TR

ROUGH TERRAIN CRANE

TR-250M

JAPANESE SPECIFICATIONS

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

Control No. JA-03

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) -360°-												
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)