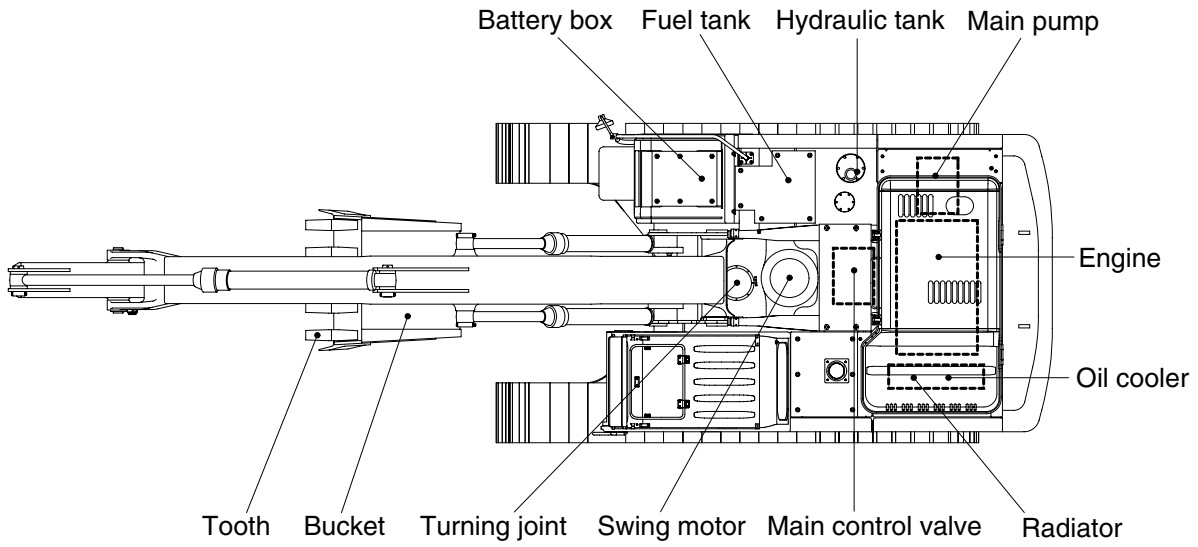
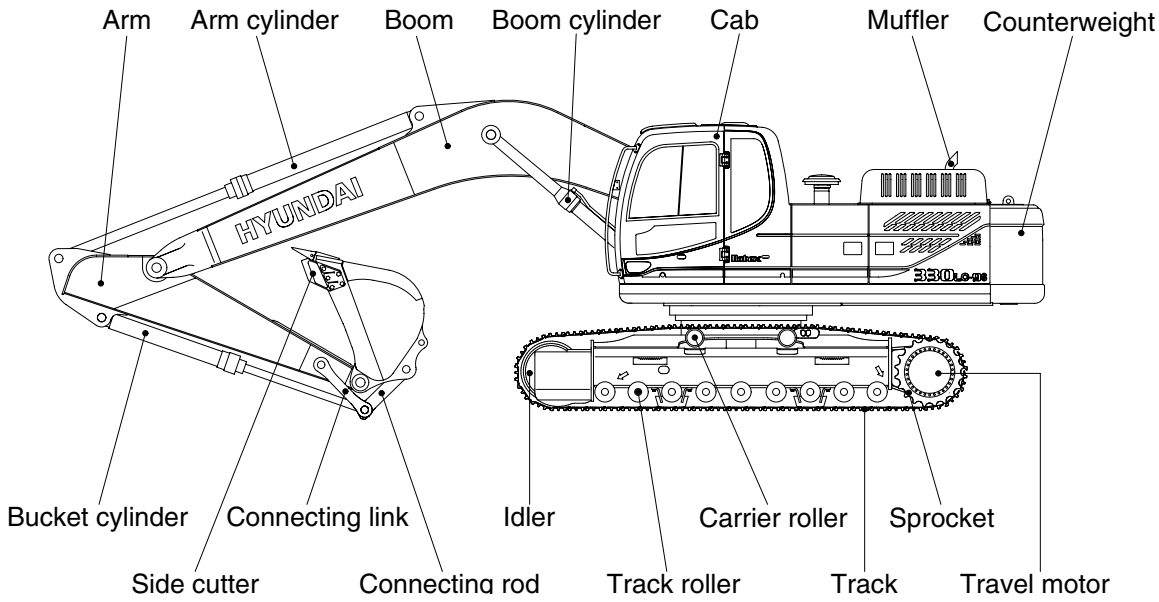
1. MAJOR COMPONENT



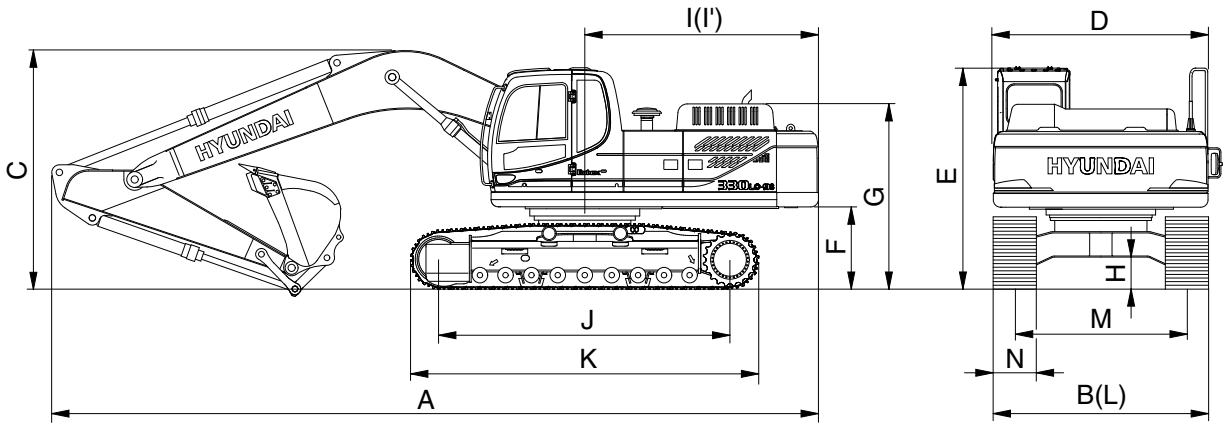


3309S2SP01

2. SPECIFICATIONS

1) R330LC-9S

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

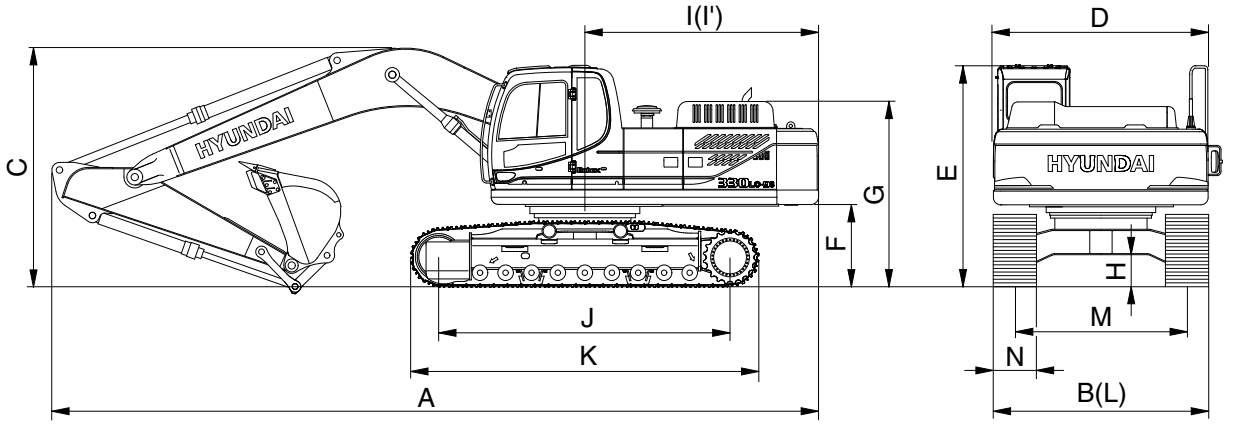


3309S2SP02

Description		Unit	Specification
Operating weight		kg (lb)	32700 (72090)
Bucket capacity (SAE heaped), standard		m^3 (yd^3)	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		3140 (10' 4")
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		3315 (10' 11")
Rear-end swing radius	I'		3380 (11' 1")
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^2(psi)	0.63 (8.96)
Max traction force		kg (lb)	29500 (65040)

2) R330NLC-9S

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

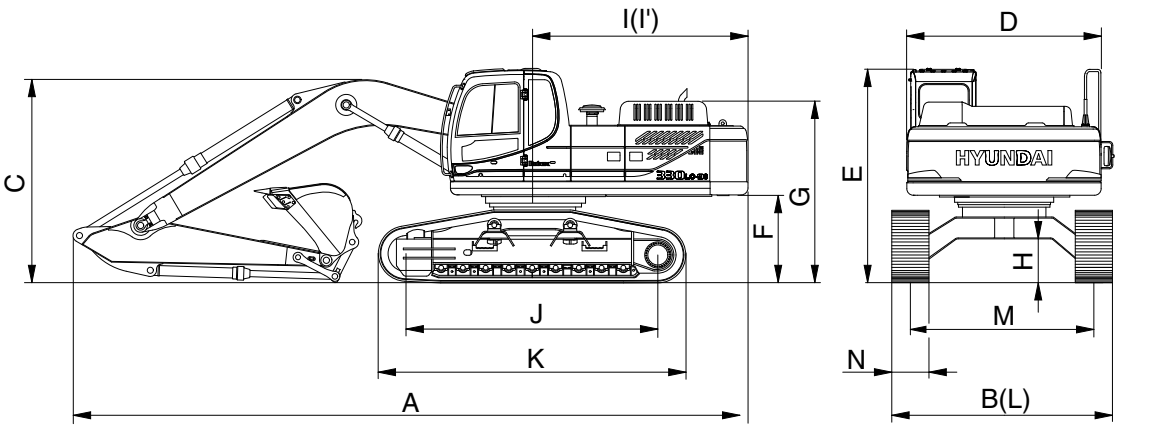


3309S2SP03

Description		Unit	Specification
Operating weight		kg (lb)	32500 (71650)
Bucket capacity (SAE heaped), standard		m^3 (yd^3)	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		3140 (10' 4")
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		3315 (10' 11")
Rear-end swing radius	I'		3380 (11' 1")
Distance between tumblers	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)	3.3/5.8 (2.1/3.6)
Swing speed		rpm	9.5
Gradeability		Degree (%)	35 (70)
Ground pressure (600 mm shoe)		kgf/cm^2(psi)	0.62 (8.82)
Max traction force		kg (lb)	29500 (65040)

3) R330LC-9S HIGH WALKER

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

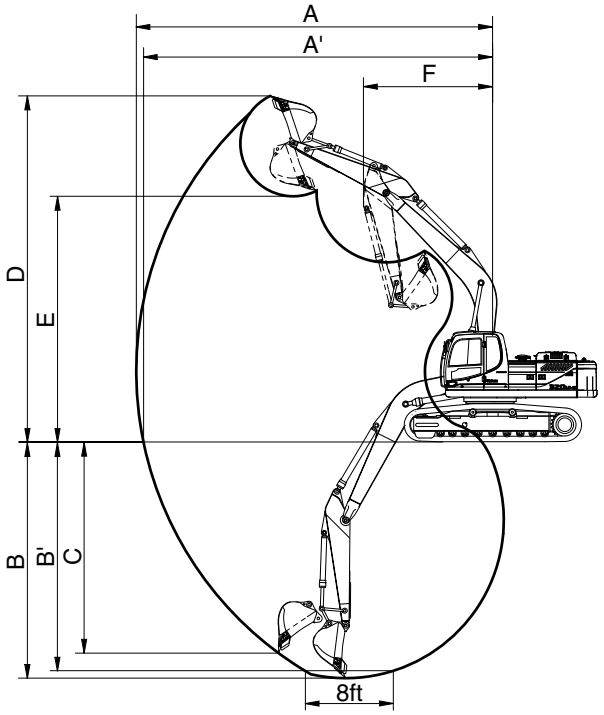


3309S2SP04

Description		Unit	Specification
Operating weight		kg (lb)	35200 (77600)
Bucket capacity (SAE heaped), standard		m^3 (yd^3)	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		3315 (10' 11")
Rear-end swing radius	I'		3380 (11' 1")
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^2(psi)	0.68 (9.67)
Max traction force		kg (lb)	29500 (65040)

3. WORKING RANGE

1) R330LC-9S, R330NLC-9S

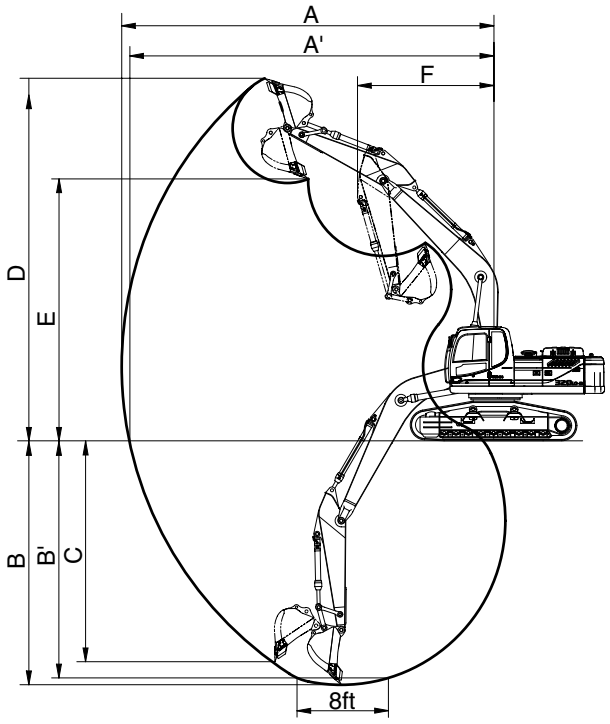


32092SP05

Description		6.45 m (21' 2") Boom				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 (27' 0")	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
		42560 [46200] lbf	42560 [46200] lbf	42560 [46200] lbf	42560 [46200] lbf	42560 [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
		47610 [51700] lbf	47610 [51700] lbf	47610 [51700] lbf	47610 [51700] lbf	47610 [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 [15860] kgf	12200 [13240] kgf	20000 [21760] kgf
		44190 [47980] lbf	40220 [43670] lbf	32190 [34960] 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 [16280] 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-9S HIGH WALKER



32092SP06

Description		6.45 m (21' 2") Boom				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 (21' 0")	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
		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

4. WEIGHT

1) R330LC-9S, R330NLC-9S

Item	R330LC-9S		R330NLC-9S	
	kg	lb	kg	lb
Upperstructure assembly	14390	31720	←	←
Main frame weld assembly	3760	8290	←	←
Engine assembly	620	1370	←	←
Main pump assembly	200	440	←	←
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	490	1080	←	←
Radiator total assy	280	620	←	←
Lower chassis assembly	11500	25770	11360	25040
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 ㎜ standard triple grouser shoe)	1860	4100	←	←
Front attachment assembly (6.45 m boom, 3.2 m arm, 1.44 m^3 SAE heaped bucket)	6390	14090	←	←
6.45 m boom assembly	2540	5600	←	←
3.2 m arm assembly	1160	2560	←	←
1.44 m^3 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-9S HIGH WALKER

Item	kg	lb
Upperstructure assembly	14790	32600
Main frame weld assembly	3760	8290
Engine assembly	620	1370
Main pump assembly	200	440
Main control valve assembly	220	490
Swing motor assembly	370	820
Hydraulic oil tank assembly	230	490
Fuel tank assembly	210	450
Counterweight	6600	14550
Cab assembly	490	1080
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 ㎜ standard triple grouser shoe)	1860	4100
Front attachment assembly (6.45 m boom, 3.2 m arm, 1.44 m^3 SAE heaped bucket)	6390	14090
6.45 m boom assembly	2540	5600
3.2 m arm assembly	1160	2560
1.44 m^3 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-9S

(1) 6.15 m (20' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m³ (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	5800	7.69
	lb									*16490	12790	(25.2)
6.0 m (20.0 ft)	kg					*8380	*8380	*8070	5900	7160	4610	8.61
	lb					*18470	*18470	*17790	13010	15790	10160	(28.2)
4.5 m (15.0 ft)	kg			*12080	*12080	*9630	8430	*8490	5760	6330	4020	9.16
	lb			*26630	*26630	*21230	18580	*18720	12700	13960	8860	(30.1)
3.0 m (10.0 ft)	kg			*15590	12350	*11230	7930	8690	5530	5960	3740	9.39
	lb			*34370	27230	*24760	17480	19160	12190	13140	8250	(30.8)
1.5 m (5.0 ft)	kg			*18040	11560	12140	7500	8450	5310	5930	3710	9.35
	lb			*39770	25490	26760	16530	18630	11710	13070	8180	(30.7)
Ground Line	kg			*18760	11280	11850	7250	8280	5160	6250	3910	9.02
	lb			*41360	24870	26120	15980	18250	11380	13780	8620	(29.6)
-1.5 m (-5.0 ft)	kg	*16910	*16910	*18280	11280	11760	7170	8240	5130	7070	4450	8.37
	lb	*37280	*37280	*40300	24870	25930	15810	18170	11310	15590	9810	(27.5)
-3.0 m (-10 ft)	kg	*22970	*22970	*16680	11470	11870	7270			*8360	5670	7.29
	lb	*50640	*50640	*36770	25290	26170	16030			*18430	12500	(23.9)
-4.5 m (-15.0 ft)	kg	*17920	*17920	*13190	11900							
	lb	*39510	*39510	*29080	26230							

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, 3.2 m (10' 6") arm equipped with 1.44 m³ (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	4280	9.06
	lb									*11550	*11550			*13160	9440	(29.7)
6.0 m (20.0 ft)	kg									*6500	5990			5630	3540	9.84
	lb									*14330	13210			12410	7800	(32.3)
4.5 m (15.0 ft)	kg							*8090	*8090	*7190	5740	*5440	4060	5070	3130	10.31
	lb							*17840	*17840	*15850	12650	*11990	8950	11180	6900	(33.8)
3.0 m (10.0 ft)	kg					*13400	12410	*9820	7840	*8110	5420	6270	3910	4790	2920	10.52
	lb					*29540	27360	*21650	17280	*17880	11950	13820	8620	10560	6440	(34.5)
1.5 m (5.0 ft)	kg					*16400	11330	*11460	7290	8260	5120	6100	3750	4740	2860	10.48
	lb					*36160	24980	*25260	16070	18210	11290	13450	8270	10450	6310	(34.4)
Ground Line	kg			*10240	*10240	*17910	10800	11500	6920	8000	4890	5960	3620	4920	2970	10.19
	lb			*22580	*22580	*39480	23810	25350	15260	17640	10780	13140	7980	10850	6550	(33.4)
-1.5 m (-5.0 ft)	kg	*11380	*11380	*14470	*14470	*18150	10650	11300	6740	7870	4760			5400	3270	9.63
	lb	*25090	*25090	*31900	*31900	*40010	23480	24910	14860	17350	10490			11900	7210	(31.6)
-3.0 m (-10.0 ft)	kg	*15350	*15350	*19470	*19470	*17370	10730	11300	6740	7880	4770			6380	3920	8.74
	lb	*33840	*33840	*42920	*42920	*38290	23660	24910	14860	17370	10520			14070	8640	(28.7)
-4.5 m (-15.0 ft)	kg			*21820	*21820	*15410	11010	*11230	6920					*7480	5360	7.37
	lb			*48100	*48100	*33970	24270	*25200	15260					*16490	11820	(24.2)
-6.0 m (-20.0 ft)	kg					*11340	*11340									
	lb					*25000	*25000									

2) R330NLC-9S

(1) 6.15 m (20' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m³ (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	4910	7.69
	lb									*16490	10820	(25.2)
6.0 m (20.0 ft)	kg					*8380	7500	*8070	4970	7120	3860	8.61
	lb					*18470	16530	*17790	10960	15700	8510	(28.2)
4.5 m (15.0 ft)	kg			*12080	11320	*9630	7110	*8490	4840	6280	3330	9.16
	lb			*26630	24960	*21230	15670	*18720	10670	13850	7340	(30.1)
3.0 m (10.0 ft)	kg			*15590	10200	*11230	6630	8640	4620	5910	3080	9.39
	lb			*34370	22490	*24760	14620	19050	10190	13030	6790	(30.8)
1.5 m (5.0 ft)	kg			*18040	9460	12060	6220	8390	4400	5880	3040	9.35
	lb			*39770	20860	26590	13710	18500	9700	12960	6700	(30.7)
Ground Line	kg			*18760	9200	11770	5980	8230	4260	6200	3210	9.02
	lb			*41360	20280	25950	13180	18140	9390	13670	7080	(29.6)
-1.5 m (-5.0 ft)	kg	*16910	*16910	*18280	9190	11680	5910	8190	4220	7030	3670	8.37
	lb	*37280	*37280	*40300	20260	25750	13030	18060	9300	15500	8090	(27.5)
-3.0 m (-10 ft)	kg	*22970	18930	*16680	9370	11800	6000			*8360	4720	7.29
	lb	*50640	41730	*36770	20660	26010	13230			*18430	10410	(23.9)
-4.5 m (-15.0 ft)	kg	*17920	*17920	*13190	9770							
	lb	*39510	*39510	*29080	21540							

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, 3.2 m (10' 6") arm equipped with 1.44 m³ (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	5170			*5970	3580	9.06
	lb									*11550	11400			*13160	7890	(29.7)
6.0 m (20.0 ft)	kg									*6500	5060			5590	2920	9.84
	lb									*14330	11160			12320	6440	(32.3)
4.5 m (15.0 ft)	kg							*8090	7130	*7190	4810	*5440	3360	5030	2540	10.31
	lb							*17840	15720	*15850	10600	*11990	7410	11090	5600	(33.8)
3.0 m (10.0 ft)	kg					*13400	10240	*9820	6540	*8110	4510	6230	3210	4760	2350	10.52
	lb					*29540	22580	*21650	14420	*17880	9940	13730	7080	10490	5180	(34.5)
1.5 m (5.0 ft)	kg					*16400	9230	*11460	6010	8200	4210	6050	3050	4710	2290	10.48
	lb					*36160	20350	*25260	13250	18080	9280	13340	6720	10380	5050	(34.4)
Ground Line	kg			*10240	*10240	*17910	8730	11420	5650	7950	3990	5920	2930	4880	2380	10.19
	lb			*22580	*22580	*39480	19250	25180	12460	17530	8800	13050	6460	10760	5250	(33.4)
-1.5 m (-5.0 ft)	kg	*11380	*11380	*14470	*14470	*18150	8590	11220	5480	7810	3870			5360	2640	9.63
	lb	*25090	*25090	*31900	*31900	*40010	18940	24740	12080	17220	8530			11820	5820	(31.6)
-3.0 m (-10.0 ft)	kg	*15350	*15350	*19470	17640	*17370	8660	11220	5480	7820	3880			6340	3190	8.74
	lb	*33840	*33840	*42920	38890	*38290	19090	24740	12080	17240	8550			13980	7030	(28.7)
-4.5 m (-15.0 ft)	kg			*21820	18170	*15410	8930	*11430	5660					*7480	4430	7.37
	lb			*48100	40060	*33970	19690	*25200	12480					*16490	9770	(24.2)
-6.0 m (-20.0 ft)	kg					*11340	9470									
	lb					*25000	20880									

3) R330LC-9S HIGH WALKER

(1) 6.15 m (20' 2") boom, 2.2 m (7' 3") arm equipped with 1.44 m³ (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	6400	7.90
	lb									*16490	14110	(25.9)
6.0 m (20.0 ft)	kg					*8560	*8560	*8100	6850	*7570	5250	8.74
	lb					*18870	*18870	*17860	15100	*16690	11570	(28.7)
4.5 m (15.0 ft)	kg			*12730	*12730	*9910	9670	*8620	6680	6870	4670	9.22
	lb			*28060	*28060	*21850	21320	*19000	14730	15150	10300	(30.2)
3.0 m (10.0 ft)	kg			*16170	14300	*11520	9170	*9400	6440	6550	4420	9.40
	lb			*35650	31530	*25400	20220	*20720	14200	14440	9740	(30.8)
1.5 m (5.0 ft)	kg			*18290	13590	*12850	8760	9250	6230	6590	4440	9.31
	lb			*40320	29960	*28330	19310	20390	13730	14530	9790	(30.5)
Ground Line	kg			*18750	13380	12960	8530	9100	6100	7020	4730	8.93
	lb			*41340	29500	28570	18810	20060	13450	15480	10430	(29.3)
-1.5 m (-5.0 ft)	kg	*18620	*18620	*18070	13410	12910	8490	9090	6090	8060	5450	8.21
	lb	*41050	*41050	*39840	29560	28460	18720	20040	13430	17770	12020	(26.9)
-3.0 m (-10 ft)	kg	*22250	*22250	*16210	13640	*12030	8630			*8240	7100	7.03
	lb	*49050	*49050	*35740	30070	*26520	19030			*18170	15650	(23.1)
-4.5 m (-15.0 ft)	kg			*12130	*12130							
	lb			*26740	*26740							

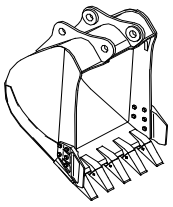
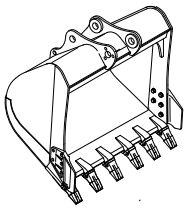
Note 1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook located on the back of the bucket.
4. *indicates load limited by hydraulic capacity.

(2) 6.45 m (21' 2") boom, 3.2 m (10' 6") arm equipped with 1.44 m³ (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									*5730	*5730			*5990	4840	9.24
	lb									*12630	*12630			*13210	10670	(30.3)
6.0 m (20.0 ft)	kg									*6600	*6600			6100	4100	9.95
	lb									*14550	*14550			13450	9040	(32.6)
4.5 m (15.0 ft)	kg							*8400	*8400	*7350	6650	*5820	4790	5570	3700	10.37
	lb							*18520	*18520	*16200	14660	*12830	10560	12280	8160	(34.0)
3.0 m (10.0 ft)	kg					*14050	*14050	*10150	9060	*8290	6320	6920	4620	5330	3500	10.53
	lb					*30970	*30970	*22380	19970	*18280	13930	15260	10190	11750	7720	(34.5)
1.5 m (5.0 ft)	kg					*16800	13300	*11720	8530	9070	6020	6750	4460	5320	3480	10.45
	lb					*37040	29320	*25840	18810	20000	13270	14880	9830	11730	7670	(34.3)
Ground Line	kg			*10990	*10990	*18040	12850	12640	8180	8840	5810	6630	4350	5570	3650	10.11
	lb			*24230	*24230	*39770	28330	27870	18030	19490	12810	14620	9590	12280	8050	(33.2)
-1.5 m (-5.0 ft)	kg	*12090	*12090	*15330	*15330	*18080	12750	12480	8040	8730	5700			6170	4060	9.50
	lb	*26650	*26650	*33800	*33800	*39860	28110	27510	17730	19250	12570			13600	8950	(31.2)
-3.0 m (-10.0 ft)	kg	*16150	*16150	*20540	*20540	*17110	12870	12510	8070	8770	5740			7390	4910	8.53
	lb	*35600	*35600	*45280	*45280	*37720	28370	27580	17790	19330	12650			16290	10820	(28.0)
-4.5 m (-15.0 ft)	kg			*20940	*20940	*14870	13200	*10980	8300					*7390	6870	7.03
	lb			*46160	*46160	*32780	29100	*24210	18300					*16290	15150	(23.1)

6. BUCKET SELECTION GUIDE

1) GENERAL BUCKET

	
1.44 m³ SAE heaped bucket	1.74 m³ SAE 2.10 m³ SAE heaped bucket

Capacity m³ (yd³)				Width mm (in)				Weight kg (lb)		Tooth EA	Recommendation mm (ft-in)				
											6150 (20' 2") boom				6450 (21' 2") boom
SAE heaped		CECE heaped		Without side cutter		With side cutter					2200 (7' 3") Arm	2200 (7' 3") Arm	2500 (8' 2") Arm	3200 (10' 6") Arm	4050 (13' 3") Arm
1.44	(1.88)	1.25	(1.63)	1380	(54")	1,500	(59")	1150	(2540)	5	●	●	●	◐	■
1.74	(2.28)	1.50	(1.96)	1620	(64")	1,740	(69")	1260	(2780)	6	●	◐	◐	■	▲
2.10	(2.75)	1.80	(2.35)	1910	(75")	2,030	(80")	1650	(3640)	6	■	■	■	▲	

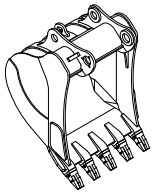
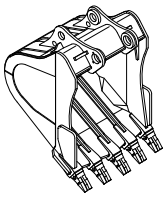
● Applicable for materials with density of 2100 kg/m³ (3500 lb/yd³) or less

◐ Applicable for materials with density of 1800 kg/m³ (3000 lb/yd³) or less

■ Applicable for materials with density of 1500 kg/m³ (2500 lb/yd³) or less

▲ Applicable for materials with density of 1200 kg/m³ (2000 lb/yd³) or less

2) ROCK AND HEAVY DUTY BUCKET

	
◈1.44 m³ SAE heaped bucket	⊙1.44 m³ SAE ⊙1.60 m³ SAE ⊙1.73 m³ SAE ⊙1.83 m³ SAE heaped bucket

Capacity m³ (yd³)				Width mm (in)		Weight kg (lb)		Tooth EA	Recommendation mm (ft-in)				
									6150 (20' 2") boom				6450 (21' 2") boom
SAE heaped		CECE heaped							2200 (7' 3") Arm	2200 (7' 3") Arm	2500 (8' 2") Arm	3200 (10' 6") Arm	4050 (13' 3") Arm
◈1.44	(1.88)	1.25	(1.63)	1470	(58")	1410	(3110)	5	●	●	●	◐	■
⊙1.44	(1.88)	1.25	(1.63)	1470	(58")	1485	(3270)	5	●	●	●	◐	■
⊙1.60	(2.09)	1.39	(1.82)	1585	(62")	1650	(3640)	5	●	◐	◐	■	▲
⊙1.73	(2.26)	1.50	(1.96)	1710	(67")	1675	(3690)	5	◐	◐	◐	■	▲
⊙1.83	(2.39)	1.59	(2.08)	1765	(69")	1850	(4080)	5	◐	■	■	▲	

◈ : Heavy duty bucket

⊙ : Rock-Heavy duty bucket

● Applicable for materials with density of 2100 kg/m³ (3500 lb/yd³) or less

◐ Applicable for materials with density of 1800 kg/m³ (3000 lb/yd³) or less

■ Applicable for materials with density of 1500 kg/m³ (2500 lb/yd³) or less

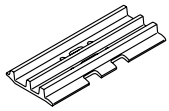
▲ Applicable for materials with density of 1200 kg/m³ (2000 lb/yd³) or less

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			
						
R330LC-9S	Shoe width	mm (in)	600(24)	700(28)	800(32)	900(36)
	Operating weight	kg (lb)	32700(72090)	33280(73410)	33640(74300)	34040(75180)
	Ground pressure	kgf/cm^2 (psi)	0.63(8.96)	0.55(7.82)	0.48(6.83)	0.44(6.26)
	Overall width	mm (ft-in)	3280(10' 9")	3380(11' 1")	3480(11' 5")	3580(11' 9")
R330NLC-9S	Shoe width	mm (in)	600(24)	-	-	-
	Operating weight	kg (lb)	32500(71650)	-	-	-
	Ground pressure	kgf/cm^2 (psi)	0.62(8.82)	-	-	-
	Overall width	mm (ft-in)	2990(9' 10")	-	-	-
R330LC-9S HIGH WALKER	Shoe width	mm (in)	600(24)	700(28)	800(32)	Double Grouser 710(28)
	Operating weight	kg (lb)	35200(77600)	35800(78920)	36200(79810)	36680(80690)
	Ground pressure	kgf/cm^2 (psi)	0.68(9.67)	0.59(8.39)	0.52(7.39)	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	· Travel at low speed on rough ground with large obstacles such as boulders or fallen trees
B	Normal soil, soft ground	· These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees · Travel at high speed only on flat ground · Travel slowly at low speed if it is impossible to avoid going over obstacles
C	Extremely soft gound (swampy ground)	· Use the shoes only in the conditions that the machine sinks and it is impossible to use the shoes of category A or B · These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees · Travel at high speed only on flat ground · Travel slowly at low speed if it is impossible to avoid going over obstacles

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins C8.3-C / HYUNDAI HM 8.3
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	114 × 135 mm (4.49" × 5.32")
Piston displacement	8300 cc (506 cu in)
Compression ratio	18 : 1
Rated gross horse power (SAE J1995)	263 Hp at 1900 rpm (196 kW at 1900 rpm)
Maximum torque	124.3 kgf · m (899 lbf · ft) at 1300 rpm
Engine oil quantity	25.5 ℓ (6.7 U.S. gal)
Dry weight	620 kg (1367 lb)
High idling speed	1950+50 rpm
Low idling speed	850±50 rpm
Rated fuel consumption	155.5 g/Hp · hr at 1750 rpm
Starting motor	24V-7.2 kW
Alternator	24V-90A
Battery	2 × 12V × 160Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 148.6 cc/rev
Rated oil flow	2 × 282 ℓ /min (74.5 U.S. gpm / 62.0 U.K. gpm)
Rated speed	1900 rpm

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	28.5 ℓ /min (7.5 U.S. gpm/6.3 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	9 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	Axial piston motor
Capacity	169.4 cc/rev
Relief pressure	300 kgf/cm^2 (4270 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	70 kgf · m (505 lbf · ft)
Brake release pressure	26 kgf/cm^2 (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^2 (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^2 (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^2 (92 psi)
	Maximum	26 kg/cm^2 (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	ø 150 × ø 105 × 1480 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 160 × ø 110 × 1685 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 140 × ø 100 × 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-9S	Standard	☆600 mm (24")	0.63 kgf/cm^2 (8.96 psi)	48	3280 mm (10' 9")
	Option	☆700 mm (28")	0.55 kgf/cm^2 (7.82 psi)	48	3380 mm (11' 1")
		☆800 mm (32")	0.48 kgf/cm^2 (6.83 psi)	48	3480 mm (11' 5")
		☆900 mm (36")	0.44 kgf/cm^2 (6.26 psi)	48	3580 mm (11' 9")
R330NLC-9S	Standard	☆600 mm (24")	0.62 kgf/cm^2 (8.82 psi)	48	2990 mm (9' 10")
R330LC-9S H/WALKER	Standard	☆600 mm (24")	0.68 kgf/cm^2 (9.67 psi)	48	3470 mm (11' 5")
	Option	☆700 mm (28")	0.59 kgf/cm^2 (8.39 psi)	48	3570 mm (11' 9")
		☆800 mm (32")	0.52 kgf/cm^2 (7.39 psi)	48	3670 mm (12' 0")
		★710 mm (28")	0.47 kgf/cm^2 (6.68 psi)	48	3580 mm (11' 9")

☆ : Triple grouser

★ : Double grouser

10) BUCKET

Item		Capacity m^3 (yd^3)				Tooth quantity EA	Width mm (in)			
		SAE heaped		CECE heaped			Without side cutter		With side cutter	
R330LC-9S R330NLC-9S H/WALKER	Standard	1.44	(1.88)	1.25	(1.63)	5	1380	(54")	1500	(59")
	Option	1.74	(2.28)	1.50	(1.96)	6	1620	(64")	1740	(69")
		2.10	(2.75)	1.80	(2.35)	6	1910	(75")	2030	(80")
		◈1.44	(1.88)	1.25	(1.63)	5	1470	(58")		
		⊙1.44	(1.88)	1.25	(1.63)	5	1470	(58")		
		⊙1.60	(2.09)	1.39	(1.82)	5	1585	(62")		
		⊙1.73	(2.26)	1.50	(1.96)	5	1710	(67")		
		⊙1.83	(2.39)	1.59	(2.08)	5	1765	(69")		

◈ : Heavy duty bucket
◎ : Rock-Heavy duty 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) 40 (104)
Engine oil pan	Engine oil	28 (7.4)	★SAE 5W-40 SAE 30 SAE 10W SAE 10W-30 SAE 15W-40
Swing drive	Gear oil	Type 1 11.0 (2.9)	★SAE 75W-90
		Type 2, 3 6.0 (1.59)	SAE 80W-90
Final drive		8.0×2 (2.1×2)	
Hydraulic tank	Hydraulic oil	Tank: 190 (50) System: 330 (87)	★ISO VG 15 ISO VG 32 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 soft water★1	40 (10.56)	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

★1 : Soft water
City water or distilled water