

VOLVO COMPACT EXCAVATOR

# ECR48C

4.86-4.99 t 36.3 hp



# IN COMMAND. IT'S YOUR TURN.

The short radius Volvo ECR48C is here and it will turn more than heads with its performance, leading fuel efficiency and profit capability. Demanding jobs, tight jobsites. We're ready. Reliability, power, legendary comfort and the standard in safety. It's your turn to get it all.

## **The confidence to safely work faster**

The ECR48C has a short radius superstructure that turns inside the width of the tracks. Quickly and confidently work next to walls, structures and busy roadways. You also get improved stability, for more performance when using long attachments or lifting heavy loads. The side-position engine and the optional rear counterweights offer excellent balance and distribution.

## **Smooth maneuverability**

Handle a wide range of jobs – and do each with ease and speed. Slew and offset can now be multi-functioned in one natural motion. Float blade allows the operator to backfill, level and contour for finish grading. Just push forward on the blade lever for the right amount of consistent blade down force. The Volvo ECR48C has new tracks with a shorter pitch. This permits travel speeds up to 10 percent faster and reduces vibration for best-in-class comfort. The Volvo ECR48C also features two-speed travel, automatically shifting from high to low speed according to travel load.

## **The power and the capacity to do more**

Excavators dig, lift, load, crane and trench. The Volvo ECR48C performs at the highest level with the power, efficiency and force you need. It starts with an advanced new generation Volvo engine. It's proven and it delivers power, long life and profit-enhancing leading fuel efficiency. It's also a quiet worker, producing low emissions and meeting Tier 4i/Stage 3A environmental standards. When it comes to hydraulics, the patented Volvo mono pump system delivers every time. It uses one system for all hydraulics, providing smooth, precise control along with optimal power.

## **The right equipment**

Get more done with a 5-ton bucket interface that utilizes buckets compatible with the Volvo EC45 Pro, EC55C, ECR48C and the ECR58 Plus. The optional pin grabber quick coupler features a safe, improved design that increases versatility by also utilizing buckets in face/shovel mode. Other options include a hydraulic angle blade and the Volvo thumb that makes picking up large/bulky objects easy. An optional second double-acting attachment circuit (X3) controlled with a fingertip electro-proportional control, provides easy and efficient command of hydraulic attachments, such as tilt rotators.



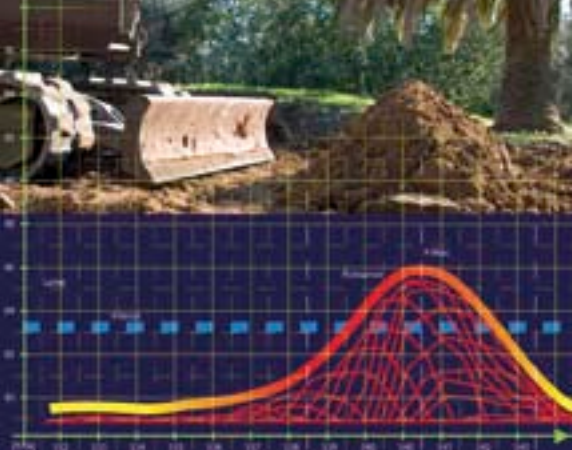
- Powerful, fuel-efficient Volvo engine



- Short turn radius adds confidence



- Get a handle on it with the Volvo thumb



- Travel speed adjusts to the load
- Control the angle blade with the lever
- Combination slew and offset movements



# WORK HARD – WITH EASE.

The comfortable operator gets more work done. The Volvo ECR48C operator leads the way. More comfort, less fatigue, longer shifts. Greater productivity, increased profits, happier owner. It's all related and it's all here in the Volvo ECR48C. Climb in.

## The leader in comfort

If you've ever operated in a Volvo cab you know why it's the leader. And Volvo doesn't sit back on reputation. The ECR48C cab is one of the most spacious in the industry. Lots of legroom and headroom – even for tall operators. The large, one-piece floor makes it easy to clean out mud, water or debris. The multi-adjustable high-back seat provides comfort, as well as proper back, neck and head support. The console joysticks and seat are mounted on the same suspension for smooth, consistent operation during jolts and shocks. And for less noise and vibration, the cab frame utilizes rubber isolation mounts at all four cab corners for a smoother ride.

## Clear visibility - inside and outside

Increased visibility increases jobsite safety. The ECR48C offers a clear, safe view through large, glazed surface areas and a contoured cab design that optimizes all-around visibility. There's also a compact rear design along with only one rear cab pillar – for a unique, improved view. Inside the cab, all the instruments and gauges are right where you want them. Monitor all critical machine functions with the easy-view instrument panel. Clear, at-a-glance information, warning lights and audible signals mean more safety.

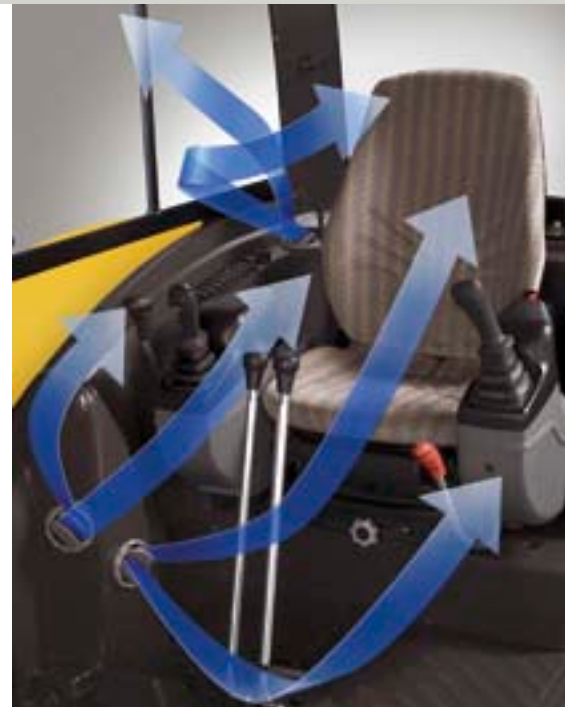
## Your machine, your controls

Enjoy precise, fingertip control through an electro-proportional control on the right joystick. This roller-type action controls the attachment circuit and the boom offset, for accurate adjustment of hydraulic flow and direction. To maximize familiarity and efficiency at the controls, the optional control pattern switch located inside the cab makes it easy to use the ISO or SAE control pattern.

## Heating, cooling and ventilation

Get the most out of your Volvo ECR48C regardless of outside weather or conditions. Two heating vents keep the operator comfortable and the windows defrosted, while optional air conditioning keeps things cool when working in hot, humid or dusty conditions.

For natural ventilation, the side window slides open easily. The gas-strut assisted front windscreen opens wide and safely stores in a locked, secure position overhead. The lower window also opens for a complete front opening.



- Climate controlled heating and cooling



- Precise control at your fingertips



- Easy-open windshield stores securely



- Spacious, comfortable Volvo cab
- Large, easy-clean one-piece floor
- Designed for all-around visibility



# GREATER ACCESS TO MORE UPTIME.

Volvo wants to help you do more work. That means less downtime, more safety, easier service access and reliability through quality parts and components. It's the Volvo way, and it's built into everything we do. Add it all up and you get the trusted Volvo ECR48C – along with more profit.

## Your access to serviceability

Get to work fast each day with easy, ground level service access. Service points are clustered together under the side position, easy-open engine hood. Check the engine oil level, fuel system, air filter and coolant level. Clean the oil cooler and radiator quickly and easily.

A large fuel filler neck allows you to fill up from the fuel station pump or portable fuel cell.

## Safe at work

Work in confidence and peace of mind in Volvo ECR48C cab and canopies – standard with FOPS 1 (falling object), ROPS (roll over) and TOPS (tip over) protection. Inside the cab work securely seated with a retractable seat belt that fits operators of all sizes. To prevent the load from slipping or dropping due to hose failure, optional safety valves can be installed on the boom and dipper cylinders. To safely reduce noise, emissions and fuel consumption, an automatic idling system is available. When engaged, the system returns the engine to idle if no controls are operated for more than five seconds. Simply touch any control, and the engine returns to high idle.

## Volvo quality through and through

Quality, durability and long life starts with the cast steel x-shaped undercarriage – a design employed on many larger excavators. It offers sturdy operation, better load distribution on the side members and high performance. The cab door remains protected in the open position by a secure locking system. The door does not stick outside the width of the undercarriage. And to keep boom lights protected, optional metal shrouds add durability for difficult conditions.

## Long-term residual value

Residual value is an important factor when considering a machine. The Volvo ECR48C is loaded with quality and features that improve long-term value. There's new cab styling with rounded contours, a short distance behind the operator's seat and a forward-leaning view of the work area. This offers excellent visibility and a modern style that enhances value. High-quality pivot points (pins, bushings and borings) provide minimal slip or play for the life of the machine. And to help protect against vandalism, an engine-key lockable panel protects the fuel port and toolbox.



- Short, contoured rear for visibility



- Easy fuel fill from the pump or can



- Sturdy, rigid X-shaped undercarriage



- Service points are clustered together



- Full range of genuine Volvo service parts
- Complete, easy service access



# SPECIFICATIONS

## Engine

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

Model	D2.2DCAE2
Gross power, rated (ISO 9249)	27.1 kW (36.3 hp) at 2200 r/min
Power, installed (ISO 9249)	26 kW (34.9 hp) at 2200 r/min
Displacement, total	2190 cc
Maximum torque	138 Nm at 1320 r/min
Bore x stroke	88 mm x 90 mm
Gas emission	PM: 0.3 g/kwh NOx + HC : 7.5 g/kwh CO: 5.5 g/kwh

## Electrical system

Battery capacity	12 V - 65 Ah
Alternator rating	12 V - 55 A
Starter motor output	12 V - 2.3 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	100 l/m
Maximum operating pressure	26 MPa (260 bars)

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

Maximum adjustable flow	60 l/min
Maximum operating pressure	26 MPa (260 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

## Bucket performance

Breakout force	3612 daN
Tearout force short arm	2656 daN
Tearout force long arm	2593 daN

## 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 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	4/1
Track width	400 mm
Track tension	by grease piston
Blade (width x height)	1960 x 395 mm

## Drivetrain

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

Max. speed (low speed/ high speed)	2,9 / 5,0 km/h
Max. tractive force	3040 daN

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

## Service fill capacities

Fuel tank	60 l
Hydraulic tank	20 l
Hydraulic system, total	50 l
Engine oil	8,6 l
Cooling system	6 l

## Weight and ground pressure

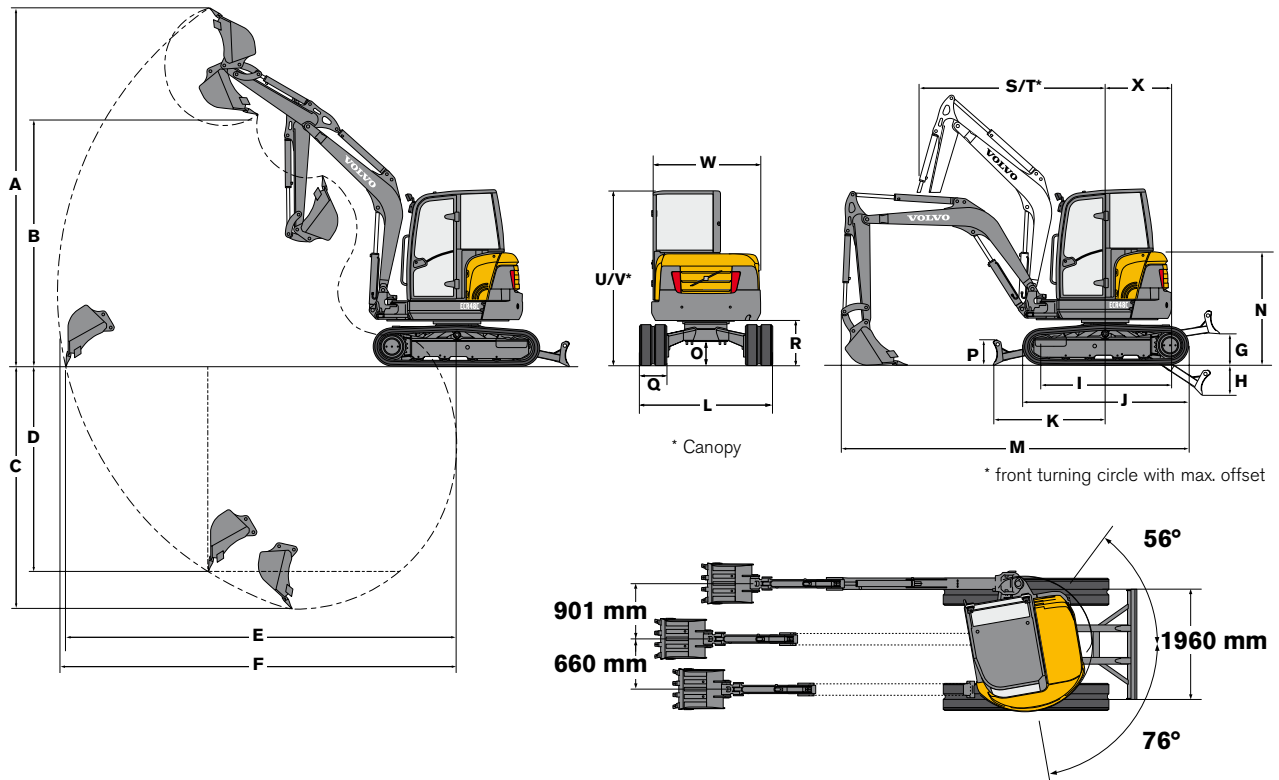
Operating weight according to ISO 6016  
(according to most usual configuration and including 75kg operator)

<b>Operating weight</b>	<b>(kg)</b>	4985
<b>Ground pressure cab</b>	<b>kg/cm<sup>2</sup> kPa</b>	0,30 (29,5)
<b>Ground pressure canopy</b>	<b>kg/cm<sup>2</sup> kPa</b>	0,29 (28,5)
<b>Transport weight</b> (Heated cab, 300mm rubber tracks, short arm, 500mm direct-fit bucket, full fuel tank)	<b>(kg)</b>	4910
<b>With canopy</b>	<b>(kg)</b>	-130
<b>With long arm and additional counterweight</b>	<b>(kg)</b>	+150
<b>With 400mm steel tracks</b>	<b>(kg)</b>	+156

## Sound Level

<b>Interior sound level according to ISO 6396 (LpA)</b>	<b>dB(A)</b>	78
<b>External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009 (LwA)</b>	<b>dB(A)</b>	96





Dipper	A	B	C	C*	D	E	F
1400	5134	<b>3593</b>	<b>3407</b>	<b>3635</b>	2829	5559	5804
1800	5365	<b>3824</b>	<b>3807</b>	<b>4024</b>	3207	5939	6181

\* Maximum dig depth

G	H	I	J	K	L	M	N	O
424	576	1870	2412	1800	1950	4939	1657	353

P	Q	R	S	T*	U	V	W	X
396	400	667	2715	2168	2569	2519	1610	974

mm

### Lifting capacity

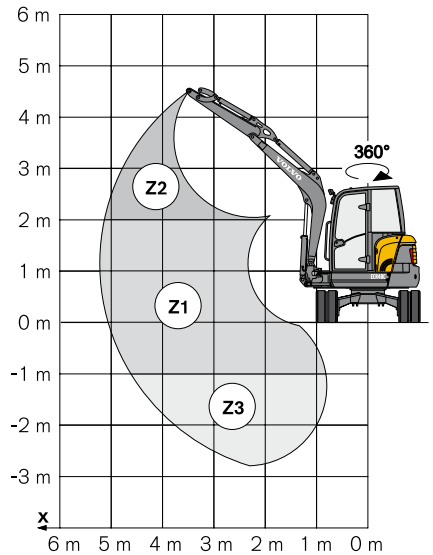
These capacities are given for a machine without a bucket or quick-release coupling and fitted with rubber tracks for a 360° total rotation lifted load.

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 (mm)	(Kg)	1,00 m	1,50 m	2,00 m	2,50 m	3,00 m	3,50 m	4,00 m	4,50 m	5,00 m	Max	Xmax(m)
1400 mm	Z2				1312*	1064*	680*	691	580		497	4.95
	Z1		1642*	1741	1226	946	768	643	551		477	5.05
	Z3	2129*	2417*	1751	1233	948	768	644				
1800 mm	Z2						741*	545*	571	482	429	5.34
	Z1	1233*	1382*	1799*		911	738	617	526	457	412	5.43
	Z3	1673*	1929*	1678		908	735	614	525			

\* hydraulic limit



## STANDARD EQUIPMENT

### Engine

Low-emission Volvo diesel engine.  
Dry-type air filter.  
Electric heating device.  
Fuel filter + transparent sediment chamber.  
Purge plug under the diesel oil tank.  
Oil sump sheet metal guard.  
Automatic return to idling system.

### Electrical system

Water-resistant electrical connectors (IP67).  
Two working lights on cab version.  
Working light on the canopy frame.

### Hydraulic system

Load-sensing system.  
ISO power-assisted hydraulic controls.  
Accessory circuit and the boom offset are controlled by an electroproportional control on the right joystick.  
Control of forward and backward movement by two levers coupled to pedals.  
Double-acting hydraulic circuit for accessories.

### Seat

"Deluxe" fabric or vinyl-covered superior comfort multi-adjustable sprung seat with a high back and fully-suspended consoles.

### Cab (cab version)

Cab mounted on rubber mountings.  
In cab heating and ventilation adjustment.  
Front window with opening system power-assisted by a gas ram.  
Provision for a radio (location for a radio and two speakers, aerial and electric wiring already fitted).  
Anti-corrosion protection of the cab by electrophoresis.  
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

2600 mm long monobloc boom.  
1400 mm dipper.  
Floating dozer blade.

### Safety

Cab and canopy versions are:  
Level 1 FOPS (Falling Objects Protective Structure).  
TOPS (Tip-Over Protective Structure).  
ROPS I (Roll-Over Protective Structure).  
All-around visibility.

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.

Seat belt with visual indicator.  
Rear view mirror right

### Official approval

Machine conforming to European directive 2006/42/EC

Noise emissions in the environment conforming to directive 2000/14/EC

Hand Arm Vibrations - Whole Body Vibrations compliant with directive 2002/44/EC

Electromagnetic compatibility (EMC) conforming to European directive 2004/108/EC and its amendments.

Object handling device conforming to EN 474-1 and EN 474-5 standards.

FOPS 1 conforming to ISO 3449 standard.  
ROPS conforming to ISO 3471-1 and SAE J1040 standards.

TOPS conforming to ISO 12117 and EN 13531 standards.

OPG 1 conforming to ISO 10262 standard.

## OPTIONAL EQUIPMENT

### Handling and earthwork equipment

Long dipper (1800 mm).  
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 & dipper rams with overload indicator.  
Thumb.  
Volvo mechanical and hydraulic pin grabber quick couplers.  
Lehnhoff mechanical quick coupler.  
Single-acting or double-acting hydraulic circuit for quick couplers.  
Additional rear counterweight.

### Hydraulic circuits for attachments

Hydraulic circuit for operating a clam-shell bucket (opening/closing and rotation).  
2 or 4 FLAT FACE hydraulic couplings.  
Additional adjustment roller of max. delivery available on the accessory circuit.  
Proportional 2nd accessory (X3) circuit to arm end with max flow adjustment.

### Undercarriage

Steel tracks : 380 mm wide.  
Angle blade.

### Lighting

Additional working light on the boom.  
Additional rear working light & rotating beacon.

### Environmental protection

Bio-degradable hydraulic oil VG46.  
Bio-degradable cold weather hydraulic oil VG32.  
Hydraulic oil for cold conditions VG32

### Comfort

Air conditioning + tinted glasses.  
Radio CD/MP3.  
Canopy.  
Suspended de luxe vinyle seat.  
ISO / SAE pattern selector.

### Safety

Rear view mirror left.  
Anti-theft system (2 programmable codes).  
Front guar protection (FOG).

### Service and maintenance

Tool kit.  
Dual stage air-filter.

### Miscellaneous

Special customised paint (RAL specifications).



ECR48C

# 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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