

MWR160TX

Road-rail 8-t crawler crane



Features The largest class road-rail crawler crane

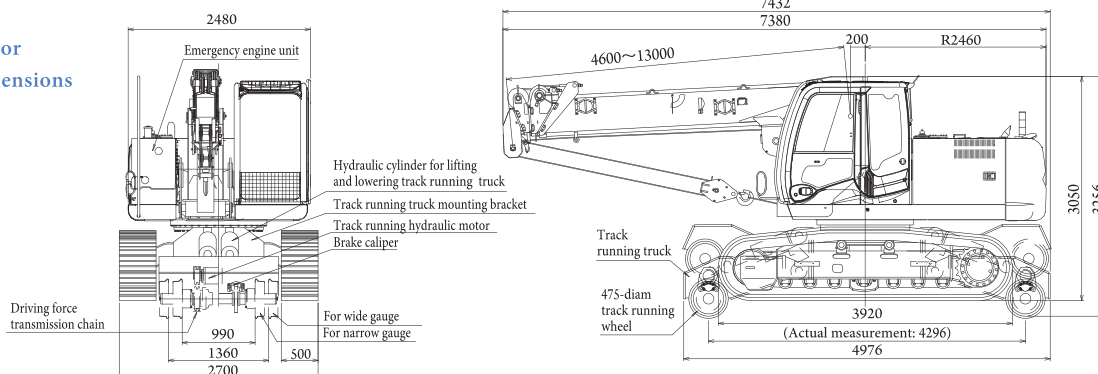
- The highest lifting load (8 t) among road-rail cranes.
- Provided with heavy weight railway equipment to ensure excellent stability on tracks.
- The hydraulic pump with a high discharge rate increases the running and working speed.
- Provided with an emergency engine unit, which ensures running even in case of trouble with the main engine.
- Equipped with automatic stop device to prevent contact with overhead lines and trains traveling on adjacent tracks.
- Equipped with insulated rubber crawlers dedicated to track work.
- Applicable to standard gauge (1,435 mm) and narrow gauge (1,067 mm)
* Changeable to other gauges.
- Provided with back monitor



Examples of work

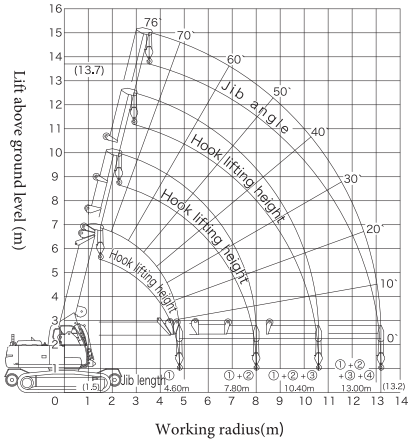


Major dimensions





Working radius-lifting height diagram



Note: This diagram shows the lifting height under no load without consideration of deflection of the jib. Operate the crane with a load in the jib angle range of 0° to 76°.

Rated total load

Boom length working radius (mm)	4.6-m boom		7.8-m boom		10.4-m boom		13.0-m boom	
	Rated lifting load in stopped state	Rated lifting load in running state	Rated lifting load in stopped state	Rated lifting load in running state	Rated lifting load in stopped state	Rated lifting load in running state	Rated lifting load in running state	Rated lifting load in running state
2.5	8,000	3,000						
2.7	7,600	3,000	7,000	3,000				
3.0	7,000	3,000	7,000	3,000				
3.5	5,500	2,750	5,500	2,750	4,900			
4.0	4,900	2,450	4,900	2,450	4,900		3,900	
4.5	4,150	2,075	4,250	2,125	4,300		3,900	
5.0	3,775/4.8m	1,885/4.8m	3,650	1,825	3,650		3,650	
6.0			2,820	1,410	2,820		2,820	
6.5			2,500	1,250	2,500	Not allowed	2,500	Not allowed
7.0			2,250	1,125	2,250		2,250	
8.0			1,820	910	1,820		1,820	
9.0					1,550		1,550	
10.0					1,320		1,320	
10.6					1,220		1,220	
11.0							1,160	
12.0							1,020	
13.0							920	
13.2							900	

- A load is hung with four wires in all cases.
- The load which can be actually lifted is the difference obtained by subtracting the weight of the hook and hanging tools, such as slinging wire ropes (hook weight: 80 kg), from the rated total load.
- It is prohibited to lift a load while running on the track.

Principal specifications

Item	MWR160TX
Specifications	
Base vehicle	Hitachi TX160
Total working weight (kg)	21,500
Type of track roller	Rubber insulated shoe
Fuel tank (L)	320
Dimensions	
Overall length (during transportation) (mm)	7,432
Overall width (mm)	2,700
Overall height (on track) (mm)	3,256
Swing radius (mm)	2,460
Overall length of crawler (mm)	3,920
Performance	
Boom length (m)	4.6~13.0
Max. lifting load × working radius (t×mm)	8.0×2,500
Max. working radius (mm)	13,200
Max. lift above ground level (mm)	13,700
Max. lift below ground level (mm)	18,000
Swing range (degrees)	360
Swing speed (rpm)	2.0
Max. speed of crawler (km/h)	High speed:3.4
Gradability (degrees)	19.5
Ground contact pressure (kgf/cm ²)	0.69
Track running performance	
Max. speed (km/h)	25
Max. gradient at which vehicle can start	30/1,000
Counterbalance braking distance (m)	In fine weather: 18 m In wet weather: 25 m
Braking distance (m)	In fine weather: 10 m In wet weather: 14 m

Major units

Item	MWR160TX
Engine	
Model	Isuzu AI-4JJ1X
Type	4-cycle water-cooled inline direct injection type with turbo
Total displacement (cc)	2,999
Rated output (kW/rpm)	83/2,000
Hydraulic unit	
Type and quantity of hydraulic pumps	Duplex variable capacity type axial piston pump + duplex gear pump
Hydraulic pump discharge (L/min)	226
Max. set pressure (kgf/cm ²)	350
Type and quantity of control valves	9-spool valve, 1 pc. + 1-spool valve, 1 pc. + 3-spool valve, 1 pc.
Operation method	Hydraulic assist + electrical assist
Crawler running motor	Variable piston type
Crane unit	
Boom	4 stages/8.0 t
Rated lifting load (t)	8.0
Crane safety devices	Overload prevention device, over-winding prevention device, load indicator, level board, working range limiting device, inclination warning device and wire irregular winding prevention device
Track traveling equipment	
Wheel	Diameter: 475mm Width: 125mm, wheel back to back gauge: 990mm (narrow gauge), 1,360mm (standard gauge), 4 insulated wheels
Axle	2 axles (diameter 110 mm), 1 axle drive Distance between axles: 4,300mm
Motive power source	Hydraulic motor with counterbalance valve (output 96 kW, torque 1,530 N.m), 2 units
Drive	Chain driving system for each axle
Brake	Hydraulic disc brake for each axle (braking torque: 2,940N/m) + counterbalance valve for each axle, with parking braking system and escape lash prevention device
Safety devices in track	
Emergency engine	Air-cooled 4-cycle 3-cylinder diesel engine (1429 cc, 30 ps)
Boom height limits	automatic stop of boom
Boom insulation	High voltage plastic sheet for electrical use (withstand voltage: 7000 V)
Other safety devices	Hydraulic motor release clutch, hydraulic motor free valve, front and rear lamps, flasher, connecting hole, coupling rod and back monitor