

ROUGH TERRAIN CRANE

TR-250M

JAPANESE SPECIFICATIONS

OUTLINE	SPEC. NO.
4-section Boom, 2-stage Power Tilt Jib	TR-250M-5-00107

TR-250M

CRANE SPECIFICATIONS

CRANE CAPACITY

9.5m Boom	25,000kg	at 3.5m	(8 part-line)
16.5m Boom	19,000kg	at 4.0m	(6 part-line)
23.5m Boom	12,500kg	at 5.0m	(4 part-line)
30.5m Boom	7,000kg	at 8.0m	(4 part-line)
8.0m Jib	3,000kg	at 72°	(1 part-line)
13.0m Jib	2,000kg	at 76°	(1 part-line)
Single top	3,000kg		(1 part-line)

MAX. LIFTING HEIGHT

Boom	31.3m
Jib	44.2m

MAX. WORKING RADIUS

Boom	28.0m
Jib	35.0m

BOOM LENGTH

9.5m – 30.5m

BOOM EXTENSION

21.0m

BOOM EXTENSION SPEED

21.0m / 90s

JIB LENGTH

8.0m, 13.0m

MAIN WINCH SINGLE LINE SPEED

120m/min (4th layer)

MAIN WINCH HOOK SPEED

15.0 m/min (8 part-line)

AUXILIARY WINCH SINGLE LINE SPEED

120m/min (4th layer)

AUXILIARY WINCH HOOK SPEED

120m/min (1 part-line)

BOOM ELEVATION ANGLE

0° – 83°

BOOM ELEVATION SPEED

0° – 83° / 43s

SWING ANGLE

360° continue

SWING SPEED

3.0 rpm

WIRE ROPE

Main Winch

16mm × 170m (Diameter × Length)

Spin-resistant wire rope

Auxiliary Winch

16mm × 95m (Diameter × Length)

Spin-resistant wire rope

BOOM

4-section hydraulically telescoping boom of box construction.

(stage 2: sequential; stages 3,4: synchronized)

BOOM EXTENSION

2 double-acting hydraulic cylinder

1 wire rope type telescoping device

JIB

Quick-turn type (2-staged type which stores alongside below the base boom section and extendible from under the boom (with 2nd stage being a pull-out type))

Hydraulic non-stage offset (5°–45°) type

SINGLE TOP

Single sheave. Mounted to main boom head for single line work.

HOIST

Driven by hydraulic motor and via spur gear speed reducer. With free-fall device.

(with operation lever lock device for prevention of misoperation)

Automatic brake (with foot brake for free-fall device)

2 single winches

With flow regulator valve with pressure compensation

BOOM ELEVATION

1 double-acting hydraulic cylinders

With flow regulator valve with pressure compensation

SWING

Hydraulic motor driven planetary gear reducer

Swing bearing

Swing free/lock changeover type

Hand brake

OUTRIGGERS

Fully hydraulic H-type (floats mounted integrally)

Slides and jacks each provided with independent operation device.

Full extended width 6.3m

Middle extended width 5.0m, 3.6m

Minimum extended width 2.2m

OPERATION METHOD

Hydraulic pilot valve operation

MAX. OUTRIGGER LOAD

26.7t

HYDRAULIC PUMPS

2 variable piston pumps

2 gear pumps

HYDRAULIC OIL TANK CAPACITY

380 liters

SAFETY DEVICES

Automatic moment limiter (AML)

Multi-display indication

Over-winding cutout

Working area control device

Outrigger extension width detector

Winch drum lock

Level gauge

Hook safety latch

Hydraulic safety valve

Telescopic counterbalance valve

Elevation counterbalance valve

Power tilt counterbalance valve

Jack pilot check valve

Swing lock

EQUIPMENTS

Heat pump type air-conditioner

Hydraulic oil temperature indication lamp

Radio

Oil cooler

Tactile-type winch drum rotation indicator

Operation pedal for elevating operation

Centralized oiling device (carrier)

Television (option)

CARRIER SPECIFICATIONS

ENGINE

Model MITSUBISHI 6D16 (with turbo charger)
Type 4-cycle, 6-cylinder, direct-injection, water-cooled diesel engine

Piston displacement 7,545cc
Max. output 220PS at 2,800rpm
Max. torque 65.0kg·m at 1,600rpm

TORQUE CONVERTER

3-element, 1-stage unit (with automatic lock-up mechanism)

TRANSMISSION

Automatic and manual transmission
Power shift type (wet multi-plate clutch)
3 forward and 1 reverse speeds (with Hi/Low settings)

REDUCER

Axle dual-ratio reduction

DRIVE

2-wheel drive (4×2) / 4-wheel drive (4×4) selection

FRONT AXLE

Full floating type

REAR AXLE

Full floating type (with no-spin differential)

SUSPENSION

Front Parallel leaf spring type
Rear Parallel leaf spring type

STEERING

Fully hydraulic power steering
With reverse steering correction mechanism

BRAKE SYSTEM

Service Brake

Hydro-pneumatic brake
Disk brake

Parking Brake

Mechanically operated, internal expanding duo-servo shoe type acting on drum at transmission case rear.

Auxiliary Brake

Hydrodynamic retarder
Electro-pneumatic operated exhaust brake.
Auxiliary braking device for operations

FRAME

Welded box-shaped structure

ELECTRIC SYSTEM

24 V DC, 2 batteries of 12V (120Ah)

FUEL TANK CAPACITY

300 liters

TIRES

Front 16.00R25☆☆(OR)
Rear 16.00R25☆☆(OR)

CAB

Two-man type
With sun visor and trim
Rubber mounted type
Fully adjustable foldable seat
(with headrest, armrest, seat belt)
Adjustable handle (tilt, telescoping)
Roof windshield lock warning
Intermittent type roof wiper (with washer)

SAFETY DEVICES

Emergency steering device
Spring lock device
Rear wheel steering lock device
Engine over-run alarm
Overshift prevention device
Parking brake alarm
Powered mirror for right side of boom
Monitor TV for left side of boom

GENERAL DATA

DIMENSIONS

Overall length	11,120mm
Overall width	2,620mm
Overall height	3,495mm
Wheel base	3,450mm
Tread Front	2,120mm
Rear	2,120mm

WEIGHTS

Gross vehicle weight	
Total	26,400kg
Front	13,200kg
Rear	13,200kg

PERFORMANCE

Max. traveling speed	49km/h
Gradeability (tan θ)	0.6
Min. turning radius	5.3m (4-wheel steering) 9.0m (2-wheel steering)

TOTAL RATED LOADS

(1) With outriggers set

(i)

Unit:ton

Outriggers fully extended; (6.3 m)											
A B	9.5 m	16.5 m	23.5 m	30.5 m	C D E	8.0 m			13.0 m		
						5°	25°	45°	5°	25°	45°
2.5 m	25.0	19.0	12.5		83°	3.0	2.1	1.6	2.0	1.2	0.8
3.0 m	25.0	19.0	12.5	7.0	76°	3.0	2.1	1.6	2.0	1.2	0.8
3.5 m	25.0	19.0	12.5	7.0	72°	3.0	2.1	1.6	1.75	1.1	0.8
4.0 m	23.0	19.0	12.5	7.0	70°	2.8	2.1	1.6	1.65	1.05	0.8
4.5 m	21.2	18.0	12.5	7.0	65°	2.35	1.8	1.5	1.4	0.95	0.78
5.0 m	19.4	16.7	12.5	7.0	60°	2.0	1.55	1.35	1.2	0.9	0.75
5.5 m	17.8	15.6	11.75	7.0	55°	1.45	1.35	1.2	1.05	0.85	0.74
6.0 m	16.3	14.6	11.1	7.0	50°	1.05	1.0	0.95	0.85	0.75	0.7
6.5 m	15.1	13.8	10.5	7.0	45°	0.75	0.7	0.7	0.6	0.55	0.55
7.0 m	13.7	13.0	10.0	7.0	40°	0.55	0.5		0.4	0.4	
8.0 m		10.55	9.0	7.0	35°	0.38	0.35				
9.0 m		8.5	8.2	6.3							
10.0 m		7.05	7.3	5.8							
11.0 m		5.85	6.4	5.3							
12.0 m		4.95	5.5	4.9							
13.0 m		4.2	4.75	4.5							
14.0 m		3.6	4.1	4.15							
15.0 m			3.6	3.8							
16.0 m			3.15	3.45							
17.0 m			2.8	3.05							
18.0 m			2.45	2.7							
19.0 m			2.15	2.45							
20.0 m			1.9	2.2							
21.0 m			1.7	1.95							
22.0 m				1.75							
24.0 m				1.4							
26.0 m				1.15							
28.0 m				0.95							

A = Boom length

B = Working radius

C = Jib length

D = Jib offset

E = Boom angle

DIMENSIONS (1/100)

