TADANO TR 500 EX

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TADANO HYDRAULIC ROUGH TERRAIN CRANE

SPEC. SHEET No. TR-500E-3-00101/EX-12

TR-500EX

Left hand steering

GENERAL DATA

CRANE CAPACITY			50,000 kg at 3.5 m
BOOM			4-section, 11.0 m – 35.0 m
DIMENSION			
Overall length		approx.	13,630 mm
Overall width		approx.	3,315 mm
Overall height		approx.	3,780 mm
MASS			
Gross vehicle mass		approx.	43,200 kg
	-front axle	approx.	22,820 kg
	-rear axle	approx.	20,380 kg
PERFORMANCE			
Max. travelling speed		computed	40 km/h
* Gradeability (tan θ)		computed	57 % (at 2.5 km/h)

*: Machine should be operated within the limit of engine crankcase design (30° : MMC 6D16-TLEA).

CRANE SPECIFICATIONS

MODEL
TR-500EX

CAPACITY
50,000 kg at 3.5 m

BOOM
4-section full power partially synchronized telescoping boom of hexagonal box construction with 5 sheaves at boom head. The synchronization system consists of 2 telescope cylinders, an extension cable and a retraction cable. Hydraulic cylinders fitted with holding valves.

Fully retracted length..... 11.0 m
Fully extended length..... 35.0 m
Extension speed..... 24.0 m in 153 s

JIB
2-staged swingaround boom extension. Dual offset (5°/30°) type. Box type top section telescopes from lattice type base section which stores alongside base boom section.
Single sheave at jib head.

Length ..... 9.8 m and 17.1 m

SINGLE TOP (AUXILIARY BOOM SHEAVE)
Single sheave. Mounted to main boom head for single line work.

ELEVATION
By a double-acting hydraulic cylinder, fitted with holding valve.

Elevation speed ..... – 1.5° to 80° in 68 s

TADANO LTD.

RATED LIFTING CAPACITIES ISO 4305

SPEC. SHEET No. TR-500E-3-00101/EX-12

ON OUTRIGGERS

Unit : kg

Outriggers fully extended (7.2 m) 360° Rotation

B \ A	11.0	15.0	19.0	23.0	27.0	31.0	35.0
3.0	50,000	41,200	37,200				
3.5	50,000	41,200	37,200	21,500			
4.0	48,400	41,200	35,500	21,500			
4.5	43,800	41,200	33,000	21,500	21,500		
5.0	39,800	38,900	31,500	21,500	21,000		
5.5	36,900	36,200	30,200	21,500	20,400		
6.0	33,900	33,300	28,800	21,500	19,900		
6.5	31,000	30,800	27,600	21,000	19,100	15,300	
7.0	28,800	28,600	26,400	20,500	18,300	14,800	
8.0	23,700	24,600	23,100	19,000	16,700	13,800	12,700
9.0	16,200	19,000	18,700	17,200	15,100	12,600	11,700
10.0		15,300	15,100	15,600	13,800	11,700	10,800
11.0		12,600	12,600	13,200	12,600	10,800	9,900
12.0		10,500	10,600	11,200	11,500	10,000	9,100
13.0			8,800	9,600	10,000	9,300	8,400
14.0			7,600	8,300	8,800	8,600	7,800
15.0			6,400	7,200	7,700	8,100	7,300
16.0			5,500	6,200	6,700	7,100	6,800
17.0			4,700	5,400	5,900	6,300	6,400
18.0				4,700	5,200	5,600	5,700
19.0				4,100	4,600	4,900	5,100
20.0				3,600	4,000	4,400	4,600
22.0					3,100	3,400	3,600
24.0					2,400	2,700	2,900
26.0						2,100	2,300
28.0						1,600	1,900
30.0							1,500
32.0							1,100
32.9							1,000
D	0°						

C	9.8 m Jib				17.1 m Jib			
	5° offset		30° offset		5° offset		30° offset	
	B	W	B	W	B	W	B	W
80°	7.8	5,600	11.2	2,800	9.7	2,800	15.9	1,100
75°	12.0	5,000	15.0	2,500	14.4	2,300	20.3	1,000
70°	15.8	4,000	18.7	2,300	18.9	1,900	24.4	900
65°	19.4	3,200	22.2	2,150	23.2	1,600	28.2	850
60°	22.9	2,600	25.4	2,000	27.2	1,400	31.8	800
55°	26.1	2,150	28.4	1,750	31.0	1,200	35.1	750
50°	29.1	1,650	31.1	1,450	34.6	1,050	38.1	700
45°	31.8	1,100	33.6	1,050	37.8	800	40.8	650
40°	34.3	700	35.7	650				

A : Boom length (m)
B : Load radius (m)
C : Boom angle
D : Minimum boom angle for indicated length (without load)
W : Rated lifting capacity

Unit : kg

Outriggers extended to middle (6.7 m) Over side

B \ A	11.0	15.0	19.0	23.0	27.0	31.0	35.0
3.0	50,000	41,200	37,200				
3.5	50,000	41,200	37,200	21,500			
4.0	48,400	41,200	35,500	21,500			
4.5	43,800	41,200	33,000	21,500	21,500		
5.0	39,800	38,900	31,500	21,500	21,000		
5.5	36,900	36,200	30,200	21,500	20,400		
6.0	33,900	33,300	28,800	21,500	19,900		
6.5	31,000	30,800	27,600	21,000	19,100	15,300	
7.0	28,800	27,100	26,400	20,500	18,300	14,800	
8.0	20,000	20,100	20,000	19,000	16,700	13,800	12,700
9.0	15,900	16,000	16,000	17,200	15,100	12,600	11,700
10.0		13,200	13,100	14,000	13,800	11,700	10,800
11.0		11,100	10,900	11,700	12,100	10,800	9,900
12.0		9,400	9,200	9,800	10,300	10,000	9,100
13.0			7,800	8,400	8,600	8,900	8,400
14.0			6,600	7,200	7,600	7,900	7,800
15.0			5,600	6,200	6,700	7,100	6,800
16.0			4,800	5,400	5,900	6,100	6,000
17.0			4,000	4,600	5,200	5,400	5,300
18.0				4,000	4,600	4,800	4,600
19.0				3,500	4,000	4,200	4,100
20.0				3,000	3,500	3,700	3,700
22.0					2,700	2,900	2,900
24.0					2,000	2,200	2,300
26.0						1,600	1,800
28.0						1,100	1,400
30.0							1,000
32.0							700
D	0°						7°

C	9.8 m Jib				17.1 m Jib			
	5° offset		30° offset		5° offset		30° offset	
	B	W	B	W	B	W	B	W
80°	7.8	5,600	11.2	2,800	9.7	2,800	15.9	1,100
75°	12.0	5,000	15.0	2,500	14.4	2,300	20.3	1,000
70°	15.8	4,000	18.7	2,300	18.9	1,900	24.4	900
65°	19.4	3,200	22.2	2,150	23.2	1,600	28.2	850
60°	22.9	2,600	25.4	2,000	27.2	1,400	31.8	800
55°	26.0	1,800	28.4	1,750	31.0	1,200	35.1	750
50°	29.0	1,350	31.0	1,150	34.6	1,000	38.1	700
45°	31.7	850	33.5	750	37.7	550	40.7	500

RATED LIFTING CAPACITIES ISO 4305

SPEC. SHEET No. TR-500E-3-00101/EX-12

ON OUTRIGGERS

Unit : kg

Outriggers extended to middle (5.5 m) Over side

B \ A	11.0	15.0	19.0	23.0	27.0	31.0	35.0
3.0	50,000	41,200	37,200				
3.5	50,000	41,200	37,200	21,500			
4.0	48,400	41,200	35,500	21,500			
4.5	43,800	41,200	33,000	21,500	21,500		
5.0	39,800	38,900	31,500	21,500	21,000		
5.5	36,900	36,200	30,200	21,500	20,400		
6.0	29,700	25,700	25,900	21,500	19,900		
6.5	24,200	22,000	21,600	21,000	19,100	15,300	
7.0	20,500	19,600	18,700	19,800	18,300	14,800	
8.0	15,600	15,400	15,300	15,600	16,200	13,800	12,700
9.0	12,300	12,200	11,900	12,600	13,000	12,600	11,700
10.0		9,900	9,500	10,400	10,800	11,200	10,800
11.0		8,100	7,800	8,400	9,300	9,500	9,700
12.0		6,700	6,400	7,000	7,700	8,100	8,300
13.0			5,300	6,000	6,600	6,900	7,000
14.0			4,400	5,100	5,600	6,000	6,200
15.0			3,700	4,300	4,800	5,200	5,300
16.0			3,000	3,600	4,100	4,500	4,700
17.0			2,500	3,100	3,500	3,900	4,100
18.0				2,600	3,000	3,300	3,600
19.0				2,200	2,600	2,800	3,100
20.0				1,800	2,200	2,400	2,600
22.0					1,500	1,700	1,900
24.0					1,000	1,200	1,400
26.0						700	900
28.0							500
D	0°					23°	33°

C	9.8 m Jib				17.1 m Jib			
	5° offset		30° offset		5° offset		30° offset	
	B	W	B	W	B	W	B	W
80°	7.8	5,600	11.2	2,800	9.7	2,800	15.9	1,100
75°	12.0	5,000	15.0	2,500	14.4	2,300	20.3	1,000
70°	15.8	4,000	18.7	2,300	18.9	1,900	24.4	900
65°	19.4	3,100	22.2	2,150	23.2	1,600	28.2	850
60°	22.7	1,850	25.3	1,600	27.2	1,400	31.8	800
55°	25.9	1,100	28.2	900	30.9	750	35.1	550
50°	28.9	500						

A : Boom length (m)
B : Load radius (m)
C : Boom angle
D : Minimum boom angle for indicated length (without load)
W : Rated lifting capacity

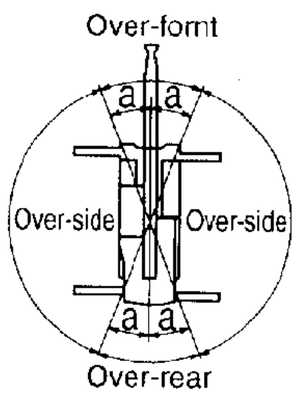
NOTES FOR "ON OUTRIGGERS" TABLE

1. Rated lifting capacities shown in the table are based on condition that crane is set on firm level surface. Those above bold 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 (500 kg for 50 ton capacity, 150 kg for 5.6 ton capacity), slings and all similarly used load handling devices must be added to the weight of the load.
4. For rated lifting capacity of single top, reduce the 500 kg from the relevant boom rated lifting capacity.
   Rated lifting capacity of single top should not exceed 5,600 kg.
5. Standard number of parts of line for each boom length is as shown below. Load per line should not surpass 52.9 kN {5,400 kgf} for main winch and 54.9 kN {5,600 kgf} for auxiliary winch.

Boom length (m)	11.0	15.0	19.0	23.0	27.0	31.0	35.0	Jib / Single top
No. of parts of line	10	8	8	4	4	4	4	1

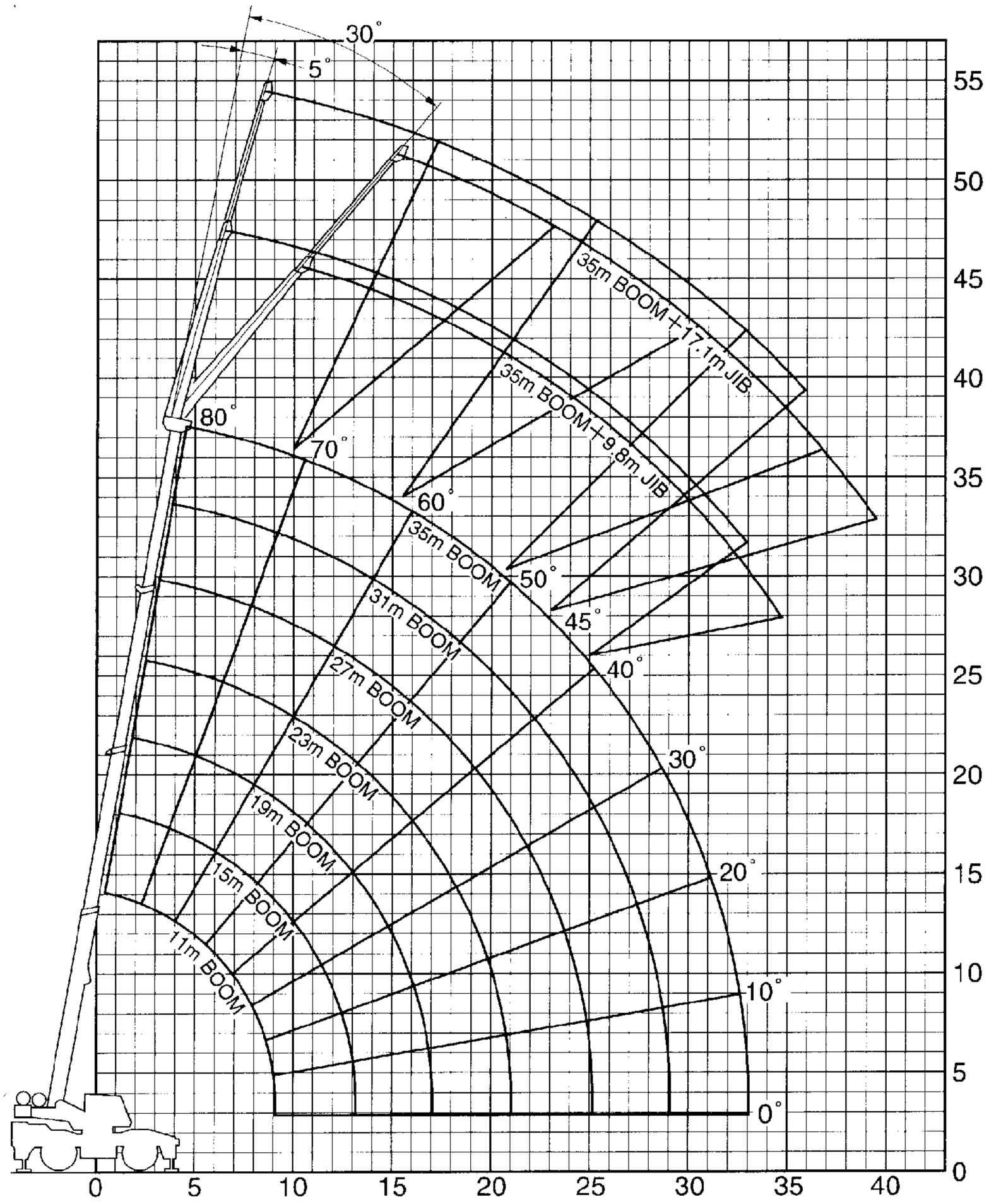
   The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.
   Maximum lifting capacity is restricted by the number of parts of line of AUTOMATIC MOMENT LIMITER (AML-L).
6. The over-side rated lifting capacity depends on outrigger extension. Rated lifting capacity of over-front and over-rear assume fully extended outrigger position. Working area for each outrigger position are given separately and must be followed accordingly during operation.

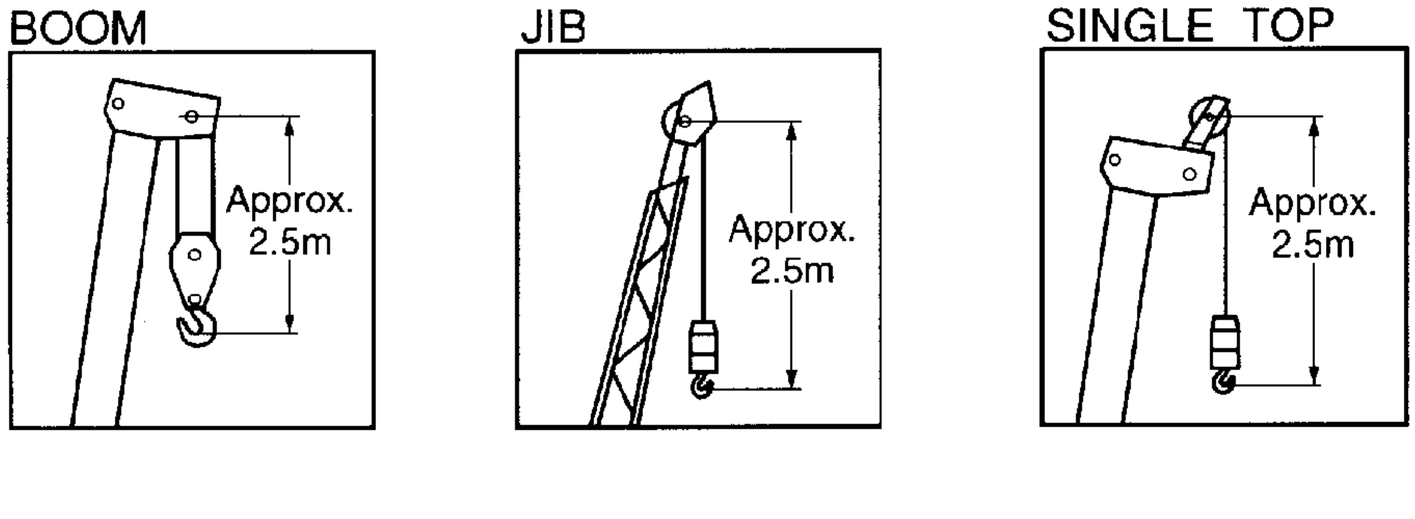
Outriggers position	Extended to middle (6.7 m)	Extended to middle (5.5 m)
Angle a°	30	25



WORKING RANGE

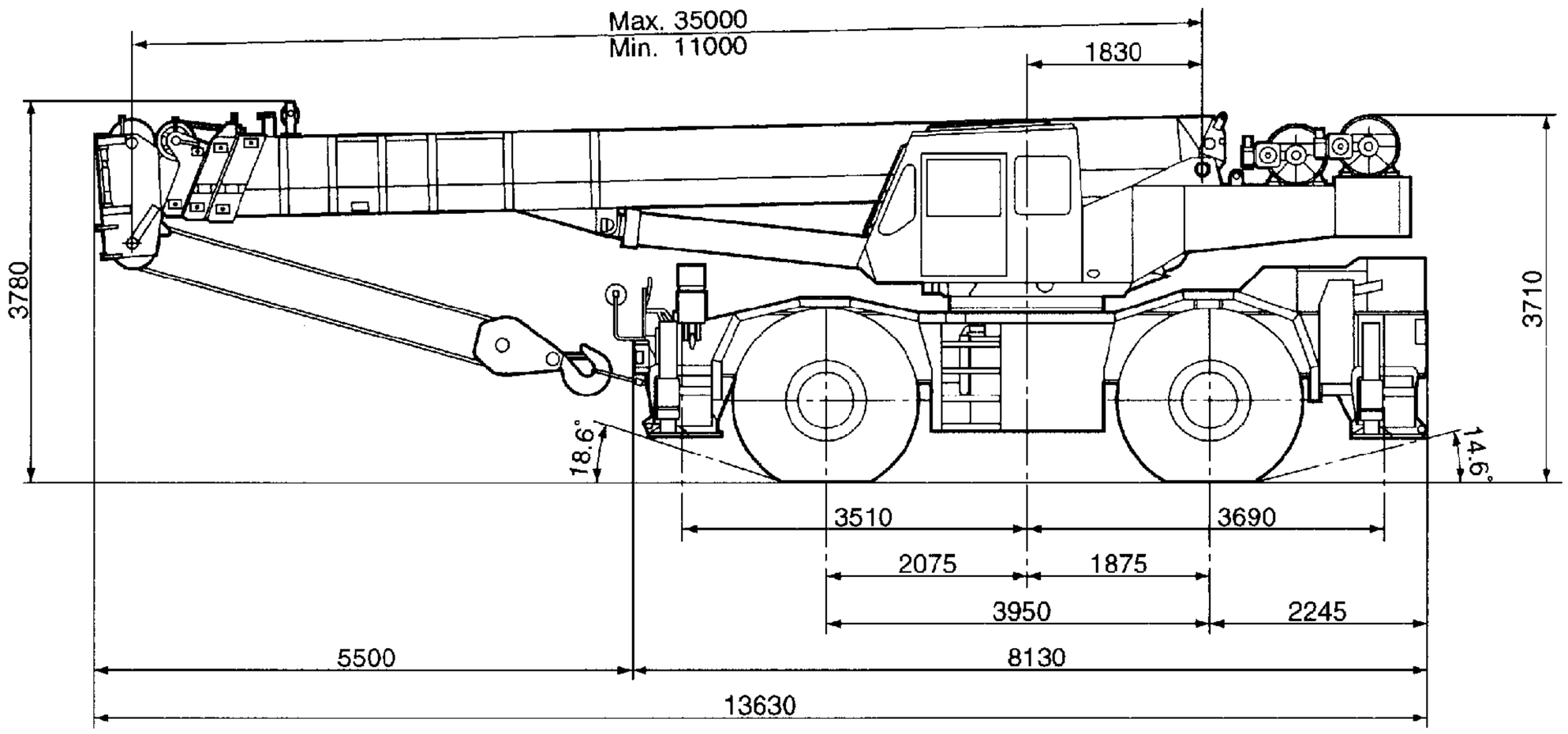
SPEC. SHEET No. TR-500E-3-00101/EX-12





NOTE:

The above lifting height and boom angle are based on a straight (unladen) boom, and allowance should be made for boom deflection obtained under laden conditions.



Overall width ..... 3,315 mm
Tail swing radius ..... 4,120 mm

Tread (track) – Front ..... 2,502 mm
– Rear ..... 2,502 mm

NOTE:
Dimension is with boom angle at – 1.5°.

TADANO

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