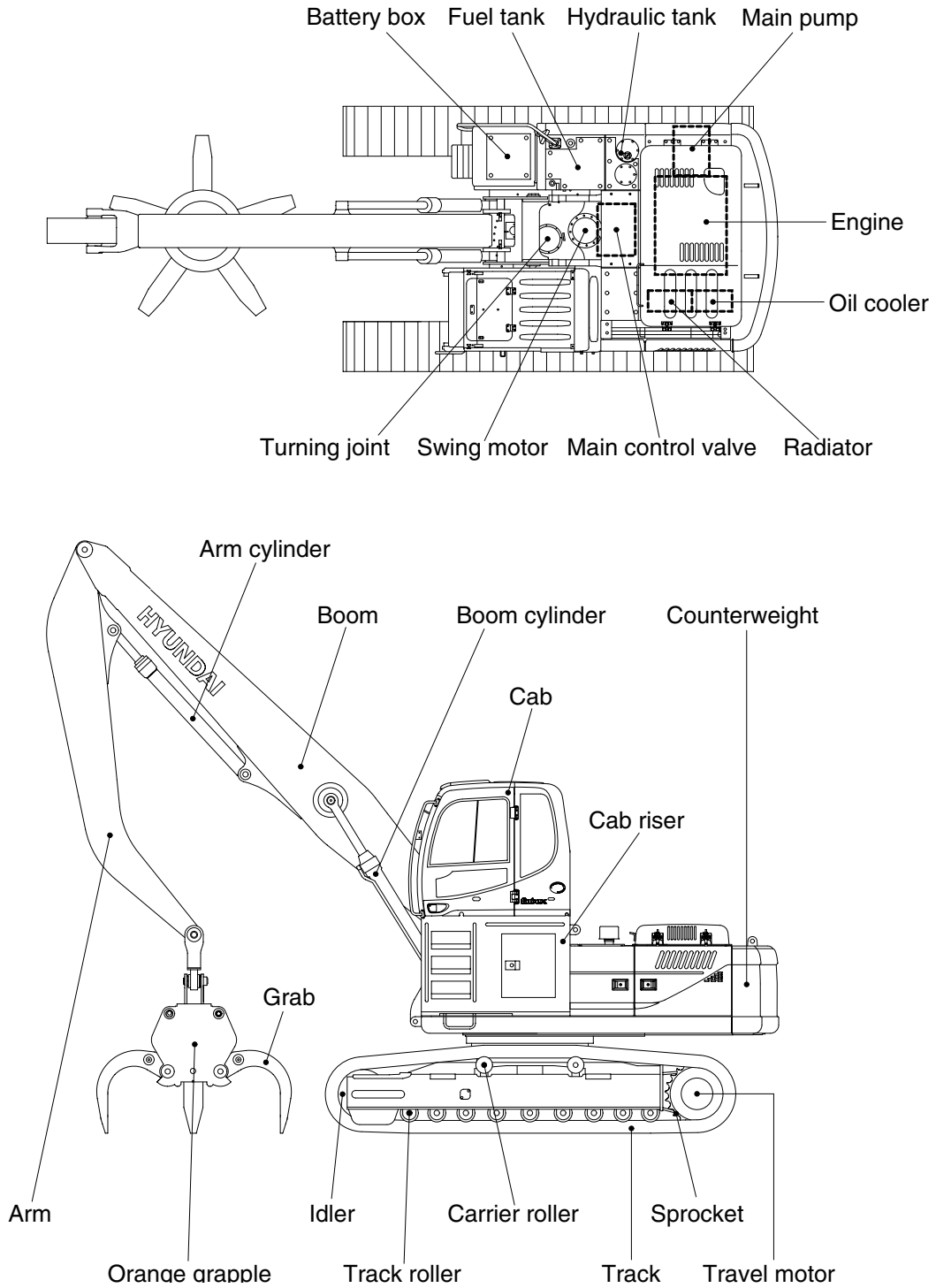


GROUP 2 SPECIFICATIONS

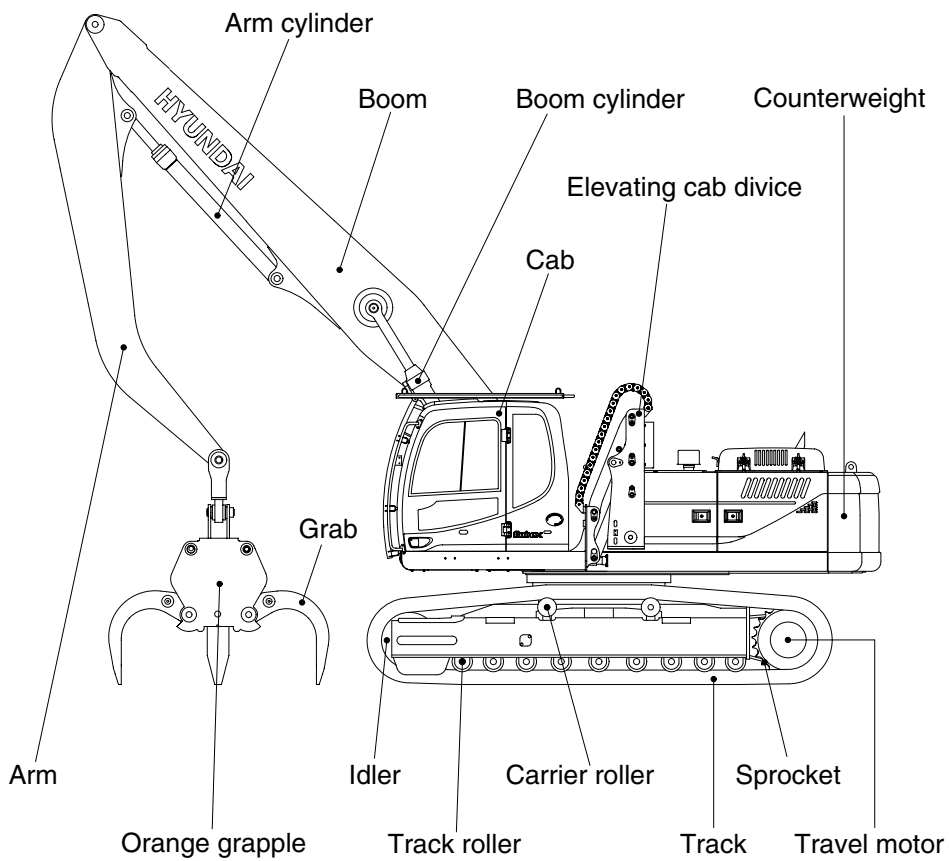
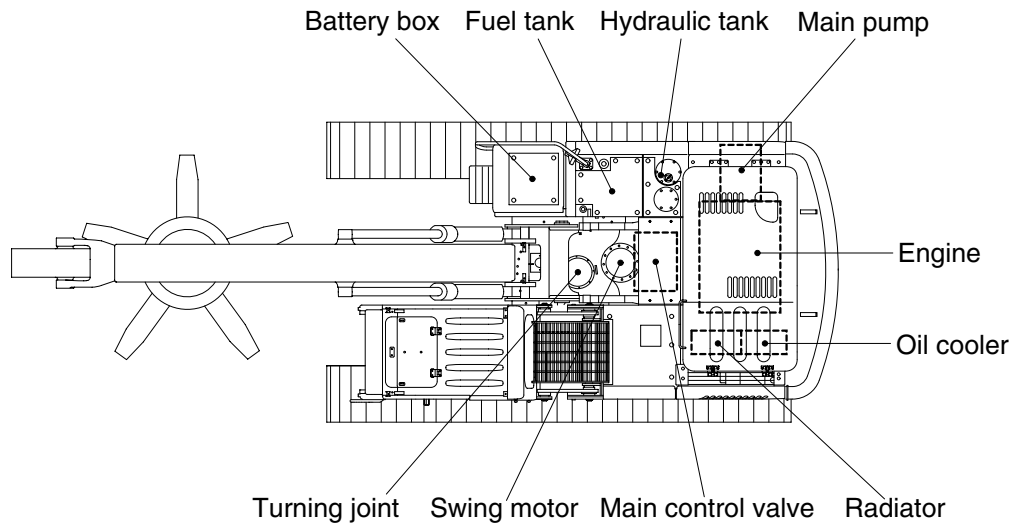
1. MAJOR COMPONENT

- 7.8 m (25' 7") BOOM, 5.4 m (17' 9") ARM AND 1.2 m (3' 11") TILT CAB



2909MH2SP01

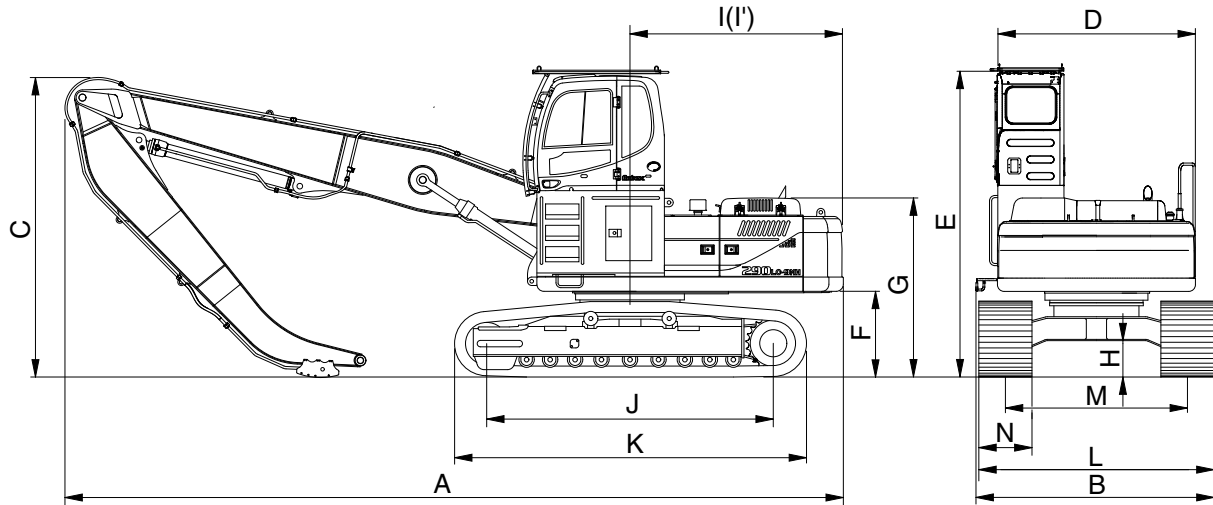
• 7.8 m (25' 7") BOOM, 5.4 m (17' 9") ARM AND 2.0 m (6' 7") ELEVATING CAB



2909MH2SP05

2. SPECIFICATIONS

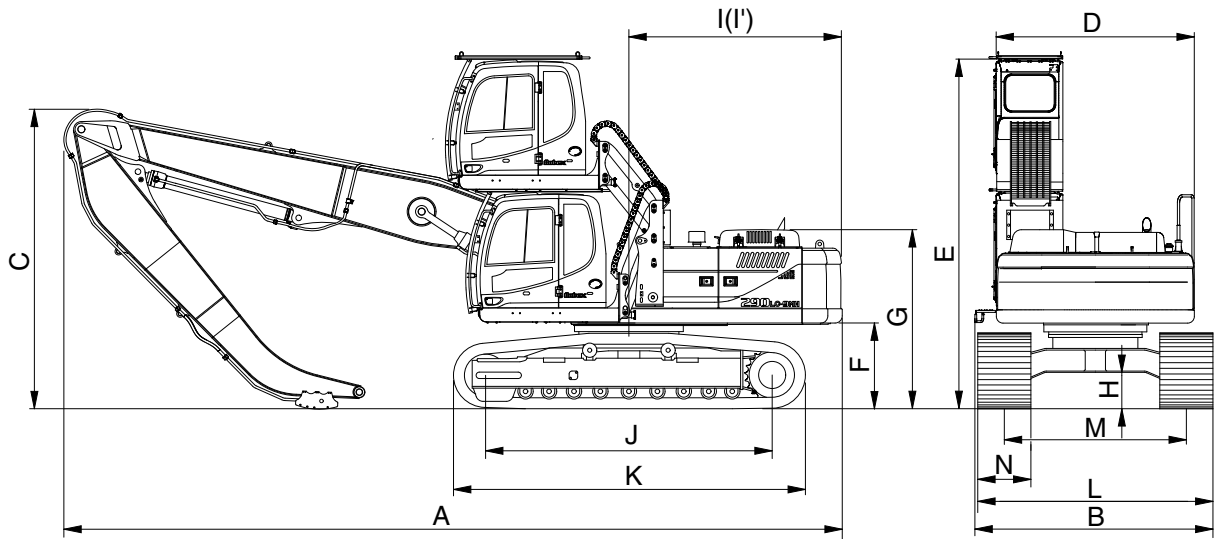
- 7.8 m (25' 7") BOOM, 5.4 m (17' 9") ARM AND 1.2 m (3' 11") TILT CAB



2909MH2SP02

Description		Unit	Specification
Operating weight		kg (lb)	32710 (72110)
Grapple capacity, standard		m ³ (yd ³)	0.90 (1.18)
Overall length	A	mm (ft-in)	11085 (36' 4")
Overall width, with 800mm shoe	B		3520 (11' 7")
Attachment height	C		4170 (13' 8")
Superstructure width	D		2980 (9' 9")
Overall height of cab	E		4445 (14' 7")
Ground clearance of counterweight	F		1185 (3' 11")
Engine cover height	G		3190 (10' 6")
Minimum ground clearance	H		500 (1' 8")
Rear-end distance	I		3120 (10' 3")
Rear-end swing radius	I'		3200 (10' 6")
Distance between tumblers	J		4030 (13' 3")
Undercarriage length	K		4883 (16' 0")
Undercarriage width	L		3400 (11' 2")
Track gauge	M		2600 (8' 6")
Track shoe width, standard	N		800 (32")
Travel speed (low/high)			km/hr (mph)
Swing speed		rpm	10.5
Gradeability		Degree (%)	35 (70)
Ground pressure (800 mm shoe)		kgf/cm ² (psi)	0.47 (6.68)
Max traction force		kg (lb)	27300 (60200)

• 7.8 m (25' 7") BOOM, 5.4 m (17' 9") ARM AND 2.0 m (6' 7") ELEVATING CAB

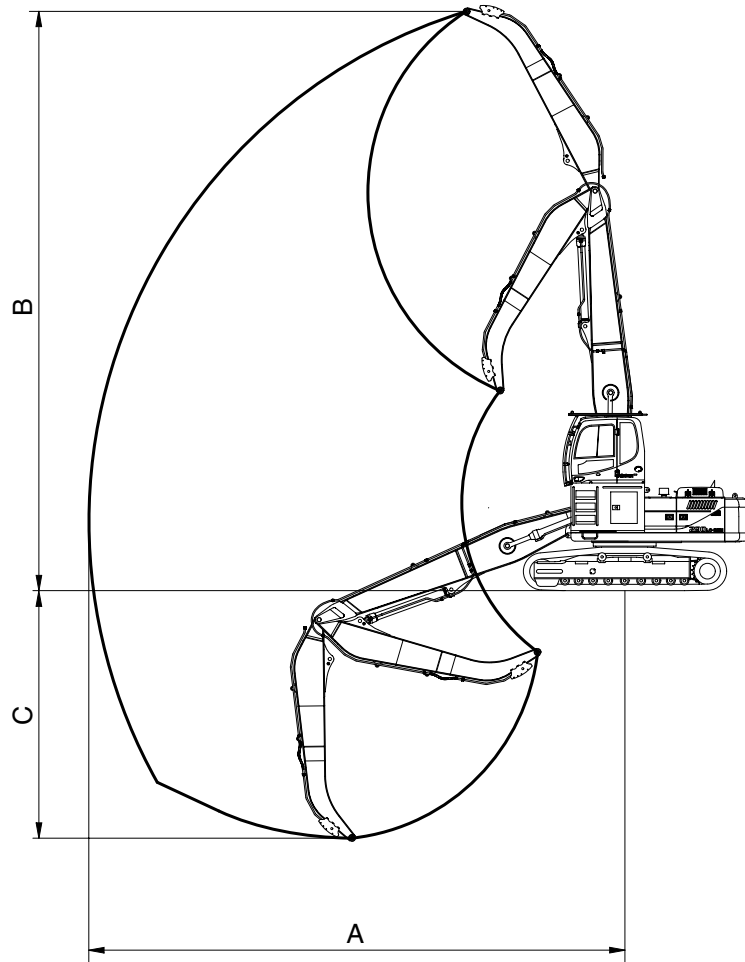


2909MH2SP04

Description		Unit	Specification	
Operating weight		kg (lb)	33660 (74210)	
Grapple capacity, standard		m ³ (yd ³)	0.90 (1.18)	
Overall length	A	mm (ft-in)	11085 (36' 4")	
Overall width, with 800mm shoe	B		3520 (11' 7")	
Attachment height	C		4170 (13' 8")	
Superstructure width	D		2980 (9' 9")	
Overall height of cab (lowered/raised position)	E		3251 / 5042 (10' 8" / 16' 7")	
Ground clearance of counterweight	F		1185 (3' 11")	
Engine cover height	G		3190 (10' 6")	
Minimum ground clearance	H		500 (1' 8")	
Rear-end distance	I		3120 (10' 3")	
Rear-end swing radius	I'		3200 (10' 6")	
Distance between tumbler	J		4030 (13' 3")	
Undercarriage length	K		4883 (16' 0")	
Undercarriage width	L		3400 (11' 2")	
Track gauge	M		2600 (8' 6")	
Track shoe width, standard	N		800 (32")	
Travel speed (low/high)			km/hr (mph)	3.5 / 5 (2.2 / 3.1)
Swing speed			rpm	10.5
Gradeability		Degree (%)	35 (70)	
Ground pressure (800 mm shoe)		kgf/cm ² (psi)	0.48 (6.83)	
Max traction force		kg (lb)	27300 (60200)	

3. WORKING RANGE

- 7.8 m (25' 7") BOOM



2909MH2SP03

Description		5.40 m (17' 9") Arm
Max working reach	A	13090 mm (42' 11")
Max working height	B	14590 mm (47' 10")
Max working depth	C	6190 mm (20' 4")

















4. WEIGHT

Item	R290LC-9MH	
	kg	lb
Upperstructure assembly (tilting cab)	17980	39640
Upperstructure assembly (elevating cab)	18930	41730
Main frame weld assembly (tilting cab)	2840	6260
Main frame weld assembly (elevating cab)	2750	6060
Engine assembly	556	1230
Main pump assembly	140	310
Main control valve assembly	220	490
Swing motor assembly	390	860
Hydraulic oil tank assembly	250	560
Fuel tank assembly	240	530
Counterweight	7300	16090
Cab and fog guard assembly	550	1210
Cab elevating device assembly	1430	3150
Tilt cab riser assembly (1.2 M)	630	1390
Lower chassis assembly	10740	23680
Track frame weld assembly	3790	8360
Swing bearing	430	950
Travel motor assembly	400	880
Turning joint	54	120
Track recoil spring	205	450
Idler	252	560
Carrier roller	35	80
Track roller	54	119
Track-chain assembly (800 mm standard triple grouser shoe)	2350	5180
Front attachment assembly (7.80 m boom, 5.40 m arm, 0.90 m ³ grapple)	5390	11880
7.80 m boom assembly	2735	6030
5.40 m arm assembly	1255	2770
0.90 m ³ grapple	1400	3090
Boom cylinder assembly	270	600
Arm cylinder assembly	360	790

5. LIFTING CAPACITIES

1) 7.8 m (25' 7") boom, 5.4 m (17' 9") arm, 800 mm (32") triple grouser shoe and cab riser.

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

Load point height	Load radius														At max. reach			
	3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		9.0 m (29.5 ft)		10.5 m (34.4 ft)		12.0 m (39.4 ft)		Capacity	Reach		
																	m (ft)	
12.0 m (39.4 ft)	kg					*7367	*7367	*6892	*6892							*6202	*6202	8.34
	lb					*16241	*16241	*15194	*15194							*13673	*13673	-27.4
10.5 m (34.4 ft)	kg							*6502	*6502	*6181	5955					*5584	5049	9.89
	lb							*14335	*14335	*13627	13128					*12311	11132	-32.4
9.0 m (29.5 ft)	kg					*6967	*6967	*6458	*6458	*6057	5994	*5755	4638			*5250	4250	11.02
	lb					*15360	*15360	*14238	*14238	*13354	13215	*12688	10225			*11575	9369	-36.1
7.5 m (24.6 ft)	kg					*7342	*7342	*6673	*6673	*6147	5936	*5727	4637			*5073	3763	11.85
	lb					*16186	*16186	*14712	*14712	*13551	13088	*12626	10224			*11183	8297	-38.9
6.0 m (19.7 ft)	kg		*9504	*9504	*8087	*8087	*7106	*7106	*6384	5810	*5826	4573	*5364	3677	*5000	3452	12.44	
	lb		*20953	*20953	*17829	*17829	*15665	*15665	*14075	12808	*12845	10081	*11825	8106	*11023	7611	-40.8	
4.8 m (14.8 ft)	kg		*11525	*11525	*9136	*9136	*7691	7367	*6712	5633	*5990	4471	5371	3632	4841	3255	12.83	
	lb		*25408	*25408	*20141	*20141	*16956	16241	*14798	12419	*13207	9856	11841	8006	10673	7177	-42.1	
3.0 m (9.8 ft)	kg		*13830	*13830	*10275	9631	*8315	7031	*7059	5433	*6163	4351	5303	3568	4694	3144	13.03	
	lb		*30490	*30490	*22653	21232	*18330	15501	*15562	11978	*13587	9591	11691	7865	10349	6931	-42.7	
1.5 m (4.9 ft)	kg		*4895	*4895	*11165	9076	*8820	6712	*7334	5239	*6282	4232	5234	3502	4649	3104	13.05	
	lb		*10792	*10792	*24615	20009	*19445	14798	*16169	11551	*13850	9331	11539	7722	10250	6844	-42.8	
Ground Line	kg		*3841	*3841	*11528	8685	*9062	6462	*7448	5080	6216	4134	5179	3451	*4625	3134	12.9	
	lb		*8468	*8468	*25416	19147	*19978	14247	*16420	11199	13703	9114	11418	7608	*10197	6910	-42.3	
-1.5 m (-4.9 ft)	kg	*1928	*1928	*4522	*4522	*11286	8477	*8945	6305	*7319	4973	*6083	4070	*4957	3427	*4414	3240	12.57
	lb	*4252	*4252	*9969	*9969	*24881	18688	*19720	13901	*16136	10964	*13412	8972	*10929	7556	*9731	7144	-41.2
-3.0 m (-9.8 ft)	kg	*3381	*3381	*5693	*5693	*10470	8416	*8414	6241	*6870	4928	*5593	4052	*4176	3454	*4120	3442	12.04
	lb	*7455	*7455	*12551	*12551	*23083	18554	*18549	13760	*15145	10864	*12330	8933	*9207	7616	*9084	7589	-39.5
-4.5 m (-14.8 ft)	kg			*7098	*7098	*9092	8468	*7408	6263	*5996	4950	*4629	4096			*3684	*3684	11.29
	lb			*15648	*15648	*20044	18668	*16331	13808	*13218	10913	*10206	9029			*8123	*8123	-37
-6.0 m (-19.7 ft)	kg					*7077	*7077	*5801	*5801	*4484	*4484					*4376	*4376	9.11
	lb					*15602	*15602	*12790	*12790	*9885	*9885					*9647	*9647	-29.9

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 the end pin point of front attachment.

4. *indicates load limited by hydraulic capacity.

▲ Failure to comply to the rated load can cause possible personal injury or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

2) 7.8 m (25' 7") boom, 5.4 m (17' 9") arm, 800 mm (32") triple grouser shoe and elevating cab.

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

Load point height	Load radius														At max. reach			
	3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		9.0 m (29.5 ft)		10.5 m (34.4 ft)		12.0 m (39.4 ft)		Capacity	Reach		
																	m (ft)	
12.0 m (39.4 ft)	kg					*7367	*7367	*6892	*6892							*6202	*6202	8.34
	lb					*16241	*16241	*15194	*15194							*13673	*13673	-27.4
10.5 m (34.4 ft)	kg							*6502	*6502	*6181	6110					*5584	5188	9.89
	lb							*14335	*14335	*13627	13470					*12311	11438	-32.4
9.0 m (29.5 ft)	kg					*6967	*6967	*6458	*6458	*6057	*6057	*5755	4768			*5250	4373	11.02
	lb					*15360	*15360	*14238	*14238	*13354	*13354	*12688	10511			*11575	9640	-36.1
7.5 m (24.6 ft)	kg					*7342	*7342	*6673	*6673	*6147	6092	*5727	4767			*5073	3876	11.85
	lb					*16186	*16186	*14712	*14712	*13551	13430	*12626	10510			*11183	8546	-38.9
6.0 m (19.7 ft)	kg			*9504	*9504	*8087	*8087	*7106	*7106	*6384	5965	*5826	4702	*5364	3788	*5000	3559	12.44
	lb			*20953	*20953	*17829	*17829	*15665	*15665	*14075	13150	*12845	10367	*11825	8351	*11023	7846	-40.8
4.8 m (14.8 ft)	kg			*11525	*11525	*9136	*9136	*7691	7561	*6712	5789	*5990	4600	*5403	3743	4989	3359	12.83
	lb			*25408	*25408	*20141	*20141	*16956	16668	*14798	12762	*13207	10142	*11912	8252	10999	7405	-42.1
3.0 m (9.8 ft)	kg			*13830	*13830	*10275	9888	*8315	7225	*7059	5588	*6163	4480	*5445	3679	4840	3245	13.03
	lb			*30490	*30490	*22653	21799	*18330	15928	*15562	12320	*13587	9877	*12004	8111	10670	7155	-42.7
1.5 m (4.9 ft)	kg			*4895	*4895	*11165	9333	*8202	6906	*7334	5395	*6282	4362	5394	3614	*4791	3206	13.05
	lb			*10792	*10792	*24615	20575	*19445	15225	*16169	11893	*13850	9617	11892	7967	*10562	7067	-42.8
Ground Line	kg			*3841	*3841	*11528	8942	*9062	6656	*7448	5235	*6281	4264	*5304	3562	*4625	3237	12.9
	lb			*8468	*8468	*25416	19714	*19978	14674	*16420	11541	*13847	9400	*11693	7853	*10197	7136	-42.3
-1.5 m (-4.9 ft)	kg	*1928	*1928	*4522	*4522	*11286	8734	*8945	6499	*7319	5128	*6083	4199	*4957	3539	*4414	3346	12.57
	lb	*4252	*4252	*9969	*9969	*24881	19255	*19720	14328	*16136	11306	*13412	9258	*10929	7801	*9731	7376	-41.2
-3.0 m (-9.8 ft)	kg	*3381	*3381	*5693	*5693	*10470	8673	*8414	6435	*6870	5083	*5593	4181	*4176	3566	*4120	3553	12.04
	lb	*7455	*7455	*12551	*12551	*23083	19121	*18549	14187	*15145	11207	*12330	9219	*9207	7861	*9084	7833	-39.5
-4.5 m (-14.8 ft)	kg			*7098	*7098	*9092	8725	*7408	6457	*5996	5105	*4629	4225			*3684	*3684	11.29
	lb			*15648	*15648	*20044	19235	*16331	14235	*13218	11255	*10206	9315			*8123	*8123	-37
-6.0 m (-19.7 ft)	kg					*7077	*7077	*5801	*5801	*4484	*4484					*4376	*4376	9.11
	lb					*15602	*15602	*12790	*12790	*9885	*9885					*9647	*9647	-29.9

Note 1. Lifting capacity are based on SAE J1097 and ISO 10567.

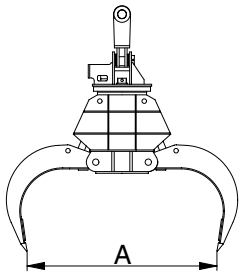
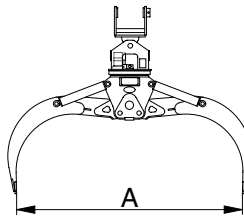
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.

3. The load point is the end pin point of front attachment.

4. *indicates load limited by hydraulic capacity.

▲ Failure to comply to the rated load can cause possible personal injury or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

6. GRAPPLE GUIDE

Item	Lifting capacity	Max opening width (A)	Weight	
Orange grapple	★0.90 m ³ (1.18 yd ³)	2000 mm (6' 7")	1400 kg (3090 lb)	 <p style="text-align: right;">300E2SP10</p>
Wood grapple	1.90 m ³ (2.49 yd ³)	3500 mm (11' 6")	2100 kg (4630 lb)	 <p style="text-align: right;">2909MH2SP06</p>

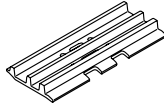
★Standard

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	
				
R290LC-9MH Tilt cab	Shoe width	mm (in)	800 (32)	900 (36)
	Operating weight	kg (lb)	32710 (72110)	33090 (72950)
	Ground pressure	kgf/cm ² (psi)	0.47 (6.68)	0.42 (5.97)
	Overall width	mm (ft-in)	3400 (11' 1")	3500 (11' 5")
R290LC-9MH Elevating cab	Shoe width	mm (in)	800 (32)	900 (36)
	Operating weight	kg (lb)	33660 (74210)	34040 (75040)
	Ground pressure	kgf/cm ² (psi)	0.48 (6.83)	0.44 (6.26)
	Overall width	mm (ft-in)	3400 (11' 1")	3500 (11' 5")

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

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

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	HYUNDAI HE6.7
Type	4-cycle turbocharged 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 (409cu in)
Compression ratio	17.2 : 1
Rated gross horse power (SAE J1995)	227 Hp at 1900 rpm (169 kW at 1900 rpm)
Maximum torque	97.0 kgf · m (701 lbf · ft) at 1400 rpm
Engine oil quantity	24 l (6.3 U.S. gal)
Dry weight	556 kg (1226 lb)
High idling speed	1850 ± 50 rpm
Low idling speed	800 ± 100 rpm
Rated fuel consumption	166.3 g/Hp · hr at 1900 rpm
Starting motor	24 V-4.5 kW
Alternator	24 V-90 A
Battery	2 × 12 V × 160 Ah

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) [380 kgf/cm ² (5400 psi)]
Rated oil flow	2 × 252 l /min (66.6 U.S. gpm / 55.4 U.K. gpm)

[] : 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	10 spools	
Operating method	Hydraulic pilot system	
Main relief valve pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]	
Port relief valve pressure	Boom	400 kgf/cm ² (5690 psi)
	Arm	400 kgf/cm ² (5690 psi)
	Bucket	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 (506 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 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 kgf/cm ² (92 psi)
	Maximum	26 kgf/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	∅ 140 × ∅ 100 × 1465 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 150 × ∅ 110 × 1765 mm
	Cushion	Extend and retract

※ 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
R290LC-9MH Tilt cab	Standard	800 mm (32")	0.47 kgf/cm ² (6.68 psi)	48	3400 mm (11' 1")
	Option	900 mm (36")	0.42 kgf/cm ² (5.97 psi)	48	3500 mm (11' 5")
R290LC-9MH Elevating cab	Standard	800 mm (32")	0.48 kgf/cm ² (6.83 psi)	48	3400 mm (11' 1")
	Option	900 mm (36")	0.44 kgf/cm ² (6.26 psi)	48	3500 mm (11' 5")

10) GRAPPLE

Item		Lifting capacity	Width	
			Max opening width	Overall length
R290LC-9MH	Standard	0.90 m ³ (1.18 yd ³)	2000 mm (6' 7")	2540 mm (8' 4")
	Option	1.90 m ³ (2.49 yd ³)	3500 mm (11' 6")	3595 mm (11' 10")

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)
Engine oil pan	Engine oil	24 (6.3)	★SAE 5W-40						
			SAE 30						
			SAE 10W						
			SAE 10W-30						
			SAE 15W-40						
Swing drive	Gear oil	6.0 (1.6)	★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 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