

MOVING YOU FURTHER

Robex

60w-95

With Tier 2 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.
- \* 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

 **HYUNDAI CONSTRUCTION EQUIPMENT**

# Pride at Work

Hyundai Construction Equipment 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!

## Robex 60w-95

### Machine Walk-Around

#### Rugged Upper and Lower Frame

The upper frame is designed with optimum structural integrity to absorb impact and operational stress. Reinforced lower frame and strengthened fenders provide exceptional strength and longer service life to withstand tough working conditions.

#### Engine Technology

The fuel efficient, Tier 2 certified Yanmar 4TNV94L – PHYBY engine provides proven, reliable

#### Efficient Control System

All control devices are arranged for higher productivity and improved operator comfort. Efficient and ergonomic controls allow an operator to control the machine in any working environment. A safety lever on the left-side console is provided to prevent exiting the cabin while hydraulic controls are live.

#### Advanced Hydraulic System

The advanced hydraulic system includes an arm flow summation system, boom holding system and a swing parking brake for smooth and fine control. Other valuable features include a hydraulic damper in the travel pedal, and a hydraulically lubricated swing reducer with a leak-free grease chamber.

#### Comfortable and Durable Cabin

The cabin is roomy and ergonomically designed, for reduced noise and good visibility. The cabin frame meets international standard TOPS, ROPS, FOPS ensuring operator safety.

#### Operator Convenience

Convenient operator features include a suspension seat, excellent visibility, and variable storage space for advanced operator comfort. The newly designed LED cluster provides current information, including engine RPM, engine coolant, fuel level, and electric components. A hydraulic function safety lock and auto diagnostic features are also available. Lock and failure diagnosis functions are also integrated.

A powerful air conditioning system and Radio/USB interface contribute to a comfortable work environment.

#### Easy and Simple Maintenance

Wide open access of doors, covers, hoods is designed for easier maintenance. The air cleaner and centralized grease fittings are also integrated for easy service.

#### Extended Life of Components

Long life components and wear parts, including hydraulic filters, oil, shims, and bushings, help to reduce operating costs.



\*Photo may include optional equipment.

# Preference



\*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

The R60W-9S operator's cab is designed for a comfortable operating experience. An ergonomically designed suspension seat, adjustable arm rests and a spacious environment helps to minimize operator fatigue. Control levers are easily accessible and an instrument display is provided to keep the operator informed of pertinent machine information.

1. A large upper roof glass provides additional visibility and a roller shade is provided to reduce glare and sunlight.
2. An advanced audio system with AM/FM stereo with USB player, plus remotely located control is perfect for listening to music favorites.
3. A hands-free cell phone function is available for safe and convenient phone use.
4. Ergonomically designed joysticks reduce operator fatigue during the work day.
5. Multiple storage compartments are available for additional convenience.



## Enhanced Cabin

Hyundai's R60W-9S is equipped for convenience and productivity.

1. Adjustable position window prevents window movement while operating.
2. A sliding fold-in front window is easily opened and safely stored in an open position to improve ventilation and visibility.
3. A tilt-up left side control console provides easier entrance and exit from the cab.
4. A power climate control system provides the operator with optimum air temperature.



## Operator - Friendly Cluster

The advanced new LED cluster allows the operator to select his personal machine preferences. The monitor displays engine rpm, engine oil temperature, water temperature and information for all electronic devices.

Button selections are provided for auto idle mode, max power mode, and travel speed. A security feature is also provided to prevent the machine from starting without a proper password.

# Precision & Performance

Innovative hydraulic system technologies make the R60W-9S excavator fast, smooth and easy to control. Also R60W-9S is designed for maximum performance to keep the operator working productively.



\*Photo may include optional equipment.

## Excellent Performance

Hyundai's 9S series offers the operator maximized productivity and efficiency. A convenient throttle volume dial with LED light allows the operator to customize engine power according to job requirements. A max power button maximizes machine speed and power for mass production. The R60W-9S also features an auto idle system which improves fuel efficiency and reduces cab noise.

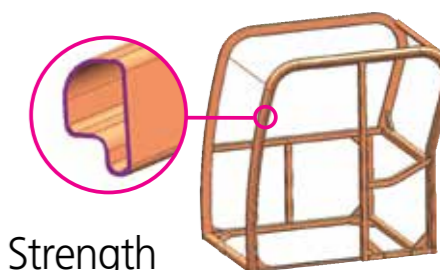
## Improved Hydraulic System



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 9S series look like a smooth operator. Boom-down flow regeneration and control valve technology are newly improved.

## Variable Swing Boom (Option)

The R60W-9S'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. Plus, increased swing torque provides enhanced operating capability on the slope.



## Structure Strength

The 9S 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.



## Yanmar 4TNV94L – PHYBY

### The Highest Engine Power in its Class

Yanmar 4TNV94L – PHYBY engine provides 20.6 kgf-m (149 lbf-ft) of maximum torque with 57 HP at 2,400rpm of rated power. This means the R60W-9S runs with the most power in its class, giving you more power to get the job done.

# Profitability

R60W-9S is designed to maximize profitability through improved efficiencies, enhanced service features and longer life components.



\*Photo may include optional equipment.

## Fuel Efficient

9S series compact excavators are engineered to be extremely fuel efficient. A newly applied cooling fan clutch contributes to reduced noise and improved fuel efficiency.



## Improved Durability

The R60W-9S is equipped with counterweight rear guards to protect the engine hood. Attachment pin with lock-nut type prevents deformation of boom lug and reduces the side play at the boom to arm connection for a long life.



## Easy Access

Centralized grease fittings and easy change plastic air cleaner provide faster, easier service and maintenance.



## Wide Open Engine hood

A newly designed full-open type engine hood makes service more convenient on the R60W-9S.



## Extended Life Components

The 9S series is designed for longer lubrication intervals and extended component life. Hydraulic oil can last up to 5,000 hours before changing. Also, a new center pivot roller bearing design, now double tapered, requires less maintenance as well. Long life and extended wear components save the operator time and money.

# Specifications

## ENGINE

MODEL			YANMAR 4TNV94L – PHYBY
Type			Water cooled, 4 cycle diesel 4 cylinders in line, direct injection, low emission
Rated flywheel horsepower	SAE	J1995 (gross)	57 HP (42 kW) at 2,400 rpm
		J1349 (net)	55 HP (41 kW) at 2,400 rpm
	DIN	6271/1 (gross)	57.7 PS (42 kW) at 2,400 rpm
		6271/1 (net)	56 PS (41 kW) at 2,400 rpm
Max. torque			20.6 kgf·m (149 lbf·ft) at 1,440 rpm
Bore X stroke			94 mm (3.7") x 110 mm (4.33")
Piston displacement			3,054 cc (186 cu in)
Batteries			1 x 12 V x 100 AH
Starting motor			12 V-3.0 kW
Alternator			12 V-100 Amp

## HYDRAULIC SYSTEM

MAIN PUMP	
Type	Variable displacement piston pump
Max. flow	2 X 60 ℓ/min(15.9 US gpm/13.2 UK gpm)
Sub-pump for pilot circuit	Gear pump
Cross-sensing and fuel saving pump system	
HYDRAULIC MOTORS	
Travel	Axial piston motor with counter balance valve and parking brake
Swing	Axial piston motor with automatic brake
RELIEF VALVE SETTING	
Implement circuits	220 kgf/cm² (3,130 psi)
Travel circuit	220 kgf/cm² (3,130 psi)
Swing circuit	220 kgf/cm² (3,130 psi)
Pilot circuit	30 kgf/cm² (430 psi)
Service valve	Installed
HYDRAULIC CYLINDERS	
No. of cylinder bore X stroke	Boom: 1-110 x 715 mm (4.3" x 28.1")
	Arm: 1-90 x 850 mm (3.5" x 33.5")
	Bucket: 1-80 x 660 mm (3.1" x 26.0")
	Boom swing: 1-95 x 527 mm (3.7" x 20.7")
	Dozer blade: 1-100 x 189 mm (3.9" x 7.4")

## TRAVEL SYSTEM

Max. travel speed	30 km/h (18.6 mph)
Gradeability	35° (70%)

## CONTROLS

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

Pilot control	Two joysticks with one safety lever (LH): Arm and swing (Boom swing) (RH): Boom and bucket (ISO)
Traveling and steering	Pedal and steering wheel
Engine throttle	Cabin(Dual type), E/G(Mechanical)

## SWING SYSTEM

Swing motor	Axial pistons motor
Swing reduction	Planetary gear reduction
Swing bearing lubrication	Grease-bathed
Swing brake	Multi wet disc
Swing speed	9 rpm

## COOLANT & LUBRICANT CAPACITY

Re-filling	liter	US gal	UK gal
Fuel tank	125.0	33.0	27.5
Engine coolant	9.5	2.5	2.1
Engine oil	11.6	3.1	2.6
Swing device - gear oil	1.5	0.4	0.3
Hydraulic tank	70.0	18.5	15.4
Hydraulic system	120.0	31.7	26.4
Axle(Front/Rear)	5.3/5.3	1.4/1.4	1.2/1.2

## AXLES & TIRES

Full floating front axle is supported by center pin for oscillation. It can be locked by oscillation lock cylinders. Rear axle is fixed on the lower chassis.

Tires	12.0 x 16.5-12PR, single
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## DOZER BLADE

Pin-on type dozer blade is standard. Dozer blade is a very useful addition for leveling and back filling or clean-up work.

Dozer blade	Width x Height: 1,925 x 355mm(6' 4" x 1' 2" )
	Max. lifting above ground level: 445mm(17.5")
	Max. depth below ground level: 140mm(5.5")

## OPERATING WEIGHT (APPROXIMATE)

Operating weight, including 3,000 mm (9' 10") boom, 1,600 mm (5' 3") arm, SAE heaped 0.18 m³ (0.24 yd³) digging bucket, lubricant, coolant, full fuel tank, hydraulic tank and the standard equipment.

MAJOR COMPONENT WEIGHT	
Upperstructure	2,680 kg ( 5,910 lb)
Mono boom(with arm cylinder)	310 kg ( 680 lb)

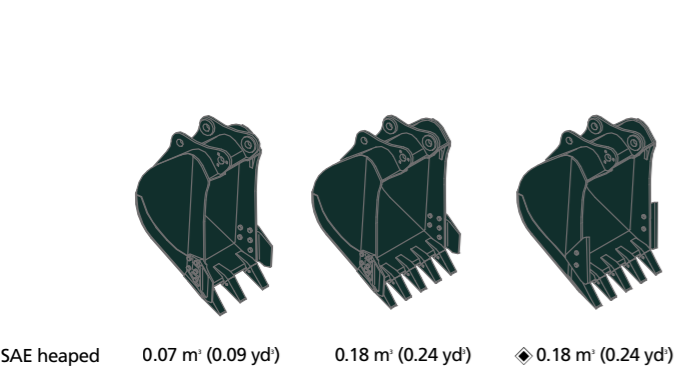
OPERATING WEIGHT	
Operating weight	5,550 kg ( 12,240 lb)

·Mono boom with blade

Specifications

BUCKETS

Capacity		Width		Weight
SAE heaped	CECE heaped	Without side cutters	With side cutters	
0.07 m³ (0.09 yd³)	0.06 m³ (0.08 yd³)	315 mm(12.4")	360 mm(14.2")	115 kg(255 lb)
0.18 m³ (0.24 yd³)	0.15 m³ (0.20 yd³)	670 mm(26.4")	740 mm(29.1")	170 kg(375 lb)
◆ 0.18 m³ (0.24 yd³)	0.15 m³ (0.20 yd³)	610 mm(24.0")	740 mm(29.1")	170 kg(375 lb)



SAE heaped    0.07 m³ (0.09 yd³)    0.18 m³ (0.24 yd³)    ◆ 0.18 m³ (0.24 yd³)

◆ Heavy duty bucket

Lifting Capacity

R60W-9S

Boom : 3.0m (9' 10") / Arm : 1.6 m (5' 3") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade down

Load point height m (ft)		Load radius								At max. reach		
		2.0 m (7 ft)		3.0 m (10 ft)		4.0 m (13 ft)		5.0 m (16 ft)		Capacity		Reach
												m (ft )
5.0 m	kg									*960	*960	4.47
(16 ft)	lb									*2120	*2120	(14.7)
4.0 m	kg					*1020	*1020			*990	720	5.26
(13 ft)	lb					*2250	*2250			*2180	1590	(17.3)
3.0 m	kg					*1150	1120	*990	760	*1020	620	5.69
(10 ft)	lb					*2540	2470	*2180	1680	*2250	1370	(18.7)
2.0 m	kg					*1900	1690	*1400	1070	*1070	570	5.86
(7 ft)	lb					*4190	3730	*3090	2360	*2360	1260	(19.2)
1.0 m	kg					*2500	1580	*1670	1020	*1110	570	5.81
(3 ft)	lb					*5510	3480	*3680	2250	*2450	1260	(19.1)
Ground	kg	*2690	*2690	*2720	1530	*1820	990	*1350	700	*1160	620	5.51
Line	lb	*5930	*5930	*6000	3370	*4010	2180	*2980	1540	*2560	1370	(18.1)
-1.0 m	kg	*4040	3040	*2610	1520	*1760	980			*1180	740	4.92
(-3 ft)	lb	*8910	6700	*5750	3350	*3880	2160			*2600	1630	(16.1)
-2.0 m	kg	*3400	3100	*2090	1550							
(-7 ft)	lb	*7500	6830	*4610	3420							

DIGGING FORCE

Arm	Length	1,600 mm (5' 3")	1,900 mm (6' 3")
	Weight	210 kg (460 lb)	230 kg (510 lb)
Bucket digging force	SAE	37.7 kN	37.7 kN
		3,850 kgf	3,850 kgf
		8,490 lbf	8,490 lbf
	ISO	42.4 kN	42.4 kN
		4,330 kgf	4,330 kgf
		9,550 lbf	9,550 lbf
Arm crowd force	SAE	28.4 kN	25.5 kN
		2,900 kgf	2,600 kgf
		6,390 lbf	5,730 lbf
	ISO	31.9 kN	28.7 kN
		3,260 kgf	2,930 kgf
		7,190 lbf	6,460 lbf

\*Arm weight including cylinder and linkage.

Lifting Capacity

R60W-9S

Boom : 3.0m (9' 10") / Arm : 1.6 m (5' 3") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade up

Load point height m (ft)		Load radius								At max. reach		
		2.0 m (7 ft)		3.0 m (10 ft)		4.0 m (13 ft)		5.0 m (16 ft)		Capacity		Reach
												m (ft )
5.0 m	kg									*960	880	4.47
(16 ft)	lb									*2120	1940	(14.7)
4.0 m	kg					*1020	*1020			760	650	5.26
(13 ft)	lb					*2250	*2250			1680	1430	(17.3)
3.0 m	kg					*1150	1010	810	690	650	550	5.69
(10 ft)	lb					*2540	2230	1790	1520	1430	1210	(18.7)
2.0 m	kg					1130	960	790	670	610	510	5.86
(7 ft)	lb					2490	2120	1740	1480	1340	1120	(19.2)
1.0 m	kg					1660	1410	1080	910	610	510	5.81
(3 ft)	lb					3660	3110	2380	2010	1340	1120	(19.1)
Ground	kg	*2690	2630	1610	1360	1040	880	750	630	650	550	5.51
Line	lb	*5930	5800	3550	3000	2290	1940	1650	1390	1430	1210	(18.1)
-1.0 m	kg	3210	2650	1600	1350	1040	870			790	660	4.92
(-3 ft)	lb	7080	5840	3530	2980	2290	1920			1740	1460	(16.1)
-2.0 m	kg	3270	2700	1630	1380							
(-7 ft)	lb	7210	5950	3590	3040							

Boom : 3.0m (9' 10") / Arm : 1.9 m (6' 3") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade down

Load point height m (ft)		Load radius								At max. reach		
		2.0 m (7 ft)		3.0 m (10 ft)		4.0 m (13 ft)		5.0 m (16 ft)		Capacity		Reach
												m (ft )
5.0 m	kg					*940	*940			*880	840	4.88
(16 ft)	lb					*2070	*2070			*1940	1850	(16.0)
4.0 m	kg									*910	650	5.60
(13 ft)	lb									*2010	1430	(18.4)
3.0 m	kg					*1010	*1010	*1010	770	*940	560	6.00
(10 ft)	lb					*2230	*2230	*2230	1700	*2070	1230	(19.7)
2.0 m	kg	*3000	*3000	*1660	*1660	*1280	1080	*1120	750	*980	520	6.16
(7 ft)	lb	*6610	*6610	*3660	*3660	*2820	2380	*2470	1650	*2160	1150	(20.2)
1.0 m	kg	*1940	*1940	*2330	1590	*1580	1020	*1250	720	*1030	520	6.10
(3 ft)	lb	*4280	*4280	*5140	3510	*3480	2250	*2760	1590	*2270	1150	(20.0)
Ground	kg	*2520	*2520	*2670	1520	*1770	980	*1330	700	*1070	560	5.83
Line	lb	*5560	*5560	*5890	3350	*3900	2160	*2930	1540	*2360	1230	(19.1)
-1.0 m	kg	*3580	3000	*2660	1500	*1790	970			*1110	650	5.29
(-3 ft)	lb	*7890	6610	*5860	3310	*3950	2140			*2450	1430	(17.4)
-2.0 m	kg	*3830	3050	*2290	1520	*1490	980			*1080	910	4.33
(-7 ft)	lb	*8440	6720	*5050	3350	*3280	2160			*2380	2010	(14.2)
-3.0 m	kg	*2070	*2070									
(-10 ft)	lb	*4560	*4560									

Boom : 3.0m (9' 10") / Arm : 1.9 m (6' 3") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade up

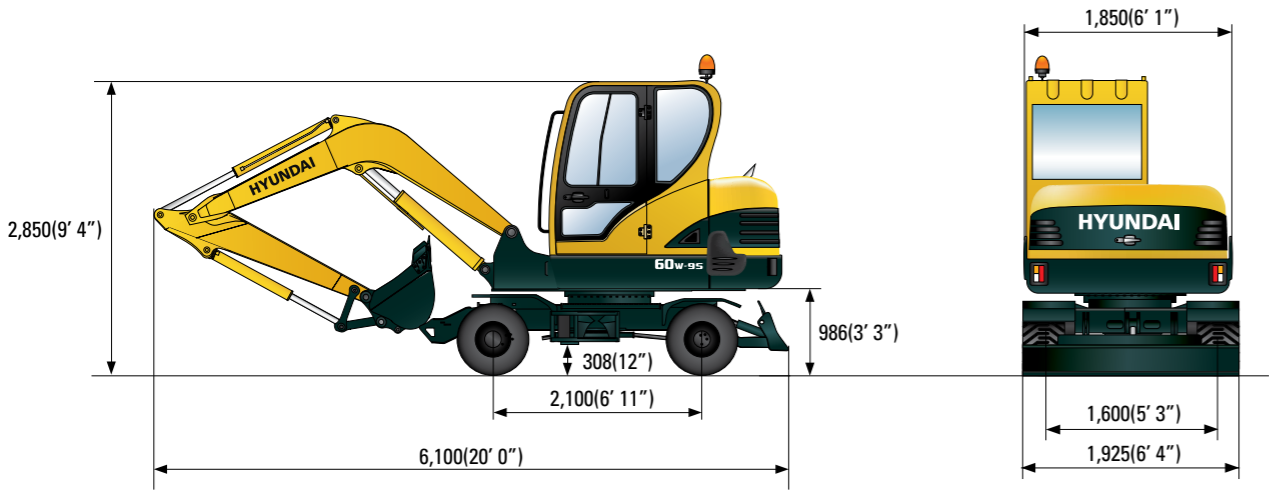
Load point height m (ft)		Load radius								At max. reach		
		2.0 m (7 ft)		3.0 m (10 ft)		4.0 m (13 ft)		5.0 m (16 ft)		Capacity		Reach
												m (ft )
5.0 m	kg					*940	*940			*880	760	4.88
(16 ft)	lb					*2070	*2070			*1940	1680	(16.0)
4.0 m	kg									690	580	5.60
(13 ft)	lb									1520	1280	(18.4)
3.0 m	kg					*1010	*1010	810	690	600	500	6.00
(10 ft)	lb					*2230	*2230	1790	1520	1320	1100	(19.7)
2.0 m	kg	*3000	2990	*1660	1540	1140	970	790	670	560	470	6.16
(7 ft)	lb	*6610	6590	*3660	3400	2510	2140	1740	1480	1230	1040	(20.2)
1.0 m	kg	*1940	*1940	1670	1420	1080	920	760	640	560	460	6.10
(3 ft)	lb	*4280	*4280	3680	3130	2380	2030	1680	1410	1230	1010	(20.0)
Ground	kg	*2520	*2520	1600	1350	1040	880	740	620	590	500	5.83
Line	lb	*5560	*5560	3530	2980	2290	1940	1630	1370	1300	1100	(19.1)
-1.0 m	kg	3160	2610	1580	1330	1020	860			690	580	5.29
(-3 ft)	lb	6970	5750	3480	2930	2250	1900			1520	1280	(17.4)
-2.0 m	kg	3210	2650	1600	1350	1040	870			960	810	4.33
(-7 ft)	lb	7080	5840	3530	2980	2290	1920			2120	1790	(14.2)
-3.0 m	kg	*2070	*2070									
(-10 ft)	lb	*4560	*4560									

1. Lifting capacity is based on 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.

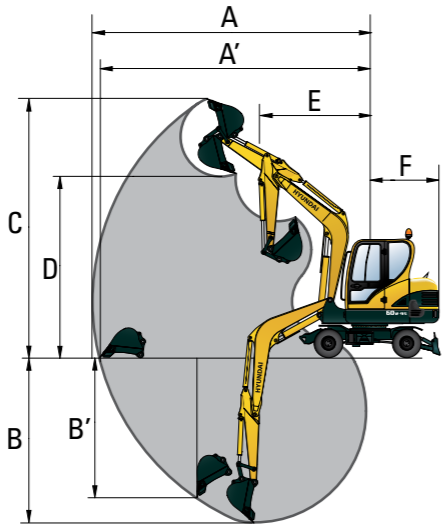
# Dimensions & Working Range

## R60W-9S DIMENSIONS

unit: mm(ft · in)



## R60W-9S WORKING RANGE



unit: mm(ft · in)

Boom length	3,000 (9' 10")	
Arm length	1,600 (5' 3")	1,900 (6' 3")
A Max. digging reach	6,150 (20' 2")	6,430 (21' 1")
A' Max. digging reach on ground	5,980 (19' 7")	6,200 (20' 4")
B Max. digging depth	3,500 (11' 6")	3,800 (12' 6")
B' Max. vertical wall digging depth	2,960 (9' 9")	3,160 (10' 4")
C Max. digging height	6,070 (19' 11")	6,260 (20' 6")
D Max. dumping height	4,340 (14' 3")	4,530 (14' 10")
E Min. swing radius	2,350 ( 7' 9")	2,350 ( 7' 9")
F Tail swing radius	1,650 ( 5' 5")	1,650 ( 5' 5")

## STANDARD EQUIPMENT

<b>ISO standard cabin</b> <ul style="list-style-type: none"><li>·Cabin ROPS<ul style="list-style-type: none"><li>FOPS(ISO 10262 Level I )</li><li>TOPS(ISO 12117)</li></ul></li><li>·All-weather steel cab with all-around visibility</li><li>·Safety glass windows</li><li>·Rise-up type windshield wiper</li><li>·Sliding fold-in front window</li><li>·Sliding side window</li><li>·Lockable door</li><li>·Accessory box &amp; Ash-tray</li></ul> <b>Centralized monitoring</b> <ul style="list-style-type: none"><li>·Engine speed</li><li>·Gauges<ul style="list-style-type: none"><li>Fuel level gauge</li><li>Engine coolant temperature gauge</li></ul></li><li>·Warning</li></ul>	<ul style="list-style-type: none"><li>Fuel level</li><li>Engine oil pressure</li><li>Engine coolant temperature</li><li>Hyd. oil temperature</li><li>Low battery</li><li>Air cleaner closing</li></ul> <b>Door and cab locks, one key</b> <b>Radio / USB player with remote control</b> <b>Three outside rear view mirrors</b> <b>Mechanical suspension seat with heater</b> <b>Console box tilting system(LH.)</b> <b>Four front working lights</b> <b>Electric horn</b> <b>Battery (1 x 12 V x 100 AH)</b> <b>Battery master switch</b> <b>12 volt power supply</b> <b>Removable clean out screen for radiator</b>	<b>Automatic swing brake</b> <b>Removable reservoir tank</b> <b>Water separator, fuel line</b> <b>Mono boom (3.0 m, 9'10")</b> <b>Arm (1.6 m, 5' 3")</b> <b>Tires (12.0 x 16.5 - 12PR, single)</b> <b>Blade (1925 x 354mm, 6'4" x 14")</b> <b>Starting aid (air grid heater) cold weather</b> <b>Single acting piping kit (breaker, etc)</b> <b>Viscous fan clutch</b> <b>Fixed Boom</b>
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## OPTIONAL EQUIPMENT

<b>Air-conditioner &amp; heater</b> <b>Fuel filler pump(35l/min, 9.2 US gpm)</b> <b>Beacon lamp</b> <b>Double acting piping kit (clamshell, etc)</b> <b>Safety lock V/V for boom cylinder</b> <b>Safety lock V/V for arm cylinder</b>	<b>Swingable boom</b> <b>Accumulator, work equipment lowering</b> <b>Cabin front (2) and rear (1) work lamp</b> <b>Quick coupler</b> <b>Narrow bucket(0.07m', 0.09yd')</b> <b>Long arm (1.9m, 6' 3")</b>	<b>Tool kit</b> <b>Mechanical suspension seat</b> <b>Swing Boom</b>
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\* Note : Regional standard is subject to change