

VOLVO COMPACT EXCAVATORS
ECR58, ECR88



VOLVO

THE COMFORTABLE WAY TO GET INTO TIGHT SPACES.

When your job takes you to an area where space is at a premium, turn to the Volvo ECR58 and ECR88. Both models have a short swing radius for the ultimate in manoeuvrability. You won't sacrifice comfort because the wide operator's area has plenty of features to make even the longest days tolerable.

The ECR58 and ECR88 short swing radius machines are very compact and the digging equipment can be offset so you can work safely in confined spaces without the risk of hitting walls, obstacles or other workers with the counterweight.

The units are built for comfort, with spacious cabs that have a wide, uncluttered floor and plenty of legroom. The deluxe, adjustable suspension seat has a high back for excellent comfort. The joysticks and ergonomic armrests are mounted to the consoles and can be adjusted independent of the seat for reduced fatigue and easy operation.

There's excellent visibility all around because of the large, flat glazed surface area on all sides, the thin cab pillars and the wide windscreen. Exterior rearview mirrors improve visibility and safety.

Heating and air conditioning help keep the cab comfortable at all times. In addition, the operator can see all key machine functions because the instrument panel is within easy view in front of the operator

Easy-grip, highly responsive control levers provide precise movements and reduce operator fatigue. The right control lever also has a roller so you can control the accessory circuit with your fingertips rather than the traditional foot pedal, allowing more foot space. A button on the front of the joystick sends maximum flow to accessories for increased comfort and better productivity. In addition, large, easy-to-use travel pedals are durable for frequent, intensive use.

The cab is set on rubber mountings to reduce vibration from the hydraulics and engine and reduce operator fatigue. In addition, the quiet, new-generation Volvo engine reduces fatigue and improves safety.



- Short swing radius offers the ultimate manoeuvrability.



- Heating and air conditioning keeps operator comfortable.



- Wide cab offers plenty of legroom for better comfort.



- Excellent performance even in tight job sites.
- Ergonomic armrests help reduce operator fatigue.
- Suspended consoles are adjustable independent of the seat.



OUTSTANDING PERFORMANCE AND ENVIRONMENTAL CARE.

Performance is everything when it comes to compact excavators - how much you can move per hour and how quickly you get the job done. That's why Volvo filled the ECR58 and ECR88 with features to help you power through the work.

The short swing radius helps you to go where the work is. The models feature impressive breakout and tear-out forces, allowing them to power through the toughest working conditions.

To work more efficiently the models feature an auto-idling system that lowers the engine speed to idle if the operator controls are not used for five seconds or more. The system returns the engine to the pre-selected speed once the operator uses any control. The auto-idling reduces fuel consumption, decreases noise for better safety and a longer engine life.

Both models feature automatic two-speed travel. In high gear, the travel speed is automatically shifted from high to low according to the travel load - perfect for levelling or backfilling work. The machines can also counter-rotate even in high speed for maximum control and manoeuvrability.

The finger tip control for accessories enables the operator to progressively adjust the flow to the attachment for more precision.

The load-sensing hydraulics are the best technology available, providing simplicity and efficiency. The speed of the hydraulic movements depends only on the position of the power-assisted, multi function control levers - regardless of load and number of simultaneous cylinder movements - to instantly supply only the necessary power.

A second independent circuit can allow complex accessories to be operated with ease.

Both machines have new-generation Volvo, 16 valve diesel engines that provide excellent performance. The engines are direct injection for fast, efficient mixing of fuel and air. Both models provide low exhaust emissions complying with the strictest legal standards.



- New Volvo engine offers excellent performance.



- Auto-idling reduces fuel consumption and noise.



- Impressive breakout and tear-out forces.



- Progressive finger-tip control of attachments.
- Load sensing hydraulics for precise movement.
- Great view of the work for better performance.



ENDURING QUALITY IN A SAFE, EFFICIENT DESIGN.

Tough work demands an even tougher machine - one that will stand up to the day-to-day assault of digging, grading and much more. The Volvo ECR58 and ECR88 are designed to stand up to work and keep coming back for more. They are built to keep the operator - and those around him - safe.

The engine is on the side and there's a large hood that allows complete, unobstructed access to all routine service points, including filters and fluid levels. The fuse box is under the seat for easy access. An electric pump delivers 35 litres of fuel per minute for fast and easy filling of the tank.

The cab door can be locked open and it is protected on the inside of the chassis to prevent damage.

There are many high quality features to ensure a long life, such as bucket cylinder hoses that are protected on the inside of the dipper. The ORFS (O-Ring Face Seal) technology of the hydraulic connectors provides a leak-free joint, resisting pressure peaks, vibrations and twisting. The wiring looms and connectors are waterproof and meet the IP67 standards, protecting the cables from their harsh operating environment.

As with all Volvo products, the units offer the best in safety to help protect the operator. Volvo excavators come standard with a FOPS 1, ROPS and TOPS safety structure to prevent injury. All machine controls are locked out when the console is raised to prevent accidents when the operator is getting into or out of the cab. This provides safety for those working near the machine.

The blade is locked in position by a safety valve, so it can be used as a front stabiliser. The laminated windscreen is designed to stay in one piece if it breaks for increased operator safety.



- Open door is protected in the width of the chassis.



- Laminated windscreen increase operator safety.



- High quality electrical and hydraulic connections.



- All controls lock out when console is raised.
- Instrument panel provides clear view of functions.
- Side engine hood opens wide for easy service.



SPECIFICATIONS - ECR58

Engine

Low emission, water-cooled, direct injection Volvo 4-cylinder diesel engine, meeting STEP 2 environmental regulations and equipped with an automatic return to idling system.

Model	Volvo D3.1
Gross power, rated (ISO 9249)	38.2 kW (52 hp) at 2100 r/min
Power, installed (ISO 9249)	37.5 kW (51 hp) at 2100 r/min
Displacement, total	3054 cc
Maximum torque	200 Nm at 1400 r/min
Bore x stroke	94 mm x 110 mm

Electrical system

Battery capacity	12 V - 100 Ah
Alternator rating	12 V - 55 A
Starter motor output	12 V - 3 kW

Hydraulic system

Closed centre Load Sensing hydraulic system providing total independence of each movement.

Control	power-assisted hydraulic controls
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Variable displacement Load Sensing pump for all the equipment and travel circuits:

Maximum flow	130 l/min
Maximum operating pressure	24 MPa (240 bars)

Gear pump for the power assistance circuit:

Maximum flow	9.4 l/min
Maximum operating pressure	3.3 MPa (33 bars)

Finger-tip controlled double-acting hydraulic circuit for accessories:

Maximum adjustable flow	70 l/min
Maximum operating pressure	24 MPa (240 bars)

End-of-stroke cushions:

On boom ram	at the end of the rod extension
On dipper ram	at the end of the rod retraction and extension
On offset ram	at the end of the rod retraction and extension

Bucket performance







Breakout force	3900 daN
Tearout force	2700 daN

Lifting capacity

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				2 m	3 m	4 m	Maxi
1 	1540 mm 	Z2	-	1320	830	540	
		Z1	1430	1090	720	490	
		Z3	2160	1090	720	620	
	1940 mm 	Z2	-	-	830	460	
		Z1	1280	1050	690	420	
		Z3	2050	1050	690	510	
2 	1540 mm 	Z2	-	1450	1230	1170	
		Z1	2790	2570	1720	1220	
		Z3	3590	2250	1520	1220	
	1940 mm 	Z2	-	-	1060	1030	
		Z1	2400	2560	1690	1100	
		Z3	3660	2390	1600	1120	

- 1 - Lifting capacity in total rotation over 360° with the blade raised.
2 - Lifting capacity in front longitudinal position and resting on the blade.

(kg)

Slewing system

Turntable slewing is provided by a radial piston hydraulic motor which drives directly (without a reduction gear) a ball internal crown wheel with remote lubrication:

Slewing speed	10 rpm
Turntable braking	automatic multi-disc brake
Absorption of hydraulic shocks	Shockless valve

Undercarriage

The undercarriage is made up of an "X" box fabricated centre part for more rigidity and of sloping side members for a better clearance of materials. The rollers and the tensioning wheels are lubricated for life.

Bottom/top rollers per side	5 / 1
Track width	Rubber: 400 mm Steel: 380 mm or 500 mm
Track tension	by grease piston
Blade (width x height)	2000 x 370 mm

Safety valve on the blade cylinder.

Drivetrain

Each track is driven by an axial piston hydraulic motor equipped with two speeds and an epicyclic reduction gear.

Braking is provided automatically by a multiple disc brake.

Automatic 2 -speed Travel enables to automatically shift from high to low speed according to the travel load.

Max. speed (low speed/ high speed)	2.2 km/h / 4.3 km/h
Max. tractive force	4600 daN

The travel control is automatically locked when the operator raises the left console.

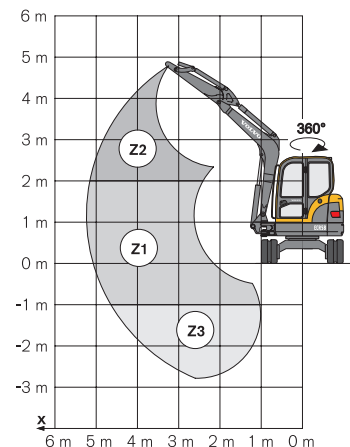
Service fill capacities

Fuel tank	65 l
Hydraulic tank	50 l
Hydraulic system, total	90 l
Engine oil	11.5 l
Cooling system	6.5 l

Weight

Operational weight and ground pressure:

Rubber Tracks (400 mm)	5480 kg - 0.3 kg/cm ²
Steel Tracks (380 mm)	5590 kg - 0.28 kg/cm ²



SPECIFICATIONS - ECR88

Engine

Low emission, water-cooled, direct injection Volvo 4-cylinder diesel engine, meeting STEP 2 environmental regulations and equipped with an automatic return to idling system.

Model	Volvo D3.4
Gross power, rated (ISO 9249)	43.8 kW (59 hp) at 2100 r/min
Power, installed (ISO 9249)	41.9 kW (57 hp) at 2100 r/min
Displacement, total	3318 cc
Maximum torque	235 Nm at 1400 r/min
Bore x stroke	98 mm x 110 mm

Electrical system

Battery capacity	12 V - 100 Ah
Alternator rating	12 V - 55 A
Starter motor output	12 V - 3 kW

Hydraulic system

Closed centre Load Sensing hydraulic system providing total independence of each movement.

Control	power-assisted hydraulic controls
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Variable displacement Load Sensing pump for all the equipment and travel circuits:

Maximum flow	174 l/min
Maximum operating pressure	30 MPa (300 bars)

Gear pump for the power assistance circuit:

Maximum flow	16.8 l/min
Maximum operating pressure	3.3 MPa (33 bars)

Finger-tip controlled double-acting hydraulic circuit for accessories:

Maximum adjustable flow	90 l/min
Maximum operating pressure	30 MPa (300 bars)

End-of-stroke cushions:

On boom ram	at the end of the rod extension
On dipper ram	at the end of the rod retraction and extension
On offset ram	at the end of the rod retraction and extension

Bucket performance







Breakout force	5600 daN
Tearout force	4100 daN

Lifting capacity

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			3 m	4 m	5 m	Maxi
1 	1700 mm 	Z2	2300	1550	1140	810
		Z1	2130	1380	1010	760
		Z3	2150	1380	1010	920
	2100 mm 	Z2	2330	1600	1150	720
		Z1	2070	1340	970	680
		Z3	2080	1340	970	790
2 	1700 mm 	Z2	2870	2070	1740	1650
		Z1	4200	2880	2140	1700
		Z3	3780	2690	1970	1720
	2100 mm 	Z2	2330	1810	1570	1500
		Z1	4220	2830	2090	1550
		Z3	3980	2750	2030	1590

1 - Lifting capacity in total rotation over 360° with the blade raised.

2 - Lifting capacity in front longitudinal position and resting on the blade.

Slewing system

Turntable slewing is provided by a radial piston hydraulic motor which drives directly (without a reduction gear) a ball internal crown wheel with remote lubrication:

Slewing speed	9.5 rpm
Turntable braking	automatic multi-disc brake
Absorption of hydraulic shocks	Shockless valve

Undercarriage

The undercarriage is made up of an "X" box fabricated centre part for more rigidity and of sloping side members for a better clearance of materials. The rollers and the tensioning wheels are lubricated for life.

Bottom/top rollers per side	6 / 1
Track width	Rubber: 450 mm Steel: 450 mm or 600 mm
Track tension	by grease piston
Blade (width x height)	2300 x 470 mm

Safety valve on the blade cylinder.

Drivetrain

Each track is driven by an axial piston hydraulic motor equipped with two speeds and an epicyclic reduction gear.

Braking is provided automatically by a multiple disc brake.

Automatic 2 -speed Travel enables to automatically shift from high to low speed according to the travel load.

Max. speed (low speed/ high speed)	2.7 km/h / 5.1 km/h
Max. tractive force	5450 daN

The travel control is automatically locked when the operator raises the left console.

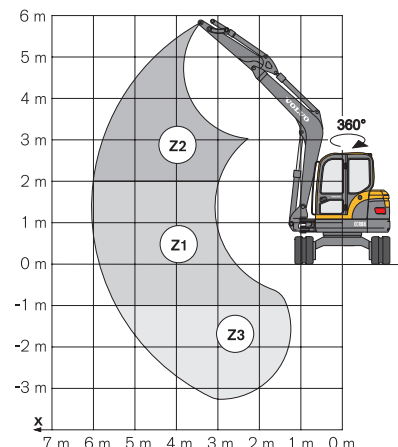
Service fill capacities

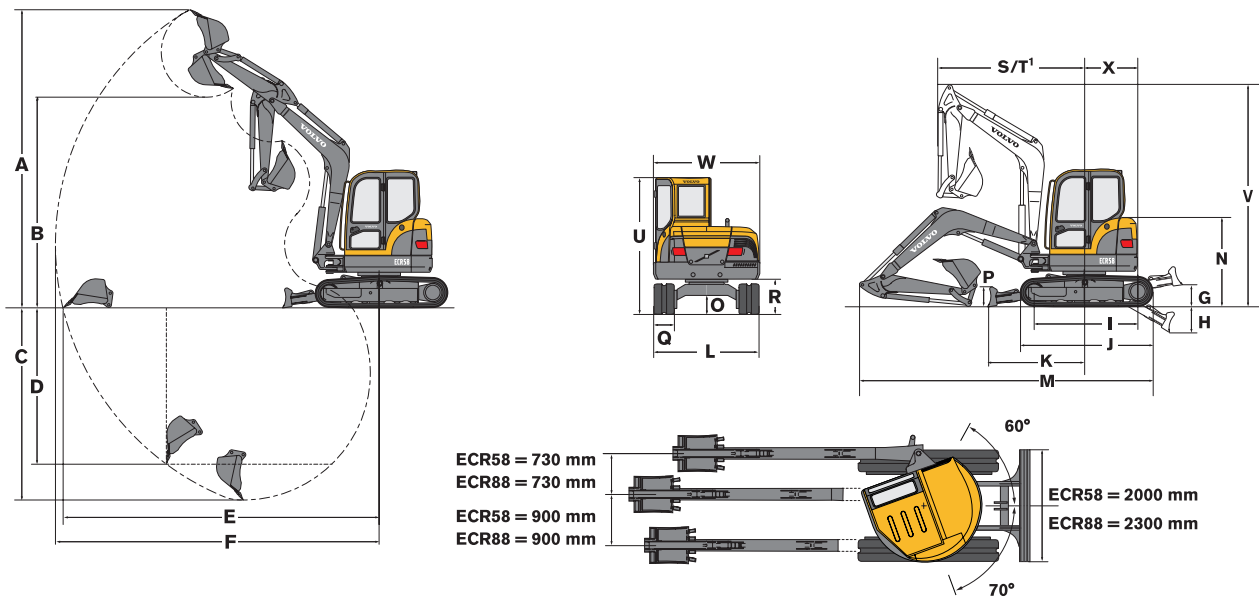
Fuel tank	110 l
Hydraulic tank	80 l
Hydraulic system, total	140 l
Engine oil	11.5 l
Cooling system	7.0 l

Weight

Operational weight and ground pressure:

Rubber Tracks (450 mm)	8200 kg - 0.36 kg/cm ²
Steel Tracks (450 mm)	8500 kg - 0.38 kg/cm ²





ECR58

Dipper	A	B	C	C*	D	E	F
1540 mm	5610	3970	3600	3850	2910	5940	6080
1940 mm	5850	4210	4000	4240	3260	6320	6460

G	H	I	J	K	L	M	N	O
420	480	1950	2500	1820	2000	5600	1670	370

P	Q	R	S	T'	U	V	W	X
370	400 ²	670	2470	1960	2580	4330	2000	1000

Buckets ECR58			
	Width	Weight	Capacity
Standard	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	1300 mm	125 kg	175 l
	1500 mm	185 kg	265 l

* : Digging depth with the blade down
 1 : Front turning radius with maximum offset
 2 : Options : 380 / 500 mm (steel)

ECR88

Dipper	A	B	C	C*	D	E	F
1700 mm	6740	4860	4170	4470	2890	6860	7010
2100 mm	7000	5120	4570	4870	3260	7240	7390

G	H	I	J	K	L	M	N	O
490	400	2200	2850	1940	2300	6410	1780	390

P	Q	R	S	T'	U	V	W	X
470	450 ²	755	2570	2040	2680	5260	2265	1210

Buckets ECR88			
	Width	Weight	Capacity
Standard	380 mm	128 kg	103 l
	450 mm	150 kg	130 l
	600 mm	183 kg	188 l
	750 mm	218 kg	246 l
	900 mm	236 kg	306 l
Ditch	1500 mm	250 kg	265 l

* : Digging depth with the blade down
 1 : Front turning radius with maximum offset
 2 : Options : 450 / 600 mm (steel)

STANDARD EQUIPMENT

Engine

Low-emission Volvo diesel engine.
Two-stage air filter with blinding indicator.
Electric heating device.
Fuel filter + transparent sediment chamber.
Electric fuel tank filling pump (35 l/min).
Drain valve under the diesel oil tank.
Oil sump sheet metal guard.
Automatic return to idling system.

Electrical system

Electric circuit-breaker.
Water-resistant electrical connectors (IP67).

Undercarriage

400 mm wide rubber tracks on ECR58.
450 mm wide rubber tracks on ECR88.
Dozer blade.

Hydraulic system

Load-sensing system.
Multiple filtration system (30µm).
ISO power-assisted hydraulic controls.
Power-assisted control of the hydraulic offset of the boom by the left control lever.
Control of forward and backward movement by two levers coupled to pedals.
Automatic 2 speed travel.
Double-acting hydraulic circuit for accessories fitted as far as the end of the arm.
Cab installed switch to select the single-acting mode for direct return of oil to the hydraulic tank.
Progressive finger-tip control of the accessory circuit.

Cab

Multi-adjustable fully-suspended consoles-seat assembly.
"Deluxe" fabric-covered superior comfort seat with a high back.
Cab mounted on rubber mountings.
Two working lights.
Heating and air conditioning.
Two-speed heating and ventilation.
Cab heating adjustment.
Tinted windows.
Front window with opening system power-assisted by two gas rams.
Radio/cassette player with 2 speakers.
Windscreen wiper and washer (front).

Instrumentation and monitoring

Warning lights for hydraulic filter and air filter restriction.
Gauges : water temperature, fuel level.
Hour meter.
Warning lights, coupled to an audible signal, in the event of overheating or drop in oil pressure.

Earthwork equipment

ECR58 :
2900 mm long monobloc boom.
1540 mm dipper arm.
ECR88 :
3550 mm long monobloc boom.
1700 mm dipper arm.

Safety

Level 1 FOPS (Falling Objects Protective Structure).
TOPS (Tip-Over Protective Structure).
ROPS (Roll-Over Protective Structure).
Device for locking the earthwork equipment's controls and the travel levers when the left console is raised to gain access to the driver's cab.
Engine starting safety device : the left console must be raised to operate the starter.
Pressure accumulator in order to be able to put the equipment on the ground if the engine is switched off.
Laminated glass front window.
Retractable seatbelt.
Tool kit.

Official approval

Machine conforming to European directive 98/37/EC.
Noise emissions in the environment conforming to directive 2000/14/EC.
Object handling device conforming to EN 474-5 standard.
FOPS 1 conforming to ISO 3449 standard.
TOPS conforming to ISO 12117 and EN 13531 standards.
Electromagnetic compatibility (EMC) conforming to European directive 89/336/EC and its amendments.

OPTIONAL EQUIPMENT

Handling and earthwork equipment

Long dipper (1940 mm on ECR58, 2100 mm on ECR88).
The long arm is recommended only for special applications with long reach and low density materials.
Safety valve piloted by the power assistance circuit on the boom ram with overload indicator.
Safety valve on the dipper ram.
Hydraulically-controlled quick-change attachment coupling.
Single-acting or double-acting hydraulic circuit for quick-coupling.

Hydraulic circuits for attachments

Hydraulic circuit for operating a clam-shell bucket (opening/closing and rotation of the bucket).
Additional adjustment roller of max. delivery available on the accessory circuit.
Second hydraulic circuit for accessories with piping on the boom.

Undercarriage

Steel tracks :
ECR58 : 380 mm or 500 mm wide.
ECR88 : 450 mm or 600 mm wide.

Cab

"Deluxe" vinyl-covered superior comfort seat with a high back.

Lighting

Additional working light on the boom.
Additional rear working light.
Rotating beacon.

Environmental protection

Bio-degradable hydraulic oil.

Comfort and safety

Anti-theft system (2 programmable codes).
Side view mirrors.
Level 2 FOPS.

Miscellaneous

Special customised paint (RAL specifications).



Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from an engineering heritage of over 170 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different – **More care. Built in.**



All products are not available in all markets. Under our policy of continuous 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.

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