

VOLVO COMPACT EXCAVATORS

ECR58 PLUS, ECR88 PLUS



- **Power installed:**

ECR58 Plus: 37,5 kW / 51 hp
ECR88 Plus: 40,3 kW / 55 hp

- **Operating Weight:**

ECR58 Plus: 5880 - 5970 kg
ECR88 Plus: 8450 - 8650 kg

- **Maximum Digging Depth:**

ECR58 Plus: 3850 - 4240 mm
ECR88 Plus: 4470 - 4870 mm

- **Short swing radius** for increased manoeuvrability.

- Spacious and comfortable **cab for less fatigue.**
Air conditioning **as standard.**

- **Automatic return to idling** for less noise, a reduced fuel consumption and a longer engine lifetime.

- **Volvo engine** with high performance and low exhaust emission for more environmental care.

- Excellent serviceability thanks to **easy access** to the engine and hydraulics compartment

- **Load Sensing System** for a total independence of the movements: better controllability.

- **Finger tip control of the accessory circuit** for more precision and comfort.

- **An optional added counterweight** is available for extra stability, greater capacity and even more performance.

MORE CARE. BUILT IN.



SPECIFICATIONS - ECR58 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.

Model	Volvo D3.1
Gross power, rated (ISO 9249)	38.2 kW (52 hp) @ 2100 rpm
Power, installed (ISO 9249)	37.5 kW (51 hp) @ 2100 rpm
Displacement, total	3054 cc
Maximum torque	200 Nm @ 1400 rpm
Bore x stroke	94 mm x 110 mm
Exhaust Emission	CO < 5 / NOx + HC < 4.7 / PM. < 0.4

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
----------------	-----------------------------------

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





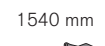

Breakout force	3900 daN
Tearout force	2700 daN

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	Standard counterweight				Optional counterweight					
	2 m	3 m	4 m	Maxi	2 m	3 m	4 m	Maxi		
1  360° 	Z2	-	1360	860	560	-	1410	900	580	
	Z1	1430	1130	750	510	1430	1180	780	530	
	Z3	2210	1140	750	650	2210	1190	790	680	
		Z2	-	-	860	480	-	-	900	510
		Z1	1280	1090	720	440	1280	1150	750	460
		Z3	2050	1090	720	540	2050	1150	750	560
2  	Z2	-	1390	880	570	-	1440	920	600	
	Z1	1430	1160	770	520	1430	1210	800	550	
	Z3	2210	1170	770	660	2210	1220	810	700	
		Z2	-	-	880	500	-	-	920	520
		Z1	1280	1120	740	450	1280	1180	770	480
		Z3	2050	1120	740	550	2050	1180	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:

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	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	4700 daN

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

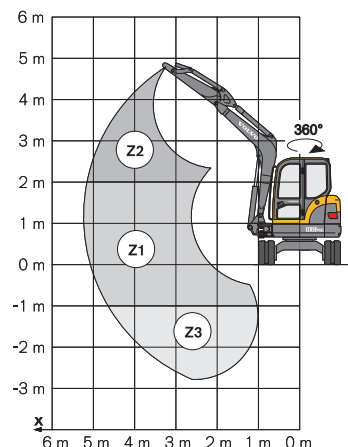
Service fill capacities

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)	5880 kg - 0.34 kg/cm ²
Steel Tracks (380 mm)	5970 kg - 0.35 kg/cm ²



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.

Model	Volvo D3.4
Gross power, rated (ISO 9249)	43.8 kW (59hp) @ 2100 rpm
Power, installed (ISO 9249)	40.3 kW (55hp) @ 2100 rpm
Displacement, total	3319 cc
Maximum torque	235 Nm @1400 rpm
Bore x stroke	98 mm x 110 mm
Exhaust Emission	CO < 5 / NOx + HC < 4.7 / PM. < 0.4

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
----------------	-----------------------------------

Variable displacement Load Sensing pump for all the equipment and travel circuits:

Maximum flow	166 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	5900 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			Standard counterweight				Optional counterweight			
			3 m	4 m	5 m	Maxi	3 m	4 m	5 m	Maxi
1  360°	1700 mm 	Z2	2300	1550	1220	880	2300	1550	1310	950
		Z1	2290	1480	1090	820	2460	1600	1170	890
		Z3	2310	1490	1090	990	2380	1600	1180	1070
	2100 mm 	Z2	2330	1600	1230	780	2330	1600	1320	850
		Z1	2230	1450	1050	730	2410	1560	1140	800
		Z3	2180	1440	1050	860	2180	1560	1140	930
2 	1700 mm 	Z2	2300	1550	1260	900	2300	1510	1340	970
		Z1	2350	1530	1120	850	2530	1390	1210	920
		Z3	2370	1530	1120	1020	2380	1400	1210	1100
	2100 mm 	Z2	2330	1600	1260	810	2330	1280	1320	870
		Z1	2300	1490	1090	760	2470	1360	1170	820
		Z3	2180	1490	1080	890	2180	1360	1170	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:

Slewing speed	8.1 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)	2.6 km/h / 4.9 km/h
Max. tractive force	5600 daN

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

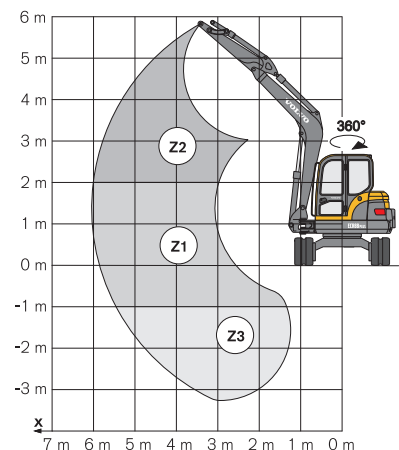
Service fill capacities

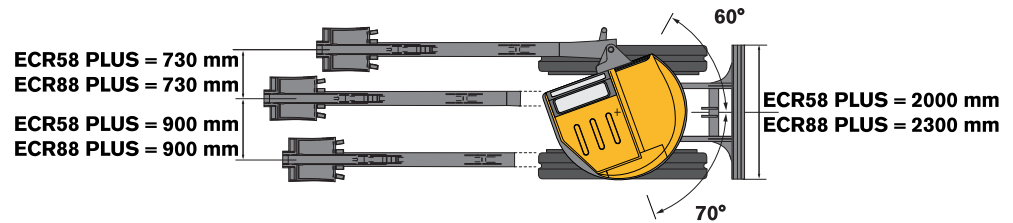
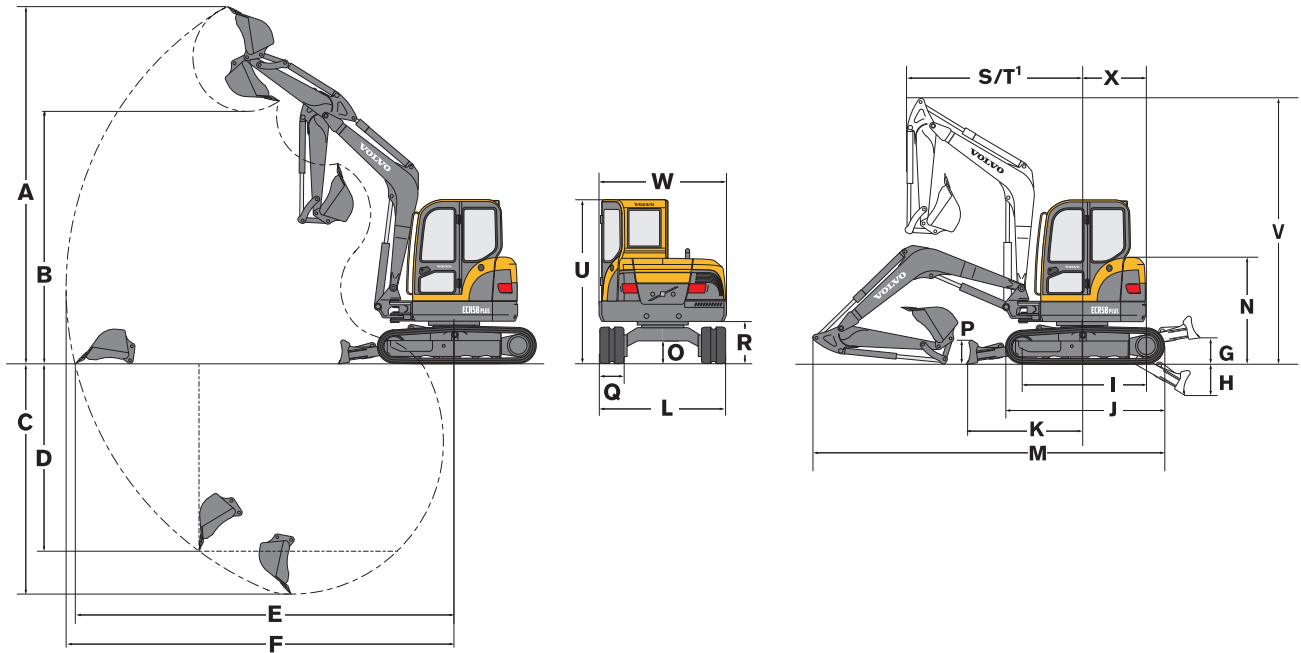
Fuel tank	110 l
Hydraulic tank	80 l
Hydraulic system, total	140 l
Engine oil	11.5 l
Cooling system	7.0 l

Weight

Operational weight and ground pressure:

Rubber Tracks (450 mm)	8450 kg - 0.39 kg/cm ²
Steel Tracks (450 mm)	8650 kg - 0.40 kg/cm ²








ECR58 Plus

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	670	2470	1960	2580	4330	2000	1000 1045

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
	750 mm	138 kg	187 l
Ditch	900 mm	163 kg	231 l
	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

ECR88 Plus

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	755	2570	2040	2680	5260	2265	1210 1285

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
	1500 mm	250 kg	265 l

*: Digging depth with the blade down

1: Front turning radius with maximum offset

STANDARD EQUIPMENT

Engine

Low-emission (EPA Tier III) 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 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.

V-CAD Pro.

Earthwork equipment

ECR58 Plus:

2900 mm long monobloc boom.

1540 mm dipper arm.

ECR88 Plus:

3550 mm long monobloc boom.

1700 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 (1940 mm on ECR58 Plus, 2100 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

- Hydraulic.

Volvo hydraulic Thumb

Complete range of Volvo genuine buckets

- Trenching

- Ditching.



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.

VOLVO

Construction Equipment

www.volvoce.com

Ref. No. 21 2 432 1188
Printed in PDF
Volvo, Belley

English
2008.01
CEX