



# VOLVO EXCAVATORS

Environmental Declaration



# Environmental Declaration

## Crawler and Wheeled Excavators

Environmental characteristics below specified by the manufacturer, relate to machines leaving the manufacturers production line. For other technical specifications, see specification sheet and operator manual for the respective machine.

Manufacturer:  
Volvo Construction Equipment Korea,  
160, Doosanvolvo-ro, Seongsan-gu,  
Changwon-si, Gyeongsangnam-do  
Korea

Manufacturer:  
Volvo Construction Equipment Germany  
GmbH  
54329 Konz  
Germany

Model	Unit	EC120D	EC140D	EC170D	EC200D	EC210D	EC220D
Engine type		D3.8E	D3.8E	D4E	D5E	D5E	D6E
Engine power, ISO 9249, SAE J1349 net	kW	73	73	90	115	115	115
Metric	hp	100	100	122	156	156	156
Engine power, ISO14396, SAE J1995 gross	kW	77	77	91	123	123	123
Metric	hp	105	105	124	167	167	167
Model	Unit	EC250D	EC300D	EC350D	EC380D	EC480D	
Engine type		D7E	D7E	D8F (T2), D8K (T3)	D13F	D13F	
Engine power, ISO 9249, SAE J1349 net	kW	137	169	197	208	256	
Metric	hp	186	230	268	283	348	
Engine power, ISO14396, SAE J1995 gross	kW	138	170	210	215	265	
Metric	hp	188	231	286	292	360	
Model	Unit	EC750D	EC950E	ECR145C	ECR235C	ECR305C	EW205D
Engine type		D16E	D16E	D4E	D6E	D7E	D6E
Engine power, ISO 9249, SAE J1349 net	kW	374	449	69	110	143	121.3
Metric	hp	509	611	94	150	194	165
Engine power, ISO14396, SAE J1995 gross	kW	385	450	80	123	153	129.5
Metric	hp	523	612	109	167	208	176

## Core values

Quality, safety and environmental care are Volvo's core values. They are designed from the beginning into the product's entire service life. This includes design and engineering, material selection, manufacturing processes, use and recycling.

## Manufacturers

The assembly of the complete machines takes place at one of Volvo Construction Equipment's production plants. Our production facilities are all certified according to ISO 14001. Many of our components and parts are purchased from external suppliers. Volvo Construction Equipment works closely with these suppliers in order to safeguard the environmental requirements for purchased components and parts.

## Declarations

Upholstery and other materials in the cab do not contain mercury.  
Plastics and other interior materials are fire-classed according to Volvo standard 104-0001.  
Brake pads do not contain cadmium or asbestos.  
The complete machine does not contain any mercury, cadmium or asbestos.  
If the machine is equipped with air conditioning (option), refrigerant type R134A (0.65~1.2 kg) is used.

## Paint and Surface Treatment

In order to reduce solvent emissions, the machines are painted using high solid paints. To reduce consumption of water and chemicals, cleaning and recirculation takes place during the pre-treatment processes in the factories.

### Specification of paint

Main components	Paint type	Heavy metals	Chlorine	Pre-treatment
Cab	Two component	no	no	Water and alkaline wash
Axles and transmission	Two component	no	no	Solvent washing
Doors and Covers	Two component	no	no	Water and alkaline wash
Frame and Attachment	Two component	no	no	Shot blasting
Tanks	Two component	no	no	Water and acid wash

# Environmental Declaration

## Engine/emissions

The engine emission value is meeting with the limit value according to EU Directive 97/68/EC 2010/26/EU, Stage IIIA, US EPA Tier3.

The parent engine is the engine with the highest fuel injection volume at maximum torque. Engines with the same design or similar technology will then belong to this family. Therefore, the values required by law are only given for the parent engine.

Emission levels	NOx + HC (g/kWh)	PM (g/kWh)	CO (g/kWh)	Power range (kW)
EU Directive 2010/26/EU, Stage IIIA	4	0.3	5.0	75-130
EU Directive 2010/26/EU, Stage IIIA	4	0.2	3.5	130-560
US EPA Tier 3+ CARB	4	0.3	5.0	75-130
US EPA Tier 3+ CARB	4	0.2	3.5	130-560

## Sound levels

Noise emission of the machine is tested by International Standards.

Model	Unit	EC120D	EC140D	EC170D	EC200D	EC210D	EC220D
External sound power level, ISO 6395	dB	101	101	100	106	102.5	103
Sound pressure level, ISO 6396	L <sub>pA</sub> dB	71	71	68	71	73	70
Model		EC250D	EC300D	EC350D	EC380D	EC480D	
External sound power level, ISO 6395	dB	104	105	106	106	107	
Sound pressure level, ISO 6396	L <sub>pA</sub> dB	71	71	73	73	73	
Model		EC750D	EC950E	ECR145C	ECR235C	ECR305C	EW205D
External sound power level, ISO 6395	dB	110	111	100	102	103	103
Sound pressure level, ISO 6396	L <sub>pA</sub> dB	74	74	72	72	72	74

## **Operator's environment**

Incoming air for the cab first passes through a pre-filter which separates coarser particles, and then through the main filter in to the cab. Up to 90% of all air can be recirculated through the main filter. This creates an overpressure in the cab, which results in a cleaner work environment.

## **Service**

To facilitate draining and to reduce the risk of spilling engine oil and hydraulic oil, there are special hoses supplied with each machine. For bleeding air from axles, transmission and hydraulic oil tank there is a breather filter to reduce appearance of any oil mist.

The hydraulic tank as well as front and rear axles have a protective valve in the breather filter, minimizing leakage in case of machine turn-over/rollover.

## **Oils and fluids**

Ethylene glycol coolant is filled at the factory. Biologically degradable oil for the hydraulic system is available as an option. For service intervals and other maintenance, see applicable operator's manuals for each respective machine model. All engines have a system for cleaning the crankcase ventilation's emissions of oil particles.

## **Tires (EW205D)**

Tires without high-aromatic oils (HA-oils) are available from our suppliers.

## **Recycling**

Volvo Excavators are designed to be at least 95% recyclable at the end of their useful working life. The recycling rate is according to ISO16714:2008.

Materials can be reused in new Volvo Construction Equipment products. The majority of our plastic parts are marked for recycling according to Volvo standard 103-0002; 5052,41; 5052,411, and 5052,412.

# Environmental Declaration

## Recycling

The materials included in machines are divided into the following approximate weights:

Model	Units (rounded)	EC120D	EC140D	EC170D	EC200D	EC210D	EC220D
Steel and iron	kg	11 906	12 884	15 479	18 433	18 675	19 140
Lead (batteries)	kg	48	48	50	50	82	50
Other non-iron metals	kg	115	119	173	126	127	170
Glass	kg	61	61	69	53	60	69
Polymer and rubber	kg	187	238	336	223	313	354
Tires	kg	-	-	-	-	-	-
Oil and fluids	kg	324	324	359	399	419	445
Total recyclable material	kg	12 640	13 674	16 466	19 283	19 676	20 230
Total weight of machine	kg	12 780	13 800	16 730	19 655	20 185	21 090
Recycling quota	%	99	99	98	98	97	96

Model	Units (rounded)	EC250D	EC300D	EC350D	EC380D	EC480D
Steel and iron	kg	23 366	27 791	32 451	35 119	43 336
Lead (batteries)	kg	101	101	101	101	101
Other non-iron metals	kg	93	80	297	298	335
Glass	kg	69	69	69	69	69
Polymer and rubber	kg	325	333	522	619	503
Tires	kg	-	-	-	-	-
Oil and fluids	kg	510	579	699	730	819
Total recyclable material	kg	24 464	28 953	34 139	36 902	45 129
Total weight of machine	kg	24 835	29 330	34 573	37 335	45 562
Recycling quota	%	99	99	99	99	99

Model	Units (rounded)	EC750D	EC950E	ECR145C	ECR235C	ECR305C	EW205D
Steel and iron	kg	69 959	89 331	13 720	22 695	33 295	18 742
Lead (batteries)	kg	112	113	50	52	66	75
Other non-iron metals	kg	440	215	148	201	197	207
Glass	kg	69	69	32	32	32	71
Polymer and rubber	kg	428	851	275	369	337	358
Tires	kg	-	-	-	-	-	463
Oil and fluids	kg	742	1 272	229	305	460	460
Total recyclable material	kg	71 750	91 851	14 453	23 654	34 388	20 377
Total weight of machine	kg	72 400	92 981	14 650	23 874	34 589	20 710
Recycling quota	%	99	99	99	99	99	98

The calculation of the weights is based on defined machines. Variations are caused by different equipment. These material fractions can be recycled (material recycled and energy recycled) where possible.

### **Producer responsibility**

In most countries today, there is a producer responsibility for our products, applicable to components such as batteries, tires, etc. There are special regulations for these components. For further information, contact your dealer.

For further information, contact your dealer.

Machine model: \_\_\_\_\_ Place for stamp

Delivery date: \_\_\_\_\_

Machine's serial number: \_\_\_\_\_

Engine Type: \_\_\_\_\_

Engine's manufacturing number: \_\_\_\_\_

**VOLVO**

**Volvo Construction Equipment**

[volvoce.com](http://volvoce.com)