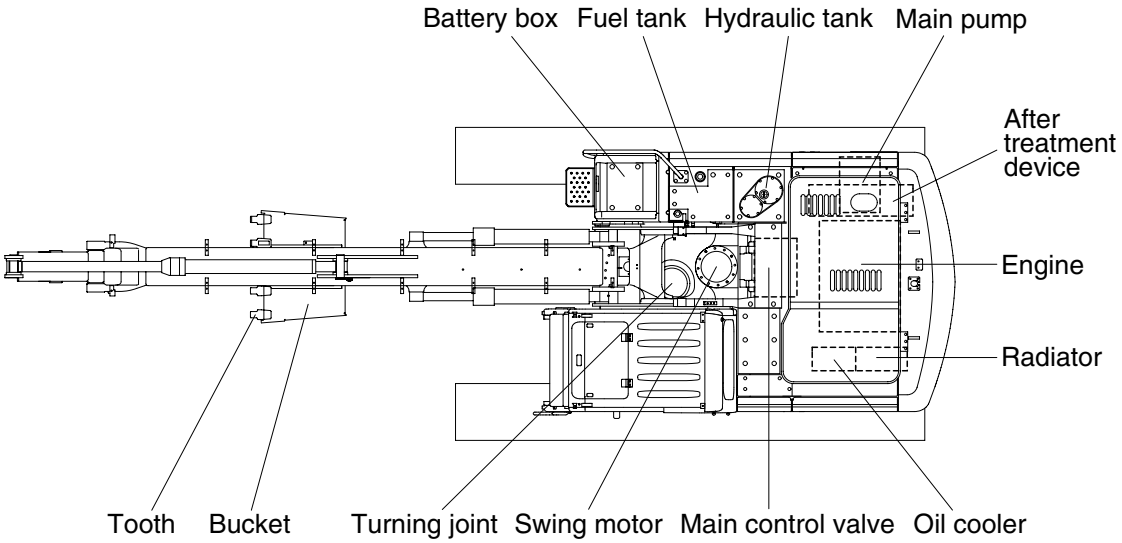
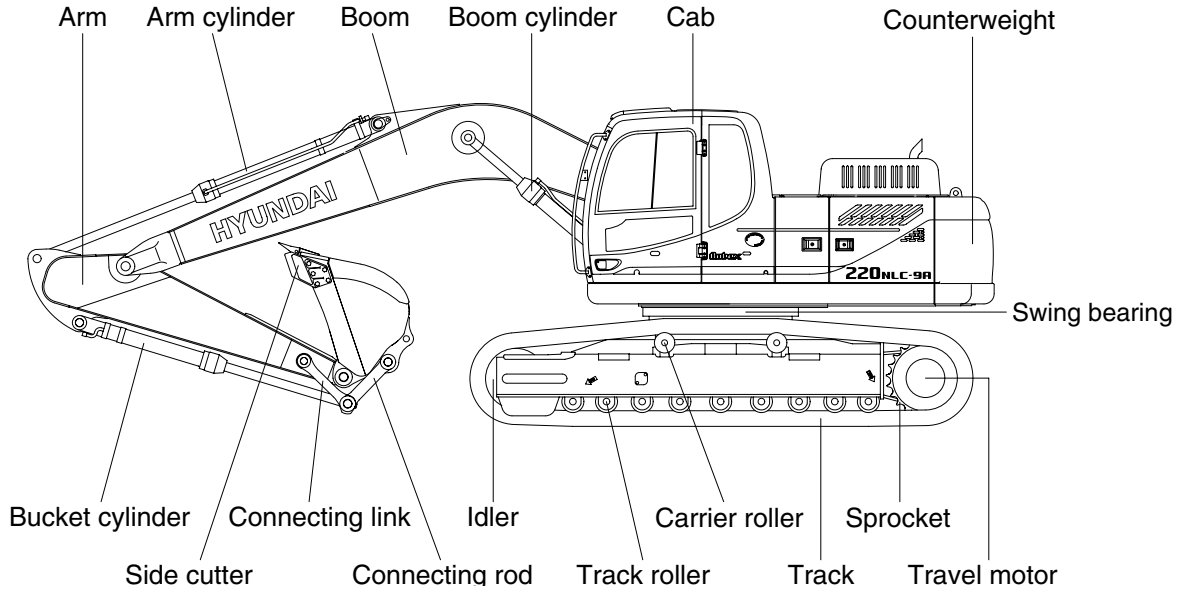
GROUP 2 SPECIFICATIONS

1. MAJOR COMPONENT



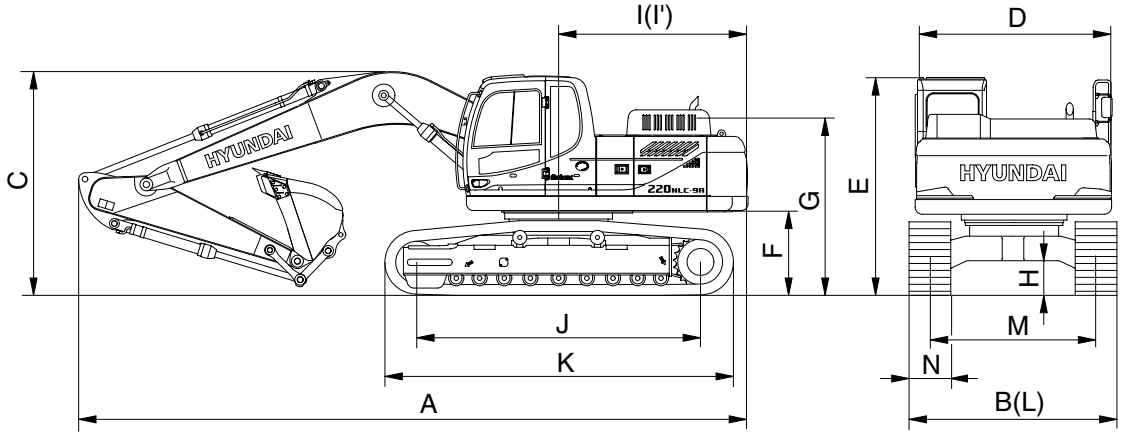


220N9A2SP01

2. SPECIFICATIONS

1) R220NLC-9A

· 5.65 m (18' 6") BOOM and 2.92 m (9' 7") ARM

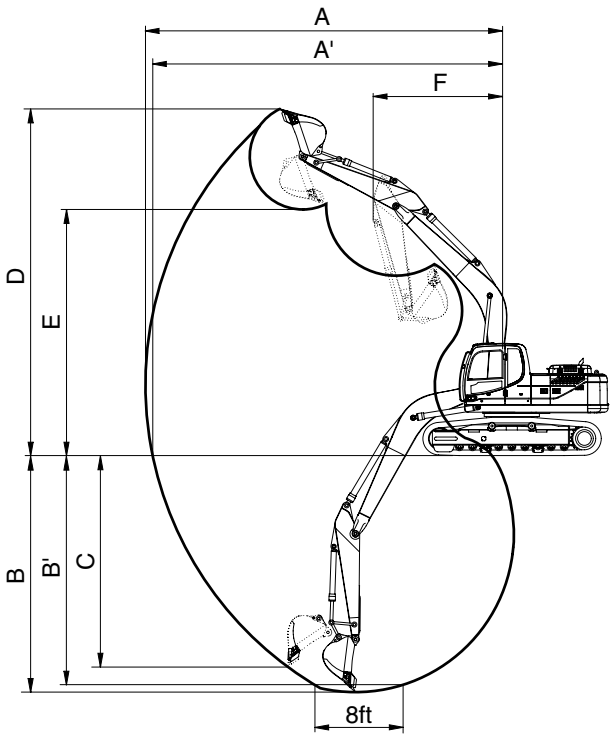


220N9A2SP02

Description		Unit	Specification
Operating weight		kg (lb)	22000 (48500)
Bucket capacity (SAE heaped), standard		m^3 (yd^3)	0.87 (1.14)
Overall length	A	mm (ft-in)	9510 (31' 2")
Overall width, with 500 mm shoe	B		2500 (8' 2")
Overall height	C		3100 (10' 2")
Superstructure width	D		2530 (8' 4")
Overall height of cab	E		2920 (9' 7")
Ground clearance of counterweight	F		1060 (3' 6")
Engine cover height	G		2320 (7' 7")
Minimum ground clearance	H		480 (1' 7")
Rear-end distance	I		2770 (9' 1")
Rear-end swing radius	I'		2790 (9' 2")
Distance between tumblers	J		3650 (12' 0")
Undercarriage length	K		4440 (14' 7")
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)	3.4/5.3 (2.1/3.3)
Swing speed		rpm	12.0
Gradeability		Degree (%)	35 (70)
Ground pressure (500 mm shoe)		kgf/cm^2(psi)	0.56 (7.96)
Max traction force		kg (lb)	21100 (46500)

3. WORKING RANGE

· 5.65 m (18' 6") MONO BOOM

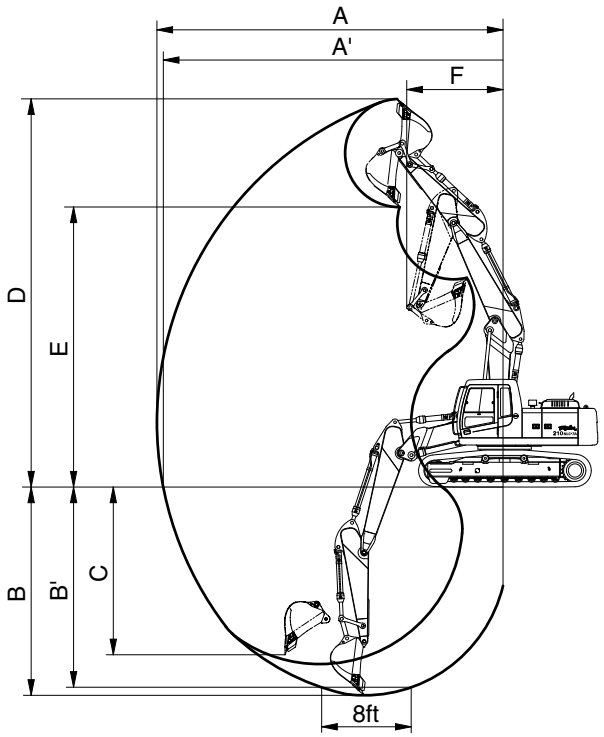


21092SP03

Description		2.0 m (6' 7") Arm	2.40 m (7' 10") Arm	2.92 m (9' 7") Arm
Max digging reach	A	9140 mm (30' 0")	9510 mm (31' 2")	9960 mm (32' 8")
Max digging reach on ground	A'	8960 mm (29' 5")	9340 mm (30' 8")	9800 mm (32' 2")
Max digging depth	B	5750 mm (18'10")	6150 mm (20' 2")	6640 mm (21' 9")
Max digging depth (8ft level)	B'	5520 mm (18' 1")	5950 mm (19' 6")	6470 mm (21' 3")
Max vertical wall digging depth	C	5320 mm (17' 5")	5780 mm (19' 0")	6250 mm (20' 6")
Max digging height	D	9270 mm (30' 5")	9500 mm (31' 2")	9740 mm (31'11")
Max dumping height	E	6450 mm (21' 2")	6660 mm (21'10")	6900 mm (22' 8")
Min swing radius	F	3710 mm (12' 2")	3630 mm (11'11")	3580 mm (11' 9")
Bucket digging force	SAE	133.4 [147.8] kN	133.4 [147.8] kN	133.4 [147.8] kN
		13600 [14770] kgf	13600 [14770] kgf	13600 [14770] kgf
		29980 [32500] lbf	29980 [32500] lbf	29980 [32500] lbf
	ISO	152.0 [165.0] kN	152.0 [165.0] kN	152.0 [165.0] kN
		15500 [16830] kgf	15500 [16830] kgf	15500 [16830] kgf
		34170 [37100] lbf	34170 [37100] lbf	34170 [37100] lbf
Arm digging force	SAE	144.2 [156.5] kN	119.6 [129.9] kN	102.0 [110.7] kN
		14700 [15960] kgf	12200 [13250] kgf	10400 [11290] kgf
		32410 [35190] lbf	26900 [29210] lbf	22930 [24900] lbf
	ISO	151.0 [164.0] kN	125.5 [136.3] kN	106.9 [116.1] kN
		15400 [16720] kgf	12800 [13900] kgf	10900 [11830] kgf
		33950 [36860] lbf	28220 [30640] lbf	24030 [26090] lbf

[ ] : Power boost

2) 5.65 m (18' 6") HYDRAULIC ADJUSTABLE BOOM



210N7A2SP05

Description		2.0 m (6' 7") Arm	*2.40 m (7' 10") Arm
Max digging reach	A	9120 mm (29' 11")	9530 mm (31' 3")
Max digging reach on ground	A'	8940 mm (29' 4")	9360 mm (30' 9")
Max digging depth	B	5480 mm (18' 0")	5890 mm (19' 4")
Max digging depth (8ft level)	B'	5360 mm (17' 7")	5770 mm (18' 11")
Max vertical wall digging depth	C	4560 mm (15' 0")	4990 mm (16' 4")
Max digging height	D	10300 mm (33' 10")	10670 mm (35' 0")
Max dumping height	E	7390 mm (24' 3")	7740 mm (25' 5")
Min swing radius	F	2870 mm (9' 5")	2670 mm (8' 9")
Bucket digging force	SAE	133 [146] kN	133 [146] kN
		13600 [14840] kgf	13600 [14840] kgf
		29980 [32710] lbf	29980 [32710] lbf
	ISO	152 [166] kN	152 [166] kN
		15500 [16910] kgf	15500 [16910] kgf
		34170 [37280] lbf	34170 [37280] lbf
Arm digging force	SAE	135 [148] kN	113 [123] kN
		13800 [15050] kgf	11500 [12550] kgf
		30420 [33190] lbf	25350 [27650] lbf
	ISO	142 [155] kN	118 [128] kN
		14500 [15820] kgf	12000 [13090] kgf
		31970 [34880] lbf	26460 [28870] lbf

* : Standard [ ] : Power boost

4. WEIGHT

1) R220NLC-9A

Item	R220NLC-9A	
	kg	lb
Upperstructure assembly	8950	19730
Main frame weld assembly	1740	3840
Engine assembly	520	1150
Main pump assembly	170	370
Main control valve assembly	220	490
Swing motor assembly	240	530
Hydraulic oil tank weld assembly	165	360
Fuel tank assembly	123	270
Counterweight	4700	10360
Cab assembly	500	1100
Lower chassis assembly	8400	18520
Track frame weld assembly	2525	5570
Swing bearing	290	640
Travel motor assembly	300	660
Turning joint	55	120
Track recoil spring and idler	140	310
Idler	170	370
Carrier roller	20	45
Track roller	40	90
Track-chain assembly (500 ㎜ standard triple grouser shoe)	1200	2650
Front attachment assembly (5.65 m boom, 2.92 m arm, 0.87 m^3 SAE heaped bucket)	3970	8750
5.65 m boom assembly	1360	3000
2.92 m arm assembly	750	1650
0.87 m^3 SAE heaped bucket	740	1630
Boom cylinder assembly	180	400
Arm cylinder assembly	290	640
Bucket cylinder assembly	175	390
Bucket control link assembly	170	370

5. LIFTING CAPACITIES

1) ROBEX 220NLC-9A

(1) 5.65 m (18' 6") boom, 2.92 m (9' 7") arm equipped with 0.87 m³ (SAE heaped) bucket, 500 mm (20") triple grouser shoe.

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

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)		6.0m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
														m (ft)
7.5 m (25.0 ft)	kg											*3400	2880	7.76
	lb											*7500	6350	(25.5)
6.0 m (20.0 ft)	kg									*2180	*2180	*3500	2250	8.73
	lb									*4810	*4810	*7720	4960	(28.6)
4.5 m (15.0 ft)	kg							*4020	*4020	*3860	2890	*3630	1920	9.30
	lb							*8860	*8860	*8510	6370	*8000	4230	(30.5)
3.0 m (10.0 ft)	kg			*9690	*9690	*6140	*6140	*4860	4040	*4260	2760	3700	1760	9.58
	lb			*21360	*21360	*13540	*13540	*10710	8910	*9390	6080	8160	3880	(31.4)
1.5 m (5.0 ft)	kg			*9170	*9170	*7980	5780	*5790	3750	*4750	2610	3650	1710	9.57
	lb			*20220	*20220	*17590	12740	*12760	8270	*10470	5750	8050	3770	(31.4)
Ground Line	kg			*9770	*9770	*9220	5410	*6540	3540	*5170	2500	3800	1780	9.29
	lb			*21540	*21540	*20330	11930	*14420	7800	*11400	5510	8380	3920	(30.5)
-1.5 m (-5.0 ft)	kg	*8900	*8900	*12810	10100	*9690	5270	*6940	3430	5200	2440	4220	2000	8.71
	lb	*19620	*19620	*28240	22270	*21360	11620	*15300	7560	11460	5380	9300	4410	(28.6)
-3.0 m (-10 ft)	kg	*12300	*12300	*14180	10240	*9440	5290	*6830	3430			*4540	2480	7.73
	lb	*27120	*27120	*31260	22580	*20810	11660	*15060	7560			*10010	5470	(25.4)
-4.5 m (-15.0 ft)	kg			*12070	10560	*8240	5460					*4420	3730	6.14
	lb			*26610	23280	*18170	12040					*9740	8220	(20.1)

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) 5.65 m (18' 6") boom, 2.00 m (6' 7") arm equipped with 0.87 m³ (SAE heaped) bucket, 500 mm (20") triple grouser shoe.

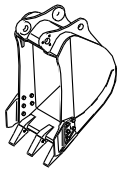
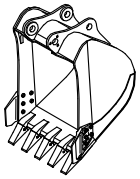
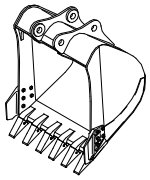
Load point height		Load radius								At max. reach		
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
												m (ft)
7.5 m (25.0 ft)	kg									*4050	3800	6.61
	lb									*8930	8380	(21.7)
6.0 m (20.0 ft)	kg					*4470	4360			*4120	2800	7.75
	lb					*9850	9610			*9080	6170	(25.4)
4.5 m (15.0 ft)	kg			*5730	*5730	*4890	4210			*4250	2340	8.41
	lb			*12630	*12630	*10780	9280			*9370	5160	(27.6)
3.0 m (10.0 ft)	kg			*7480	6130	*5650	3970	*4880	2740	4350	2130	8.71
	lb			*16490	13510	*12460	8750	*10760	6040	9590	4700	(28.6)
1.5 m (5.0 ft)	kg			*9040	5650	*6440	3730	*5240	2640	4300	2080	8.71
	lb			*19930	12460	*14200	8220	*115510	5820	9480	4590	(28.6)
Ground Line	kg			*9780	5440	*6980	3580	5340	2560	4540	2190	8.40
	lb			*21560	11990	*15390	7890	11770	5640	10010	4830	(27.6)
-1.5 m (-5.0 ft)	kg	*14220	10460	*9740	5410	*7080	3540			*4980	2530	7.73
	lb	*31350	23060	*21470	11930	*15610	7800			*10980	5580	(25.4)
-3.0 m (-10 ft)	kg	*12730	10670	*8950	5520	*6440	3620			*4950	3360	6.58
	lb	*28060	23520	*19730	12710	*14200	7980			*10910	7410	(21.6)

(3) 5.65 m (18' 6") boom, 2.40 m (7' 10") arm equipped with 0.87 m³ (SAE heaped) bucket, 500 mm (20") 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)		6.0m (20.0 ft)		7.5 m (25.0 ft)		Capacity		Reach
														m (ft)
7.5 m (25.0 ft)	kg											*3740	3340	7.12
	lb											*8250	7360	(23.4)
6.0 m (20.0 ft)	kg							*4030	*4030			*3820	2530	8.18
	lb							*8880	*8880			*8420	5580	(26.8)
4.5 m (15.0 ft)	kg							*4510	4250	*4090	2850	*3950	2140	8.80
	lb							*9940	9370	*9020	6280	*8710	4720	(28.9)
3.0 m (10.0 ft)	kg					*6900	6220	*5310	3990	*4600	2740	4050	1950	9.09
	lb					*15210	13710	*11710	8800	*10140	6040	8930	4300	(29.8)
1.5 m (5.0 ft)	kg					*8590	5690	*6160	3730	*5020	2620	4000	1910	9.08
	lb					*18940	12540	*13580	8220	*11070	5780	8820	4210	(29.8)
Ground Line	kg			*9030	*9030	*9560	5410	*6800	3550	5300	2520	4190	2000	8.79
	lb			*19910	*19910	*21080	11930	*14990	7830	11680	5560	9240	4410	(28.8)
-1.5 m (-5.0 ft)	kg	*9880	*9880	*13740	10260	*9750	5330	*7030	3480			*4710	2270	8.16
	lb	*21780	*21780	*30290	22620	*21500	11750	*15500	7670			*10380	5000	(26.8)
-3.0 m (-10 ft)	kg	*14280	*14280	*13430	10450	*9200	5400	*6670	3520			*4790	2920	7.09
	lb	*31480	*31480	*29610	23040	*20280	11900	*14700	7760			*10560	6440	(23.3)
-4.5 m (-15.0 ft)	kg			*10820	*10820	*7500	5640							
	lb			*23850	*23850	*16530	12430							

6. BUCKET SELECTION GUIDE

1) GENERAL BUCKET

		
0.51 m³ SAE heaped bucket	※ 0.87, 0.80, 0.92, 1.10, 1.20 m³ SAE heaped bucket	1.34 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation		
					5.65 m (18' 6") Mono boom		
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.0 m arm (6' 7")	2.4 m arm (7' 10")	2.92 m arm (9' 7")
0.51 m³ (0.67 yd³)	0.45 m³ (0.59 yd³)	700 mm (27.6")	820 mm (32.3")	570 kg (1260 lb)			
0.80 m³ (1.05 yd³)	0.70 m³ (0.92 yd³)	1000 mm (39.4")	1120 mm (44.1")	700 kg (1540 lb)			
※ 0.87 m³ (1.14 yd³)	0.75 m³ (0.98 yd³)	1090 mm (42.9")	1210 mm (47.6")	740 kg (1630 lb)			
0.92 m³ (1.20 yd³)	0.80 m³ (1.05 yd³)	1150 mm (45.3")	1270 mm (50.0")	770 kg (1700 lb)			
1.10 m³ (1.44 yd³)	0.96 m³ (1.26 yd³)	1320 mm (52.0")	1440 mm (56.7")	830 kg (1830 lb)			
1.20 m³ (1.57 yd³)	1.00 m³ (1.31 yd³)	1400 mm (55.1")	1520 mm (60.0")	850 kg (1870 lb)			
1.34 m³ (1.75 yd³)	1.15 m³ (1.50 yd³)	1550 mm (61.0")	1670 mm (65.7")	920 kg (2030 lb)			

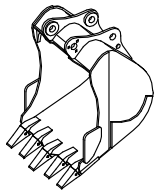
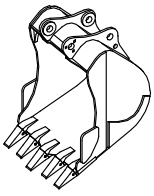
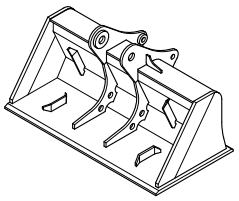
※ : Standard bucket

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) HEAVY DUTY, ROCK-HEAVY DUTY AND SLOPE FINISHING BUCKET

Heavy duty bucket	Rock-Heavy duty bucket	Slope finishing bucket
		
◈ 0.74, 0.90, 1.05 m³ SAE heaped bucket	⊙ 0.87 m³ SAE heaped bucket	▣ 0.75 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation		
					5.65 m (18' 6") boom		
SAE heaped	SAE heaped	Without side cutter	With side cutter		2.0 m arm (6' 7")	2.4 m arm (7' 10")	2.92 m arm (9' 7")
◈ 0.74 m³ (0.97 yd³)	0.65 m³ (0.85 yd³)	985 mm (38.8")	-	770 kg (1700 lb)			
◈ 0.90 m³ (1.18 yd³)	0.80 m³ (1.05 yd³)	1070 mm (42.1")	-	810 kg (1790 lb)			
◈ 1.05 m³ (1.37 yd³)	0.92 m³ (1.20 yd³)	1290 mm (50.8")	-	890 kg (1960 lb)			
⊙ 0.87 m³ (1.14 yd³)	0.75 m³ (0.98 yd³)	1140 mm (44.9")	-	900 kg (1980 lb)			
▣ 0.75 m³ (0.98 yd³)	0.65 m³ (0.85 yd³)	1790 mm (70.5")	-	880 kg (1940 lb)			

◈ : Heavy duty bucket ⊙ : Rock-Heavy duty bucket ▣ : Slope finishing bucket

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

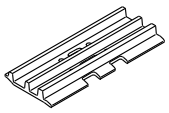
Applicable for materials with density of 1100 kg/m³ (1850 lb/yd³) or less

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		
					
R220NLC-9A MONO BOOM	Shoe width	mm (in)	500 (20)	600 (24)	700 (28)
	Operating weight	kg (lb)	22000 (48500)	22300 (49200)	22600 (49820)
	Ground pressure	kgf/cm^2 (psi)	0.56 (7.96)	0.47 (6.68)	0.41 (5.83)
	Overall width	mm (ft-in)	2500 (8' 2")	2600 (8' 6")	2700 (8'10")
R220NLC-9A ADJUST BOOM	Shoe width	mm (in)	500 (20)	600 (24)	-
	Operating weight	kg (lb)	21150 (46630)	21450 (47290)	-
	Ground pressure	kgf/cm^2 (psi)	0.56 (7.96)	0.47 (6.68)	-
	Overall width	mm (ft-in)	2500 (8' 2")	2600 (8' 6")	-

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	2 EA
Track rollers	9 EA
Track shoes	49 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 and the other various problems.

※ **Table 1**

Track shoe	Specification	Category
500 mm triple grouser	Standard	A
600 mm triple grouser	Option	B
700 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 QSB6.7
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	107 × 124 mm (4.2" × 4.9")
Piston displacement	6700 cc (409cu in)
Compression ratio	17.2 : 1
Rated gross horse power (SAE J1995)	158 Hp at 1900 rpm (118 kW at 1900 rpm)
Maximum torque at 1500 rpm	63.0 kgf · m (456 lbf · ft)
Engine oil quantity	19.4 ℓ (5.3 U.S. gal)
Wet weight	520 kg (1150 lb)
High idling speed	1950 ± 50 rpm
Low idling speed	850 ± 100 rpm
Rated fuel consumption	163.2 g/Hp · hr at 1900 rpm
Starting motor	Nippon denso (24 V-4.5 kW)
Alternator	Delco Remy (24 V-70 A)
Battery	2 × 12 V × 100 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 117cc/rev
Maximum pressure	350kgf/cm^2 (4980psi) [380 kgf/cm^2 (5400 psi)]
Rated oil flow	2 × 222 ℓ /min (58.6U.S. gpm/ 48.8U.K. gpm)
Rated speed	1900 rpm

[ ] : Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15 cc/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 two-block
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 1	Type 2
Type	Two fixed displacement axial piston motor	
Capacity	151 cc/rev	142.8 cc/rev
Relief pressure	265 kgf/cm^2 (3770 psi)	
Braking system	Automatic, spring applied hydraulic released	
Braking torque	59 kgf · m (427 lbf · ft)	58 kgf · m (420 lbf · ft)
Brake release pressure	33~50 kgf/cm^2 (470~711 psi)	21.3~35.6 kgf/cm^2 (154~257 psi)
Reduction gear type	2 - stage planetary	

6) TRAVEL MOTOR

Item	Specification	
	Type 1	Type 2, 3
Type	Variable displacement axial piston motor	
Relief pressure	350 kgf/cm^2 (4980 psi)	
Reduction gear type	2-stage planetary	
Braking system	Automatic, spring applied hydraulic released	
Brake release pressure	11 kgf/cm^2 (156 psi)	15.2 kgf/cm^2 (216 psi)
Braking torque	49.3 kgf · m (357 lbf · ft)	65.4 kgf · m (473 lbf · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducting type
Operating pressure	Minimum	6.5 kgf/cm^2 (92 psi)
	Maximum	25 kgf/cm^2 (360 psi)
Single operation stroke	Lever(1, 3 port)	90 mm (3.5 in)
	Pedal(2, 4 port)	130 mm (4.4 in)

8) CYLINDER

Item			Specification
Boom cylinder		Bore dia × Rod dia × Stroke	ø 120 × ø 85 × 1290 mm
		Cushion	Extend only
Arm cylinder		Bore dia × Rod dia × Stroke	ø 140 × ø 100 × 1510 mm
		Cushion	Extend and retract
Bucket cylinder		Bore dia × Rod dia × Stroke	ø 120 × ø 85 × 1055 mm
		Cushion	Extend only
Adjust boom cylinder	1st	Bore dia × Rod dia × Stroke	ø 120 × ø 85 × 1290 mm
		Cushion	Extend only
	2nd	Bore dia × Rod dia × Stroke	ø 160 × ø 100 × 1060 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.

8) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R220NLC-9A MONO BOOM	Standard	500 mm (20")	0.56 kgf/cm^2 (7.96 psi)	49	2500 mm (8' 2")
	Option	600 mm (24")	0.47 kgf/cm^2 (6.68 psi)	49	2600 mm (8' 6")
		700 mm (28")	0.41 kgf/cm^2 (5.83 psi)	49	2700 mm (8' 10")
R220NLC-9A ADJUST BOOM	Standard	500 mm (20")	0.56 kgf/cm^2 (7.96 psi)	49	2500 mm (8' 2")
	Option	600 mm (24")	0.48 kgf/cm^2 (6.83 psi)	49	2600 mm (8' 6")

10) BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
Standard	0.87 m³ (1.14 yd³)	0.75 m³ (0.98 yd³)	5	1090 mm (42.9")	1120 mm (47.6")
Option	0.51 m³ (0.67 yd³)	0.45 m³ (0.59 yd³)	3	700 mm (27.6")	820 mm (32.3")
	0.80 m³ (1.05 yd³)	0.70 m³ (0.92 yd³)	5	1000 mm (39.4")	1120 mm (44.1")
	0.92 m³ (1.20 yd³)	0.80 m³ (1.05 yd³)	5	1150 mm (45.3")	1270 mm (50.0")
	1.10 m³ (1.44 yd³)	0.96 m³ (1.26 yd³)	5	1320 mm (52.0")	1440 mm (56.7")
	1.20 m³ (1.57 yd³)	1.00 m³ (1.31 yd³)	5	1400 mm (55.1")	1520 mm (60.0")
	1.34 m³ (1.75 yd³)	1.15 m³ (1.50 yd³)	6	1550 mm (61.0")	1670 mm (65.7")
	◈0.74 m³ (0.97 yd³)	0.65 m³ (0.85 yd³)	5	985 mm (38.8")	-
	◈0.90 m³ (1.18 yd³)	0.80 m³ (1.05 yd³)	5	1070 mm (42.1")	-
	◈1.05 m³ (1.37 yd³)	0.92 m³ (1.20 yd³)	5	1290 mm (50.8")	-
	⊙0.87 m³ (1.14 yd³)	0.75 m³ (0.98 yd³)	5	1140 mm (44.9")	-
	▣0.75 m³ (0.98 yd³)	0.65 m³ (0.85 yd³)	-	1790 mm (70.5")	-

◈ : Heavy duty bucket

⊙ : Rock-heavy duty bucket

▣ : Slope finishing 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	23.1 (6.1)	★SAE 5W-40 SAE 30 SAE 10W SAE 10W-30 SAE 15W-40
Swing drive	Gear oil	5.0 (1.3)	★SAE 75W-90
Final drive		5.8×2 (1.5×2)	SAE 80W-90
Hydraulic tank	Hydraulic oil	Tank; 165 (43.6) System; 290 (76.6)	★ISO VG 15 ISO VG 32 ISO VG 46 ISO VG 68
Fuel tank	Diesel fuel★1	310 (81.9)	★ASTM D975 NO.1 ASTM D975 NO.2
Fitting (grease nipple)	Grease	As required	★NLGI NO.1 NLGI NO.2
Radiator (reservoir tank)	Mixture of antifreeze and water 50 : 50	40 (10.6)	Ethylene glycol base permanent type ★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

★1 : Ultra low sulfur diesel
- sulfur content ≤ 15 ppm

★ : Cold region
Russia, CIS, Mongolia