

VOLVO COMPACT EXCAVATORS

# ECR58 PLUS, ECR88 PLUS



# 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 Plus and ECR88 Plus. Both models have a 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 Plus and ECR88 Plus 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 Plus and ECR88 Plus 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 a new generation Volvo 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 latest EPA regulations.



- New Volvo engine offers excellent performance.



- Auto-idling reduces fuel consumption and noise.



- Impressive breakout and tear-out forces.



- New pin-on Volvo attachment bracket.



- Progressive finger-tip control of attachments.
- Keep it together with Bucket Transport.
- 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 Plus and ECR88 Plus 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.

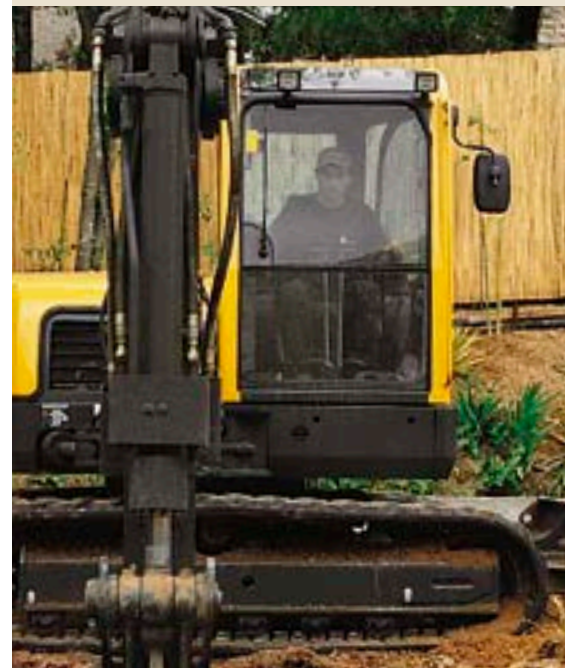
There are many high quality features to ensure a long life, such as bucket cylinder hoses that are protected on the inside of the dipper. The ORFS (O-Ring Face Seal) technology of the hydraulic connectors provides a leak-free joint, resisting pressure peaks, vibrations and twisting. The wiring looms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



**ECR88 PLUS**

# SPECIFICATIONS - ECR58 PLUS

## Engine

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

<b>Model</b>	Volvo D3.1
<b>Gross power, rated (ISO 9249)</b>	35.9 kW (48.8 hp) @ 2 000 rpm
<b>Power, installed (ISO 9249)</b>	34.6 kW (47 hp) @ 2 000 rpm
<b>Displacement, total</b>	3 054 cc
<b>Maximum torque</b>	200 Nm @ 1 400 rpm
<b>Bore x stroke</b>	94 mm x 110 mm

## Electrical system

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

## Hydraulic system

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

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

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

Gear pump for the power assistance circuit:

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

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

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

End-of-stroke cushions:

<b>On boom ram</b>	at the end of the rod extension
<b>On dipper ram</b>	at the end of the rod retraction and extension
<b>On offset ram</b>	at the end of the rod retraction and extension

## Bucket performance




<b>Breakout force</b>	3 900 daN
<b>Tearout force</b>	2 700 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	Standard counterweight				Optional counterweight					
	2 m	3 m	4 m	Maxi	2 m	3 m	4 m	Maxi		
1 360° 	1540 mm	Z2	-	1 360	860	560	-	1 410	900	580
		Z1	1 430	1 130	750	510	1 430	1 180	780	530
		Z3	2 210	1 140	750	650	2 210	1 190	790	680
	1940 mm	Z2	-	-	860	480	-	-	900	510
		Z1	1 280	1 090	720	440	1 280	1 150	750	460
		Z3	2 050	1 090	720	540	2 050	1 150	750	560
2 	1540 mm	Z2	-	1 390	880	570	-	1 440	920	600
		Z1	1 430	1 160	770	520	1 430	1 210	800	550
		Z3	2 210	1 170	770	660	2 210	1 220	810	700
	1940 mm	Z2	-	-	880	500	-	-	920	520
		Z1	1 280	1 120	740	450	1 280	1 180	770	480
		Z3	2 050	1 120	740	550	2 050	1 180	770	580

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:

<b>Slewing speed</b>	9.5 rpm
<b>Turntable braking</b>	automatic multi-disc brake
<b>Absorption of hydraulic shocks</b>	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.

<b>Bottom/top rollers per side</b>	5 / 1
<b>Track width</b>	Rubber: 400 mm Steel: 380 mm or 500 mm
<b>Track tension</b>	by grease piston
<b>Blade (width x height)</b>	2 000 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.

<b>Max. speed (low speed/ high speed)</b>	2.2 km/h / 4.3 km/h
<b>Max. tractive force</b>	4 700 daN

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

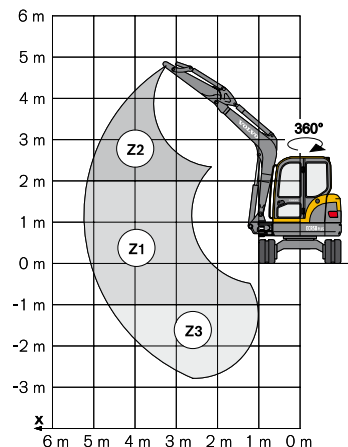
## Service fill capacities

<b>Fuel tank</b>	65 l
<b>Hydraulic tank</b>	50 l
<b>Hydraulic system, total</b>	90 l
<b>Engine oil</b>	11.5 l
<b>Cooling system</b>	6.5 l

## Weight

Operational weight and ground pressure:

<b>Rubber Tracks (400 mm)</b>	5 880 kg - 0.34 kg/cm <sup>2</sup>
<b>Steel Tracks (380 mm)</b>	5 970 kg - 0.35 kg/cm <sup>2</sup>



# SPECIFICATIONS - ECR88 PLUS

## Engine

Low emission, water-cooled, direct injection Volvo 4-cylinder diesel engine, meeting Tier III / STAGE IIIA environmental regulations and equipped with an automatic return to idling system.

<b>Model</b>	Volvo D3.4
<b>Gross power, rated (ISO 9249)</b>	42.5 kW (58hp) @ 2 000 rpm
<b>Power, installed (ISO 9249)</b>	40.3 kW (55hp) @ 2 000 rpm
<b>Displacement, total</b>	3 319 cc
<b>Maximum torque</b>	235 Nm @1 400 rpm
<b>Bore x stroke</b>	98 mm x 110 mm

## Electrical system

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

## Hydraulic system

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

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

<b>Maximum flow</b>	166 l/min
<b>Maximum operating pressure</b>	30 MPa (300 bars)

Gear pump for the power assistance circuit:

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

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

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

End-of-stroke cushions:

<b>On boom ram</b>	at the end of the rod extension
<b>On dipper ram</b>	at the end of the rod retraction and extension
<b>On offset ram</b>	at the end of the rod retraction and extension

## Bucket performance







<b>Breakout force</b>	5 900 daN
<b>Tearout force</b>	4 100 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		Standard counterweight				Optional counterweight				
		3 m	4 m	5 m	Maxi	3 m	4 m	5 m	Maxi	
1 360° 	1700 mm 	Z2	2 300	1 550	1 220	880	2 300	1 550	1 310	950
		Z1	2 290	1 480	1 090	820	2 460	1 600	1 170	890
		Z3	2 310	1 490	1 090	990	2 380	1 600	1 180	1 070
	2100 mm 	Z2	2 330	1 600	1 230	780	2 330	1 600	1 320	850
		Z1	2 230	1 450	1 050	730	2 410	1 560	1 140	800
		Z3	2 180	1 440	1 050	860	2 180	1 560	1 140	930
2 	1700 mm 	Z2	2 300	1 550	1 260	900	2 300	1 510	1 340	970
		Z1	2 350	1 530	1 120	850	2 530	1 390	1 210	920
		Z3	2 370	1 530	1 120	1 020	2 380	1 400	1 210	1 100
	2100 mm 	Z2	2 330	1 600	1 260	810	2 330	1 600	1 320	870
		Z1	2 300	1 490	1 090	760	2 470	1 590	1 170	820
		Z3	2 180	1 490	1 080	890	2 180	1 580	1 170	960

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:

<b>Slewing speed</b>	8.1 rpm
<b>Turntable braking</b>	automatic multi-disc brake
<b>Absorption of hydraulic shocks</b>	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.

<b>Bottom/top rollers per side</b>	6 / 1
<b>Track width</b>	Rubber: 450 mm Steel: 450 mm or 600 mm
<b>Track tension</b>	by grease piston
<b>Blade (width x height)</b>	2 300 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.

<b>Max. speed (low speed/ high speed)</b>	2.6 km/h / 4.9 km/h
<b>Max. tractive force</b>	5 600 daN

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

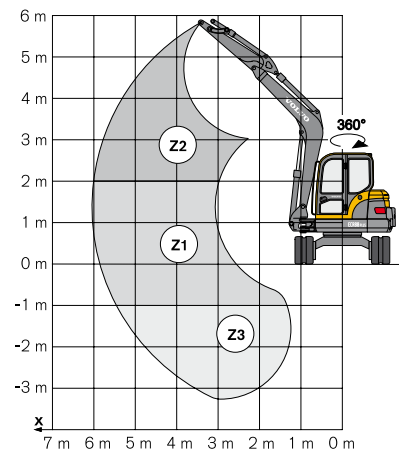
## Service fill capacities

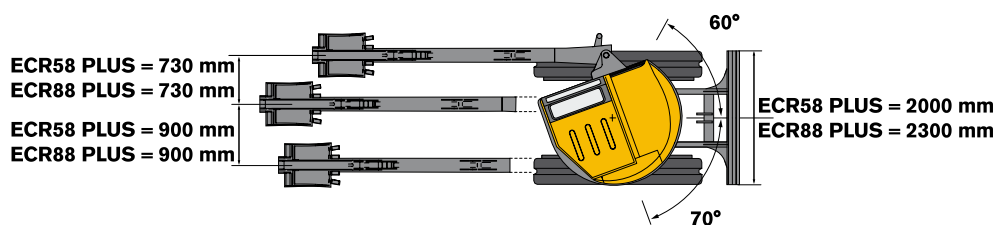
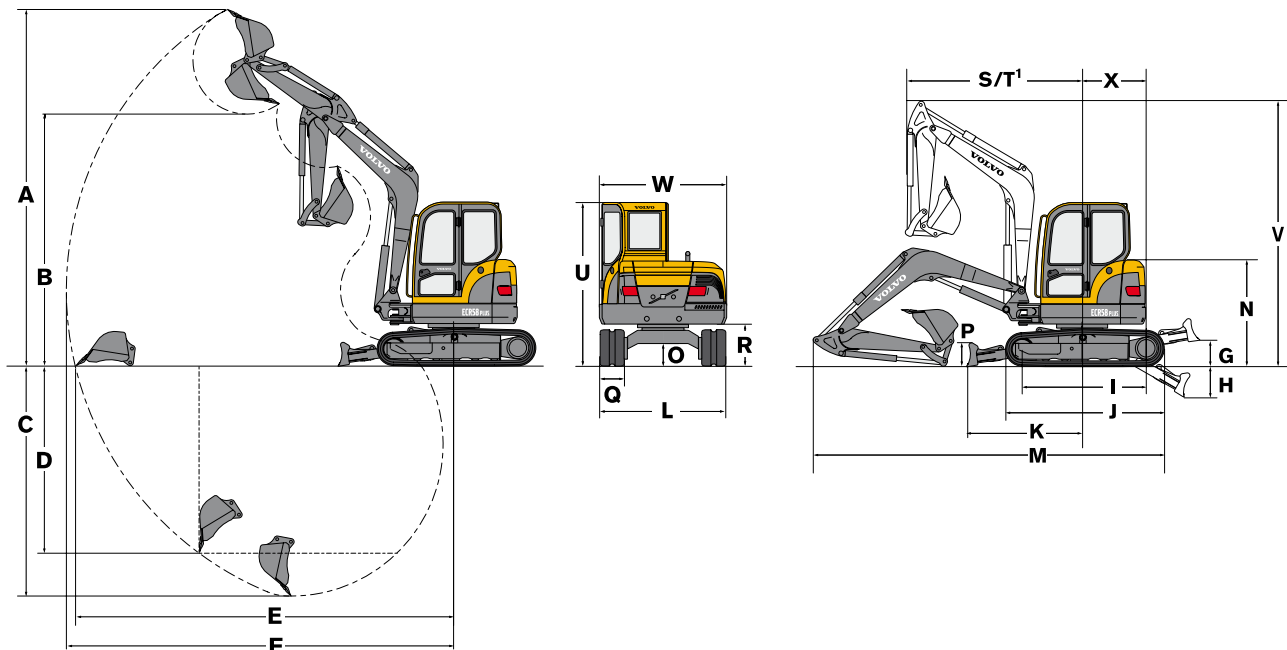
<b>Fuel tank</b>	110 l
<b>Hydraulic tank</b>	80 l
<b>Hydraulic system, total</b>	140 l
<b>Engine oil</b>	11.5 l
<b>Cooling system</b>	7.0 l

## Weight

Operational weight and ground pressure:

<b>Rubber Tracks (450 mm)</b>	8 450 kg - 0.39 kg/cm <sup>2</sup>
<b>Steel Tracks (450 mm)</b>	8 650 kg - 0.40 kg/cm <sup>2</sup>





### ECR58 Plus

Dipper	A	B	C	C*	D	E	F
1 540 mm	5 610	<b>3 970</b>	<b>3 600</b>	<b>3 850</b>	2 910	5 940	6 080
1 940 mm	5 850	<b>4 210</b>	<b>4 000</b>	<b>4 240</b>	3 260	6 320	6 460

G	H	I	J	K	L	M	N	O
420	480	1 950	2 500	1 820	2 000	5 600	1 670	370

P	Q	R	S	T'	U	V	W	X
370	400	670	2 470	1 960	2 580	4 330	2 000	1 000 1 045

Buckets ECR58 Plus			
	Width	Weight	Capacity
Standard	350 mm	85 kg	70 l
	450 mm	97 kg	98 l
	600 mm	118 kg	142 l
	900 mm	163 kg	231 l
Ditch	1 300 mm	125 kg	175 l
	1 500 mm	185 kg	265 l

\*: Digging depth with the blade down  
1: Front turning radius with maximum offset

### ECR88 Plus

Dipper	A	B	C	C*	D	E	F
1 700 mm	6 740	<b>4 860</b>	<b>4 170</b>	<b>4 470</b>	2 890	6 860	7 010
2 100 mm	7 000	<b>5 120</b>	<b>4 570</b>	<b>4 870</b>	3 260	7 240	7 390

G	H	I	J	K	L	M	N	O
490	400	2 200	2 850	1 940	2 300	6 410	1 780	390

P	Q	R	S	T'	U	V	W	X
470	450	755	2 570	2 040	2 680	5 260	2 265	1 210 1 285

Buckets ECR88 Plus			
	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
Ditch	900 mm	236 kg	306 l
	1 500 mm	250 kg	265 l

\*: Digging depth with the blade down  
1: Front turning radius with maximum offset

## 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.  
Engine speed by dial.  
Long service intervals.

### Electrical system

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

### Undercarriage

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

### Hydraulic system

Load-sensing system.  
Multiple filtration system (30 µm).  
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 console-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.  
V-CAD Pro.

### Earthwork equipment

ECR58 Plus:  
2 900 mm long monobloc boom.  
1 540 mm dipper arm.

ECR88 Plus:

3 550 mm long monobloc boom.  
1 700 mm dipper arm.

### Safety

Level 1 FOPS (Falling Objects Protective Structure).  
TOPS (Tip-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.  
Anti theft.

### 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 (1 940 mm on ECR58 Plus, 2 100 mm on ECR88 Plus).

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.

### Counterweight

ECR58 Plus : 170 kg  
ECR88 Plus : 400 kg

### 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 Plus: 380 mm or 500 mm wide.

ECR88 Plus: 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

Side view mirrors.

Level 2 FOPS.

### Miscellaneous

Special customised paint (RAL specifications).

## ATTACHMENT OFFER

### Volvo Hydraulic Breaker :

- HB300 Low Noise (ECR58, ECR58Plus)  
- HB450 Low Noise (ECR88, ECR88Plus).

### New Volvo pin on Attachment Bracket (VAB)

- Mechanical  
- Hydraulical.

### Volvo hydraulic Thumb

### Complete range of Volvo genuine buckets

- Trenching  
- Ditching.

# VOLVO CONSTRUCTION EQUIPMENT



Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 180 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.

Not all products are 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.

## **VOLVO**

**Volvo Construction Equipment**  
[www.volvoce.com](http://www.volvoce.com)

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CEX