

## 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(LH)  
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, 2-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  
Power Max  
Low speed/High speed  
Fuel warmer  
Auto idle

### Door and cab locks, one key

### Two outside rearview mirrors

### Mechanical suspension seat with heater

### Pilot-operated slidable joystick

### Console box height adjust system

### Four front working lights

### Electric horn

### Batteries (2 x 12V x 100 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 (2,950kg, 6,500lb)

### Track shoes (600mm, 24")

### Track rail guard

### Accumulator for lowering work equipment

### Electric transducer

### Lower frame under cover (Normal)

### Viscous fan clutch

## OPTIONAL EQUIPMENT

### Fuel filler pump (35 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

### Arms

Short arm (2.2 m, 7' 3")

Long arm (3.1 m, 10' 2")

### Buckets

Various optional Buckets(SAE heaped)

Standard bucket (0.70m<sup>3</sup>, 0.92 yd<sup>3</sup>)

Narrow bucket (0.39 m<sup>3</sup>, 0.51 yd<sup>3</sup>)

Narrow bucket (0.50 m<sup>3</sup>, 0.65 yd<sup>3</sup>)

Narrow bucket (0.64 m<sup>3</sup>, 0.84 yd<sup>3</sup>)

Light duty bucket (0.89 m<sup>3</sup>, 1.16 yd<sup>3</sup>)

Heavy duty bucket (0.69 m<sup>3</sup>, 0.90 yd<sup>3</sup>)

### Climate control

Air conditioner only

Heater only

### 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 grousers shoe (500mm, 20")

Triple grousers shoe (700mm, 28")

### Lower frame under cover (Additional)

### Pre-heating system, coolant

### Tool kit

### Operator suit

### Rearview camera

### Seat

Adjustable air suspension seat

Adjustable air suspension seat with heater

Mechanical suspension seat

### Pattern change valve (2 patterns)

### Hi-mate (Remote Management System)

We build a better future

Robex

# 160LC-9

With Tier 3 Engine installed



\*Photo may include optional equipment.

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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# 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 160LC-9

### Machine Walk-Around

#### Undercarriage

Sealed track chain (urethane seals) / Standard track rail guard / Comfortable bolt-on steps  
Large upper roller cut-outs for debris clean-out / Tapered side frames for debris clean-out / Grease-type track tensioner

#### Engine Technology

Proven / reliable, fuel efficient Mitsubishi Tier III D04FD-TAA engine  
Electronically controlled for optimum fuel to air ratio and clean, efficient combustion  
Low noise / Auto engine overheat feature / Anti-restart feature

#### Hydraulic System Improvements

New patented hydraulic control for improved controllability / Improved control valve design for added efficiency and smoother operation / New auto boom and swing priority system for optimum speed / New auto power boost feature for additional power when needed / Improved arm-in and boom-down flow regeneration system for added speed and efficiency

#### Pump Compartment

Industry-leading, powerful, reliable Kawasaki designed, variable volume in-line axial piston pumps  
New compact solenoid block equipped with 3 solenoid valves, 1 EPPR valve, 1 check valve accumulator and pilot filter controls 2 speed travel, power boost, boom priority, safety lock

#### Enhanced Operator Cab

##### Improved Visibility

Enlarged cab with improved visibility / See-through upper skylight for visibility and ventilation  
Larger right-side glass, now one piece, for better right visibility  
Safety glass windows on all sides - less expensive than (polycarbonate) and won't scratch or fade  
Closeable sunshade for operator convenience / Reduced front window seam for improved operator view

##### Improved Cab Construction

New steel tube construction for added operator safety, protection and durability  
New window open/close mechanism designed with cable and spring lift assist and single latch release

##### Improved Suspension Seat / Console Assembly

Ergonomic joysticks with auxiliary control buttons for attachment use. Now with new sleek styling  
Heated suspension (standard) or optional air ride suspension with heat  
New joystick consoles - now adjustable in height by way of dial at bottom  
Adjustable arm rests - turn dial to raise or lower for optimum comfort

##### Advanced 7" Color Cluster

New Color LCD Display with easy to read digital gauges for hydraulic oil temperature, water temperature, and fuel. Simplified design makes adjustment and diagnostics easier. Also, new enhanced features such as rear-view camera are integrated into monitor.  
3 power modes : (P) Power, (S) Standard, (E) Economy, 2 work modes : Dig & Attachment, (U) User mode for operator preference  
Enhanced self-diagnostic features with GPS download capability  
One pump flow or two pump flow for optional attachment now selectable through the cluster / New anti-theft system with password capability  
Boom speed and arm regeneration are selectable through the monitor.  
Auto power boost is now available - selectable (on/off) through the monitor.  
Powerful air conditioning and heat with auto climate control, 20% more heat and air output than 7A series!  
RMS (Remote Management System) works through GPS/satellite technology to ultimately provide better customer service and support.

# Preference

Operating 9 series 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.



## Wide Cabin with Excellent Visibility

The newly designed cabin was conceived for more space, a wider field of view and operator comfort. Special attention was given to a clear, open and convenient interior with plenty of visibility on the machine surroundings and the job at hand. This well balanced combination of precision aspects put the operator in the perfect position to work safely and securely.

## Operator Comfort

In 9 series cabin you can easily adjust the seat, console and armrest settings to best suit your preferred comfort level. Seat and console position and height can be set together and independent from each other. Other preference settings that add to overall operator comfort include the full automatic high capacity airconditioning system and the CD/MP3 radio.



## Reduced Stress

Work is stressful enough. Your work environment should be stress free. Hyundai's 9 series provides improved cab amenities, additional space and a comfortable seat to minimize stress to the operator. A powerful climate control system provides the operator with optimum air temperature. An advanced audio system with CD player, AM/FM stereo and MP3 capabilities, plus remotely located controls is perfect for listening to music favorites. Operators can even talk on the phone with the hands-free cell phone feature.



## Operator - Friendly Cluster

The advanced new cluster with 7 inch wide color LCD screen and toggle switch allows the operator to select his personal machine preferences. Power and work mode selection, self diagnostics, optional rear-view camera, maintenance check lists, start-up machine security, and video functions were integrated into the cluster to make the machine more versatile and the operator more productive.



# Precision

Innovative hydraulic system technologies make the 9 series excavator fast, smooth and easy to control.



\*Photo may include optional equipment.

## Computer Aided Power

The engine horsepower and hydraulic horsepower together in unison through the advanced CAPO(Computer Aided Power Optimization) system, flow for the job at hand. Operator can set their own preferences for boom or swing priority, power mode selection and optional work tools at the touch of a button.

The CAPO system also provides complete self diagnostic features and digital gauges for important information like hydraulic oil temperature, water temperatures and fuel level. This system interfaces with multiple sensors placed throughout the hydraulic system as well as the electronically controlled engine to provide the optimum level of engine power and hydraulic flow.

### Power Mode

P (Power Max) mode maximizes machine speed and power for mass production. S (Standard) mode provides a reduced, fixed rpm for optimum performance and improved fuel economy. For maximum fuel savings and improved control, E (Economy) mode provides precise flow and engine power based on load demand. Three unique power modes provide the operator with custom power, speed and fuel economy.

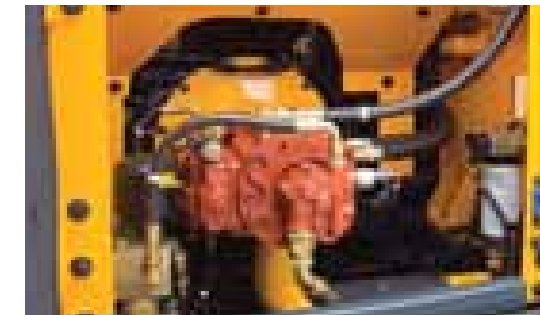
### Work Mode

The work mode allows the operator to select single flow attachments like a hydraulic breaker or bi-directional flow attachments like a crusher. Flow settings unique to each attachment can be programmed from within the cluster.

### User Mode

Some jobs require more precise machine settings. Using the versatile U (User) mode, the operator can customize engine speed, pump output, idle speed and other machine settings for the job at hand.

## Improved Hydraulic System



To achieve optimum precision, Hyundai redesigned the hydraulic system to provide the operator with super fine touch and improved controllability. Improved pump flow control reduces flow when controls are not being used to minimize fuel consumption.

Improved spool valves in the control valve are engineered to provide more precise flow to each function with less effort.

Improved hydraulic valves, precision-designed variable volume piston pumps, fine-touch pilot controls, and enhanced travel functions make any operator running a 9

series look like a smooth operator. Newly improved features include arm-in and boom-down flow regeneration, improved control valve technology and innovative auto boom and swing priority for optimal performance in any application.



## Auto Boom-swing Priority

This smart function automatically and continuously looks the ideal hydraulic flow balance for the boom and swing motions of the machine. The advanced CAPO system monitors the hydraulic system and adjusts its settings to maximize performance and productivity.

# Performance

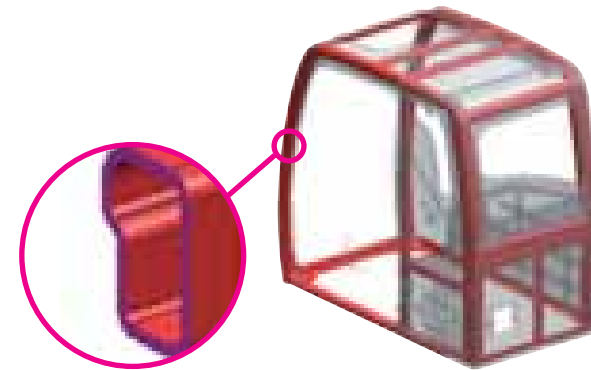
9 series is designed for maximum performance to keep the operator working productively.



## Track Rail Guard & Adjusters

adjustment is made easy with standard grease cylinder track adjusters and shock absorbing springs.

Durable track rail guards keep track links in place. Track



## Structure Strength

The 9 series cabin structure has been fitted with stronger but slimmer tubing for more 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.



## Easy to maintain engine components

The cooling and preheating system are provided for optimum and immediate operation, guaranteeing longer life for the engine and hydraulic components. Servicing of the engine and hydraulics is considerably simplified due to total accessibility.

## Mitsubishi D04FD-TAA

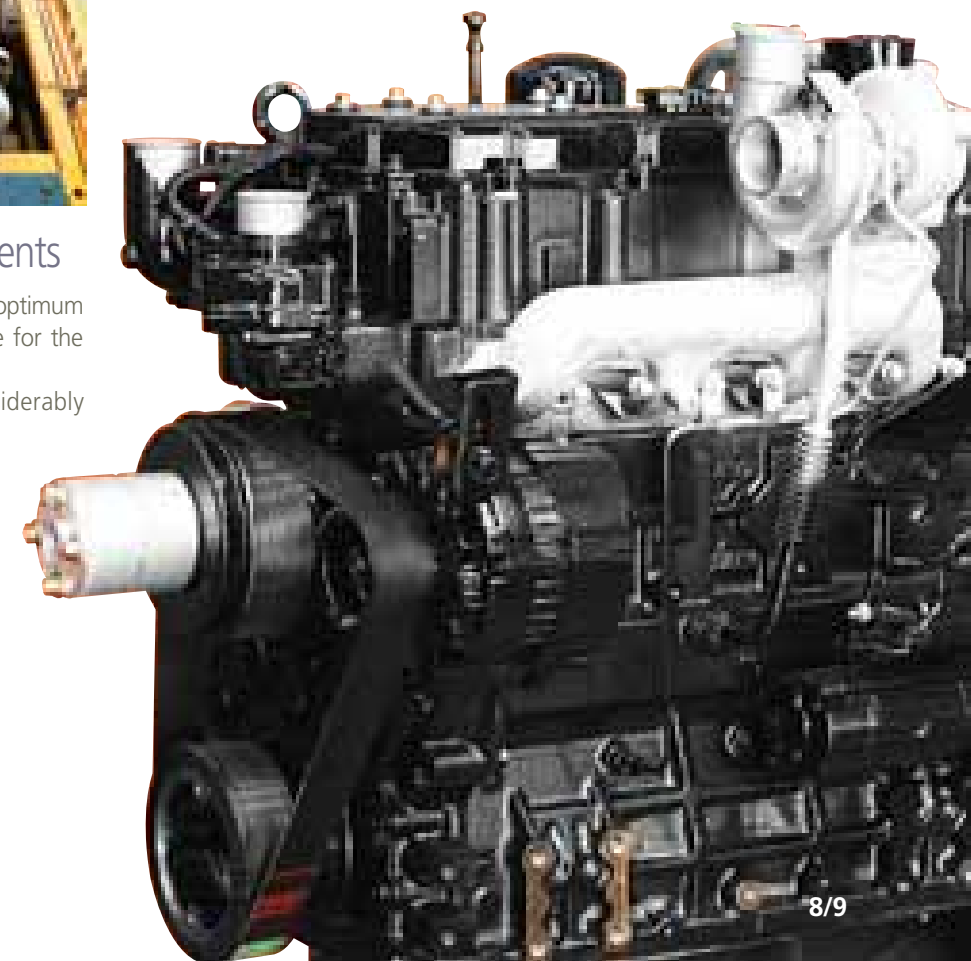
The Tier III, four cylinder, 4 cycle, turbo-charged, charge air cooled, Mitsubishi D04FD-TAA engine provides maximum power, reliability, optimum fuel economy, and reduced emissions. Electronically controlled fuel injection and diagnostic capabilities add to the engines efficiency and serviceability.

## Heavy-duty strength

Everyone who's ever worked on construction equipment knows, there is no substitute for power and durability. The D04FD-TAA handles the toughest loads and the roughest work conditions.

At the same time, it delivers better fuel economy, has better cold starting capability and is up to 50% quieter in operation. Plus, the heavy-duty design of the D04FD-TAA engine block and components add reliability and durability you can count on every day, year after year.

Both fuel-efficiency and response are significantly enhanced with the Mitsubishi high pressure common rail fuel system. The system delivers high pressure injection, independent of engine speed, for optimum performance and flexibility at every rpm.



\*Photo may include optional equipment.

# Profitable

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



\*Photo may include optional equipment.



## Fuel Efficient

9 series excavators are engineered to be extremely fuel efficient. New innovations like fan clutch, the variable speed remote fan, three-stage auto decel system and the new economy mode help to conserve fuel and reduce the impact on the environment.



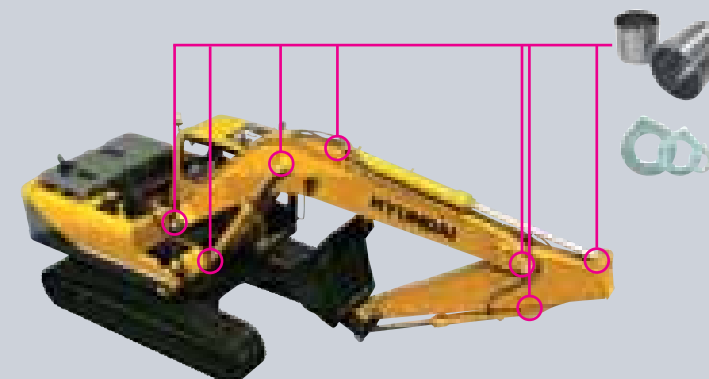
## Hi-mate (Remote Management System)

Hi-mate, Hyundai's proprietary remote management system, provides operators and dealer service personnel access to vital service and diagnostic information on the machine from any computer with internet access. Users can pinpoint machine location using digital mapping and set machine work boundaries, reducing the need for multiple service calls. Hi-mate saves time and money for the owner and dealer by promoting preventative maintenance and reducing machine downtime.



## Easy Access

Ground-line access to filters, lube fittings, fuses, machine computer components and wide open compartments makes service more convenient on the 9 series.



## Extended Life Components

9 series excavators were designed with extended lubricant bush life & ultra high molecular weight polymer shim (wear resistant, noise reducing), extended-life hydraulic filters (1,000hr), long-life hydraulic oil (5,000hr), more efficient cooling systems and integrated preheating systems to long extend service intervals, minimize operating costs and reduce machine down time.

# Specifications

## ENGINE

MODEL		Mitsubishi D04FD-TAA	
Type		Water cooled, 4 cycle Diesel, 4-cylinders in line, direct injection, turbocharged charger and air cooled	
Rated flywheel horse power	SAE	J1995 (gross) J1349 (net)	126 HP (94 kW)/ 2,000 rpm 120 HP (90 kW)/ 2,000 rpm
	DIN	6271/1 (gross) 6271/1 (net)	128 PS (94 kW)/ 2,000 rpm 122 PS (90 kW)/ 2,000 rpm
Max. torque		47.7 kgf-m(345 lbf-ft)/ 1,800 rpm	
Bore X stroke		102 x 130 mm (4.01" x 5.12")	
Piston		4,249cc (259.3 in³)	
Batteries		2 X 12V X 100AH	
Starting motor		24V- 5.0kW	
Alternator		24V- 50Amp	

## HYDRAULIC SYSTEM

MAIN PUMP	
Type	Two variable displacement piston pumps
Rated flow	2 X 160L /min (44.4 US gpm / 37.0 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/cm² (4,980 psi)
Travel	330 kgf/cm² (4,690 psi)
Power boost (boom, arm, bucket)	380 kgf/cm² (5,410 psi)
Swing circuit	285 kgf/cm² (4,050 psi)
Pilot circuit	40 kgf/cm² (570 psi)
Service valve	Installed

HYDRAULIC CYLINDERS	
No. of cylinder bore X stroke	Boom: 2-115 X 1,090 mm (4.5" X 42.9")
	Arm: 1-120 X 1,355 mm (4.7" X 53.3")
	Bucket: 1-110 X 995 mm (4.3" X 39.2")
	Blade: 2-110 X 320 mm (4.3" X 12.6")
	2PCS 1st: 2-115 X 960 mm (4.5" X 37.8") 2nd: 1-160 X 650 mm (6.3" X 25.6")

## DRIVES & BRAKES

Drive method	Fully hydrostatic type
Drive motor	Axial piston motor, in-shoe design
Reduction system	Planetary reduction gear
Max. drawbar pull	15,700 kgf (34,600 lbf)
Max. travel speed(high) / (low)	5.5 km/hr (3.4 mph) / 3.2 km/hr (2.0 mph)
Gradeability	30° (58 %)
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 Two on the upper frame

## 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	11.3 rpm

## COOLANT & LUBRICANT CAPACITY

Refilling	liter	US gal	UK gal
Fuel tank	270	71.3	59.4
Engine coolant	28.0	7.4	6.2
Engine oil	17.5	4.6	3.8
Swing device-gear oil	5.0	1.3	1.1
Final drive(each)-gear oil	3.0	0.8	0.7
Hydraulic system(including tank)	240	63.4	52.8
Hydraulic tank	160	42.3	35.2

## 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	49
No. of carrier roller on each side	2
No. of track roller on each side	7
No. of rail guard on each side	1

## OPERATING WEIGHT (APPROXIMATE)

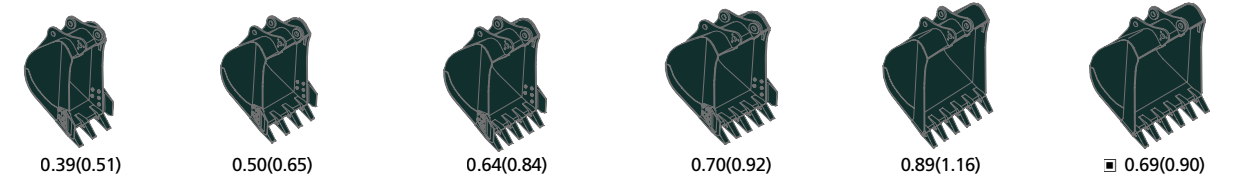
Operating weight, including 5,100mm (16' 9") boom, 2,600mm (8' 6") arm, SAE heaped 0.70m³ (0.92 yd³) bucket, lubricant, coolant, full fuel tank, full hydraulic tank, and all standard equipments.

MAJOR COMPONENT WEIGHT	
Upperstructure	4,980 kg (10,980 lb)
Counterweight	2,900 kg (6,390 lb)
5.1m (16' 9")mono boom(with arm cylinder)	1,250 kg (2,760 lb)
Hydraulic adjustable boom(with arm cylinder)	1,780 kg (3,920 lb)

OPERATING WEIGHT				
Shoes		Operating weight	Ground pressure	
Type	Width mm(in)	kg(lb)	kgf/cm²(psi)	
Triple grouser	500 (20")	R160LC-9	17,550 (38,690)	0.51 (7.25)
		R160LCD-9	18,550 (40,900)	0.54 (7.68)
	600 (24")	R160LC-9	17,800 (39,240)	0.43 (6.11)
		R160LCD-9	18,800 (41,450)	0.46 (6.54)
	700 (28")	R160LC-9	18,050 (39,790)	0.38 (5.40)
		R160LCD-9	19,050 (42,000)	0.40 (5.69)

## BUCKETS

All buckets are welded with high-strength steel.



Capacity m³ (yd³)		Width mm (in)		Weight kg (lb)	Recommendation mm (ft-in)				
SAE heaped	CECE heaped	Without sidecutters	With sidecutters		5,100 (16' 9") Mono Boom			5,100 (16' 9") Hydraulic Adjustable Boom	
					2,200 (7' 3") Arm	2,600 (8' 6") Arm	3,100 (10' 2") Arm	2,200 (7' 3") Arm	2,600 (8' 6") Arm
0.39(0.51)	0.34(0.44)	620(24.4)	740(29.1)	410(900)	•	•	•	•	•
0.50(0.65)	0.44(0.58)	760(29.9)	880(34.6)	470(1,040)	•	•	•	•	•
0.64(0.84)	0.55(0.72)	920(36.2)	1,040(40.9)	510(1,120)	•	•	•	•	•
0.70(0.92)	0.60(0.78)	990(39.0)	1,110(43.7)	540(1,190)	•	•	▲	•	▲
0.89(1.16)	0.77(1.01)	1,220(48.0)	1,340(52.8)	610(1,340)	•	▲	-	▲	-
0.69(0.90)	0.62(0.81)	990(39.0)	-	700(1,540)	•	•	▲	•	▲

■ Heavy duty bucket

- : Applicable for materials with density of 2,000 kg /m³ (3,370 lb/ yd³) or less
- : Applicable for materials with density of 1,600 kg /m³ (2,700 lb/ yd³) or less
- ▲ : Applicable for materials with density of 1,100 kg /m³ (1,850 lb/ yd³) or less

## ATTACHMENT

Booms and arms are welded, a low-stress, full-box section design. 5.1m(16' 9") boom, 5.1m(16' 9") hydraulic adjustable boom and 2.20m(7' 3"), 2.60m(8' 6"), 3.10m(10' 2") arms are available.

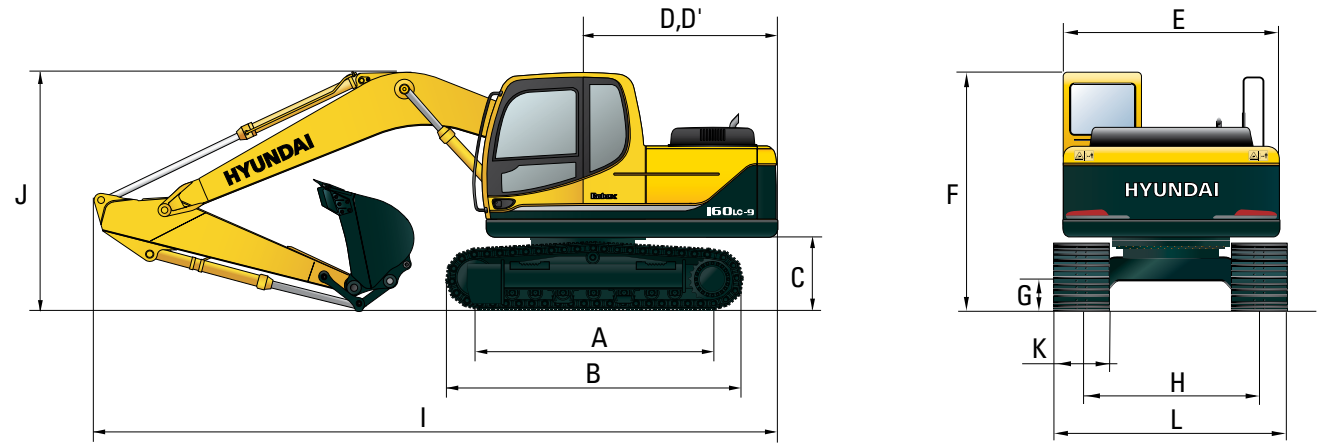
## DIGGING FORCE

Boom	Length	mm (ft-in)	5,100 (16' 9")			Remarks
	Weight	kg (lb)	1,040 (2,290)			
Arm	Length	mm (ft-in)	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")	[ ]: Power Boost
	Weight	kg (lb)	750 (1,560)	810 (1,790)	890 (1,960)	
Bucket digging force	SAE	kN	107.9 [117.2]	107.9 [117.2]	107.9 [117.2]	
		kgf	11,000 [11,940]	11,000 [11,940]	11,000 [11,940]	
		lbf	24,250 [26,330]	24,250 [26,330]	24,250 [26,330]	
	ISO	kN	123.6 [134.2]	123.6 [134.2]	123.6 [134.2]	
		kgf	12,600 [13,680]	12,600 [13,680]	12,600 [13,680]	
		lbf	27,780 [30,160]	27,780 [30,160]	27,780 [30,160]	
Arm crowd force	SAE	kN	87.2 [94.7]	77.3 [83.9]	69.0 [74.9]	
		kgf	8,890 [9,650]	7,880 [8,560]	7,030 [7,630]	
		lbf	19,600 [21,280]	17,370 [18,860]	15,500 [16,830]	
	ISO	kN	91.0 [98.8]	80.3 [87.2]	71.4 [77.5]	
		kgf	9,280 [10,080]	8,190 [8,890]	7,280 [7,900]	
		lbf	20,460 [22,210]	18,060 [19,600]	16,050 [17,430]	

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

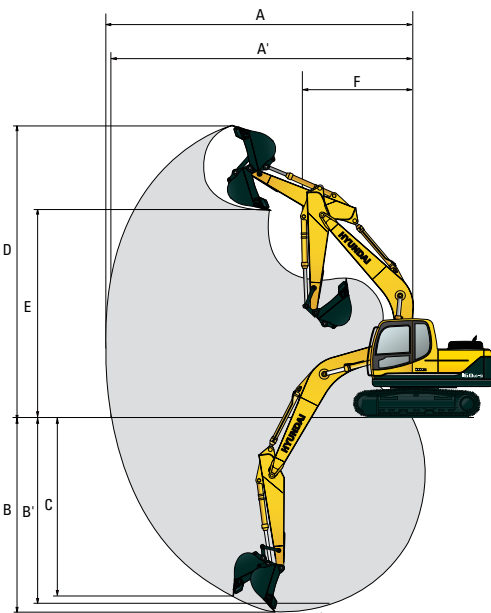
# Dimensions & Working Range

## R160LC-9 DIMENSIONS



mm (ft-in)		mm (ft-in)			
A Tumbler distance	3,170 (10' 5")	Boom length	5,100(16' 9")		
B Overall length of crawler	3,960 (13' 0")	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
C Ground clearance of counterweight	1,055 (3' 6")	I Overall length	8,660 (28' 5")	8,650 (28' 5")	8,650 (28' 5")
D Tail swing radius	2,530 (8' 4")	J Overall height of boom	3,010 (9' 11")	2,990 (9' 10")	3,150 (10' 4")
D' Rear-end length	2,480 (8' 2")	K Track shoe width	500 (20")	600 (24")	700 (28")
E Overall width of upperstructure	2,475 (8' 1")	L Overall width	2,490 (8' 2")	2,590 (8' 6")	2,690 (8' 10")
F Overall height of cab	2,980 (9' 9")				
G Min. ground clearance	460 (1' 6")				
H Track gauge	1,990 (6' 6")				

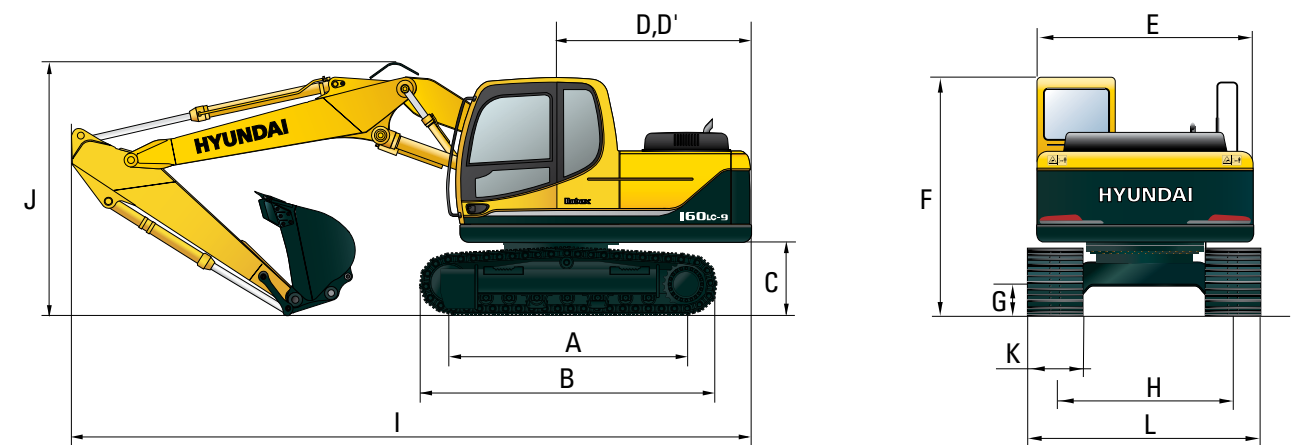
## R160LC-9 WORKING RANGE



		mm (ft-in)		
	Boom length	5,100 (16' 9")		
	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
A	Max. digging reach	8,690 (28' 6")	9,020 (29' 7")	9,450 (31' 0")
A'	Max. digging reach on ground	8,530 (27' 12")	8,860 (29' 1")	9,300 (30' 6")
B	Max. digging depth	5,660 (18' 7")	6,060 (19' 11")	6,560 (21' 6")
B'	Max. digging depth (8' level)	5,430 (17' 10")	5,850 (19' 2")	6,370 (20' 11")
C	Max. vertical wall digging depth	5,120 (16' 10")	5,380 (17' 8")	5,710 (18' 9")
D	Max. digging height	8,750 (28' 8")	8,840 (29' 0")	8,980 (29' 6")
E	Max. dumping height	6,110 (20' 1")	6,220 (20' 5")	6,390 (21' 0")
F	Min. swing radius	3,180 (10' 5")	3,170 (10' 5")	3,170 (10' 5")

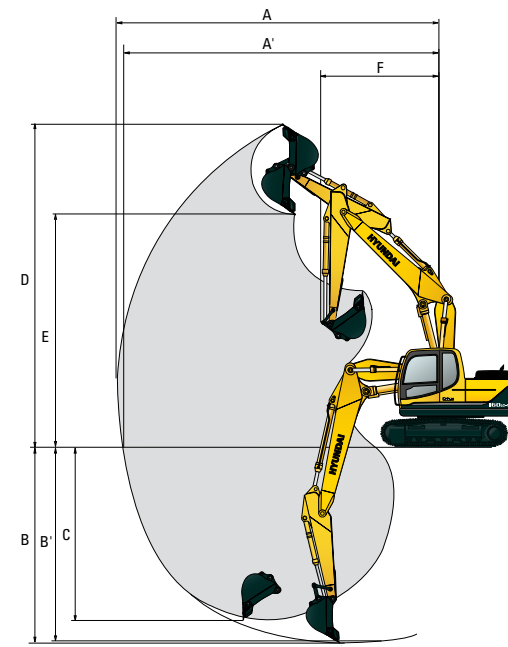
# Dimensions & Working Range

## R160LC-9 2-PIECE BOOM DIMENSIONS



mm (ft-in)		mm (ft-in)			
A Tumbler distance	3,170 (10' 5")	Boom length	5,100(16' 9")		
B Overall length of crawler	3,960 (13' 0")	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
C Ground clearance of counterweight	1,055 (3' 6")	I Overall length	8,610 (28' 3")	8,610 (28' 3")	8,610 (28' 3")
D Tail swing radius	2,530 (8' 4")	J Overall height of boom	3,040 (9' 12")	3,060 (10' 0")	
D' Rear-end length	2,480 (8' 2")	K Track shoe width	500 (20")	600 (24")	700 (28")
E Overall width of upperstructure	2,475 (8' 1")	L Overall width	2,490 (8' 2")	2,590 (8' 6")	2,690 (8' 10")
F Overall height of cab	2,980 (9' 9")				
G Min. ground clearance	460 (1' 6")				
H Track gauge	1,990 (6' 6")				

## R160LC-9 2-PIECE BOOM WORKING RANGE

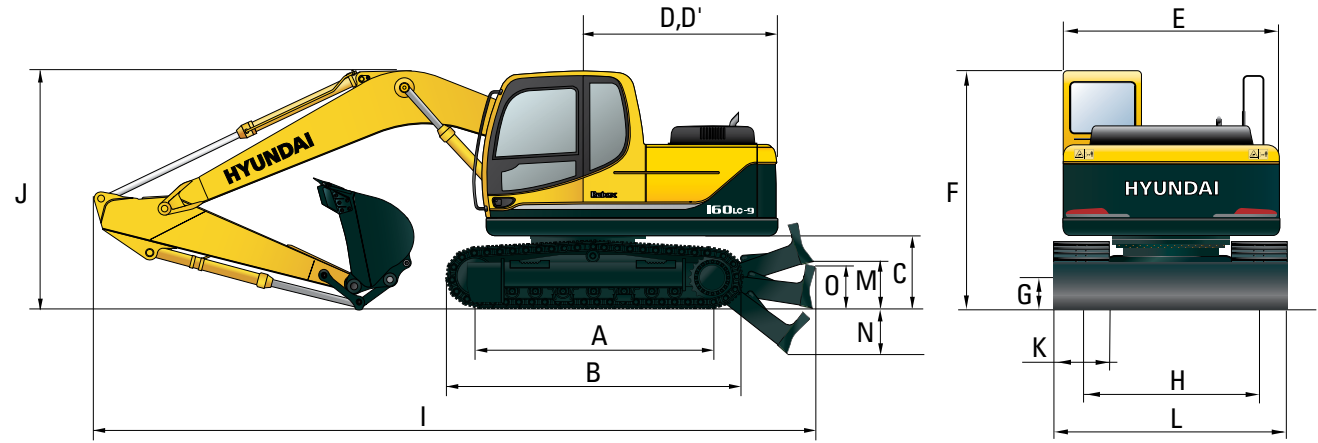


		mm (ft-in)		
	Boom length	5,100 (16' 9")		
	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
A	Max. digging reach	8,760 (28' 9")	9,110 (29' 11")	
A'	Max. digging reach on ground	8,590 (28' 2")	8,950 (29' 4")	
B	Max. digging depth	5,430 (17' 10")	5,830 (19' 2")	
B'	Max. digging depth (8' level)	5,330 (17' 6")	5,730 (18' 10")	
C	Max. vertical wall digging depth	4,630 (15' 2")	4,980 (16' 4")	
D	Max. digging height	9,420 (30' 11")	9,610 (31' 6")	
E	Max. dumping height	6,710 (22' 0")	6,910 (22' 8")	
F	Min. swing radius	3,100 (10' 2")	2,970 (9' 9")	



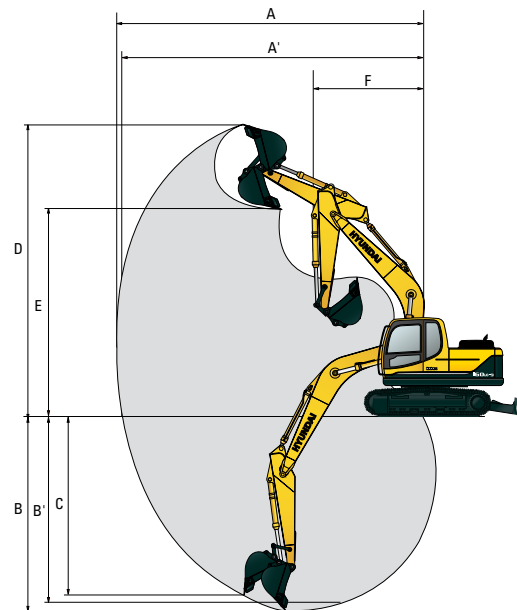
# Dimensions & Working Range

## R160LCD-9 DIMENSIONS



mm (ft-in)		mm (ft-in)			
A Tumbler distance	3,170 (10' 5")	Boom length	5,100(16' 9")		
B Overall length of crawler	3,960 (13' 0")	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
C Ground clearance of counterweight	1,055 (3' 6")	I Overall length	9,110 (29' 11")	9,100 (29' 10")	9,100 (29' 10")
D Tail swing radius	2,530 (8' 4")	J Overall height of boom	3,010 (9' 11")	2,990 (9' 10")	3,150 (10' 4")
D' Rear-end length	2,480 (8' 2")	K Track shoe width	500 (20")	600 (24")	700 (28")
E Overall width of upperstructure	2,475 (8' 1")	L Overall width	2,490 (8' 2")	2,590 (8' 6")	2,690 (8' 10")
F Overall height of cab	2,980 (9' 9")				
G Min. ground clearance	460 (1' 6")				
H Track gauge	1,990 (6' 6")				
M Ground clearance of blade up	615 (2' 0")				
N Depth of blade down	675 (2' 3")				
O Height of blade	640 (2' 1")				

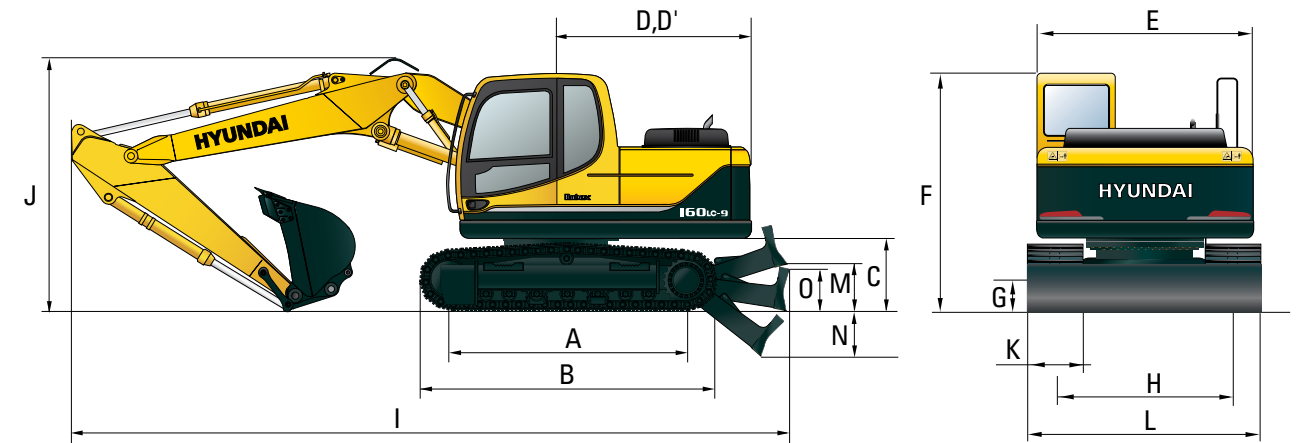
## R160LCD-9 WORKING RANGE



		mm (ft-in)		
	Boom length	5,100 (16' 9")		
	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
A	Max. digging reach	8,690 (28' 6")	9,020 (29' 7")	9,450 (31' 0")
A'	Max. digging reach on ground	8,530 (27' 12")	8,860 (29' 1")	9,300 (30' 6")
B	Max. digging depth	5,660 (18' 7")	6,060 (19' 11")	6,560 (21' 6")
B'	Max. digging depth (8' level)	5,430 (17' 10")	5,850 (19' 2")	6,370 (20' 11")
C	Max. vertical wall digging depth	5,120 (16' 10")	5,380 (17' 8")	5,710 (18' 9")
D	Max. digging height	8,750 (28' 8")	8,840 (29' 0")	8,980 (29' 6")
E	Max. dumping height	6,110 (20' 1")	6,220 (20' 5")	6,390 (21' 0")
F	Min. swing radius	3,180 (10' 5")	3,170 (10' 5")	3,170 (10' 5")

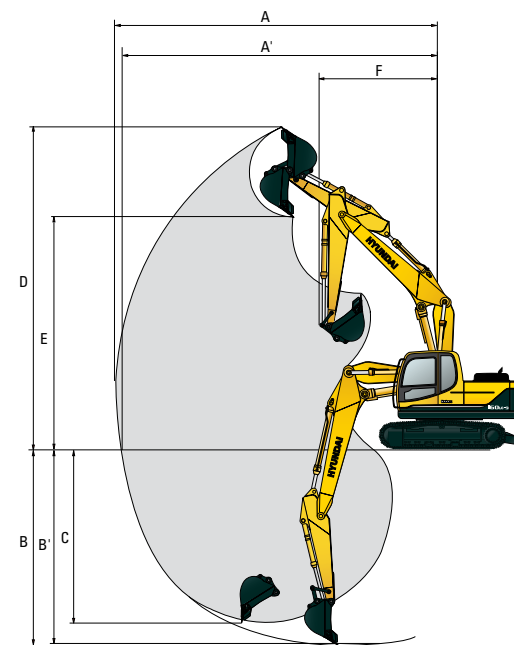
# Dimensions & Working Range

## R160LCD-9 2-PIECE BOOM DIMENSIONS



mm (ft-in)		mm (ft-in)			
A Tumbler distance	3,170 (10' 5")	Boom length	5,100(16' 9")		
B Overall length of crawler	3,960 (13' 0")	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
C Ground clearance of counterweight	1,055 (3' 6")	I Overall length	9,080 (29' 9")	9,080 (29' 9")	9,080 (29' 9")
D Tail swing radius	2,530 (8' 4")	J Overall height of boom	3,040 (9' 12")	2,990 (9' 10")	3,060 (10' 0")
D' Rear-end length	2,480 (8' 2")	K Track shoe width	500 (20")	600 (24")	700 (28")
E Overall width of upperstructure	2,475 (8' 1")	L Overall width	2,490 (8' 2")	2,590 (8' 6")	2,690 (8' 10")
F Overall height of cab	2,980 (9' 9")				
G Min. ground clearance	460 (1' 6")				
H Track gauge	1,990 (6' 6")				
M Ground clearance of blade up	615 (2' 0")				
N Depth of blade down	675 (2' 3")				
O Height of blade	640 (2' 1")				

## R160LCD-9 2-PIECE BOOM WORKING RANGE



		mm (ft-in)		
	Boom length	5,100 (16' 9")		
	Arm length	2,200 (7' 3")	2,600 (8' 6")	3,100 (10' 2")
A	Max. digging reach	8,760 (28' 9")	9,110 (29' 11")	9,450 (31' 0")
A'	Max. digging reach on ground	8,590 (28' 2")	8,950 (29' 4")	9,300 (30' 6")
B	Max. digging depth	5,430 (17' 10")	5,830 (19' 2")	6,560 (21' 6")
B'	Max. digging depth (8' level)	5,330 (17' 6")	5,730 (18' 10")	6,370 (20' 11")
C	Max. vertical wall digging depth	4,630 (15' 2")	4,980 (16' 4")	5,710 (18' 9")
D	Max. digging height	9,420 (30' 11")	9,610 (31' 6")	9,980 (32' 7")
E	Max. dumping height	6,710 (22' 0")	6,910 (22' 8")	7,390 (24' 3")
F	Min. swing radius	3,100 (10' 2")	2,970 (9' 9")	3,170 (10' 5")



# Lifting Capacity

## R160LCD-9

Rating over-front Rating over-side or 360 degree

Boom : 5.10 m (16' 9") / Arm : 2.20 m (7' 3") / Bucket : 0.70 m<sup>3</sup> (0.92 yd<sup>3</sup>) SAE heaped / Shoe : 600mm(24") triple grouser with 2,900kg (6,390 lb) counterweight

Load point height m (ft)	Load radius								At max. reach			
	1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		Capacity			
7.5 m (25.0 ft)	kg									*3770	*3770	5.60
	lb									*8310	*8310	(18.4)
6.0 m (20.0 ft)	kg									*3690	2600	6.98
	lb									*8140	5730	(22.9)
4.5 m (15.0 ft)	kg					*4590	*4590	*4130	3290	3590	2110	7.76
	lb					*10120	*10120	*9110	7250	7910	4650	(25.5)
3.0 m (10.0 ft)	kg			*9120	*9120	*5810	4950	*4620	3150	3260	1880	8.15
	lb			*20110	*20110	*12810	10910	*10190	6940	7190	4140	(26.7)
1.5 m (5.0 ft)	kg					*7050	4600	5170	2990	3180	1810	8.20
	lb					*15540	10140	11400	6590	7010	3990	(26.9)
Ground	kg			*7100	*7100	*7710	4390	5040	2880	3320	1890	7.94
	lb			*15650	*15650	*17000	9680	11110	6350	7320	4170	(26.0)
-1.5 m (-5.0 ft)	kg	*7010	*7010	*11130	8200	*7620	4320	4990	2830	3770	2160	7.31
	lb	*15450	*15450	*24540	18080	*16800	9520	11000	6240	8310	4760	(24.0)
-3.0 m (-10.0 ft)	kg	*11210	*11210	*9650	8360	*6690	4380			*3780	2860	6.19
	lb	*24710	*24710	*21270	18430	*14750	9660			*8330	6310	(20.3)
-4.5 m (-15.0 ft)	kg			*6300	*6300							
	lb			*13890	*13890							

Boom : 5.10 m (16' 9") / Arm : 2.60 m (8' 6") / Bucket : 0.70 m<sup>3</sup> (0.92 yd<sup>3</sup>) SAE heaped / Shoe : 600mm(24") triple grouser with 2,900kg (6,390 lb) counterweight

Load point height m (ft)	Load radius										At max. reach			
	1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		Capacity			
7.5 m (25.0 ft)	kg											*3410	3350	6.11
	lb											*7520	7390	(20.0)
6.0 m (20.0 ft)	kg					*3040	*3040					*3380	2370	7.37
	lb					*6700	*6700					*7450	5220	(24.2)
4.5 m (15.0 ft)	kg					*3790	3310					3340	1940	8.11
	lb					*8360	7300					7360	4280	(26.6)
3.0 m (10.0 ft)	kg			*7930	*7930	*5330	5000	*4320	3160	*2830	2140	3040	1730	8.48
	lb			*17480	*17480	*11750	11020	*9520	6970	*6240	4720	6700	3810	(27.8)
1.5 m (5.0 ft)	kg			*8090	*8090	*6680	4620	*4950	2980	3620	2070	2960	1670	8.53
	lb			*17840	*17840	*14730	10190	*10910	6570	7980	4560	6530	3680	(28.0)
Ground	kg			*7880	*7880	*7520	4360	5010	2840	*3490	2010	3080	1730	8.28
	lb			*17370	*17370	*16580	9610	11050	6260	*7690	4430	6790	3810	(27.2)
-1.5 m (-5.0 ft)	kg	*6690	*6690	*10670	8080	*7650	4260	4930	2780			3450	1950	7.69
	lb	*14750	*14750	*23520	17810	*16870	9390	10870	6130			7610	4300	(25.2)
-3.0 m (-10.0 ft)	kg	*9970	*9970	*10310	8200	*6990	4280	*4900	2800			*3770	2500	6.64
	lb	*21980	*21980	*22730	18080	*15410	9440	*10800	6170			*8310	5510	(21.8)
-4.5 m (-15.0 ft)	kg			*7500	*4980	4460								
	lb			*16530	*10980	9830								

Boom : 5.10 m (16' 9") / Arm : 3.10 m (11' 1") / Bucket : 0.70 m<sup>3</sup> (0.92 yd<sup>3</sup>) SAE heaped / Shoe : 600mm(24") triple grouser with 2,900kg (6,390 lb) counterweight

Load point height m (ft)	Load radius										At max. reach			
	1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		Capacity			
7.5 m (25.0 ft)	kg											*3030	2850	6.73
	lb											*6680	6280	(22.1)
6.0 m (20.0 ft)	kg					*2890	*2890					*3050	2090	7.88
	lb					*6370	*6370					*6720	4610	(25.9)
4.5 m (15.0 ft)	kg					*3370	3340	*2150	*2150			3040	1740	8.57
	lb					*7430	7360	*4740	*4740			6700	3840	(28.1)
3.0 m (10.0 ft)	kg					*4730	*4730	*3950	3180	*3110	2140	2790	1560	8.91
	lb					*10430	*10430	*8710	7010	*6860	4720	6150	3440	(29.2)
1.5 m (5.0 ft)	kg			*10240	8720	*6180	4670	*4640	2980	3610	2050	2710	1500	8.96
	lb			*22580	19220	*13620	10300	*10230	6570	7960	4520	5970	3310	(29.4)
Ground	kg			*8650	8130	*7240	4360	4990	2820	3520	1970	2800	1540	8.73
	lb			*19070	17920	*15960	9610	11000	6220	7760	4340	6170	3400	(28.6)
-1.5 m (-5.0 ft)	kg	*6290	*6290	*10300	7990	*7610	4210	4880	2730	*3250	1930	3090	1720	8.17
	lb	*13870	*13870	*22710	17610	*16780	9280	10760	6020	*7170	4250	6810	3790	(26.8)
-3.0 m (-10.0 ft)	kg	*8930	*8930	*10930	8050	*7230	4190	4870	2710			*3660	2130	7.21
	lb	*19690	*19690	*24100	17750	*15940	9240	10740	5970			*8070	4700	(23.7)
-4.5 m (-15.0 ft)	kg	*12410	*12410	*8670	8270	*5820	4310					*3390	3290	5.59
	lb	*27360	*27360	*19110	18230	*12830	9500					*7470	7250	(18.3)

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.

# Lifting Capacity

## R160LCD-9 2-PIECE BOOM

Rating over-front Rating over-side or 360 degree

Boom : 5.10 m (16' 9") / Arm : 2.20 m (7' 3") / Bucket : 0.70 m<sup>3</sup> (0.92 yd<sup>3</sup>) SAE heaped / Shoe : 600mm(24") triple grouser with 2,900kg (6,390 lb) counterweight

Load point height m (ft)	Load radius										At max. reach			
	1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		Capacity			
6.0 m (20.0 ft)	kg											*3750	2520	7.06
	lb											*8270	5560	(23.2)
4.5 m (15.0 ft)	kg							*4170	3280			3540	2040	7.83
	lb							*9190	7230			7800	4500	(25.7)
3.0 m (10.0 ft)	kg							*5860	4950	*4630	3130	3220	1830	8.21
	lb							*12920	10910	*10210	6900	7100	4030	(26.9)
1.5 m (5.0 ft)	kg							*7010	4560	*5140	2970	*3450	2060	8.27
	lb							*15450	10050	*11330	6550	*7610	4540	(27.1)
Ground	kg					*6200	*6200	*7590	4340	5050	2840	3290	1840	8.01
	lb					*13670	*13670	*16730	9570	11130	6260	7250	4060	(26.3)
-1.5 m (-5.0 ft)	kg	*6200	*6200	*10330	8130	*7430	4280	5000	2800			*3710	2120	7.39
	lb	*13670	*13670	*22770	17920	*16380	9440	11020	6170			*8180	4670	(24.2)
-3.0 m (-10.0 ft)	kg			*9150	8320	*6410	4350					*3300	2800	6.28
	lb			*20170	18340	*14130	9590					*7280	6170	(20.6)

Boom : 5.10 m (16' 9") / Arm : 2.60 m (8' 6") / Bucket : 0.70 m<sup>3</sup> (0.92 yd<sup>3</sup>) SAE heaped / Shoe : 600mm(24") triple grouser with 2,900kg (6,390 lb) counterweight

Load point height m (ft)	Load radius										At max. reach					
	1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		Capacity					
6.0 m (20.0 ft)	kg											*3450	2280	7.48		
	lb											*7610	5030	(24.5)		
4.5 m (15.0 ft)	kg											3280	1870	8.20		
	lb											7230	4120	(26.9)		
3.0 m (10.0 ft)	kg									*4350	3150	*3250	2120	1680	8.57	
	lb									*9590	6940	*7170	4670	6590	3700	(28.1)
1.5 m (5.0 ft)	kg			*6980	*6980	*6660	4590	*4920	2960	3630	2040	2920	1620	8.62		
	lb			*15390	*15390	*14680	10120	*10850	6530	8000	4500					