	6.1	1.3	7.8	0.82	8.8	0.69
75	6.9	2.0	8.4	1.9	9.3	1.45	9.7	1.15	7.8	1.5	9.9	1.05	11.4	0.75	12.2	0.66
70	9.3	2.0	10.7	1.75	11.5	1.4	11.8	1.1	10.4	1.5	12.4	0.96	13.7	0.72	14.4	0.65
65	11.5	1.75	12.8	1.5	13.6	1.4	13.7	1.1	12.8	1.4	14.7	0.88	15.8	0.69	16.4	0.64
60	13.6	1.26	14.8	1.1	15.4	1.05	15.5	1.0	15.1	1.2	16.9	0.82	17.8	0.67	18.3	0.64
55	15.6	0.91	16.6	0.84	17.1	0.8			17.2	0.85	18.9	0.77	19.7	0.66		
50	17.4	0.66	18.3	0.63	18.7	0.61			19.2	0.63	20.7	0.54	21.3	0.52		
45	19.0	0.48	19.8	0.42	20.1	0.42			21.0	0.42	22.3	0.35	22.7	0.35		
40	20.5	0.31	21.2	0.25					22.6	0.26	23.7	0.21				
35	21.9	0.17														

Boom angle △ (°)	ON OUTRIGGERS MIDDLE EXTENDED 3.2m SPREAD 360° ROTATION															
	23.3m Boom + 4.5m Jib								23.3m Boom + 6.9m Jib							
	5° offset		25° offset		45° offset		60° offset		5° offset		25° offset		45° offset		60° offset	
	R	W	R	W	R	W	R	W	R	W	R	W	R	W	R	W
82.5	3.2	2.0	4.8	2.0	5.9	1.55	6.4	1.2	3.7	1.5	6.1	1.3	7.8	0.82	8.8	0.69
75	6.9	2.0	8.3	1.7	9.3	1.4	9.7	1.15	7.8	1.5	9.9	1.05	11.4	0.75	12.2	0.66
70	9.3	1.6	10.6	1.35	11.5	1.25	11.8	1.1	10.4	1.35	12.4	0.96	13.7	0.72	14.4	0.65
65	11.5	0.95	12.7	0.84	13.4	0.79	13.7	0.77	12.8	0.83	14.7	0.7	15.8	0.64	16.4	0.63
60	13.6	0.52	14.6	0.46	15.3	0.44	15.4	0.43	15.0	0.45	16.7	0.38	17.7	0.35	18.1	0.35
55	15.6	0.22	16.5	0.19	17.0	0.18			17.1	0.18	18.7	0.14	19.5	0.13		

(R : Load radius (m) W : Rated lifting capacity (Unit : x 1000kg))

NOTES

- ◆ Rated lifting capacities based on crane stability are according to ISO 4305.
- ◆ Rated lifting capacities shown in the chart are based on the condition that the crane is set on firm level surface.
- ◆ The weight of handling device such as hook blocks (50kg for 3,200kg capacity), slings, etc., must be considered as part of the load and must be deducted from the lifting capacities.
- ◆ For boom length less than 27.5m and longer than 23.3m with jib, rated lifting capacities are determined by loaded boom angle only in the column headed "27.5m boom + jib".
- ◆ For boom length less than 23.3m with jib, rated lifting capacities are determined by loaded boom angle only in the column headed "23.3m boom + jib".
- ◆ For angles not shown, use the next lower loaded boom angle to determine allowable capacity.
- ◆ High-speed down hoisting should be performed without any load on the hook. Be sure to operate the winch levers slowly.
- ◆ The standard number of part lines of wire rope for hook on jib is 1.
- ◆ For total rated loads of over-front and over-rear areas, see "Outriggers fully extended".
- ◆ However, the areas differs depending on the outrigger extension width.
- ◆ For details, refer to "CAUTIONS FOR USING THE CRANE (No.1), AML operation".

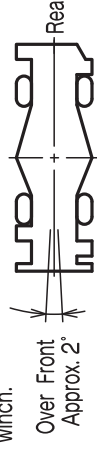
ISO GR-200EX RATED LIFTING CAPACITIES

ON RUBBER																
L(m)	STATIONARY (Unit : x1,000kg)								CREEP (Unit : x1,000kg)							
	Over Front				360° Rotation				Over Front				360° Rotation			
	6.5	10.7	14.9	19.1	6.5	10.7	14.9	19.1	6.5	10.7	14.9	19.1	6.5	10.7	14.9	19.1
R(m)	3.0	3.7	3.6	3.55	3.7	2.3	2.3	2.3	2.6	2.6	2.6	2.6	1.6	1.6	1.6	1.6
	3.5	3.2	3.1	3.1	3.25	1.9	1.8	2.0	2.3	2.2	2.2	2.3	1.3	1.2	1.2	1.3
	4.0	2.8	2.7	2.7	2.85	1.6	1.4	1.6	1.9	1.9	1.9	2.0	1.0	0.9	0.9	1.1
	4.5	2.55	2.4	2.35	2.5	1.3	1.1	1.05	1.7	1.6	1.6	1.8	0.9	0.7	0.7	0.9
	5.0	(4.4m)	2.1	2.05	2.2	(4.4m)	0.8	0.75	1.4	(4.4m)	1.4	1.6	(4.4m)	0.6	0.5	0.7
	5.5		1.85	1.8	2.0		0.5	0.45			1.2	1.2	1.4	0.35	0.3	0.6
	6.0		1.6	1.6	1.75						1.1	1.1	1.2			0.45
	7.0		1.25	1.25	1.4						0.8	0.8	1.0			
	8.0		1.0	0.9	1.1						0.6	0.6	0.8			
	9.0			0.65	0.8						0.45	0.6				
	10.0			0.4	0.6						0.3	0.45				
	11.0			0.25	0.4							0.35				
	12.0				0.25											
	13.0				0.15											
A(°)	0°				35°	0°	37°	56°	64°	0°	33°	50°	0°	46°	61°	68°

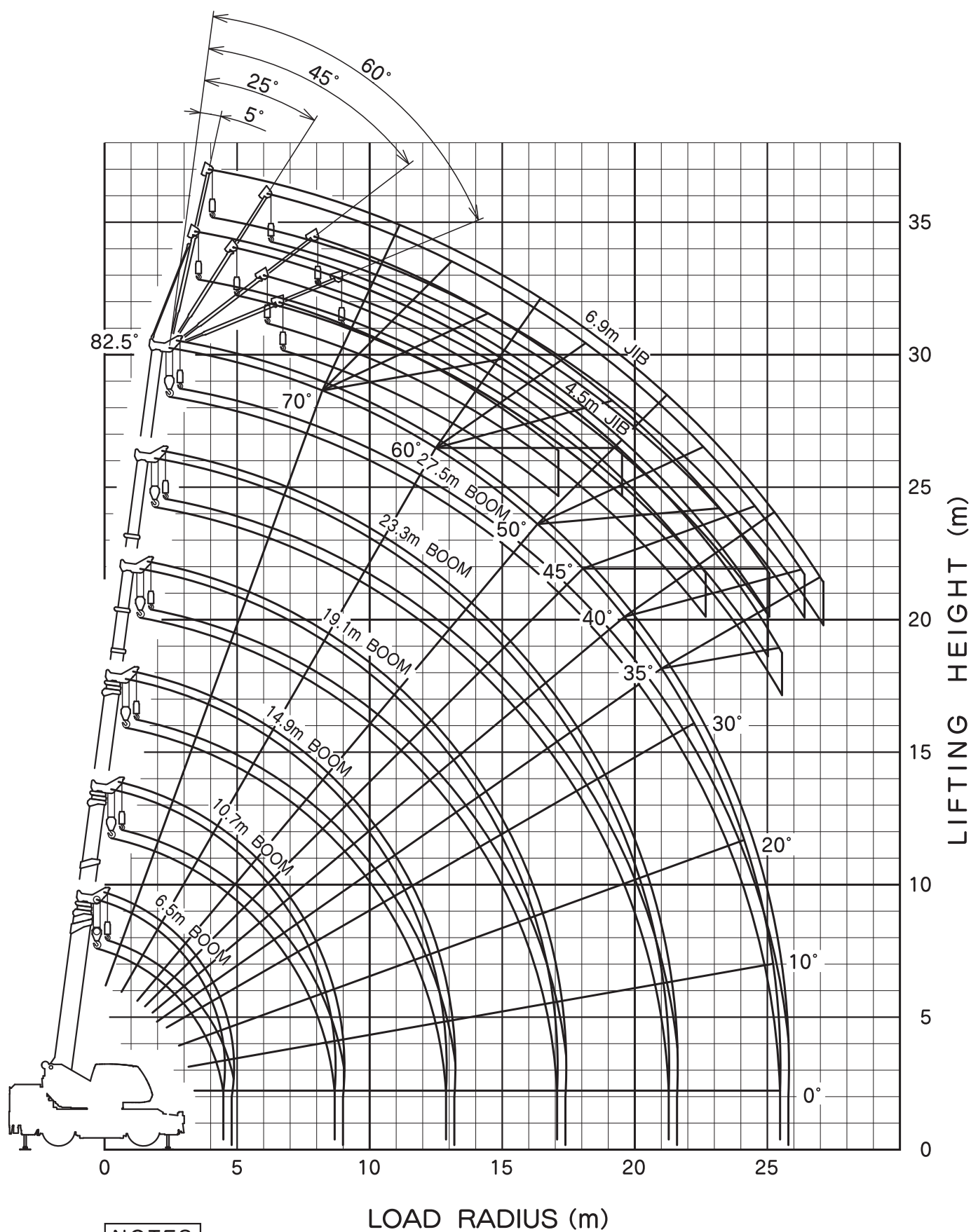
L: Boom length
R: Load radius
A: Minimum boom angle (°)
for indicated length
(no load)

NOTES

- Rated lifting capacities based on crane stability are according to ISO 4305.
 - Rated lifting capacities shown in the chart are based on condition that crane is set on firm level surface, tire air pressure is the standard pressure 700kPa (7.00kgf/cm²) and spring lock is activated. Consider the footing, and working conditions etc. when actually working.
 - The weight of handling device such as hook blocks (175kg for 20,000kg capacity, 50kg for 3,200kg capacity), slings, etc., must be considered as part of the load and must be deducted from the lifting capacities.
 - Rated lifting capacities are based on actual working radius increased by tire and boom deflection. Always watch for working radius.
 - Standard number of part lines for each boom length is as shown below. Load per line should not surpass 2,900kg for main winch and 3,200kg for auxiliary winch.
- | | | | | | |
|----------------------|------|-------|-------|-------|------------|
| Boom length | 6.5m | 10.7m | 14.9m | 19.1m | Single top |
| No. of parts of line | 4 | 4 | 4 | 4 | 1 |
- Operate the crane in over-front area only when the AML over-front indicative symbol is lit. Over-front area is where the boom is within 2 degrees in front of chassis.
 - For lifting capacity of single top, deduct the weight of the load handling equipment from the rated lifting capacity of the boom.
 - For the lifting capacity of single top, the net capacity shall not exceed 3,200kg including the main boom hook mass attached to the boom.
 - High-speed down hosting and on tire lifting with 'Jib' is not permitted. Maximum permissible boom length is 19.1m.
 - CREEP is motion for crane not to travel more than 60m in any 30 minutes period and to travel at the speed of less than 1.6km/h.
 - For CREEP operation, set Drive select switch to "L/4D" and set gear shift switch to "1".
 - During "CREEP" duties travel slowly and keep the lifting load as close to the ground as possible, and especially avoid any abrupt steering, accelerating or braking.
 - Do not operate the crane while carrying the load.



GR-200EX WORKING RANGE



NOTES

1. The above lifting heights and boom angles are based on a straight (unladen) boom, and allowance should be made for boom deflection obtained under laden conditions.
2. The above working range is shown on condition with outriggers fully extended.(360°)

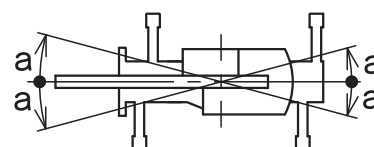
CAUTIONS FOR USING THE CRANE (NO.1)

I. AML operation (For the details, see Operation and Maintenance Manual.)

1. When operating crane on outriggers

- Before outrigger operation, suspension lock in the over-front area of the boom.
(Locking and releasing cannot be performed in other state.)
Keep pressing the switch to the "LOCK" side until the suspension lock indicator lamp changes from flashing to lighting, and lower the body to the full.
(Outrigger operation and crane operation cannot be performed without suspension locking.)
- Set the "P.T.O" switch to "ON".
- Press the outrigger status select key, check that the actual outrigger extension width and AML display coincide, and then if the state is correct, press the register key.
- 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.

Extended width	4.8m	4.4m	3.2m	1.79m
Angle a°	45 (middle)	40 (middle)	20 (middle)	5 (minimum)



- Re-register the outrigger state whenever the outriggers have been retracted.
 - When using the wooden blocks, be careful that the float does not come away from the blocks.
- ### 2. When operating crane on rubber
- Suspension lock in the over-front area of the boom.
(Locking and releasing cannot be performed in other state.)
Keep pressing the switch to the "LOCK" side until the suspension lock indicator lamp changes from flashing to lighting, and lower the body to the full.
 - Set the "slewing-free" switch to "OFF" necessarily.
 - Touch the outrigger status select key and make the on-rubber status indicator symbol light up (stationary), or make the on-rubber status indicator symbol and the arrow symbol on its right light up (creep).
Pay attention to the following:
 - (1) Operation with over-front capacity can be performed only when "AML"s over-front indicative symbol is lit.
If the boom is slewed out of the over-front area, it will change to 360° capacity.
 - (2) When lifting a load in over-front area and slewing to over-side area, operate within 360° capacity.
 - When releasing the suspension lock, keep pressing the switch to the "FREE" side until the suspension lock indicator lamp changes from lighting to going out. (Releasing cannot be performed out of the over-front area.)
- ### 3. Operate the crane after checking that each working condition and AML-registered condition coincide.

II. Automatic slewing stop (For the details, see Operation and Maintenance Manual.)

1. This machine is equipped with an automatic slew stopping device.
2. Operate very carefully because the slewing automatic stop function does not work in the during on-tire operation.

III. Crane operation

1. Do not hoist a load obliquely.
2. Do not operate the control lever with sudden movements.
3. Be very careful not to come in contact with the mirror, engine cover, etc, with following warning messages.
When operating crane in the following case.
 - When lowering the boom angles less than 14°
 - When swinging with the boom angles less than 14°
4. Do not carry out any crane operation using the boom with the jib mounted.

IV. Telescoping operation

1. The boom telescoping/jib offset lever and pedal can be switched by the boom telescoping/jib offset operation selector.
2. To extend the 4th, 5th and top boom sections, after fully extending the 2nd and 3rd, keep the telescoping lever 4th/5th/top boom extension switch pressed for a little while.

CAUTIONS FOR USING THE CRANE (NO.2)

V. Handling the crane control levers

1. Check that the lock pin is inserted, and then raise the control lever stand while pulling the unlock lever.
2. Before starting the engine and before turning on the "P.T.O" switch, check that the control levers are in neutral.
3. For unused control levers, when crane operation is completed and when entering or leaving the cab, insert lock pins and throw them backward.

VI. Handling the steering lock pin

1. Switching from 2-wheel steering to special steering.
 - Select steering mode of ,  or  with the steering mode selector.
 - Press the lock pin switch and remove the lock pin.
 - Check that the lock pin warning  (on MFD) is lit.
 - If the lock pin warning does not light up, gently shake the handle left and right while pressing the lock pin release switch, and check that the lock pin warning lights up.
2. Switching from special steering to 2-wheel steering.
 - Ensure that the rear tires are parallel with the frame, and check that the "straight-ahead wheel indicator" icon  (on MFD) is lit.
 - Press the lock pin switch and insert the lock pin.
 - Check that the lock pin warning  (on MFD) is not lit, and set the steering mode selector switch to .
3. When traveling on a road, insert the rear steering lock pin and travel with 2-wheel steering.

VII. Handling the jib (For the details, see Operation and Maintenance Manual.)

1. When mounting, storing or operating the jib, extend the outriggers 3.2m (middle) or more.
2. Before mounting or storing the jib, register the "Jib set status".
3. Before crane operation, check that the "Jib set status" is cleared.
4. When the jib lock pin is inserted, the jib lock icon  appears on the AML screen.

HIGH-SPEED HOIST DOWN OPERATION PROCEDURE

Automatic brake

This crane uses an automatic brake mechanism.

- ◆ For normal operation, use that the High-speed hoist down switch is in the "OFF" position.
(High-speed hoist down indicator icon will go out.)
 - Hoisting up: Pull the winch lever forwards you.
 - Hoisting down: Push the winch lever forwards.
 - Stop: If the winch lever is put in the neutral, the brake will automatically engages.
- ◆ When traveling, upset the operation lever stand of right all the way back ward.

High-speed hoist down operation

- ◆ High-speed hoist down operation should be performed without any load on the hook. And in operating, attention to the wrong winding of wire ropes with a sudden operation.
- ◆ Main winch operation
 1. Put the main high-speed hoist down switch in the "ON" position. The high-speed hoist down indicator icon comes on.
 2. Push the main winch lever forwards, operate the high-speed hoist down.
 3. If high-speed hoist down is completed, Put the main high-speed hoist down switch in the "OFF" position, and check that the high-speed hoist down indicator icon will go out.
- ◆ Auxiliary winch operation
 1. Perform the same procedure as for the main winch.
 2. Use the switches, levers for the auxiliary winch.

"ON" side



"OFF" side



Main winch
high-speed hoist down
(on MFD)



Auxiliary winch
high-speed hoist down
(on MFD)

