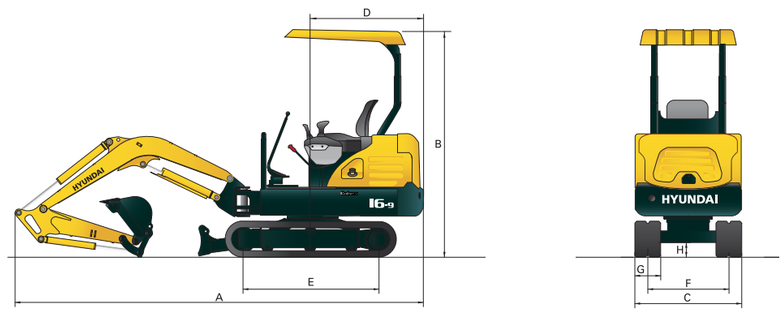
Dimensions & Working Range

R16-9 DIMENSIONS



unit: mm(ft·in)

A	Overall length	3,840 (12'7")	E	Tumbler distance	1,230 (4'0")
B	Overall height	2,300 (7'7")	F	Track gauge	750~1,020 (2'6"~3'4")
C	Overall width	980~1,250 (3'3"~4'1")	G	Track shoe width	230 (0'9")
D	Tail swing radius	1,065 (3'6")	H	Ground clearance	150 (0'6")

R16-9 WORKING RANGE

unit: mm(ft·in)

	Boom length	1,800 (5'11")
	Arm length	960 (3'2")
A	Max. digging reach	3,970 (13'0")
A'	Max. digging reach at ground	3,880 (12'9")
B	Max. digging depth	2,250 (7'5")
C	Max. vertical wall digging depth	1,785 (5'10")
D	Max. digging height	3,670 (12'0")
E	Max. dumping height	2,550 (8'4")
F	Min. swing radius	1,615 (5'4")

* Standard and optional equipment may vary. Contact your Hyundai dealer for more information. The machine may vary according to International standards.
* The photos may include attachments and optional equipment that are not available in your area.
* Materials and specifications are subject to change without advance notice.
* All imperial measurements rounded off to the nearest pound or inch.

PLEASE CONTACT

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We build a better future

Robex 16-9

With Tier 4 Engine installed

*Photo may include optional equipment.

HYUNDAI
HEAVY INDUSTRIES CO.,LTD.

Pride at Work

Hyundai Heavy Industries strives to build state-of-the art earthmoving equipment to give every operator maximum performance, more precision, versatile machine preferences, and proven quality. Take pride in your work with Hyundai!

*Photo may include optional equipment.

Robex 16-9

Machine Walk-Around

Rugged Upper and Lower Frame

The upper frame is designed with an optimum structure to absorb high stress from outside. Reinforced box section center frame and track frame provide exceptional strength and longer service life to withstand the tough working conditions.

Compact design

R16-9's compact design allows the operator to work in confined areas, like close to buildings on roadways, and in urban areas. R16-9's variable undercarriage provides easy and efficient operation in any limited space work environment.

Engine Technology

The R16-9 is powered by a proven and reliable,Tier 4 certified Mitsubishi L3E Engine. This engine provides efficient fuel combustion and reduced noise.

Efficient Control System

Control devices are all conveniently located for improved operator comfort and productivity.
A safety lever on the left-side console is designed to prevent exiting the cab while hydraulic controls are live.

Advanced Hydraulic System

The R16-9 hydraulic system is precision designed for fast operation with fine control capabilities.

Comfortable and Durable Cab with Canopy

Cab frames meet international standards TOPS, ROPS, FOPS ensuring operator's safety.

Operator Convenience

An adjustable suspension seat, wrist rests, ergonomically designed joysticks and plenty of leg room help to reduce operator fatigue. A array of indicators and gauges are displayed on the monitor which keep the operator aware of machine performance at all times. The monitoring system includes seven warning indicators, water temperature gauge, fuel gauge and hour meter.

Easy and Simple Maintenance

R16-9 is equipped with wide opening covers and hoods for easy access and maintenance. Additional benefits include an easily serviceable air cleaner and centralized grease fittings.

Extended Life of Components

The R16-9 reduces operating costs over time with long life hydraulic oil, shims and bushings.

Preference

The R16-9 offers an operator an optimal work environment with a cab designed for comfort and sophistication.

Operating R16-9 is unique to every operator.
Operators can fully customize their work environment and operating preferences to fit their individual needs.

*Photo may include optional equipment.

Monitor

The monitoring system of the R16-9 provides the operator with machine status information, including: engine oil pressure, battery charge, engine coolant temperature and a fuel gauge.

Comfortable Operating Cab

In a 9 series cab with canopy you can easily adjust the seat and wrist rests settings to best suit your preferred operating condition.

1. All pedals are foldable for additional floor space. Foot rest, attachment pedal, left and right travel pedals and boom swing pedal are arranged for convenient access.
2. Two cup holders are integrated into the right console for large and small drink storage.
3. Adjustable wrist rests provide additional comfort.
4. Layout of control devices is ergonomically located for higher production efficiency.

Concentrated Controller Position

The left and right control levers are ergonomically located for convenient access. Pilot operated hand levers are easily accessible for controlling the dozer blade and track extension. Easy-to-access control switches on the left side console improve operating comfort and productivity.

A tiltable left-side console allows the operator easier access to the cab. A safety lock system is designed to prevent exiting the cab while hydraulic controls are live. When the safety lever and left side console are positioned upright, hydraulic functions are disengaged.

Operator Comfort

An operator's work environment should be stress free. Hyundai R16-9's adjustable suspension seat, wrist rests, ergonomically designed joysticks and plenty of space help to reduce stress on the operator.

*Photo may include optional equipment.

Precision & Performance

New technologies designed to improve performance and precision, make the R16-9 smooth, fast and easy to control.

*Photo may include optional equipment.

Improved Hydraulic System

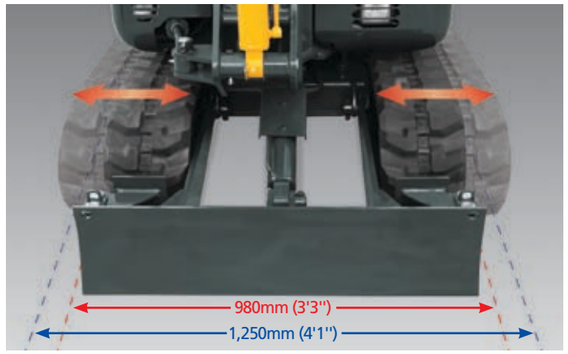
Optimized matching between the joystick and main control valve improves fine control and smoothness of operation. An arm flow summation system provides energy savings, reduced cavitation and increased speed. To improve safety and avoid boom drift the R16-9 is equipped with an integrated boom holding system.

Boom Swing

The R16-9's boom swing function is designed for efficient work in congested residential and urban areas. The boom can be offset left or right within an operating range.

Structure Strength

The R16-9 canopy structure has been fitted with stronger but slimmer tubing for added safety and improved visibility. Low-stress, high strength steel is integrally welded to form a stronger, more durable upper and lower frame. Structural integrity was tested by way of FEM (Finite Elements Method) analysis and long-term durability tests.



Variable Undercarriage

R16-9's track width adjusts to between 980mm~1,250mm (3'3''~4'1''). The operator can easily adjust the blade size by removing the pin. Specially designed rubber-padded track shoes protect the road surface.

Mitsubishi L3E

Tier 4 certified, Mitsubishi L3E engine provides maximum power, reliability, optimum fuel economy, and reduced emissions.

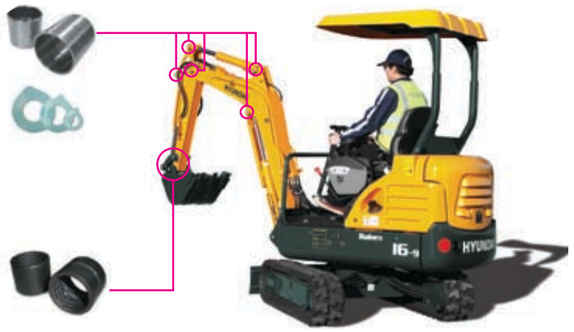
Profitability

R16-9 is designed to maximize profitability through improved efficiencies, enhanced service features and longer life components.

*Photo may include optional equipment.

Easy Access

The R16-9 was built with accessibility in mind. All covers and hoods were built for complete open access. Regular service and maintenance is easy and convenient with the R16-9.



Extended the Life of Components

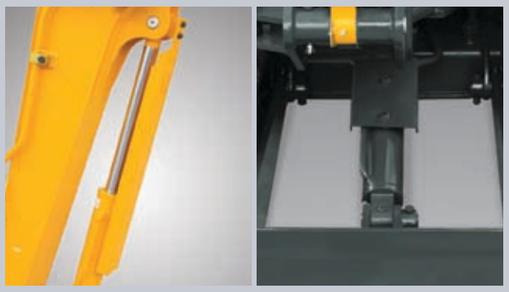
Reliability is improved and maintenance costs are reduced due to long life hydraulic oil (5,000 hrs). The addition of lubricated bushings and resin shims has extended lube intervals throughout the attachment to 250 hours.

Easy Change Air Cleaner

The R16-9 is equipped with a durable plastic air cleaner designed for easy maintenance.

Centralized Grease Fittings

Centralized lubrication bank for faster, easier service and maintenance.



Cylinder Covers

Standard boom cylinder cover and dozer cylinder cover provide added protection.

Specifications

ENGINE

Model		Mitsubishi L3E
Type		4 cycle, in line, water cooled, diesel, Tier 4 certified
Rated flywheel horse power		
SAE	J1995 (gross)	16.8hp (12.5kw) / 2,300rpm
	J1349 (net)	16.2hp (12.1kw) / 2,300rpm
DIN	627 1/1 (gross)	17ps (12.5kw) / 2,300rpm
	627 1/1 (net)	16.5ps (12.1kw) / 2,300rpm
Max. torque		5.4 kgf·m(39lbf·ft) at 1,800 rpm
Bore x stroke		76mm(2.99")x70mm(2.76")
Piston displacement		952cc (58.1in^3)
Batteries		12V, 80AH
Starting motor		12V, 1.7kW
Alternator		12V, 40A

HYDRAULIC SYSTEM

Main pumps	
Type	Variable displacement piston pumps
Rated flow	2x17.0 ℓ/min(4.5USgpm/3.7UKgpm)
Sub-pump for pilot circuit	Gear pump
Hydraulic motors	
Travel	Two speed axial piston motor with counter balance valve
Swing	Axial piston motor
Relief valve setting	
Implement circuits	210 kgf/cm^2 (2,990 psi)
Travel circuit	210 kgf/cm^2 (2,990 psi)
Swing circuit	170 kgf/cm^2 (2,420 psi)
Pilot circuit	30 kgf/cm^2 (430 psi)
Service valve	Installed

HYDRAULIC CYLINDER

No. of cylinder - bore x stroke	
Boom	60 x 465mm (2.4" x 18.3")
Arm	60 x 400mm (2.4" x 15.7")
Bucket	55 x 345mm (2.2" x 13.6")
Boom swing	55 x 355mm (2.2" x 14.0")
Dozer blade	65 x 93mm (2.6" x 3.7")
Extension	50 x 270mm (2.0" x 10.6")

NOISE LEVEL

Noise Levels (dynamic value)	
LwA	93dB
LpA	82dB

COOLANT & LUBLICANT CAPACITY

(refilling)	liter	US gal	UK gal
Fuel tank	25	6.6	5.5
Engine coolant	4.2	1.1	0.9
Engine oil	4.2	1.1	0.9
Hydraulic tank	20	5.3	4.4

TRAVEL LEVERS

Traveling and steering : Two levers with pedals.

CONTROL LEVERS

Type	
Pilot control	Two joysticks with one safety lever (LH): Swing and arm, (RH): Boom and bucket with horn (ISO)
Engine throttle	Mechanical, cable type

SWING SYSTEM

Swing motor	Axial piston motor
Swing reduction	Planetary gear reduction
Swing circuit lubrication	Lubricated with drain oil
Swing speed	9.3 rpm

DRIVES & BRAKES

Max. travel speed(high) / (low)	4.1km / 2.2km (2.5mph) / (1.4mph)
Maximum traction force	1.55ton
Maximum gradeability	30°
Parking brake	Multi wet disc

DIGGING FORCE(ISO)

Bucket	1,540 kgf
	15.1 kN
	3,400 lbf
Arm	960 kgf
	9.4kN
	2,120 lbf

WEIGHT(APPROXIMATE)

Operating weight, including 1,800 mm (5' 11") boom, 960 mm (3' 2") arm, SAE heaped 0.04 m^3 (0.05 yd^3) excavator bucket, lubricant, coolant, full fuel tank, hydraulic tank and the standard equipment.

Shoe width	Rubber shoe 230mm(9")
Operating weight (canopy)	1,650kg (3,640lb)
Ground pressure (canopy)	0.27kg/cm^2 (3.84psi)

UNDERCARRIAGE

Center frame is integrally welded with reinforced box-section track frames. The undercarriage includes lubricated rollers, track adjusters with shock absorbing springs and sprockets, and rubber shoes.

Track frame	Variable undercarriage
No. of track roller on each side	3 EA

LIFTING CAPACITIES R16-9

Rating over-front Rating over-side or 360 degree

Boom : 1.80m (5' 11") / Arm : 0.96 m (3' 2") / Bucket : 0.04m^3 (0.05yd^3) SAE heaped / Dozer blade up, track extended, 230mm(9") rubber track.

Load point height m (ft)		Load radius 2.0 m (7 ft)		2.5 m (8 ft)		3.0 m (10 ft)		At max. reach Capacity		Reach
										m (ft)
3.0 m	kg							300	270	2.72
(10 ft)	lb							660	600	(8.9)
2.5 m	kg			*320	310			220	200	3.22
(8 ft)	lb			*710	680			490	440	(10.6)
2.0 m	kg			330	300	240	220	180	170	3.52
(7 ft)	lb			730	660	530	490	400	370	(11.5)
1.5 m	kg	*460	420	320	290	240	220	170	150	3.69
(5 ft)	lb	*1010	930	710	640	530	490	370	330	(12.1)
1.0 m	kg	450	400	310	280	230	210	160	140	3.76
(3 ft)	lb	990	880	680	620	510	460	350	310	(12.3)
0.5 m	kg	420	380	300	270	220	200	160	140	3.74
(2 ft)	lb	930	840	660	600	490	440	350	310	(12.3)
Ground	kg	410	370	290	260	220	200	160	150	3.62
Line	lb	900	820	640	570	490	440	350	330	(11.9)
-0.5 m	kg	410	360	290	260	220	200	180	170	3.39
(-2 ft)	lb	900	790	640	570	490	440	400	370	(11.1)
-1.0 m	kg	410	370	290	260			230	200	3.00
(-3 ft)	lb	900	820	640	570			510	440	(9.8)
-1.5 m	kg	430	380							
(-5 ft)	lb	950	840							
-2.5 m	kg							*230	210	3.14
(-8 ft)	lb							*510	460	(10.3)

Boom : 1.80m (5' 11") / Arm : 0.96 m (3' 2") / Bucket : 0.04m^3 (0.05yd^3) SAE heaped / Dozer blade down, track extended, 230mm(9") rubber track.

Load point height m (ft)		Load radius 2.0 m (7 ft)		2.5 m (8 ft)		3.0 m (10 ft)		At max. reach Capacity		Reach
										m (ft)
3.0 m	kg							*300	290	2.72
(10 ft)	lb							*660	640	(8.9)
2.5 m	kg			*320	*320			*310	210	3.22
(8 ft)	lb			*710	*710			*680	460	(10.6)
2.0 m	kg			*340	320	*340	230	*310	180	3.52
(7 ft)	lb			*750	710	*750	510	*680	400	(11.5)
1.5 m	kg	*460	450	*400	310	*370	230	*320	160	3.69
(5 ft)	lb	*1010	990	*880	680	*820	510	*710	350	(12.1)
1.0 m	kg	*660	420	*480	300	*410	220	*330	150	3.76
(3 ft)	lb	*1460	930	*1060	660	*900	490	*730	330	(12.3)
0.5 m	kg	*820	400	*560	290	*450	220	*340	150	3.74
(2 ft)	lb	*1810	880	*1230	640	*990	490	*750	330	(12.3)
Ground	kg	*880	390	*610	280	*470	210	*350	160	3.62
Line	lb	*1940	860	*1340	620	*1040	460	*770	350	(11.9)
-0.5 m	kg	*860	390	*610	280	*460	210	*360	180	3.39
(-2 ft)	lb	*1900	860	*1340	620	*1010	460	*790	400	(11.1)
-1.0 m	kg	*770	390	*550	280			*350	220	3.00
(-3 ft)	lb	*1700	860	*1210	620			*770	490	(9.8)
-1.5 m	kg	*560	400							
(-5 ft)	lb	*1230	880							
-2.5 m	kg							*230	220	3.14
(-8 ft)	lb							*510	490	(10.3)

1. Lifting capacity is based on SAE J1097, ISO 10567.
2. Lifting capacity of the Robex Series does not exceed 75% of the tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook located on the back of the bucket.
4. (*) indicates the load limited by hydraulic capacity.

STANDARD EQUIPMENT

ISO standard canopy
·Canopy ROPS(ISO 3471)
FOPS(ISO 3449)
TOPS(ISO 12117)
·Centralized monitoring
·Gauges
Fuel level gauge
Engine coolant temperature gauge
·Warning
Quick clamp
Engine oil pressure
Engine coolant temperature
Preheat
Low battery
Air cleaner closing
Fuel empty
·One key
·Mechanical suspension seat with seat belt
·Console box tilting system(LH.)
·Two front working lights
·Electric horn
·Battery (1 x 12 V x 80 AH)
·Battery master switch
·Automatic swing brake
·Removable reservoir tank
·Water separator, fuel line
·Mono boom (1.80 m, 5' 11")
·Arm (0.96 m, 3' 2")
·Rubber crawler (230mm, 9")
·Single acting piping (Breaker, etc)
·Double acting piping (Clamshell, etc)

OPTIONAL EQUIPMENT

·Accumulator, work equipment lowering
·Travel alarm
·Tool kit
·Operator suit
·Lever pattern change valve