VOLVO

# EC210

Volvo Excavators 20.7t - 21.3t, 137 hp




Volvo Construction Equipment

# The power to perform

Get the most out of your excavator in any application. The EC210 is equipped with a range of features to ensure a superior performance, shift after shift. Designed with Volvo's extensive experience and expertise, this robust machine delivers ultimate productivity and efficient operation in a wide variety of tasks.

### Powerful Fuel-Efficeint Engine

The engine is manufactured by Volvo Eicher Commercial Vehicles and customised for Volvo Construction Equipment. It combines advanced technology with robust hydraulics to deliver optimum power and high torque at low RPM. This translates into excellent performance and improved fuel efficiency. The engine offers superior quality, reliability, and durability. It is designed to handle tough conditions, including high altitudes upto 2500 meters and cold temperatures as low as -15$^{0}$ C with an optional cold start kit.



### Positive Hydraulic System

The next-generation hydraulic system seamlessly integrates with the fully electronic control system and advanced ECO mode to optimize engine power, minimize losses and enhance controllability with faster response times.

The electro-hydraulic system with an MCV (Main Control Valve) powered by intelligent technology, precisely manages on-demand flow, ensuring high productivity, powerful digging capabilities, and exceptional fuel efficiency. The electro-hydraulic control offers rapid and smooth machine response for exceptional control and precision and simplified troubleshooting for quicker maintenance and reduced downtime.



### Cabin

The EC210 is equipped with a spacious and safe operator environment offering enhanced all-around visibility, an adjustable seat and ergonomic controls. The improved cab interior features a new I-ECU monitor that displays a range of information for efficient operation. This ergonomic design minimozes stress and fatigue, promoting safety and maximizing productivity.











# Efficiency that lasts

The Volvo EC210 is a versatile machine that ensures enhanced profitability. It has Volvo's intelligent ECO mode that lowers fuel consumption, offers best-in-class fuel efficiency and reduces operating costs. The durable design guarantees a long service life to get the most out of your machine.

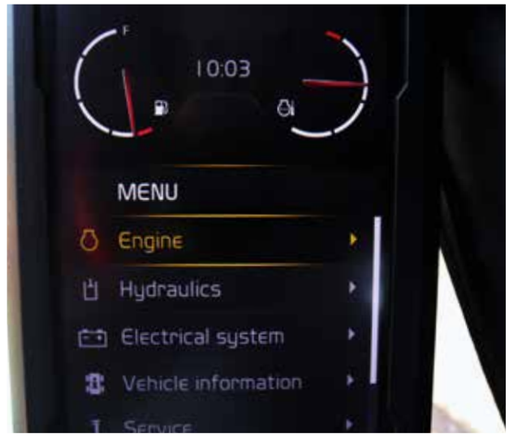
### Efficient work modes

The EC210 is equipped with unique 10 working modes for effective cycle time and optimum fuel efficiency. Operators can select at hand the best mode to suit the application from Idle (I), Fine (F), General (G), Heavy (H) mode and Power Max (P) mode. Choose the correct mode according to the working conditions for added precision and improved fuel efficiency. Volvo's innovative ECO mode helps maximize fuel efficiency without sacrificing performance.




### Instrument Panel - IECU

The all-new, color LCD monitor keeps you informed with vital machine data. Track fuel consumption in real-time, stay ahead with service interval alerts, and diagnose issues quickly with on-screen error codes. The large, anti-glare screen tilts for optimal viewing, making it easy to navigate all the information you need. Easily select working modes and adjust response settings for a truly user-friendly experience.




### Easy to service

The EC210 ensures that servicing is safe, quick and easy. Featuring Grouped Filters, ground level service access, anti slip plates and centralized lubrication points. Efficient service intervals enhance machine availability and increase uptime for maximum productivity.



### Genuine Volvo Parts

Volvo Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, you can be sure that your machine retains the renowned Volvo quality.



# Safety

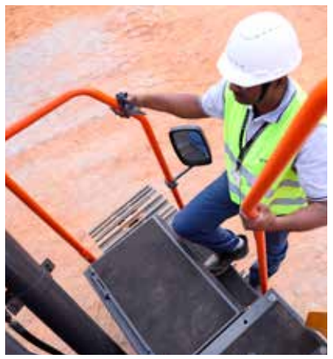
Safety is one of our core value and it is an important part of our product design that ensures safe environment for operator as well as people around.



**Boom Accumulator**
For the safe lowering of boom in the event of power loss.



**Anti-skid Platform**
For safety of operators and technicians



**Side access**
New improved coloured 3-point side access enhances safety and ease to access.

# Attachment Management System

Make sure you are ready to tackle any job. Volvo CE offers a comprehensive range of attachments that let you handle a wide variety of tasks. The EC210 can be fitted with a selection of buckets and breakers that work in harmony with the machine to ensure optimal performance and profitability in any application.

**Unmatched Versatility and Power**

The EC210 boasts of an advanced hydraulic system designed for maximum productivity and attachment compatibility. It allows you to pre-set and adjust hydraulic flow for up to 20 different attachments. Choose between one or two pump flow options to optimize fuel consumption and performance based on your jobsite needs.

**Volvo Hydraulic Quick Coupler**

Quick Coupler manufactured by the world's leading authority on pin grabber quick coupler technology. The patented Automatic Blocking System (ABS) prevents the accidental release of an attachment. In the unlikely event of a hydraulic failure or operator error, buckets cannot be dropped or swung dangerously on the front pin. The variable pin centre design allows you to easily pick up and swap the widest range of OEM attachments at your jobsite.









# Telematics system

CareTrack is the Volvo Construction Equipment telematics system that gives you access to a wide range of machine monitoring information designed to save you time and money. With CareTrack you can reduce fuel costs, optimize machine and operator performance and proactively manage service and maintenance to maximize uptime. Stay connected to your machines via remote monitoring and experience new levels of control and efficiency.




**Service schedule**

| | |
|---|---|
| Engine oil and filter, replacing | 500 Hrs |
| Fuel filters, replacing | 500 Hrs |
| Swing gearbox oil, replacing | 1000 Hrs |
| Hydraulic oil servo filter, replacing | 1000 Hrs |
| Hydraulic oil return filter, replacing | 2000 Hrs |

**Low maintenance cost**

- ₹ Lower Engine Maintenance Cost
- ₹ 20% reduced Engine oil and Hydraulic Oil Refill volume
- ₹ Extended oil & Filter change interval (500 hours)
- ₹ Maintenance-free batteries

# Optional auxiliary piping

The Volvo-designed hydraulic breaker / shear piping and quick coupler piping option provides optimum flow to the hydraulic attachments. State-of-the-art auxiliary lines allow the correct flow and pressure for special attachments.



**Standard & Optional Equipment***

| Standard | Optional |
|---|---|
| Air condtioning | Caretrack |
| Auto Engine Shut Down | Cold Start kit |
| Delay Engine Shut Down | Coolant Heater |
| Battery cut-off Switch | Fuel Filler Pump |
| | LED Lights |
| | Beacon Lights |
| | Attachment / SafetyNet |
| | Piping kit |
| | CLS. AFSS |
| | Rear view Camera |

*Standard and optional items may vary. Consult your Volvo dealer for details.

# New Volvo EC210, E-Series Electronics and Styling with improved efficiency.

## Features & Benefits

**Lower Equipment Life Cycle Cost**

Best-in-class fuel efficiency

Lower maintenance cost

Faster payback

Higher rental

Higher resale value

**Machine to meet all needs**

Versatility in applications

Heavy duty applications

Standard Hydraulic breaker compatibility

**Equipped with efficient technology**

Optimised Engine Power (137hp)

Better serviceability and lower maintenance costs

E-Series electronics and styling

**Superior Support**

On Board Interactive Monitor Telematics

Wide network of service and parts

Range of uptime services (optional)

Service Call Center




**VECV 494 – T3 Electronic Engine made in India with delay engine shut down as standard feature.**

**Higher Fuel Efficiency and Lower Maintenance Cost**

**Versatile Machine: Double Acting x1 Spool – Standard Fitment**

**10 Efficient Work Modes**

**Posicon Hydraulics – Fuel saving and superior performance to meet required power**

# Versatile Applications




Stone Quarry




Sand Mining




Road Construction




Rock Breaker
and many more....



Powerlatch Coupler



# Volvo EC210 in detail

| **Engine** | | |
|---|---|---|
| The engine, which provide excellent performance, is equipped with four cylinder, electronic-controlled high pressure fuel injectors, internal EGR, in-line waste gate turbo charger, air-to-air intercooler and water cooled diesel engine type. | | |
| Engine | VECV | E494-Tier 3 |
| Max. power at | r/min | 2000 |
| Gross, ISO 14396/SAEJ1995 | hp | 137 |
| Max. torque | Nm | 520 |
| at engine speed | r/min | 1600 |
| No. of cylinders | | 4 |
| Bore | mm | 100 |
| Stroke | mm | 120 |
| **Electrical System** | | |
| High-capacity electrical system that is well protected. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard. | | |
| Voltage | V | 24 |
| Batteries | V | 2 x 12 |
| Battery Capacity | Ah | 100 |
| Alternator | V/Ah | 24/75 |
| Start Motor | V - kW | 24-5.2 |
| **Swing System** | | |
| The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and antirebound valve are standard. | | |
| Max. slew speed | r/min | 11.5 |
| Max. slew torque | kNm | 76.5 |
| **Travel System** | | |
| Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame. | | |
| Max. drawbar pull | kN | 174 |
| Max. travel speed (low) | km/h | 3.3 |
| Max. travel speed (high) | km/h | 5.5 |
| Gradeability | ° | 35 |
| **Undercarriage** | | |
| The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard. | | |
| Track shoe | | 2 x 46 |
| Link pitch | mm | 190 |
| Shoe width, triple grouser | mm | 600 |
| Bottom rollers | | 2 x 7 |
| Top roller | | 2 x 2 |

| **Positive Hydraulic System** | | |
|---|---|---|
| The new electro-hydraulic system and new MCV (main control valve) use intelligent technology to control on-demand flow for high productivity, high-digging capacity and excellent fuel efficiency.<br>The following important functions are included in the system:<br>**Summation system:** Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.<br>**Boom priority:** Gives priority to the boom operation for faster raising when loading or performing deep excavations.<br>**Arm priority:** Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.<br>**Swing priority:** Gives priority to swing functions for faster simultaneous operations.<br>**Regeneration system:** Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity. | | |
| **2 x Variable displacement axial piston pumps** | | |
| Maximum flow | l/min | 2 x 200 |
| **Gear pump** | | |
| Maximum flow | l/min | 1 x 20 |
| **Relief valve setting pressure** | | |
| Implement | MPa | 32.4 |
| Travel circuit | MPa | 32.4 |
| Slew circuit | MPa | 27.9 |
| Pilot circuit | Mpa | 3.9 |
| **Hydraulic cylinders** | | |
| Mono boom | | 2 |
| Bore x Stroke | ø x mm | 125 x 1235 |
| Arm | | 1 |
| Bore x Stroke | ø x mm | 135 x 1540 |
| Bucket | | 1 |
| Bore x Stroke | ø x mm | 115 x 1065 |
| **Service Refill** | | |
| Fuel tank | ltr | 360 |
| Hydraulic system, total | ltr | 240 |
| Hydraulic tank | ltr | 140 |
| Engine oil | ltr | 15 |
| Engine coolant | ltr | 18 |
| Slew reduction unit | ltr | 5 |
| Travel reduction unit | ltr | 2 x 3.5 |
| **Cab** | | |
| The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into the ceiling. | | |
| Sound Level | | |
| Sound level in cab according to ISO 6396 | | |
| LpA (tropical) | dB(A) | 69 |
| External sound level according to ISO 6395, GB16710-2010 | | |

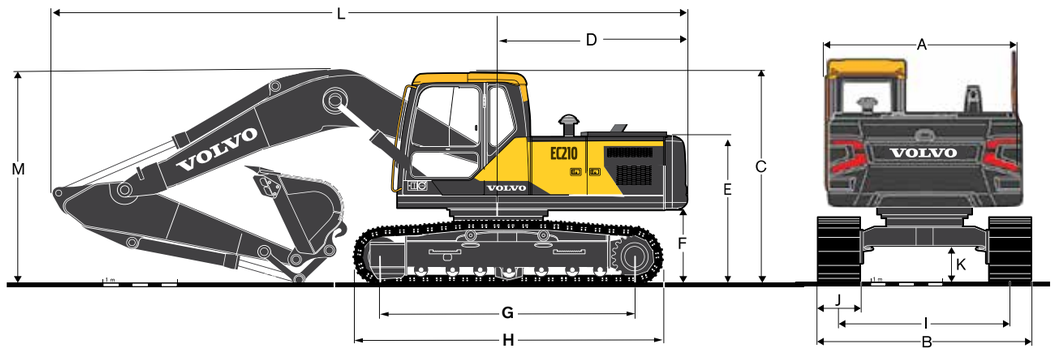
# Specifications

| **MACHINE WEIGHTS AND GROUND PRESSURE (EC210 WITH 5.7 M BOOM, 2.5 M ARM, 1.1 CUM BUCKET AND 3800 KG COUNTERWEIGHT)** | | | | |
|---|---|---|---|---|
| **Description** | **Shoe width** | **Operating weight** | **Ground pressure** | **Overall width** |
| **Units** | mm | kg | kPa | mm |
| **Triple grouser** | 600 | 20700 | 46.1 | 2800 |

# Specifications

| Bucket Selection Guide | | | | | | |
|---|---|---|---|---|---|---|
| **Bucket type** | | **Capacity** | **Cutting width** | **Weight** | **Teeth** | **EC210 600 mm shoe, 3800 kg counterweight, 5.7 Boom, 2.5 Arm** |
| Direct Fit Buckets | | $m^3$ | mm | kg | EA | |
| | GP | 1.1 | 1380 | 805 | 6 | B |
| | HD | 0.92 | 1230 | 947 | 5 | C |
| | Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application. The recommendations are given as a guide only, based on typical operation conditions. Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose. | | | | | Maximum material density<br>D: 2100 kg / $m^3$<br>C: 1800 kg / $m^3$<br>B: 1500 kg / $m^3$<br>A: 1200 kg / $m^3$ |

# Dimensions



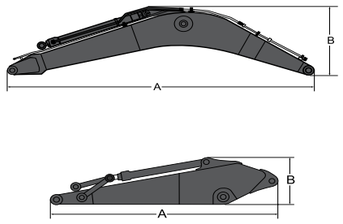

| Description | | Unit | EC210 |
|---|---|---|---|
| **Boom** | | **m** | **5.7** |
| **Arm** | | **m** | **2.5** |
| A | Overall width of upper structure | mm | 2500 |
| B | Overall width | mm | 2800 |
| C | Overall height of cab | mm | 2900 |
| D | Tail swing radius | mm | 2880 |
| E | Overall height of engine hood | mm | 2225 |
| F | Counterweight clearance* | mm | 1005 |
| G | Tumbler length | mm | 3370 |
| H | Track length | mm | 4170 |
| I | Track guage | mm | 2200 |
| J | Shoe width | mm | 600 |
| K | Min. ground clearance* | mm | 450 |
| L | Overall length | mm | 9780 |
| M | Overall height of boom | mm | 3083 |

* Without shoe grouser



# Dimensions

| | Description | Unit | Boom | Arm |
|---|---|---|---|---|
| | | m | 5.7 | 2.5 |
| A | Length | mm | 5910 | 3525.0 |
| B | Height | mm | 1585 | 860.0 |
| B | Width | mm | 670 | 440.0 |
| B | Weight | kg | 1851 | 1006 |




**WORKING RANGES**

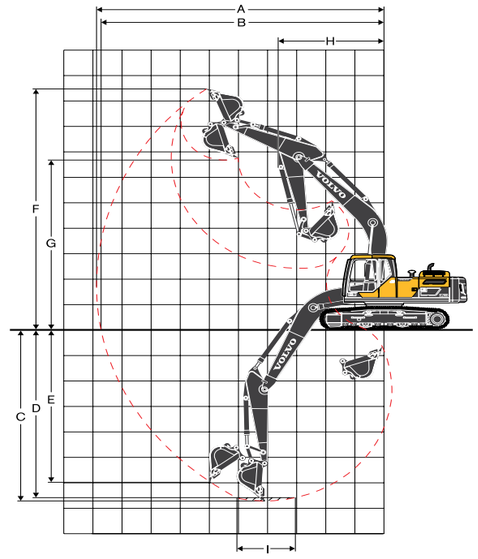
| Description | | Unit | |
|---|---|---|---|
| **Boom** | | **m** | 5.7 |
| **Arm** | | **m** | 2.5 |
| A | Max. digging reach | mm | 9605 |
| B | Max. digging reach on ground | mm | 9435 |
| C | Max. digging depth | mm | 6380 |
| D | Max. digging depth (2.44m level) | mm | 6163 |
| E | Max. vertical wall digging depth | mm | 5095 |
| F | Max. cutting height | mm | 9248 |
| G | Max. dumping height | mm | 6373 |
| H | Min. front swing radius | mm | 3585 |

**DIGGING FORCES WITH DIRECT FIT ON BUCKET***

| | | | | |
|---|---|---|---|---|
| Breakout force bucket | Normal | SAEJ1179 | kN | 113 |
| | Normal | ISO 6015 | kN | 126 |
| Tearout force - dipper arm | Normal | SAE J1179 | kN | 99 |
| | Normal | ISO 6015 | kN | 101 |
| Rotation angle, bucket | | | ° | 175 |

*Machine with pin-on bucket

**Working Ranges with Direct fit Bucket**




**LIFTING CAPACITY EC210**

Lifting capacity at the arm end without bucket. For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with the quick coupler from the following values.

| | Lifting hook related to ground level | 1.5 m | | 3.0 m | | 4.5 m | | 6.0 m | | 7.5 m | | Max. reach | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Along UC | Across UC | Along UC | Across UC | Along UC | Across UC | Along UC | Across UC | Along UC | Across UC | Along UC | Across UC | m |
| Boom: 5.7 m<br>Arm: 2.5 m<br>Shoe: 600 mm<br>CWT: 3800 kg | 7.5 m | | | | | | | | | | | 3360 | 3360 | 5.97 |
| | 6.0 m | | | | | | | 3320 | 3320 | | | 3360 | 3360 | 7.14 |
| | 4.5 m | | | | | | | 3750 | 3750 | 3470 | 3000 | 3300 | 3460 | 7.85 |
| | 3.0 m | | | | | 5900 | 5900 | 4450 | 4310 | 3770 | 2890 | 3540 | 3300 | 8.22 |
| | 1.5 m | | | | | 7300 | 6360 | 5160 | 4030 | 3780 | 2760 | 3400 | 3160 | 8.30 |
| | 0 m | | | | | 8070 | 6040 | 5290 | 3830 | 3680 | 2660 | 3480 | 3240 | 8.11 |
| | -1.5 m | 5550 | 5550 | 9030 | 9030 | 8180 | 5960 | 5200 | 3750 | 3650 | 2630 | 3840 | 3570 | 7.61 |
| | -3.0 m | 9880 | 9880 | 11190 | 11190 | 7660 | 6050 | 5250 | 3800 | | | 4650 | 4380 | 6.74 |
| | -4.5 m | | | 8930 | 8930 | 6190 | 6190 | | | | | 4970 | 4970 | 5.32 |

VOLVO



Volvo CE Dealer Network

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