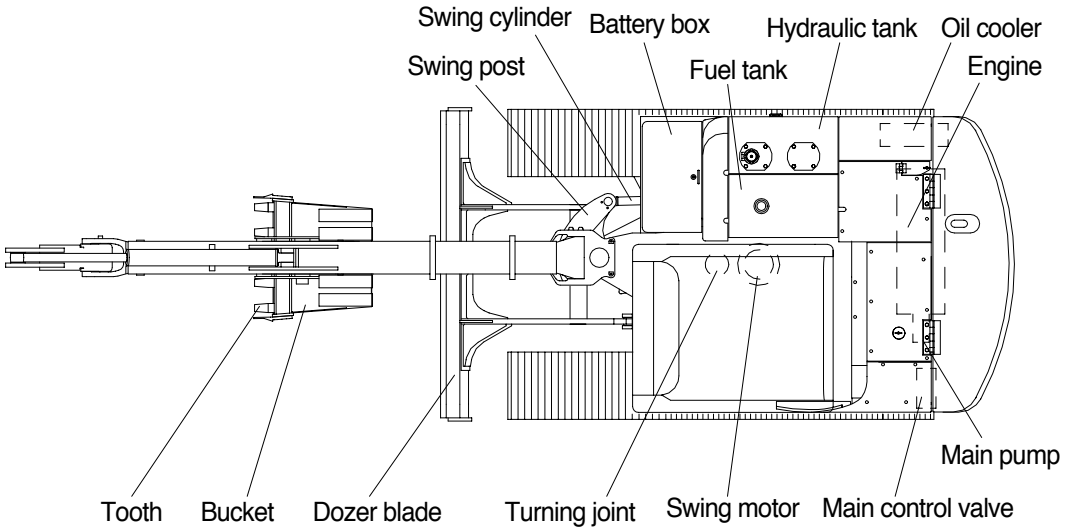
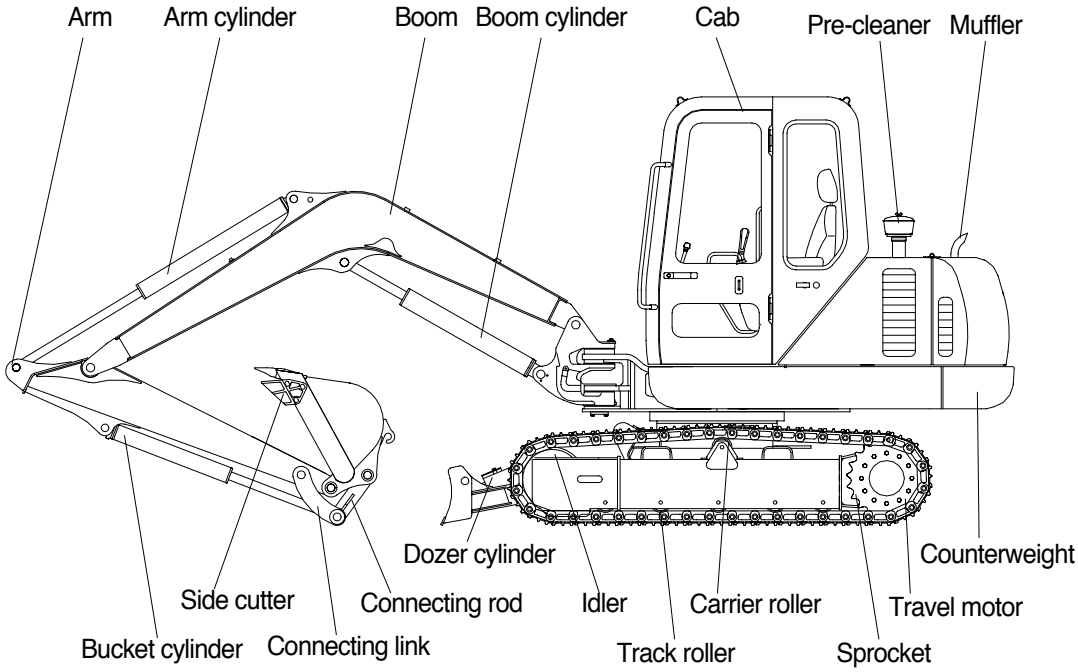
GROUP 2 SPECIFICATIONS

1. MAJOR COMPONENT

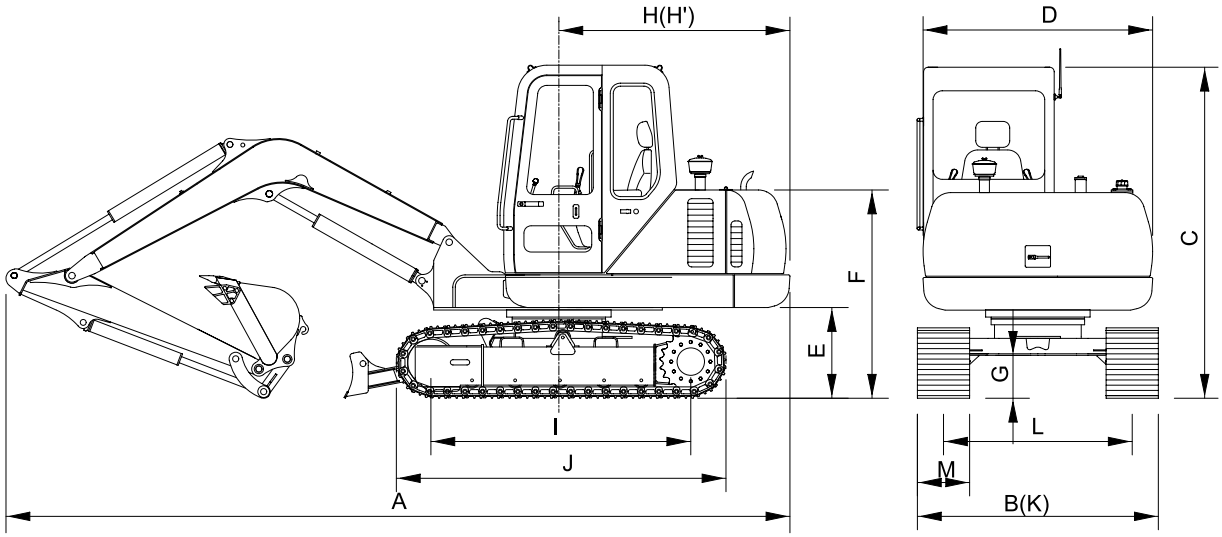




R55NM2SP08

2. SPECIFICATIONS

2.9m(9' 6") ONE PIECE BOOM AND 1.6m(5' 3") ARM

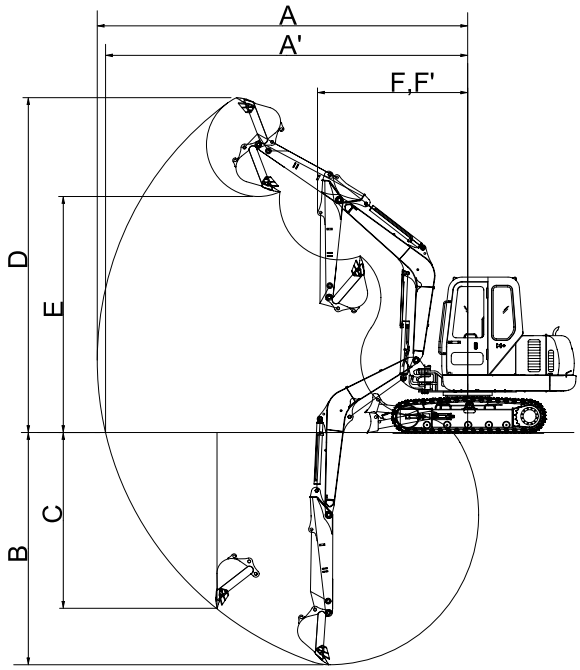


555M2SP02

Description		Unit	Specification
Operating weight		kg(lb)	5400(11905)
Bucket capacity(PCSA heaped), standard		m^3(yd^3)	0.18(0.24)
Overall length	A	mm(ft-in)	6000(19' 8")
Overall width, with 400mm shoe	B		1865(6' 1")
Overall height	C		2550(8' 4")
Superstructure width	D		1760(5' 9")
Ground clearance of counterweight	E		695(2' 3")
Engine cover height	F		1595(5' 3")
Minimum ground clearance	G		325(1' 1")
Rear-end distance	H		1760(5' 9")
Rear-end swing radius	H'		1770(5' 10")
Distance between tumblers	I		1990(6' 6")
Undercarriage length	J		2525(8' 3")
Undercarriage width	K		1845(6' 1")
Track gauge	L		1445(4' 9")
Track shoe width, standard	M		400(16")
Travel speed(Low/high)		km/hr(mph)	2.2/4.0(1.4/2.5)
Swing speed		rpm	10.0
Gradeability		Degree(%)	35(70)
Ground pressure(400mm shoe)		kgf/cm^2(psi)	0.31(4.41)

3. WORKING RANGE

2.9m(9' 6") ONE PIECE BOOM



R55NM2SP01

Description			1.6m(5' 3") Arm
Max digging reach		A	6045mm (19' 10")
Max digging reach on ground		A'	5890mm (19' 4")
Max digging depth		B	3780mm (12' 5")
Max vertical wall digging depth		C	2845mm (9' 4")
Max digging height		D	5525mm (18' 2")
Max dumping height		E	3905mm (12' 10")
Min swing radius	Front	F	2450mm (8' 1")
	80° Boom swing	F'	2000mm (6' 7")
Boom offset angle (LH/RH)			80 ° / 50 °
Bucket digging force		SAE	32 kN
			3273 kgf
			7216 lbf
		ISO	35 kN
			3573 kgf
			7877 lbf
Arm crowd force		SAE	22 kN
			2236 kgf
			4930 lbf
		ISO	22.2 kN
			2268 kgf
			5000 lbf

4. WEIGHT

Item	R55-3	
	kg	lb
Upperstructure assembly	2475	5460
Main frame weld assembly	650	1430
Engine assembly	250	551
Main pump assembly	34	75
Main control valve assembly	26	57
Swing motor assembly	48	106
Hydraulic oil tank assembly	104	229
Fuel tank assembly	52	115
Counterweight	221	490
Cab assembly	190	420
Lower chassis assembly	2305	5080
Lower frame weld assembly	733	1620
Swing bearing	88	190
Travel motor assembly	90	198
Turning joint	27	60
Track recoil spring and idler	63	139
Idler	46	101
Carrier roller	11	25
Track roller	11	25
Track-chain assembly(400㎜ tniple grouser shos)	280	617
Front attachment assembly(2.9m boom, 1.6m arm, 0.18㎥ PCSA heaped bucket)	655	1440
2.9m one piece boom assembly	205	450
Dozer blade assembly	212	470
1.6m arm assembly	95	209
0.18㎥ PCSA heaped bucket assembly	137	300
Boom cylinder assembly	53	117
Arm cylinder assembly	45	99
Bucket cylinder assembly	31	68
Bucket control link assembly	37	82
Dozer blade cylinder assembly	52	114

5. LIFTING CAPACITIES

ROBEX 55-3

2.9m(9' 6") boom, 1.6m(5' 3") arm equipped with 0.18m³(PCSA heaped) bucket, 400m (16") triple grouser shoe and dozer blade with 221kg(490lb) counterweight.

1) Dozer blade down with 221kg CWT

- : Rating over-front
- : Rating over-side or 360 degree

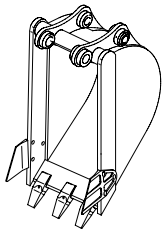
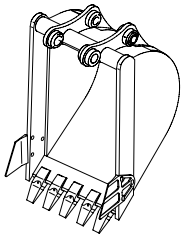
Load point height		Load radius								At max. reach		
		2.0m(7.0ft)		3.0m(10.0ft)		4.0m(13.0ft)		5.0m(16.0ft)		Capacity		Reach
												m(ft)
5.0m (16.0ft)	kg									*660	*660	4.05
	lb									*1460	*1460	(13.3)
4.0m (13.0ft)	kg					*720	*720			*670	*670	5.04
	lb					*1590	*1590			*1480	*1480	(16.5)
3.0m (10.0ft)	kg					*750	*750			*690	640	5.56
	lb					*1650	*1650			*1520	1410	(18.2)
2.0m (7.0ft)	kg	*2160	*2160	*1160	*1160	*900	*900	*800	730	*710	580	5.80
	lb	*4760	*4760	*2560	*2560	*1980	*1980	*1760	1610	*1570	1280	(19.0)
1.0m (3.0ft)	kg			*1640	1520	*1090	990	*870	710	*740	570	5.81
	lb			*3620	3350	*2400	2180	*1920	1570	*1630	1260	(19.1)
Ground Line	kg	*2030	*2030	*1870	1460	*1220	960			*770	600	5.58
	lb	*4480	*4480	*4120	3220	*2690	2120			*1700	1320	(18.3)
-1.0m (-3.0ft)	kg	*3010	2840	*1820	1450	*1200	950			*780	700	5.06
	lb	*6640	6260	*4010	3200	*2650	2090			*1720	1540	(16.6)
-2.0m (-7.0ft)	kg	*2490	*2490	*1500	1470							
	lb	*5490	*5490	*3310	3240							

2) Dozer blade up with 221kg CWT

Load point height		Load radius								At max. reach		
		2.0m(7.0ft)		3.0m(10.0ft)		4.0m(13.0ft)		5.0m(16.0ft)		Capacity		Reach
												m(ft)
5.0m (16.0ft)	kg									*660	*660	4.05
	lb									*1460	*1460	(13.3)
4.0m (13.0ft)	kg					*720	*720			*670	*670	5.04
	lb					*1590	*1590			*1480	*1480	(16.5)
3.0m (10.0ft)	kg					*750	*750			*690	590	5.56
	lb					*1650	*1650			*1520	1300	(18.2)
2.0m (7.0ft)	kg	*2160	*2160	*1160	*1160	*900	*900	*800	680	*710	540	5.80
	lb	*4760	*4760	*2560	*2560	*1980	*1980	*1760	1500	*1570	1190	(19.0)
1.0m (3.0ft)	kg			*1640	1410	*1090	920	*870	660	*740	530	5.81
	lb			*3620	3110	*2400	2030	*1920	1460	*1630	1170	(19.1)
Ground Line	kg	*2030	*2030	*1870	1360	*1220	890			*770	560	5.58
	lb	*4480	*4480	*4120	3000	*2690	1960			*1700	1230	(18.3)
-1.0m (-3.0ft)	kg	*3010	2600	*1820	1350	*1200	880			*780	650	5.06
	lb	*6640	5730	*4010	2980	*2650	1940			*1720	1430	(16.6)
-2.0m (-7.0ft)	kg	*2490	*2490	*1500	1360							
	lb	*5490	*5490	*3310	3000							

Note
1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the ROBEX series does not exceed 75% of 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 load limited by hydraulic capacity.

6. BUCKET SELECTION GUIDE

	
0.06m³ PCSA heaped bucket	0.18m³ PCSA heaped bucket

Capacity		Width		Weight	2.9m (9' 6") boom
PCSA heaped	CECE heaped	Without side cutter	With side cutter		1.6m (5' 3") arm
0.06m³ (0.08yd³)	0.05m³ (0.07yd³)	315mm (12.4")	360mm (14.2")	84kg (185lb)	●
* 0.18m³ (0.24yd³)	* 0.15m³ (0.20yd³)	705mm (27.8")	770mm (30.3")	137kg (300lb)	■

* : Standard backhoe bucket

● Applicable for materials with density 2000 kg/m³ (3370 lb/yd³) or less

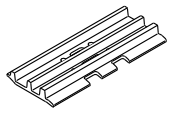
■ Applicable for materials with density 1600 kg/m³ (2700 lb/yd³) or less

7. UNDER CARRIAGE

1) TRACKS

X-leg type center frame is integrally welded with reinforced box-section track frames. The design includes dry tracks, lubricated rollers, idlers, sprockets, hydraulic track adjusters with shock absorbing springs and assembled track-type tractor shoes with triple grousers.

2) TYPES OF SHOES

Shapes		Triple grouser	Rubber
			
Shoe width	mm (in)	400 (16”)	400 (16”)
Operating weight	kg (lb)	5455 (12030)	5420 (11948)
Ground pressure	kg / cm^2 (psi)	0.31 (4.41)	0.30 (4.26)
Overall width	mm (ft-in)	1845 (6’ 1”)	1845 (6’ 1”)

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	1 EA
Track rollers	5 EA
Track shoes (Steel)	40 EA

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Yanmar 4TNE94
Type	4-cycle
Cooling method	Water cooling
Number of cylinders and arrangement	4 cylinders in line
Firing order	1-3-4-2
Combustion chamber type	Direct injection type
Cylinder bore × stroke	94× 100mm(3.70" × 3.94")
Piston displacement	2776cc(169.5cu in)
Compression ratio	18 : 1
Rated gross horse power(SAE J134P)	58.5Ps at 2500rpm(43kW at 2500rpm)
Maximum torque at 1600rpm	19.4kgf · m(140lbf · ft)
Engine oil quantity	9.7 ℓ (2.6U.S. gal)
Dry weight	250kg(551lb)
High idling speed	2600 ± 50rpm
Low idling speed	1150 ± 50rpm
Rated fuel consumption	167g/Hp · hr
Starting motor	S13-204(12V)
Alternator	LR140-714(12V-40AMP)
Battery	1 × 12V × 100Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement piston pumps
Capacity	2 × 21cc/rev
Rated pressure	210kgf/cm^2 (2987psi)
Rated oil flow	2 × 52.25 ℓ /min (13.8U.S. gpm/ 11.5U.K. gpm)
Rated speed	2500rpm (Clockwise viewed from shaft end)

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump
Capacity	16.2/4.5cc/rev
Maximum pressure	21./30kgf/cm^2(2987/427psi)
Rated oil flow	40/11.3 ℓ /min(10.6/3.0 U.S.gpm, 8.8/2.5U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	9 spool
Operating method	Hydraulic pilot system/Manual
Main relief valve pressure	210kgf/cm^2(2987psi)
Overload relief valve pressure	230kgf/cm^2(3271psi)

5) SWING MOTOR

Item	Specification
Type	Two fixed displacement axial piston motor
Capacity	39.1cc/rev
Relief pressure	180kgf/cm^2(2560psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	11.5kgf · m(83lbf · ft)
Brake release pressure	25~50kgf/cm^2(356~710psi)
Reduction gear type	2 - stage planetary
Swing speed	10rpm

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	210kgf/cm^2(2987psi)
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	4.6kgf/cm^2(65psi)
Braking torque	8.4kgf · m(61lbf · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	5kgf/cm²(71psi)
	Maximum	20kgf/cm²(284psi)
Single operation spool stroke	Lever	6.5/8.5mm(0.26/0.33in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø100× Ø55× 636mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø85× Ø50× 760mm
	Cushion	Retract only
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø80× Ø50× 580mm
	Cushion	-

9) SHOE

Item	Width	Ground pressure	Link quantity	Overall width
Standard	400mm(16")	0.31kgf/cm²(4.41psi)	40	2525mm(8' 3")

10) BUCKET

Item	Capacity		Tooth quantity	Width	
	PCSA heaped	CECE heaped		Without side cutter	With side cutter
Standard	0.18m³(0.24yd³)	0.15m³(0.20yd³)	5	705mm(27.8")	770mm(30.3")
Option	0.06m³(0.08yd³)	0.05m³(0.07yd³)	3	315mm(12.4")	360mm(14.2")

9. RECOMMENDED OILS

Use only oils listed below or equivalent.

Do not mix different brand oil.

Service point	Kind of fluid	Capacity ℓ (U.S. gal)	Ambient temperature °C (°F) -20 (-4) / -10 (14) / 0 (32) / 10 (50) / 20 (68) / 30 (86) / 40 (104)
Engine oil pan	Engine oil	9.7(2.6)	SAE 30 SAE 10W SAE 10W-30 SAE 15W-40
Swing drive	Gear oil	0.6(0.16)	SAE 85W-140
Final drive		1.7×2 (0.45×2)	
Hydraulic tank	Hydraulic oil	Tank; 80(21)	ISO VG 32 ISO VG 46 ISO VG 68
Fuel tank	Diesel fuel	125(33.0)	ASTM D975 NO.1 ASTM D975 NO.2
Fitting (Grease nipple)	Grease	As required	NLGI NO.1 NLGI NO.2
Radiator (Reservoir tank)	Mixture of antifreeze and water 50 : 50	8(2.1)	Ethylene glycol base permanent type

SAE : Society of Automotive Engineers

API : American Petroleum Institute

ISO : International Organization for Standardization

NLGI : National Lubricating Grease Institute

ASTM : American Society of Testing and Material