

## STANDARD EQUIPMENT

### ISO Standard cabin

All-weather steel cab with 360° visibility  
Safety glass windows  
Rise-up type windshield wiper  
Sliding fold-in front window  
Sliding side window  
Lockable door  
Hot & cool box  
Storage compartment & Ashtray  
Transparent cabin roof-cover  
CD/MP3 Player  
Handsfree mobile phone system with USB  
Sun visor

### Computer aided power optimization (New CAPO) system

3-power mode, 3-work mode, User mode  
Auto deceleration & one-touch deceleration system  
Auto warm-up system  
Auto overheat prevention system

### Automatic climate control

Air conditioner & heater  
Defroster

### Self-diagnostics system

Starting Aid (air grid heater) for cold weather

### Centralized monitoring

LCD display  
Engine speed or Trip meter/Accel.  
Clock  
Gauges  
Fuel level gauge  
Engine coolant temperature gauge  
Hyd. oil temperature gauge  
Warnings  
Check Engine  
Overload  
Communication error  
Low battery  
Air cleaner clogging  
Indicators  
Max power  
Low speed/High speed  
Fuel warmer  
Auto idle/Auto cruise

### Door and cab locks, one key

Two outside rearview mirrors

Fully adjustable suspension seat with seat belt

Pilot-operated slidable joystick

Console box tilting system (LH.)

Three frontal working lights

Electric horn

Batteries (2 x 12V x 160 AH)

Battery master switch

Removable clean-out screen for oil cooler

Automatic swing brake

Removable reservoir tank

Fuel pre-filter with fuel warmer

Boom holding system

Arm holding system

Counterweight (5,200kg, 11,460lb)

Track shoes (600mm, 24")

Track rail guard

Viscous fan clutch

Accumulator for lowering work equipment

Electric transducer

## OPTIONAL EQUIPMENT

Fuel filler pump (50 L/min)

Beacon lamp

Safety lock valve for boom cylinder with overload warning device

Safety lock valve for arm cylinder

Single-acting piping kit (breaker, etc.)

Double-acting piping kit (clamshell, etc.)

Quick coupler

12 volt power outlet (24V DC to 12V DC converter)

Travel alarm

Booms

6.25 m, 20' 6"

6.25 m, 20' 6" Heavy duty

10.2 m, 33' 6" Long reach

Arms

2.1 m, 6' 11"

2.5 m, 8' 2"

3.05 m, 10' 0"

3.75 m, 12' 4"

3.05 m, 10' 0" Heavy duty

7.85 m, 25' 9" Long reach

Cabin FOPS/FOG (ISO/DIS 10262)

FOPS (Falling Object Protective Structure)

FOG (Falling Object Guard)

Cabin Roof-steel cover

Cabin lights

Cabin front window rain guard

Track shoes

Triple grouser shoe (700 mm, 28" )

Triple grouser shoe (800 mm, 32" )

Triple grouser shoe (900 mm, 36" )

Double grouser shoe (700 mm, 28" )

Full track rail guard (High walker only)

Lower frame under-cover

Pre-heating system, coolant

Tool kit

Operator suit

Low-noise kit

Rearview camera

Engine emergency control cable

Seat

Adjustable air suspension seat

Adjustable air suspension seat with heater

Mechanical suspension seat with heater

Pattern change valve (4 patterns)

Hi-mate (Remote Management System)

Standard and optional equipment may vary. Contact your Hyundai dealer for more information. The machine may vary according to International standards. All imperial measurements rounded off to the nearest pound or inch.

PLEASE CONTACT

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We build a better future

Robex

**290LC-9**

With Tier 3 Engine in Standard



\*Photo may include optional equipment

# Robex 290LC-9

**BUILT FOR MAXIMUM POWER,  
PERFORMANCE, AND RELIABILITY.**

A new chapter in construction equipment has begun.



<http://thespareparts.com>



**Hi-mate**  
Remote Management System

Hi-mate, Hyundai's newly developed remote management system, utilizes in GPS-satellite technology, to provide our customers with the highest level of service and product support available. Hi-mate enables a dealer or end user to remotely evaluate machine performance, access diagnostic information and verify machine location at the touch of a button.

\*Photo may include optional equipment.

# Cabin Design Technology

The fully re-designed cabin offers low noise operation and increased visibility, providing a pleasant working environment for the operator.

### Ergonomic Joystick

New joystick grips offering precise control are equipped with 4 switches.



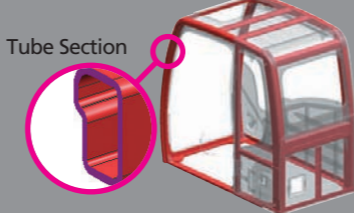
### Wide Cabin with Excellent Visibility

The cabin is roomy and ergonomically designed with low noise levels and good visibility. A full-view front window and large rear and side windows provide excellent visibility in all directions.



### Enhanced Structure

The operators' cabin tube-structure thickness has been improved for optimum safety.



- 1 Handsfree mobile phone with USB connector
- 2 Small cup holders and ashtray
- 3 MP3/CD Player with remote control
- 4 Seat heater (Optional)
- 5 Storage compartment
- 6 Additional storage area



\*Photo may include optional equipment



Centralized Operation Buttons



Sunroof with Sliding Cover



Increased Tilt Angle of Operator's Seat



Rear Window Emergency Exit



Window Locking Device

# Improved Performance & Safety Features

Overcome the limits with Robex 9



Photo may include optional equipment.



## Track Rail Guard & Adjusters

Durable track rail guards keep track links in place. Track adjustment is made easy with standard grease cylinder track adjusters and shock absorbing springs.

## Cummins QSB6.7 Engine

The 6-cylinders, turbo-charged, 4-cycle charger air-cooled engine is built for power, reliability, and economy. This engine meets the 3 emission regulations.



## The Definition of Progress

The Quantum System B-Series 6.7-liter engine combines full-authority electronic controls with reliable performance. The QSB6.7 electronics have been used in our high-horsepower products in the harshest, most demanding environments, including dusty, non-stop mining operations, and meet worldwide emissions regulations. The QSB6.7 features 24 valves designed with centered injectors and a symmetrical piston bowl. The combination of improved airflow and evenly dispersed fuel results in increased power, improved transient response, and reduced fuel consumption.



## Strong and Stable Lower Frame

The reinforced box-section frame is welded using low-stress, high-strength steel. The X-leg type center frame is integrally welded for maximum strength and durability.



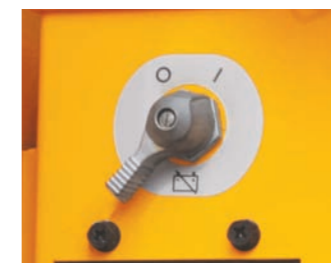
- 1 Reinforced Bucket and Bucket Linkage  
Sealed and adjustable bucket linkage produces less wear of pins and bushes and offers silent operation.
- 2 Dial-Type Engine Speed Switch
- 3 Power Boost Control System



Rearview Camera (Optional)



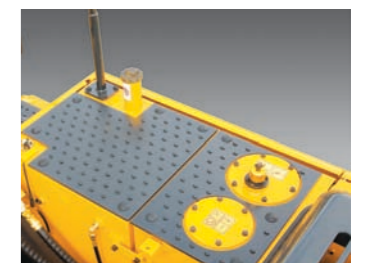
Safety Lever



Master Switch



Anti Restart System



Anti-Slip Plates

<http://thespareparts.com>

# Newly Designed Hydraulic System

Powerful and precise swing control

## Advanced CAPO System

The advanced CAPO (Computer Aided Power Optimization) system tunes engine and pump power to optimum levels. Multiple mode selections are available for various work loads, maintaining high performance while reducing fuel consumption. Features include auto deceleration and power boost. The system monitors engine speed, coolant and hydraulic oil temperature. Contained within the system are self-diagnostic capabilities which display error codes on the monitor.

## New larger display (7inch Wide LCD)

The instrument Panel is installed in front of RH console box, making it easy to check all critical systems via easy-to-read indicators.



## Multi Function Wide Color LCD Monitor



Intelligent main screen lay-out (2 layer)



- 1 Power Modes: P-Max Power/S-Standard Power/E-Economy Power
- 2 Work Modes: Digger/Breaker/Crusher
- 3 User Mode: Saved Operator-Preferred Power Settings
- 4 Self-Diagnostics System
- 5 Maintenance List & Security Password
- 6 Rearview camera (Optional)

- Caution Light
- 1 Engine Water Temperature Gauge
- 2 Fuel Gauge
- 3 Hyd. Oil Temperature Gauge
- 4 RPM/Tripmeter Display Window
- 5 Accel. Dial Gauge Bar
- Select Power Button Window
- Select Work Button Window
- Select Attachment Mode Window
- Notice Light
- Select Travel Window
- Select Auto Idle Window



## Optimum Hydraulic Performance

The pump output capacity has been increased.

## Auto Deceleration System

When the remote-control valves are in the neutral position for more than 4 seconds, the CPU controller instructs the accel. actuator to reduce engine speed to 1,000rpm. And 60 seconds later, engine speed is reduced to low idle automatically. This decreases fuel consumption and reduces cab noise levels.

## Boom & Arm Holding System

The holding valves in the main control valve prevent boom & arm lowering during an extended period in the neutral position.

## Boom & Arm Flow Regeneration System

The flow regeneration valve provides smooth and fast operation without cylinder cavitation.

## Hydraulically Dampened Travel Pedal

Improved travel controllability & smoother travel has been achieved via shock reducing components.

## Pump Flow Control System

When in neutral, the pump flow is minimized to reduce power loss. During operation, maximum pump flow is delivered to the actuator to increase speed. Movement of the control lever automatically adjusts pump flow, with cylinder speed controlled proportionally.

## Power Boost Control System

In power mode, the digging force increases about 10%.

## One-Touch Decel. System

When the one-touch decel. switch is engaged, the CPU controller limits the accel. actuator to an 800rpm idle. When the one-touch decel. Switch is disengaged, the engine speed recovers to its preset rpm.

## Self-Diagnostics System

The CPU controller diagnoses problems in the CAPO system caused by electric and hydraulic malfunctions and displays the corresponding displayed on the cluster LCD monitor error codes.

The information via this device, including engine rpm, main pump delivery pressure, battery voltage, hydraulic temperature and the status of electric switches, allows the operator to know the exact operating conditions of the machine.

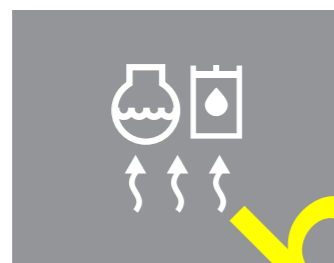
This makes it easier to troubleshoot any problems that occur.

## Attachment Flow Control System

Attachment mode provides adequate hydraulic pump flow to each work tool, preventing excess flow and ensuring the regular performance.



Automatic Engine Overheat Prevention



Automatic Warm-Up System

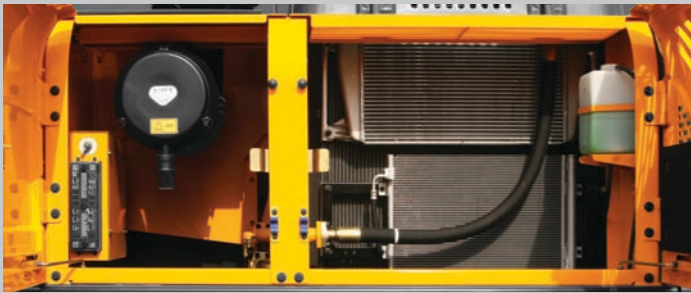
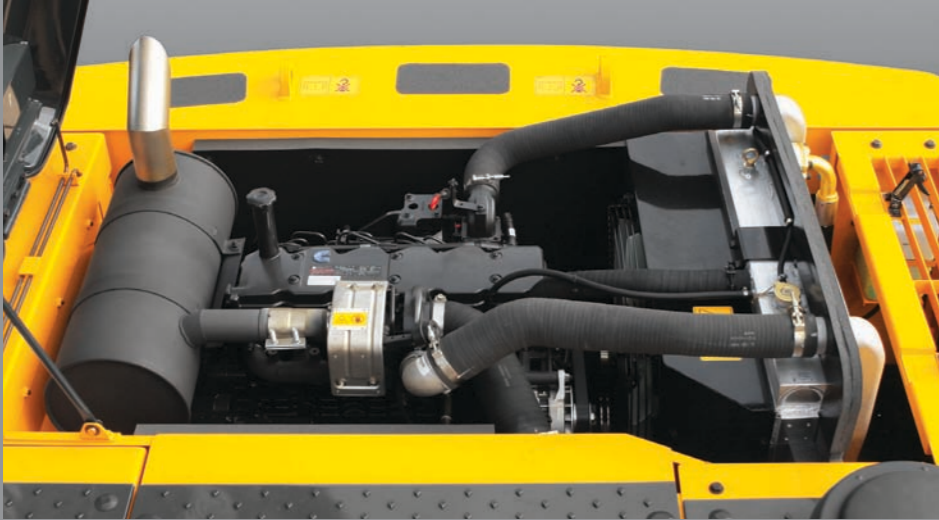
# Reliability & Maintenance

### Lubrication Fittings

All lube fittings are centralized and in close proximity to each other for easy service.

### Easy to Maintain Engine Components

The cooling and pre-heating systems are designed for optimal and immediate operation, guaranteeing longer engine and hydraulic components life. Servicing the engine and the hydraulics has been considerably simplified due to accessibility.



### Side Cover with Left & Right Swing Open Type

Unrestricted access to vital components allows easy maintenance and repair.



### Filter with Extended Exchange Interval (1,000hr)

- 1 Drain Filter
- 2 Fuel Pre-Filter
- 3 Engine Oil Filter



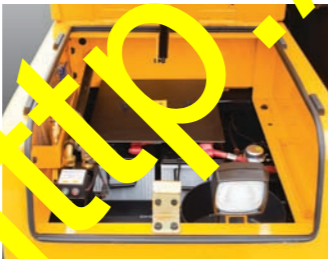
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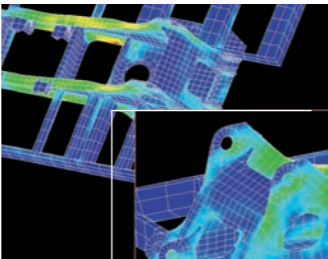
### Easy to Access Electric Box



### Easy to Change Air Cleaner Assembly



### Large Compartment for Extra Storage (Fuel filler pump: Optional)



### Structure Durability Proven via FEM Analysis and Long-Term Durability Tests.

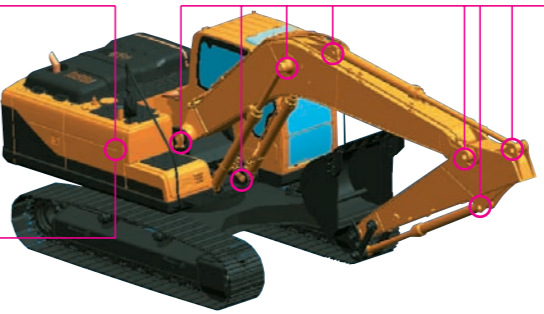
### Extended Hydraulic Filter Life

Filters with extended exchange intervals (250hr → 1,000 hr, Fiber glass)

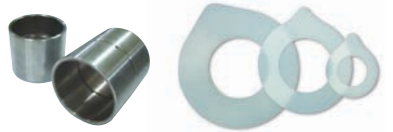


### Extended Hydraulic Oil Life

(2,000hr → 5,000 hr, Increase Protection From Oxidization & Heat)



### Extended Lubricant Bush Life & Ultra High Molecular Weight Polymer Shim (Wear Resistant & Noise Reducing)



# Specifications

## ENGINE

MODEL	Cummins Q5B6.7		
Type	Water-cooled, 4-cycle Diesel, 6-Cylinder in-line, Direct injection, Turbocharged, Charge air cooled, Low emission		
Rated flywheel horse power	SAE	J1995 (gross) J1349 (net)	227 HP (169 kW)/ 1,900 rpm 197 HP (147 kW)/ 1,900 rpm
	DIN	6271/1 (gross) 6271/1 (net)	230 PS (169 kW)/ 1,900 rpm 200 PS (147 kW)/ 1,900 rpm
Max. torque	96.8 kgf-m(700 lbf-ft)/ 1,400 rpm		
Bore X stroke	107 x 124 mm (4.2" x 4.9")		
Piston displacement	6,700 cc (409 in <sup>3</sup> )		
Batteries	2 x 12 V x 160 AH		
Starting motor	24 V, 4.5kW		
Alternator	24 V, 50 Amp		

## HYDRAULIC SYSTEM

MAIN PUMP	
Type	Variable displacement tandem-axis piston pumps
Max. flow	2 X 252 L/min (68.7 US gpm / 57.2 UK gpm)
Sub-pump for pilot circuit	Gear pump

Cross-sensing and fuel saving pump system

HYDRAULIC MOTORS	
Travel	Two-speed axial pistons motor with brake valve and parking brake
Swing	Axial piston motor with automatic brake

RELIEF VALVE SETTING	
Implement circuits	350 kgf/cm <sup>2</sup> (4,978 psi)
Travel	350 kgf/cm <sup>2</sup> (4,978 psi)
Power boost (boom, arm, bucket)	380 kgf/cm <sup>2</sup> (5,404 psi)
Swing circuit	300 kgf/cm <sup>2</sup> (4,267 psi)
Pilot circuit	40 kgf/cm <sup>2</sup> (568 psi)
Service valve	Installed

HYDRAULIC CYLINDERS	
No. of cylinder bore X stroke	Boom: 2-140 X 1,465 mm (5.5" X 57.7") Arm: 1-150 X 1,765 mm (5.9" X 69.5") Bucket: 1-135 X 1,185 mm (5.3" X 46.7")

## DRIVES & BRAKES

Drive method	Fully hydrostatic type
Drive motor	Axial piston motor, in-shoe design
Reduction system	Planetary reduction gear
Max. drawbar pull	27,300 kgf (60,200 lbf)
Max. travel speed (high / low)	5.2 km/hr (3.2 mph) / 3.1 km/hr (1.9 mph)
Gradeability	35° (70 %)
Parking brake	Multi wet disc

## CONTROL

Pilot pressure operated joysticks and pedals with detachable lever provide almost effortless and fatigueless operation.

Pilot control	Two joysticks with one safety lever (LH): Swing and arm, (RH): Boom and bucket (ISO)
Traveling and steering	Two levers with pedals
Engine throttle	Electric, Dial type
Lights	Two lights mounted on the boom, one light mounted on the battery

## SWING SYSTEM

Swing motor	Two fixed displacement axial pistons motor
Swing reduction	Planetary gear reduction
Swing bearing lubrication	Grease-bathed
Swing brake	Multi wet disc
Swing speed	10.2 rpm

## COOLANT & LUBRICANT CAPACITY

Re-filling	liter	US gal	UK gal
Fuel tank	500	132.1	110.0
Engine coolant	50.0	13.2	11.0
Engine oil	24	6.3	5.3
Swing device	11.0	1.8	1.5
Final drive (each)	5.5	2.9	2.4
Hydraulic system (including tank)	330	87.2	72.6
Hydraulic tank	190	50.2	41.8

## UNDERCARRIAGE

The X-leg type center frame is integrally welded with reinforced box-section track frames. The undercarriage includes lubricated rollers, idlers, track adjusters with shock absorbing springs and sprockets, and a track chain with double or triple grouser shoes.

Center frame	X - leg type
Track frame	Pentagonal box type
No. of shoes on each side	48
No. of carrier rollers on each side	2
No. of track rollers on each side	9
No. of rail guards on each side	2

## OPERATING WEIGHT (APPROXIMATE)

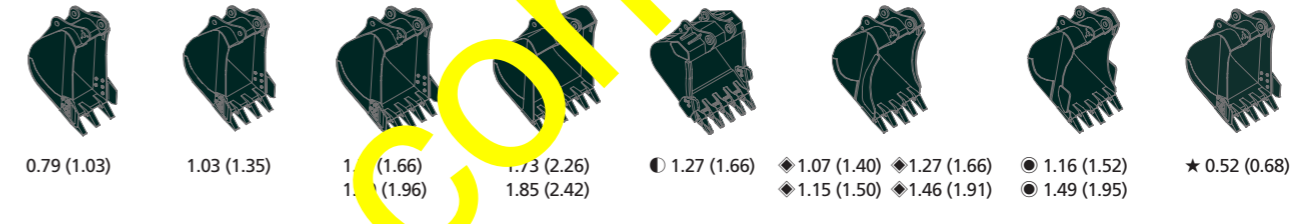
Operating weight, including 6,250mm (20' 6") boom, 3,050mm (10' 0") arm, SAE heaped 1.27m<sup>3</sup> (1.66 yd<sup>3</sup>) bucket, lubricant, coolant, full fuel tank, full hydraulic tank and all standard equipments.

MAJOR COMPONENT WEIGHT	
Upperstructure	7,040 kg (15,520 lb)
Counterweight	5,200 kg (11,460 lb)
Boom (with arm cylinder)	2,670 kg (5,900 lb)
Arm (with bucket cylinder)	1,570 kg (3,460 lb)

OPERATING WEIGHT			
Shoes		Operating weight	Ground pressure
Type	Width mm (in)	kg (lb)	kgf/cm <sup>2</sup> (psi)
Triple grouser	600 mm (24")	R290LC-9	21,750 (64,600) 0.56 (7.97)
		R290LC-9 HW	25,200 (64,700) 0.55 (7.82)
	700 mm (28")	R290LC-9	22,800 (65,870) 0.49 (6.97)
		R290LC-9 HW	32,720 (72,140) 0.54 (7.68)
	800 mm (31")	R290LC-9	30,460 (67,150) 0.54 (7.68)
		R290LC-9 HW	33,300 (73,410) 0.44 (6.26)
900 mm (36")	R290LC-9	31,040 (68,430) 0.48 (6.83)	
	R290LC-9 HW	33,310 (73,440) 0.38 (5.40)	
Double grouser	700 mm (28")	R290LC-9 HW	33,310 (73,440) 0.38 (5.40)

## BUCKETS

All buckets are welded with high-strength steel.



Capacity m <sup>3</sup> (yd <sup>3</sup> )	Width mm (ft-in)	Weight kg (lb)	Recommendation mm (ft-in)				
			6,250 (20' 6") Boom				10,200 (33' 6") Boom
			2,100 (6' 11") Arm	2,500 (8' 2") Arm	3,050 (10' 0") Arm	3,750 (12' 4") Arm	7,850 (25' 9") Arm
0.79 (1.03)	890 (35.0)	790 (1,740)	●	●	●	●	-
1.03 (1.35)	1,010 (39.7)	890 (1,960)	●	●	●	■	-
1.27 (1.66)	1,170 (42.6)	1,010 (2,230)	●	●	■	▲	-
1.50 (1.96)	1,210 (47.6)	1,080 (2,380)	●	■	▲	-	-
1.73 (2.26)	1,210 (47.6)	1,170 (2,580)	▲	▲	-	-	-
1.85 (2.42)	1,210 (47.6)	1,230 (2,710)	▲	-	-	-	-
1.27 (1.66)	1,310 (51.6)	1,300 (2,870)	●	●	▲	▲	-
1.07 (1.40)	1,150 (45.3)	1,120 (2,470)	●	●	●	■	-
1.27 (1.66)	1,210 (47.6)	1,160 (2,560)	●	●	●	■	-
1.27 (1.66)	1,310 (51.6)	1,240 (2,730)	●	●	▲	▲	-
1.16 (1.52)	1,210 (47.6)	1,320 (2,910)	●	■	▲	-	-
1.16 (1.52)	1,340 (52.8)	1,280 (2,820)	●	●	■	▲	-
1.49 (1.95)	1,620 (63.8)	1,440 (3,170)	●	■	▲	-	-
1.07 (1.40)	935 (36.8)	460 (1,010)	-	-	-	-	▲

- Casting bucket
- ◆ Heavy duty bucket
- Rock-Heavy duty bucket
- ★ Long reach bucket
- : Applicable for materials with density of 2,000 kg /m<sup>3</sup> (3,370 lb/ yd<sup>3</sup>) or less
- : Applicable for materials with density of 1,600 kg /m<sup>3</sup> (2,700 lb/ yd<sup>3</sup>) or less
- ▲ : Applicable for materials with density of 1,100 kg /m<sup>3</sup> (1,850 lb/ yd<sup>3</sup>) or less

## ATTACHMENT

Booms and arms are welded with a low-stress, full-box section design. 6.25m & 10.2m Booms and 2.1m, 2.5m, 3.05m, 3.75m & 7.85m Arms are available.

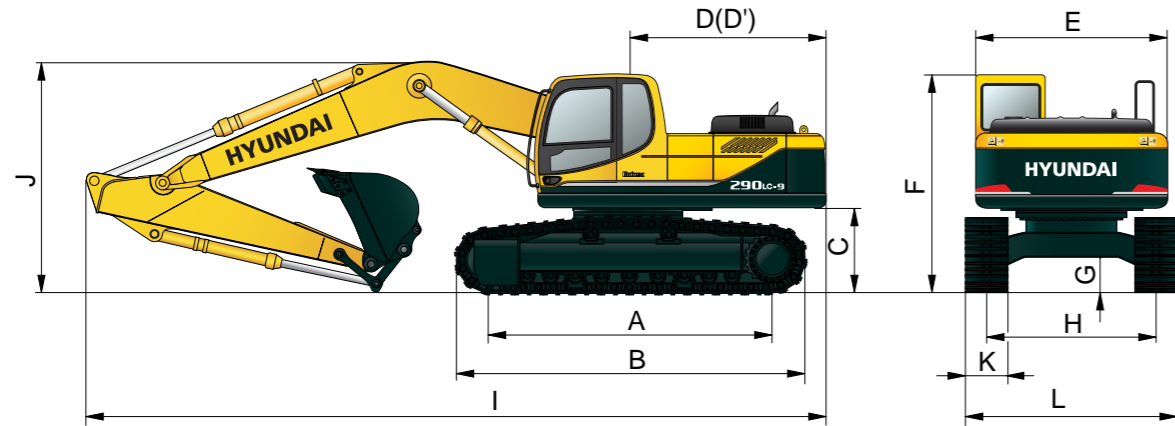
## DIGGING FORCE

Boom	Length	mm (ft-in)	6,250 (20' 6")				10,200 (33' 6")	Remark
	Weight	kg (lb)	2,670 (5,900)				3,420 (7,540)	
Arm	Length	mm (ft-in)	2,100 (6' 11")	2500 (8' 2")	3,050 (10' 0")	3,750 (12' 4")	7,850 (25' 9")	Power Boost
	Weight	kg (lb)	1,480 (3,260)	1,460 (3,220)	1,570 (3,460)	1,710 (3,770)	1,690 (3,730)	
Bucket digging force	SAE	kN	166.7 [181]	166.7 [181]	166.7 [181]	166.7 [181]	70	[ ]: Power Boost
		kgf	17000 [18460]	17000 [18460]	17000 [18460]	17000 [18460]	7100	
		lbf	37480 [40690]	37480 [40690]	37480 [40690]	37480 [40690]	15650	
	ISO	kN	189.3 [205.5]	189.3 [205.5]	189.3 [205.5]	189.3 [205.5]	80	
		kgf	19300 [20950]	19300 [20950]	19300 [20950]	19300 [20950]	8200	
		lbf	42550 [46200]	42550 [46200]	42550 [46200]	42550 [46200]	18080	
Arm crowd force	SAE	kN	180.4 [195.9]	156.9 [170.4]	131.4 [142.7]	114.7 [124.6]	47.1	[ ]: Power Boost
		kgf	18400 [19980]	16000 [17370]	13400 [14550]	11700 [12700]	4800	
		lbf	40570 [44050]	35270 [38290]	29540 [32070]	25790 [28000]	10580	
	ISO	kN	190.3 [206.6]	163.8 [177.8]	136.3 [148]	119.6 [129.9]	48.1	
		kgf	19400 [21060]	16700 [18130]	13900 [15090]	12200 [13250]	4900	
		lbf	42770 [46440]	36820 [39980]	30640 [33270]	26900 [29210]	10800	

Note: Boom weight includes arm cylinder, piping, and pin  
Arm weight includes bucket cylinder, linkage, and pin

# Dimensions & Working Range

## R290LC-9 / R290NLC-9 DIMENSIONS

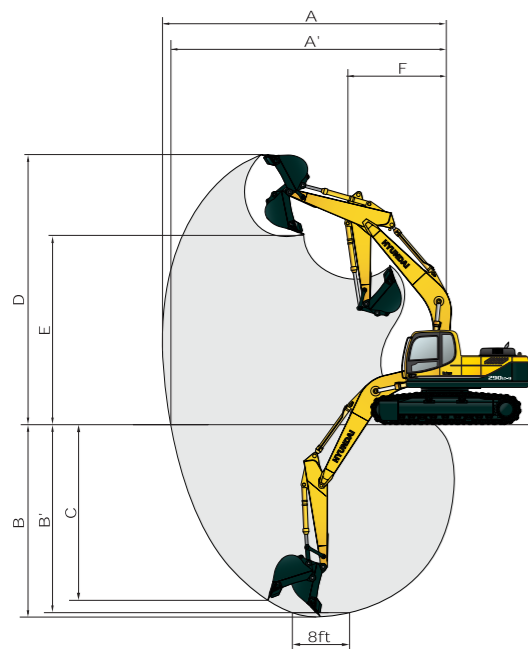


Unit : mm (ft · in)

<b>A</b> Tumbler distance	R290LC-9	4,030 (13' 3")
	R290NLC-9	4,030 (13' 3")
<b>B</b> Overall length of crawler		4,940 (16' 2")
<b>C</b> Ground clearance of counterweight		1,190 (3' 11")
<b>D</b> Tail swing radius		3,200 (10' 6")
<b>D'</b> Rear-end length		3,120 (10' 3")
<b>E</b> Overall width of upperstructure		2,980 (9' 9")
<b>F</b> Overall height of cab		3,010 (9' 11")
<b>G</b> Min. ground clearance		500 (1' 8")
<b>H</b> Track gauge	R290LC-9	2,600 (8' 6")
	R290NLC-9	2,390 (7' 10")

Boom length	6,250 (20' 6")				10,200 (33' 6")
Arm length	2,100 (6' 11")	2,500 (8' 2")	3,050 (10' 0")	3,750 (12' 4")	7,850 (25' 9")
<b>I</b> Overall length	10,700 (35' 1")	10,650 (34' 11")	10,560 (34' 8")	10,630 (34' 11")	14,560 (47' 9")
<b>J</b> Overall height of boom	3,590 (11' 9")	3,470 (11' 5")	3,290 (10' 10")	3,500 (11' 6")	3,560 (11' 8")
<b>K</b> Track shoe width	600 (24")	700 (28")	800 (32")	900 (36")	
<b>L</b> Overall width	R290LC-9	3,200 (10' 6")	3,300 (10' 10")	3,400 (11' 2")	3,500 (11' 6")
	R290NLC-9	2,990 (9' 10")	-	-	-

## R290LC-9 / R290NLC-9 WORKING RANGE

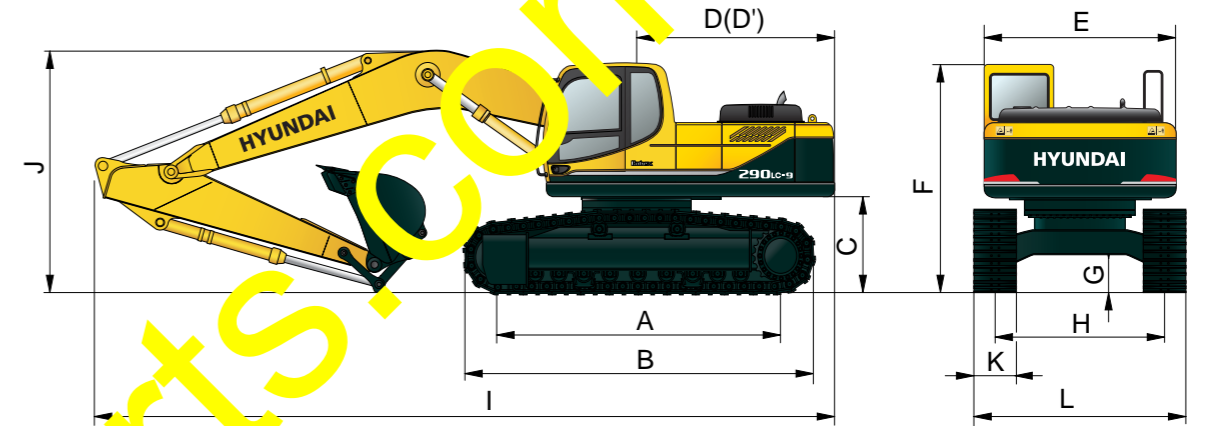


Unit : mm (ft · in)

Boom length	6,250 (20' 6")				10,200 (33' 6")
Arm length	2,100 (6' 11")	2,500 (8' 2")	3,050 (10' 0")	3,750 (12' 4")	7,850 (25' 9")
<b>A</b> Max. digging reach	10,020 (32' 10")	10,280 (33' 7")	10,820 (35' 6")	11,700 (38' 5")	18,510 (60' 9")
<b>A'</b> Max. digging reach on ground	9,820 (32' 3")	10,080 (33' 1")	10,620 (34' 10")	11,220 (36' 10")	18,400 (60' 4")
<b>B</b> Max. digging depth	6,440 (21' 1")	6,800 (22' 5")	7,500 (24' 7")	8,090 (26' 7")	14,820 (48' 7")
<b>B'</b> Max. digging depth (8' level)	6,240 (20' 6")	6,630 (21' 9")	7,200 (23' 7")	7,920 (25' 12")	14,690 (48' 2")
<b>C</b> Max. vertical wall digging depth	6,000 (19' 8")	5,700 (18' 9")	6,410 (21' 0")	7,080 (23' 3")	12,020 (39' 5")
<b>D</b> Max. digging height	10,070 (32' 9")	10,110 (33' 2")	10,160 (33' 4")	10,360 (33' 12")	14,500 (47' 7")
<b>E</b> Max. dumping height	7,940 (26' 1")	7,030 (23' 1")	7,110 (23' 4")	7,310 (23' 12")	12,190 (39' 12")
<b>F</b> Min. swing radius	4,380 (14' 4")	4,260 (13' 12")	4,230 (13' 11")	4,140 (13' 7")	6,250 (20' 6")

# Dimensions & Working Range

## R290LC-9 HIGH WALKER DIMENSIONS



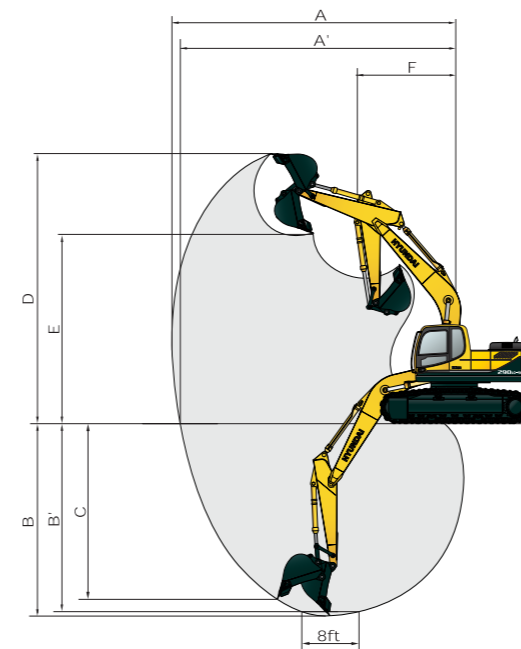
Unit : mm (ft · in)

<b>A</b> Tumbler distance	4,030 (13' 3")
<b>B</b> Overall length of crawler	4,950 (16' 3")
<b>C</b> Ground clearance of counterweight	1,500 (4' 11")
<b>D</b> Tail swing radius	3,200 (10' 6")
<b>D'</b> Rear-end length	3,120 (10' 3")
<b>E</b> Overall width of upperstructure	2,980 (9' 9")
<b>F</b> Overall height of cab	3,380 (11' 1")
<b>G</b> Min. ground clearance	765 (2' 6")
<b>H</b> Track gauge	2,870 (9' 5")

Boom length	6,250 (20' 6")				
Arm length	2,100 (6' 11")	2,500 (8' 2")	3,050 (10' 0")	3,750 (12' 4")	
<b>I</b> Overall length	10,690 (35' 1")	10,610 (34' 10")	10,430 (34' 3")	10,530 (34' 7")	
<b>J</b> Overall height of boom	3,740 (12' 3")	3,590 (11' 9")	3,350 (11' 0")	3,510 (11' 6")	
<b>K</b> Track shoe width	Type	Triple grouser			Double grouser
	Width	600 (24")	700 (28")	800 (32")	700 (28")
<b>L</b> Overall width	3,470 (11' 5")	3,570 (11' 9")	3,670 (12' 0")	3,570 (11' 9")	

## R290LC-9 HIGH WALKER WORKING RANGE

Unit : mm (ft · in)



Boom length	6,250 (20' 6")			
Arm length	2,100 (6' 11")	2,500 (8' 2")	3,050 (10' 0")	3,750 (12' 4")
<b>A</b> Max. digging reach	10,020 (32' 10")	10,280 (33' 7")	10,790 (35' 5")	11,400 (37' 5")
<b>A'</b> Max. digging reach on ground	9,750 (32' 0")	10,020 (32' 10")	10,530 (34' 7")	11,160 (36' 7")
<b>B</b> Max. digging depth	6,140 (20' 2")	6,540 (21' 5")	7,090 (23' 3")	7,790 (25' 7")
<b>B'</b> Max. digging depth (8' level)	5,930 (19' 5")	6,330 (20' 9")	6,910 (22' 8")	7,630 (25' 0")
<b>C</b> Max. vertical wall digging depth	5,700 (18' 8")	5,560 (18' 3")	6,090 (20' 0")	6,790 (22' 3")
<b>D</b> Max. digging height	10,370 (34' 0")	10,220 (33' 6")	10,440 (34' 3")	10,660 (35' 0")
<b>E</b> Max. dumping height	7,240 (23' 9")	7,170 (23' 6")	7,400 (24' 3")	7,610 (25' 0")
<b>F</b> Min. swing radius	4,380 (14' 4")	4,260 (14' 0")	4,230 (13' 11")	4,140 (13' 7")



# Lifting Capacity

## R290LC-9

Rating over-front Rating over-side or 360 degree

Boom : 6.25m (20' 6") / Arm : 2.10 m (6' 11") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius								At max. reach			
	3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		Capacity		Reach	
											m (ft)	
7.5 m (25.0 ft)	kg					*6200	*6200			*5710	4550	8.01
	lb					*13670	*13670			*12590	10030	(26.3)
6.0 m (20.0 ft)	kg					*6560	*6560	*6370	4920	*5810	3640	8.90
	lb					*14460	*14460	*14040	10850	*12810	8020	(29.2)
4.5 m (15.0 ft)	kg		*9620	*9620		*7590	7040	*6700	4800	5250	3170	9.42
	lb		*21210	*21210		*16730	15520	*14770	10580	11570	6990	(30.9)
3.0 m (10.0 ft)	kg		*12550	10150		*8910	6570	*7330	4580	4960	2960	9.64
	lb		*27670	22380		*19640	14480	*16160	10100	10930	6530	(31.6)
1.5 m (5.0 ft)	kg		*14540	9450		*10090	6170	7300	4370	4950	2930	9.58
	lb		*32060	20830		*22240	13600	16090	9630	10910	6460	(31.4)
Ground	kg		*15120	9240		*10210	5940	7150	4230	5230	3110	9.23
Line	lb		*33330	20370		*22510	13100	15760	9330	11530	6860	(30.3)
-1.5 m (-5.0 ft)	kg	*14250	*14250	*14810	9260	10140	5880	7120	4210	5940	3560	8.57
	lb	*31420	*31420	*32650	20410	22350	12960	15700	9280	13100	7850	(28.1)
-3.0 m (-10.0 ft)	kg	*18890	*18890	*13670	9440	*10170	5980			*6670	4570	7.47
	lb	*41650	*41650	*30140	20810	*22420	13180			*14700	10080	(24.5)
-4.5 m (-15.0 ft)	kg	*15250	*15250	*11130	9840							
	lb	*33620	*33620	*24540	21690							

Boom : 6.25m (20' 6") / Arm : 2.50 m (8' 2") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius								At max. reach				
	1.5 m (5.0ft)		3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		Capacity	Reach	
													m (ft)
7.5 m (25.0 ft)	kg										*5240	4280	8.34
	lb										*11550	9440	(27.4)
6.0 m (20.0 ft)	kg							*5870	5000	*5400	3460	9.19	
	lb							*12940	11020	*11900	7630	(30.2)	
4.5 m (15.0 ft)	kg			*8760	*8760	*7090	*7090	*6310	4840	5010	3020	9.69	
	lb			*19310	*19310	*15630	*15630	*13910	10670	11050	6660	(31.8)	
3.0 m (10.0 ft)	kg			*11680	10360	*8460	6630	*7000	4600	4730	2810	9.90	
	lb			*25750	22840	*18650	14620	*15430	10140	10430	6190	(32.5)	
1.5 m (5.0 ft)	kg			*13960	9530	*9730	6190	7300	4370	4710	2770	9.84	
	lb			*30780	21010	*21450	13650	16090	9630	10380	6110	(32.3)	
Ground	kg			*14930	9190	10190	5910	7110	4200	4940	2910	9.51	
Line	lb			*32910	20260	22470	13030	15670	9260	10890	6420	(31.2)	
-1.5 m (-5.0 ft)	kg		*15220	*15220	*14910	9140	10060	5810	7040	4130	5550	3290	8.87
	lb		*33550	*33550	*32870	20150	22180	12810	15520	9110	12240	7630	(24.4)
-3.0 m (-10.0 ft)	kg	*17240	*17240	*20000	19540	*14040	9270	10130	5860	*6780	4140	7.8	
	lb	*38010	*38010	*44090	43080	*30950	20440	22330	12920	*14950	9110	(20.5)	
-4.5 m (-15.0 ft)	kg			*16720	*16720	*11970	9610						
	lb			*36860	*36860	*26390	21190						

Boom : 6.25m (20' 6") / Arm : 3.05 m (10' 0") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius								At max. reach						
	1.5 m (5.0ft)		3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		Capacity	Reach			
													m (ft)		
7.5 m (25.0 ft)	kg										*4780	3780	8.94		
	lb										*10540	8330	(29.3)		
6.0 m (20.0 ft)	kg							*5270	5100	*4940	3100	9.74			
	lb							*11620	11240	*10890	6830	(32.0)			
4.5 m (15.0 ft)	kg					*6380	*6380	*5780	4890	4580	2730	10.20			
	lb					*14070	*14070	*12740	10780	10100	6020	(33.5)			
3.0 m (10.0 ft)	kg		*10490	*10490	*10510	*10510	*7800	6710		4620	4420	3310	10.40		
	lb		*23130	*23130	*23170	*23170	*17200	14790		14400	10190	*9740	7300	9.550	
1.5 m (5.0 ft)	kg				*13100	9660	*9190	6220	7300	4350	*5230	3170	4300	2490	10.35
	lb				*28880	21300	*20260	13710	16090	9590	*11530	6990	9480	5490	(34.0)
Ground	kg		*10140	*10140	*14530	9160	10150	5980	7070	4150	*4600	3070	4480	2600	10.04
Line	lb		*22350	*22350	*32030	20190	22200	12500	15500	9150	*10140	6770	9880	5730	(32.9)
-1.5 m (-5.0 ft)	kg	*10990	*10990	*14250	*14250	*14890	9010	9900	5710	6950	4040	4950	2900	9.44	
	lb	*24230	*24230	*31420	*31420	*32830	19860	21980	12590	15320	8910	10910	6390	(31.0)	
-3.0 m (-10.0 ft)	kg	*14880	*14880	*19250	19100	*14380	9070	9600	5100	6970	4060	5960	3540	8.48	
	lb	*32800	*32800	*42440	42110	*31700	20000	21900	12500	15370	8950	13140	7800	(27.8)	
-4.5 m (-15.0 ft)	kg	*19470	*19470	*18400	*18400	*12820	9500	9370	5890			*6400	5050	6.97	
	lb	*42920	*42920	*40570	*40570	*28260	20550	*20660	12990			*14110	11130	(22.9)	

- Lifting capacity is based on SAE J1097, ISO 10567.
- 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.
- The load point is a hook located on the back of the bucket.
- (\*) indicates the load limited by hydraulic capacity.

# Lifting Capacity

## R290LC-9

Rating over-front Rating over-side or 360 degree

Boom : 6.25m (20' 6") / Arm : 3.75 m (12' 4") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius								At max. reach										
	1.5 m (5.0ft)		3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		Capacity	Reach							
													m (ft)						
7.5 m (25.0 ft)	kg												*4230	3250	9.67				
	lb												*9330	7170	(31.7)				
6.0 m (20.0 ft)	kg												*4470	*4470	*2540	*2540	*4400	2710	10.40
	lb												*9850	*9850	*5600	*5600	*9700	5970	(34.1)
4.5 m (15.0 ft)	kg												*5050	4990	*3970	3480	4100	2400	10.83
	lb												*11130	11000	*8750	7670	9040	5290	(35.5)
3.0 m (10.0 ft)	kg					*14430	*14430	*8910	*6870	*6870			*5870	4690	*5060	3330	3890	2230	11.02
	lb					*31810	*31810	*19640	*19640	*15150	*15150		*12940	10340	*11160	7340	8580	4920	(36.2)
1.5 m (5.0 ft)	kg					*13500	*10550	*11820	9980	*8410	6340	*6760	4390	5380	3160	3850	2180	10.97	
	lb					*29600	*23200	*26060	22000	*18540	13980	*14900	9680	11860	6970	8490	4810	(36.0)	
Ground	kg	*6830	*6830	*11000	*11000	*13790	9270	*9670	5910	7060	4140	5220	3020	3980	2260	10.68			
Line	lb	*15060	*15060	*24030	*24030	*30400	20440	*21320	13030	15560	9130	11510	6660	8770	4980	(35.0)			
-1.5 m (-5.0 ft)	kg	*9850	*9850	*13520	13520	*14680	8950	9930	5670	6880	3970	5130	2940	4340	2480	10.12			
	lb	*21720	*21720	*29810	*29810	*32360	19730	21890	12500	15170	8750	11310	6480	9570	5470	(33.2)			
-3.0 m (-10.0 ft)	kg	*13010	*13010	*11200	*11200	*17210	*14640	8900	9830	5590	6830	3920		5070	2950	9.25			
	lb	*28690	*28690	*24580	*24580	*37940	*37940	*32280	19620	21670	12320	15060	8640		6500	(30.3)			
-4.5 m (-15.0 ft)	kg	*1660	*1660	*20250	19120	*13660	9050	9930	5670					*6200	3950	7.92			
	lb	*3670	*3670	*44640	42150	*30120	19950	21890	12500					*13670	8710	(26.0)			

## R290LC-9

Rating over-front Rating over-side or 360 degree

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# Lifting Capacity

## R290NLC-9

Rating over-front Rating over-side or 360 degree

Boom : 6.25m (20' 6") / Arm : 3.05 m (10' 0") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius												At max. reach		
	1.5 m (5.0ft)		3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		9.0 m (30.0ft)		Capacity	Reach	m (ft)
	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Capacity	Reach	
7.5 m (25.0 ft)	kg												*4780	3400	8.94
	lb												*10540	7500	(29.3)
6.0 m (20.0 ft)	kg							*5270	4610				*4940	2770	9.74
	lb							*11620	10160				*10890	6110	(32.0)
4.5 m (15.0 ft)	kg						*6380	*6380	*5780	4410			4550	2420	10.20
	lb						*14070	*14070	*12740	9720			10030	5340	(33.5)
3.0 m (10.0 ft)	kg		*10490	*10490	*10510	9510	*7800	6040	*6530	4150	*4420	2940	4310	2240	10.40
	lb		*23130	*23130	*23170	20970	*17200	13320	*14400	9150	*9740	6480	9500	4940	(34.1)
1.5 m (5.0 ft)	kg				*13100	8570	*9190	5560	7260	3880	*5230	2810	4270	2190	10.35
	lb				*28880	18890	*20260	12260	16010	8550	*11530	6190	9410	4830	(34.0)
Ground Line	kg		*10140	*10140	*14530	8090	10100	5220	7030	3680	*4600	2710	4450	2290	10.04
	lb		*22350	*22350	*32030	17840	22270	11510	15500	8110	*10140	5970	9810	5050	(32.9)
-1.5 m (-5.0 ft)	kg	*10990	*10990	*14250	*14250	*14890	7940	9910	5060	6910	3580		4920	2560	9.44
	lb	*24230	*24230	*31420	*31420	*32830	17500	21850	11160	15230	7890		10850	5640	(31.0)
-3.0 m (-10.0 ft)	kg	*14880	*14880	*19250	16450	*14380	8000	9910	5060	6930	3590		5920	3140	8.48
	lb	*32800	*32800	*42440	36270	*31700	17640	21850	11160	15280	7910		13050	6920	(27.8)
-4.5 m (-15.0 ft)	kg	*19470	*19470	*18400	16950	*12820	8240	*9370	5240				*6400	4520	6.97
	lb	*42920	*42920	*40570	37370	*28260	18170	*20660	11550				*14110	9960	(22.9)

Boom : 6.25m (20' 6") / Arm : 3.75 m (12' 4") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius												At max. reach			
	1.5 m (5.0ft)		3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		9.0 m (30.0ft)		Capacity	Reach	m (ft)	
	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Capacity	Reach		
7.5 m (25.0 ft)	kg												*4230	2920	9.67	
	lb												*9330	6440	(31.7)	
6.0 m (20.0 ft)	kg							*4470	*4470	*2540	*2540	*4400	2410	10.40		
	lb							*9850	*9850	*5600	*5600	*9700	5310	(34.1)		
4.5 m (15.0 ft)	kg							*5050	4500	*3970	3120	4080	2110	10.83		
	lb							*11130	9920	*8750	6880	8990	4650	(35.5)		
3.0 m (10.0 ft)	kg		*14430	*14430	*8910	*8910	*6870	6210	*5870	4210	*5060	2960	3870	1950	11.02	
	lb		*31810	*31810	*19640	*19640	*15150	13690	*12940	9280	*11160	6530	8530	4300	(36.2)	
1.5 m (5.0 ft)	kg		*10550	*10550	*8410	8870	*6760	3910	5350	2800	3820	1910	10.97			
	lb		*23260	*23260	*18540	19550	*14900	8620	11790	6170	8420	4210				
Ground Line	kg	*6830	*6830	*10900	*10900	*13790	8190	*9670	5260	7020	3670	5190	2660	3960	1970	10.68
	lb	*15060	*15060	*24030	*24030	*30400	18060	*21320	11600	15480	8090	11440	5860	8730	4340	(35.0)
-1.5 m (-5.0 ft)	kg	*9850	*9850	*13520	*13520	*14680	7880	9870	5010	6850	3510	5100	2580	4310	2170	10.12
	lb	*21720	*21720	*29810	*29810	*32360	17370	21760	11050	15100	7740	11240	5690	9500	4830	(32.2)
-3.0 m (-10.0 ft)	kg	*13010	*13010	*17210	16070	*14640	7830	9780	4940	6790	3460		5040	2600	9.5	
	lb	*28680	*28680	*37940	35430	*32280	17260	21560	10890	14970	7630		11110	5820	(30.3)	
-4.5 m (-15.0 ft)	kg	*16680	*16680	*20250	16460	*13660	7980	9880	5020				*6200	3520	7.92	
	lb	*36770	*36770	*44640	36290	*30120	17590	21780	11070				13800	7760	(26.0)	

## R290LC-9 HIGH WALKER

Rating over-front Rating over-side or 360 degree

Boom : 6.25m (20' 6") / Arm : 3.05 m (10' 0") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius												At max. reach		
	1.5 m (5.0ft)		3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		9.0 m (30.0ft)		Capacity	Reach	m (ft)
	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Capacity	Reach	
7.5 m (25.0 ft)	kg												*4810	4650	9.12
	lb												*10600	10250	(29.9)
6.0 m (20.0 ft)	kg							*5340	*5340				*4970	3950	9.85
	lb							*11770	*11770				*10960	8710	(32.3)
4.5 m (15.0 ft)	kg						*6630	*6630	*5910	4310	*3130	*3130	*5180	3570	10.26
	lb						*14620	*14620	*13030	*13030	*6900	*6900	*11420	7870	(33.7)
3.0 m (10.0 ft)	kg				*11060	*11060	*8070	*8070	*6680	5910	*4640	4330	5050	3390	10.41
	lb				*24380	*24380	*17790	*17790	*14730	13030	*10230	9550	11130	7470	(34.2)
1.5 m (5.0 ft)	kg		*7260	*7260	*13460	12470	*9420	8080	5640	*5260	4190	5070	3380	10.31	
	lb		*16010	*16010	*29670	27490	*20200	17790	*16400	12430	*11600	9240	11180	7450	(33.8)
Ground Line	kg		*10880	*10880	*14670	12030	*10300	7670	*9040	5450			5330	3560	9.95
	lb		*23990	*23990	*32340	26520	*22840	16910	*20200	12020			11750	7850	(32.6)
-1.5 m (-5.0 ft)	kg	*11690	*11690	*15110	*15110	*14860	11910	9700	8080	5360			5950	3990	9.29
	lb	*25770	*25770	*33310	*33310	*32760	26500	*23600	16600	11780			13120	8800	(30.5)
-3.0 m (-10.0 ft)	kg	*15680	*15680	*20360	*20360	*14180	12000	*10400	7560	*7880	5410		*6450	4900	8.24
	lb	*34570	*34570	*44890	*44890	*31260	26480	*22930	16670	*17370	11930		*14220	10800	(27.0)
-4.5 m (-15.0 ft)	kg	*20460	*20460	*17650	*17650	*12350	12330	9950	7790						
	lb	*45110	*45110	*38910	*38910	*27230	27180	*11200	17170						

# Lifting Capacity

## R290LC-9 HIGH WALKER

Rating over-front Rating over-side or 360 degree

Boom : 6.25m (20' 6") / Arm : 3.75 m (12' 4") / Bucket : 1.27 m<sup>3</sup> (1.66 yd<sup>3</sup>) SAE heaped / Shoe : 600mm (24") triple grouser with 5,200kg (11,460 lb) Counterweight

Load point height m(ft)	Load radius												At max. reach									
	1.5 m (5.0ft)		3.0 m (10.0ft)		4.5 m (15.0ft)		6.0 m (20.0ft)		7.5 m (25.0ft)		9.0 m (30.0ft)		Capacity	Reach	m (ft)							
	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Capacity	Reach								
7.5 m (25.0 ft)	kg													*4260	4070	9.83						
	lb													*9390	8970	(32.3)						
6.0 m (20.0 ft)	kg									*4560	*4560	*2880	*2880	*4430	3500	10.50						
	lb									*10050	*10050	*6350	*6350	*9770	7720	(34.4)						
4.5 m (15.0 ft)	kg									*5200	*5200	*4190	*4190	*4640	3180	10.89						
	lb									*11460	*11460	*9240	*9240	*10230	7010	(35.7)						
3.0 m (10.0 ft)	kg									*15960	*15960	*9500	*7170	*7170	4560	3020	11.03					
	lb									*35100	*35190	*20940	*20940	*15810	*15810	*13320	13180	10050	6660	3140	10.59	
1.5 m (5.0 ft)	kg									*2940	*10240	*12280	*12280	*8680	8090	*6920	5670	*5940	4180	4560	3010	10.93
	lb									*6500	*22800	*27070	*27070	*19140	17840	*15260	12500	*13100	9220	10050	6640	(35.9)
Ground Line	kg	*7420	*7420	*10140	*10140	*14530	8090	10100	5220	7030	3680	*4600	2710	4450	2290	10.04						
	lb	*16360	*16360	*22490	*22490	*31910	17840	22270	11510	15500	8110	*10140	5970	9810	5050	(32.9)						
-1.5 m (-5.0 ft)	kg	*10420	*10420	*14140	*14140	*14740	7940	9910	5060	6910	3580		4920	2560	9.44							
	lb	*22970	*22970	*31170	*31170	*32500	17500	21850	11160	15230	7890		10850	5640	(31.0)							
-3.0 m (-10.0 ft)	kg	*13660	*13660	*18040	*18040	*14540	7940	9910	5060	6930	3590		5920	3140	8.48							
	lb	*30120	*30120	*39770	*39770	*32060	17500	21850	11160	15280	7910		13050	6920	(27.8)							
-4.5 m (-15.0 ft)	kg	*17400	*17400	*19680	*19680	*13340	8240	*9370	5240				*6400	4520	6.97							
	lb	*38490	*38490	*43390	*43390	*29410	18170	*														