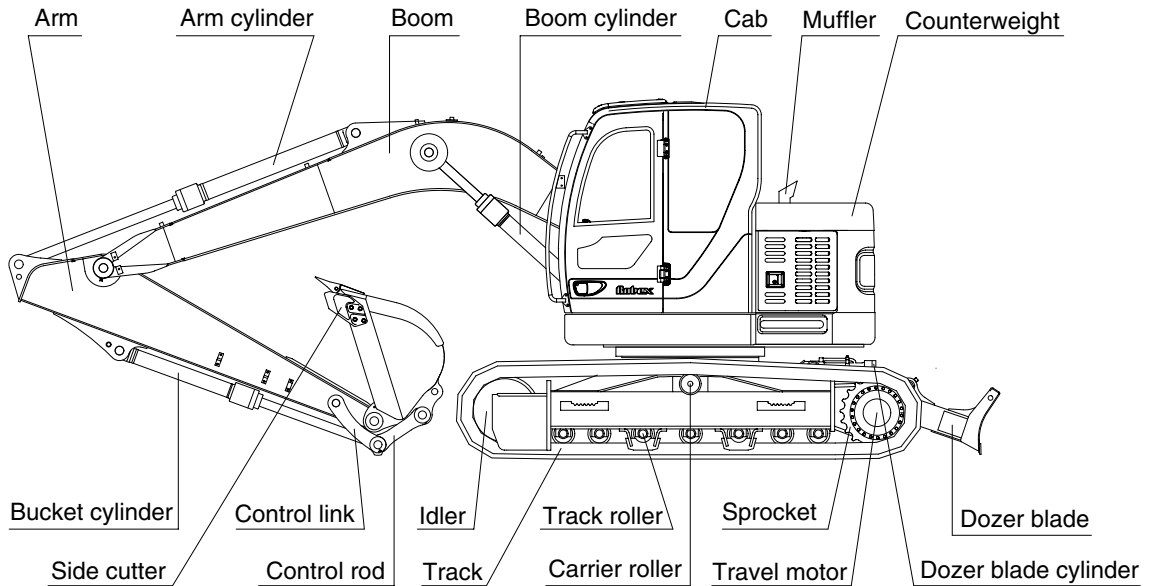
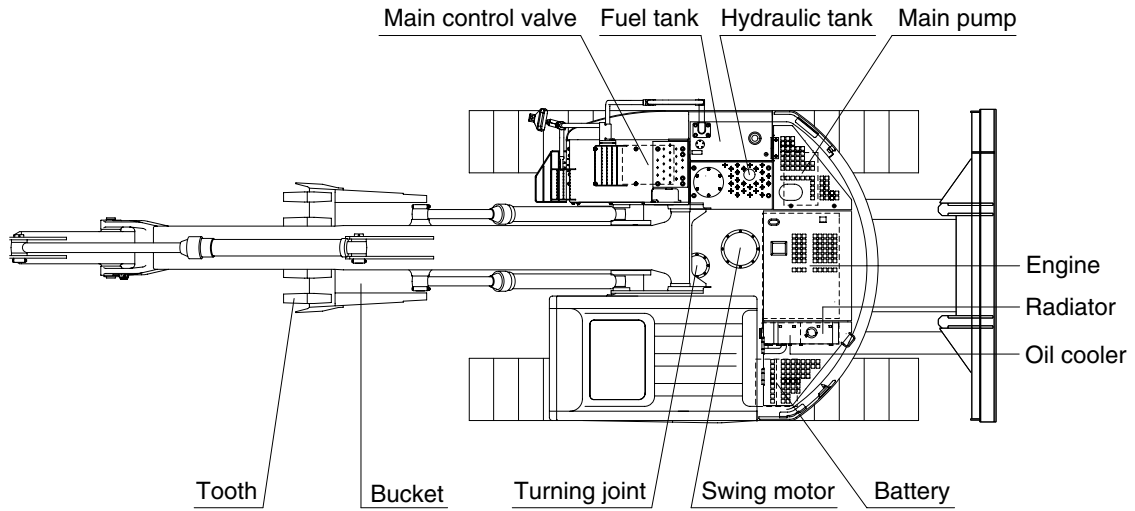


GROUP 2 SPECIFICATIONS

1. MAJOR COMPONENT

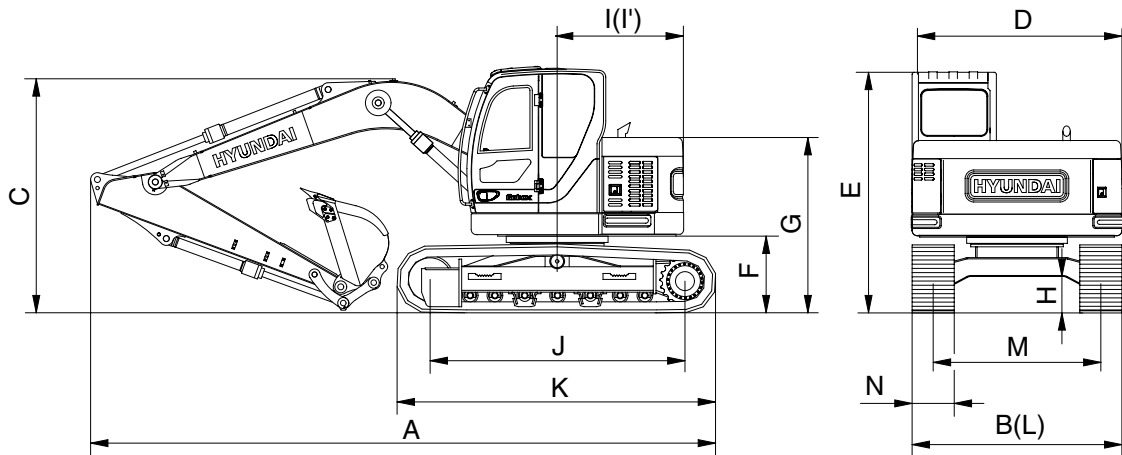


140Z92SP01

2. SPECIFICATIONS

1) R145CR-9

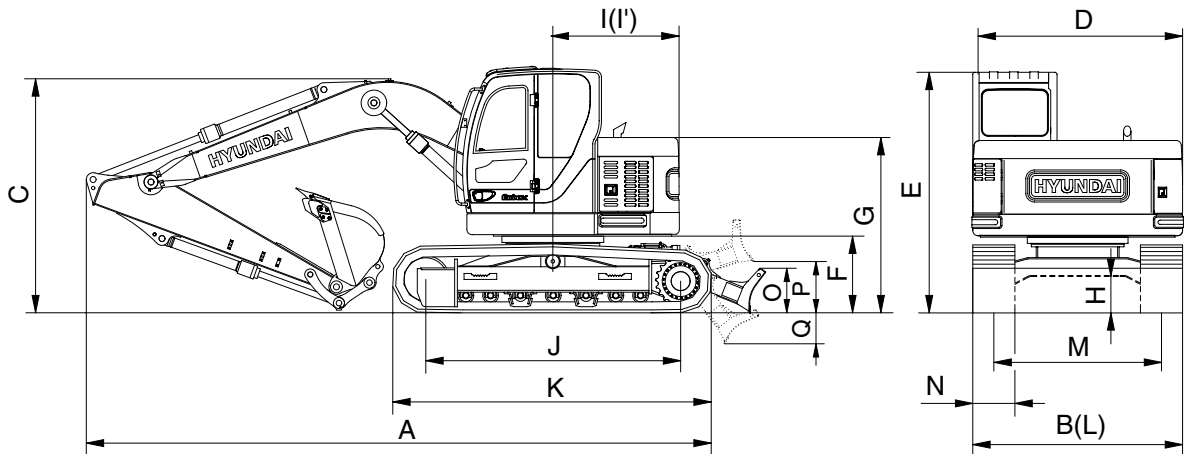
· 4.60 m (15' 1") BOOM and 2.50 m (8' 2") ARM



140Z92SP02

Description		Unit	Specification
Operating weight		kg (lb)	14600 (32190)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	0.52 (0.68)
Overall length	A	mm (ft-in)	7270 (23' 10")
Overall width, with 500 mm shoe	B		2500 (8' 2")
Overall height	C		2860 (9' 5")
Superstructure width	D		2500 (8' 2")
Overall height of cab	E		2900 (9' 6")
Ground clearance of counterweight	F		930 (3' 1")
Engine cover height	G		2065 (6' 9")
Minimum ground clearance	H		440 (1' 5")
Rear-end distance	I		1480 (4' 10")
Rear-end swing radius	I'		1480 (4' 10")
Distance between tumblers	J		2910 (9' 7")
Undercarriage length	K		3640 (11' 11")
Undercarriage width	L		2500 (8' 2")
Track gauge	M		2000 (6' 7")
Track shoe width, standard	N		500 (20")
Travel speed (low/high)		km/hr (mph)	3.2/5.5 (2.0/3.4)
Swing speed		rpm	12.0
Gradeability		Degree (%)	35 (70)
Ground pressure (500 mm shoe)		kgf/cm ² (psi)	0.46 (6.54)
Max traction force		kg (lb)	13300 (29320)

2) R145CRD-9

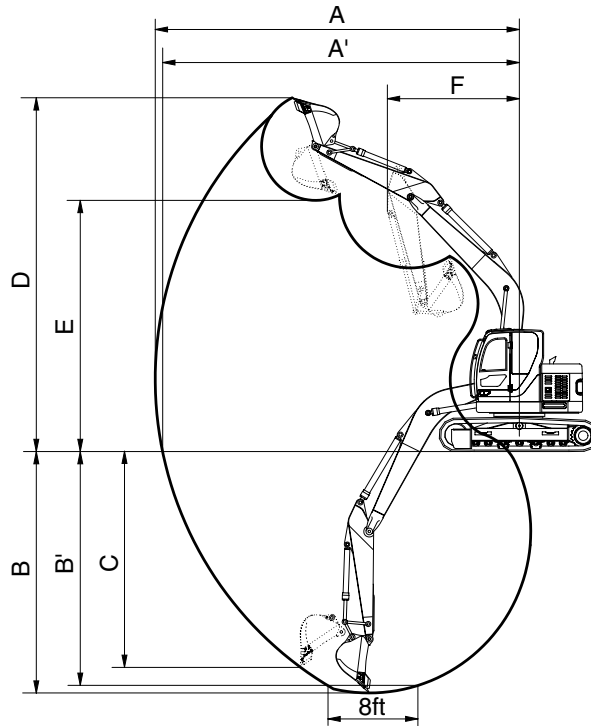


140Z92SP04

Description		Unit	Specification
Operating weight		kg (lb)	15400 (33950)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	0.52 (0.68)
Overall length	A	mm (ft-in)	7820 (25' 8")
Overall width, with 500 mm shoe	B		2500 (8' 2")
Overall height	C		2860 (9' 5")
Superstructure width	D		2500 (8' 2")
Overall height of cab	E		2900 (9' 6")
Ground clearance of counterweight	F		930 (3' 1")
Engine cover height	G		2065 (6' 9")
Minimum ground clearance	H		440 (1' 5")
Rear-end distance	I		1480 (4' 10")
Rear-end swing radius	I'		1480 (4' 10")
Distance between tumblers	J		2910 (9' 7")
Undercarriage length	K		3640 (11' 11")
Undercarriage width	L		2500 (8' 2")
Track gauge	M		2000 (6' 7")
Track shoe width, standard	N		500 (20")
Height of blade	O		575 (1' 8")
Ground clearance of blade up	P		420 (1' 8")
Depth of blade down	Q		430 (1' 6")
Travel speed (low/high)			km/hr (mph)
Swing speed		rpm	12.0
Gradeability		Degree (%)	35 (70)
Ground pressure (500 mm shoe)		kgf/cm ² (psi)	0.49 (6.97)
Max traction force		kg (lb)	13300 (29320)

3. WORKING RANGE

1) R145CR/CRD-9



140Z92SP06

Description		1.90 m (6' 3") Arm	2.10 m (6' 11") Arm	※2.50 m (8' 2") Arm	3.00 m (9' 10") Arm
Max digging reach	A	7730 mm (25' 4")	7900 mm (25'11")	8310 mm (27' 3")	8770 mm (28' 9")
Max digging reach on ground	A'	7580 mm (24'10")	7750 mm (25' 0")	8170 mm (26'10")	8630 mm (28' 4")
Max digging depth	B	4890 mm (16' 1")	5100 mm (16' 9")	5500 mm (18' 1")	5990 mm (19' 8")
Max digging depth (8ft level)	B'	4640 mm (15' 3")	4870 mm (16' 0")	5290 mm (17' 4")	5810 mm (19' 1")
Max vertical wall digging depth	C	4400 mm (14' 5")	4600 mm (15' 1")	5000 mm (16' 5")	5400 mm (17' 9")
Max digging height	D	8840 mm (29' 0")	8970 mm (29' 5")	9350 mm (30' 8")	9730 mm (31'11")
Max dumping height	E	6350 mm (20'10")	6470 mm (21' 3")	6850 mm (22' 6")	7230 mm (23' 9")
Min swing radius	F	1860 mm (6' 1")	2030 mm (6' 8")	1980 mm (6' 6")	2260 mm (7' 5")
Bucket digging force	SAE	87.3 [94.8] kN	87.3 [94.8] kN	87.3 [94.8] kN	87.3 [94.8] kN
		8900 [9670] kgf	8900 [9670] kgf	8900 [9670] kgf	8900 [9670] kgf
		19620 [21300] lbf	19620 [21300] lbf	19620 [21300] lbf	19620 [21300] lbf
	ISO	102 [110.8] kN	102 [110.8] kN	102 [110.8] kN	102 [110.8] kN
		10400 [11290] kgf	10400 [11290] kgf	10400 [11290] kgf	10400 [11290] kgf
		22930 [24890] lbf	22930 [24890] lbf	22930 [24890] lbf	22930 [24890] lbf
Arm crowd force	SAE	76.5 [83.1] kN	73.6 [79.9] kN	62.8 [68.2] kN	55.9 [60.7] kN
		7800 [8470] kgf	7500 [8140] kgf	6400 [6950] kgf	5700 [6190] kgf
		17200 [18670] lbf	16530 [17950] lbf	14110 [15320] lbf	12570 [13640] lbf
	ISO	80.4 [87.3] kN	77.5 [84.1] kN	65.7 [71.4] kN	57.9 [62.8] kN
		8200 [8900] kgf	7900 [8580] kgf	6700 [7270] kgf	5900 [6410] kgf
		18080 [19630] lbf	17420 [18910] lbf	14770 [16040] lbf	13010 [14120] lbf

※ : STD [] : Power boost



4. WEIGHT











Item	R145CR-9		R145CRD-9	
	kg	lb	kg	lb
Upper structure assembly	6950	15320	←	
Main frame weld assembly	1315	2900	←	
Engine assembly	420	930	←	
Main pump assembly	90	200	←	
Main control valve assembly	140	310	←	
Swing motor assembly	120	260	←	
Hydraulic oil tank assembly	150	330	←	
Fuel tank assembly	120	260	←	
Counterweight	2800	6170	←	
Cab assembly	450	990	←	
Lower chassis assembly	5230	11530	6030	13290
Track frame weld assembly	1480	3260	1640	3620
Swing bearing	215	470	←	
Travel motor assembly	240	530	←	
Turning joint	50	110	←	
Track recoil spring	105	230	←	
Idler	125	280	←	
Carrier roller	20	45	←	
Track roller	35	80	←	
Track-chain assembly (500 mm standard triple grouser shoe)	910	2010	←	
Dozer blade assembly	-		465	1025
Front attachment assembly (4.6 m boom, 2.5 m arm, 0.52 m ³ SAE heaped bucket)	2420	5330	←	
4.6 m boom assembly	830	1830	←	
2.5 m arm assembly	435	960	←	
0.52 m ³ SAE heaped bucket	460	1010	←	
Boom cylinder assembly	130	290	←	
Arm cylinder assembly	160	350	←	
Bucket cylinder assembly	100	220	←	
Bucket control rod assembly	90	200	←	
Dozer blade cylinder assembly	-		55	120

5. LIFTING CAPACITIES

1) R145CR-9











(1) 4.60 m (15' 1") boom, 2.50 m (8' 2") arm equipped with 0.52 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2800 kg (6170 lb) counterweight.

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













Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg lb					*2960 *6530	*2960 *6530			2710 5970	1700 3750	6.50 (21.3)
4.5 m (15.0 ft)	kg lb					*3460 *7630	3310 7300	*2670 *5890	1930 4250	2120 4670	1280 2820	7.37 (24.2)
3.0 m (10.0 ft)	kg lb			*6090 *13430	*6090 *13430	*4480 *9880	3090 6810	2990 6590	1850 4080	1870 4120	1090 2400	7.81 (25.6)
1.5 m (5.0 ft)	kg lb			*8480 *18700	5380 11860	4640 10230	2810 6190	2870 6330	1730 3810	1780 3920	1030 2270	7.90 (25.9)
Ground Line	kg lb			9050 19950	4920 10850	4390 9680	2590 5710	2750 6060	1630 3590	1850 4080	1060 2340	7.67 (25.2)
-1.5 m (-5.0 ft)	kg lb	*5850 *12900	*5850 *12900	*8700 *19180	4820 10630	4280 9440	2490 5490	2700 5950	1580 3480	2120 4670	1240 2730	7.07 (23.2)
-3.0 m (-10 ft)	kg lb	*8930 *19690	*8930 *19690	*7030 *15500	4900 10800	4300 9480	2510 5530			*2400 *5290	1700 3750	5.97 (19.6)
-4.5 m (-15.0 ft)	kg lb			*3750 *8270	*3750 *8270							

- 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) 4.60 m (15' 1") boom, 1.90 m (6' 3") arm equipped with 0.52 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2800 kg (6170 lb) counterweight.



Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg lb					*3270 *7210	*3270 *7210			3360 7410	2130 4700	5.75 (18.9)
4.5 m (15.0 ft)	kg lb			*4960 *10930	*4960 *10930	*4310 *9500	3250 7170			2500 5510	1550 3420	6.73 (22.1)
3.0 m (10.0 ft)	kg lb			*7230 *15940	5970 13160	4900 10800	3050 6720	2980 6570	1850 4080	2170 4780	1310 2890	7.22 (23.7)
1.5 m (5.0 ft)	kg lb			*9120 *20110	5220 11510	4620 10190	2800 6170	2880 6350	1750 3860	2070 4560	1230 2710	7.32 (24.0)
Ground Line	kg lb			*8610 *18980	4970 10560	4430 9770	2640 5820	2800 6170	1680 3700	2170 4780	1290 2840	7.06 (23.2)
-1.5 m (-5.0 ft)	kg lb	*6830 *15060	*6830 *15060	*8140 *17950	4970 10960	4370 9630	2580 5690			2560 5640	1540 3400	6.40 (21.0)
-3.0 m (-10 ft)	kg lb			*6010 *13250	5100 11240	*4100 *9040	2650 5840			*2250 *4960	*2250 *4960	5.12 (16.8)











(3) 4.60 m (15' 1") boom, 3.0 m (9' 10") arm equipped with 0.52 m³ (SAE heaped) bucket and 700 mm (20") triple grouser shoe and 2800 kg (6170 lb) counterweight.

Load point height		Load radius										At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		7.0 m (25 ft)		Capacity		Reach
														m (ft)
6.0 m (20.0 ft)	kg					*2560	*2560	*1730	*1730			2350	1450	7.07
	lb					*5640	*5640	*3810	*3810			5180	3200	(23.2)
4.5 m (15.0 ft)	kg					*2760	*2760	*2550	1980			1890	1120	7.86
	lb					*6080	*6080	*5620	4370			4170	2470	(25.8)
3.0 m (10.0 ft)	kg			*3690	*3690	*3690	3170	3030	1880	*1430	1180	1680	960	8.27
	lb			*8140	*8140	*8140	6990	6680	4140	*3150	2600	3700	2120	(27.1)
1.5 m (5.0 ft)	kg			*7740	5620	4720	2880	2890	1750	1950	1130	1610	910	8.36
	lb			*17060	12390	10410	6350	6370	3860	4300	2490	3550	2010	(27.4)
Ground Line	kg			9180	5020	4440	2630	2760	1630	*1830	1080	1660	930	8.14
	lb			20240	11070	9790	5800	6080	3590	*4030	2380	3660	2050	(26.7)
-1.5 m (-5.0 ft)	kg	*5380	*5380	8930	4820	4280	2490	2680	1560			1860	1060	7.59
	lb	*11860	*11860	19690	10630	9440	5490	5910	3440			4100	2340	(24.9)
-3.0 m (-10 ft)	kg	*7860	*7860	*7790	4830	4250	2460	2680	1560			2380	1400	6.59
	lb	*17330	*17330	*17170	10650	9370	5420	5910	3440			5250	3090	(21.6)
-4.5 m (-15 ft)	kg	*8050	*8050	*5160	5020	*3260	2580							
	lb	*17750	*17750	*11380	11070	*7190	5690							

2) R145CR-9 (with dozer blade)













(1) 4.60 m (15' 1") boom, 2.50 m (8' 2") arm equipped with 0.52 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2800 kg (6170 lb) counterweight with dozer blade.

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

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg					*2960	*2960			*2910	1820	6.50
	lb					*6530	*6530			*6420	4010	(21.3)
4.5 m (15.0 ft)	kg					*3460	*3460	*2670	2060	2340	1380	7.37
	lb					*7630	*7630	*5890	4540	5160	3040	(24.2)
3.0 m (10.0 ft)	kg			*6090	*6090	*4480	3270	3270	1980	2070	1190	7.81
	lb			*13430	*13430	*9880	7230	7210	4370	4560	2620	(25.6)
1.5 m (5.0 ft)	kg			*8480	5720	5060	3000	3150	1860	1980	1120	7.90
	lb			*18700	12610	11160	6610	6940	4100	4370	2470	(25.9)
Ground Line	kg			*9170	5260	4810	2780	3030	1760	2060	1160	7.67
	lb			*20220	11600	10600	6130	6680	3880	4540	2560	(25.2)
-1.5 m (-5.0 ft)	kg	*5850	*5850	*8700	5160	4700	2680	2980	1710	2350	1340	7.07
	lb	*12900	*12900	*19180	11380	10360	5910	6570	3770	5180	2950	(23.2)
-3.0 m (-10 ft)	kg	*8930	*8930	*7030	5230	4720	2700			*2400	1830	5.97
	lb	*19690	*19690	*15500	11530	10410	5950			*5290	4030	(19.6)
-4.5 m (-15.0 ft)	kg			*3750	*3750							
	lb			*8270	*8270							











- 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) 4.60 m (15' 1") boom, 3.0 m (9' 10") arm equipped with 0.52 m³ (SAE heaped) bucket and 700 mm (20") triple grouser shoe and 2800 kg (6170 lb) counterweight with dozer blade.

Load point height		Load radius										At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		7.0 m (25 ft)		Capacity		Reach
														m (ft)
6.0 m (20.0 ft)	kg					*2560	*2560	*1730	*1730			2570	1560	7.07
	lb					*5640	*5640	*3810	*3810			5670	3440	(23.2)
4.5 m (15.0 ft)	kg					*2760	*2760	*2550	2110			2090	1220	7.86
	lb					*6080	*6080	*5620	4650			4610	2690	(25.8)
3.0 m (10.0 ft)	kg			*3690	*3690	*3690	3360	*3210	2020	*1430	1280	1860	1050	8.27
	lb			*8140	*8140	*8140	7410	*7080	4450	*3150	2820	4100	2310	(27.1)
1.5 m (5.0 ft)	kg			*7740	5950	*5030	3070	3170	1890	*1990	1230	1790	990	8.36
	lb			*17060	13120	*11090	6770	6990	4170	*4390	2710	3590	2180	(27.4)
Ground Line	kg			*9190	5360	4850	2820	3040	1770	*1830	1180	1850	1020	8.14
	lb			*20260	11820	10690	6220	6700	3900	*4030	2600	4080	2250	(26.7)
-1.5 m (-5.0 ft)	kg	*5380	*5380	*9060	5160	4700	2680	2960	1690			2070	1160	7.59
	lb	*11860	*11860	*19970	11380	10360	5910	6530	3730			4560	2560	(24.9)
-3.0 m (-10 ft)	kg	*7860	*7860	*7790	5170	4670	2650	2960	1690			*2460	1520	6.59
	lb	*17330	*17330	*17170	11400	10300	5840	6530	3730			*5420	3350	(21.6)
-4.5 m (-15 ft)	kg	*8050	*8050	*5160	*5160	3260	2770							
	lb	*17750	*17750	*11380	*11380	7190	6110							

3) R145LCR-9

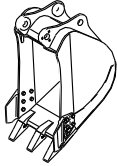
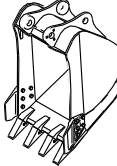
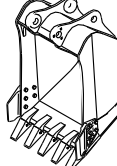
(1) 4.60 m (15' 1") boom, 2.50 m (8' 2") arm equipped with 0.52 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2800 kg (6170 lb) counterweight.

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg lb					*2960 *6530	*2960 *6530			2870 6330	1710 3770	6.50 (21.3)
4.5 m (15.0 ft)	kg lb					*3460 *7630	3340 7360	*2670 *5890	1950 4300	2250 4960	1300 2870	7.37 (24.2)
3.0 m (10.0 ft)	kg lb			*6090 *13430	*6090 *13430	*4480 *9880	3120 6880	3170 6990	1870 4120	1990 4390	1110 2450	7.81 (25.6)
1.5 m (5.0 ft)	kg lb			*8480 *18700	5420 11950	4930 10870	2840 6260	3040 6700	1750 3860	1900 4190	1040 2290	7.90 (25.9)
Ground Line	kg lb			*9170 *20220	4970 10960	4680 10320	2620 5780	2930 6460	1650 3640	1970 4340	1080 2380	7.67 (25.2)
-1.5 m (-5.0 ft)	kg lb	*5850 *12900	*5850 *12900	*8700 *19180	4870 10740	4570 10080	2520 5560	2870 6330	1600 3530	2260 4980	1250 2760	7.07 (23.2)
-3.0 m (-10 ft)	kg lb	*8930 *19690	*8930 *19690	*7030 *15500	4940 10890	4590 10120	2540 5600			*2400 *5290	1720 3790	5.97 (19.6)
-4.5 m (-15 ft)	kg lb			*3750 *8270	*3750 *8270							

6. BUCKET SELECTION GUIDE

1) R145CR-9, R145CRD-9

(1) General bucket

		
0.23 m ³ SAE heaped bucket	0.40, 0.46 m ³ SAE heaped bucket	※ 0.52, 0.58, 0.65, 0.71 m ³ SAE heaped bucket

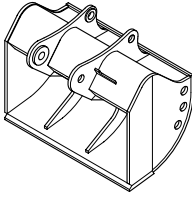
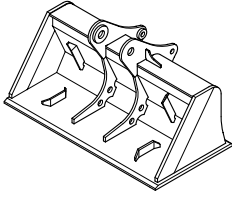
Capacity		Width		Weight	Recommendation			
					4.6 m (15' 1") boom			
SAE heaped	CECE heaped	Without side cutter	With side cutter		1.9 m arm (6' 3")	2.1 m arm (6' 11")	2.5 m arm (8' 2")	3.0 m arm (9' 10")
0.23 m ³ (0.30 yd ³)	0.20 m ³ (0.26 yd ³)	520 mm (20.5")	620 mm (24.4")	335 kg (740 lb)				
0.40 m ³ (0.52 yd ³)	0.35 m ³ (0.46 yd ³)	750 mm (29.5")	850 mm (33.5")	410 kg (900 lb)				
0.46 m ³ (0.60 yd ³)	0.40 m ³ (0.52 yd ³)	840 mm (33.1")	940 mm (37.0")	435 kg (960 lb)				
0.52 m ³ (0.68 yd ³)	0.45 m ³ (0.59 yd ³)	915 mm (36.0")	1015 mm (40.0")	460 kg (1010 lb)				
0.58 m ³ (0.76 yd ³)	0.50 m ³ (0.65 yd ³)	1000 mm (39.4")	1100 mm (43.3")	480 kg (1060 lb)				
0.65 m ³ (0.85 yd ³)	0.55 m ³ (0.72 yd ³)	1105 mm (43.5")	1205 mm (47.4")	500 kg (1100 lb)				
0.71 m ³ (0.93 yd ³)	0.60 m ³ (0.78 yd ³)	1190 mm (46.9")	1290 mm (50.8")	540 kg (1190 lb)				

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

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

Applicable for materials with density of 1100 kg/m³ (1850 lb/yd³) or less

(2) Special bucket

<p>Ditch cleaning bucket</p> 	<p>Slope finishing bucket</p> 
<p>★0.45 m³ SAE heaped bucket</p>	<p>◎0.55 m³ SAE heaped bucket</p>

Capacity		Width		Weight	Recommendation			
					4.6 m (15' 1") boom			
SAE heaped	CECE heaped	Without side cutter	With side cutter		1.9 m arm (6' 3")	2.1 m arm (6' 11")	2.5 m arm (8' 2")	3.0 m arm (9' 10")
★0.45 m ³ (0.59 yd ³)	0.40 m ³ (0.52 yd ³)	1520 mm (59.8")	-	410 kg (900 lb)				-
◎0.55 m ³ (0.72 yd ³)	0.45 m ³ (0.59 yd ³)	1800 mm (70.9")	-	585 kg (1290 lb)				-

★ : Ditch cleaning bucket

◎ : Slope finishing bucket

Applicable for materials with density of 2000 kgf/m³ (3370 lbf/yd³) or less

Applicable for materials with density of 1600 kgf/m³ (2700 lbf/yd³) or less

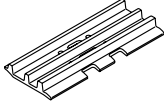
Applicable for materials with density of 1100 kgf/m³ (1850 lbf/yd³) or less

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		Triple grouser		
					
R145CR-9	Shoe width	mm (in)	※ 500 (20)	600 (24)	700 (28)
	Operating weight	kg (lb)	14600/32190	14790 (32610)	15020 (33110)
	Ground pressure	kgf/cm ² (psi)	0.46 (6.54)	0.39 (5.55)	0.34 (4.83)
	Overall width	mm (ft-in)	2500 (8' 2")	2600 (8' 6")	2700 (8' 10")
R145CRD-9	Shoe width	mm (in)	※ 500 (20)	600 (24)	700 (28)
	Operating weight	kg (lb)	15400 (33950)	15610 (34610)	15840 (34920)
	Ground pressure	kgf/cm ² (psi)	0.49 (6.97)	0.41 (5.83)	0.36 (5.12)
	Overall width	mm (ft-in)	2500 (8' 2")	2600 (8' 6")	2700 (8' 10")
R145LCR-9	Shoe width	mm (in)	※ 500 (20)	600 (24)	700 (28)
	Operating weight	kg (lb)	14660 (32320)	14850 (32740)	15080 (33250)
	Ground pressure	kgf/cm ² (psi)	0.47 (6.68)	0.39 (5.55)	0.34 (4.83)
	Overall width	mm (ft-in)	2500 (8' 2")	2600 (8' 6")	2700 (8' 10")

※ : Standard

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity	
	R145CR-9/R145CRD-9	R145LCR-9
Carrier rollers	1 EA	1 EA
Track rollers	7 EA	7 EA
Track shoes	45 EA	46 EA

4) SELECTION OF TRACK SHOE

Suitable track shoes should be selected according to operating conditions.

Method of selecting shoes

Confirm the category from the list of applications in **table 2**, then use **table 1** to select the shoe. Wide shoes (Categories B and C) have limitations on applications. Before using wide shoes, check the precautions, then investigate and study the operating conditions to confirm if these shoes are suitable.

Select the narrowest shoe possible to meet the required flotation and ground pressure. Application of wider shoes than recommendations will cause unexpected problem such as bending of shoes, crack of link, breakage of pin, loosening of shoe bolts

※ **Table 1**

Track shoe	Specification	Category
500 mm triple grouser	Standard	A
600 mm triple grouser	Option	A
700 mm triple grouser	Option	B

※ **Table 2**

Category	Applications	Applications
A	Rocky ground, river beds, normal soil	<ul style="list-style-type: none"> Travel at low speed on rough ground with large obstacles such as boulders or fallen trees

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Mitsubishi D04FD-TAA
Type	4-cycle turbocharged charge air cooled diesel engine
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	102 × 130 mm
Piston displacement	4250cc (260cu in)
Compression ratio	16.5 : 1
Rated gross horse power (SAE J1995)	119 Hp (89 kW) at 2000 rpm
Maximum torque	45.4 kgf · m (328 lbf · ft) at 1700 rpm
Engine oil quantity	17.5 l (4.6 U.S. gal)
Dry weight	420 kg (930 lb)
High idling speed	2100 ± 50 rpm
Low idling speed	800 ± 100 rpm
Rated fuel consumption	165 g/HP · hr at 2000 rpm
Starting motor	24 V-5.0 kW
Alternator	24 V-50 A
Battery	2 × 12 V × 80 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 65 cc/rev
Maximum pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Rated oil flow	2 × 130 l /min (34.3 U.S. gpm / 28.6 U.K. gpm)
Rated speed	2000 rpm

[]: Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm ² (570 psi)
Rated oil flow	30 l /min (7.9 U.S. gpm / 6.6 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Overload relief valve pressure	400 kgf/cm ² (5690 psi)

[]: Power boost

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	72 cc/rev
Relief pressure	285 kgf/cm ² (4053 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	25 kgf · m (181 lbf · ft)
Brake release pressure	15~50 kgf/cm ² (213~711 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	350 kgf/cm ² (4970 psi)
Capacity (max / min)	77/45 cc/rev
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	9.5 kgf/cm ² (135 psi)
Braking torque	19.7 kgf · m (280.2 lbf · ft)

7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 105 × ∅ 75 × 1105 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 115 × ∅ 80 × 1138 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 100 × ∅ 70 × 840 mm
	Cushion	Extend only
Dozer cylinder (option)	Bore dia × Rod dia × Stroke	∅ 100 × ∅ 70 × 250 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) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R145CR-9	Standard	500 mm (20")	0.46 kgf/cm ² (6.54 psi)	45	2500 mm (8' 2")
	Option	600 mm (24")	0.39 kgf/cm ² (5.55 psi)	45	2600 mm (8' 6")
		700 mm (28")	0.34 kgf/cm ² (4.83 psi)	45	2700 mm (8' 10")
R145CRD-9	Standard	500 mm (20")	0.49 kgf/cm ² (6.97 psi)	45	2500 mm (8' 2")
	Option	600 mm (24")	0.41 kgf/cm ² (5.81 psi)	45	2600 mm (8' 6")
		700 mm (28")	0.36 kgf/cm ² (5.12 psi)	45	2700 mm (8' 10")
R145LCR-9	Standard	500 mm (20")	0.47 kgf/cm ² (6.68 psi)	46	2500 mm (8' 2")
	Option	600 mm (24")	0.39 kgf/cm ² (5.55 psi)	46	2600 mm (8' 6")
		700 mm (28")	0.34 kgf/cm ² (4.83 psi)	46	2700 mm (8' 10")

BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
R145CR-9	0.52 m ³ (0.68 yd ³)	0.45 m ³ (0.59 yd ³)	5	915 mm (36.0")	1015 mm (40.0")
	0.23 m ³ (0.30 yd ³)	0.20 m ³ (0.26 yd ³)	3	520 mm (20.5")	620 mm (24.4")
	0.40 m ³ (0.52 yd ³)	0.35 m ³ (0.46 yd ³)	4	750 mm (29.5")	850 mm (33.5")
	0.46 m ³ (0.60 yd ³)	0.40 m ³ (0.52 yd ³)	4	840 mm (33.1")	940 mm (37.0")
	0.58 m ³ (0.76 yd ³)	0.50 m ³ (0.65 yd ³)	5	1000 mm (39.4")	1100 mm (43.3")
	0.65 m ³ (0.85 yd ³)	0.55 m ³ (0.72 yd ³)	5	1105 mm (43.5")	1205 mm (47.4")
	0.71 m ³ (0.93 yd ³)	0.60 m ³ (0.78 yd ³)	5	1190 mm (46.9")	1290 mm (50.8")
	★0.45 m ³ (0.59 yd ³)	0.40 m ³ (0.52 yd ³)	-	1520 mm (59.8")	-
	◎0.55 m ³ (0.72 yd ³)	0.45 m ³ (0.59 yd ³)	-	1800 mm (70.9")	-

★ : Ditch cleaning bucket

◎ : Slope finishing bucket

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)
Engine oil pan	Engine oil	17.5 (4.6)	SAE 30					
			SAE 10W					
			SAE 10W-30					
						SAE 15W-40		
Swing drive	Grease	0.35 (0.09)	NLGI NO.1					
			NLGI NO.2					
Swing drive	Gear oil	2.5 (0.7)	SAE 85W-140					
Final drive		1.8 × 2 (0.48 × 2)						
Hydraulic tank	Hydraulic oil	Tank: 96 (25.4) System: 180 (47.6)	ISO VG 32					
			ISO VG 46					
			ISO VG 68					
Fuel tank	Diesel fuel	232 (61.3)	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	15.5 (4.1)	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