

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) J1349 (net)	57 HP (42.5 kW) at 2,400 rpm 55.2 HP (41.2 kW) at 2,400 rpm
	DIN	6271/1 (gross) 6271/1 (net)	57.8 PS (42.5 kW) at 2,400 rpm 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 55 l/min(14.5 US gpm/12.1 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/cm ² (3,130 psi)
Travel circuit	220 kgf/cm ² (3,130 psi)
Swing circuit	220 kgf/cm ² (3,130 psi)
Pilot circuit	30 kgf/cm ² (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: 1-110 x 224 mm (4.3" x 8.8")	

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	9.5	2.5	2.1
Engine oil	11.6	3.1	2.6
Swing device-gear oil	1.5	0.4	0.3
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 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.

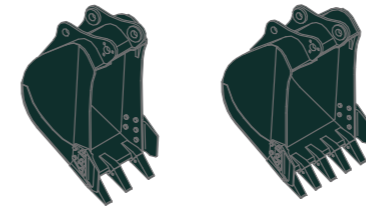
MAJOR COMPONENT WEIGHT	
Upperstructure	2,710 kg (5,970 lb)
Counterweight	230 kg (510 lb)
Mono boom(with arm cylinder)	310 kg (680 lb)

OPERATING WEIGHT	
Operating weight	5,650 kg (12,460 lb)

· Mono boom with blade

BUCKETS

Capacity		Width		Weight
SAE heaped	CECE heaped	Without side cutters	With side cutters	
0.07 m ³ (0.09 yd ³)	0.06 m ³ (0.08 yd ³)	315 mm(12.4")	360 mm(14.2")	115 kg(255 lb)
0.18 m ³ (0.24 yd ³)	0.15 m ³ (0.20 yd ³)	670 mm(26.4")	740 mm(29.1")	170 kg(375 lb)



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

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
	ISO	8,490 lbf	8,490 lbf
		42.4 kN	42.4 kN
Arm crowd force	SAE	4,330 kgf	4,330 kgf
		9,550 lbf	9,550 lbf
	ISO	28.4 kN	25.5 kN
		2,900 kgf	2,600 kgf
ISO	6,390 lbf	5,730 lbf	
	31.9 kN	28.7 kN	
ISO	3,260 kgf	2,930 kgf	
	7,190 lbf	6,460 lbf	

*Arm weight including cylinder and linkage.

Lifting Capacity

R55-9

Rating over-front Rating over-side or 360 degree

Boom : 3.0m (9' 10") / Arm : 1.6 m (5' 3") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade down with 230kg (510 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)	
5.0 m (16 ft)	kg								*950	*950	4.12	
	lb								*2090	*2090	(13.5)	
4.0 m (13 ft)	kg				*1020	*1020			*980	780	5.08	
	lb				*2250	*2250			*2160	1720	(16.7)	
3.0 m (10 ft)	kg				*1090	*1090			*1010	650	5.60	
	lb				*2400	*2400			*2230	1430	(18.4)	
2.0 m (7 ft)	kg	*3050	*3050	*1690	*1690	*1320	1100	*1170	760	*1050	590	5.84
	lb	*6720	*6720	*3730	*3730	*2910	2430	*2580	1680	*2310	1300	(19.2)
1.0 m (3 ft)	kg			*2360	1610	*1600	1040	*1280	740	*1100	580	5.85
	lb			*5200	3550	*3530	2290	*2820	1630	*2430	1280	(19.2)
Ground Line	kg	*2350	*2350	*2700	1540	*1790	1000	*1350	720	*1140	610	5.63
	lb	*5180	*5180	*5950	3400	*3950	2200	*2980	1590	*2510	1340	(18.5)
-1.0 m (-3 ft)	kg	*3600	3020	*2670	1530	*1800	990			*1180	700	5.13
	lb	*7940	6660	*5890	3370	*3970	2180			*2600	1540	(16.8)
-2.0 m (-7 ft)	kg	*3770	3060	*2300	1540					*1140	960	4.23
	lb	*8310	6750	*5070	3400					*2510	2120	(13.9)
-3.0 m (-10 ft)	kg	*2040	*2040									
	lb	*4500	*4500									

- 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

R55-9 Rating over-front Rating over-side or 360 degree

Boom : 3.0m (9' 10") / Arm : 1.6 m (5' 3") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade up with 230kg (510 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)
		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	Capacity	
5.0 m (16 ft)	kg									*950	*950	4.12
	lb									*2090	*2090	(13.5)
4.0 m (13 ft)	kg					*1020	*1020			*980	740	5.08
	lb					*2250	*2250			*2160	1630	(16.7)
3.0 m (10 ft)	kg					*1090	1080			890	610	5.60
	lb					*2400	2380			1960	1340	(18.4)
2.0 m (7 ft)	kg	*3050	*3050	*1690	1630	*1320	1030	1040	710	810	550	5.84
	lb	*6720	*6720	*3730	3590	*2910	2270	2290	1570	1790	1210	(19.2)
1.0 m (3 ft)	kg			2250	1510	1430	980	1010	690	800	540	5.85
	lb			4960	3330	3150	2160	2230	1520	1760	1190	(19.2)
Ground Line	kg	*2350	*2350	2170	1440	1390	940	990	670	840	570	5.63
	lb	*5180	*5180	4780	3170	3060	2070	2180	1480	1850	1260	(18.5)
-1.0 m (-3 ft)	kg	*3600	2780	2150	1420	1370	930			970	660	5.13
	lb	*7940	6130	4740	3130	3020	2050			2140	1460	(16.8)
-2.0 m (-7 ft)	kg	*3770	2830	2170	1440					*1140	900	4.23
	lb	*8310	6240	4780	3170					*2510	1980	(13.9)
-3.0 m (-10 ft)	kg	*2040	*2040									
	lb	*4500	*4500									

Boom : 3.0m (9' 10") / Arm : 1.9 m (6' 3") / Bucket : 0.18m³ (0.24yd³) SAE heaped / Dozer blade down with 230kg (510 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)
		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	Capacity	
5.0 m (16 ft)	kg									*870	*870	4.58
	lb									*1920	*1920	(15.0)
4.0 m (13 ft)	kg									*900	700	5.43
	lb									*1980	1540	(17.8)
3.0 m (10 ft)	kg					*950	*950	*990	780	*930	590	5.91
	lb					*2090	*2090	*2180	1720	*2050	1300	(19.4)
2.0 m (7 ft)	kg			*1440	*1440	*1190	1110	*1080	760	*970	540	6.13
	lb			*3170	*3170	*2620	2450	*2380	1680	*2140	1190	(20.1)
1.0 m (3 ft)	kg	*2050	*2050	*2160	1630	*1500	1050	*1220	740	*1020	530	6.14
	lb	*4520	*4520	*4760	3590	*3310	2310	*2690	1630	*2250	1170	(20.1)
Ground Line	kg	*2280	*2280	*2610	1540	*1730	1000	*1320	710	*1060	550	5.93
	lb	*5030	*5030	*5750	3400	*3810	2200	*2910	1570	*2340	1210	(19.5)
-1.0 m (-3 ft)	kg	*3230	2980	*2700	1510	*1810	980	*1310	700	*1100	620	5.48
	lb	*7120	6570	*5950	3330	*3990	2160	*2890	1540	*2430	1370	(18.0)
-2.0 m (-7 ft)	kg	*4140	3020	*2450	1520	*1630	980			*1100	810	4.67
	lb	*9130	6660	*5400	3350	*3590	2160			*2430	1790	(15.3)
-3.0 m (-10 ft)	kg	*2760	*2760	*1640	1570							
	lb	*6080	*6080	*3620	3460							

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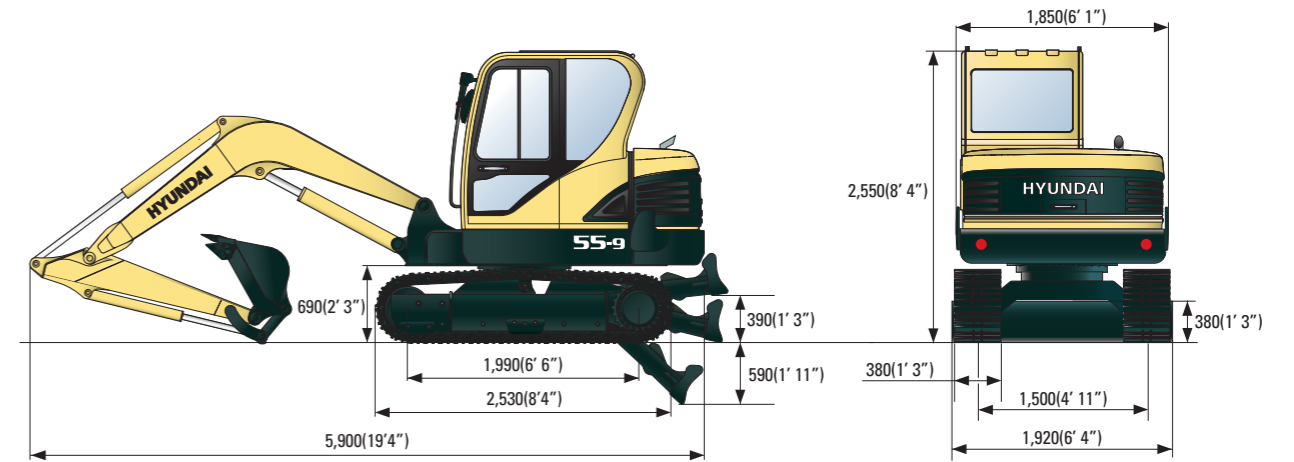
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		Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Rating over-front	Rating over-side or 360 degree	Capacity	Capacity	
5.0 m (16 ft)	kg									*870	*870	4.58
	lb									*1920	*1920	(15.0)
4.0 m (13 ft)	kg									*900	660	5.43
	lb									*1980	1460	(17.8)
3.0 m (10 ft)	kg					*950	*950	*990	740	810	550	5.91
	lb					*2090	*2090	*2180	1630	1790	1210	(19.4)
2.0 m (7 ft)	kg			*1440	*1440	*1190	1040	1040	720	750	500	6.13
	lb			*3170	*3170	*2620	2290	2290	1590	1650	1100	(20.1)
1.0 m (3 ft)	kg	*2050	*2050	*2160	1530	1440	980	1010	690	740	490	6.14
	lb	*4520	*4520	*4760	3370	3170	2160	2230	1520	1630	1080	(20.1)
Ground Line	kg	*2280	*2280	2170	1440	1390	940	990	670	770	510	5.93
	lb	*5030	*5030	4780	3170	3060	2070	2180	1480	1700	1120	(19.5)
-1.0 m (-3 ft)	kg	*3230	2740	2140	1410	1360	910	980	660	870	580	5.48
	lb	*7120	6040	4720	3110	3000	2010	2160	1490	1920	1280	(18.0)
-2.0 m (-7 ft)	kg	*4140	2780	2150	1420	1370	920			*1100	760	4.67
	lb	*9130	6130	4740	3130	3020	2030			*2430	1680	(15.3)
-3.0 m (-10 ft)	kg	*2760	*2760	*1640	1470							
	lb	*6080	*6080	*3620	3240							

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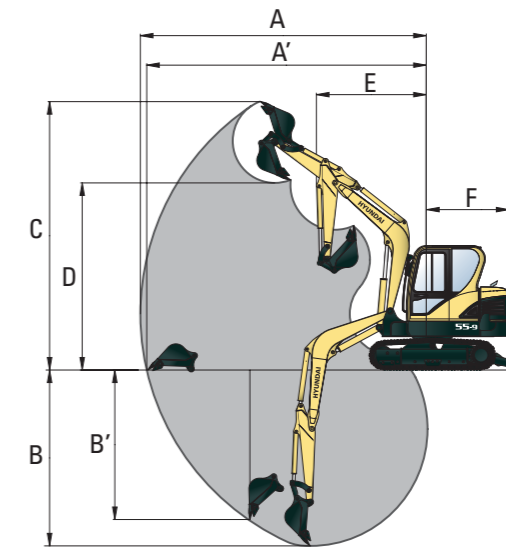
Dimensions & Working Range

R55-9 DIMENSIONS

unit: mm(ft · in)



R55-9 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")	6,400 (20' 1")
A' Max. digging reach on ground	6,010 (19' 9")	6,270 (20' 7")
B Max. digging depth	3,820 (12' 6")	4,060 (13' 4")
B' Max. vertical wall digging depth	3,200 (10' 6")	3,460 (11' 4")
C Max. digging height	5,780 (18' 12")	5,920 (19' 5")
D Max. dumping height	4,050 (13' 3")	4,180 (13' 9")
E Min. swing radius	2,350 (7' 9")	2,360 (7' 9")
F Tail swing radius	1,650 (5' 5")	1,650 (5' 5")