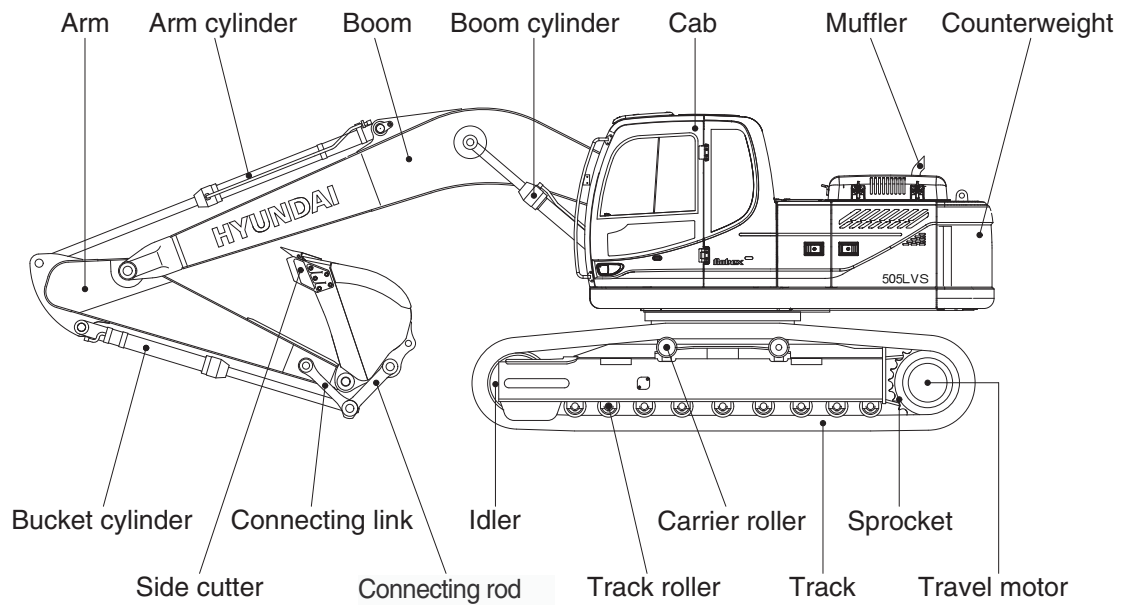
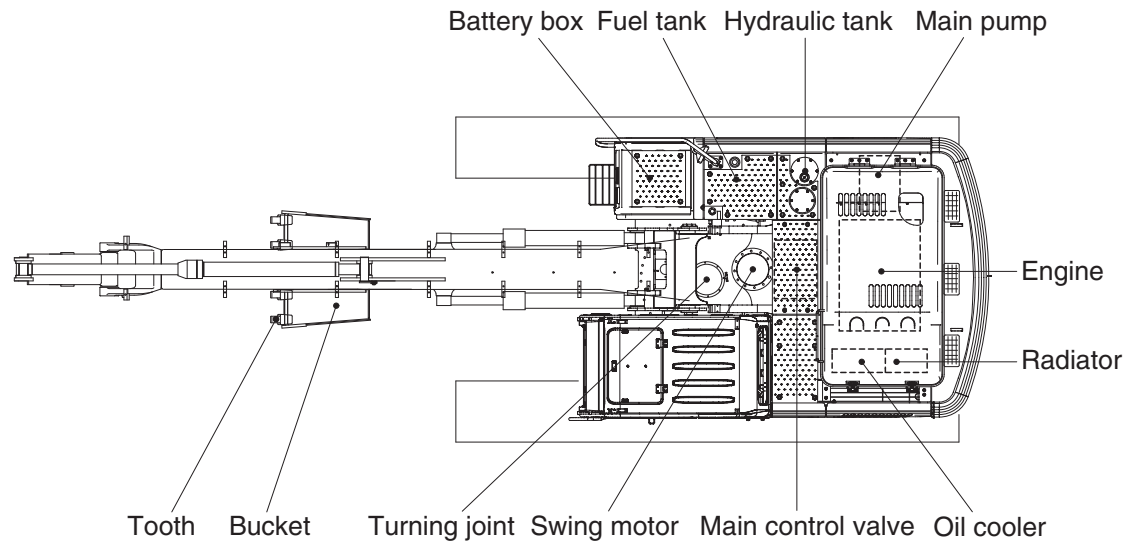


SPECIFICATIONS

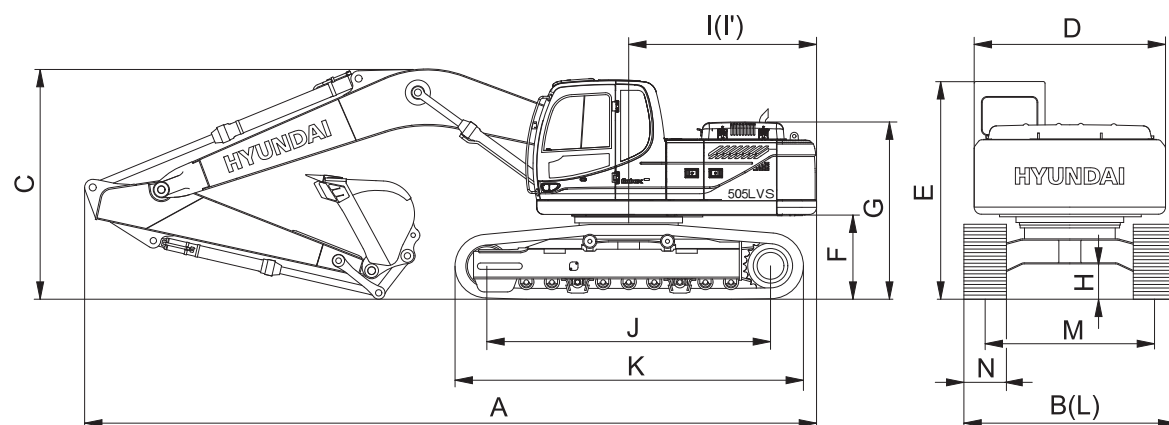
1. MAJOR COMPONENT



2. SPECIFICATIONS

1) R505LVS

· 6.55 m (21' 6") BOOM and 2.90 m (9' 6") ARM



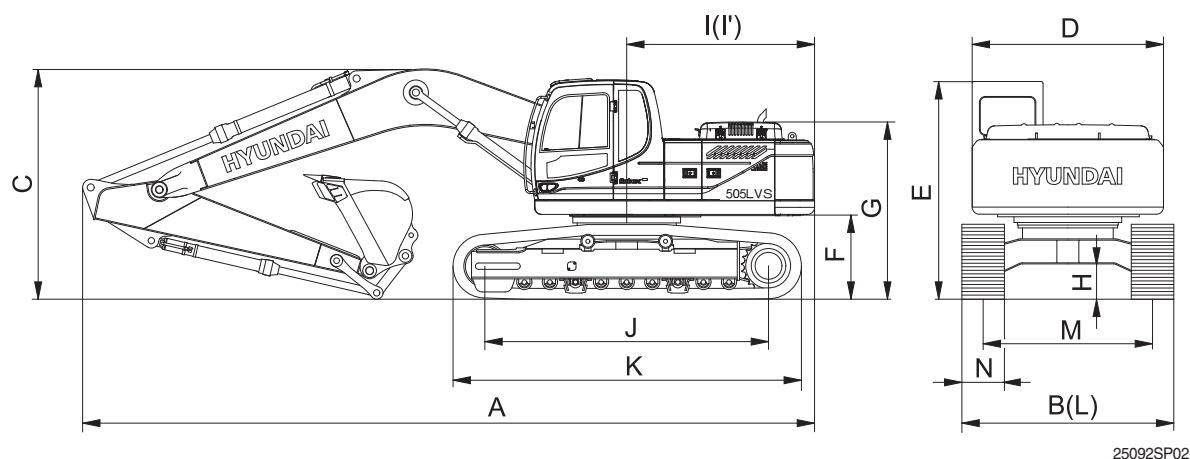
25092SP02

Description		Unit	Specification
Operating weight		kg (lb)	50200 (110673)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	2.79 (3.65)
Overall length	A	mm (ft-in)	11710 (38' 5")
Overall width, with 600mm shoe	B		3340 (10' 11")
Overall height	C		3810 (12' 6")
Superstructure width	D		2980 (9' 9")
Overall height of cab	E		3190 (10' 6")
Ground clearance of counterweight	F		1275 (4' 2")
Engine cover height	G		2770 (9' 1")
Minimum ground clearance	H		575 (1' 11")
Rear-end distance	I		3750 (12' 4")
Rear-end swing radius	I'		3780 (12' 5")
Distance between tumblers	J		4470 (14' 8")
Undercarriage length	K		5510 (18' 1")
Undercarriage width	L		3340 (10' 11")
Track gauge	M		2740 (8' 12")
Track shoe width, standard	N		600 (24")
Travel speed (low/high)		km/hr (mph)	3.4/5.4 (2.1/3.3)
Swing speed		rpm	9.2
Gradeability		Degree (%)	35 (70)
Ground pressure (600 mm shoe)		kgf/cm ² (psi)	0.88 (12.53)
Max traction force		kg (lb)	34100 (75178)

2. SPECIFICATIONS

1) R505LVS (for Russia only #339~#387)

· 7.06m(23' 2") BOOM and 3.38m(11' 1") ARM

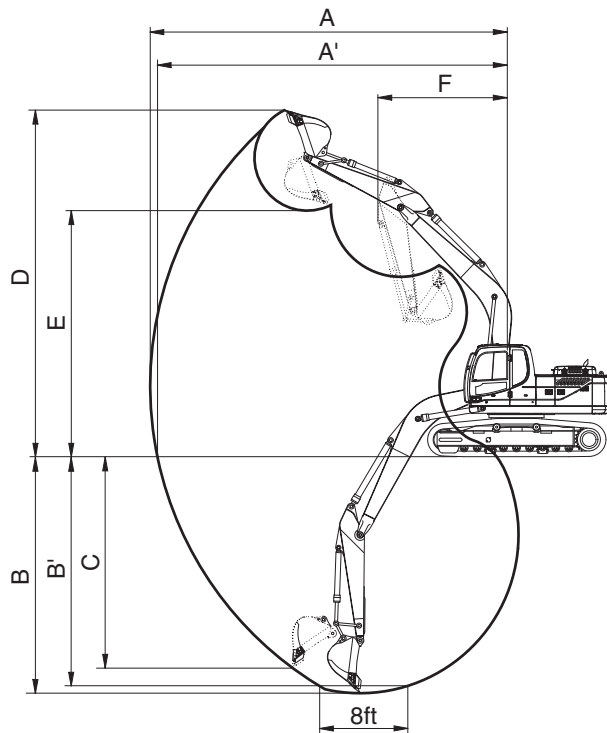


25092SP02

Description		Unit	Specification
Operating weight		kg (lb)	50600 (111554)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	2.79 (3.65)
Overall length	A	mm (ft-in)	12075 (39' 7")
Overall width, with 600mm shoe	B		3340 (10' 11")
Overall height	C		3870 (12' 8")
Superstructure width	D		2980 (9' 9")
Overall height of cab	E		3325 (10' 11")
Ground clearance of counterweight	F		1305 (4' 4")
Engine cover height	G		2770 (9' 1")
Minimum ground clearance	H		575 (1' 11")
Rear-end distance	I		3750 (12' 4")
Rear-end swing radius	I'		3780 (12' 5")
Distance between tumblers	J		4470 (14' 8")
Undercarriage length	K		5510 (18' 1")
Undercarriage width	L		3340 (10' 11")
Track gauge	M		2740 (8' 12")
Track shoe width, standard	N		600 (24")
Travel speed (low/high)		km/hr (mph)	3.4/5.4 (2.1/3.3)
Swing speed		rpm	9.2
Gradeability		Degree (%)	35 (70)
Ground pressure (600 mm shoe)		kgf/cm ² (psi)	0.88 (12.53)

3. WORKING RANGE

1) R505LVS [6.55 m (21' 6") BOOM]

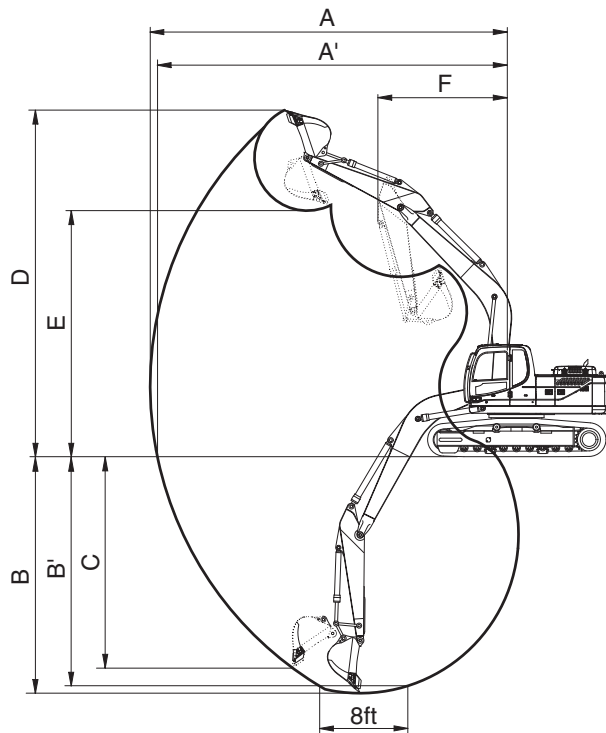


Description		STD *2.9 m (9' 6") Arm	OPT 2.4 m (7' 10") Arm
Max digging reach	A	11050mm (36'3")	10630mm (34'11")
Max digging reach on ground	A'	10830 mm (35' 6")	10400 mm (34' 1")
Max digging depth	B	6900mm (22'8")	6400mm (21'0")
Max digging depth (8ft level)	B'	6740mm (22' 1")	6210mm (20' 4")
Max vertical wall digging depth	C	4570mm (15' 0")	4420mm (14' 6")
Max digging height	D	10280 mm (33 9")	10210 mm (33 6")
Max dumping height	E	6990 mm (22' 11")	6880 mm (22' 7")
Min swing radius	F	4530mm (14' 10")	4730mm (15' 6")
Bucket digging force	SAE	239.9 [261.7] kN	242.5 [264.5] kN
		24460 [26680] kgf	24717 [26964] kgf
		53920 [58820] lbf	54492 [59445] lbf
	ISO	278.5 [303.8] kN	279.7 [305.1] kN
		28390 [30970] kgf	28511 [31103] kgf
		62580 [68270] lbf	62856 [68570] lbf
Arm crowd force	SAE	220.6 [240.7] kN	277.9[303.2] kN
		22490 [24530] kgf	28327 [30902] kgf
		49580 [54090] lbf	62450 [68128] lbf
	ISO	229.9 [250.8] kN	288.8 [315.0] kN
		23430 [25560] kgf	29434 [32110] kgf
		51660 [56360] lbf	64891 [70791] lbf

[] : Power boost

3. WORKING RANGE

1) R505LVS [7.06 m (23' 2") BOOM] (for Russia only #339~#387)



Description		STD *3.38m (11' 1") Arm
Max digging reach	A	12015mm (39' 5")
Max digging reach on ground	A'	11821 mm (38' 9")
Max digging depth	B	7777mm (25' 6")
Max digging depth (8ft level)	B'	7633mm (25' 1")
Max vertical wall digging depth	C	4864mm (15' 12")
Max digging height	D	10888mm (35' 9")
Max dumping height	E	7619mm (24' 12")
Min swing radius	F	4773mm (15' 8 ")
Bucket digging force	SAE	243.4[265.6] kN
		24814 [27070] kgf
		54707 [59680] lbf
	ISO	279.5 [304.9] kN
		28486 [31076] kgf
		62801 [68511] lbf
Arm crowd force	SAE	193.3[210.8] kN
		19700 [21491] kgf
		43431 [47379] lbf
	ISO	199.1 [217.2] kN
		20294 [22139] kgf
		44740 [48808] lbf

[] : Power boost

4. WEIGHT

1) R505LVS

Item	R505LVS	
	kg	lb
Upperstructure assembly	20000	44090
Main frame weld assembly	4430	9770
Engine assembly	940	2070
Main pump assembly	190	420
Main control valve assembly	420	930
Swing motor assembly	230	510
Hydraulic oil tank assembly	450	990
Fuel tank assembly	270	600
Counterweight	10200	22487
Cab assembly	490	1080
Lower chassis assembly	19000	41890
Track frame weld assembly	7060	15570
Swing bearing	720	1590
Travel motor assembly	440	970
Turning joint	50	110
Track recoil spring	310	680
Idler	250	550
Carrier roller	80	80
Track roller	80	180
Track-chain assembly (600 mm standard triple grouser shoe)	2700	5950
Front attachment assembly (6.55 m boom, 2.90 m arm, 2.79 m³ SAE heaped bucket)	9320	20547
6.55m boom assembly	3590	7910
2.90 m arm assembly	1800	3970
2.79 m³ SAE heaped bucket	2980	6570
Boom cylinder assembly	740	1631
Arm cylinder assembly	586	1292
Bucket cylinder assembly	397	875
Bucket control rod assembly	171	377

4. WEIGHT

1) R505LVS(for Russia only #339~#387)

Item	R505LVS	
	kg	lb
Upperstructure assembly	20500	45195
Main frame weld assembly	4430	9770
Engine assembly	940	2070
Main pump assembly	190	420
Main control valve assembly	420	930
Swing motor assembly	230	510
Hydraulic oil tank assembly	450	990
Fuel tank assembly	270	600
Counterweight	10200	22487
Cab assembly	490	1080
Lower chassis assembly	19000	41890
Track frame weld assembly	7060	15570
Swing bearing	720	1590
Travel motor assembly	440	970
Turning joint	50	110
Track recoil spring	310	680
Idler	250	550
Carrier roller	80	80
Track roller	80	180
Track-chain assembly (600 mm standard triple grouser shoe)	2700	5950
Front attachment assembly (7.06 m boom, 3.38 m arm, 2.79 m³ SAE heaped bucket)	9998	22042
7.06m boom assembly	3540	7617
3.38 m arm assembly	1755	3869
2.79 m³ SAE heaped bucket	2980	6570
Boom cylinder assembly	740	1631
Arm cylinder assembly	586	1292
Bucket cylinder assembly	397	875
Bucket control rod assembly	171	377

5. LIFTING CAPACITIES

1) R505LVS

(1) 6.55 m (21' 6") boom, 2.90 m (9' 6") arm equipped with 2.79 m³ (SAE heaped) bucket and 600 mm (24") triple grouser shoe and 10200 kg (22487 lb) counterweight.

Lift-point height (m/ft)		Lift-point radius										At max. reach		
		3.0m (9.8ft)		4.5m (14.8ft)		6.0m (19.7ft)		7.5m (24.6ft)		9.0m (29.5ft)		Capacity		Reach
														m (ft)
7.5m 24.6ft	kg lb											*7000 *15430	*7000 *15430	7.47 (24.5)
6.0m 19.7ft	kg lb							*9140 *20150	8140 17950			*7070 *15590	6460 14240	8.35 (27.4)
4.5m 14.8ft	kg lb			*15760 *34740	*15760 *34740	*11920 *26280	11700 25790	*9850 *21720	7770 17130			*7470 *16470	5440 11990	8.89 (29.2)
3.0m 9.8ft	kg lb			*19350 *42660	17100 37700	*13620 *30030	10780 23770	*10720 *23630	7310 16120	*8970 *19780	5090 11220	*8220 *18120	4900 10800	9.16 (30.1)
1.5m 4.9ft	kg lb			*21490 *47380	15670 34550	*14950 *32960	10010 22070	*11430 *25200	6880 15170	*9240 *20370	4880 10760	*9020 *19890	4690 10340	9.17 (30.1)
水平面 lb	kg lb			*21640 *47710	15110 33310	*15460 *34080	9530 21010	*11730 *25860	6580 14510			*9270 *20440	4800 10580	8.93 (29.3)
-1.5m -4.9ft	kg lb	*18790 *41420	*18790 *41420	*20380 *44930	15050 33180	*15010 *33090	9350 20610	*11350 *25020	6460 14240			*9520 *20990	5300 11680	8.42 (27.6)
-3.0m -9.8ft	kg lb	*23530 *51870	*23530 *51870	*17840 *39330	15300 33730	*13390 *29520	9450 20830	*9830 *21670	6560 14460			*9650 *21270	6450 14220	7.58 (24.9)
-4.5m -14.8ft	kg lb	*17160 *37830	*17160 *37830	*13520 *29810	*13520 *29810	*9940 *21910	9850 21720					*9270 *20440	9190 20260	6.27 (20.6)

- 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 (standard equipment) located on the back of the bucket.
 4. *indicates load limited by hydraulic capacity.

5. LIFTING CAPACITIES

1) R505LVS(for Russia only #339~#387)

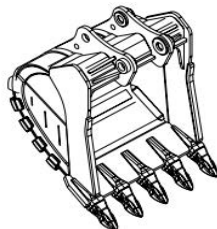
(1) 7.06 m (23' 2") boom, 3.38 m (11' 1") arm equipped with 2.79 m³ (SAE heaped) bucket and 600 mm (24") triple grouser shoe and 10200 kg (22487 lb) counterweight.

LIFT-POINT HEIGHT (m/ft)		LIFTING-POINT RADIUS										AT MAX. REACH		
		3.0m(9.8ft)		4.5m(14.8ft)		6.0m(19.7ft)		7.5m(24.6ft)		9.0m(29.5ft)		CAPACITY		REACH
														m (ft)
9.0m	kg											*4520	*4520	7.49
29.5ft	lb											*9960	*9960	(24.6)
7.5m	kg							*7670	*7670			*4320	*4320	8.65
24.6ft	lb							*16910	*16910			*9520	*9520	(28.4)
6.0m	kg							*8190	*8190	*6770	*6770	*4370	*4370	9.43
19.7ft	lb							*18060	*18060	*14930	*14930	*9630	*9630	(30.9)
4.5m	kg					*11120	*11120	*9050	*9050	*7790	6690	*4610	*4610	9.92
14.8ft	lb					*24520	*24520	*19950	*19950	*17170	14750	*10160	*10160	(32.5)
3.0m	kg			*18670	*18670	*12940	*12940	*10030	8970	*8290	6400	*5050	4970	10.16
9.8ft	lb			*41160	*41160	*28530	*28530	*22110	19780	*18280	14110	*11130	10960	(33.3)
1.5m	kg			*20950	19120	*14380	12200	*10870	8470	*8740	6120	*5750	4790	10.18
4.9ft	lb			*46190	42150	*31700	26900	*23960	18670	*19270	13490	*12680	10560	(33.4)
0.0m	kg			*20830	18470	*15060	11650	*11350	8110	*8950	5900	*6840	4870	9.97
0.0ft	lb			*45920	40720	*33200	25680	*25020	17880	*19730	13010	*15080	10740	(32.7)
-1.5m	kg	*13550	*13550	*20350	18360	*14880	11400	*11270	7920	*8720	5800	*7930	5250	9.52
-4.9ft	lb	*29870	*29870	*44860	40480	*32800	25130	*24850	17460	*19220	12790	*17480	11570	(31.2)
-3.0m	kg	*19770	*19770	*18390	*18390	*13800	11420	*10460	7910			*8080	6080	8.79
-9.8ft	lb	*43590	*43590	*40540	*40540	*30420	25180	*23060	17440			*17810	13400	(28.8)
-4.5m	kg	*19840	*19840	*15230	*15230	*11580	*11580	*8450	8120			*8010	7780	7.71
-14.8ft	lb	*43740	*43740	*33580	*33580	*25530	*25530	*18630	17900			*17660	17150	(25.3)
-6.0m	kg			*10110	*10110	*7290	*7290					*7150	*7150	6.06
-19.7ft	lb			*22290	*22290	*16070	*16070					*15760	*15760	(19.9)

- 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 (standard equipment) located on the back of the bucket.
 4. *indicates load limited by hydraulic capacity.

6. BUCKET SELECTION GUIDE

1) GENERAL BUCKET



2.5 m³ SAE *2.79m³ SAE 3.0 m³ SAE

heaped bucket

Capacity		Width		Weight	Recommendation		
					6.55 m (21.6") boom		REMARK
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.4 m arm (7' 10")	*2.9 m arm (9' 6")	
2.5m ³ (3.27 yd ³)	2.16m ³ (2.83 yd ³)	1860mm (73.2")		2660 kg (5864 lb)			OPT
*2.79 m ³ (3.65 yd ³)	2.47 m ³ (3.23 yd ³)	1860 mm (73.2")		2980 kg (6570 lb)			STD
3.0m ³ (3.92 yd ³)	2.76 m ³ (3.61 yd ³)	2030 mm (79.9")		3100 kg (6834 lb)			OPT
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							

※ : Standard bucket

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) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
	R505LVS
Carrier rollers	2 EA
Track rollers	9 EA
Track shoes	53 EA

3) 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
600mm triple grouser	Standard	A
700mm triple grouser	Option	B
800mm triple grouser	Option	C
900mm triple grouser	Option	C

※ Table 2

Category	Applications	Precautions
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 ground (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 QSM11
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	125 × 147 mm (4.9" × 5.8")
Piston displacement	10800 cc (659 cu in)
Compression ratio	16.3 : 1
Rated gross horse power (SAE J1995)	407 Hp at 1900 rpm (299 kW at 1900 rpm)
Maximum torque	193.6 kgf · m at 1300 rpm
Engine oil quantity	38 l (10 U.S. gal)
Dry weight	942 kg (2077 lb)
High idling speed	1750 ± 50 rpm
Low idling speed	900 ± 50 rpm
Rated fuel consumption	155.4 g/Hp · hr at 1900 rpm
Starting motor	Remy (24V-7.2 kW)
Alternator	Delco Remy 24V-90A
Battery	2 × 12V × 200 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 225 cc/rev
Maximum pressure	330 kgf/cm ² (4690 psi) [360 kgf/cm ² (5124 psi)]
Rated oil flow	2 × 405 l /min (107 U.S. gpm / 89.1 U.K. gpm)
Rated speed	1800 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	27 l /min (7.1 U.S. gpm / 5.9 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	9 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	330 kgf/cm ² (4690 psi) [360 kgf/cm ² (5124 psi)]
Overload relief valve pressure	400 kgf/cm ² (5690 psi)

[] : Power boost

5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	142.8 cc/rev
Relief pressure	285 kgf/cm ² (4132 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	1192kgf · m (8622 lbf · ft)
Brake release pressure	20.9 kgf/cm ² (297 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Axial piston motor
Relief pressure	330 kgf/cm ² (4690 psi)
Capacity (max / min)	160 / 100 cc/rev
Reduction gear type	Planetary differential
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	15.7 kgf/cm ² (223 psi)
Braking torque	7376 kgf · m (53350lbf · ft)

7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 170 × ø 115 × 1580 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 190 × ø 130 × 1820 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 170 × ø 115 × 1370 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
R505LVS	Standard	600 mm (24")	0.88 kgf/cm ² (12.53 psi)	53	3340 mm (10' 11")
	Option	700 mm (28")	0.75 kgf/cm ² (10.65 psi)	53	3440 mm (11' 3")
		800 mm (32")	0.66 kgf/cm ² (9.39 psi)	53	3540 mm (11' 7")
		900 mm (36")	0.59 kgf/cm ² (8.39 psi)	53	3640 mm (11' 11")

9) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R505LVS	Standard	⊙ 2.79(3.65)	2.47(3.23)	5	1860 (73 ")	—
	Option	⊙ 2.20(2.88)	1.93(2.52)	5	1685 (66 ")	—

⊙ : Rock bucket (heavy)

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	38 (10)	SAE 5W-40								
								SAE 30			
				SAE 10W							
				SAE 10W-30							
				SAE 15W-40							
Swing drive	Gear oil	7.0×2 (1.8×2)			SAE 80W-90						
Travel drive		6.0×2 (1.6×2)			SAE 85W-140						
Hydraulic tank	Hydraulic oil	Tank; 260 (68.7) System; 486 (128.4) 295 (77.9) for Russia	ISO VG 15								
				ISO VG 32							
				ISO VG 46							
				ISO VG 68							
Fuel tank	Diesel fuel	620 (164)	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	50 (13.2)		Ethylene glycol base permanent type (50 : 50)							

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