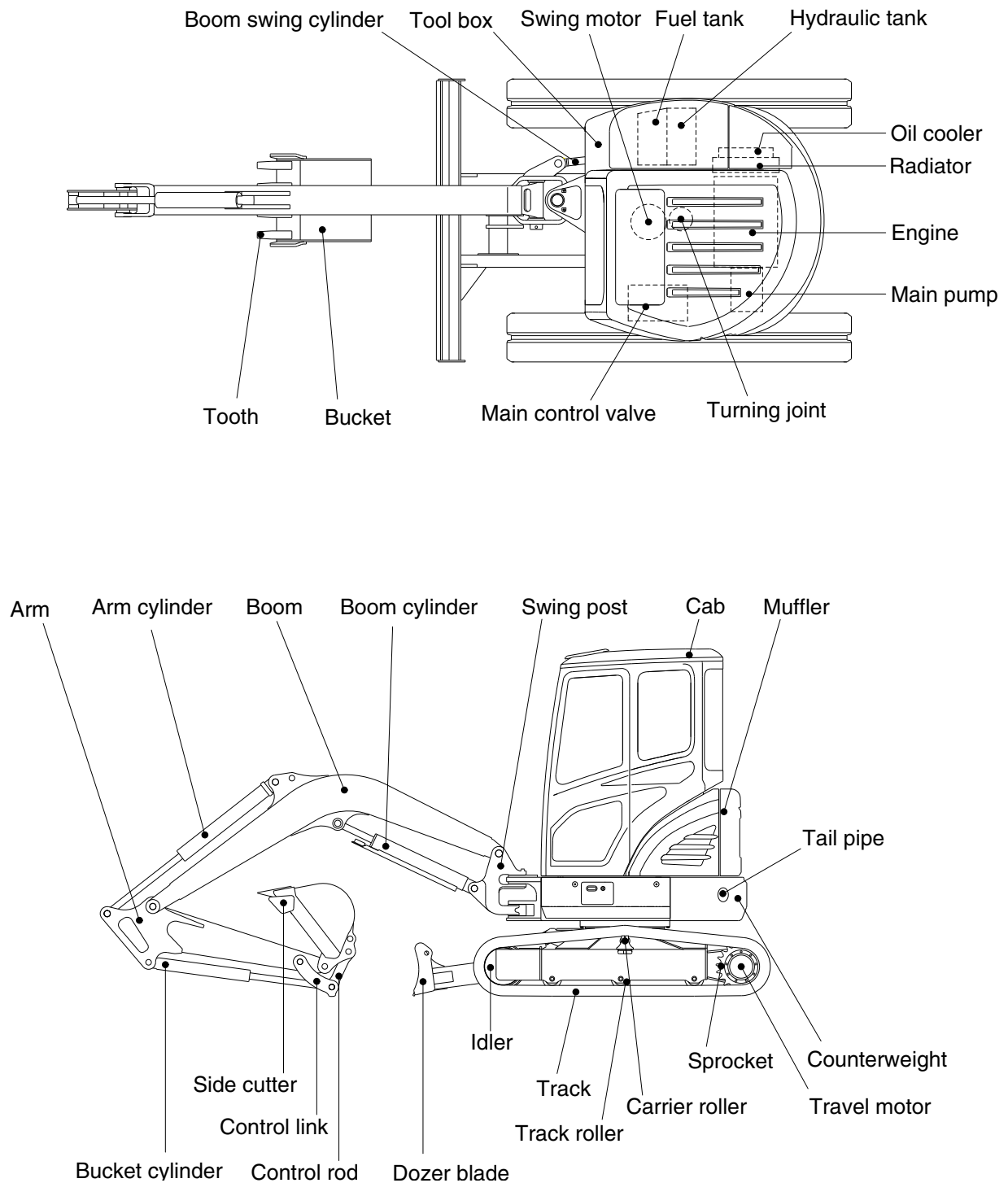


SPECIFICATIONS

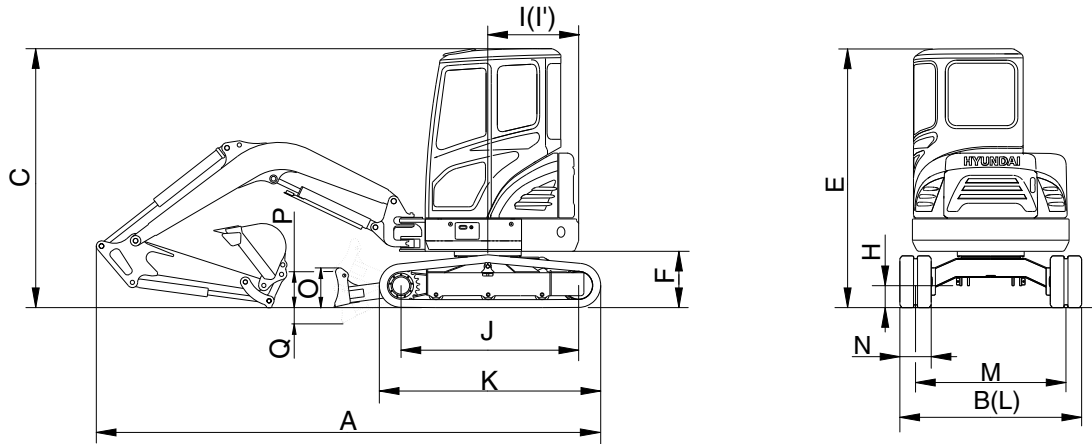
1. MAJOR COMPONENT



R27Z92SP01

2. SPECIFICATIONS

1) 1.945 m (6' 5") MONO BOOM, 1.12 m (3' 8") ARM, WITH BOOM SWING POST

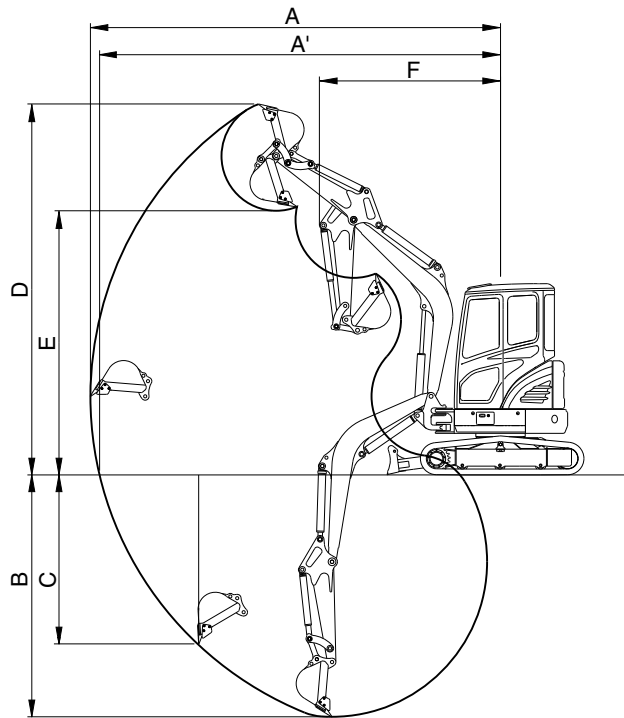


R27Z92SP02

Description		Unit	Specification
Operating weight (cabin / canopy)		kg (lb)	2600 (5730) / 2450 (5400)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	0.07 (0.09)
Overall length	A	mm (ft-in)	4030 (13' 3")
Overall width, with 250 mm shoe	B		1500 (4' 11")
Overall height	C		2500 (8' 2")
Overall height of cab	E		2500 (8' 2")
Ground clearance of counterweight	F		540 (1' 9")
Minimum ground clearance	H		290 (0' 11")
Rear-end distance	I		775 (2' 7")
Rear-end swing radius	I'		775 (2' 7")
Distance between tumblers	J		1490 (4' 11")
Undercarriage length	K		1910 (6' 3")
Undercarriage width	L		1500 (4' 11")
Track gauge	M		1250 (4' 1")
Track shoe width, standard	N		250 (9.8")
Height of blade	O		300 (1' 0")
Ground clearance of blade up	P		330 (1' 1")
Depth of blade down	Q		380 (1' 3")
Travel speed (low/high)		km/hr (mph)	2.5/4.5 (1.6/2.8)
Swing speed		rpm	9.1
Gradeability		Degree (%)	30 (58)
Ground pressure 250 mm rubber shoe (cab / canopy)		kgf/cm ² (psi)	0.33 (4.69) / 0.31 (4.41)

3. WORKING RANGE

1) 1.945 m (6' 5") MONO BOOM WITH BOOM SWING POST



R27Z92SP03

Description		1.12 m (3' 8") Arm
Max digging reach	A	4480 mm (14' 8")
Max digging reach on ground	A'	4340 mm (14' 3")
Max digging depth	B	2420 mm (7' 11")
Max vertical wall digging depth	C	1460 mm (4' 9")
Max digging height	D	4150 mm (13' 7")
Max dumping height	E	2930 mm (9' 7")
Min swing radius	F	1980 mm (6' 6")
Boom swing radius (left/right)		75°/50°
Bucket digging force	SAE	19.2 kN
		1960 kgf
		4320 lbf
	ISO	21.1 kN
		2150 kgf
		4740 lbf
Arm crowd force	SAE	14.2 kN
		1450 kgf
		3200 lbf
	ISO	14.6 kN
		1490 kgf
		3280 lbf

4. WEIGHT

Item	kg	lb
Upperstructure assembly	1480	3260
Main frame weld assembly	310	683
Engine assembly	136	300
Main pump assembly	19	42
Main control valve assembly	25	55
Swing motor assembly	34	75
Hydraulic oil tank assembly	50	110
Fuel tank assembly	30	70
Boom swing post	75	165
Counterweight	118	260
Cab assembly	210	460
Lower chassis assembly	805	1770
Track frame weld assembly	220	485
Swing bearing	47	100
Travel motor assembly	36	80
Turning joint	11	24
Track recoil spring	16	35
Idler	19	42
Carrier roller	3	7
Track roller	6	13
Sprocket	7	15
Rubber track (250 mm)	93	210
Dozer blade assembly	92	200
Front attachment assembly (1.945 m boom, 1.12 m arm, 0.07 m ³ SAE heaped bucket)	315	694
1.945 m boom assembly	80	176
1.12 m arm assembly	40	88
0.07 m ³ SAE heaped bucket	57	126
Boom cylinder assembly	26	57
Arm cylinder assembly	26	57
Bucket cylinder assembly	20	44
Bucket control link assembly	20	45
Dozer cylinder assembly	21	46
Boom swing cylinder assembly	23	51

5. LIFTING CAPACITIES

1) 1.945 m (6' 5") boom, 1.12 m (3' 8") arm equipped with 0.07 m³ (SAE heaped) bucket and 250 mm (10") rubber track, the dozer blade up with 118 kg (260 lb) counterweight.

•  : Rating over-front

•  : Rating over-side or 360 degree

Load point height		Load radius								At max. reach		
		2.0 m (7.0 ft)		2.5 m (8.0 ft)		3.0 m (10.0 ft)		3.5 m (11.0 ft)		Capacity		Reach
												m (ft)
3.5 m (11.0 ft)	kg lb									460 1010	400 880	2.88 (9.4)
3.0 m (10.0 ft)	kg lb					410 900	360 790			330 730	290 640	3.48 (11.4)
2.5 m (8.0 ft)	kg lb					410 900	360 790			270 600	240 530	3.85 (12.6)
2.0 m (7.0 ft)	kg lb			560 1230	490 1080	410 900	360 790	310 680	270 600	240 530	210 460	4.09 (13.4)
1.5 m (5.0 ft)	kg lb	800 1760	680 1500	540 1190	470 1040	400 880	350 770	300 660	260 570	220 490	190 420	4.22 (13.8)
1.0 m (3.0 ft)	kg lb			520 1150	450 990	380 840	340 750	290 640	260 570	210 460	190 420	4.26 (14.0)
0.5 m (2.0 ft)	kg lb	730 1610	610 1340	500 1100	430 950	370 820	330 730	290 640	250 550	210 460	190 420	4.22 (13.8)
Ground Line	kg lb	720 1590	600 1320	490 1080	420 930	370 820	320 710	290 640	250 550	220 490	190 420	4.09 (13.4)
-0.5 m (-2.0 ft)	kg lb	720 1590	610 1340	490 1080	420 930	370 820	320 710			240 530	210 460	3.86 (12.7)
-1.0 m (-3.0 ft)	kg lb	730 1610	610 1340	500 1100	430 950	370 820	320 710			290 640	250 550	3.49 (11.5)
-1.5 m (-5.0 ft)	kg lb	750 1650	630 1390	510 1120	440 970					400 880	350 770	2.90 (9.5)
-2.5 m (-8.0 ft)	kg lb									370 820	330 730	3.14 (10.3)

- 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.

2) 1.945 m (6' 5") boom, 1.12 m (3' 8") arm equipped with 0.07 m³ (SAE heaped) bucket and 250 mm (10") rubber track, the dozer blade down with 118 kg (260 lb) counterweight.

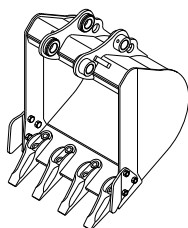
•  : Rating over-front

•  : Rating over-side or 360 degree

Load point height		Load radius								At max. reach		
		2.0 m (7.0 ft)		2.5 m (8.0 ft)		3.0 m (10.0 ft)		3.5 m (11.0 ft)		Capacity		Reach
												m (ft)
3.5 m (11.0 ft)	kg lb									*550 *1210	400 880	2.88 (9.4)
3.0 m (10.0 ft)	kg lb					*660 *1460	360 790			*570 *1260	290 640	3.48 (11.4)
2.5 m (8.0 ft)	kg lb					*640 *1410	360 790			*580 *1280	240 530	3.85 (12.6)
2.0 m (7.0 ft)	kg lb			*740 *1630	490 1080	*700 *1540	360 790	*680 *1500	270 600	*600 *1320	210 460	4.09 (13.4)
1.5 m (5.0 ft)	kg lb	*1360 *3000	680 1500	*970 *2140	470 1040	*810 *1790	350 770	*730 *1610	260 570	*620 *1370	190 420	4.22 (13.8)
1.0 m (3.0 ft)	kg lb			*1220 *2690	450 990	*940 *2070	340 750	*790 *1740	260 570	*630 *1380	190 420	4.26 (14.0)
0.5 m (2.0 ft)	kg lb	*1310 *2890	610 1340	*1380 *3040	430 950	*1040 *2290	330 730	*840 *1850	250 550	*650 *1430	190 420	4.22 (13.8)
Ground Line	kg lb	*1760 *3880	600 1320	*1450 *3200	430 950	*1080 *2380	320 710	*860 *1900	250 550	*670 *1480	190 420	4.09 (13.4)
-0.5 m (-2.0 ft)	kg lb	*1990 *4390	610 1340	*1410 *3110	420 930	*1050 *2310	320 710			*690 *1520	210 460	3.86 (12.7)
-1.0 m (-3.0 ft)	kg lb	*1740 *3840	610 1340	*1250 *2760	430 950	*900 *1980	320 710			*690 *1520	250 550	3.49 (11.5)
-1.5 m (-5.0 ft)	kg lb	*1250 *2760	630 1390	*840 *1850	440 970					*650 *1430	350 770	2.90 (9.5)
-2.5 m (-8.0 ft)	kg lb									*490 *1080	330 730	3.14 (10.3)

- 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



0.07 m³ SAE
heaped bucket

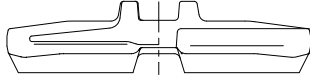
Capacity		Width		Weight	Recommendation
					1.945 m (6' 5") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		1.12 m (3' 8") arm
0.07m ³ (0.09 yd ³)	0.06 m ³ (0.07 yd ³)	435 mm (17.1")	490 mm (19.3")	57 kg (125 lb)	Applicable for materials with density of 1600 kgf/m ³ (2700 lb /yd ³) or less

7. UNDERCARRIAGE

(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

Model	Shapes		Rubber track
			
R25Z-9A	Shoe width	mm (in)	250 (10")
	Operating weight	kg (lb)	2600 (5730)
	Ground pressure	kgf/cm ² (psi)	0.33 (4.69)
	Overall width	mm (ft-in)	1500 (4' 11")

(3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	1 EA
Track rollers	3 EA

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Mitsubishi S3L2
Type	4-cycle vertical overhead valve, diesel fuel
Cooling method	Water cooling
Number of cylinders and arrangement	3 cylinders, in-line
Firing order	1-3-2
Combustion chamber type	Swirl chamber type
Cylinder bore × stroke	78 × 92 mm (3.07" × 3.62")
Piston displacement	1318 cc (80.4 cu in)
Compression ratio	22 : 1
Rated gross horse power (SAE J1995)	24.7 Hp at 2300 rpm (18.4 kW at 2300 rpm)
Maximum torque at 1800 rpm	8 kgf · m (57.8 lbf · ft)
Engine oil quantity	5.9 l (1.6 U.S. gal)
Dry weight	136 kg (300 lb)
High idling speed	2500+ 30 rpm
Low idling speed	1160 ± 25 rpm
Rated fuel consumption	198 g/Hp · hr at 2300 rpm (265 g/kW · hr at 2300 rpm)
Starting motor	12V-1.7 kW
Alternator	12V-40 A
Battery	1 × 12 V × 58 Ah (5h rating)

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 12 cc/rev
Rated oil flow	2 × 27.6 l /min (7.3 U.S. gpm / 6.1 U.K. gpm)
Rated speed	2300 rpm

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	8.5/4.5 cc/rev
Rated oil flow	19.6/10.4 l /min (5.2/2.7 U.S. gpm / 4.3/2.3 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	Sectional, 9 spools (12 blocks)
Operating method	Hydraulic pilot system
Main relief valve pressure	220 kgf/cm ² (3130 psi)
Overload relief valve pressure	240 kgf/cm ² (3410 psi)

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	12.5 cc/rev
Relief pressure	170 kgf/cm ² (2420 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	7.0 kgf · m (50.6 lbf · ft)
Brake release pressure	25~50 kgf/cm ² (356~710 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	220 kgf/cm ² (3130 psi)
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	19 kgf/cm ² (270 psi)
Braking torque	5.7 kgf · m (41 lbf · ft)

7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 75 × ø 45 × 565 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 70 × ø 45 × 500 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 60 × ø 35 × 420 mm
	Cushion	-
Boom swing cylinder	Bore dia × Rod dia × Stroke	ø 75 × ø 40 × 400 mm
	Cushion	-
Dozer cylinder	Bore dia × Rod dia × Stroke	ø 85 × ø 45 × 140 mm
	Cushion	-

※ Discoloration of cylinder rod can occur when the friction reduction additive of lubrication oil spreads on the rod surface.

※ Discoloration does not cause any harmful effect on the cylinder performance.

8) BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
Standard	0.07 m ³ (0.09 yd ³)	0.06 m ³ (0.07 yd ³)	4	435 mm (17.1")	490 mm (19.3")

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)							
			-50 (-58)	-30 (-22)	-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)
Engine oil pan	Engine oil	5.9 (1.6)	★SAE 5W-40							
			SAE 30							
			SAE 10W							
			SAE 10W-30							
			SAE 15W-40							
Final drive	Gear oil	0.6 × 2 (0.16 × 2)	★SAE 75W-90							
			SAE 85W-140							
Hydraulic tank	Hydraulic oil	Tank; 27(7.1)	★ISO VG 15							
		System; 55 (14.5)	ISO VG 46							
			ISO VG 68							
Fuel tank	Diesel fuel	30 (7.9)	★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	4.2 (1.1)	Ethylene glycol base permanent type (50 : 50)							
			★Ethylene glycol base permanent type (60 : 40)							

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

★ : Cold region

Russia, CIS, Mongolia