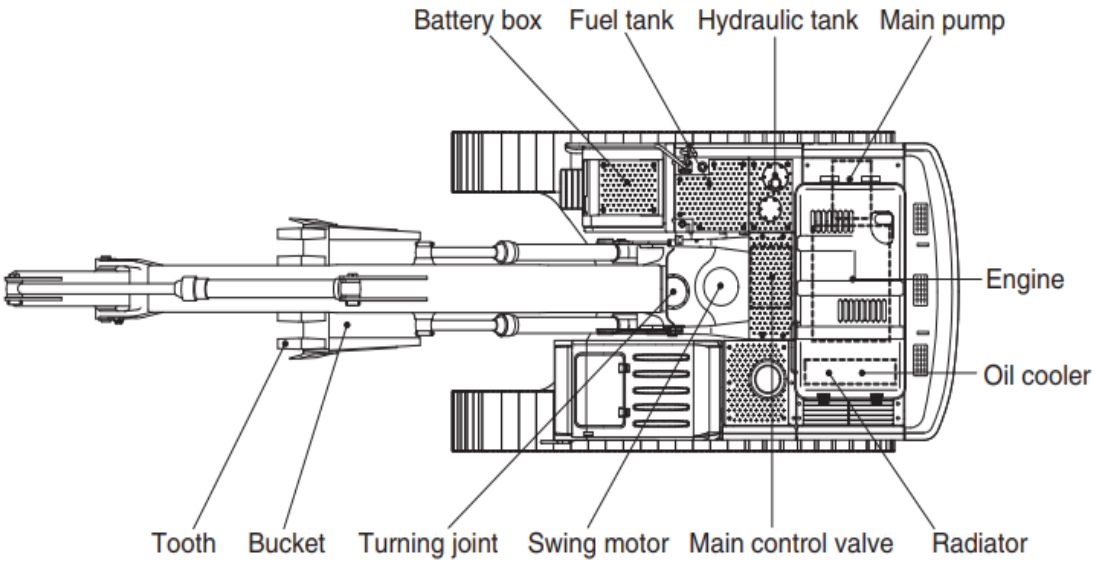
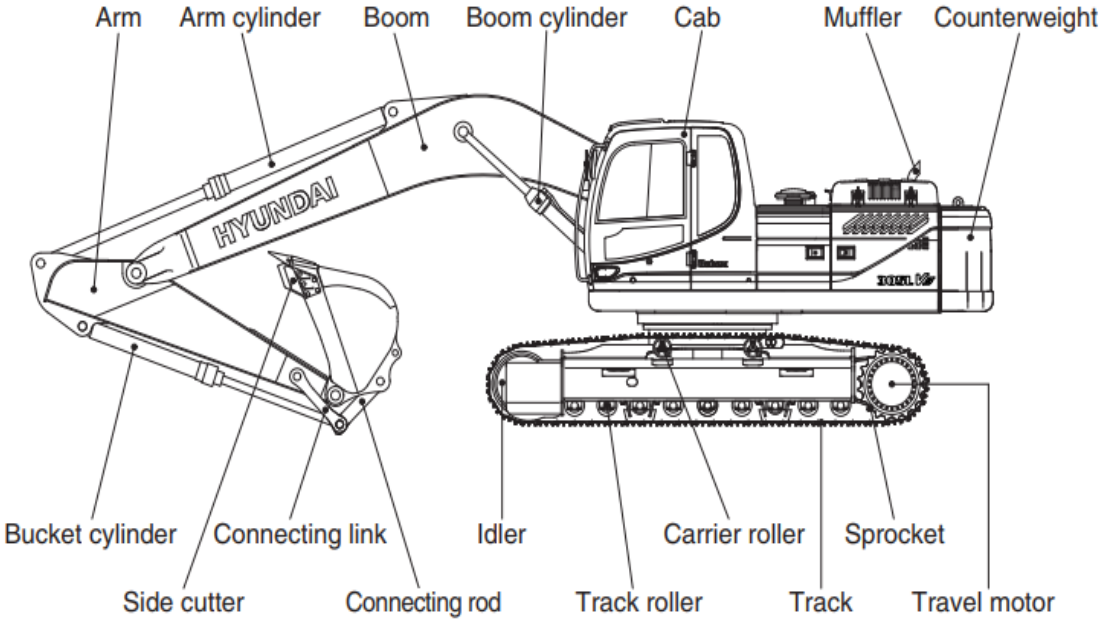
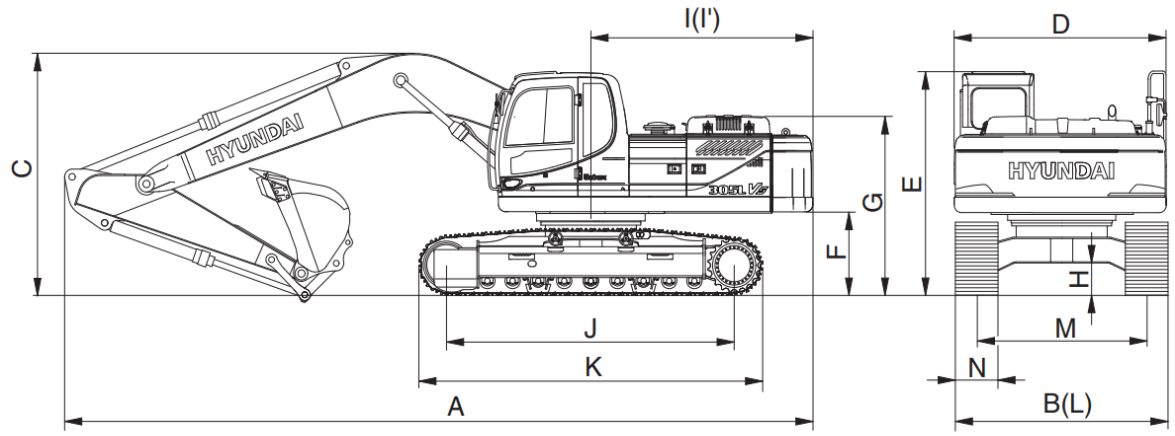
1. MAJOR COMPONENT





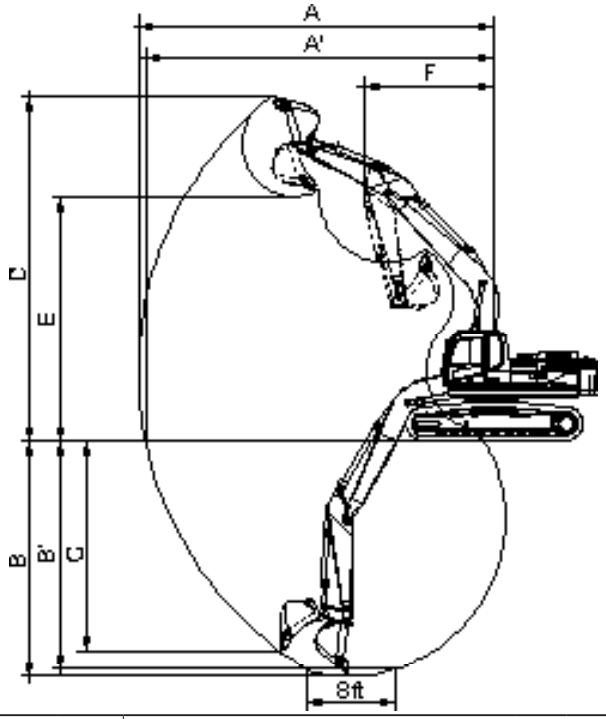
2. SPECIFICATIONS



Description		Unit	Specification
Operating weight		kg (lb)	30200 (66580)
Bucket capacity (SAE heaped), standard		m^3 (yd^3)	1.44(1.88)
Overall length	A	mm (ft-in)	10453 (34' 4")
Overall width, with 600 mm shoe	B		3200 (10' 6")
Overall height	C		3350 (10' 12")
Superstructure width	D		2980 (9' 9")
Overall height of cab	E		3010 (9' 11")
Ground clearance of counterweight	F		1190(3' 11")
Engine cover height	G		3190 (10' 6")
Minimum ground clearance	H		500 (1' 8")
Rear-end distance	I		3118 (10' 3")
Rear-end swing radius	I'		3196 (10' 5")
Distance between tumblers	J		4030 (13' 3")
Undercarriage length	K		4940 (16' 2")
Undercarriage width	L		3200 (10' 6")
Track gauge	M		2600 (8' 6")
Track shoe width, standard	N		600 (24")
Travel speed (low/high)		km/hr (mph)	3.2/5.6 (2.0/3.2)
Swing speed		rpm	10.2
Gradeability		Degree (%)	35 (70)
Ground pressure (600 mm shoe)		kgf/cm^2(psi)	0.58 (8.25)
Max traction force		kg (lb)	26500(58422)

3. WORKING RANGE

· 6.25 m (20' 6") BOOM



Description		2.85 m (9' 4") Arm
Max digging reach	A	10590 mm (34' 9")
Max digging reach on ground	A'	10400 mm (34' 1")
Max digging depth	B	7180 mm (23' 7")
Max digging depth (8ft level)	B'	6990 mm (22' 11")
Max vertical wall digging depth	C	6120 mm (20' 1")
Max digging height	D	10030 mm (32' 11")
Max dumping height	E	7000mm (22' 12")
Min swing radius	F	4300mm (14' 1")
Bucket digging force	SAE	168.7[183.2] kN
		17200 [18670] kgf
		37920 [41170] lbf
	ISO	192.2 [208.7] kN
		19600[21280] kgf
		43210 [46910] lbf
Arm crowd force	SAE	139.3 [151.2] kN
		14200 [15420] kgf
		31310[33990] lbf
	ISO	145.1 [157.5] kN
		14800[16070] kgf
		32630 [35430] lbf

[ ] : Power boost

4. WEIGHT

Item	R305LVS	
	kg	lb
Upperstructure assembly	12604	27786
Main frame weld assembly	2757	6078
Engine assembly	556	1226
Main pump assembly	140	310
Main control valve assembly	220	485
Swing motor assembly	390	860
Hydraulic oil tank assembly	250	560
Fuel tank assembly	240	530
Counterweight	5200	11460
Cab assembly	490	1080
Lower chassis assembly	10740	23680
Track frame weld assembly	3765	8300
Swing bearing	433	955
Travel motor assembly	400	880
Turning joint	54	120
Track recoil spring and idler	215.5	475
Idler	260	573
Carrier roller	35	80
Track roller	56.4	124.3
Track-chain assembly (600 mm standard triple grouser shoe)	1879	4143
Front attachment assembly (6.25 m boom, 2.85 m arm, 1.44 m^3 SAE heaped bucket)	5610	12370
6.25 m boom assembly	2385	5258
2.85m arm assembly	1099	2423
1.44 m^3 SAE heaped bucket	1314	2897
Boom cylinder assembly	270	600
Arm cylinder assembly	360	790
Bucket cylinder assembly	220	485
Bucket control linkage assembly	110	240

5. LIFTING CAPACITIES

1) 6.25 m (20' 6") boom, 2.85 m (9' 4") arm equipped with 1.44 m³ (SAE heaped) bucket and 600 mm (24") triple grouser shoe and 5200 kg (11464 lb) counterweight.

· : 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)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity		Reach
																m (ft)
9.0 m (30 ft)	kg															
	lb															
7.5 m (25.0 ft)	kg													*4630	*3720	8.71
	lb													*10210	*8200	(28.6)
6.0 m (20.0 ft)	kg									*5180	*4830			*4780	2980	9.53
	lb									*11420	*10650			*10540	6570	(31.3)
4.5 m (15.0 ft)	kg							*6310	*6310	*5650	4620			*4490	2570	10.01
	lb							*13910	*13910	*12460	10190			*9900	5670	(32.8)
3.0 m (10.0 ft)	kg					*10520	*10200	*7670	6390	*6360	4340	*3820	3040	*4220	2370	10.21
	lb					*23190	*22490	*16910	14090	*14020	9570	*8420	6700	*9300	5220	(33.5)
1.5 m (5.0 ft)	kg					*12940	*9200	*8990	5880	*7020	4070	*4560	2900	4180	2320	10.16
	lb					*28530	*20280	*19820	12960	*15480	8970	*10050	6390	9220	5110	(33.3)
Ground Line	kg			*10120	*10210	*14190	*8730	*9820	5540	*6790	3860			4380	2430	9.84
	lb			*22310	*22310	*31280	*19250	*21650	12210	*14970	8510			9660	5360	(32.3)
-1.5 m (-5.0 ft)	kg	*11650	*11650	*14830	*14830	*14410	*8600	*9650	5390	6680	3760			4900	2760	9.22
	lb	*25680	*25680	*32690	*32690	*31770	*18960	*21270	11880	14730	8290			10800	6080	(30.2)
-3.0 m (-10.0 ft)	kg	*15860	*15860	*20180	*20180	*13780	*8700	*9670	5410	6730	3810			6010	3460	8.23
	lb	*34970	*34970	*44490	*44490	*30380	*19180	*21320	11930	14840	8400			13250	7630	(27.0)
-4.5 m (-15.0 ft)	kg			*17240	*17240	*12070	*9020	*8740	*5640							
	lb			*38010	*38010	*26610	*19890	*19270	*12430							
-6.0 m (-20.0 ft)	kg															
	lb															

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.

6. BUCKET SELECTION GUIDE

1) HEAVY DUTY BUCKET

1.44 m^3 SAE
heaped bucket

Capacity		Width		Weight	Recommendation
					6.25 m (20'6") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.85 m arm (9' 4")
※1.44m^3 (1.88yd^3)	1.26 m^3 (1.65 yd^3)	1480 mm (58.3")	—	1310kg (2890 lb)	Applicable for materials with density of 1600 kg/m^3 (2700 lb/yd^3) 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
			
R305LVS	Shoe width	mm (in)	600 (24)
	Operating weight	kg (lb)	30200 (66580)
	Ground pressure	kgf/cm^2 (psi)	0.58 (8.25)
	Overall width	mm (ft-in)	3200 (10' 6")

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	2 EA
Track rollers	9 EA
Track shoes	48 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
600 mm triple grouser	Standard	A
700 mm triple 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	HYUNDAI HE 6.7
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 (4.21" × 4.88")
Piston displacement	6700 cc (409 cu in)
Compression ratio	17.2 : 1
Rated gross horse power (SAE J1995)	227 Hp at 1900 rpm (169 kW at 1900 rpm)
Maximum torque	96.8 kgf · m (700 lbf · ft) at 1400 rpm
Engine oil quantity	24 ℓ (6.3 U.S. gal)
Dry weight	556 kg (1226 lb)
Low idling speed	800 ± 50 rpm
High idling speed	1850 ± 50 rpm
Rated fuel consumption	166.3 g/Hp · hr at 1900 rpm
Starting motor	Nippon Denso(24V-4.5kW)
Alternator	Valeo 24V-90A
Battery	2 × 12V × 160Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 140 cc/rev
Maximum pressure	350 kgf/cm^2 (4980 psi) [385 kgf/cm^2 (5400 psi)]
Rated oil flow	2 × 252 ℓ/min (66.6 U.S. gpm / 55.4 U.K. gpm)
Rated speed	1800 rpm

[ ]: Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm^2 (570 psi)
Rated oil flow	27 ℓ /min (7.1 U.S. gpm / 5.9 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	10 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	390 kgf/cm^2 (5550 psi)

[ ]: Power boost

5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	156.9 cc/rev
Relief pressure	300 kgf/cm^2 (4270 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	84.4 kgf · m (613 lbf · ft)
Brake release pressure	22.3 kgf/cm^2 (317 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement 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) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø140 × Ø100 × 1465 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø150 × Ø110 × 1765 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø135 × Ø95 × 1185 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
R305LVS	Standard	600 mm (24")	0.58 kgf/cm^2 (8.25 psi)	48	3200 mm (10' 6")

9) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R305LVS	Standard	1.44 m^3 (1.88 yd^3)	1.26 m^3 (1.65yd^3)	5	1480mm (58.3")	—

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	24 (6.3)	★SAE 5W-40 SAE 10W-30 SAE 15W-40
Swing drive	Gear oil	6.0 (1.6)	SAE 85W-140
Final drive		7.8×2 (2.1×2)	
Hydraulic tank	Hydraulic oil	Tank: 190 (50) System: 330 (87)	ISO VG 32 ISO VG 46 ISO VG 68
Fuel tank	Diesel fuel	560 (148)	★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) ★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