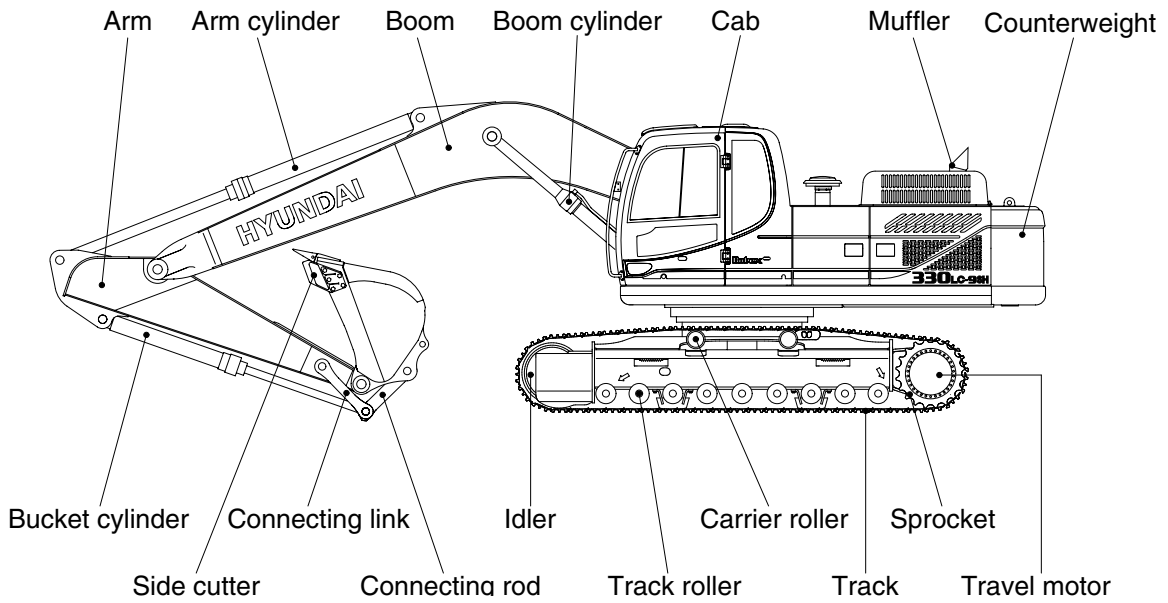
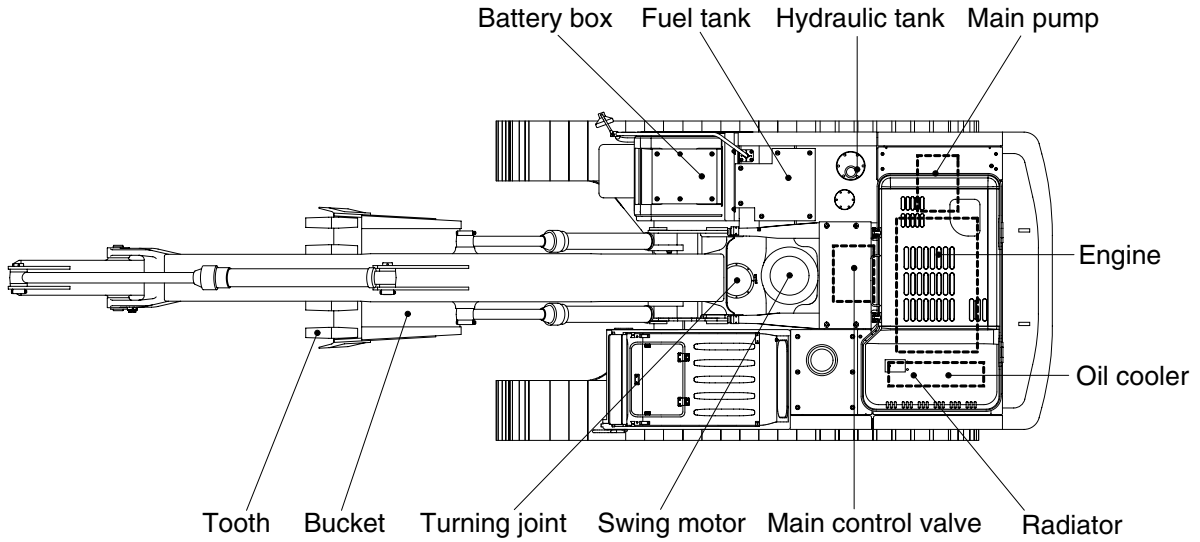


# GROUP 2 SPECIFICATIONS

## 1. MAJOR COMPONENT

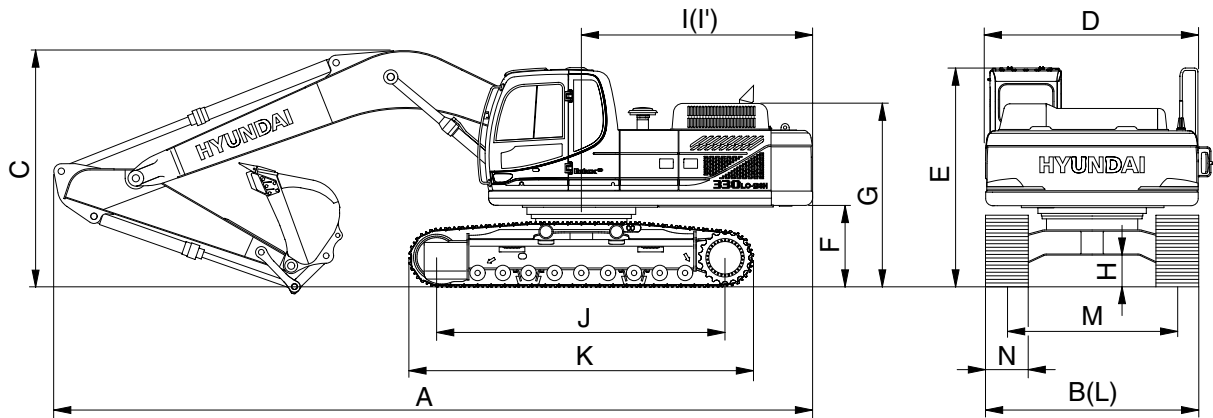


3309SH2SP01

## 2. SPECIFICATIONS

### 1) R330LC-9SH

· 6.45 m (21' 2") BOOM and 3.20 m (10' 6") ARM

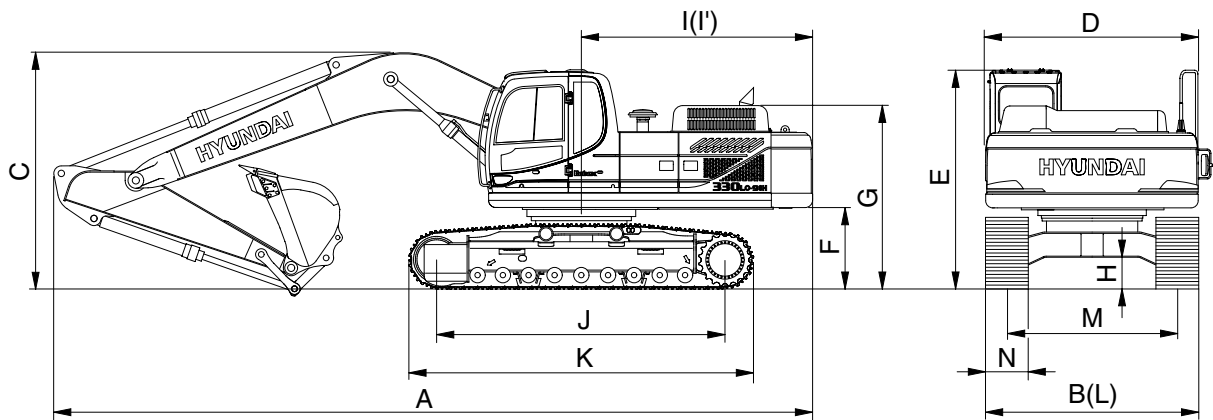


3309SH2SP02

Description		Unit	Specification
Operating weight		kg (lb)	33000 (72750)
Bucket capacity (SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	1.44 (1.88)
Overall length	A	mm (ft-in)	10980 (36' 0")
Overall width, with 600 mm shoe	B		3280 (10' 9")
Overall height	C		3380 (11' 1")
Superstructure width	D		2980 ( 9' 9")
Overall height of cab	E		3090 (10' 2")
Ground clearance of counterweight	F		1200 ( 3' 11")
Engine cover height	G		2580 ( 8' 6")
Minimum ground clearance	H		500 ( 1' 8")
Rear-end distance	I		3265 (10' 9")
Rear-end swing radius	I'		3330 (10' 11")
Distance between tumblers	J		4030 (13' 3")
Undercarriage length	K		4940 (16' 2")
Undercarriage width	L		3280 (10' 9")
Track gauge	M		2680 ( 8' 10")
Track shoe width, standard	N		600 (24")
Travel speed (low/high)		km/hr (mph)	3.3/5.8 (2.1/3.6)
Swing speed		rpm	9.5
Gradeability		Degree (%)	35 (70)
Ground pressure (600 mm shoe)		kgf/cm <sup>2</sup> (psi)	0.63 (8.96)
Max traction force		kg (lb)	29500 (65040)

## 2) R330NLC-9SH

· 6.45 m (21' 2") BOOM and 3.20 m (10' 6") ARM

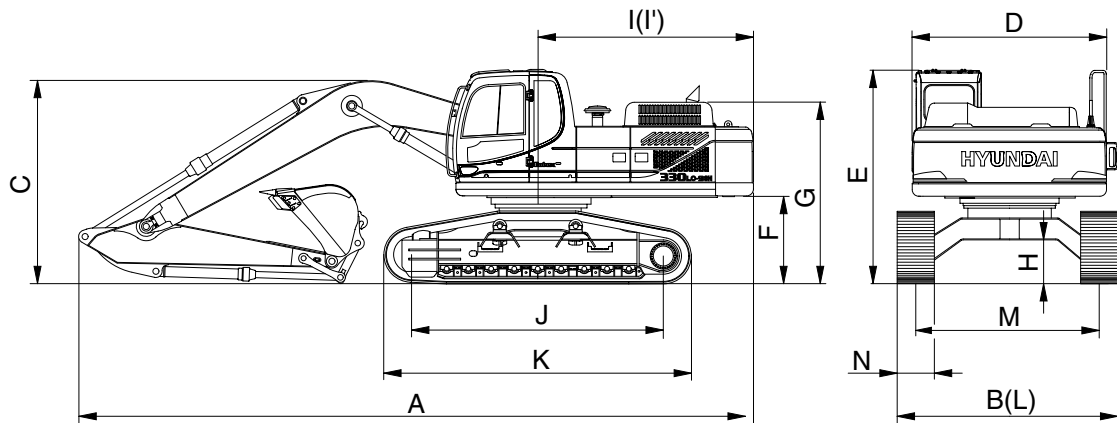


3309SH2SP03

Description		Unit	Specification
Operating weight		kg (lb)	32800 (72310)
Bucket capacity (SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	1.44 (1.88)
Overall length	A	mm (ft-in)	10980 (36' 0")
Overall width, with 600 mm shoe	B		2990 ( 9' 10")
Overall height	C		3380 (11' 1")
Superstructure width	D		2980 ( 9' 9")
Overall height of cab	E		3090 (10' 2")
Ground clearance of counterweight	F		1200 ( 3' 11")
Engine cover height	G		2580 ( 8' 6")
Minimum ground clearance	H		500 ( 1' 8")
Rear-end distance	I		3265 (10' 9")
Rear-end swing radius	I'		3330 (10' 11")
Distance between tumbler	J		4030 (13' 3")
Undercarriage length	K		4940 (16' 2")
Undercarriage width	L		2990 ( 9' 10")
Track gauge	M		2390 ( 7' 10")
Track shoe width, standard	N		600 (24")
Travel speed (low/high)			km/hr (mph)
Swing speed		rpm	9.5
Gradeability		Degree (%)	35 (70)
Ground pressure (600 mm shoe)		kgf/cm <sup>2</sup> (psi)	0.63 (8.96)
Max traction force		kg (lb)	29500 (65040)

### 3) R330LC-9SH HIGH WALKER

· 6.45 m (21' 2") BOOM and 3.20 m (10' 6") ARM

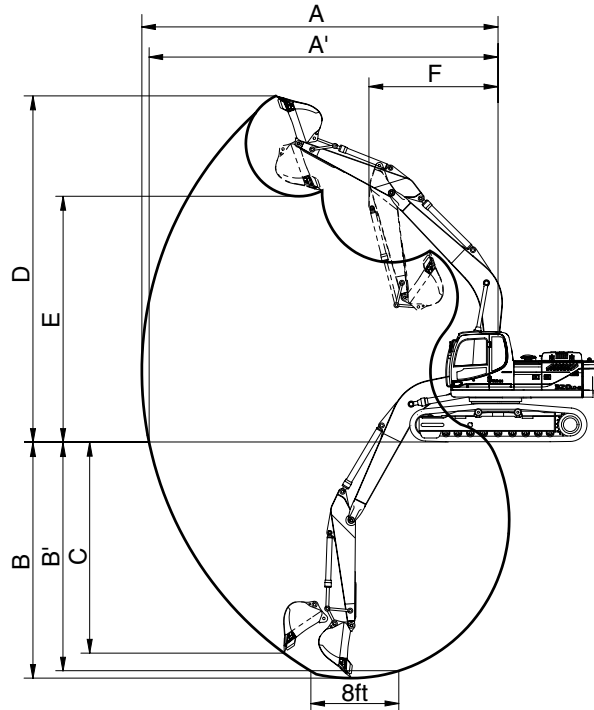


3309SH2SP04

Description		Unit	Specification	
Operating weight		kg (lb)	35500 (78260)	
Bucket capacity (SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	1.44 (1.88)	
Overall length	A	mm (ft-in)	10910 (35' 10")	
Overall width, with 600 mm shoe	B		3470 (11' 5")	
Overall height	C		3360 (11' 0")	
Superstructure width	D		2980 ( 9' 9")	
Overall height of cab	E		3390 (11' 1")	
Ground clearance of counterweight	F		1500 ( 4' 11")	
Engine cover height	G		2880 ( 9' 5")	
Minimum ground clearance	H		765 ( 2' 6")	
Rear-end distance	I		3265 (10' 9")	
Rear-end swing radius	I'		3330 (10' 11")	
Distance between tumblers	J		4030 (13' 3")	
Undercarriage length	K		4940 (16' 2")	
Undercarriage width	L		3470 (11' 5")	
Track gauge	M		2870 ( 9' 5")	
Track shoe width, standard	N		600 (24")	
Travel speed (low/high)			km/hr (mph)	3.3/5.8 (2.1/3.6)
Swing speed			rpm	9.5
Gradeability		Degree (%)	35 (70)	
Ground pressure (600 mm shoe)		kgf/cm <sup>2</sup> (psi)	0.68 (9.67)	
Max traction force		kg (lb)	29500 (65040)	

### 3. WORKING RANGE

#### 1) R330LC-9SH, R330NLC-9SH

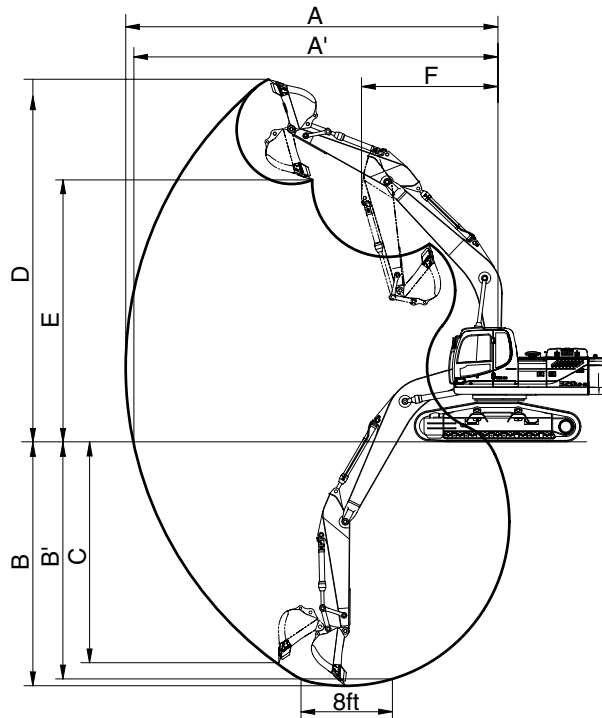


32092SP05

Description	6.45 m (21' 2") Arm				6.15 m (20' 2") Boom	
	2.2 m (7' 3") Arm	2.5 m (8' 2") Arm	3.2 m (10' 6") Arm	4.05 m (13' 3") Arm	2.2 m (7' 3") Arm	
Max digging reach	A 10330 mm (33'11")	10550 mm (34' 7")	11140 mm (36' 7")	11950 mm (39' 2")	10020 mm (32'10")	
Max digging reach on ground	A' 10110 mm (33' 2")	10330 mm (33'11")	10940 mm (35'11")	11760 mm (38' 7")	9800 mm (32' 2")	
Max digging depth	B 6370 mm (20'11")	6670 mm (21'11")	7370 mm (24' 2")	8220 mm (26'12")	6160 mm (20' 3")	
Max digging depth (8ft level)	B' 6160 mm (20' 3")	6470 mm (21' 3")	7210 mm (23' 8")	8080 mm (26' 6")	5950 mm (19' 6")	
Max vertical wall digging depth	C 5980 mm (19' 7")	5920 mm (19' 5")	6360 mm (20'10")	7260 mm (23'10")	5710 mm (18' 9")	
Max digging height	D 10220 mm (33' 6")	10170 mm (33' 4")	10310 mm (33'10")	10710 mm (35' 2")	9940 mm (32' 7")	
Max dumping height	E 7050 mm (23' 2")	7050 mm (23' 2")	7240 mm (23' 9")	7630 mm (25' 0")	6780 mm (22' 3")	
Min swing radius	F 4700 mm (15' 5")	4500 mm (14' 9")	4470 mm (14' 8")	4470 mm (14' 8")	4520 mm (14'10")	
Bucket digging force	SAE	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN
		19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf
		42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf
	ISO	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN
		21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf
		47620 [51700] lbf	47620 [51700] lbf	47620 [51700] lbf	47620 [51700] lbf	47620 [51700] lbf
Arm crowd force	SAE	196.6 [213.4] kN	178.9 [194.2] kN	143.2 [155.5] kN	119.6 [129.9] kN	196.6 [213.4] kN
		20000 [21760] kgf	18200 [19810] kgf	14600 [15850] kgf	12200 [13240] kgf	20000 [21760] kgf
		44190 [47980] lbf	40220 [43670] lbf	32190 [34950] lbf	26890 [29190] lbf	44190 [47980] lbf
	ISO	202.8 [220.2] kN	185.1 [201.0] kN	147.1 [159.7] kN	122.7 [133.3] kN	202.8 [220.2] kN
		20700 [22450] kgf	18900 [20500] kgf	15000 [16290] kgf	12515 [13590] kgf	20700 [22450] kgf
		45600 [49510] lbf	41620 [45190] lbf	33070 [35900] lbf	27590 [29950] lbf	45600 [49510] lbf

[ ] : Power boost

## 2) R330LC-9SH HIGH WALKER



32092SP06

Description		6.45 m (21' 2") Arm				6.15 m (20' 2") Boom	
		2.2 m (7' 3") Arm	2.5 m (8' 2") Arm	3.2 m (10' 6") Arm	4.05 m (13' 3") Arm	2.2 m (7' 3") Arm	
Max digging reach	A	10330 mm (33'11")	10550 mm (34' 7")	11140 mm (36' 7")	11950 mm (39' 2")	10020 mm (32'10")	
Max digging reach on ground	A'	10040 mm (32'11")	10270 mm (33' 8")	10880 mm (35' 8")	11710 mm (38' 5")	9730 mm (31'11")	
Max digging depth	B	6100 mm (20' 0")	6400 mm (20'12")	7100 mm (23' 4")	7950 mm (26' 1")	5880 mm (19' 3")	
Max digging depth (8ft level)	B'	5890 mm (19' 4")	6200 mm (20' 4")	6940 mm (22' 9")	7800 mm (25' 7")	5680 mm (18' 8")	
Max vertical wall digging depth	C	5700 mm (18' 8")	5650 mm (18' 6")	6080 mm (19'11")	6980 mm (22'11")	5440 mm (17'10")	
Max digging height	D	10500 mm (34' 5")	10450 mm (34' 3")	10590 mm (34' 9")	10990 mm (36' 1")	10220 mm (33' 6")	
Max dumping height	E	7330 mm (24' 1")	7330 mm (24' 1")	7520 mm (24' 8")	7910 mm (25'11")	7060 mm (23' 2")	
Min swing radius	F	4700 mm (15' 5")	4500 mm (14' 9")	4470 mm (14' 8")	4470 mm (14' 8")	4520 mm (14'10")	
Bucket digging force	SAE	[ ]	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN
		19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf
		42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf
	ISO	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN
		21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf
Arm crowd force	SAE	[ ]	196.6 [213.4] kN	178.9 [194.2] kN	143.2 [155.5] kN	119.6 [129.9] kN	196.6 [213.4] kN
		20000 [21760] kgf	18200 [19810] kgf	14600 [15850] kgf	12200 [13240] kgf	20000 [21760] kgf	20000 [21760] kgf
		44190 [47980] lbf	40220 [43670] lbf	32190 [34950] lbf	26890 [29190] lbf	44190 [47980] lbf	44190 [47980] lbf
	ISO	202.8 [220.2] kN	185.1 [201.0] kN	147.1 [159.7] kN	122.7 [133.3] kN	202.8 [220.2] kN	202.8 [220.2] kN
		20700 [22450] kgf	18900 [20500] kgf	15000 [16290] kgf	12515 [13590] kgf	20700 [22450] kgf	20700 [22450] kgf
		45600 [49510] lbf	41620 [45190] lbf	33070 [35900] lbf	27590 [29950] lbf	45600 [49510] lbf	

[ ] : Power boost

## 4. WEIGHT

### 1) R330LC-9SH, R330NLC-9SH

Item	R330LC-9SH		R330NLC-9SH	
	kg	lb	kg	lb
Upperstructure assembly	15110	33310	←	←
Main frame weld assembly	3760	8290	←	←
Engine assembly	920	2028	←	←
Main pump assembly	216	476	←	←
Main control valve assembly	220	490	←	←
Swing motor assembly	370	820	←	←
Hydraulic oil tank assembly	230	490	←	←
Fuel tank assembly	210	450	←	←
Counterweight	6200	13670	←	←
Cab assembly	310	680	←	←
Radiator total assy	280	620	←	←
Lower chassis assembly	11500	25770	11300	24910
Track frame weld assembly	3970	8750	3835	8450
Swing bearing	410	900	←	←
Travel motor assembly	360	800	←	←
Turning joint	50	110	←	←
Tension cylinder	210	450	←	←
Idler	250	540	←	←
Sprocket	80	170	←	←
Carrier roller	40	80	←	←
Track roller	60	120	←	←
Track-chain assembly (600 mm standard triple grouser shoe)	1860	4100	←	←
Front attachment assembly (6.45 m boom, 3.2 m arm, 1.44 m <sup>3</sup> SAE heaped bucket)	6390	14090	←	←
6.45 m boom assembly	2540	5600	←	←
3.2 m arm assembly	1160	2560	←	←
1.44 m <sup>3</sup> SAE heaped bucket	1120	2470	←	←
Boom cylinder assembly	300	660	←	←
Arm cylinder assembly	380	840	←	←
Bucket cylinder assembly	270	570	←	←
Bucket control linkage assembly	370	820	←	←

## 2) R330LC-9SH HIGH WALKER

Item	kg	lb
Upperstructure assembly	15110	33310
Main frame weld assembly	3760	8290
Engine assembly	920	2028
Main pump assembly	216	476
Main control valve assembly	220	490
Swing motor assembly	370	820
Hydraulic oil tank assembly	230	490
Fuel tank assembly	210	450
Counterweight	6200	13670
Cab assembly	310	680
Radiator total assy	280	620
Lower chassis assembly	14000	30860
Track frame weld assembly	6180	13620
Swing bearing	410	900
Travel motor assembly	360	800
Turning joint	50	110
Tension cylinder	210	450
Idler	250	540
Sprocket	80	170
Carrier roller	40	80
Track roller	60	120
Track-chain assembly (600 mm standard triple grouser shoe)	1860	4100
Front attachment assembly (6.45 m boom, 3.2 m arm, 1.44 m <sup>3</sup> SAE heaped bucket)	6390	14090
6.45 m boom assembly	2540	5600
3.2 m arm assembly	1160	2560
1.44 m <sup>3</sup> SAE heaped bucket	1120	2470
Boom cylinder assembly	300	660
Arm cylinder assembly	380	840
Bucket cylinder assembly	270	570
Bucket control linkage assembly	370	820













## 5. LIFTING CAPACITIES

### 1) R330LC-9SH

(1) 6.15 m (20' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.











·  : Rating over-front

·  : Rating over-side or 360 degree













Load point height		Load radius								At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
												m (ft)
7.5 m (25.0 ft)	kg lb									*7480 *16490	5930 13070	7.69 (25.2)
6.0 m (20.0 ft)	kg lb					*8380 *18470	*8380 *18470	*8070 *17790	6030 13290	7300 16090	4720 10410	8.61 (28.2)
4.5 m (15.0 ft)	kg lb			*12080 *26630	*12080 *26630	*9630 *21230	8600 18960	*8490 *18720	5890 12990	6450 14220	4120 9080	9.16 (30.1)
3.0 m (10.0 ft)	kg lb			*15590 *34370	12100 27800	*11230 *24760	8100 17860	8860 19530	5660 12480	6080 13400	3840 8470	9.39 (30.8)
1.5 m (5.0 ft)	kg lb			*18040 *39770	11820 26060	12360 27250	7670 16910	8610 18980	5440 11990	6050 13340	3800 8380	9.35 (30.7)
Ground Line	kg lb			*18760 *41360	11540 25440	12070 26610	7420 16360	8450 18630	5290 11660	6380 14070	4010 8840	9.02 (29.6)
-1.5 m (-5.0 ft)	kg lb	*16910 *37280	*16910 *37280	*18280 *40300	11540 25440	11990 26430	7340 16180	8410 18540	5260 11600	7220 15920	4560 10050	8.37 (27.5)
-3.0 m (-10 ft)	kg lb	*22970 *50640	*22970 *50640	*16680 *36770	11720 25840	12100 26680	7440 16400			*8360 *18430	5800 12790	7.29 (23.9)
-4.5 m (-15.0 ft)	kg lb	*17920 *39510	*17920 *39510	*13190 *29080	12150 26790							

- 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) 6.45 m (21' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius								At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
												m (ft)
7.5 m (25.0 ft)	kg									*7120	5350	8.07
	lb									*15700	11790	(26.5)
6.0 m (20.0 ft)	kg					*8220	*8220	*7700	5970	6740	4320	8.95
	lb					*18120	*18120	*16980	13160	14860	9520	(29.4)
4.5 m (15.0 ft)	kg			*12360	*12360	*9550	8410	*8250	5780	5990	3780	9.47
	lb			*27250	*27250	*21050	18540	*18190	12740	13210	8330	(31.1)
3.0 m (10.0 ft)	kg					*11160	7870	8710	5520	5660	3530	9.70
	lb					*24600	17350	19200	12170	12480	7780	(31.8)
1.5 m (5.0 ft)	kg					12100	7430	8450	5280	5630	3500	9.66
	lb					26680	16380	18630	11640	12410	7720	(31.7)
Ground Line	kg			*18470	11210	11820	7190	8280	5130	5920	3680	9.34
	lb			*40720	24710	26060	15850	18250	11310	13050	8110	(30.6)
-1.5 m (-5.0 ft)	kg	*14420	*14420	*17890	11250	11750	7130	8230	5090	6650	4160	8.72
	lb	*31790	*31790	*39440	24800	25900	15720	18140	11220	14660	9170	(28.6)
-3.0 m (-10 ft)	kg	*22130	*22130	*16390	11450	11870	7230			*7930	5200	7.70
	lb	*48790	*48790	*36130	25240	26170	15940			*17480	11460	(25.3)
-4.5 m (-15.0 ft)	kg	*17840	*17840	*13400	11870							
	lb	*39330	*39330	*29540	26170							















(3) 6.45 m (21' 2") boom, 2.5 m (8' 2") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius									At max. reach			
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach
														m (ft)
7.5 m (25.0 ft)	kg										*6720	5060	8.34	
	lb										*14820	11160	(27.4)	
6.0 m (20.0 ft)	kg						*7320	6010			6450	4120	9.19	
	lb						*16140	13250			14220	9080	(30.2)	
4.5 m (15.0 ft)	kg			*11600	*11600	*9120	8460	*7930	5790		5760	3620	9.70	
	lb			*25570	*25570	*20110	18650	*17840	12760		12700	7980	(31.8)	
3.0 m (10.0 ft)	kg			*15130	12260	*10770	7890	8710	5520		5440	3370	9.92	
	lb			*33360	27030	*23740	17390	19200	12710		11990	7430	(32.5)	
1.5 m (5.0 ft)	kg			*17590	11400	12090	7420	8420	5260	6260	3880	5400	3330	9.88
	lb			*38780	25130	26650	16360	18560	11600	13800	8550	11900	7340	(32.4)
Ground Line	kg			*18360	11110	11770	7140	8230	5080			5650	3480	9.57
	lb			*40480	24490	25950	15740	18140	11200			12460	7670	(31.4)
-1.5 m (-5.0 ft)	kg	*15010	*15010	*18010	11110	11660	7040	8160	5010			6300	3910	8.97
	lb	*33090	*33090	*39710	24490	25710	15520	17990	11050			13890	8620	(29.4)
-3.0 m (-10.0 ft)	kg	*22800	*22800	*16720	11280	11740	7120					7690	4820	7.98
	lb	*50270	*50270	*36860	24870	25880	15700					16950	10630	(26.2)
-4.5 m (-15.0 ft)	kg	*19110	*19110	*14080	11660	*10340	7410					*7300	7110	6.42
	lb	*42130	*42130	*31040	25710	*22800	16340					*16090	15670	(21.1)

(4) 6.45 m (21' 2") boom, 3.2 m (10' 6") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius												At max. reach		
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity	Reach	
																m (ft)
7.5 m (25.0 ft)	kg									*5240	*5240			*5970	4390	9.06
	lb									*11550	*11550			*13160	9680	(29.7)
6.0 m (20.0 ft)	kg									*6500	6120			5740	3640	9.84
	lb									*14330	13490			12650	8020	(32.3)
4.5 m (15.0 ft)	kg						*8090	*8090	*7190	5870	*5440	4170	5170	3220	10.31	
	lb						*17840	*17840	*15850	12940	*11990	9190	11400	7100	(33.8)	
3.0 m (10.0 ft)	kg				*13400	12660	*9820	8010	*8110	5550	6400	4010	4900	3000	10.52	
	lb				*29540	27910	*21650	17660	*17880	12240	14110	8840	10800	6610	(34.5)	
1.5 m (5.0 ft)	kg				*16400	11580	*11460	7460	8420	5250	6230	3850	4850	2950	10.48	
	lb				*36160	25530	*25260	16450	18560	11570	13730	8490	10690	6500	(34.4)	
Ground Line	kg			*10240	*10240	*17910	11050	11720	7090	8170	5010	6090	3720	5030	3060	10.19
	lb			*22580	*22580	*39480	24360	25840	15630	18010	11050	13430	8200	11090	6750	(33.4)
-1.5 m (-5.0 ft)	kg	*11380	*11380	*14470	*14470	*18150	10910	11520	6910	8030	4890			5510	3370	9.63
	lb	*25090	*25090	*31900	*31900	*40010	24050	25400	15230	17700	10780			12150	7430	(31.6)
-3.0 m (-10.0 ft)	kg	*15350	*15350	*19470	*19470	*17370	10990	11520	6910	8040	4900			6520	4030	8.74
	lb	*33840	*33840	*42920	*42920	*38290	24230	25400	15230	17730	10800			14370	8880	(28.7)
-4.5 m (-15.0 ft)	kg			*21820	*21820	*15410	11260	*11430	7090					*7480	5490	7.37
	lb			*48100	*48100	*33970	24820	*25200	15630					*16490	12100	(24.2)
-6.0 m (-20.0 ft)	kg					*11340	*11340									
	lb					*25000	*25000									

(5) 6.45 m (21' 2") boom, 4.05 m (13' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.











Load point height		Load radius												At max. reach		
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity	Reach	
																m (ft)
7.5 m (25.0 ft)	kg													*5250	3650	10.00
	lb													*11570	8050	(32.8)
6.0 m (20.0 ft)	kg											*4530	4400	4960	3090	10.71
	lb											*9990	9700	10930	6810	(35.1)
4.5 m (15.0 ft)	kg									*6270	6020	*5750	4260	4520	2760	11.13
	lb									*13820	13270	*12680	9390	9960	6080	(36.5)
3.0 m (10.0 ft)	kg			*18220	*18220	*11250	*11250	*8610	8280	*7280	5680	6480	4070	4300	2580	11.32
	lb			*40170	*40170	*24800	*24800	*18980	18250	*16050	12520	14290	8970	9480	5690	(37.1)
1.5 m (5.0 ft)	kg			*10440	*10440	*14750	12040	*10470	7660	*8360	5330	6260	3880	4250	2530	11.29
	lb			*23020	*23020	*32520	26540	*23080	16890	*18430	11750	13800	8550	9370	5580	(37.0)
Ground Line	kg			*10810	*10810	*17060	11250	11840	7180	8200	5040	6080	3710	4370	2600	11.03
	lb			*23830	*23830	*37610	24800	26100	15830	18080	11110	13400	8180	9630	5730	(36.2)
-1.5 m (-5.0 ft)	kg	*9850	*9850	*13390	*13390	*18030	10900	11520	6900	8000	4860	5960	3600	4720	2830	10.52
	lb	*21720	*21720	*29520	*29520	*39750	24030	25400	15210	17640	10710	13140	7940	10410	6240	(34.5)
-3.0 m (-10.0 ft)	kg	*13020	*13020	*16980	*16980	*17900	10840	11420	6810	7920	4790	5950	3590	5400	3280	9.72
	lb	*28700	*28700	*37430	*37430	*39460	23900	25180	15010	17460	10560	13120	7910	11900	7230	(31.9)
-4.5 m (-15.0 ft)	kg	*16670	*16670	*21800	*21800	*16680	10990	11500	6880	8000	4860			6780	4200	8.53
	lb	*36750	*36750	*48060	*48060	*36770	24230	25350	15170	17640	10710			14950	9260	(28.0)
-6.0 m (-20.0 ft)	kg			*20030	*20030	*13950	11380	*10120	7160					*6790	6460	6.71
	lb			*44160	*44160	*30750	25090	*22310	15790					*14970	14240	(22.0)

## 2) R330NLC-9SH

(1) 6.15 m (20' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.











·  : Rating over-front

·  : Rating over-side or 360 degree













Load point height		Load radius								At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
												m (ft)
7.5 m (25.0 ft)	kg lb									*7480 *16490	5020 11070	7.69 (25.2)
6.0 m (20.0 ft)	kg lb					*8380 *18470	7650 16870	*8070 *17790	5090 11220	7250 15980	3960 8730	8.61 (28.2)
4.5 m (15.0 ft)	kg lb			*12080 *26630	11540 25440	*9630 *21230	7270 16030	*8490 *18720	4960 10930	6410 14130	3430 7560	9.16 (30.1)
3.0 m (10.0 ft)	kg lb			*15590 *34370	10430 22990	*11230 *24760	6790 14970	8800 19400	4740 10450	6040 13320	3170 6990	9.39 (30.8)
1.5 m (5.0 ft)	kg lb			*18040 *39770	9690 21360	12290 27090	6380 14070	8560 18870	4520 9960	6010 13250	3130 6900	9.35 (30.7)
Ground Line	kg lb			*18760 *41360	9420 20770	12000 26460	6130 13510	8390 18500	4380 9660	6330 13960	3300 7280	9.02 (29.6)
-1.5 m (-5.0 ft)	kg lb	*16910 *37280	*16910 *37280	*18280 *40300	9420 20770	11910 26260	6060 13360	8350 18410	4340 9570	7170 15810	3770 8310	8.37 (27.5)
-3.0 m (-10 ft)	kg lb	*22970 *50640	19350 42660	*16680 *36770	9600 21160	12030 26520	6160 13580			*8360 *18430	4840 10670	7.29 (23.9)
-4.5 m (-15.0 ft)	kg lb	*17920 *39510	*17920 *39510	*13190 *29080	10000 22050							

- 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) 6.45 m (21' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius								At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
												m (ft)
7.5 m (25.0 ft)	kg									*7120	4510	8.07
	lb									*15700	9940	(26.5)
6.0 m (20.0 ft)	kg					*8220	7530	*7700	5030	6690	3600	8.95
	lb					*18120	16600	*16980	11090	14750	7940	(29.4)
4.5 m (15.0 ft)	kg			*12360	11180	*9550	7080	*8250	4850	5950	3120	9.47
	lb			*27250	24650	*21050	15610	*18190	10690	13120	6880	(31.1)
3.0 m (10.0 ft)	kg					*11160	6560	8650	4600	5620	2900	9.70
	lb					*24600	14460	19070	10140	12390	6390	(31.8)
1.5 m (5.0 ft)	kg					12020	6150	8390	4370	5590	2860	9.66
	lb					26500	13560	18500	9630	12320	6310	(31.7)
Ground Line	kg			*18470	9110	11740	5910	8220	4220	5880	3010	9.34
	lb			*40720	20080	25880	13030	18120	9300	12960	6640	(30.6)
-1.5 m (-5.0 ft)	kg	*14420	*14420	*17890	9150	11670	5850	8180	4180	6600	3420	8.72
	lb	*31790	*31790	*39440	20170	25730	12900	18030	9220	14550	7540	(28.6)
-3.0 m (-10 ft)	kg	*22130	19010	*16390	9340	11790	5950			*7930	4320	7.70
	lb	*48790	41910	*36130	20590	25990	13120			*17480	9520	(25.3)
-4.5 m (-15.0 ft)	kg	*17840	*17840	*13400	9730							
	lb	*39330	*39330	*29540	21450							
















(3) 6.45 m (21' 2") boom, 2.5 m (8' 2") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius										At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach
														m (ft)
7.5 m (25.0 ft)	kg											*6720	4260	8.34
	lb											*14820	9390	(27.4)
6.0 m (20.0 ft)	kg						*7320	5070				6400	3420	9.19
	lb						*16140	11180				14110	7540	(30.2)
4.5 m (15.0 ft)	kg			*11600	11340	*9120	7130	*7930	4860			5720	2970	9.70
	lb			*25570	25000	*20110	15720	*17480	10710			12610	6550	(31.8)
3.0 m (10.0 ft)	kg			*15130	10100	*10770	6590	8650	4590			5400	2750	9.92
	lb			*33360	22270	*23740	14530	19070	10120			11900	6060	(32.5)
1.5 m (5.0 ft)	kg			*17590	9290	12010	6130	8370	4340	6210	3180	5360	2710	9.88
	lb			*38780	20480	26480	13510	18450	9570	13690	7010	11820	5970	(32.4)
Ground Line	kg			*18360	9020	11690	5860	8170	4170			5610	2840	9.57
	lb			*40480	19890	25770	12920	18010	9190			12370	6260	(31.4)
-1.5 m (-5.0 ft)	kg	*15010	*15010	*18010	9010	11580	5770	8100	4100			6250	3200	8.97
	lb	*33090	*33090	*39710	19860	25530	12720	17860	9040			13780	7050	(29.4)
-3.0 m (-10.0 ft)	kg	*22800	18670	*16720	9170	11670	5840					7640	3980	7.98
	lb	*50270	41160	*36860	20220	25730	12870					16840	8770	(26.2)
-4.5 m (-15.0 ft)	kg	*19110	*19110	*14080	9530	*10340	6120					*7300	5930	6.42
	lb	*42130	*42130	*31040	21010	*22800	13490					*16090	13070	(21.1)

(4) 6.45 m (21' 2") boom, 3.2 m (10' 6") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius												At max. reach		
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach
																
7.5 m (25.0 ft)	kg									*5240	*5240			*5970	3670	9.06
	lb									*11550	*11550			*13160	8090	(29.7)
6.0 m (20.0 ft)	kg									*6500	5180			5700	3000	9.84
	lb									*14330	11420			12570	6610	(32.3)
4.5 m (15.0 ft)	kg						*8090	7290	*7190	4930	*5440	3450	5140	2620	10.31	
	lb						*17840	16070	*15850	10870	*11990	7610	11330	5780	(33.8)	
3.0 m (10.0 ft)	kg				*13400	10470	*9820	6700	*8110	4620	6360	3300	4860	2430	10.52	
	lb				*29540	23080	*21650	14770	*17880	10190	14020	7280	10710	5360	(34.5)	
1.5 m (5.0 ft)	kg				*16400	9450	*11460	6170	8370	4330	6180	3140	4810	2370	10.48	
	lb				*36160	20830	*25260	13600	18450	9550	13620	6920	10600	5220	(34.4)	
Ground Line	kg			*10240	*10240	*17910	8960	11650	5810	8110	4100	6050	3020	4990	2460	10.19
	lb			*22580	*22580	*39480	19750	25680	12810	17880	9040	13340	6660	11000	5420	(33.4)
-1.5 m (-5.0 ft)	kg	*11380	*11380	*14470	*14470	*18150	8820	11450	5640	7980	3980			5470	2730	9.63
	lb	*25090	*25090	*31900	*31900	*40010	19440	25240	12430	17590	8770			12060	6020	(31.6)
-3.0 m (-10.0 ft)	kg	*15350	*15350	*19470	18060	*17370	8890	11450	5640	7990	3990			6470	3290	8.74
	lb	*33840	*33840	*42920	39820	*38290	19600	25240	12430	17610	8800			14260	7250	(28.7)
-4.5 m (-15.0 ft)	kg			*21820	18590	*15410	9150	*11430	5810					*7480	4550	7.37
	lb			*48100	40980	*33970	20170	*25200	12810					*16490	10030	(24.2)
-6.0 m (-20.0 ft)	kg					*11340	9700									
	lb					*25000	21380									

(5) 6.45 m (21' 2") boom, 4.05 m (13' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.











Load point height		Load radius												At max. reach		
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach
																
7.5 m (25.0 ft)	kg													*5250	3030	10.00
	lb													*11570	6680	(32.8)
6.0 m (20.0 ft)	kg											*4530	3680	4920	2520	10.71
	lb											*9990	8110	10850	5560	(35.1)
4.5 m (15.0 ft)	kg									*6270	5080	*5750	3540	4490	2230	11.13
	lb									*13820	11200	*12680	7800	9900	4920	(36.5)
3.0 m (10.0 ft)	kg			*18220	*18220	*11250	11080	*8610	6950	*7280	4740	6430	3360	4260	2060	11.32
	lb			*40170	*40170	*24800	24430	*18980	15320	*16050	10450	14180	7410	9390	4540	(37.1)
1.5 m (5.0 ft)	kg			*10440	*10440	*14750	9880	*10470	6350	*8360	4410	6220	3170	4210	2010	11.29
	lb			*23020	*23020	*32520	21780	*23080	14000	*18430	9720	13710	6990	9280	4430	(37.0)
Ground Line	kg			*10810	*10810	*17060	9130	11770	5890	8150	4130	6040	3000	4340	2070	11.03
	lb			*23830	*23830	*37610	20130	25950	12990	17970	9110	13320	6610	9570	4560	(36.2)
-1.5 m (-5.0 ft)	kg	*9850	*9850	*13390	*13390	*18030	8800	11450	5630	7940	3950	5920	2900	4680	2260	10.52
	lb	*21720	*21720	*29520	*29520	*39750	19400	25240	12410	17500	8710	13050	6390	10320	4980	(34.5)
-3.0 m (-10.0 ft)	kg	*13020	*13020	*16980	*16890	*17900	8750	11340	5540	7870	3880	5910	2890	5360	2650	9.72
	lb	*28700	*28700	*37430	*37430	*39460	19290	25000	12210	17350	8550	13030	6370	11820	5840	(31.9)
-4.5 m (-15.0 ft)	kg	*16670	*16670	*21800	18080	*16680	8890	11420	5600	7950	3950			6730	3430	8.53
	lb	*36750	*36750	*48060	39860	*36770	19600	25180	12350	17530	8710			14840	7560	(28.0)
-6.0 m (-20.0 ft)	kg			*20030	18770	*13950	9250	*10120	5880					*6790	5360	6.71
	lb			*44160	41380	*30750	20390	*22310	12960					*14970	11820	(22.0)

### 3) R330LC-9SH HIGH WALKER

(1) 6.15 m (20' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.











·  : Rating over-front

·  : Rating over-side or 360 degree













Load point height		Load radius								At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
												m (ft)
7.5 m (25.0 ft)	kg									*7480	6530	7.90
	lb									*16490	14400	(25.9)
6.0 m (20.0 ft)	kg					*8560	*8560	*8100	6980	*7540	5360	8.74
	lb					*18870	*18870	*17860	15390	*16690	11820	(28.7)
4.5 m (15.0 ft)	kg			*12730	*12730	*9910	9850	*8620	6820	6990	4780	9.22
	lb			*28060	*28060	*21850	21720	*19000	15040	15410	10540	(30.2)
3.0 m (10.0 ft)	kg			*16170	14570	*11520	9350	*9400	6580	6670	4530	9.40
	lb			*35650	32120	*25400	20610	*20720	14510	14700	9990	(30.8)
1.5 m (5.0 ft)	kg			*18290	13860	*12850	8940	9410	6360	6710	4540	9.31
	lb			*40320	30560	*28330	19710	20750	14020	14790	10010	(30.5)
Ground Line	kg			*18750	13640	13190	8710	9270	6230	7150	4840	8.93
	lb			*41340	30070	29080	19200	20440	13730	15760	10670	(29.3)
-1.5 m (-5.0 ft)	kg	*18620	*18620	*18070	13680	13140	8670	9260	6220	8200	5560	8.21
	lb	*41050	*41050	*39840	30160	28970	19110	20410	13710	18080	12260	(26.9)
-3.0 m (-10 ft)	kg	*22250	*22250	*16210	13910	*12030	8810			*8240	7240	7.03
	lb	*49050	*49050	*35740	30670	*26520	19420			*18170	15960	(23.1)
-4.5 m (-15.0 ft)	kg			*12130	*12130							
	lb			*26740	*26740							

- 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. \*i indicates load limited by hydraulic capacity.

(2) 6.45 m (21' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.
















Load point height		Load radius								At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
												m (ft)
7.5 m (25.0 ft)	kg									*7120	5940	8.27
	lb									*15700	13100	(27.1)
6.0 m (20.0 ft)	kg					*8420	*8420	*7770	6910	*7190	4930	9.07
	lb					*18560	*18560	*17130	15230	*15850	10870	(29.8)
4.5 m (15.0 ft)	kg			*13030	*13030	*9840	9650	*8390	6700	6520	4410	9.53
	lb			*28730	*28730	*21690	21270	*18500	14770	14370	9720	(31.3)
3.0 m (10.0 ft)	kg					*11450	9110	*9200	6430	6230	4190	9.71
	lb					*25240	20080	*20280	14180	13730	9240	(31.9)
1.5 m (5.0 ft)	kg					*12720	8700	9240	6210	6270	4200	9.62
	lb					*28040	19180	20370	13690	13820	9260	(31.6)
Ground Line	kg			*18430	13320	12940	8490	9090	6070	6650	4460	9.25
	lb			*40630	29370	28530	18720	20040	13380	14660	9830	(30.3)
-1.5 m (-5.0 ft)	kg	*16090	*16090	*17690	13390	12910	8460	9080	6050	7560	5090	8.56
	lb	*35470	*35470	*39000	29520	28460	18650	20020	13340	16670	11220	(28.1)
-3.0 m (-10 ft)	kg	*21530	*21530	*15980	13640	*12030	8600			*7840	6490	7.45
	lb	*47470	*47470	*35230	30070	*26520	18960			*17280	14310	(24.4)
-4.5 m (-15.0 ft)	kg			*12550	*12550							
	lb			*27670	*27670							

(3) 6.45 m (21' 2") boom, 2.5 m (8' 2") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.
















Load point height		Load radius										At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach
														m (ft)
7.5 m (25.0 ft)	kg											*6730	5650	8.53
	lb											*14840	12460	(28.0)
6.0 m (20.0 ft)	kg					*7410	6950					*6840	4720	9.31
	lb					*16340	15320					*15080	10410	(30.5)
4.5 m (15.0 ft)	kg			*12260	*12260	*9420	*9420	*8070	6710			6270	4230	9.76
	lb			*27030	*27030	*20770	*20770	*17790	14790			13820	9330	(32.0)
3.0 m (10.0 ft)	kg			*15720	14190	*11070	9130	*8930	6430	7020	4730	5990	4010	9.93
	lb			*34660	31280	*24410	20130	*19690	14180	15480	10430	13210	8840	(32.6)
1.5 m (5.0 ft)	kg			*17850	13440	*12430	8680	9220	6170			6010	4010	9.84
	lb			*39350	29630	*27400	19140	20330	13600			13250	8840	(32.3)
Ground Line	kg			*18370	13210	12880	8420	9040	6010			6350	4240	9.48
	lb			*40500	29120	28400	18560	19930	13250			14000	9350	(31.1)
-1.5 m (-5.0 ft)	kg	*16360	*16360	*17850	13240	12810	8360	9000	5970			7160	4800	8.82
	lb	*36070	*36070	*39350	29190	28240	18430	19840	13160			15790	10580	(28.9)
-3.0 m (-10.0 ft)	kg	*22580	*22580	*16360	13460	*12250	8470					*7890	6010	7.75
	lb	*49780	*49780	*36070	29670	*27010	18670					*17390	13250	(25.4)
-4.5 m (-15.0 ft)	kg	*18050	*18050	*13340	*13340									
	lb	*39790	*39790	*29410	*29410									



(4) 6.45 m (21' 2") boom, 3.2 m (10' 6") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

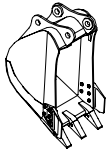
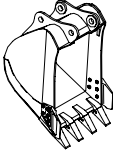
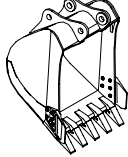
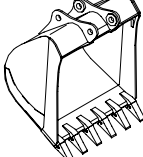
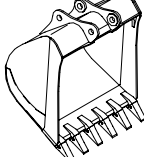
Load point height		Load radius												At max. reach			
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach	
																	m (ft)
7.5 m (25.0 ft)	kg																
	lb																
6.0 m (20.0 ft)	kg																
	lb																
4.5 m (15.0 ft)	kg																
	lb																
3.0 m (10.0 ft)	kg																
	lb																
1.5 m (5.0 ft)	kg																
	lb																
Ground Line	kg																
	lb																
-1.5 m (-5.0 ft)	kg																
	lb																
-3.0 m (-10.0 ft)	kg																
	lb																
-4.5 m (-15.0 ft)	kg																
	lb																

(5) 6.45 m (21' 2") boom, 4.05 m (13' 3") arm equipped with 1.44 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

Load point height		Load radius												At max. reach			
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach	
																	m (ft)
7.5 m (25.0 ft)	kg																
	lb																
6.0 m (20.0 ft)	kg																
	lb																
4.5 m (15.0 ft)	kg																
	lb																
3.0 m (10.0 ft)	kg																
	lb																
1.5 m (5.0 ft)	kg																
	lb																
Ground Line	kg																
	lb																
-1.5 m (-5.0 ft)	kg																
	lb																
-3.0 m (-10.0 ft)	kg																
	lb																
-4.5 m (-15.0 ft)	kg																
	lb																
-6.0 m (-20.0 ft)	kg																
	lb																

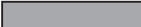
## 6. BUCKET SELECTION GUIDE

### 1) GENERAL BUCKET

				
0.9 m <sup>3</sup> SAE heaped bucket	1.14 m <sup>3</sup> SAE heaped bucket	1.44 m <sup>3</sup> SAE heaped bucket	1.74 m <sup>3</sup> SAE heaped bucket	2.10 m <sup>3</sup> SAE heaped bucket

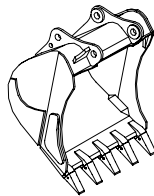
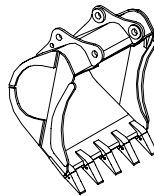
Capacity		Width		Weight	Recommendation				
					6.45 m (21' 2") boom				6.15 m (20' 2") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.2 m arm (7' 3")	2.5 m arm (8' 2")	3.2 m arm (10' 6")	4.05 m arm (13' 3")	2.2 m arm (7' 3")
0.9 m <sup>3</sup> (1.18 yd <sup>3</sup> )	0.8 m <sup>3</sup> (1.05 yd <sup>3</sup> )	950 mm (37.4")	1070 mm (42.1")	870 kg (1920 lb)					
1.14 m <sup>3</sup> (1.49 yd <sup>3</sup> )	1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> )	1110 mm (43.7")	1230 mm (48.4")	980 kg (2160 lb)					
1.44 m <sup>3</sup> (1.88 yd <sup>3</sup> )	1.25 m <sup>3</sup> (1.63 yd <sup>3</sup> )	1380 mm (54.3")	1500 mm (59.1")	1110 kg (2450 lb)					
1.74 m <sup>3</sup> (2.28 yd <sup>3</sup> )	1.5 m <sup>3</sup> (1.96 yd <sup>3</sup> )	1620 mm (63.8")	1740 mm (68.5")	1230 kg (2710 lb)					
2.10 m <sup>3</sup> (2.75 yd <sup>3</sup> )	1.8 m <sup>3</sup> (2.35 yd <sup>3</sup> )	1910 mm (75.2")	2030 mm (79.9")	1370 kg (3020 lb)					

 Applicable for materials with density of 2000 kg/m<sup>3</sup> (3370 lb/yd<sup>3</sup>) or less

 Applicable for materials with density of 1600 kg/m<sup>3</sup> (2700 lb/yd<sup>3</sup>) or less

 Applicable for materials with density of 1100 kg/m<sup>3</sup> (1850 lb/yd<sup>3</sup>) or less

## 2) ROCK AND HEAVY DUTY BUCKET

	
<p>◆ 1.44 m<sup>3</sup> SAE heaped bucket</p>	<p>⊙ 1.44 m<sup>3</sup> SAE ⊙ 1.73 m<sup>3</sup> SAE heaped bucket</p>

Capacity		Width		Weight	Recommendation				
					6.45 m (21' 2") boom				6.15 m (20' 2") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.2 m arm (7' 3")	2.5 m arm (8' 2")	3.2 m arm (10' 6")	4.05 m arm (13' 3")	2.2 m arm (7' 3")
◆ 1.44 m <sup>3</sup> (1.88 yd <sup>3</sup> )	1.25 m <sup>3</sup> (1.63 yd <sup>3</sup> )	1470 mm (57.9")	-	1380 kg (3040 lb)					
⊙ 1.44 m <sup>3</sup> (1.88 yd <sup>3</sup> )	1.25 m <sup>3</sup> (1.63 yd <sup>3</sup> )	1470 mm (57.9")	-	1470 kg (3240 lb)					
⊙ 1.73 m <sup>3</sup> (2.26 yd <sup>3</sup> )	1.5 m <sup>3</sup> (1.96 yd <sup>3</sup> )	1710 mm (67.3")	-	1610 kg (3550 lb)					

◆ : Heavy duty bucket

⊙ : Rock-Heavy duty bucket

Applicable for materials with density of 2000 kg/m<sup>3</sup> (3370 lb/yd<sup>3</sup>) or less

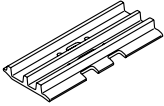
Applicable for materials with density of 1600 kg/m<sup>3</sup> (2700 lb/yd<sup>3</sup>) or less

## 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			
						
R330LC-9SH	Shoe width	mm (in)	600(24)	700(28)	800(32)	900(36)
	Operating weight	kg (lb)	33000(72750)	33580(74030)	33940(74820)	34340(75710)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.63(8.96)	0.55(7.82)	0.49(6.97)	0.44(6' 26")
	Overall width	mm (ft-in)	3280(10' 9")	3380(11' 1")	3480(11' 5")	3580(11' 9")
R330NLC-9SH	Shoe width	mm (in)	600(24)	-	-	-
	Operating weight	kg (lb)	32800(72310)	-	-	-
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.63(8.96)	-	-	-
	Overall width	mm (ft-in)	2990(9' 10")	-	-	-
R330LC-9SH HIGH WALKER	Shoe width	mm (in)	600(24)	700(28)	800(32)	Double Grouser 710(28)
	Operating weight	kg (lb)	35500(78260)	36080(79540)	36440(80340)	36480(80420)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.68(9.67)	0.59(8.39)	0.53(7.54)	0.47(6.68)
	Overall width	mm (ft-in)	3470(11' 5")	3570(11' 9")	3670(12' 0")	3580(11' 9")

### 3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	2EA
Track rollers	9EA
Track shoes	48EA

#### 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 and the other various problems.

※ **Table 1**

Track shoe	Specification	Category
600 mm triple grouser	Standard	A
700 mm triple grouser	Option	B
710 mm double grouser	Option	B
800 mm triple grouser	Option	C
900 mm triple grouser	Option	C

※ **Table 2**

Category	Applications	Applications
A	Rocky ground, river beds, normal soil	<ul style="list-style-type: none"> <li>Travel at low speed on rough ground with large obstacles such as boulders or fallen trees</li> </ul>
B	Normal soil, soft ground	<ul style="list-style-type: none"> <li>These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>Travel at high speed only on flat ground</li> <li>Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>
C	Extremely soft ground (swampy ground)	<ul style="list-style-type: none"> <li>Use the shoes only in the conditions that the machine sinks and it is impossible to use the shoes of category A or B</li> <li>These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>Travel at high speed only on flat ground</li> <li>Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>

## 8. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification
Model	HMC D6AC
Type	4-cycle turbocharged charger air cooled diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	130 × 140 mm (5.12" × 5.51")
Piston displacement	11,149 cc (680 cu in)
Compression ratio	17 : 1
Rated gross horse power (SAE J1995)	276 Hp at 1900 rpm (206 kW at 1900 rpm)
Maximum torque	120.0 kgf · m (868 lbf · ft) at 1400 rpm
Engine oil quantity	27.3 ℓ (7.2 U.S. gal)
Dry weight	920 kg (2028 lb)
Low idling speed	800 ± 100 rpm
High idling speed	2050 + 50 rpm
Rated fuel consumption	157.1 g/Hp · hr at 1900 rpm
Starting motor	Valeo (24V-5.5 kW)
Alternator	Valeo 24V-70A
Battery	2 × 12V × 160Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 154 cc/rev
Rated oil flow	2 × 262 ℓ/min (69.2 U.S. gpm / 57.6 U.K. gpm)
Rated speed	1800 rpm

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm <sup>2</sup> (570 psi)
Rated oil flow	25.5 ℓ /min (6.7 U.S. gpm/5.6 U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	9 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	350 kgf/cm <sup>2</sup> (4980 psi) [380 kgf/cm <sup>2</sup> (5400 psi)]
Overload relief valve pressure	400 kgf/cm <sup>2</sup> (5690 psi)

[ ]: Power boost

### 5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	169.4 cc/rev
Relief pressure	300 kgf/cm <sup>2</sup> (4270 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	70 kgf · m (505 lbf · ft)
Brake release pressure	26 kgf/cm <sup>2</sup> (370 psi)
Reduction gear type	2 - stage planetary

### 6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement bent-axis axial piston motor
Relief pressure	350 kgf/cm <sup>2</sup> (4980 psi)
Capacity (max / min)	154.8/88.5 cc/rev
Reduction gear type	3-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	9 kgf/cm <sup>2</sup> (128 psi)
Braking torque	40 kgf · m (290 lbf · ft)

## 7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	6.5 kg/cm <sup>2</sup> (92 psi)
	Maximum	26 kg/cm <sup>2</sup> (370 psi)
Single operation stroke	Lever	61 mm (2.4 in)
	Pedal	123 mm (4.84 in)

## 8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø150 × Ø105 × 1480 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø160 × Ø110 × 1685 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø140 × Ø100 × 1285 mm
	Cushion	Extend only

※ 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.

## 9) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R330LC-9SH	Standard	☆600 mm (24")	0.63 kgf/cm <sup>2</sup> (8.96 psi)	48	3280 mm (10' 9")
	Option	☆700 mm (28")	0.55 kgf/cm <sup>2</sup> (7.82 psi)	48	3380 mm (11' 1")
		☆800 mm (32")	0.49 kgf/cm <sup>2</sup> (6.97 psi)	48	3480 mm (11' 5")
		☆900 mm (36")	0.44 kgf/cm <sup>2</sup> (6.26 psi)	48	3580 mm (11' 9")
R330NLC-9SH	Standard	☆600 mm (24")	0.63 kgf/cm <sup>2</sup> (8.96 psi)	48	2990 mm (9' 10")
R330LC-9SH H/WALKER	Standard	☆600 mm (24")	0.68 kgf/cm <sup>2</sup> (9.67 psi)	48	3470 mm (11' 5")
	Option	☆700 mm (28")	0.59 kgf/cm <sup>2</sup> (8.39 psi)	48	3570 mm (11' 9")
		☆800 mm (32")	0.53 kgf/cm <sup>2</sup> (7.54 psi)	48	3670 mm (12' 0")
		★710 mm (28")	0.47 kgf/cm <sup>2</sup> (6.68 psi)	48	3580 mm (11' 9")

☆ : Triple grouser

★ : Double grouser



## 10) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R330LC-9SH R330NLC-9SH H/WALKER	Standard	1.44 m <sup>3</sup> (1.88 yd <sup>3</sup> )	1.25 m <sup>3</sup> (1.63 yd <sup>3</sup> )	5	1380 mm (54.3")	1500 mm (59.1")
	Option	0.9 m <sup>3</sup> (1.18 yd <sup>3</sup> )	0.8 m <sup>3</sup> (1.05 yd <sup>3</sup> )	3	950 mm (37.4")	1070 mm (42.1")
		1.14 m <sup>3</sup> (1.49 yd <sup>3</sup> )	1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> )	4	1110 mm (43.7")	1230 mm (48.4")
		1.74 m <sup>3</sup> (2.28 yd <sup>3</sup> )	1.5 m <sup>3</sup> (1.96 yd <sup>3</sup> )	5	1620 mm (63.8")	1740 mm (68.5")
		2.10 m <sup>3</sup> (2.75 yd <sup>3</sup> )	1.8 m <sup>3</sup> (2.35 yd <sup>3</sup> )	5	1910 mm (75.2")	2030 mm (79.9")
		◆ 1.44 m <sup>3</sup> (1.88 yd <sup>3</sup> )	1.25 m <sup>3</sup> (1.63 yd <sup>3</sup> )	5	1470 mm (57.9")	-
		◎ 1.44 m <sup>3</sup> (1.88 yd <sup>3</sup> )	1.25 m <sup>3</sup> (1.63 yd <sup>3</sup> )	5	1470 mm (57.9")	-
		◎ 1.73 m <sup>3</sup> (2.26 yd <sup>3</sup> )	1.5 m <sup>3</sup> (1.96 yd <sup>3</sup> )	5	1710 mm (67.3")	-

◆ : Heavy duty bucket

◎ : Rock-Heavy ducy bucket

## 9. RECOMMENDED OILS

Use only oils listed below. Do not mix different brand oil.

Please use HYUNDAI genuine oil and grease.

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	27.3 (7.2)	★SAE 5W-40							
			SAE 30							
			SAE 10W							
			SAE 10W-30							
			SAE 15W-40							
Swing drive	Gear oil	11 (2.9)	★SAE 75W-90							
Final drive		8.0×2 (2.1×2)	SAE 80W-90							
Hydraulic tank	Hydraulic oil	Tank; 190 (50)	★ISO VG 15							
			ISO VG 32							
		System; 330 (87)	ISO VG 46							
			ISO VG 68							
Fuel tank	Diesel fuel	500 (132)	★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	45 (12.0)	Ethylene glycol base permanent type (50 : 50)							
			★Ethylene glycol base permanent type (60 : 40)							

**SAE** : Society of Automotive Engineers

★ : Arctic machine

**API** : American Petroleum Institute

**ISO** : International Organization for Standardization

**NLGI** : National Lubricating Grease Institute

**ASTM** : American Society of Testing and Material