Specifications

ENGINE

MODEL			YANMAR 4TNV98
Type			Water cooled, 4 cycle diesel 4 cylinders in line, direct injection, low emission
Rated flywheel horsepower	SAE	J1995 (gross)	57 HP (42.5 kW) at 2,400 rpm
		J1349 (net)	55.2 HP (41.2 kW) at 2,400 rpm
	DIN	6271/1 (gross)	57.8 PS (42.5 kW) at 2,400 rpm
		6271/1 (net)	56 PS (41.2 kW) at 2,400 rpm
Max. torque			20.5 kgf·m (148 lbf·ft) at 1,550 rpm
Bore X stroke			98 mm (3.86") x 110 mm (4.33")
Piston displacement			3,319 cc (203 cu in)
Batteries			1 x 12 V x 100 AH
Starting motor			12V-3.0 kW
Alternator			12V-80 Amp

HYDRAULIC SYSTEM

MAIN PUMP	
Type	Two variable displacement piston pumps
Max. flow	2 X 57.8 ℓ/min(15.3 US gpm/12.7 UK gpm)pumps
Sub-pump for pilot circuit	Gear pump

Cross-sensing and fuel saving pump system

HYDRAULIC MOTORS	
Travel	Two speed 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: 1-85 x 840 mm (3.3" x 33.1")
	Bucket: 1-80 x 660 mm (3.1" x 26.0")
	Boom swing: 1-95 x 519 mm (3.7" x 20.4")
	Dozer blade: 1-110 x 224 mm (4.3" x 8.8")

NOISE LEVEL (CAB)

Nosie levels (dynamic valve)	
LwA	98 dB
LpA	78 dB

TRAVEL SYSTEM

Drive method	Full hydrostatic type
Drive motor	Axial piston motor, in-shoe design
Reduction system	Planetary reduction gear
Max. drawbar pull	5,300 kgf (11,700 lbf)
Max. travel speed(high) / (low)	4.0 km/hr (2.5 mph) / 2.2 km/hr (1.4 mph)
Gradeability	35° (70%)
Parking brake	Multi-wet disc

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 swing, Boom swing (RH): Boom and bucket (ISO)
Traveling and steering	Two levers with pedals
Engine throttle	Electric, Dial type

SWING SYSTEM

Swing motor	Axial piston motor
Swing reduction	Planetary gear reduction
Swing bearing lubrication	Grease-bathed
Swing brake	Multi wet disc
Swing speed	9.3 rpm

COOLANT & LUBRICANT CAPACITY

(Refilling)	liter	US gal	UK gal
Fuel tank	125.0	33.0	27.5
Engine coolant	11.0	2.9	2.4
Engine oil	11.6	3.1	2.6
Final drive(each)	1.2	0.3	0.3
Hydraulic tank	70.0	18.5	15.4
Hydraulic system	120.0	31.7	26.4

UNDERCARRIAGE

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

Center frame	X - leg type
Track frame	Pentagonal box type
No. of track shoe on each side	40
No. of upper roller on each side	1
No. of lower roller on each side	5

OPERATING WEIGHT (APPROXIMATE)

Operating weight, including 2,900 mm (9' 6") boom, 1,480 mm (4' 10") 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	2,900 kg (6,390 lb)
Counterweight	470 kg (1,030 lb)
Mono boom(with arm cylinder)	310 kg (680 lb)

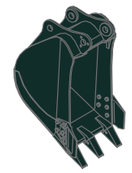
OPERATING WEIGHT		
Operating weight	Steel	5,900 kg (13,010 lb)
	Rubber	5,800 kg (12,790 lb)

·Mono boom with blade

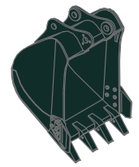
Ground Pressure	Steel	0.36 kgf·m / cm² (5.12 psi)
	Rubber	0.34 kgf·m / cm² (4.83 psi)

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)



SAE heaped 0.07 m³ (0.09 yd³)



0.18 m³ (0.24 yd³)

DIGGING FORCE (ISO)

Bucket	4,170 kgf
	40.9 kN
	9,190 lbf
Arm	2,700 kgf
	26.5 kN
	5,950 lbf

Lifting Capacity

R60CR-9

Rating over-front Rating over-side or 360 degree

Boom : 2.9m (9' 6") / Arm : 1.48 m (4' 10") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade down with 470kg (1,030 lb) counterweight.

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)
4.0 m	kg					*1120	*1120			*1050	790	4.99
(13 ft)	lb					*2470	*2470			*2310	1740	(16.4)
3.0 m	kg					*1180	1130			*1080	640	5.56
(10 ft)	lb					*2600	2490			*2380	1410	(18.2)
2.0 m	kg			*1890	1710	*1430	1080	*1250	740	*1120	580	5.82
(7 ft)	lb			*4170	3770	*3150	2380	*2760	1630	*2470	1280	(19.1)
1.0 m	kg			*2670	1580	*1740	1020	*1360	720	*1160	560	5.84
(3 ft)	lb			*5890	3480	*3840	2250	*3000	1590	*2560	1230	(19.2)
Ground	kg	*1980	*1980	*3000	1520	*1930	980	*1430	700	*1190	590	5.61
Line	lb	*4370	*4370	*6610	3350	*4250	2160	*3150	1540	*2620	1300	(18.4)
-1.0 m	kg	*3230	3030	*2890	1500	*1910	970			*1210	690	5.09
(-3 ft)	lb	*7120	6680	*6370	3310	*4210	2140			*2670	1520	(16.7)
-2.0 m	kg	*3960	3080	*2370	1530					*1110	990	4.12
(-7 ft)	lb	*8730	6790	*5220	3370					*2450	2180	(13.5)

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

R60CR-9

Rating over-front Rating over-side or 360 degree

Boom : 2.9m (9′ 6″) / Arm : 1.48 m (4′ 10″) / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade up with 470kg (1,030 lb) counterweight.

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)
4.0 m	kg					*1120	1070			1040	740	4.99
(13 ft)	lb					*2470	2360			2290	1630	(16.4)
3.0 m	kg					*1180	1060			860	600	5.56
(10 ft)	lb					*2600	2340			1900	1320	(18.2)
2.0 m	kg			*1890	1600	1430	1010	990	690	780	540	5.82
(7 ft)	lb			*4170	3530	3150	2230	2180	1520	1720	1190	(19.1)
1.0 m	kg			2150	1470	1370	960	970	670	770	520	5.84
(3 ft)	lb			4740	3240	3020	2120	2140	1480	1700	1150	(19.2)
Ground	kg	*1980	*1980	2080	1410	1330	920	950	650	810	550	5.61
Line	lb	*4370	*4370	4590	3110	2930	2030	2090	1430	1790	1210	(18.4)
-1.0 m	kg	*3230	2770	2070	1400	1320	900			940	650	5.09
(-3 ft)	lb	*7120	6110	4560	3090	2910	1980			2070	1430	(16.7)
-2.0 m	kg	*3960	2820	2090	1420					*1110	920	4.12
(-7 ft)	lb	*8730	6220	4610	3130					*2450	2030	(13.5)

Boom : 2.9m (9′ 6″) / Arm : 1.90 m (6′ 3″) / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade down with 470kg (1,030 lb) counterweight.

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)
4.0 m	kg									*900	670	5.45
(13 ft)	lb									*1980	1480	(17.9)
3.0 m	kg					*950	*950	*950	750	*940	550	5.96
(10 ft)	lb					*2090	*2090	*2090	1650	*2070	1210	(19.6)
2.0 m	kg			*1470	*1470	*1220	1070	*1100	730	*980	500	6.19
(7 ft)	lb			*3240	*3240	*2690	2360	*2430	1610	*2160	1100	(20.3)
1.0 m	kg			*2330	1580	*1560	1010	*1250	700	*1020	490	6.21
(3 ft)	lb			*5140	3480	*3440	2230	*2760	1540	*2250	1080	(20.4)
Ground	kg	*2000	*2000	*2850	1480	*1820	950	*1360	670	*1070	510	6.00
Line	lb	*4410	*4410	*6280	3260	*4010	2090	*3000	1480	*2360	1120	(19.7)
-1.0 m	kg	*2840	*2840	*2920	1450	*1900	930	*1360	660	*1110	580	5.54
(-3 ft)	lb	*6260	*6260	*6440	3200	*4190	2050	*3000	1460	*2450	1280	(18.2)
-2.0 m	kg	*3980	2950	*2590	1460	*1690	930			*1100	760	4.70
(-7 ft)	lb	*8770	6500	*5710	3220	*3730	2050			*2430	1680	(15.4)

Boom : 2.9m (9′ 6″) / Arm : 1.90 m (6′ 3″) / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade up with 470kg (1,030 lb) counterweight.

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)
4.0 m	kg									890	620	5.45
(13 ft)	lb									1960	1370	(17.9)
3.0 m	kg					*950	*950	*950	700	750	510	5.96
(10 ft)	lb					*2090	*2090	*2090	1540	1650	1120	(19.6)
2.0 m	kg			*1470	*1470	*1220	1000	980	680	690	460	6.19
(7 ft)	lb			*3240	*3240	*2690	2200	2160	1500	1520	1010	(20.3)
1.0 m	kg			2150	1470	1360	940	950	650	670	450	6.21
(3 ft)	lb			4740	3240	3000	2070	2090	1430	1480	990	(20.4)
Ground	kg	*2000	*2000	2040	1370	1300	880	920	620	700	470	6.00
Line	lb	*4410	*4410	4500	3020	2870	1940	2030	1370	1540	1040	(19.7)
-1.0 m	kg	*2840	2660	2010	1340	1270	860	910	610	790	530	5.54
(-3 ft)	lb	*6260	5860	4430	2950	2800	1900	2010	1340	1740	1170	(18.2)
-2.0 m	kg	*3980	2700	2020	1350	1280	860			1040	710	4.70
(-7 ft)	lb	*8770	5950	4450	2980	2820	1900			2290	1570	(15.4)

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3. The load point is a hook located on the back of the bucket.
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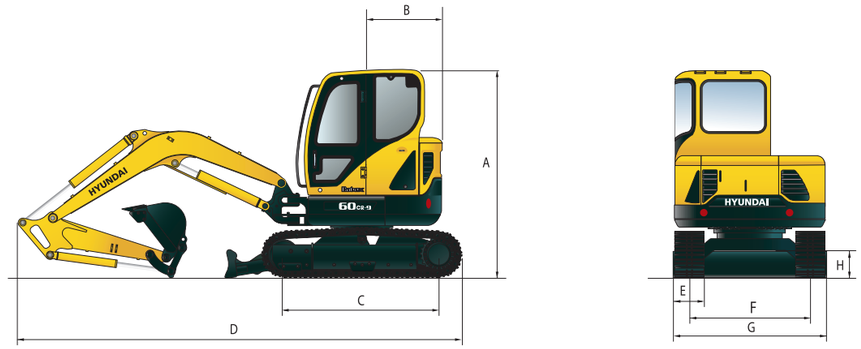
Dimensions & Working Range

R60CR-9 DIMENSIONS

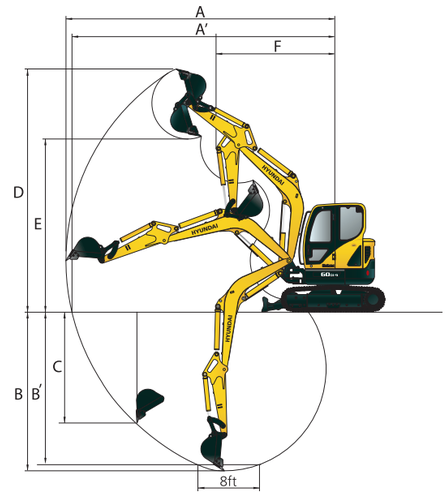
unit: mm(ft · in)



mm (ft·in)

A	Overall height of cab	2,550 (8' 4")	E	Track shoe width	Steel	380 (1' 3")
B	Tail swing radius	1,080 (3' 7")			Rubber	400 (1' 4")
C	Tumbler distance	1,990 (6' 6")	F	Track gauge		1,600 (5' 3")
D	Overall length	5,600 (18' 4")	G	Overall width		2,000 (6' 7")
			H	Ground clearance		380 (1' 3")

R60CR-9 WORKING RANGE



unit: mm(ft · in)

Boom length	2,900 (9' 6")	
Arm length	1,480 (4' 10")	1,900 (6' 3")
A Max. digging reach	6,150 (20' 2")	6,480 (21' 3")
A' Max. digging reach on ground	6,010 (19' 9")	6,350 (20' 10")
B Max. digging depth	3,570 (11' 9")	3,990 (13' 1")
B' Max. digging depth (8 ft)	3,160 (10' 5")	3,620 (11' 11")
C Max. vertical wall digging depth	3,040 (9' 12")	3,360 (11' 0")
D Max. digging height	5,680 (18' 8")	5,850 (19' 2")
E Max. dumping height	3,930 (12' 11")	4,100 (13' 5")
F Min. swing radius	2,420 (7' 11")	2,510 (8' 3")