

VOLVO COMPACT EXCAVATORS

ECR58, ECR88



- **Power installed:**
ECR58: 51 hp (37.5 kW)
ECR88: 57 hp (41.9 kW)
- **Operating Weight :**
ECR58: 12963 lbs - 13161 lbs
(5880 kg - 5970 kg)
ECR88: 18629 lbs - 19070 lbs
(8450 kg - 8650 kg)
- **Maximum Digging Depth :**
ECR58: 151.6" - 166.9"
(3850 mm - 4240 mm)
ECR88: 176" - 191.7"
(4470 mm - 4870 mm)
- **Short swing radius** or increased maneuverability and productivity working close to walls.
- Spacious, comfortable **cab for less fatigue** & greater productivity - **standard Air conditioning.**
- **Auto idle:** Less noise, reduced fuel consumption, and longer engine life.
- **Volvo** high performance **engine** with low exhaust emission for more environmental care.
- Side-mounted engine with large for **super access and easy serviceability.**
- **Load-Sensing Hydraulic System** for low fuel consumption and better controllability.
- **"Roller" thumb control on auxiliary hydraulic circuit** for more precision and comfort.
- **Optional added counterweight** is available for extra stability, greater capacity and even more performance.

MORE CARE. BUILT IN.



SPECIFICATIONS - ECR58

Engine

Low-emission, water-cooled, direct-injection Volvo 4-cylinder, diesel engine, meeting Interim Tier 4 environmental regulations & equipped with auto idle.

Model	Volvo D3.1
Gross power, rated (ISO 9249)	48.8 hp (35.9 kW) @ 2100 rpm
Power, installed (ISO 9249)	47 hp (34.6 kW) @ 2100 rpm
Displacement, total	186.4 in³ (3054 cc)
Maximum torque	147.5 ft-lbf (200 Nm) @ 1400 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	
Variable-displacement, load-sensing pump for all equipment and travel circuits:		
Maximum flow	34.3 US gal/min	(130 l/min)
Maximum operating pressure	3483 psi	(240 bars)
Gear pump for pilot circuit:		
Maximum flow	2.5 US gal/min	(9.4 l/min)
Maximum operating pressure	479 psi	(33 bars)

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.

Outreach	Standard counterweight				Optional counterweight				
	5 ft	10 ft	15 ft	Max	5 ft	10 ft	15 ft		
1  5'11"	Z2	-	-	1320 lbf	1180 lbf			1430 lbf	1190 lbf
	Z1		2240 lbf	1180 lbf	990 lbf		2380 lbf	1260 lbf	1010 lbf
	Z3	7540 lbf	2260 lbf		1340 lbf	6760 lbf	2370 lbf	-	1310 lbf
	Z2	-	-	1320 lbf	980 lbf			1430 lbf	1000 lbf
	Z1		2190 lbf	1130 lbf	820 lbf		2330 lbf	1220 lbf	840 lbf
	Z3	5950 lbf	2160 lbf	1120 lbf	1060 lbf	5380 lbf	2280 lbf	1190 lbf	1050 lbf
2  5'11"	Z2	-	-	2230 lbf	2190 lbf			2230 lbf	2190 lbf
	Z1		5390 lbf	2950 lbf	2400 lbf		5390 lbf	2950 lbf	2400 lbf
	Z3	6760 lbf	4620 lbf	-	2470 lbf	6760 lbf	4620 lbf		2470 lbf
	Z2			1890	1660 lbf			1890 lbf	1650 lbf
	Z1		5200 lbf	2830	2040 lbf		5200 lbf	2830 lbf	2040 lbf
	Z3	5380 lbf	4910 lbf	2640	2230 lbf	5380 lbf	4910 lbf	2640 lbf	2230 lbf
 6'4"	Z2			1890	1660 lbf			1890 lbf	1650 lbf
	Z1		5200 lbf	2830	2040 lbf		5200 lbf	2830 lbf	2040 lbf
	Z3	5380 lbf	4910 lbf	2640	2230 lbf	5380 lbf	4910 lbf	2640 lbf	2230 lbf

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

Double-acting auxiliary hydraulic circuit (for attachments):

Maximum adjustable flow	18.5 US gal/min	(70 l/min)
Maximum operating pressure	3483 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	8768 lbf	(3900 daN)
Digging Force - Dipper	6070 lbf	(2700 daN)

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 5 / 1

Track width	Rubber: 15.75" (400 mm)
	Steel: 15" (380 mm)
Track tension	grease piston
Blade (width x height)	78.75" x 14.6" (2000 mm x 370 mm)

Safety valve on the blade cylinder.

Drivetrain

Each track driven by a 2-speed, axial-piston hydraulic motor & 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	10566 lbf (4700 daN)

Travel control automatically locks when operator raises left console.

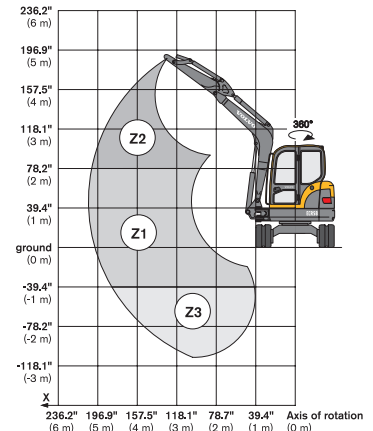
Service fill capacities

Fuel tank	17.2 US gal	(65 ltr)
Hydraulic tank	13.2 US gal	(50 ltr)
Hydraulic system, total	23.8 US gal	(90 ltr)
Engine oil	3 US gal	(11.5 ltr)
Cooling system	1.7 US gal	(6.5 ltr)

Weight

Operating weight and ground pressure:

Rubber Tracks 15.75" (400 mm)	12963 lbs (5880 kg) - 4.34 psi (0.34 kg/cm²)
Steel Tracks 15" (380 mm)	
Cab:	13161 lbs (5970 kg) - 4.98 psi (0.35 kg/cm²)



SPECIFICATIONS - ECR88

Engine

Low-emission, water-cooled, direct-injection Volvo 4-cylinder diesel engine, meeting Tier 3 environmental regulations & equipped with auto idle.

Model Volvo	D3.4
Gross power, rated (ISO 9249)	59 hp (43.8 kW) @ 2100 rpm
Power, installed (ISO 9249)	55 hp (40.2 kW) @ 2100 rpm
Displacement, total	202.5 in ³ (3318 cc)
Maximum torque	173.3 ft-lbf (235 Nm) @ 1400 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

Variable-displacement, load-sensing pump for all equipment and travel circuits:

Maximum flow	43.8 US gal/min (166 l/min)
Maximum operating pressure	4354 psi (300 bars)

Gear pump for pilot circuit:

Maximum flow	4.4 gpm (16.8 l/min)
Maximum operating pressure	479 psi (33 bars)

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.

Outreach	Standard counterweight				Optional counterweight			
	5 ft	10ft	15ft	20ft Max	5 ft	10ft	15ft	20ft Max
1 360° 5'11"	Z2		3020 lbf	2400 lbf		3020 lbf	2580 lbf	
	Z1	4990 lbf	2670 lbf	1630 lbf	1560 lbf	5370 lbf	2890 lbf	1780 lbf
	Z3	7860 lbf	4720 lbf	2450 lbf	1940 lbf	7850 lbf	5090 lbf	2660 lbf
	Z2		2520 lbf	2030 lbf		2520 lbf	2200 lbf	
	Z1	5140 lbf	2680 lbf	1600 lbf	1360 lbf	5510 lbf	2890 lbf	1760 lbf
	Z3	6470 lbf	4570 lbf	2360 lbf	1630 lbf	6470 lbf	4950 lbf	2580 lbf
2 5'11"	Z2		3020 lbf	3140 lbf		3020 lbf	3140 lbf	
	Z1	7910 lbf	4390 lbf	3270 lbf	3220 lbf	7910 lbf	4390 lbf	3270 lbf
	Z3	7850 lbf	7880 lbf	4640 lbf	3480 lbf	7850 lbf	7880 lbf	4640 lbf
	Z2		2520 lbf	2520 lbf		2520 lbf	2520 lbf	
	Z1	7220 lbf	4020 lbf	3050 lbf	2540 lbf	7220 lbf	4020 lbf	3050 lbf
	Z3	6470 lbf	8300 lbf	4740 lbf	3150 lbf	6470 lbf	8300 lbf	4740 lbf

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

Double-acting auxiliary hydraulic circuit (for attachments):

Maximum adjustable flow	23.8 US gal/min (90 l/min)
Maximum operating pressure	4354 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	13623 lbf (5900 daN)
Digging force - Dipper	9217 lbf (4100 daN)

Swing system

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

Swing speed	8.1 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: 17.7" (450 mm) Steel: 17.7" (450 mm) or 23.6" (600 mm)
--------------------	---

Track tension grease piston

Blade (width x height)	90.5" x 18.5" (2300 mm x 470 mm)
-------------------------------	----------------------------------

Safety valve on the blade cylinder.

Drivetrain

Each track driven by a 2-speed, axial-piston hydraulic motor & 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)	1.6 mph / 3 mph (2.6 km/h / 4.9 km/h)
Max. tractive force	12589 lbf (5600 daN)

Travel control automatically locks when operator raises left console.

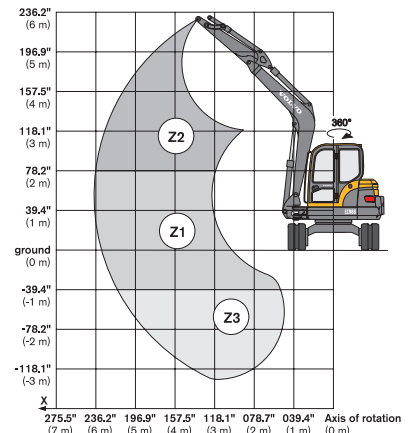
Service fill capacities

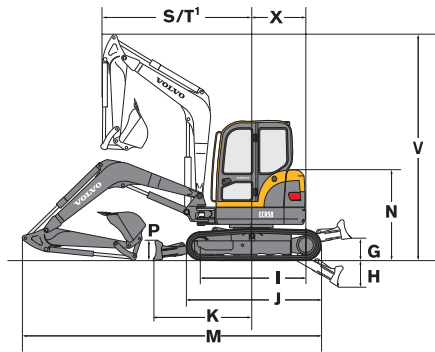
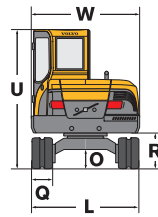
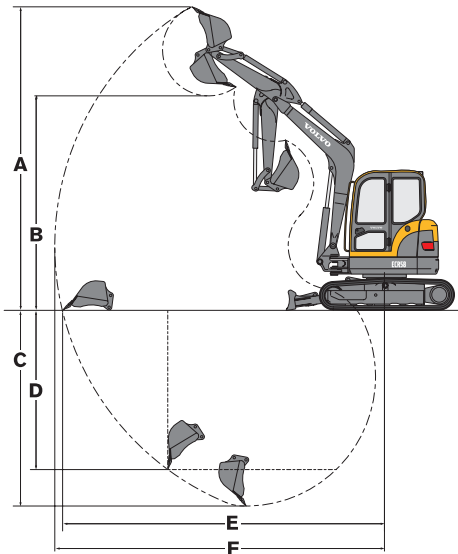
Fuel tank	29.1 US gal (110 ltr)
Hydraulic tank	21.1 US gal (80 ltr)
Hydraulic system, total	37 US gal (140 ltr)
Engine oil	3 US gal (11.5 ltr)
Cooling system	1.9 US gal (7.0 ltr)

Weight

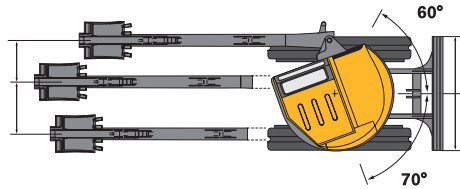
Operating weight and ground pressure:

Rubber Tracks 17.7" (450 mm)	18629 lbs (8450 kg) - 5.55 psi (0.39 kg/cm ²)
Steel Tracks 17.7" (450 mm)	
Cab: 19070 lbs (8650 kg) - 5.69 psi (0.40 kg/cm²)	





ECR58 = 28.7" (730 mm)
 ECR88 = 28.7" (730 mm)
 ECR58 = 35.4" (900 mm)
 ECR88 = 35.4" (900 mm)



ECR58 = 78.7" (2000 mm)
 ECR88 = 90.6" (2300 mm)

ECR58

Dipper	A	B	C	D	E	F
60.6" (1540)	220.9" (5610)	156.3" (3970)	141.7" (3600)	114.6" (2910)	233.9" (5940)	239.4" (6080)
76.4" (1940)	230.3" (5850)	165.7" (4210)	157.5" (4000)	128.3" (3260)	248.8" (6320)	254.3" (6460)

(mm)

G	H	I	J	K	L	M	N	O
16.5" (420)	18.9" (480)	76.8" (1950)	98.4" (2500)	71.7" (1820)	78.7" (2000)	220.5" (5600)	65.7" (1670)	14.6" (370)

(mm)

P	Q	R	S	T'	U	V	W	X
14.6" (370)	15.7" (400)	26.4" (670)	97.2" (2470)	77.2" (1960)	101.6" (2580)	170.5" (4330)	78.7" (2000)	39.4" (1000) 41.2" (1045)

(mm)

1: Front turning radius with maximum offset

Buckets ECR58			
	Width	Weight	Capacity
Standard	14" (350 mm)	187 lbs (85 kg)	2.5 ft³ (70 l)
	18" (450 mm)	213 lbs (97 kg)	3.5 ft³ (98 l)
	24" (600 mm)	260 lbs (118 kg)	5.0 ft³ (142 l)
	30" (750 mm)	304 lbs (138 kg)	6.6 ft³ (187 l)
	35" (900 mm)	359 lbs (163 kg)	8.2 ft³ (231 l)
Ditch	51" (1300 mm)	275 lbs (125 kg)	6.2 ft³ (175 l)
	59" (1500 mm)	407 lbs (185 kg)	9.4 ft³ (265 l)

ECR88

Dipper	A	B	C	D	E	F
66.9" (1700)	265.4" (6740)	191.3" (4860)	164.2" (4170)	113.8" (2890)	270.1" (6860)	276" (7010)
82.7" (2100)	275.6" (7000)	201.6" (5120)	179.9" (4570)	128.3" (3260)	285" (7240)	290.9" (7390)

G	H	I	J	K	L	M	N	O
19.3" (490)	15.7" (400)	86.6" (2200)	112.2" (2850)	76.4" (1940)	90.6" (2300)	252.4" (6410)	70.1" (1780)	15.4" (390)

P	Q	R	S	T'	U	V	W	X
18.5" (470)	17.7" (450)	29.7" (755)	101.2" (2570)	80.3" (2040)	105.5" (2680)	207.1" (5260)	89.2" (2265)	47.6" (1210) 50.6" (1285)

(mm)

1: Front turning radius with maximum offset

Buckets ECR88			
	Width	Weight	Capacity
Standard	15" (380 mm)	282 lbs (128 kg)	3.6 ft³ (103 l)
	18" (450 mm)	330 lbs (150 kg)	4.6 ft³ (130 l)
	24" (600 mm)	403 lbs (183 kg)	6.6 ft³ (188 l)
	30" (750 mm)	480 lbs (218 kg)	8.7 ft³ (246 l)
	35" (900 mm)	519 lbs (236 kg)	10.8 ft³ (306 l)
Ditch	59" (1500 mm)	550 lbs (250 kg)	9.4 ft³ (265 l)

STANDARD EQUIPMENT

Engine

Low-emission 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.
Rotary dial control for engine speed.
Long service intervals

Electrical system

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

Undercarriage

ECR58: **15.8"** (400 mm) wide rubber tracks.
ECR88: **17.7"** (450 mm) wide rubber tracks.
Dozer blade.

Hydraulic system

Closed-center, load-sensing system.
Multiple filtration system (30 µm).
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.
Two speed travel with auto kickdown.

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.

Cab / 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.
Two working lights.
Heating and air-conditioning.
Two-speed heating and ventilation.
Tinted windows.
Front window opening system power-assisted by dual gas struts.
Windshield 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 and Audible alarm: Coolant temperature and Engine oil pressure.
V-CAD pro (ECR88 only).

Earthwork equipment

ECR58:
114" (2900 mm) long monobloc boom.
60.6" (1540 mm) dipper arm.
ECR88:
139.8" (3550 mm) long monobloc boom.
66.9" (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.
Antitheft.

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 & amendments.

OPTIONAL EQUIPMENT

Digging equipment

Long dipper - ECR58: **76.4"** (1940 mm).
Long dipper - ECR88: **82.7"** (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.

Counterweight

ECR58: **375 lbs** (170 kg)
ECR88: **882 lbs** (400 kg)

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: **15"** (380 mm)
ECR88: **17.7"** (450 mm)
or **23.6"** (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

Sideview mirrors.
Level 2 FOPS.
Radio/cassette player with 2 speakers.

Miscellaneous

Special custom 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.**



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/na

Ref. No. 22 2 432 1188
Printed in PDF 09/09
Volvo, Asheville

English
USA