

VOLVO COMPACT EXCAVATOR

EC55



- **Net horsepower :**
38 kW / 52 hp

- **Operational weight :**
4910 – 5050 kg

- **Bucket capacity :**
70 – 231 litres

- **Maximum dig depth :**
4000 mm

- **Spacious, ergonomically designed and quiet cab**

- **Air conditioning** as standard for more comfort

- **TOPS and ROPS** cab for total operator safety

- Direct injection diesel engine and **low emissions** for **better environmental protection**

- **Total Power Control** hydraulic system providing **independence** of all movements and a high **work rate**

- Long undercarriage for **greater stability**

VOLVO

A very high level of comfort and safety

COMPACT EXCAVATOR EC55

The EC55 is designed for efficient work on the most difficult sites in optimal comfort conditions. Equipped with a powerful yet quiet engine, this machine has a hydraulic system which provides smoothness and precision. The output, reliability, comfort and standard equipment of this Volvo will constantly surprise you.



Excellent visibility for maximum safety

Comfortably installed in a good-sized cab, the operator enjoys excellent visibility all around the machine. This visibility represents an important safety element for the property and people in the vicinity of the working machine, particularly on narrow or congested sites.



Air conditioning as standard

For maximum comfort and productivity irrespective of the temperature, air conditioning is installed as standard. In addition, the cab is pressurized to provide a dust-free environment.



High operator safety

The EC55's cab enjoys a very high standard of safety, guaranteed by the ROPS and TOPS (tip over protection structure) certifications. The seatbelt is part of the standard equipment. The operator can thus work safely on any type of terrain.



A spacious and comfortable cab

Modern and quiet, the EC55's cab offers a size and standard of comfort worthy of heavier excavators.

The sprung seat is multi-adjustable to suit the operator perfectly and thus provide him with the most comfortable operating position.

For even more comfort, the EC55's windows are tinted.

The hydraulic controls are power-assisted and very progressive for smoothness and precision.



Protection against theft

An anti-theft keypad, available as an option, disables the machine's starter motor and the main hydraulic functions.



Operator information

Located where the operator can see it easily, the EC55's instrument panel incorporates all of the machine's information and control elements.



Radio as standard

To improve comfort even more and to make operation as pleasant as possible, the EC55 is fitted as standard with a radio/cassette player.

Quality, sturdiness and performance



Filling pump

The electric fuel pump fitted as standard enables the tank to be filled cleanly and easily. An easily accessible external gauge enables the fuel level to be checked.



Easy servicing

The wide soundproofed cover which can be opened completely provides excellent engine accessibility : all the servicing and inspection points are at hand, thus saving time. The enormous capacity of the fuel tank (90 litres) permits a long operating range.



Pre-filtration of the air

The three-stage air filtration system improves the engine's service life and reliability. Particularly useful in a dusty atmosphere, the external air pre-filter retains heavy particles.



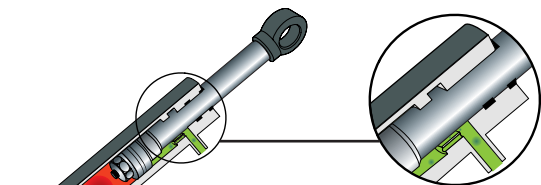
Increased equipment protection

Sturdy shielding protects the sensitive parts of the equipment. Thus, the dipper is reinforced at the end to protect it from hard or abrasive materials.



High-precision operation

All the hydraulic functions are independent and can be operated simultaneously for more comfort and productivity. Straight line travel is maintained even when the equipment or turret are moving for more safety.



Smooth operation

Cushions on the rams eliminate jolting, making for smooth movements and a longer service life for the equipment.



Power and efficiency

The EC55 has a large, powerful yet quiet engine (2.8 litres), with a low speed. The fast, smooth hydraulics are reinforced by a total power system which provides a very high level of performances and shorter cycle times. The bucket forces and the displacements are amongst the best on the market to give you greater productivity on all your sites.



Long chassis for more stability

The considerable length of the undercarriage provides exceptional stability and offers more output and safety, whilst reducing ground pressure. The top roller reduces noise and wear when travelling.



ENGINE

Low-emission, water-cooled, 4-cylinder direct-injection diesel engine.

Type Yanmar 4TNE94-SM
Cubic capacity 2.8 l
Max. power (SAE J 1349) 40 kW (54 hp)
Installed horsepower
(ISO 9249/DIN 6271) 38 kW (52 hp) at 2200 rpm
Maximum torque 181 Nm at 1600 rpm
Bore x stroke 94 mm x 100 mm



ELECTRICAL EQUIPMENT

Voltage 12 V
Battery 12 V – 100 AH
Alternator 12 V – 40 A
Starter 12 V – 2.3 kW



HYDRAULIC SYSTEM

Variable displacement Total Power Control hydraulic system. The system provides total independence of all movements and of travel. It incorporates in addition the following functions :

- Priority to the boom for faster raising
- Priority to the dipper for fast cycle times when doing levelling and earth work
- Boom anti-lowering device

Control power-assisted hydraulic controls

Variable displacement double pump for the equipment (boom, dipper and bucket) and travel circuits :

Maximum delivery 2 x 55 litres/min.
Maximum operating pressure 210 bars

Gear pump for the slewing, offset and blade circuits :

Maximum delivery 35.6 litres/min.
Maximum operating pressure 190 bars

Gear pump for the power assistance circuit :

Maximum delivery 9.9 litres/min.
Maximum operating pressure 33 bars

Double-acting hydraulic circuit for accessories :

Maximum delivery 55 litres/min.
Maximum operating pressure 210 bars

End-of-stroke cushions :

On boom ram at the end of the rod extension
On dipper ram on both sides
On offset ram on both sides



SLEWING SYSTEM

Turret slewing is provided by an axial piston hydraulic motor which drives a ball internal slew ring with remote lubrication.

Slewing speed 10 rpm
Turntable braking automatic brake



BUCKET PERFORMANCES

Excavation force 4070 daN
Tear-out force 2730 daN



LOWER UNDERCARRIAGE

The rollers and the tensioning wheels are lubricated for life.

Bottom/top rollers per side 5 / 1
Width of the standard tracks (rubber) 400 mm
Width of the optional tracks (steel) 380 mm
Track tension by grease piston
Blade (width x height) 1900 x 360 mm



TRAVEL SYSTEM

Each track is driven by an axial piston hydraulic motor equipped with two gears and an epicyclic reduction gear. Braking is provided automatically by a multiple disc brake.

Max. speed (low/high speed) 2.6 – 4.3 kph
Max. tractive effort 4280 daN
Permitted slope 35° (70%)



CAPACITIES

Fuel tank 90 litres
Hydraulic reservoir 90 litres
Total capacity of the hydraulic circuit 130 litres
Engine oil sump 9.7 litres
Coolant 12.1 litres



WEIGHTS

Operational weight and ground pressure :

Rubber tracks	Steel tracks
4910 kg 0.29 kg/cm ²	5050 kg 0.31 kg/cm ²



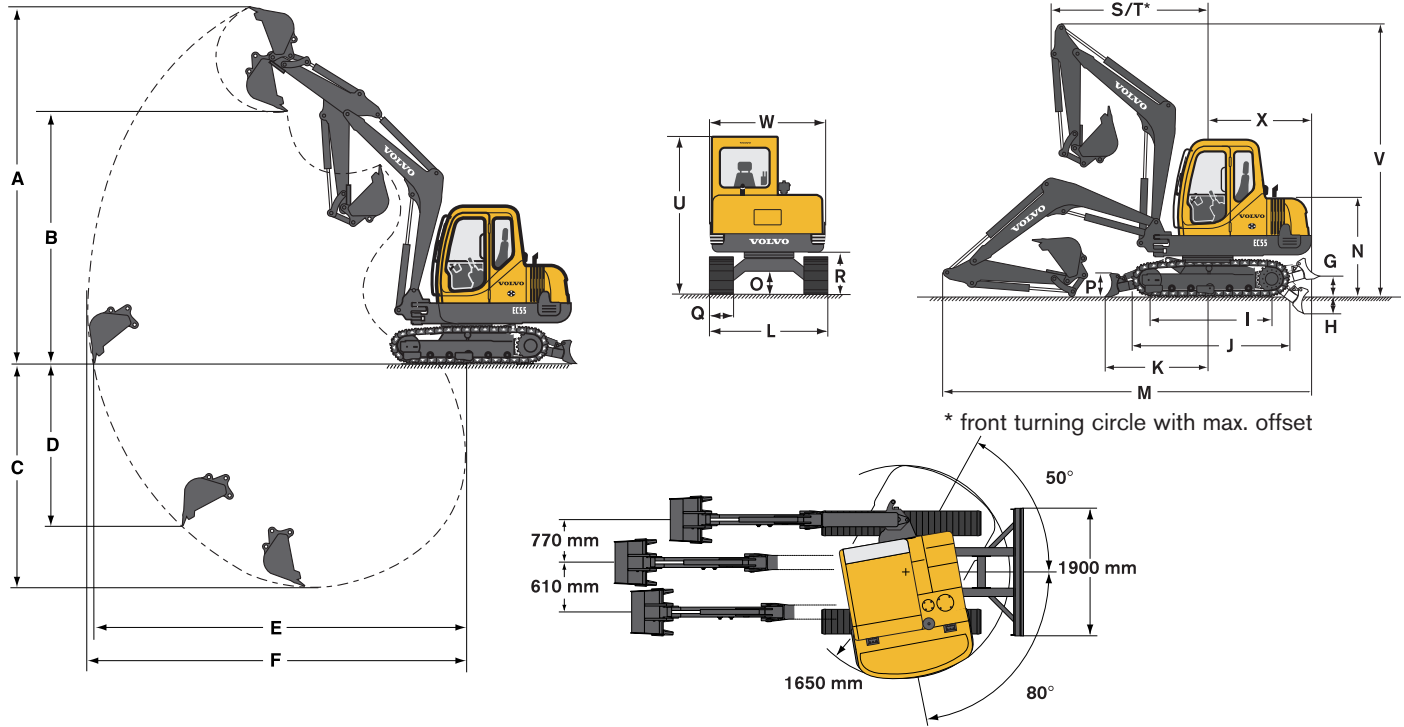
SOUND LEVELS






Results of dynamic measurements :

Sound level exterior (L_{wA}) 98 dB(A)
Sound level in the cab (L_{pA}) 79 dB(A)

The sound levels conform to EC directive n° 86/662 and its amendments.

DIMENSIONS



Buckets	 Width	 Weight	 Volume
 Backhoe bucket	350 mm	85 kg	70 l
	450 mm	97 kg	98 l
	600 mm	118 kg	142 l
	750 mm	138 kg	187 l
	900 mm	163 kg	231 l
 Ditch bucket	1500 mm	185 kg	265 l

A	B	C*	C	D	E	F	G	H
5770	4090	4000	3820	2620	5980	6110	350	450

* Dig depth with the blade down.

I	J	K	L	M	N	O	P
1950	2500	1610	1920	5900	1600	380	360









Q	R	S	T	U	V	W	X
400	690	2360	2330	2550	4470	1840	1650

In mm

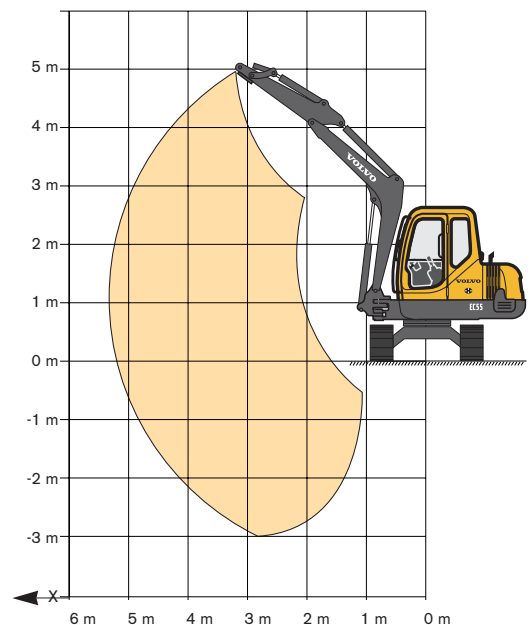
LOAD CAPACITIES

These capacities are given for a machine without a bucket or quick-release coupling and fitted with rubber tracks. The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

Caution : In accordance with standard EN 474-5, the machine must be equipped with a safety valve on the boom ram and an overload indicator (available as options) to carry out handling operations.

Outreach	1.5 m		3 m		4.5 m		Max.	
	 kg	 kg	 kg	 kg	 kg	 kg	 kg	 kg
4.5 m							870	*990
3 m					630	870	530	750
1.5 m			1160	1640	580	830	430	630
0 m			1030	1500	540	780	440	640
-1.5 m	*2370	*2370	1010	1480			560	810

* hydraulic limit



 Handling capacity in 360° rotation, with the blade up

 Front load capacity, with the blade up

STANDARD EQUIPMENT

Engine

Low-emission engine meeting European and American standards
 Three-stage air filter with blinding indicators
 External air pre-filter
 Electric heating device
 Diesel filter and sediment chamber
 Electric fuel tank filling pump (35 l/min)
 Oil sump sheet metal

Electrical system

Maintenance-free 12 V - 100 AH battery
 Starter motor 12 V – 2.3 kW
 Halogen working lights (2 on the turret and 1 on the boom)
 Horn

Load-bearing chassis

400 mm wide rubber tracks
 Backfilling blade
 Remote lubrication of the slew ring

Hydraulic system

Total Power Control system
 Power-assisted hydraulic controls
 Boom anti-lowering device
 Multiple filtration system (30 µm)
 Double-acting hydraulic circuit for accessories fitted on the boom
 Power-assisted control of the hydraulic offset of the boom by the left manipulator.
 Control of forward movement by two levers coupled to pedals.

Cab

Heating and air conditioning
 Anti-dust system by pressurization of the cab
 Tinted windows
 ROPS (Roll-Over Protective Structure)
 TOPS (Tilt-Over Protective Structure)
 Fabric-covered multi-adjustable sprung seat
 Non-slip floor and grab handle for access to the driver's cab
 Seatbelt
 Adjustable control console
 Hinged front window
 Removable bottom front window
 Sliding right side window

Door which can be held in the open position
 Radio/cassette player with 2 speakers
 Flexible aerial
 Interior lighting
 Intermittent windscreen wiper and windscreen washer on the front window
 Ashtray
 Cigar lighter

Instrumentation and monitoring

Monitoring and warning light for the following functions : pre-heating, engine oil pressure, water temperature, battery charge, air filter clogging
 Internal and external fuel gauges
 Hour meter

Handling and earthwork equipment

3030 mm long monobloc boom
 1540 mm dipper
 130° hydraulic boom offset
 Remote lubrication of the offset and dipper rams

Safety

Device for locking the controls when the left console is raised to gain access to the driver's cab
 Pressure accumulator on the power assistance circuit in order to be able to put the equipment on the ground if the engine is switched off.
 Window-breaker hammer (cab)

Official approval

Machine conforming to EC directive n° 89/392 and its amendments.
 Soundproofing conforming to EC directive n° 86/662 and its amendments.
 Handling device conforming to EN standard 474-5 (Option)
 ROPS conforming to ISO standard 3471/SAE J 1040
 TOPS conforming to ISO standard 12117

OPTIONAL EQUIPMENT

Handling and earthwork equipment

Safety valve piloted by the power assistance circuit on the boom ram with overload indicator
 Safety valve on the dipper ram
 Quick-release accessories coupling

Lower chassis

Steel tracks (380 mm wide)

Lighting

Additional rear working light
 Revolving light

Environmental protection

Bio degradable hydraulic oil

Safety

Anti-starting device coded by digicode keypad (2 programmable codes)
 FOPS1/FOG windscreen guard

Miscellaneous

Special customised paint (RAL specifications)

*Under our policy of continuous product improvement, we reserve the right to change specifications and design without prior notice.
 The illustrations do not necessarily show the standard version of the machine.*

VOLVO

Volvo Construction
 Equipment

Ref. No. 21 3 432 1110
 Printed in France 2001.06
 Volvo, Belley

English
 CEX
 2908893