



# TR-300EX

(Left hand steering)

## GENERAL DATA

CRANE CAPACITY		30,000 kg at 3.0 m
BOOM	4-section,	9.1 m – 28.6 m
<b>DIMENSIONS</b>		
Overall length	approx.	11,000 mm
Overall width	approx.	2,620 mm
Overall height	approx.	3,530 mm
<b>WEIGHTS</b>		
Gross vehicle weight	approx.	27,100 kg
- front axle	approx.	13,450 kg
- rear axle	approx.	13,650 kg
<b>PERFORMANCE</b>		
Max. travelling speed	computed	50 km/h
Gradeability( $\tan \theta$ )	computed	85 % (at stall)

## CRANE SPECIFICATIONS

**MODEL**  
TR-300EX

**CAPACITY**  
30,000 kg at 3.0 m

**BOOM**  
4-section full length power telescoping boom of box construction with 5 sheaves at boom head. 3rd boom and top boom telescope synchronically by means of a double-acting cylinder, an extension cable and a retraction cable. Hydraulic cylinders fitted with holding valves.

Fully retracted length.....9.1 m  
Fully extended length.....28.6 m  
Extension speed.....19.5 m in 88 s

**JIB**  
2-staged swingaround boom extension. Triple offset(5° / 25° / 45°)type. Box type top section telescopes from lattice type base section which stores alongside base boom section.

Single sheave at jib head.  
Length.....7.2 m and 12.8 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.....0° to 80° in 44 s

**TADANO LTD.**

## HOIST—Main winch

2-speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and hoisting.

Equipped with automatic fail-safe brake and counterbalance valve.

Controlled independently of auxiliary winch.

Single line pull.....3,200 kg

Single line speed

High range.....120 m/min. (at the 4th layer)

Normal range.....60 m/min. (at the 4th layer)

Wire rope.....No-Spin type

Diameter × length...16 mm × 175 m

## HOOK BLOCK—30 ton capacity

5 sheaves, swivel type hook with safety latch.

## HOIST—Auxiliary winch

2-speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and hoisting.

Equipped with automatic fail-safe brake and counterbalance valve.

Controlled independently of main winch.

Single line pull.....3,000 kg

Single line speed

High range.....120 m/min. (at the 4th layer)

Normal range.....60 m/min. (at the 4th layer)

Wire rope.....No-Spin type

Diameter × length...16 mm × 90 m

## HOOK BLOCK—3 ton capacity

Swivel hook with safety latch for single line use.

## SWING

Hydraulic axial piston motor driven through planetary swing speed reducer. Continuous 360° full circle swing on ball bearing slew ring. TADANO Twin Swing System enables to select power-controlled or free swing. Equipped with hand-operated swing brake.

Swing speed.....3.0 rpm

## HYDRAULIC SYSTEM

Pumps..... 2 variable piston pumps for crane.  
Tandem gear pump for steering and accumulator.

Control valves..... Multiple valves actuated by hand levers with integral pressure relief valves.

Circuit..... Equipped with air cooled type oil cooler. Pressure gauge for main circuit installed in crane cab.

Hydraulic oil tank capacity....

approx. 410 liters

Filters..... Return line filter

## CAB

Both crane and drive operations can be performed from one cab mounted on rotating superstructure. One sided one-man type ( two-man type optional ), steel construction with sliding door access and safety glass windows opening at side, rear and roof.

Operator's 4 way adjustable seat with high back.

## TADANO Automatic Moment Limiter (Model: AML-M)

Main unit in crane cab gives audible and visual warning of approach to overload. Automatically cuts out crane motions before overload. With working range ( working radius and / or boom angle and/or tip height ) limit function.

Seven functions are constantly displayed.

Digital liquid crystal display:

Boom angle

Either boom length or potential hook height

Actual working radius

Actual load

Permissible load

Jib offset angle (Display changes by button)

Color bar graphical display :

Moment as percentage

## OUTRIGGERS

4 hydraulically operated outriggers. Each outrigger controlled simultaneously or independently from the cab. Equipped with sight level gauges. Floats mounted integrally with the jacks retract to within vehicle width.

All cylinders fitted with pilot check valves.

Extended width.....6,300 mm

Float size (Diameter).....400 mm

## COUNTERWEIGHT

Integral with swing frame.

Weight.....1,890 kg

## NOTE :

Each crane motion speed is based on unladen conditions.

# CRANE SPECIFICATIONS

SPEC. SHEET No. TR-300E-2-00201/EU-21

## TYPE

Rear engine, left hand steering, driving axle 2-way selected type (by manual switch).

4×2 front drive

4×4 front and rear drive

## FRAME

High-tensile steel, all welded box construction.

## ENGINE

Model.....MITSUBISHI 6D16T

Type.....4 cycle, turbo charged, 6 cylinders in line, direct injection, water cooled diesel engine.

Piston displacement.....7,545 cc

Bore×stroke.....118 mm × 115 mm

Max. output (JIS).....215 PS at 2,800 rpm

Max. torque (JIS).....65 kgm at 1,600 rpm

## TRANSMISSION

Full automatic transmission.

Torque converter (with automatic lock up device at forward, 3rd and 4th) driving full powershift. 4 forward and 1 reverse speeds, constant mesh.

## AXLES

Front.....Full floating type, steering and driving axle with planetary reduction.

Rear .....Full floating type, steering and driving axle with planetary reduction.  
Non-spin differential.

## 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 with hydraulic lockout device.

Rear ..... Semi-elliptic leaf springs with hydraulic lockout device.

## BRAKE SYSTEM

Service..... Air over hydraulic disc brakes on all 4 wheels.

Parking.....Spring operated air released brake acting on front propeller shaft.

## ELECTRIC SYSTEM

24 V DC. 2 batteries of 12 V-120 Ah capacity.

## FUEL TANK CAPACITY

300 liters

## TIRES

Front..... Single×2 16.00-25-28 PR(OR)

Rear .....Single×2 16.00-25-28 PR(OR)

## TURN RADIUS

Min. turning radius(at center of extreme outer tire)

2-wheel steering.....9.0 m

4-wheel steering.....5.3 m

# EQUIPMENTS

## STANDARD EQUIPMENTS

Automatic moment limiter (AML-M)

External lamp (AML)

Pendant type over-winding cutout

Winch automatic fail-safe brake

Over-unwinding prevention

Hook safety latch

Pilot check valves

Holding valves

Counterbalance valves

Hydraulic pressure relief valves

Swing brake

Swing lock

TADANO Twin swing system

Winch drum indicator

Boom angle indicator

Boom elevation foot pedal

Sight level gauge

Hydraulic oil cooler

Electric windshield wiper and washer

Roof windshield wiper

Roof windshield lock warning

Tachometer / Speedometer

AM radio

Synthetic leather trimmed cab interior

Cloth covered cab seat

Cab floor mats

Sun visor (Front and roof)

Neutral position adjustable control lever  
(swing and/or boom elevation)

Automatic drive system

Transmission neutral position start

Overshift prevention

Parking braked travel warning

Tilt-telescope steering wheel

Emergency steering

Back-up alarm

Air cleaner dust indicator

Air dryer

Water separator with filter

Engine over-run alarm

Hydraulic lockout suspension

Non-spin differential (rear)

Towing eyes-front and rear

## OPTIONAL EQUIPMENTS

Reversing steering compensator

Outrigger control from the carrier side

Backseat

Seat belt

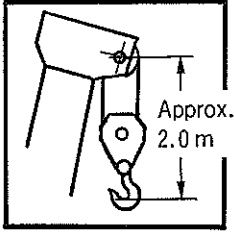
Electric fan

Tire inflation kit

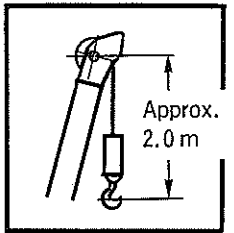
# WORKING RADIUS-LIFTING HEIGHT

SPEC. SHEET No.  
TR-300E-2-00201/EU-21

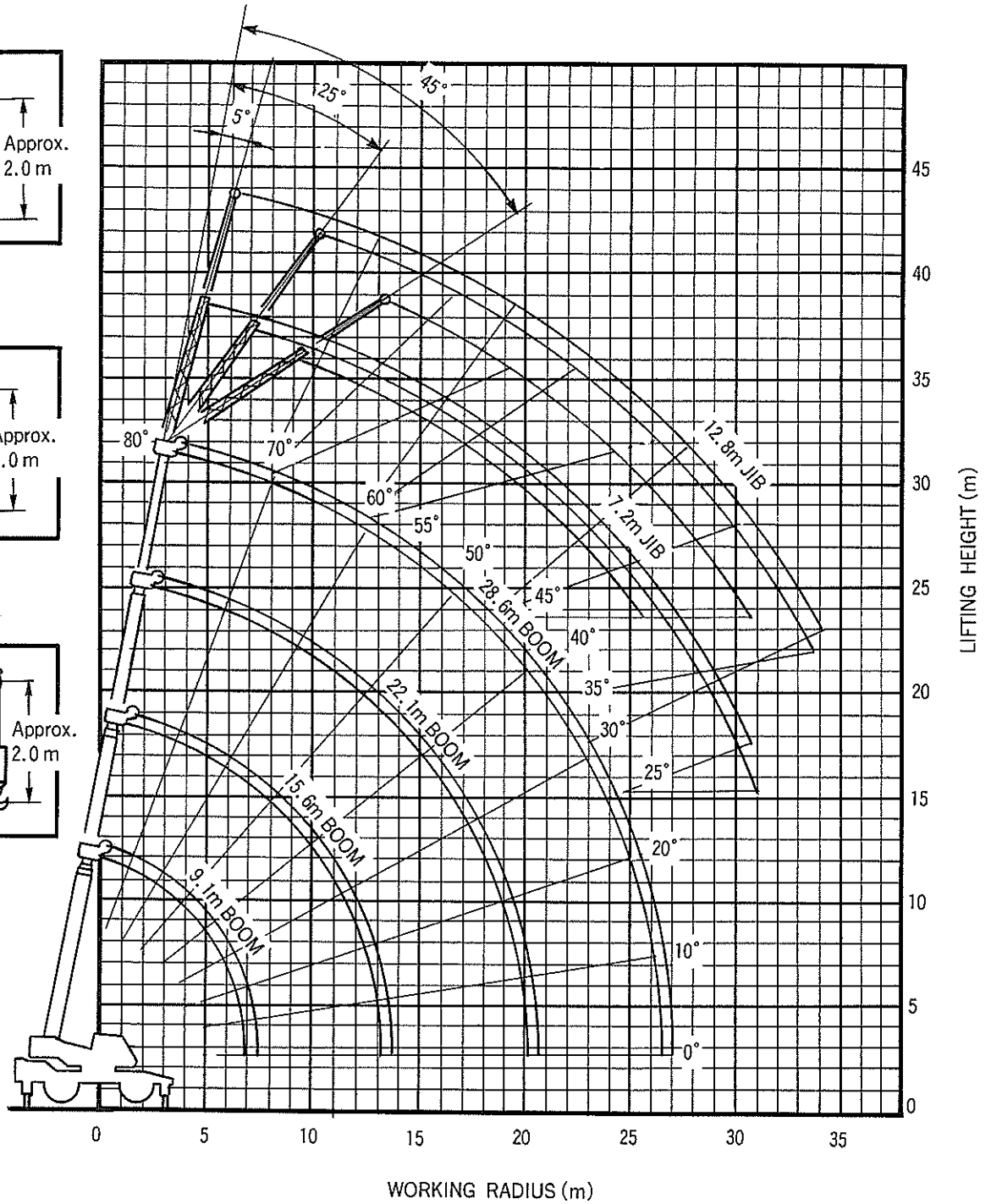
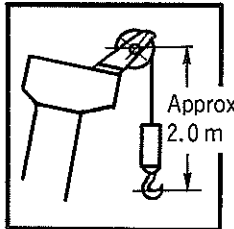
BOOM



JIB



SINGLE TOP



**NOTE:**

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.

# TOTAL RATED LOADS

SPEC. SHEET No. TR-300E-2-00201/EU-21

DIN 15019.2-75%

ON OUTRIGGERS

Unit : kg

		Outriggers fully extended (360°)											
B	A	9.1m	15.6m	22.1m	28.6m	E	7.2m			12.8m			
							C	D		5°	25°	45°	5°
3.0m		30,000	19,200				80°	3,000	2,000	1,400	2,000	1,000	650
3.5m		25,000	19,200	12,500			75°	3,000	2,000	1,400	2,000	1,000	650
4.0m		23,000	19,200	12,500	8,000		70°	2,900	2,000	1,400	1,650	1,000	650
4.5m		21,200	18,100	12,500	8,000		65°	2,350	1,750	1,400	1,400	900	650
5.0m		19,400	17,000	12,500	8,000		60°	1,950	1,500	1,350	1,200	850	650
5.5m		17,900	15,800	12,000	8,000		55°	1,600	1,350	1,200	1,000	750	620
6.0m		16,300	14,700	11,500	8,000		50°	1,350	1,200	1,100	900	700	600
6.5m		15,100	13,800	11,000	8,000		45°	1,050	1,000	1,000	750	650	550
7.0m			12,900	10,500	8,000		40°	850	800		650	550	
7.5m			12,000	9,900	7,500		35°	600	600		450	400	
8.0m			10,700	9,400	7,100		30°	450	450		350		
9.0m			8,400	8,400	6,400		25°	350	350				
10.0m			6,850	7,500	5,800								
11.0m			5,600	6,400	5,350								
12.0m			4,750	5,400	4,900								
13.0m			4,050	4,600	4,550								
14.0m				4,000	4,200								
15.0m				3,450	3,850								
16.0m				3,000	3,450								
17.0m				2,650	3,050								
18.0m				2,350	2,650								
19.0m				2,050	2,400								
20.0m					2,100								
22.0m					1,700								
24.0m					1,300								
26.0m					1,000								

- A : Boom length
- B : Working radius
- C : Jib length
- D : Jib offset
- E : Boom angle

NOTES FOR "ON OUTRIGGERS" TABLE

- Total rated loads 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.
- Total rated loads below bold lines do not exceed 75 % of tipping load.
- The weight of the hook (350 kg for 30 ton capacity, 60 kg for 3 ton capacity), slings and all similarly used load handling devices must be added to the weight of the load.

- For total rated load of single top, reduce the 250 kg from the relevant boom total rated load. Total rated load of single top should not exceed 3,000 kg.
- Standard number of part lines for each boom length is as shown below. Load per line should not surpass 3,200 kg for main winch and 3,000 kg for auxiliary winch.

Boom length (m)	9.1 m	15.6 m	22.1 m	28.6 m	Jib	Single top
No. of part lines	10	6	4	4	1	1

DIN 15019.2-75%

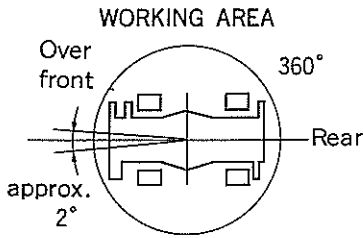
ON TIRES

Unit : kg

		Stationary						Creep					
B	A	Over front			360°			Over front			360°		
		9.1m	15.6m	22.1m	9.1m	15.6m	22.1m	9.1m	15.6m	22.1m	9.1m	15.6m	22.1m
3.0m		14,000	9,000		9,000	7,300		10,500	7,500		7,000	5,100	
3.5m		14,000	9,000	6,500	7,800	7,300	4,500	10,500	7,500	5,500	6,300	5,100	3,200
4.0m		12,500	9,000	6,500	6,600	6,100	4,500	9,500	7,500	5,500	5,600	4,900	3,200
4.5m		10,900	9,000	6,500	5,500	5,100	4,500	8,700	7,500	5,500	4,800	4,400	3,200
5.0m		9,800	8,200	6,500	4,600	4,300	4,300	8,000	7,000	5,500	4,000	3,800	3,200
5.5m		8,700	7,500	6,100	3,850	3,600	3,900	7,100	6,400	5,250	3,400	3,200	3,100
6.0m		7,600	6,800	5,750	3,200	3,000	3,450	6,150	5,900	5,000	2,800	2,650	2,900
6.5m		6,600	6,200	5,400	2,650	2,500	3,000	5,300	5,300	4,750	2,350	2,200	2,650
7.0m			5,600	5,050		2,050	2,650		4,900	4,450		1,800	2,350
8.0m			4,500	4,400		1,500	2,000		3,900	3,900		1,300	1,750
9.0m			3,500	3,800		1,000	1,500		3,100	3,400		850	1,300
10.0m			2,750	3,250		650	1,100		2,400	2,900			950
11.0m			2,200	2,700			800		1,950	2,400			700
12.0m			1,800	2,250					1,550	2,000			
13.0m			1,450	1,850					1,150	1,700			
14.0m				1,500						1,300			
15.0m				1,250						1,100			
16.0m				1,050						900			
17.0m				850						750			
18.0m				700						600			

- A : Boom length
- B : Working radius

to be continued.

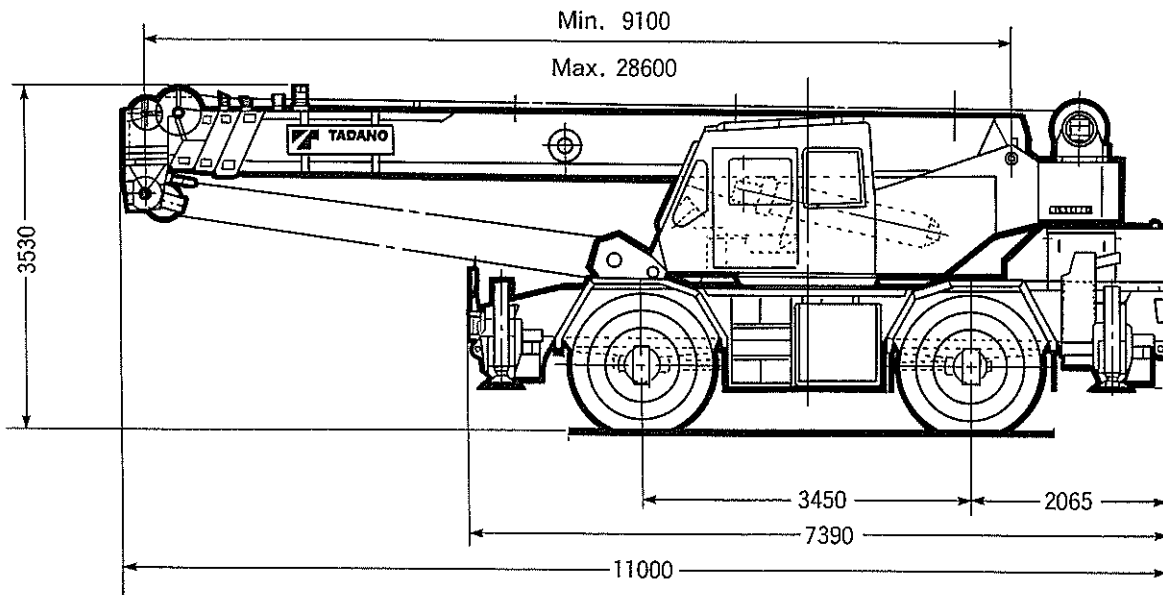


Without outriggers "Over front" operation should be performed within 2 degrees in front of chassis.

### NOTES FOR "ON TIRES" TABLES

- Total rated loads shown in the table are based on condition that crane is set on firm level surface, with suspension lock applied. Those above bold lines are based on tire capacity and those below, on crane stability. They are based on actual working radii increased by tire deformation and boom deflection.
- "STATIONARY" load capacities do not exceed 75 % of tipping loads. "CREEP" load capacities do not exceed 66<sup>2</sup>/<sub>3</sub> % of tipping loads.
- The weight of the hook (350 kg for 30 ton capacity), slings and all similarly used load handling devices must be added to the weight of the load.
- Without outriggers liftings with "28.6 m boom", "Jib" and with "single top" are not permitted.
- CREEP is motion for crane not to travel more than 60 m in any 30 min. period and to travel at the speed of less than 1.6 km/h.
- 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.
- Tires should be inflated to their correct air pressure of 7.75 kg/cm<sup>2</sup>.

## DIMENSIONS



Overall width.....2,620 mm  
Tail swing radius.....3,335 mm

Tread(track) – Front.....2,140 mm  
– Rear .....2,140 mm

Specifications are subject to change without notice.



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