

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 a premium, turn to the Volvo ECR58 and ECR88. Both models have a short swing radius for the ultimate in maneuverability. You won't sacrifice comfort because the wide operator's area has plenty of features to make even the longest days comfortable.

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.

These 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 exceptional 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 joystick levers provide precise movements and reduce operator fatigue. The right joystick lever also has a thumb roller so you can control bi-directional attachments such as augers and tilt couplers with your hand rather than the traditional foot pedal, allowing greater attachment precision and more foot space. A button on the front of the joystick sends maximum flow to attachments such as breakers that use single-acting hydraulic flow. In addition, large, easy-to-use travel pedals are durable for frequent, intensive use.

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



- Short swing radius offers the ultimate maneuverability.



- Heating and air-conditioning keep operator comfortable.



- Wide cab offers plenty of legroom for better comfort.



- Excellent performance even in tight jobsites.
- 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 get in to where the work is. The models feature impressive bucket and dipper digging forces, allowing them to power through the toughest working conditions.

To work more efficiently the models feature an auto-idle system that drops the engine speed to idle if the operator controls are not used for five seconds. The system returns the engine to the preselected speed as soon as the operator uses any control. The auto-idle reduces fuel consumption, decreases noise for better comfort and means a longer engine life.

Both models feature automatic two-speed travel. In high range, the travel speed automatically shifts from high to low according to the travel load – perfect for levelling, backfilling or turning. The machines can also counter-rotate even in high range for maximum control and maneuverability.

The thumb-roller control enables the operator to progressively adjust the flow to the attachment for more precision.

The load sensing hydraulics are the best technology available, providing fuel savings, simplicity and efficiency. The speed of the hydraulic movements is directly proportional to the position of the pilot-controlled, multi-function joystick levers – regardless of load and number of simultaneous cylinder movements – to instantly supply only the necessary power.

A second independent circuit allows 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 latest EPA Tier II regulations.



- New Volvo engine offers excellent performance.



- Auto-idling reduces fuel consumption and noise.



- Impressive bucket and dipper digging forces.



- Proportional thumb-roller 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 or her – safe.

The engine is positioned on the side, making room for a larger operator's area, and the large hood allows complete, unobstructed access to all routine service points, including filters and fluid levels. The fuse box is under the seat for easy access.

The cab door can be locked open, and it is positioned within the perimeter 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 O-Ring Face Seal (ORFS) hydraulic connectors provide leak-free joints 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 in 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 stabilizer. 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, 16-Valve diesel engine, meeting Tier II environmental regulations and equipped with automatic return-to-idle.

Model	Volvo D3.1
Gross power, rated (ISO 9249)	52 hp (38,2 kW) @ 2,100 rpm
Power, installed (ISO 9249)	50,8 hp (37,5 kW) @ 2,100 rpm
Displacement, total	186.4 in³ (3054 cc)
Maximum torque	147.5 ft-lbf (200 Nm) @ 1,400 rpm
Bore x stroke	3.7" x 4.33" (94 mm x 110 mm)

Electrical system

Battery capacity	12 V - 100 Ah - 780 CCA
Alternator rating	12 V - 55 A
Starter motor output	12 V - 3 kW

Hydraulic system

Closed-center, load-sensing hydraulic system (CCLS) providing fuel savings and independent control of functions

Control	pilot-operated joystick controls
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Variable-displacement, load-sensing pump for all equipment and travel circuits:

Maximum flow	34.3 gpm (130 l/min)
Maximum operating pressure	3,483 psi (240 bars)

Gear pump for pilot circuit:

Maximum flow	2.5 gpm (9,4 l/min)
Maximum operating pressure	479 psi (33 bars)

Double-acting auxiliary hydraulic circuit (for attachments):

Maximum adjustable flow	18.5 gpm (70 l/min)
Maximum operating pressure	3,483 psi (240 bars)

End-of-stroke cushions:

	Boom Cylinder Rod Extension
	Dipper Cylinder Rod Retraction
	Dipper Cylinder Rod Extension
	Boom Offset Cylinder Rod Retraction
	Boom Offset Cylinder Rod Extension

Digging performance

Digging Force – Bucket	8,768 lbf (3900 daN)
Digging Force – Dipper	6,070 lbf (2700 daN)

Load capacities

These capacities are given for a machine without a bucket or quick-release coupling and fitted with rubber tracks and cab.

The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

in (X m)			6' 6" (2 m)	9' 8" (3 m)	13' 1" (4 m)	Maxi
			lbs (kg)	lbs (kg)	lbs (kg)	
1 	5' 1" (1540 mm)	Z2	-	2,910 (1320)	1,830 (830)	1,190 (540)
		Z1	3,153 (1430)	2,403 (1090)	1,587 (720)	1,080 (490)
		Z3	4,762 (2160)	2,403 (1090)	1,587 (720)	1,367 (620)
	6' 4" (1940 mm)	Z2	-	-	1,830 (830)	1,014 (460)
		Z1	2,822 (1280)	2,315 (1050)	1,521 (690)	926 (420)
		Z3	4,519 (2050)	2,315 (1050)	1,521 (690)	1,124 (510)
2 	5' 1" (1540 mm)	Z2	-	3,197 (1450)	2,712 (1230)	2,579 (1170)
		Z1	6,151 (2790)	5,666 (2570)	3,792 (1720)	2,690 (1220)
		Z3	7,915 (3590)	4,960 (2250)	3,351 (1520)	2,690 (1220)
	6' 4" (1940 mm)	Z2	-	-	2,337 (1060)	2,271 (1030)
		Z1	5,291 (2400)	5,644 (2560)	3,726 (1690)	2,425 (1100)
		Z3	8,069 (3660)	5,269 (2390)	3,527 (1600)	2,469 (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.

Swing system

Turntable Swing provided by direct-drive, radial piston motor (no reduction gear) with remote lubrication:

Swing speed	10 rpm
Turntable braking	automatic multi-disc brake

Undercarriage

The undercarriage uses fabricated box steel sections that carry the loads from the turntable to the track frames in an "X" pattern for more strength and rigidity. The track frames are built with sides that slope down to more easily shed mud and dirt from the tracks. The track rollers and the tensioning wheels are lubricated for life.

Bottom/top rollers per side	5 / 1
Track width	Rubber: 1' 3" (400 mm) Steel: 1' 2" (380 mm) or 1' 6" (500 mm)
Track tension	grease piston
Blade (width x height)	6' 6" x 1' 2" (2000 mm x 370 mm)

Safety valve on the blade cylinder.

Drivetrain

Each track driven by a 2-speed, axial-piston hydraulic motor and planetary reduction gear. Braking: automatically-applied, multiple-disc brake. 2-speed travel to automatically shift from high to low speed according to load.

Travel speed (low / high)	1.4 mph / 2.7 mph (2,2 km/h / 4,3 km/h)
Max. tractive force	10,341 lbf (4600 daN)

Travel control automatically locks when operator raises left console.

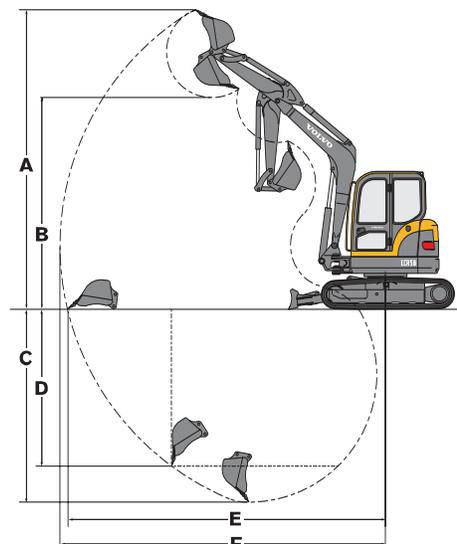
Service fill capacities

Fuel tank	17.2 gal (65 ltr)
Hydraulic tank	13.2 gal (50 ltr)
Hydraulic system, total	23.8 gal (90 ltr)
Engine oil	3 gal (11,5 ltr)
Cooling system	1.7 gal (6,5 ltr)

Weight

Operating weight and ground pressure:

Rubber Tracks 1' 3" (400 mm)	12,056 lbs (5500 kg) – 4.26 psi (0,3 kg/cm²)
Steel Tracks 1' 2" (380 mm)	12,298 lbs (5600 kg) – 3.98 psi (0,28 kg/cm²)



*hydraulic limit

SPECIFICATIONS – ECR88

Engine

Low-emission, water-cooled, direct-injection Volvo 4-cylinder diesel engine, meeting Tier II environmental regulations and equipped with automatic return-to-idle.

Model	Volvo D3.4
Gross power, rated (ISO 9249)	59 hp (43,8 kW) @ 2,100 rpm
Power, installed (ISO 9249)	56,8 hp (41,9 kW) @ 2,100 rpm
Displacement, total	202.5 in³ (3318 cc)
Maximum torque	173.3 ft-lbf (235 Nm) @ 1,400 rpm
Bore x stroke	3.86" x 4.33" (98 mm x 110 mm)

Electrical system

Battery capacity	12 V - 100 Ah - 780 CCA
Alternator rating	12 V - 55 A
Starter motor output	12 V - 3 kW

Hydraulic system

Closed-center, load-sensing hydraulic system (CCLS) providing fuel savings and independent control.

Control	pilot-operated Joystick controls
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Variable-displacement, load-sensing pump for all equipment and travel circuits:

Maximum flow	46 gpm (174 l/min)
Maximum operating pressure	4,354 psi (300 bars)

Gear pump for pilot circuit:

Maximum flow	4.4 gpm (16,8 l/min)
Maximum operating pressure	479 psi (33 bars)

Double-acting auxiliary hydraulic circuit (for attachments):

Maximum adjustable flow	23.8 pgm (90 l/min)
Maximum operating pressure	4,354 psi (300 bars)

End-of-stroke cushions:

	Boom Cylinder Rod Extension
	Dipper Cylinder Rod Retraction
	Dipper Cylinder Rod Extension
	Boom Offset Cylinder Rod Retraction
	Boom Offset Cylinder Rod Extension

Digging performance

Digging force – Bucket	12,589 lbf (5600 daN)
Digging force – Dipper	9,217 lbf (4100 daN)

Load capacities

These capacities are given for a machine without a bucket or quick-release coupling and fitted with rubber tracks and cab.

The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

in (X m)			1' 5" 3 m	13' 1" 4 m	16' 4" 5 m	Maxi
			lbs (kg)	lbs (kg)	lbs (kg)	lbs (kg)
1 360° 	5' 6" (1700 mm) 	Z2	5,071 (2300)	3,417 (1550)	2,513 (1140)	1,786 (810)
		Z1	4,696 (2130)	3,042 (1380)	2,227 (1010)	1,676 (760)
		Z3	4,740 (2150)	3,042 (1380)	2,227 (1010)	2,028 (920)
	6' 9" (2100 mm) 	Z2	5,137 (2330)	3,527 (1600)	2,535 (1150)	1,587 (720)
		Z1	4,564 (2070)	2,954 (1340)	2,138 (970)	1,499 (680)
		Z3	4,586 (2080)	2,954 (1340)	2,138 (970)	1,742 (790)
2 	5' 6" (1700 mm) 	Z2	6,327 (2870)	4,564 (2070)	3,836 (1740)	3,638 (1650)
		Z1	9,259 (4200)	6,349 (2880)	4,718 (2140)	3,748 (1700)
		Z3	8,333 (3780)	5,930 (2690)	4,343 (1970)	3,792 (1720)
	6' 9" (2100 mm) 	Z2	5,137 (2330)	3,990 (1810)	3,461 (1570)	3,307 (1500)
		Z1	9,303 (4220)	6,239 (2830)	4,608 (2090)	3,417 (1550)
		Z3	8,774 (3980)	6,063 (2750)	4,475 (2030)	3,505 (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.

Swing system

Turntable Swing provided by direct-drive, radial piston motor (no reduction gear) with remote lubrication:

Swing speed	9.5 rpm
Turntable braking	automatic multi-disc brake

Undercarriage

The undercarriage uses fabricated box steel sections that carry the loads from the turntable to the track frames in an "X" pattern for more strength and rigidity. The track frames are built with sides that slope down to more easily shed mud and dirt from the tracks. The track rollers and the tensioning wheels are lubricated for life.

Bottom/top rollers per side	6 / 1
Track width	Rubber: 1' 5" (450 mm) Steel: 1' 5" (450 mm) or 2' 0" (600 mm)
Track tension	grease piston
Blade (width x height)	7' 5" x 1' 5" (2300 mm x 470 mm)

Safety valve on the blade cylinder.

Drivetrain

Each track driven by a 2-speed, axial-piston hydraulic motor and planetary reduction gear. Braking: automatically-applied, multiple-disc brake. 2-speed travel to automatically shift from high to low speed according to load.

Travel speed (low / high)	1.7 mph / 3.2 mph (2,7 km/h / 5,1 km/h)
Max. tractive force	12,252 lbf (5450 daN)

Travel control automatically locks when operator raises left console.

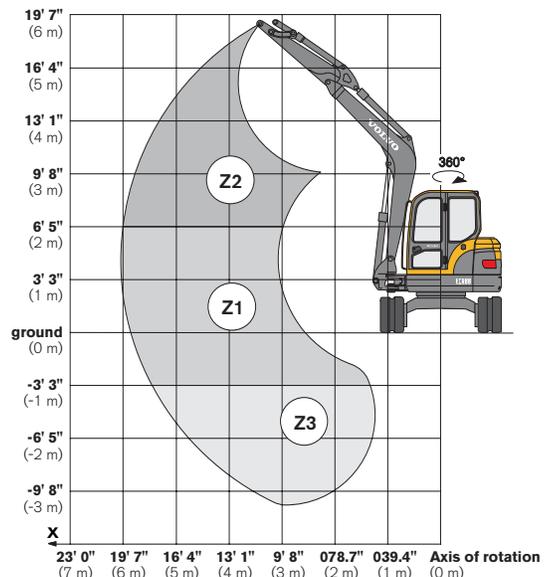
Service fill capacities

Fuel tank	29.1 gal (110 ltr)
Hydraulic tank	21.1 gal (80 ltr)
Hydraulic system, total	37 gal (140 ltr)
Engine oil	3 gal (1.5 ltr)
Cooling system	1.9 gal (7.0 ltr)

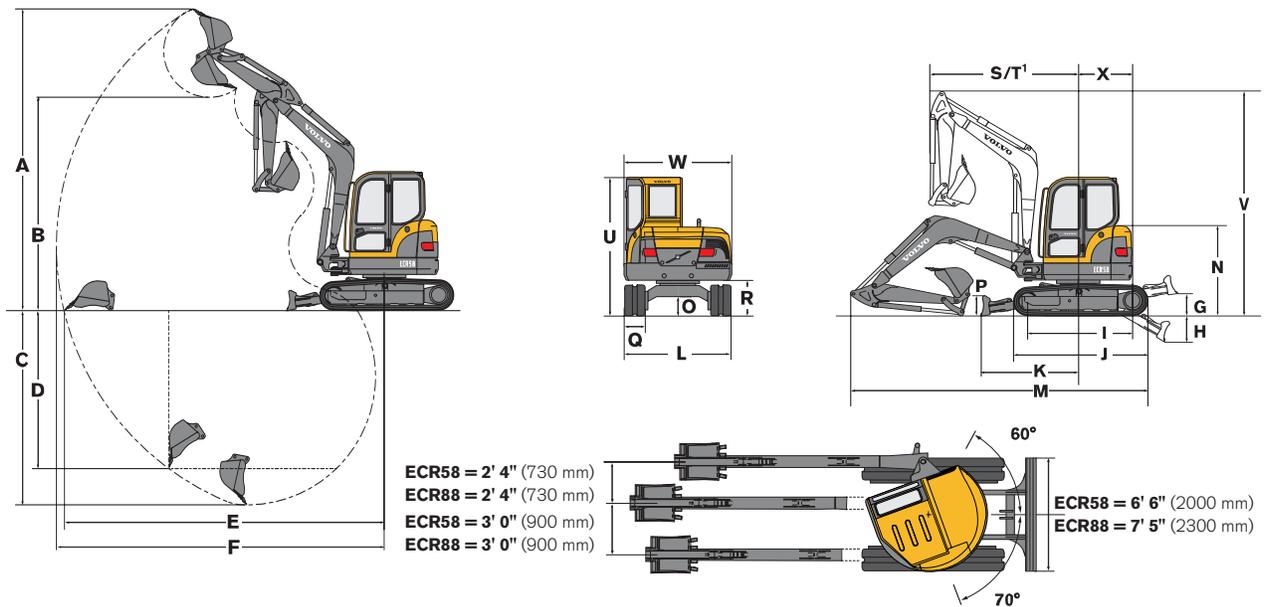
Weight

Operating weight and ground pressure:

Rubber Tracks 1' 5" (450 mm)	18,040 lbs (8200 kg) – 5.1 psi (0,36 kg/cm²)
Steel Tracks 1' 5" (450 mm)	18,700 lbs (8500 kg) – 5.4 psi (0,38 kg/cm²)



*hydraulic limit



ECR58

Dipper	A	B	C	D	E	F
5' 1" (1540 mm)	18' 4" (5610)	13' 0" (3970)	11' 8" (3600)	9' 5" (2910)	19' 5" (5940)	20' 0" (6080)
6' 4" (1940 mm)	19' 2" (5850)	13' 8" (4210)	13' 1" (4000)	10' 7" (3260)	20' 7" (6320)	21' 2" (6460)

G	H	I	J	K	L	M	N	O
1' 4" (420)	1' 6" (480)	6' 4" (1950)	8' 2" (2500)	6' 0" (1820)	6' 5" (2000)	18' 4" (5600)	5' 5" (1670)	1' 2" (370)

P	Q	R	S	T ¹	U	V ²	W	X
1' 2" (370)	1' 3" (400)	2' 2" (670)	8' 1" (2470)	6' 4" (1960)	8' 5" (2580)	14' 2" (4330)	6' 5" (2000)	3' 3" (1000)

1: Front turning radius with maximum offset
 2: Options: 1' 2" (380 mm) / 1' 6" (500 mm) (steel)

Buckets ECR58			
	Width	Weight	Capacity
Standard	1' 2" (350 mm)	187 lbs (85 kg)	2,5 ft ³ (70 l)
	1' 5" (450 mm)	213 lbs (97 kg)	3,5 ft ³ (98 l)
	2' 0" (600 mm)	260 lbs (118 kg)	5,0 ft ³ (142 l)
	2' 5" (750 mm)	304 lbs (138 kg)	6,6 ft ³ (187 l)
	2' 9" (900 mm)	359 lbs (163 kg)	8,2 ft ³ (231 l)
Ditch	4' 2" (1300 mm)	275 lbs (125 kg)	6,2 ft ³ (175 l)
	4' 9" (1500 mm)	407 lbs (185 kg)	9,4 ft ³ (265 l)

ECR88

Dipper	A	B	C	D	E	F
5' 6" (1700 mm)	22' 1" (6740)	15' 9" (4860)	13' 7" (4170)	9' 5" (2890)	22' 5" (6860)	23' 0" (7010)
6' 9" (2100 mm)	23' 0" (7000)	16' 8" (5120)	15' 0" (4570)	10' 7" (3260)	23' 8" (7240)	24' 2" (7390)

G	H	I	J	K	L	M	N	O
1' 6" (490)	1' 3" (400)	7' 2" (2200)	9' 4" (2850)	6' 4" (1940)	7' 5" (2300)	21' 2" (6410)	5' 8" (1780)	1' 3" (390)

P	Q	R	S	T ¹	U	V ²	W	X
1' 5" (470)	1' 5" (450)	2' 5" (755)	8' 4" (2570)	6' 7" (2040)	8' 8" (2680)	17' 3" (5260)	7' 4" (2265)	4' 0" (1210)

1: Front turning radius with maximum offset
 2: Options: 1' 5" (450 mm) / 2' 0" (600 mm) (steel)

Buckets ECR88			
	Width	Weight	Capacity
Standard	1' 2" (380 mm)	282 lbs (128 kg)	3,6 ft ³ (103 l)
	1' 5" (450 mm)	330 lbs (150 kg)	4,6 ft ³ (130 l)
	2' 0" (600 mm)	403 lbs (183 kg)	6,6 ft ³ (188 l)
	2' 5" (750 mm)	480 lbs (218 kg)	8,7 ft ³ (246 l)
	2' 9" (900 mm)	519 lbs (236 kg)	10,8 ft ³ (306 l)
Ditch	4' 9" (1500 mm)	550 lbs (250 kg)	9,4 ft ³ (265 l)

STANDARD EQUIPMENT

Engine

Low-emission (US EPA Tier II) Volvo diesel engine.
Dry-type, Dual-element air filter with indicator.
Electric air intake heater cold start aid.
Fuel filter w/transparent sediment chamber.
Drain valve for diesel fuel tank.
Oil sump sheet metal guard.
Automatic return-to-idle system.

Electrical system

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

Undercarriage

ECR58 : 1' 3" (400 mm) wide rubber tracks.
ECR88 : 1' 5" (450 mm) wide rubber tracks.
Dozer blade.

Hydraulic system

Closed-center, Load-sensing system.
Multiple filtration system (30µm).
Pilot-operated joystick hydraulic controls.
Joystick pattern-selector valve.
Pilot-operated boom offset control with left joystick lever.
Steering/Propulsion control by two steering levers equipped with foot pedals.
Automatic 2-speed travel.

Single-acting/Double-acting auxiliary hydraulic tubes installed to middle of dipper.
Cab-mounted switch to select single or double-acting auxiliary hydraulics mode.
Proportional-flow and full-flow auxiliary hydraulic controls on right joystick lever.

Canopy

Multi-adjustable, full-suspension, high-back console/seat assembly.
"Deluxe" fabric-covered superior comfort seat (cab).
"Deluxe" vinyl-covered superior comfort seat (canopy).
Operator's platform (canopy & cab) mounted on rubber bushings.

Instrumentation and monitoring

Warning lights for hydraulic filter and air filter restriction.
Gauges: water temperature, fuel level.
Hour meter.
Warning lights and audible alarm: Coolant temperature and engine oil pressure.

Earthwork equipment

ECR58:
9' 5" (2900 mm) long monobloc boom.
5' 0" (1540 mm) dipper arm.
ECR88:
11' 7" (3550 mm) long monobloc boom.
5' 6" (1700 mm) dipper arm.

Safety

Level 1 FOPS (Falling Objects Protective Structure).
TOPS (Tip-Over Protective Structure).
ROPS (Roll-Over Protective Structure).
Interlock for joystick levers and propulsion controls – Raise left console.
Interlock for engine starting safety – Raise left console.
Equipment lowering system in case of engine stoppage – Pressure accumulator.
Laminated glass front window.
Retractable seatbelt.
Tool kit.

Official approval

Machine meets 98/37/EC.
Noise emissions meets 2000/14/EC.
Object handling device meets EN 474-5 standard.
FOPS 1 meets ISO 3449 standard.
TOPS meets ISO 12117 and EN 13531.
Electromagnetic compatibility (EMC) meets 89/336/EC and amendments.

OPTIONAL EQUIPMENT

Digging equipment

Long dipper – ECR58: 6' 4" (1940 mm).
Long dipper – ECR88: 6' 9" (2100 mm).
Boom cylinder safety valve with overload indicator.
Dipper cylinder safety valve.
Hydraulically-controlled attachment quick change coupling.
Single-acting or double-acting hydraulic circuit for attachment quick coupling.

Cab

Two working lights.
Heating and air-conditioning.
Two-speed heating and ventilation.
Tinted windows.
Front window opening system power-assisted by dual gas struts.

Radio/cassette player with two speakers.
Windshield wiper and washer (front).
"Deluxe" vinyl-covered superior comfort seat with a high back.

Hydraulic circuits for attachments

Hydraulic circuit for clam-shell bucket (opening/closing and rotation).
Flow control for single-acting/double-acting auxiliary hydraulic system.
Second hydraulic circuit for attachments with piping on the boom.

Undercarriage

Steel tracks:
ECR58: 1' 2" (380 mm)
or 1' 6" (500 mm) wide.
ECR88: 1' 5" (450 mm)
or 2' 0" (600 mm) wide.

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).
Sideview mirrors.
Level 2 FOPS.

Miscellaneous

Special custom paint (RAL specifications).



Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from our 170-year engineering heritage. 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

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