



Volvo Construction Equipment

EC220E

Volvo Excavators 20.6-25.1 t / 45,350 - 55,360 lb 173 hp



A passion for performance

At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for customers around the globe. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

Helping you to do more

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

Designed to fit your needs

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.



You learn a lot in 180 years

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

We're on your side

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

We have a passion for performance.

A strong, dedicated, capable dealer network

Our dealers are strategically located throughout North America to provide the equipment you need and the parts and service support you demand for a productive and profitable operation.

The strength of our dealer network is enhanced with extensive individualized product support training at our best-in-class Customer Center in Shippensburg and through hands-on training. Using a great Product Demonstration Center featuring a dedicated area for most common applications, visitors operate equipment from our entire product line under a variety of simulated working conditions. This facility is in year-round use by our dealers and customers.

Building the best starts right here.

The products designed and manufactured by Volvo Construction Equipment have their beginnings at the most advanced Research & Design centers in the industry. Volvo CE machines are designed in 11 R&D centers and produced in 15 manufacturing facilities across the world.

The major R&D center and manufacturing plant in the Americas is located in Shippensburg, Pennsylvania. This facility has been in operation for over 30 years and – with its recently added 200,000 sq. ft. expansion – now covers 570,000 sq. ft. on an 80 acre campus. Dedicated work teams and highly advanced technologies and techniques using the Volvo Production System ensure continuous quality improvements, labor savings and cost control to reach the high quality that our customers have come to expect from Volvo.





Volvo Trucks



Renault Trucks



Mack Trucks



UD Trucks



Volvo Buses



Volvo Construction Equipment



Volvo Penta



Volvo Financial Services

Best in Class Efficiency

The EC220E builds on its efficiency reputation from the D-Series by ensuring all components work together and complement each other. The enhancements deliver the best in class fuel efficiency while not compromising on power – reducing emissions and consumption, while increasing productivity.

Volvo engine

Featuring proven advanced technology, and built on decades of experience, Volvo's robust D6 Tier 4 Final engine boasts more power - while reducing both fuel consumption and emissions to deliver superior quality, reliability and durability.



Boom float function

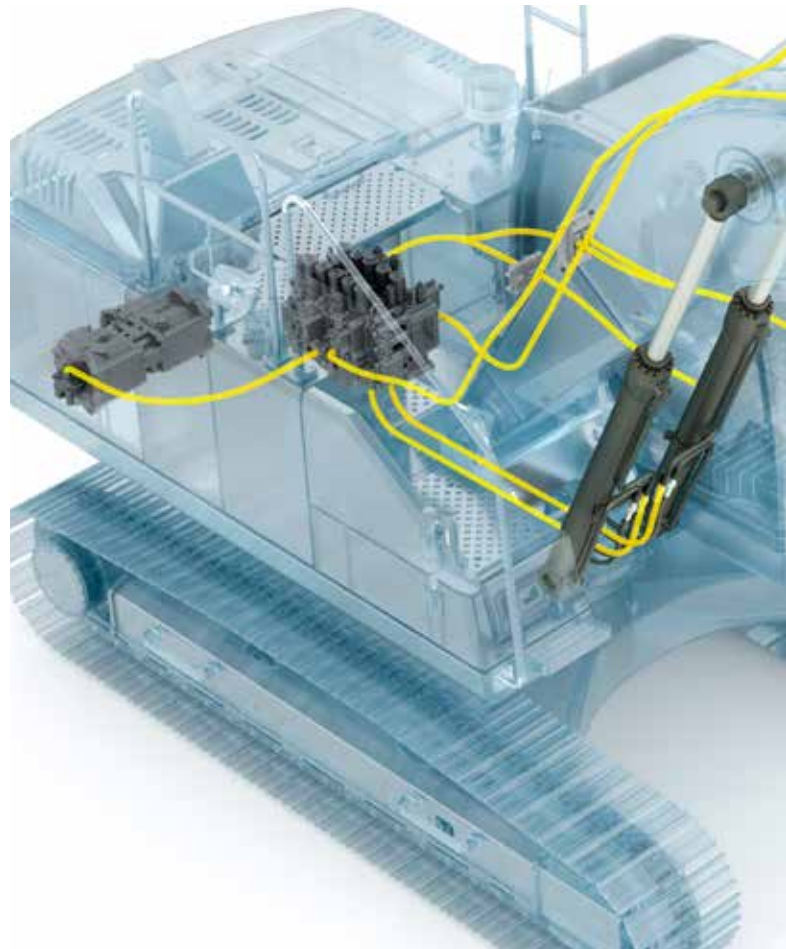
With the boom float function, the pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

Auto engine shutdown

To reduce fuel consumption, the engine will automatically switch off when the machine is inactive for a pre-set amount of time (five minutes is the default setting).

Main Control Valve and Software

The valve is compatible with software in the machine to aid controllability, by providing smooth and easy operation. In addition to increased swing force, the EC220E also comes with a boom swing priority valve; this enhances controllability of the swing and boom operation – making it ideal for loading trucks.



Increased power

The increased pump input power creates a highly responsive operation resulting in greater productivity and faster cycle time.



Optimized hydraulics system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with D6 Tier 4 Final engine to match the engine power, reduce power loss and improve controllability and response time.



Human Machine Interface (HMI)

All machine interfaces – including joysticks, keypad, panel and larger LCD monitor – are ergonomically designed for optimum control and efficiency, resulting in increased productivity and workplace wellbeing. The number of switches have been simplified and climate control integrated into the keypad for easy adjustments.

First Choice for Comfort

The cab design puts the operator in the drivers' seat to control personal specifications - from climate control, to short-cut functions on the joystick. The spacious cab allows the operator to move comfortably, to create a working environment that naturally promotes increased productivity.

Side view camera

As well as the rear view camera, side view camera can be optionally available for customers' comfort. Both views are displayed on the colour monitor, creating a safer working environment, protecting the operator and personnel on the ground.



Short-cut key

For added convenience, functions such as windshield wipers, cameras, auto-mute or power max function can all be assigned a short-cut button on the joystick. This allows the operator to select a function during the application without disruption.



Bluetooth®

To aid operator convenience and support better productivity, you can now connect a Bluetooth device to the machine enabling the hands-free function.



Seatbelt warning alarm

If the seatbelt is not buckled when the ignition key is turned, an alarm is triggered in intervals along with a continuous visual alert. This emphasises our priority for operator safety.

Building on Foundations of Trust and Quality

Quality is one of Volvo's core values and it goes hand-in-hand with reliability and durability. The EC220E pays particular attention to having all the components working at a high level of capacity but also being built to stand the test of time – providing the customer and operator with peace of mind.

ROPS

The cab features ROPS – this reinforced steel structure ensures the operator is protected in the unlikely event of the machine rolling over, while it also meets the ISO standards for safety.



Boom and Arm

The robust design includes internal plates positioned to support pressure points during the range of applications. This helps disperse the stress from high-pressure areas of the boom and arm, to ensure maximum productivity time after time, during the most demanding applications.



Lower frame

The intelligently designed X-shape lower frame enables even weight distribution increasing stability and durability - preventing damage from rock and debris.



Narrow and Heavy-duty (NH) Undercarriage

The EC220E NH's oversized and heavy-duty undercarriage creates excellent tractive force for improved durability and reliability in demanding terrain. A robust undercarriage increases the service life of the machine.



Built to last

Working in tough conditions means every component matters - this is why Volvo pays extra attention to each detail during the manufacturing and product design processes. Silicone caulking is used to prevent rust, waterproof harnesses and connections are installed - as well as heavy-duty door hinges and bolted-on protection for the frame-work lights.



Ultimate tool carrier

The machine can be adjusted to take a wide variety of hydraulic lines, which are factory fitted with breaker and shear piping (X1), as well as rotator piping (X3). State-of-the-art auxiliary lines provide the correct flow and pressure for special attachments such as mowers and grinders, shears, crushers and tilt rotators among other attachments. You can choose between the one or two pump flow to maximize profits and productivity.

Customer Choice

Creating a machine that can adapt to a number of attachments increases productivity and reduces cycle time. The EC220E not only manages to achieve this versatility but it is a machine that incorporates the same high quality performance across its entire menu of applications – meaning the operator is safe in the knowledge that with Volvo there is no better option.

Attachment Management System

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab, which ensures the use of various attachments for increased versatility.



Extra piping

An additional piping solution is available on the breaker and shear piping (X1), accommodating the use of tilt/rotator attachments.



Electrical pedal

The electric pedal offers precise control to allow the operator to use a wider variety of attachments.



Response mode

The attachment response sensitivity can be adjusted using the keypad. This allows the operator to tailor machine response for maximum impact in different environments.

Proactive Maintenance Solutions

Maintaining your machine will ensure you get the maximum lifetime and productivity. This is why Volvo have made this process easy – developing it to be fast, regular and safe.

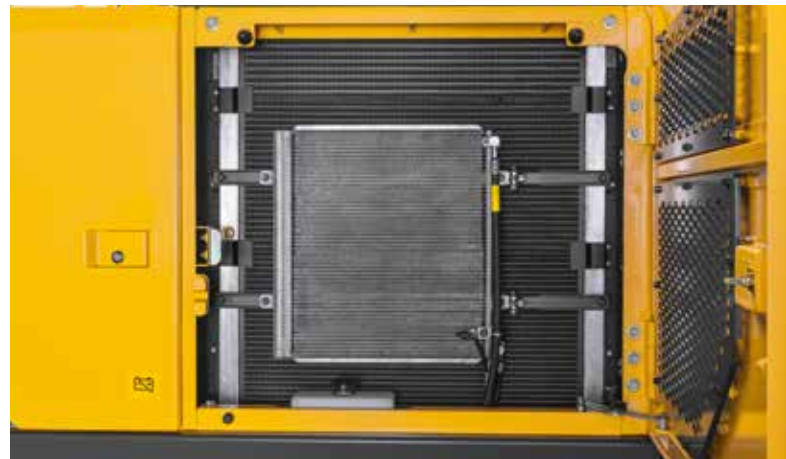
Full size fold-able guard rails

Multiple sturdy handrails and fold-able guardrails provide safe and easy access to the superstructure for inspection and maintenance. The fold-able guardrail is to minimize transportation height when it is folded.



Single layer cooling system

The radiator, charged air cooler and hydraulic oil cooler are situated side-by-side on a single layer, to maximize efficiency, reduce blockages and aid cleaning. The system is easily accessed from ground level by simply opening the side door.



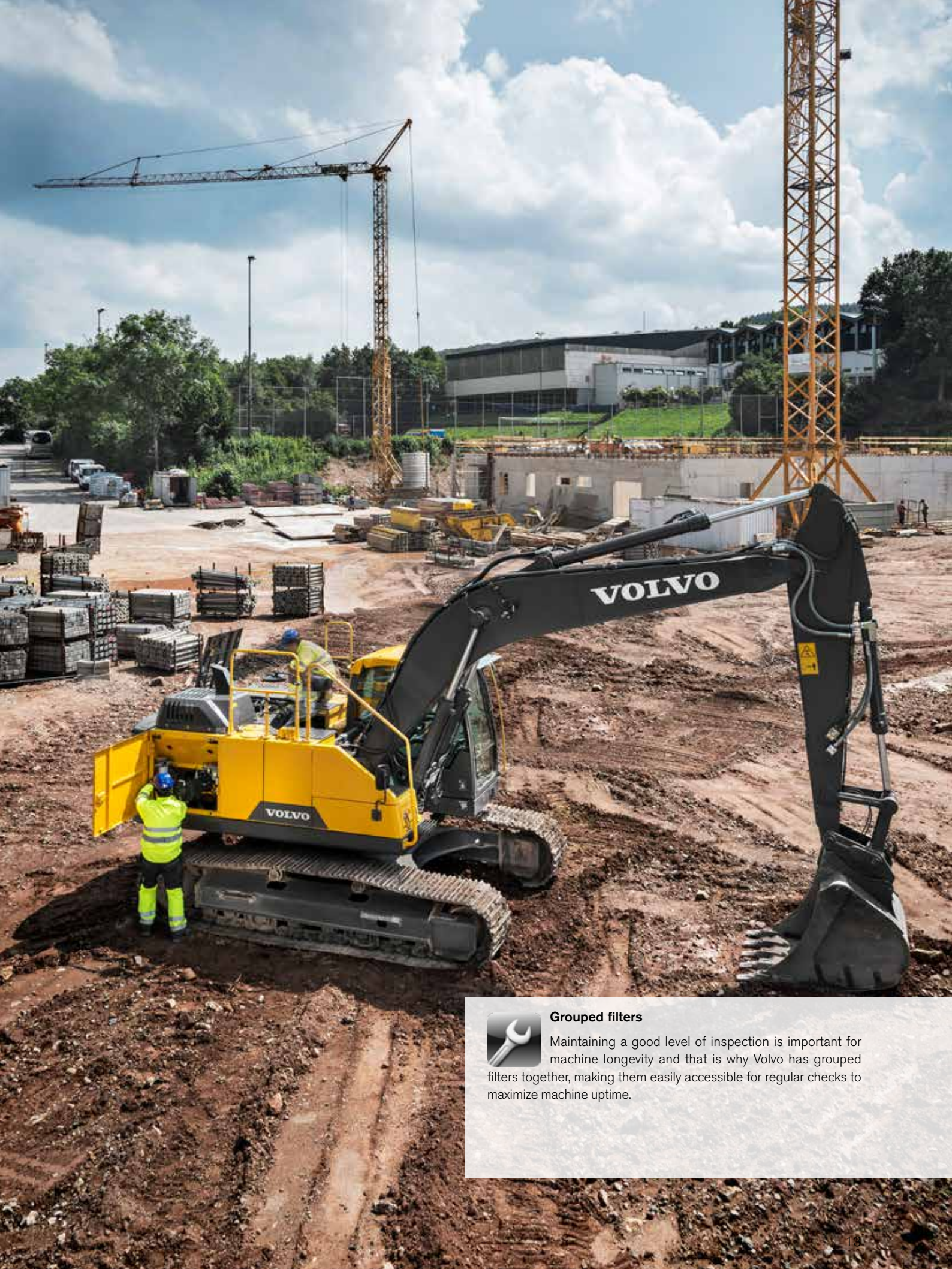
Service interval alerts

Real-time service alerts are displayed on the colour monitor to enable diagnostic checks. Separate service intervals include – the engine oil/ filter, fuel filter/water separator, hydraulic oil and hydraulic oil filter. This ensures peace of mind and maximum uptime.



Anti-slip steel plates

Well-positioned punched anti-slip plates provide superior grip and durability. The design facilitates easy cleaning while promoting safety.



Grouped filters

Maintaining a good level of inspection is important for machine longevity and that is why Volvo has grouped filters together, making them easily accessible for regular checks to maximize machine uptime.



Matched attachments

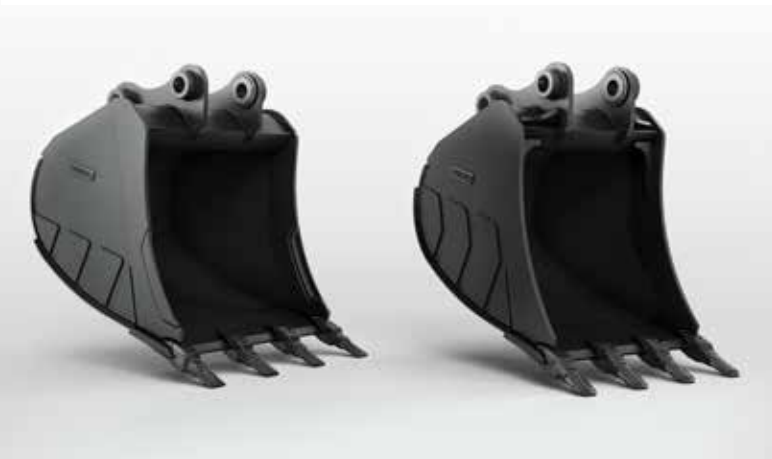
Volvo's durable attachments have been purpose-built to work in perfect harmony with Volvo machines, forming one solid, reliable unit. With functions and properties ideally matched, Volvo attachments are an integrated part of the excavator for which they're intended.

Mix and match for a superior fit

Maximize your productivity and profitability with Volvo's EC220E crawler excavator and a range of durable attachments. Increase your versatility, access more applications and perform a variety of tasks – all while experiencing faster cycle times and excellent control.

Buckets – GP/HD/XD

Volvo's buckets are the perfect tool for digging and re-handling in all conditions from soft, medium and hard materials. Heavy-duty buckets are intended for productive digging in compact materials. All provide maximum productivity and long life and feature original Volvo wear components.



Quick Coupler

Volvo offers a full range of quick couplers, from its dedicated Volvo S-type coupler to the Steelwrist® ones. Both couplers feature Front Pin Lock technology, which allows supreme safety when changing attachments. Those innovative couplers are not only designed to fit perfectly with Volvo excavators but they also comply with the latest safety regulations of ISO 13031 and EN474-1.

Steelwrist® is a registered trademark of Steelwrist AB

Breakers HB21, HB22

The HB-Series of hydraulic breakers are optimized to the specific weights of Volvo machines and tailored to Volvo quick couplers for swift, safe and simple attachment changes. They are available with a full assortment of tools.



Tilt Rotator

Volvo's tilt rotator can be ordered factory installed with multifunctional joysticks and color display that's fully integrated into the machine's system. The new series of Volvo XD excavator buckets are perfectly matched to the factory installed tilt rotator.

Improved total cost of ownership

Boom and arm

To achieve the best performance, select the most suitable boom and arm configuration combination for your requirements.



Ultimate tool carrier

Designed to not only be compatible with a range of attachments, but also to enhance their performance by easily and quickly switching to accommodate any needs.



Optimized hydraulics

Designed to perfectly match the engine power, reduce power loss, and improve controllability and response time.

Diesel Exhaust Fluid (DEF)

Volvo offers a total DEF solution that is quality assured, cost efficient and easily accessible. Contact your Volvo dealer for more information.

Boom float

The pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

Attachment management system

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab.



Full size fold-able guard rails

Multiple sturdy handrails and fold-able guardrails provide safe and easy access to the super-structure for inspection and maintenance.

Side view camera

Covers the visual blind spot at the side of machine. View is displayed on the colour monitor, creating a safer working environment, protecting the operator and personnel on the ground.



HMI

All machine interfaces are ergonomically positioned and designed for optimum control and efficiency.

Bluetooth®

Bluetooth and hands-free functions have been added, allowing the operator to connect to wireless functions for increased comfort and safety.

Short cut key function

For ease of use, functions such as windshield wipers, cameras, auto-mute or power max function can all be assigned a short-cut button on the joystick

Volvo engine

Volvo's efficient D6 Tier 4 Final engine gives you more power while consuming less fuel for low emission levels.



Built to last

All detail – no matter how small – is overlooked. Silicone caulking is used to prevent rust, waterproof harnesses and connections have been installed – as well as heavy-duty door hinges and bolted-on protection for the framework lights.



Grouped filters

Filters are well grouped and easily accessible from the ground level. This facilitates the speed and ease of servicing.

Adding value to your business

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to the positive return of your investment.



Complete Solutions

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of

your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.



Genuine Volvo Parts

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.



Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.

Volvo EC220E in detail

Engine

The latest generation, Volvo engine Tier 4f / Stage IV emissions compliant diesel engine fully meets the demands of the latest, emissions regulations. Featuring Volvo Advanced Combustion Technology (V-ACT), it is designed to deliver superior performance and fuel efficiency. The engine uses precise, high pressure fuel injectors, turbo charger and air-to-air intercooler, and electronic engine controls to optimize machine performance.

Air Filter: 3-stage with precleaner

Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

| | | | | |
|----------------------------|-------------|----------------|-------------|-------------|
| Engine | Volvo | | D6J | |
| Max power at | r/s / r/min | | 30 / 1 800 | |
| Net, ISO 9249/SAE J1349 | kW / hp | | 128 / 172 | |
| Gross, ISO 14396/SAE J1995 | kW / hp | | 129 / 173 | |
| Max torque at | Nm / r/min | lbf ft / r/min | 849 / 1 350 | 626 / 1,350 |
| No. of cylinders | | | 6 | |
| Displacement | l | cu.in | 5.7 | 348 |
| Bore | m | in | 98 | 3.86 |
| Stroke | m | in | 126 | 4.96 |

Electrical system

Well protected high-capacity electrical system. 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.

Contronics provides advanced monitoring of machine functions and important diagnostic information.

| | | | | |
|-------------|--------|--|--------------|--|
| Voltage | V | | 24 | |
| Batteries | V / Ah | | 2 x 12 / 140 | |
| Alternator | V / Ah | | 28 / 80 | |
| Start motor | V / kW | | 24 / 5.5 | |

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 | | 11.1 | |
| Max. slew torque | kNm | lbf ft | 83 | 61,220 |

Drive

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 | lbf | 183 | 41,150 |
| Max. travel speed | km/h | mph | 3.5 / 5.7 | 2.2 / 3.5 |
| Gradeability | ° | | 35 | |

Undercarriage

Robust X-shaped frame with greased and sealed track chains as standard

| | | | | |
|---------------------------------|----|----|-----------------------------|------------------------|
| Track shoe | | | 2 x 49 | |
| Link pitch | mm | in | 190 | 7.5 |
| Shoe width, triple grouser | mm | in | 500 / 600 / 700 / 800 / 900 | 20 / 24 / 28 / 32 / 36 |
| Shoe width, triple grouser (HD) | mm | in | 600 | 24 |
| Shoe width, double grouser | mm | in | 700 | 28 |
| Bottom rollers | | | 2 x 8 | |
| Top rollers | | | 2 x 2 | |

Service refill capacities

| | | | | |
|-------------------------|---|-----|---------|-------|
| Fuel tank | l | gal | 320 | 85 |
| Hydraulic system, total | l | gal | 290 | 77 |
| Hydraulic tank | l | gal | 140 | 37 |
| DEF tank | l | gal | 27 | 7 |
| Engine oil | l | gal | 25 | 7 |
| Engine coolant | l | gal | 35 | 9 |
| Swing reduction unit | l | gal | 6 | 2 |
| Travel reduction unit | l | gal | 2 x 5.8 | 2 x 2 |

Hydraulic system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time.

The following important functions are included in the system:

Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.

Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.

Swing priority: Gives priority to swing functions for faster simultaneous operations.

Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.

Power boost: All digging and lifting forces are increased.

Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

Main pump

| | | | | |
|--------------|--|-----|---------|--------|
| Type | 2 x variable displacement axial piston pumps | | | |
| Maximum flow | l/min | gpm | 2 x 207 | 2 x 55 |

Pilot pump

| | | | | |
|--------------|-----------|-----|--------|-------|
| Type | Gear pump | | | |
| Maximum flow | l/min | gpm | 1 x 18 | 1 x 5 |

Relief valve setting

| Implement | Mpa | psi | 34.3 / 36.3 | 4,980 / 5,260 |
|----------------|-----|-----|-------------|---------------|
| Travel circuit | Mpa | psi | 34.3 | 4,980 |
| Slew circuit | Mpa | psi | 27.9 | 4,050 |
| Pilot circuit | Mpa | psi | 3.9 | 570 |

Travel: Variable displacement axial piston motor with mechanical brake

Slew: Fixed displacement axial piston motor with mechanical brake

Hydraulic cylinders

| | | | | |
|--------------------|--------|--------|-------------|------------|
| Mono boom | | | 2 | |
| Bore x Stroke | ø x mm | ø x in | 125 x 1 235 | 4.9 x 48.6 |
| 2 piece boom | | | 1 | |
| Bore x Stroke | ø x mm | ø x in | 160 x 1 070 | 6.3 x 42.1 |
| Arm | | | 1 | |
| Bore x Stroke | ø x mm | ø x in | 135 x 1 540 | 5.3 x 60.6 |
| Bucket | | | 1 | |
| Bore x Stroke | ø x mm | ø x in | 120 x 1 065 | 4.7 x 41.9 |
| Bucket for LR boom | | | 1 | |
| Bore x Stroke | ø x mm | ø x in | 100 x 865 | 3.9 x 34.1 |

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, and the lower front glass can be removed and stored in the side door.

Integrated air-conditioning and heating system: The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.

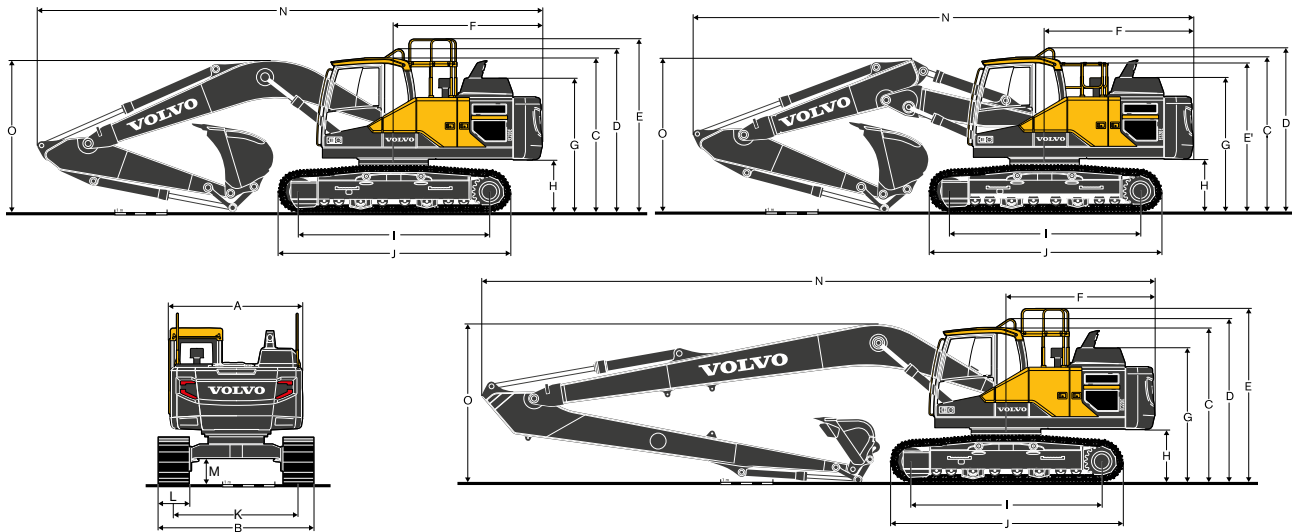
Ergonomic operator's seat: The adjustable seat and joystick console move independently to accommodate the operator. The seat has nine different adjustments plus a seat belt for the operator's comfort and safety.

Sound Level

| | | |
|---|-------|-----|
| Sound level in cab according to ISO 6396 | | |
| LpA (standard) | dB(A) | 69 |
| LpA (tropical) | dB(A) | 70 |
| External sound level according to ISO 6395, EU Noise Directive (2000/14/EC) | | |
| LwA (standard) | dB(A) | 102 |
| LwA (tropical) | dB(A) | 103 |

Specifications

DIMENSIONS



| Description | Unit | EC220EL | | | | | | | | EC220ELR | |
|--|----------|---|-------|-------|-------|-------|-------|-------|--------|----------|-------|
| | | 5.7 (18'8") mono and 5.57 (18'3") 2-piece | | | | | | | | 8.85 | 29'0" |
| Boom | m, ft in | | | | | | | | | 6.25 | 20'6" |
| Arm | m, ft in | 2.0 | 6'7" | 2.5 | 8'2" | 2.9 | 9'6" | 3.5 | 11'6" | | |
| A. Overall width of upper structure | mm ft in | 2 540 | 8'4" | 2 540 | 8'4" | 2 540 | 8'4" | 2 540 | 8'4" | 2 540 | 8'4" |
| B. Overall width | mm ft in | 2 990 | 9'10" | 2 990 | 9'10" | 2 990 | 9'10" | 2 990 | 9'10" | 3 190 | 10'6" |
| C. Overall height of cab | mm ft in | 2 955 | 9'8" | 2 955 | 9'8" | 2 955 | 9'8" | 2 955 | 9'8" | 2 955 | 9'8" |
| D. Overall height of handrail | mm ft in | 3 075 | 10'1" | 3 075 | 10'1" | 3 075 | 10'1" | 3 075 | 10'1" | 3 075 | 10'1" |
| E. Overall height of guardrail(unfolded) | mm ft in | 3 270 | 10'9" | 3 270 | 10'9" | 3 270 | 10'9" | 3 270 | 10'9" | 3 270 | 10'9" |
| E'. Overall height of guardrail(folded) | mm ft in | 2 790 | 9'2" | 2 790 | 9'2" | 2 790 | 9'2" | 2 790 | 9'2" | 2 790 | 9'2" |
| F. Tail swing radius | mm ft in | 2 850 | 9'4" | 2 850 | 9'4" | 2 850 | 9'4" | 2 850 | 9'4" | 2 850 | 9'4" |
| G. Overall height of engine hood | mm ft in | 2 600 | 8'6" | 2 600 | 8'6" | 2 600 | 8'6" | 2 600 | 8'6" | 2 600 | 8'6" |
| H. Counterweight clearance * | mm ft in | 1 025 | 3'4" | 1 025 | 3'4" | 1 025 | 3'4" | 1 025 | 3'4" | 1 025 | 3'4" |
| I. Tumbler length | mm ft in | 3 660 | 12'0" | 3 660 | 12'0" | 3 660 | 12'0" | 3 660 | 12'0" | 3 660 | 12'0" |
| J. Track length | mm ft in | 4 460 | 14'8" | 4 460 | 14'8" | 4 460 | 14'8" | 4 460 | 14'8" | 4 460 | 14'8" |
| K. Track gauge | mm ft in | 2 390 | 7'10" | 2 390 | 7'10" | 2 390 | 7'10" | 2 390 | 7'10" | 2 390 | 7'10" |
| L. Shoe width | mm ft in | 600 | 2'0" | 600 | 2'0" | 600 | 2'0" | 600 | 2'0" | 800 | 2'7" |
| M. Min. ground clearance * | mm ft in | 460 | 1'6" | 460 | 1'6" | 460 | 1'6" | 460 | 1'6" | 460 | 1'6" |
| N. Overall length | mm ft in | 9 795 | 32'2" | 9 745 | 32'0" | 9 690 | 31'9" | 9 720 | 31'11" | 12 880 | 42'3" |
| N'. Overall length | mm ft in | 9 660 | 31'8" | 9 610 | 31'6" | 9 570 | 31'5" | 9 560 | 31'4" | - | - |
| O. Overall height of boom | mm ft in | 3 100 | 10'2" | 3 080 | 10'1" | 2 940 | 9'8" | 3 260 | 10'8" | 3 055 | 10'0" |
| O'. Overall height of boom | mm ft in | 3 065 | 10'1" | 3 065 | 10'1" | 2 960 | 9'9" | 3 310 | 10'10" | - | - |

* Without shoe grouser.

¹ 2-piece boom

DIMENSIONS

| Boom | | | | | Arm | | | | |
|-------------|------|-------|-------|--|--------|-------|---------|-------|------------|
| Description | Unit | mono | | | mono | | 2-piece | | Long-Reach |
| Boom | m | 5.7 | 18'8" | | 5.7 HD | 18'8" | 5.57 | 18'3" | 8.85 |
| Length | mm | 5 910 | 19'5" | | 5 910 | 19'5" | 5 780 | 19'0" | 9 060 |
| Height | mm | 1 585 | 5'2" | | 1 585 | 5'2" | 1 570 | 5'2" | 1 460 |
| Width | mm | 670 | 2'2" | | 670 | 2'2" | 670 | 2'2" | 670 |
| Weight | kg | 2 006 | 4,420 | | 2 151 | 4,740 | 2 585 | 5,700 | 2 510 |

* Includes cylinder, piping and pin, excludes boom cylinder pin

| Description | Unit | | | | | | | | | Long-Reach | |
|-------------|------|-------|-------|-------|-------|-------|--------|--------|--------|------------|--------|
| Arm | m | 2.0 | 6'7" | 2.5 | 8'2" | 2.9 | 9'6" | 2.9 HD | 9'6" | 3.5 | 11'6" |
| Length | mm | 3 065 | 10'1" | 3 525 | 11'7" | 3 910 | 12'10" | 3 910 | 12'10" | 4 540 | 14'11" |
| Height | mm | 980 | 3'3" | 860 | 2'10" | 860 | 2'10" | 860 | 2'10" | 855 | 2'10" |
| Width | mm | 440 | 1'5" | 440 | 1'5" | 440 | 1'5" | 440 | 1'5" | 440 | 1'5" |
| Weight | kg | 1 091 | 2,410 | 1 133 | 2,500 | 1 146 | 2,530 | 1 183 | 2,610 | 1 226 | 2,700 |

* Includes cylinder, linkage and pin

Specifications

MACHINE WEIGHTS AND GROUND PRESSURE

| Description | Shoe width | | Operating weight | | Ground pressure | | Overall width | | Operating weight | | Ground pressure | | Overall width | |
|-------------------|--|-------|------------------|--------|-----------------|-----|---------------|--|------------------|--------|-----------------|-----|---------------|--------|
| | mm | ft in | kg | lb | kPa | psi | mm | ft in | kg | lb | kPa | psi | mm | ft in |
| Triple grouser | EC220EL | | | | | | | | | | | | | |
| | 5.7m (18'8") boom, 2.9m (9'6") arm, 860kg / 0.92m³ (1,810lb) bucket, 4 200kg (9,260lb) counterweight | | | | | | | 5.57m (18'3") 2-piece, 2.9m (9'6") arm, 860kg / 0.92m³ (1,810lb) bucket, 4 200kg (9,260lb) counterweight | | | | | | |
| | 500 | 20 | 21 480 | 47,370 | 53.9 | 7.8 | 2 890 | 9'6" | 22 170 | 48,880 | 54.9 | 8.0 | 2 890 | 9'6" |
| | 600 | 24 | 21 740 | 47,940 | 45.1 | 6.5 | 2 990 | 9'10" | 22 425 | 49,450 | 46.1 | 6.7 | 2 990 | 9'10" |
| | 700 | 28 | 22 200 | 48,950 | 39.2 | 5.7 | 3 090 | 10'2" | 22 880 | 50,460 | 40.2 | 5.8 | 3 090 | 10'2" |
| Triple grouser HD | 800 | 32 | 22 485 | 49,580 | 35.3 | 5.1 | 3 190 | 10'6" | 23 170 | 51,090 | 36.3 | 5.3 | 3 190 | 10'6" |
| | 900 | 36 | 22 780 | 50,230 | 31.4 | 4.6 | 3 290 | 10'10" | 23 460 | 51,740 | 32.4 | 4.7 | 3 290 | 10'10" |
| Double grouser | 600 | 24 | 21 910 | 48,310 | 45.1 | 6.5 | 2 990 | 9'10" | 22 590 | 49,820 | 47.1 | 6.8 | 2 990 | 9'10" |
| Single grouser | 700 | 28 | 22 465 | 49,540 | 40.2 | 5.8 | 3 090 | 10'2" | 23 150 | 51,050 | 41.2 | 6.0 | 3 090 | 10'2" |
| Triple grouser | 600 | 24 | 21 950 | 48,400 | 45.1 | 6.5 | 2 990 | 9'10" | 22 630 | 49,910 | 47.1 | 6.8 | 2 990 | 9'10" |
| | EC220ELR | | | | | | | | | | | | | |
| | 8.85m (29'0") boom, 6.25m (20'6") arm, 452kg / 0.52m³ (1 000lb) bucket, 5 000kg (11 030lb) counterweight | | | | | | | | | | | | | |
| Triple grouser | 800 | 32 | 23 690 | 52,250 | 37.3 | 5.4 | 3 190 | 10'6" | | | | | | |
| | 900 | 36 | 23 990 | 52,890 | 33.3 | 4.8 | 3 290 | 10'10" | | | | | | |

BUCKET SELECTION GUIDE

| Bucket type | | Capacity | | Cutting width | | Weight | | Teeth | EC220EL | | | | | | | |
|--------------------|-----------------|----------|-------|---------------|-------|--------|-------|-------|---|-------------|-------------|--------------|-----------------------|-------------|-------------|--------------|
| | | | | | | | | | 5.7m (18'8") Boom | | | | 5.57m (18'3") 2-piece | | | |
| | | | | | | | | | 800mm (32") shoe, 4 200kg (9 260lb) counterweight | | | | | | | |
| | | L | yard³ | mm | in | kg | lb | EA | 2.0m (6'7") | 2.5m (8'2") | 2.9m (9'6") | 3.5m (11'6") | 2.0m (6'7") | 2.5m (8'2") | 2.9m (9'6") | 3.5m (11'6") |
| Direct fit Buckets | General purpose | 480 | 0.63 | 600 | 23.40 | 666 | 1,468 | 3.00 | C | C | C | C | C | C | C | C |
| | | 590 | 0.77 | 750 | 29.25 | 711 | 1,568 | 3.00 | C | C | C | C | C | C | C | C |
| | | 750 | 0.98 | 900 | 35.10 | 792 | 1,746 | 4.00 | C | C | C | C | C | C | C | C |
| | | 920 | 1.20 | 1 050 | 40.95 | 862 | 1,900 | 4.00 | C | C | C | C | C | C | C | C |
| | | 1 090 | 1.43 | 1 200 | 46.80 | 951 | 2,096 | 5.00 | C | C | C | C | C | C | C | C |
| | | 1 270 | 1.66 | 1 350 | 52.65 | 1 038 | 2,289 | 5.00 | C | C | C | C | C | C | C | C |
| | Heavy duty | 480 | 0.63 | 600 | 23.40 | 738 | 1,628 | 3.00 | D | D | D | D | D | D | D | D |
| | | 480 | 0.63 | 600 | 23.40 | 675 | 1,488 | 3.00 | D | D | D | D | D | D | D | D |
| | | 750 | 0.98 | 900 | 35.10 | 872 | 1,922 | 4.00 | D | D | D | D | D | D | D | D |
| | | 750 | 0.98 | 900 | 35.10 | 808 | 1,783 | 4.00 | D | D | D | D | D | D | D | D |
| | | 920 | 1.20 | 1 050 | 40.95 | 951 | 2,098 | 4.00 | D | D | D | D | D | D | D | D |
| | | 920 | 1.20 | 1 050 | 40.95 | 888 | 1,959 | 4.00 | D | D | D | D | D | D | D | D |
| | | 1 090 | 1.43 | 1 200 | 46.80 | 1 046 | 2,307 | 5.00 | D | D | D | D | D | D | D | D |
| | | 1 090 | 1.43 | 1 200 | 46.80 | 983 | 2,168 | 5.00 | D | D | D | D | D | D | D | D |

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.

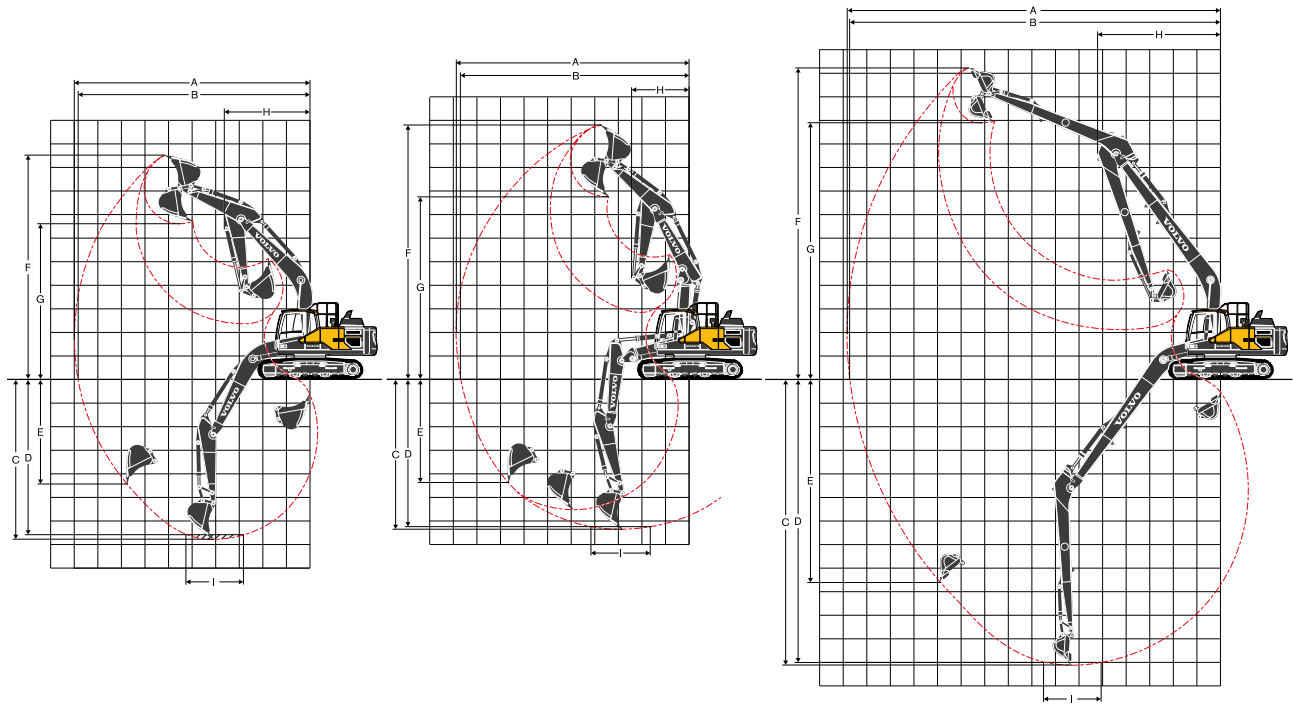
The recommendations are given as a guide only, based on typical operation conditions.

Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

Maximum material density

| | kg/m³ | lb/yd³ | |
|---|---------------|---------------|--|
| A | 1 200 - 1 300 | 2,000 - 2,200 | Coal, Caliche, Shale |
| B | 1 400 - 1 600 | 2,300 - 2,700 | Wet earth and clay, Limestone, Sandstone |
| C | 1 700 - 1 800 | 2,800 - 3,100 | Granite, Wet sand, Well blasted rock |
| D | > 1 900 | > 3,200 | Wet mud, Iron ore |

WORKING RANGES



| Description | Unit | EC220EL | | | | | | | | | | | | | | | | EC220ELR | |
|---|----------|------------------|--------|-------|-------|-------|--------|--------|-------|--------|--------|--------|-------|--------|-------|--------|--------|----------|--------|
| Boom | m ft in | 5.7 (18'8") mono | | | | | | | | | | | | | | | | 8.85 | 29'0" |
| Arm | m ft in | 2.0 | 6'7" | 2.5 | 8'2" | 2.9 | 9'6" | 3.5 | 11'6" | 2.0 | 6'7" | 2.5 | 8'2" | 2.9 | 9'6" | 3.5 | 11'6" | 6.25 | 20'6" |
| A. Max. digging reach | mm ft in | 9 090 | 29'10" | 9 550 | 31'4" | 9 930 | 32'7" | 10 390 | 34'1" | 8 980 | 29'6" | 9 450 | 31'0" | 9 840 | 32'3" | 10 310 | 33'10" | 15 800 | 51'10" |
| B. Max. digging reach on ground | mm ft in | 8 910 | 29'3" | 9 380 | 30'9" | 9 770 | 32'1" | 10 240 | 33'7" | 8 800 | 28'10" | 9 280 | 30'5" | 9 670 | 31'9" | 10 150 | 33'4" | 15 700 | 51'6" |
| C. Max. digging depth | mm ft in | 5 830 | 19'2" | 6 330 | 20'9" | 6 730 | 22'1" | 7 330 | 24'1" | 5 410 | 17'9" | 5 900 | 19'4" | 6 300 | 20'8" | 6 850 | 22'6" | 12 100 | 39'8" |
| D. Max. digging depth (2.44 m / 8' level) | mm ft in | 5 560 | 18'3" | 6 100 | 20'0" | 6 540 | 21'5" | 7 130 | 23'5" | 5 290 | 17'4" | 5 790 | 19'0" | 6 200 | 20'4" | 6 750 | 22'2" | 12 000 | 39'4" |
| E. Max. vertical wall digging depth | mm ft in | 4 880 | 16'0" | 5 620 | 18'5" | 6 090 | 20'0" | 6 470 | 21'3" | 4 390 | 14'5" | 4 990 | 16'4" | 5 410 | 17'9" | 5 930 | 19'5" | 11 290 | 37'0" |
| F. Max. cutting height | mm ft in | 8 940 | 29'4" | 9 220 | 30'3" | 9 460 | 31'0" | 9 460 | 31'0" | 10 010 | 32'10" | 10 380 | 34'1" | 10 710 | 35'2" | 10 920 | 35'10" | 13 300 | 43'8" |
| G. Max. dumping height | mm ft in | 6 190 | 20'4" | 6 430 | 21'1" | 6 650 | 21'10" | 6 700 | 22'0" | 7 100 | 23'4" | 7 460 | 24'6" | 7 780 | 25'6" | 8 010 | 26'3" | 10 950 | 35'11" |
| H. Min. front swing radius | mm ft in | 3 790 | 12'5" | 3 670 | 12'0" | 3 640 | 11'11" | 3 660 | 12'0" | 2 890 | 9'6" | 2 740 | 9'0" | 2 470 | 8'1" | 2 730 | 8'11" | 5 200 | 17'1" |

DIGGING FORCES WITH DIRECT FIT BUCKET

| Bucket radius | | mm ft in | 1 528 | 5'0" | 1 528 | 5'0" | 1 528 | 5'0" | 1 528 | 5'0" | 1 528 | 5'0" | 1 528 | 5'0" | 1 528 | 5'0" | 1 250 | 4'1" |
|----------------------------|-----------------------|----------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| Breakout force - bucket | Normal SAE J1179 | kN lb | 146 | 32,820 | 125 | 28,100 | 125 | 28,100 | 125 | 28,100 | 146 | 32,820 | 125 | 28,100 | 125 | 28,100 | 68 | 15,290 |
| | Power boost SAE J1179 | kN lb | 154 | 34,620 | 132 | 29,670 | 132 | 29,670 | 132 | 29,670 | 154 | 34,620 | 132 | 29,670 | 132 | 29,670 | - | - |
| | Normal ISO 6015 | kN lb | 165 | 37,090 | 141 | 31,700 | 141 | 31,700 | 141 | 31,700 | 165 | 37,090 | 141 | 31,700 | 141 | 31,700 | 77 | 17,310 |
| | Power boost ISO 6015 | kN lb | 174 | 39,120 | 149 | 33,500 | 149 | 33,500 | 149 | 33,500 | 174 | 39,120 | 149 | 33,500 | 149 | 33,500 | - | - |
| Tearout force - dipper arm | Normal SAE J1179 | kN lb | 144 | 32,370 | 117 | 26,300 | 101 | 22,710 | 92 | 20,680 | 144 | 32,370 | 117 | 26,300 | 101 | 22,710 | 44 | 9,890 |
| | Power boost SAE J1179 | kN lb | 153 | 34,400 | 124 | 27,880 | 107 | 24,050 | 97 | 21,810 | 153 | 34,400 | 124 | 27,880 | 107 | 24,050 | - | - |
| | Normal ISO 6015 | kN lb | 149 | 33,500 | 121 | 27,200 | 104 | 23,380 | 94 | 21,130 | 149 | 33,500 | 121 | 27,200 | 104 | 23,380 | 45 | 10,120 |
| | Power boost ISO 6015 | kN lb | 158 | 35,520 | 128 | 28,780 | 110 | 24,730 | 99 | 22,260 | 158 | 35,520 | 128 | 28,780 | 110 | 24,730 | - | - |
| Rotation angle, bucket | | ° | 166 | | 175 | | 175 | | 175 | | 175 | | 175 | | 175 | | 178 | |

Specifications

LIFTING CAPACITY EC220EL

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 quick coupler from the following values.

| | Lifting hook related to ground level | | 1.5m (5') | | | | 3.0m (10') | | | | 4.5m (15') | | | | 6.0m (20') | | | | | |
|--------------------|---|-----|------------|---------|-----------|---------|------------|---------|-----------|---------|------------|---------|-----------|---------|------------|---------|-----------|---------|--------|--|
| | | | Along UC | | Across UC | | Along UC | | Across UC | | Along UC | | Across UC | | Along UC | | Across UC | | | |
| | m | in | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb | | |
| Boom: 5.7m (18'8") | 7.5 | 25 | | | | | | | | | | | | | | | | | | |
| Arm: 2.5m (8'2") | 6.0 | 20 | | | | | | | | | | | | | *5.5 | *12,110 | *5.5 | *12,110 | | |
| Shoe: 800mm (32") | 4.5 | 15 | | | | | | | | | *7.0 | *15,100 | *7.0 | *15,100 | *6.0 | *13,120 | 5.6 | 12,150 | | |
| CWT: 4,200kg | 3.0 | 10 | | | | | | | | | *9.0 | *19,400 | 8.2 | 17,660 | *6.9 | *14,990 | 5.4 | 11,640 | | |
| (9,260lb) | 1.5 | 5 | | | | | | | | | *10.8 | *23,250 | 7.7 | 16,610 | *7.8 | *16,910 | 5.2 | 11,140 | | |
| | 0.0 | 0 | | | | | | | | | *11.6 | *25,050 | 7.5 | 16,120 | 8.0 | 17,210 | 5.0 | 10,810 | | |
| | -1.5 | -5 | | | | | | *10.8 | *24,770 | *10.8 | *24,770 | *11.5 | *24,900 | 7.5 | 16,050 | 7.9 | 17,100 | 5.0 | 10,710 | |
| | -3.0 | -10 | | | | | | *14.8 | *32,010 | 14.7 | 31,560 | *10.6 | *22,840 | 7.6 | 16,280 | *7.8 | *16,730 | 5.0 | 10,890 | |
| | -4.5 | -15 | | | | | | *11.4 | *24,370 | *11.4 | *24,370 | *8.2 | *17,180 | 7.8 | 16,940 | | | | | |
| Boom: 5.7m (18'8") | 7.5 | 25 | | | | | | | | | | | | | *5.2 | | *5.2 | | | |
| Arm: 2.9m (9'6") | 6.0 | 20 | | | | | | | | | | | | | *5.1 | *11,170 | *5.1 | *11,170 | | |
| Shoe: 800mm (32") | 4.5 | 15 | | | | | | | | | | | | | *5.7 | *12,330 | *5.7 | 12,310 | | |
| CWT: 4,200kg | 3.0 | 10 | | | | | | | | | *8.4 | *18,180 | 8.3 | 17,980 | *6.6 | *14,300 | 5.5 | 11,780 | | |
| (9,260lb) | 1.5 | 5 | | | | | | | | | *10.4 | *22,370 | 7.8 | 16,830 | *7.6 | *16,400 | 5.2 | 11,240 | | |
| | 0.0 | 0 | | | | | | *5.4 | *12,560 | *5.4 | *12,560 | *11.4 | *24,740 | 7.5 | 16,210 | 8.0 | 17,270 | 5.0 | 10,860 | |
| | -1.5 | -5 | *6.3 | *14,060 | *6.3 | *14,060 | *10.3 | *23,490 | *10.3 | *23,490 | *11.6 | *25,120 | 7.4 | 16,030 | 7.9 | 17,090 | 5.0 | 10,700 | | |
| | -3.0 | -10 | *11.4 | *25,580 | *11.4 | *25,580 | *15.7 | *33,940 | 14.6 | 31,310 | *10.9 | *23,640 | 7.5 | 16,180 | 8.0 | 17,190 | 5.0 | 10,790 | | |
| | -4.5 | -15 | | | | | | *12.7 | *27,330 | *12.7 | *27,330 | *9.1 | *19,310 | 7.7 | 16,680 | | | | | |
| Boom: 5.7m (18'8") | 7.5 | 25 | | | | | | | | | | | | | | | | | | |
| Arm: 3.5m (11'6") | 6.0 | 20 | | | | | | | | | | | | | | | | | | |
| Shoe: 800mm (32") | 4.5 | 15 | | | | | | | | | | | | | *4.9 | *10,720 | *4.9 | *10,720 | | |
| CWT: 4,200kg | 3.0 | 10 | | | | | | | | | | | | | *5.8 | *12,590 | 5.6 | 11,980 | | |
| (9,260lb) | 1.5 | 5 | | | | | | | | | | | | | *6.8 | *14,710 | 5.3 | 11,380 | | |
| | 0.0 | 0 | | | | | | | | | | | | | *7.6 | *16,460 | 5.1 | 10,900 | | |
| | -1.5 | -5 | | | | | | | | | *10.8 | *23,490 | 7.4 | 15,960 | 7.9 | 17,040 | 4.9 | 10,650 | | |
| | -3.0 | -10 | | | | | | *15.4 | *33,360 | 14.4 | 30,840 | *10.6 | *22,860 | 7.4 | 15,980 | *7.9 | 17,020 | 4.9 | 10,630 | |
| | -4.5 | -15 | *16.7 | *38,240 | *16.7 | *38,240 | *13.1 | *28,240 | *13.1 | *28,240 | *9.3 | *20,080 | 7.6 | 16,320 | *6.9 | *14,650 | 5.0 | 10,920 | | |
| | Lifting hook related to ground level | | 7.5m (25') | | | | 9.0m (30') | | | | Max. reach | | | | | | | | | |
| | | | Along UC | | Across UC | | Along UC | | Across UC | | Along UC | | Across UC | | m | ft | | | | |
| | m | in | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb | | | | | | |
| Boom: 5.7m (18'8") | 7.5 | 25 | | | | | | | | | *5.7 | *12,540 | *5.7 | *12,540 | 5.6 | 18.0 | | | | |
| Arm: 2.5m (8'2") | 6.0 | 20 | | | | | | | | | *5.6 | *12,350 | 4.7 | 10,400 | 6.9 | 22.3 | | | | |
| Shoe: 800mm (32") | 4.5 | 15 | *5.7 | | 4.0 | | | | | | *5.7 | *12,530 | 3.9 | 8,630 | 7.6 | 24.8 | | | | |
| CWT: 4,200kg | 3.0 | 10 | 6.0 | 12,850 | 3.9 | 8,370 | | | | | 5.4 | 11,970 | 3.5 | 7,790 | 8.0 | 26.2 | | | | |
| (9,260lb) | 1.5 | 5 | 5.9 | 12,610 | 3.8 | 8,140 | | | | | 5.3 | 11,580 | 3.4 | 7,490 | 8.1 | 26.5 | | | | |
| | 0.0 | 0 | 5.8 | 12,450 | 3.7 | 7,990 | | | | | 5.4 | 11,890 | 3.5 | 7,650 | 7.9 | 25.8 | | | | |
| | -1.5 | -5 | | | | | | | | | 5.9 | 13,090 | 3.8 | 8,380 | 7.4 | 24.1 | | | | |
| | -3.0 | -10 | | | | | | | | | *7.0 | *15,470 | 4.6 | 10,180 | 6.5 | 21.1 | | | | |
| | -4.5 | -15 | | | | | | | | | *7.2 | *15,750 | 6.8 | 15,530 | 5.0 | 16.0 | | | | |
| Boom: 5.7m (18'8") | 7.5 | 25 | | | | | | | | | *4.9 | *10,930 | *4.9 | *10,930 | 6.2 | 19.9 | | | | |
| Arm: 2.9m (9'6") | 6.0 | 20 | | | | | | | | | *4.6 | *10,120 | 4.2 | 9,480 | 7.3 | 23.8 | | | | |
| Shoe: 800mm (32") | 4.5 | 15 | *5.4 | *11,760 | 4.0 | 8,670 | | | | | *4.5 | *9,950 | 3.6 | 8,020 | 8.0 | 26.2 | | | | |
| CWT: 4,200kg | 3.0 | 10 | *5.8 | *12,560 | 3.9 | 8,450 | | | | | *4.6 | *10,220 | 3.3 | 7,300 | 8.4 | 27.5 | | | | |
| (9,260lb) | 1.5 | 5 | 5.9 | 12,670 | 3.8 | 8,200 | | | | | 4.9 | 10,840 | 3.2 | 7,030 | 8.5 | 27.8 | | | | |
| | 0.0 | 0 | 5.8 | 12,460 | 3.7 | 8,000 | | | | | 5.0 | 11,090 | 3.2 | 7,150 | 8.3 | 27.1 | | | | |
| | -1.5 | -5 | 5.8 | 12,400 | 3.7 | 7,950 | | | | | 5.5 | 12,060 | 3.5 | 7,750 | 7.8 | 25.5 | | | | |
| | -3.0 | -10 | | | | | | | | | 6.5 | 14,380 | 4.1 | 9,180 | 6.9 | 22.7 | | | | |
| | -4.5 | -15 | | | | | | | | | *6.9 | *15,270 | 5.7 | 12,930 | 5.6 | 18.0 | | | | |
| Boom: 5.7m (18'8") | 7.5 | 25 | | | | | | | | | *4.9 | *10,920 | 4.5 | 10,160 | 7.1 | 23.0 | | | | |
| Arm: 3.5m (11'6") | 6.0 | 20 | *4.7 | *10,360 | 4.2 | 8,940 | | | | | *4.9 | *10,800 | 3.6 | 8,060 | 8.1 | 26.5 | | | | |
| Shoe: 800mm (32") | 4.5 | 15 | *4.8 | *10,550 | 4.1 | 8,820 | | | | | 4.8 | 10,670 | 3.2 | 7,000 | 8.8 | 28.6 | | | | |
| CWT: 4,200kg | 3.0 | 10 | *5.2 | *11,410 | 4.0 | 8,560 | 4.6 | | 3.0 | | 4.5 | 9,900 | 2.9 | 6,450 | 9.1 | 29.8 | | | | |
| (9,260lb) | 1.5 | 5 | *5.7 | *12,500 | 3.8 | 8,250 | 4.5 | 9,680 | 2.9 | 6,270 | 4.4 | 9,640 | 2.8 | 6,250 | 9.2 | 30.1 | | | | |
| | 0.0 | 0 | 5.8 | 12,460 | 3.7 | 8,000 | | | | | 4.5 | 9,820 | 2.9 | 6,340 | 9.0 | 29.5 | | | | |
| | -1.5 | -5 | 5.7 | 12,310 | 3.6 | 7,860 | | | | | 4.8 | 10,520 | 3.1 | 6,770 | 8.6 | 28.0 | | | | |
| | -3.0 | -10 | 5.7 | 12,390 | 3.7 | 7,930 | | | | | 5.5 | 12,100 | 3.5 | 7,760 | 7.8 | 25.5 | | | | |
| | -4.5 | -15 | | | | | | | | | *5.9 | *12,990 | 4.5 | 10,010 | 6.6 | 21.5 | | | | |

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

LIFTING CAPACITY EC220ELR

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 quick coupler from the following values.

| | Lifting hook related to ground level | | 6.0m (20') | | | | 7.5m (25') | | | | 9.0m (30') | | | | 10.5m (35') | | | |
|----------------------------|---|-----|-------------|---------|-----------|--------|-------------|---------|-----------|--------|------------|--------|-----------|--------|-------------|--------|-----------|--------|
| | | | Along UC | | Across UC | | Along UC | | Across UC | | Along UC | | Across UC | | Along UC | | Across UC | |
| | m | in | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb |
| Boom: 8.85m (29'0") | 12.0 | 40 | | | | | | | | | | | | | | | | |
| Arm: 6.25m (20'6") | 10.5 | 35 | | | | | | | | | | | | | | | *3,530 | *3,530 |
| Shoe: 800mm (32") | 9.0 | 30 | | | | | | | | | | | | | | | *4,750 | *4,750 |
| CWT: 5 000kg (11 030lb) | 7.5 | 25 | | | | | | | | | | | | | | | *2.2 | *4,910 |
| | 6.0 | 20 | | | | | | | | | | | | | | | *2.4 | *5,240 |
| | 4.5 | 15 | | | | | | | | | *2.8 | *6,140 | *2.8 | *6,140 | *2.6 | *5,700 | 2.5 | 5,450 |
| | 3.0 | 10 | *4.6 | *9,900 | *4.6 | *9,900 | *3.7 | *8,060 | *3.7 | *8,060 | *3.2 | *6,960 | 3.1 | 6,620 | *2.9 | *6,250 | 2.4 | 5,140 |
| | 1.5 | 5 | *5.6 | *12,040 | 5.0 | 10,860 | *4.3 | *9,370 | 3.7 | 8,000 | *3.6 | *7,820 | 2.9 | 6,140 | *3.1 | *6,830 | 2.2 | 4,830 |
| | 0 | 0 | *6.4 | *13,750 | 4.6 | 9,870 | *4.9 | *10,520 | 3.4 | 7,360 | *4.0 | *8,600 | 2.7 | 5,710 | *3.4 | *7,370 | 2.1 | 4,540 |
| | -1.5 | -5 | *6.9 | *14,860 | 4.3 | 9,270 | *5.3 | *11,380 | 3.2 | 6,910 | 4.1 | 8,920 | 2.5 | 5,390 | 3.3 | 7,170 | 2.0 | 4,310 |
| | -3.0 | -10 | *7.1 | *15,400 | 4.2 | 8,970 | 5.2 | 11,220 | 3.1 | 6,630 | 4.0 | 8,690 | 2.4 | 5,170 | 3.3 | 7,010 | 1.9 | 4,160 |
| | -4.5 | -15 | *7.1 | *15,410 | 4.1 | 8,890 | 5.2 | 11,100 | 3.0 | 6,520 | 4.0 | 8,580 | 2.4 | 5,070 | 3.2 | 6,930 | 1.9 | 4,090 |
| | -6.0 | -20 | *6.9 | *14,980 | 4.2 | 8,980 | 5.2 | 11,130 | 3.0 | 6,550 | 4.0 | 8,600 | 2.4 | 5,080 | 3.2 | 6,960 | 1.9 | 4,110 |
| | -7.5 | -25 | *6.5 | *13,970 | 4.3 | 9,230 | *5.2 | *11,130 | 3.1 | 6,710 | 4.0 | 8,750 | 2.4 | 5,220 | 3.3 | 7,130 | 2.0 | 4,270 |
| | -9.0 | -30 | *5.7 | *12,200 | 4.5 | 9,650 | *4.6 | *9,710 | 3.2 | 7,040 | *3.6 | *7,640 | 2.5 | 5,540 | | | | |
| | -10.5 | -35 | *4.4 | *9,090 | *4.4 | *9,090 | *3.4 | | *3.4 | | | | | | | | | |
| | Lifting hook related to ground level | | 12.0m (40') | | | | 13.5m (45') | | | | Max. reach | | | | | | | |
| | | | Along UC | | Across UC | | Along UC | | Across UC | | Along UC | | Across UC | | | | | |
| | m | in | t | lb | t | lb | t | lb | t | lb | t | lb | t | lb | | | m | ft |
| | 12.0 | 40 | | | | | | | | | *0.8 | *1,950 | *0.9 | *1,950 | 10.3 | 33.1 | | |
| | 10.5 | 35 | | | | | | | | | *0.8 | *1,780 | *0.8 | *1,780 | 11.6 | 37.7 | | |
| | 9.0 | 30 | *1.5 | *2,610 | *1.5 | *2,610 | | | | | *0.8 | *1,680 | *0.8 | *1,680 | 12.6 | 41.1 | | |
| | 7.5 | 25 | *2.1 | *4,190 | *2.1 | *4,190 | | | | | *0.7 | *1,630 | *0.7 | *1,630 | 13.4 | 43.7 | | |
| | 6.0 | 20 | *2.3 | *5,120 | 2.1 | 4,420 | *1.3 | *2,230 | *1.3 | *2,230 | *0.7 | *1,620 | *0.7 | *1,620 | 13.9 | 45.6 | | |
| | 4.5 | 15 | *2.5 | *5,410 | 2.0 | 4,260 | *1.8 | *3,440 | 1.6 | 3,330 | *0.8 | *1,650 | *0.8 | *1,650 | 14.3 | 46.9 | | |
| | 3.0 | 10 | *2.6 | *5,770 | 1.9 | 4,060 | *2.2 | *4,230 | 1.5 | 3,220 | *0.8 | *1,710 | *0.8 | *1,710 | 14.5 | 47.6 | | |
| | 1.5 | 5 | *2.8 | *6,160 | 1.8 | 3,850 | 2.4 | *4,720 | 1.4 | 3,090 | *0.8 | *1,810 | *0.8 | *1,810 | 14.6 | 47.8 | | |
| | 0 | 0 | 2.82 | 6,070 | 1.7 | 3,660 | 2.3 | *4,830 | 1.4 | 2,980 | *0.9 | *1,950 | *0.9 | *1,950 | 14.4 | 47.4 | | |
| | -1.5 | -5 | 2.74 | 5,910 | 1.6 | 3,510 | 2.3 | *4,250 | 1.4 | 2,890 | *1.0 | *2,150 | *1.0 | *2,150 | 14.2 | 46.5 | | |
| | -3.0 | -10 | 2.69 | 5,800 | 1.6 | 3,410 | *1.7 | *2,460 | 1.3 | *2,460 | *1.1 | *2,430 | *1.1 | *2,430 | 13.7 | 45.0 | | |
| | -4.5 | -15 | 2.67 | 5,780 | 1.6 | 3,380 | | | | | *1.3 | *2,850 | *1.3 | *2,850 | 13.1 | 42.9 | | |
| | -6.0 | -20 | *2.4 | *3,580 | 1.6 | 3,460 | | | | | *1.6 | *3,490 | 1.6 | 3,460 | 12.3 | 40.0 | | |
| | -7.5 | -25 | | | | | | | | | *2.0 | *4,590 | 1.8 | 4,100 | 11.2 | 36.3 | | |
| | -9.0 | -30 | | | | | | | | | *3.0 | *6,990 | 2.3 | 5,280 | 9.7 | 31.2 | | |
| | -10.5 | -35 | | | | | | | | | *3.3 | *7,140 | *3.3 | *7,140 | 7.6 | 24.2 | | |

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

Equipment

STANDARD EQUIPMENT

Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4f EU (Stage IV) requirements
Air filter with indicator
Air intake heater
Cyclone pre-cleaner
Electric engine shut-off
Fuel filter and water separator
Alternator, 80 A
Tropical cooling system (50 deg. C)

Electric/Electronic control system

Contronics
Advanced mode control system
Self-diagnostic system
Satellite Caretrack and 3yr-Caretrack subscription
Machine status indication
Engine speed sensing power control
Automatic idling system
One-touch power boost
Safety stop/start function
Adjustable LCD color monitor
Master electrical disconnect switch
Engine restart prevention circuit
High-capacity halogen or LED lights:
Frame-mounted 2
Boom-mounted 1
Travel alarm
Batteries, 2 x 12 V / 140 Ah
Start motor, 24 V / 5.5 kW

Hydraulic system

Boom float function without HRV
Automatic sensing hydraulic system
Summation system
Arm priority
Swing priority
Pilot control pattern change
ECO mode fuel saving technology
Boom, arm and bucket regeneration valves
Swing anti-rebound valves
Boom and arm holding valves
Multi-stage filtering system
Boom cylinders (x2)
Cylinder cushioning
Cylinder contamination seals
Auxiliary hydraulic valve
Automatic two-speed travel motors
Hydraulic oil, longlife oil 46

Frame

Access way with handrail
Tool storage area
Punched metal anti-slip plates
Undercover (heavy-duty)
Full height counterweight:
4 200 kg (9,260 lb) - Long Crawler (L)
5 000 kg (11,030 lb) - Long Reach (LR)

Cab and interior

ROPS (ISO12117-2) certified cab
Silicon oil and rubber mounts with spring
Opening top hatch
Control lock out lever
Travel pedals and hand levers
Adjustable operator seat with heater and joystick control console
Control joysticks with 4 switches each
Straight travel pedal
Heater & air-conditioner, automatic
Flexible antenna
Radio with MP3 and USB Jack with bluetooth
Cab, all-weather sound suppressed, includes:
Cup holders
Door locks
Tinted glass
Floor mat
Horn
Large storage area
Pull-up type front window
Removable lower windshield
Seat belt
Safety glass
Sun screens, front, roof, rear
Windshield wiper with intermittent feature
Rear view camera
Master key

Undercarriage

Undercover
Hydraulic track adjusters
Greased and sealed track link
Track Guard
800 mm (32") shoe with triple grousers

Digging equipment

Boom: monoblock 5.7 m (18'8"), Long Reach 8.85 m (29'0")
Arm: 2.9 m (9'6"), Long Reach 6.25 m (20'6")
Manual centralized lubrication
Linkage without lifting eye

OPTIONAL EQUIPMENT

Engine

Block heater: 120 V
Oil bath pre-cleaner
Diesel coolant heater, 5 kW
Water separator with heater
Auto engine shutdown
Fuel filler pump: 50 l/min (13.2 gpm), with automatic shut-off
Standard cooling system by fan clutch (40 deg. C)

Electric

Extra work lights (Halogen or LED):
Boom-mounted 1
Cab-mounted 3
Counterweight-mounted 1
Anti-theft system
Rotating warning beacon
Flashing beacon, LED
Side view camera
Dig assist 2D/In-field/Steelwrist
Volvo smart View (VSV)

OPTIONAL EQUIPMENT

Hydraulic system

Boom hose rupture valve (HRV) with overload warning device

Arm hose rupture valve (HRV)

Boom float function with HRV

Hydraulic piping:

Work tool management system (up to 20 programmable memories)

Hammer & shear, 1 and 2 pump flow

Slope & rotator (40lpm/11gpm or 60lpm/16gpm)

Extra for slope & rotator

Grapple

Oil leak (drain) line

Quick coupler piping

Breaker & shear pressure pre-setting

Additional return filter

Volvo hydraulic quick coupler S1, S1 without hook

Hydraulic oil, biodegradable 46

Hydraulic oil, longlife oil 32, 68

Cab and interior

Fabric seat without heater

Fabric seat with heater and air suspension

Control joysticks with semi-long

Control joysticks with 3 switch & 1 proportional

Falling object guard (FOG)

Frame-mounted

Cab-mounted

Cab-mounted

Cab and interior

Cab-mounted falling object protective structure (FOPS)

Side view camera

Rain shield

Smoker kit (ashtray and lighter)

Safety net for front window

Lower wiper with intermittent control

Cleaning air gun

Anti-vandalism kit

Undercarriage

Full track guard

500mm (20") / 600mm (24") / 600mm HD (24") /

700mm (28") / 900mm (36") shoe with triple grousers

700 mm (28") shoe with double grousers

600 mm (24") shoe with single grouser

Digging equipment

Boom: 5.7 m (18'8") monoblock, heavy duty

Boom: 5.57 m (18'3") 2-piece boom

Arm: 2.0 m (6'7"), 2.5 m (8'2"), 2.9 m (9'6"), 3.5 m (11'6")

Linkage with lifting eye

Service

Tool kit, daily maintenance

Tool kit, full scale

Selection of Volvo optional equipment

Auto engine shutdown



Two-piece boom



Diesel coolant heater



LED lights



Fuel fill pump



Cleaning air gun



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 Construction Equipment

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