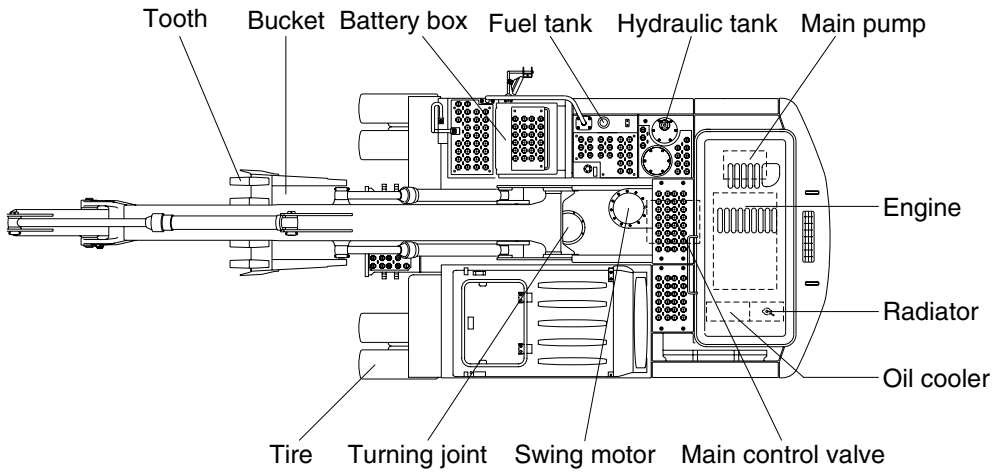
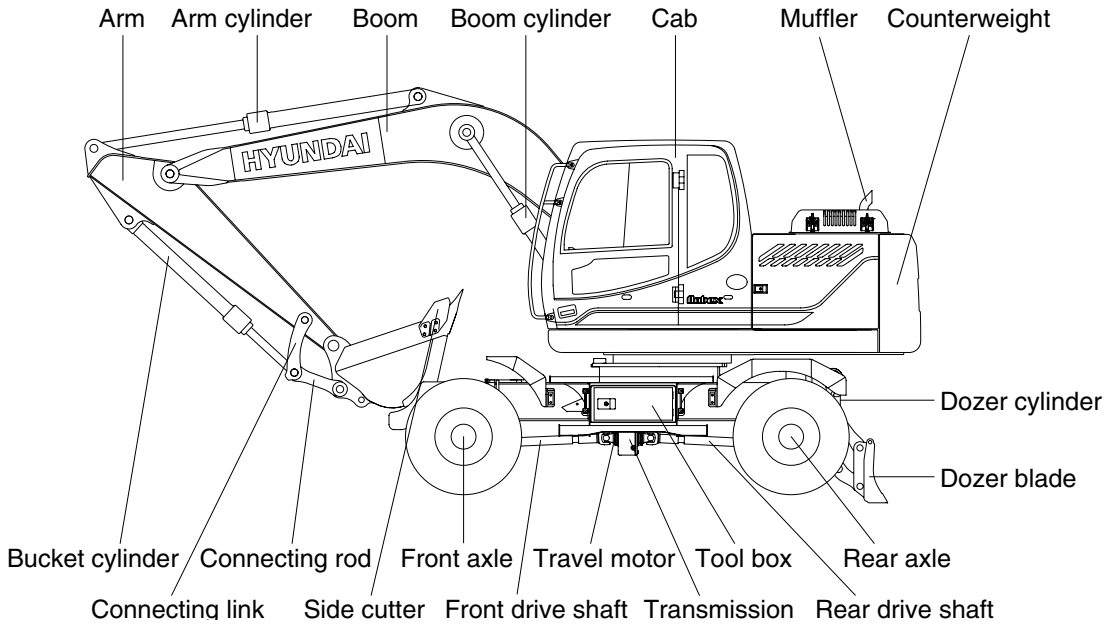
1. MAJOR COMPONENTS

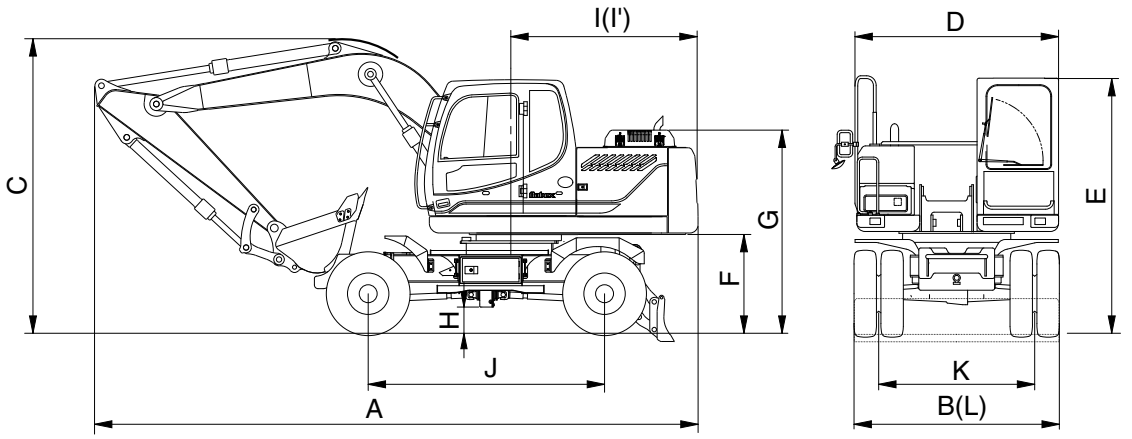




14W92SP01

2. SPECIFICATIONS

1) 4.6 m (15' 1") ONE PIECE BOOM, 2.1 m (6' 11") ARM AND REAR DOZER BLADE

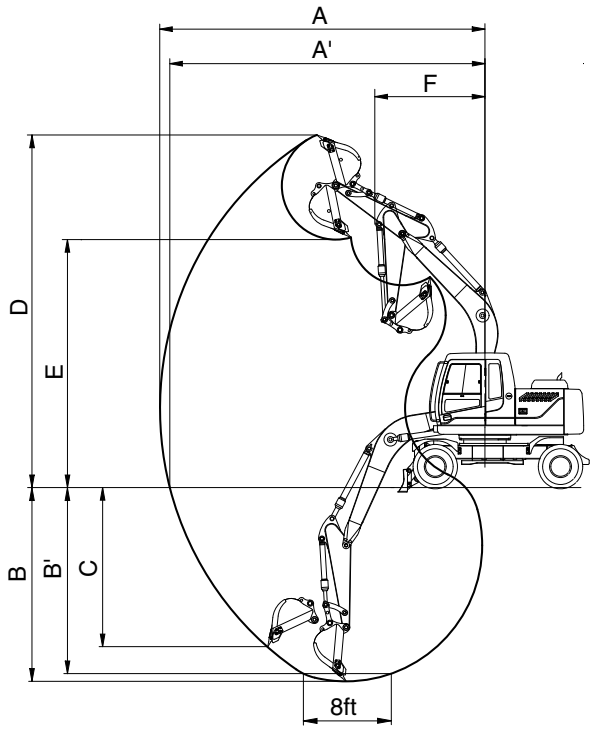


14W92SP02

Description		Unit	Specification
Operating weight		kg	13700
Bucket capacity (SAE heaped), standard		m^3	0.58
Overall length	A	mm	7760
Overall width	B		2495
Overall height	C		3500
Upperstructure width	D		2475
Cab height	E		3140
Ground clearance of counterweight	F		1233
Wheel base	J		2320
Minimum ground clearance	H		365
Rear-end distance	I		2310
Rear-end swing radius	I'		2310
Engine cover height	G		2800
Tread	K		1944
Dozer blade width	L		2490
Travel speed	High	km/hr	37.0
Swing speed		rpm	11.6
Gradeability		Degree (%)	35(70)
Max traction force		kgf	8500

3. WORKING RANGE

1) 4.6 m (15' 1") MONO BOOM



14W92SP03

Description		1.9 m **Arm**	* 2.10 m **Arm**	2.50 m **Arm**	3.00 m **Arm**
Max digging reach	A	7750 mm	7920 mm	8320 mm	8780 mm
Max digging reach on ground	A'	7530 mm	7700 mm	8120 mm	8590 mm
Max digging depth	B	4650 mm	4850 mm	5250 mm	5750 mm
Max digging depth (8 ft level)	B'	4390 mm	4600 mm	5040 mm	5570 mm
Max vertical wall digging depth	C	4120 mm	4260 mm	4790 mm	5320 mm
Max digging height	D	8410 mm	8490 mm	8810 mm	9090 mm
Max dumping height	E	5980 mm	6060 mm	6370 mm	6640 mm
Min swing radius	F	2620 mm	2680 mm	2630 mm	2660 mm
Bucket digging force	SAE	8800 [9600] kgf	8800 [9600] kgf	8800 [9600] kgf	8800 [9600] kgf
	ISO	10400 [11290] kgf	10400 [11290] kgf	10400 [11290] kgf	10400 [11290] kgf
Arm digging force	SAE	7800 [8470] kgf	7500 [8140] kgf	6400 [6950] kgf	5700 [6190] kgf
	ISO	8200 [8900] kgf	7900 [8580] kgf	6700 [7270] kgf	5900 [6410] kgf

* : Standard [ ] : Power boost

4. WEIGHT

	R150WVS PRO	
	kg	lb
Upperstructure assembly	5090	11220
Main frame weld assembly	1145	2525
Engine assembly	485	1069
Main pump assembly	100	220
Main control valve assembly	80	175
Swing motor assembly	107	235
Hydraulic oil tank assembly	180	400
Fuel tank assembly	140	310
Counterweight	1650	3640
Cab assembly	500	1100
Chassis assembly	4650	10250
Lower frame weld assembly	1550	3420
Swing bearing	186	410
Travel motor assembly	60	130
Turning joint	120	265
Transmission assembly	140	310
Front axle assembly	540	1190
Rear axle assembly	450	990
Dozer blade assembly	400	880
Front attachment assembly (4.6 m 0.58 m^3 SAE heaped bucket)	2400	5291
4.6 m boom assembly	870	1918
2.1 m arm assembly	385	850
0.58 m^3 SAE heaped bucket assembly	480	1060
Boom cylinder assembly	130	285
Arm cylinder assembly	160	350
Bucket cylinder assembly	100	220
Bucket control link assembly	80	175
Oscillating cylinder assembly	30	70
Blade cylinder assembly (front)	55	120

5. LIFTING CAPACITIES

1) ROBEX 150WVS PRO

(1) 4.60 m (15' 1") boom, 2.1 m (6'11") arm equipped with 0.58 m³ (SAE heaped) bucket and rear dozer blade down with 1700 kg 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)		Capacity		Reach
												m (ft)
6.0 m	kg					*3130	*3130			*3050	1950	6.43
(20.0 ft)	lb					*6900	*6900			*6720	4300	(21.1)
4.5 m	kg					*3540	*3540	*3210	2120	*3160	1520	7.23
(15.0 ft)	lb					*7800	*7800	*7080	4670	*6970	3350	(23.7)
3.0 m	kg			*6620	6450	*4510	3310	*3770	2040	3230	1340	7.59
(10.0 ft)	lb			*14590	14220	*9940	7300	*8310	4500	7120	2950	(24.9)
1.5 m	kg			*8650	5730	*5580	3060	*4230	1930	3180	1300	7.59
(5.0 ft)	lb			*19070	12630	*12300	6750	*9330	4250	7010	2870	(24.9)
Ground	kg			*9090	5510	*6240	2900	*4540	1860	3420	1390	7.24
Line	lb			*20040	12150	*13760	6390	*10010	4100	7540	3060	(23.8)
-1.5 m	kg	*7380	*7380	*9530	5530	*6240	2860			*3760	1700	6.45
(-5.0 ft)	lb	*16270	*16270	*21010	12190	*13760	6310			*8290	3750	(21.2)
-3.0 m	kg	*11710	*11710	*7990	5690	*5240	2950					
(-10.0 ft)	lb	*25820	*25820	*17610	12540	*11550	6500					

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

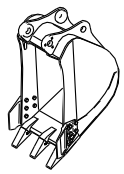
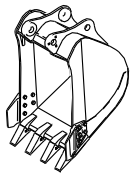
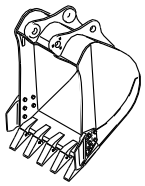
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.

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) GENERAL BUCKET

		
0.23 m³ SAE heaped bucket	0.40, 0.46 m³ SAE heaped bucket	0.52, ※0.58, 0.65, 0.71 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation						
					4.6 m (15' 1") Mono boom				4.9 m (16' 9") Hyd adjustable boom		
SAE heaped	CECE heaped	Without side cutter	With side cutter		1.9 m arm (6' 3")	2.1 m arm (6' 11")	2.5 m arm (8' 2")	3.0 m arm (9' 10")	1.9 m arm (6' 3")	2.1 m arm (6' 11")	2.5 m arm (8' 2")
0.23 m³ (0.30 yd³)	0.20 m³ (0.26 yd³)	520 mm (20.5")	620 mm (24.4")	335 kg (740 lb)							
0.40 m³ (0.52 yd³)	0.35 m³ (0.46 yd³)	760 mm (29.9")	860 mm (33.9")	410 kg (900 lb)							
0.46 m³ (0.60 yd³)	0.40 m³ (0.52 yd³)	850 mm (33.5")	950 mm (37.4")	435 kg (960 lb)							
0.52 m³ (0.68 yd³)	0.45 m³ (0.59 yd³)	935 mm (36.8")	1035 mm (40.7")	460 kg (1010 lb)							
※0.58 m³ (0.76 yd³)	0.50 m³ (0.65 yd³)	1030 mm (40.6")	1130 mm (44.5")	480 kg (1060 lb							
0.65 m³ (0.85 yd³)	0.55 m³ (0.72 yd³)	1110 mm (43.7")	1210 mm (47.6")	500 kg (1100 lb)							
0.71 m³ (0.93 yd³)	0.60 m³ (0.78 yd³)	1205 mm (47.4")	1305 mm (51.4")	540 kg (1190 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

7. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSB7
Type	4-cycle turbocharged diesel engine, low emission
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 (409 cu in)
Compression ratio	17.3 : 1
Rated gross horse power (SAE J1995)	167 Hp (125 kW) at 1900 rpm
Maximum torque	67 kgf·m /1200 rpm
Engine oil quantity	24l
Dry weight	485 kg
High idling speed	1950 ±50 rpm
Low idling speed	850 ±100 rpm
Rated fuel consumption	151.4 g/Hp·hr at 1900 rpm
Starting motor	Nippon densor (24 V-7.8 kW)
Alternator	Delco remy (24 V-90 A)
Battery	2×12 V×120 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2×80 cc/rev
Maximum pressure	350 kgf/cm^2 (4980 psi) [380 kgf/cm^2 (5400 psi)]
Rated oil flow	2×172 l/min (45.4 U.S. gpm / 37.8 U.K. gpm)
Rated speed	2150 rpm

[ ]: Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm^2
Rated oil flow	32.3 l/min

4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools two-block
Operating method	Hydraulic pilot system
Main relief valve pressure	350 kgf/cm^2
Overload relief valve pressure	400 kgf/cm^2

[ ]: Power boost

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	72 cc/rev
Relief pressure	280 kgf/cm^2 ^{2}
Braking system	Automatic, spring applied hydraulic released
Braking torque	36.8 kgf·m
Brake release pressure	20~50 kgf/cm^2
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement bent-axis axial piston motor
Relief pressure	400 kgf/cm^2
Counter balance valve	Applied
Capacity	107 cc/rev

7) POWER TRAIN

Item	Description		Specification
Transmission	Type		2 speed power shift transmission
	Gear ratio	1st	4.87
		2nd	1.20
Parking brake	Type		Multi disc brake integrated in transmission
	Maximum braking torque		2124 kgf·m (15360 lbf·ft)
Axle	Type		4 wheel drive with differential
	Gear ratio		16.0
	Brake		Multi disc brake

8) CYLINDER

Item			Specification
Boom cylinder		Bore dia×Rod dia×Stroke	Ø105×Ø75×1075mm
		Cushion	Extend only
Arm cylinder		Bore dia×Rod dia×Stroke	Ø115×Ø80×1138mm
		Cushion	Extend and retract
Bucket cylinder		Bore dia×Rod dia×Stroke	Ø100×Ø70×850mm
		Cushion	Extend only
Dozer cylinder	Rear	Bore dia×Rod dia×Stroke	Ø100×Ø65×236mm

9) BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
Standard	※ 0.58 m³ (0.76 yd³)	0.50 m³ (0.65 yd³)	5	1030 mm (40.6")	1130 mm (44.5")
Option	0.23 m³ (0.30 yd³)	0.20 m³ (0.26 yd³)	3	520 mm (20.5")	620 mm (24.4")
	0.40 m³ (0.52 yd³)	0.35 m³ (0.46 yd³)	4	760 mm (29.9")	860 mm (33.9")
	0.46 m³ (0.60 yd³)	0.40 m³ (0.52 yd³)	4	850 mm (33.5")	950 mm (37.4")
	0.52 m³ (0.68 yd³)	0.45 m³ (0.59 yd³)	5	935 mm (36.8")	1035 mm (40.7")
	0.65 m³ (0.85 yd³)	0.55 m³ (0.72 yd³)	5	1110 mm (43.7")	1210 mm (47.6")
	0.71 m³ (0.93 yd³)	0.60 m³ (0.78 yd³)	5	1205 mm (47.4")	1305 mm (51.4")
	◎ 0.55 m³ (0.72 yd³)	0.45 m³ (0.59 yd³)	-	1800 mm (70.9")	-
	★ 0.45 m³ (0.59 yd³)	0.40 m³ (0.52 yd³)	-	1520 mm (59.8")	-

◎ : Slope finishing bucket

★ : Ditch cleaning bucket

8. RECOMMENDED OILS

Use only oils listed below or equivalent.
Do not mix different brand oil.

Service point	Kind of fluid	Capacity L	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	23.7	★SAE 5W-40 SAE 30
Transmission case		2.5	SAE 10W SAE 10W-30 SAE 15W-40
Swing drive	Gear oil	2.5 ★1 3.5	★SAE 75W-90 SAE 85W-140
	Grease	0.35	★NLGI NO.1 NLGI NO.2
Front axle	Gear oil	9.0	SAE 85W-90 LSD or UTTO
Rear axle		11.2	
Hydraulic tank	Hydraulic oil	Tank: 124 System: 240	★ISO VG 15 ISO VG 32 ISO VG 46 ISO VG 68
Fuel tank	Diesel fuel	270	★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	19.5	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 Materia
UTTO : Universal Tractor Transmission Oil

★ : Cold region
Russia, CIS, Mongolia
★1 : Soft water
City water or distilled water
★2 : Service when the grease inlet exists on the equipment