

MWR120UR

Road-rail 4.9-t crawler crane



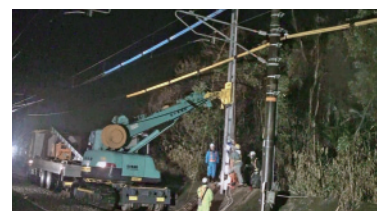
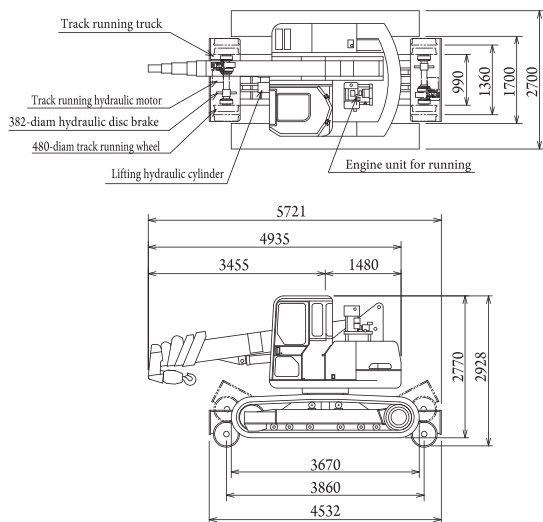
Features

Road-rail crawler crane with the highest lifting load in the class

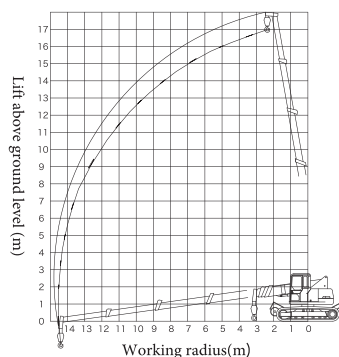
- The highest lifting load in the 4.9-t class.
 - Provided with heavy weight railway equipment to ensure excellent stability on tracks.
 - The hydraulic pump with a high discharge rate increases the running and working speed.
 - Provided with rail clamps (patented) to work stably on unstable tracks, such as bridges.
 - Provided with an emergency engine unit, which ensures running even in case of trouble with the main engine.
 - Provided with a hydraulic circuit to enable installation of special attachments (gondola and earth auger).
 - The gondola turning mechanism enables working above overhead lines where conventional vehicles for high lift work are unusable. * Gondola type
 - 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 (1,435mm) and narrow gauge (1,067mm) * Changeable to other gauges.



Major dimensions

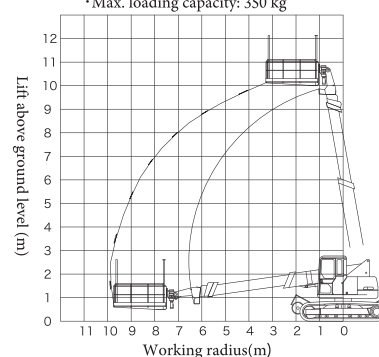


Working radius-lifting height diagram (crane type)

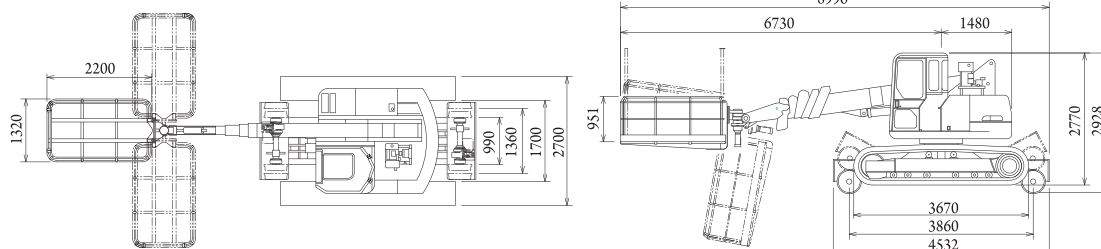


Working radius-lifting height diagram (gondola type)

- Max. number of crews: 3 persons
- Max. loading capacity: 350 kg



Major dimensions Gondola type





Rated total load

Working radius(m)	4.51-m boom		7.27-m boom		10.03-m boom		12.79-m boom		15.55-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 stopped state	Rated lifting load in running state	Rated lifting load in stopped state	Rated lifting load in running state
1.00	4,900	2,000	4,900	2,000						
1.50	4,900	2,000	4,900	2,000	2,600	1,400				
2.00	4,900	2,000	4,900	2,000	2,600	1,400	2,000			
2.50	4,900	2,000	4,900	2,000	2,600	1,400	2,000		1,400	
3.00	4,300	2,000	4,300	2,000	2,600	1,300	2,000		1,400	
3.50	3,600/3.45m	1,800/3.45m	3,550	1,775	2,600	1,300	2,000		1,400	
4.00			3,050	1,525	2,600	1,300	2,000		1,400	
4.50			2,650	1,325	2,400	1,200	2,000		1,400	
5.00			2,250	1,125	2,200	1,100	1,800	Not allowed	1,400	Not allowed
6.00			1,650	825	1,800	900	1,500		1,160	
7.00			1,550/6.22m	775/6.22m	1,400	700	1,280		1,000	
8.00					1,100	550	1,100		870	
9.00					950/8.98m	475/8.98m	950		770	
10.00							800		700	
12.00							600/11.74m		570	
14.00									350	
14.50									320	

- 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.

Principal specifications

Item	MWR120UR	MWR120UR (gondola type)
Specifications		
Base vehicle	Kobelco MWR120UR	
Total working weight (kg)	16,700	
Type of track roller	Rubber integral insulated shoe	
Fuel tank (L)	100	
Dimensions		
Overall length (during transportation) (mm)	5,721	8,996
Overall width (mm)	2,700	
Overall height (on track) (mm)	2,928	
Swing radius (mm)	1,480	
Overall length of crawler (mm)	3,670	
Performance		
Boom length (m)	4.51~15.55	
Max. lifting load X working radius (tXmm)	4.9X2,500	
Max. working radius (mm)	14,500	10,000
Max. lift above ground level (mm)	16,500	10,000
Max. lift below ground level (mm)	26,300	—
Swing range (degrees)	360	
Swing speed (rpm)	2.2	
Max. speed of crawler (km/h)	Low speed: 1.9 High speed: 3.3	
Gradability (degrees)	35	
Ground contact pressure (kgf/cm ²)	0.58	
Track running performance		
Max. speed (km/h)	16	
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	MWR120UR
Engine	
Model	Isuzu A-4JB1
Type	4-cycle water-cooled inline direct injection type with turbo
Total displacement (cc)	2,771
Rated output (PS/rpm)	41.9/2,200
Hydraulic unit	
Type and quantity of hydraulic pumps	Variable piston type, 2 pcs. + gear type, 2 pcs.
Hydraulic pump discharge (L/min)	66×2+12.1+19.6
Max. set pressure (kgf/cm ²)	320
Type and quantity of control valves	6+1+1-spool valve
Operation method	Hydraulic assist
Crawler running motor	Variable piston type, 2 pcs.
Crane unit	
Boom	5 stages/4.9 t
Rated lifting load (t)	4.9
Crane safety devices	Overload prevention device, over-winding prevention device, load indicator, Height upper limit setting device, level board, inclination warning device
Gondola safety devices	Gondola balancing device, gondola emergency stop device and column to prevent getting caught in gondola
Track running equipment	
Wheel	Diameter: 460mm Width: 125mm, wheel back to back gauge: 990mm (narrow gauge), 1,360mm (standard gauge), 4 insulated wheels
Axle	2 axles (diameter 100 mm), 1 axle drive Distance between axles: 3,860mm
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: 0.5 t.m) + counterbalance valve for each axle, with parking braking system escape lash prevention device
Safety devices in track	
Emergency engine	Air-cooled 4-cycle single cylinder diesel engine (406 cc, 10 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, fence for crew, connecting hole and coupling rod