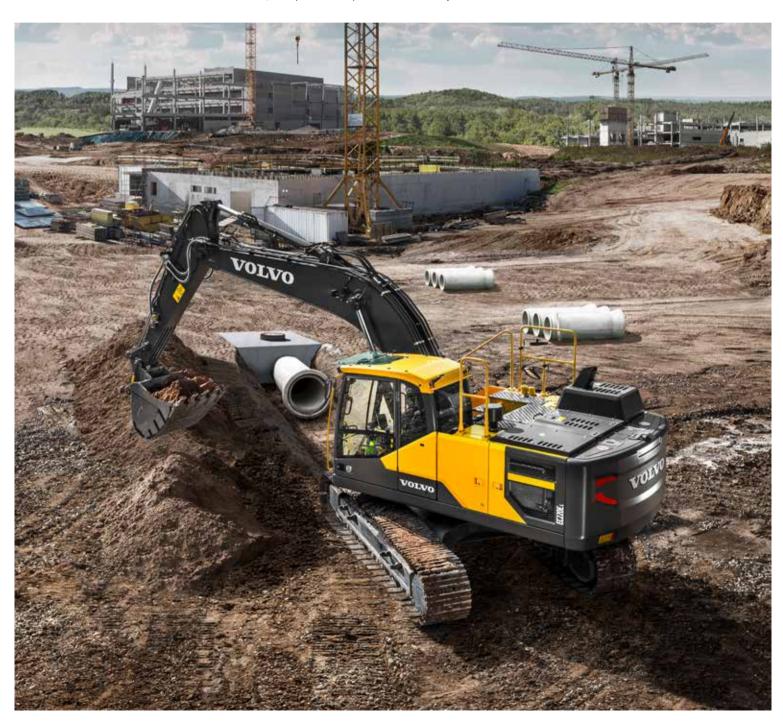
EC220E

Volvo Excavators 20.6-25.1t / 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 commons 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 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.

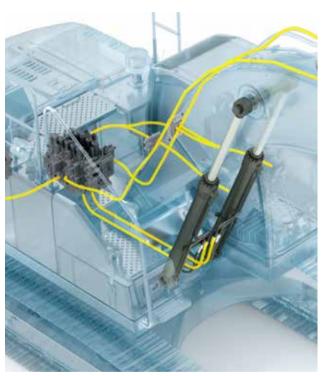
Volvo engine

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.



Increased power

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



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.



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.

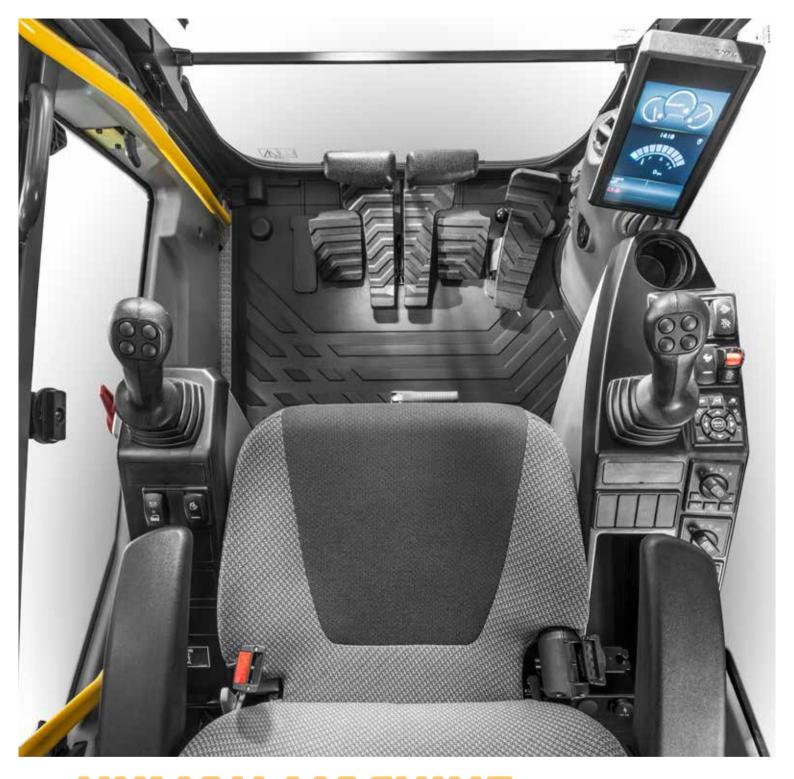
Auto engine shutdown

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).



OPTIMIZED HYDRAULICS

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 handsfree 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.



Lower frame

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



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.



Narrow and Heavy-duty (NH) Undercarriage

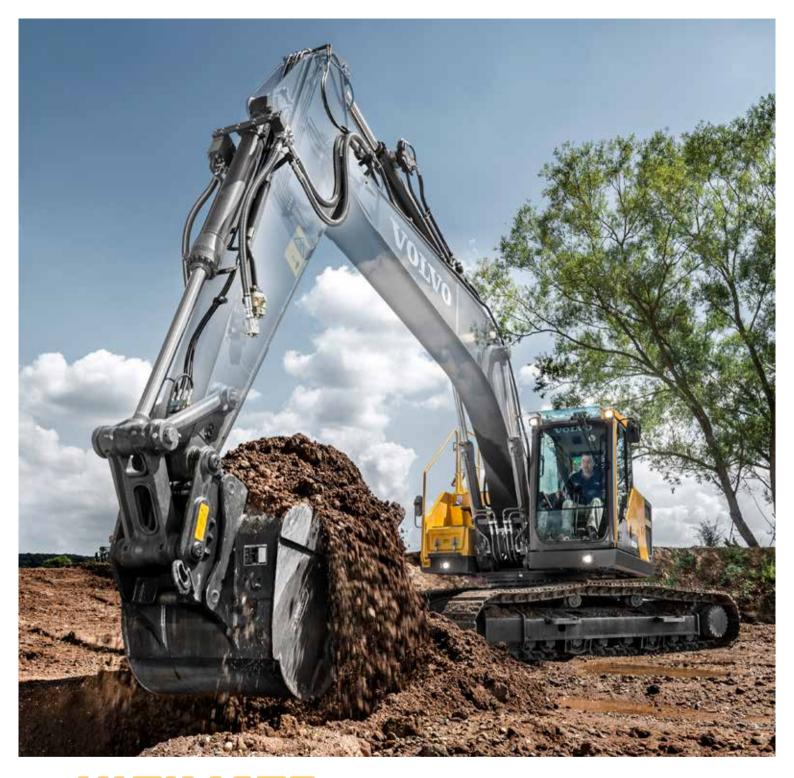
The EC220E NH's oversized and heavy-duty undercarriage creates excellent tractive force for improved durability and reliability in demanding terrain. A robust undercarriage increases the service life of the machine.





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-theart 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 guard rails

Multiple sturdy handrails provide safe and easy access to the superstructure for inspection and maintenance.



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

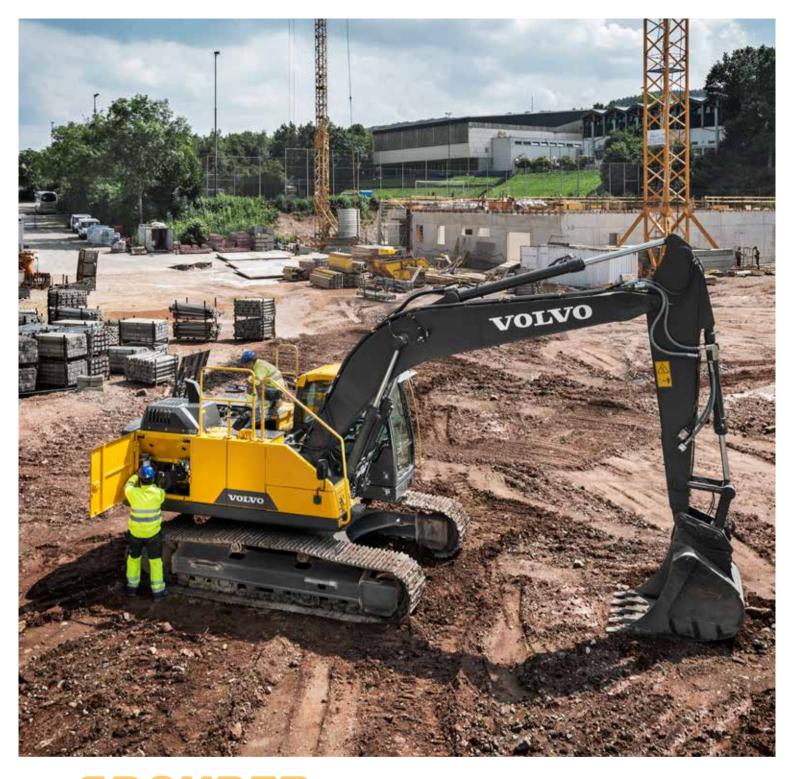
Real-time service alerts are displayed on the colour monitor to enable diagnostic checks. Separate service intervals include – the engine oil/ filter, fuel filter/water separator, hydraulic oil and hydraulic oil filter. This ensures peace of mind and maximum uptime.



Anti-slip steel plates

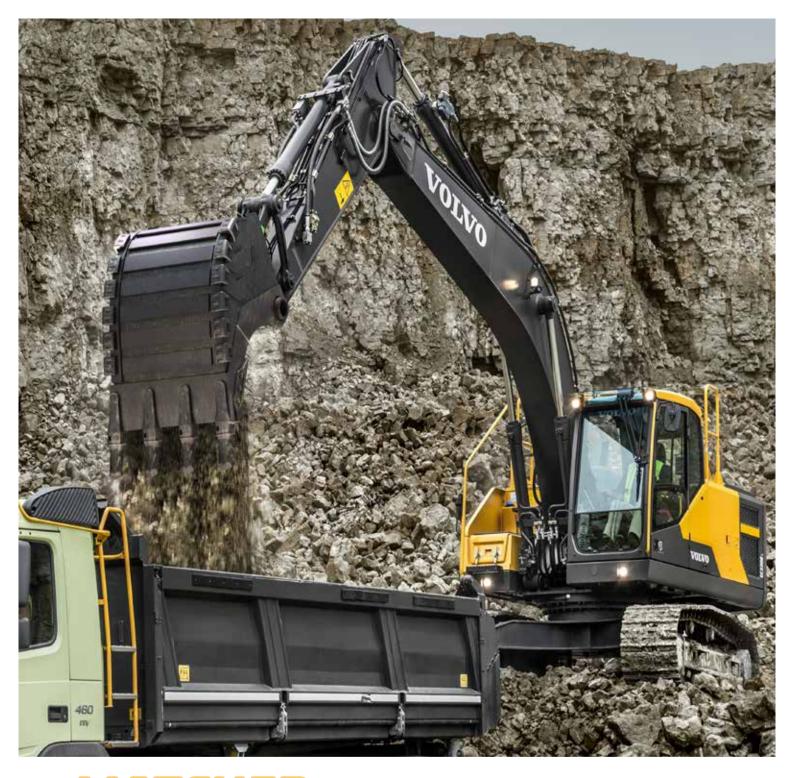
Well-positioned punched anti-slip plates provide superior grip and durability. The design facilitates easy cleaning while promoting safety.





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 inl 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.



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.



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 complies with the latest safety regulations of ISO 13031 and EN474-1. Steelwrist® is a registered trademark of Steelwrist AB



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

OPTIMIZED HYDRAULICS

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

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.

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.

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.



HMI

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

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.

Full size guard rails

VOLVO

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

Short-cut key

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.

Bluetooth®

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

Volvo engine

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

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.

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.

ACC.

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 increasing the positive return on your investment and maximising uptime.

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.







CUSTOMER SUPPORT AGREEMENTS

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.

Volvo EC220E in detail

Engine

The latest generation, Volvo engine Tier 4f emissions compliant diesel engine fully meets the demands of the latest, emsissions 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/min (r/s)	1 800 (30)
Net, ISO 9249/SAE J1349	kW (hp)	128 (172)
Gross, ISO 14396/SAE J1995	kW (hp)	129 (173)
Max torque	Nm (ft lbf)	849 (626)
at engine speed	r/min (r/s)	1 350 (22.5)
No. of cylinders		6
Displacement	l (in³)	5.7 (348)
Bore	mm (in)	98 (3.86)
Stroke	mm (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	2 x 12
Battery capacity	Ah	140
Alternator	V/A	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 (ft lbf)	83 (61,220)

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 (lbf)	183 (41,150)
Max. travel speed (low)	km/h (mi/h)	3.5 (2.2)
Max. travel speed (high)	km/h (mi/h)	5.7 (3.5)
Gradeability	o	35

Undercarriage

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

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.

Maximum flow	l/min (gal/min)	2 x 207 (2 x 55)							
Pilot pump: Gear pump									
Maximum flow	l/min (gal/min)	1 x 18 (1 x 5)							
Relief value setting pressure									
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									

Travel: Variable displacement axial piston motor with mechanical brake Slew: Fixed displacement axial piston motor with mechanical brake

Hydraulic Cylinders

riyuraunc Cynnucis					
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 3				

Cab

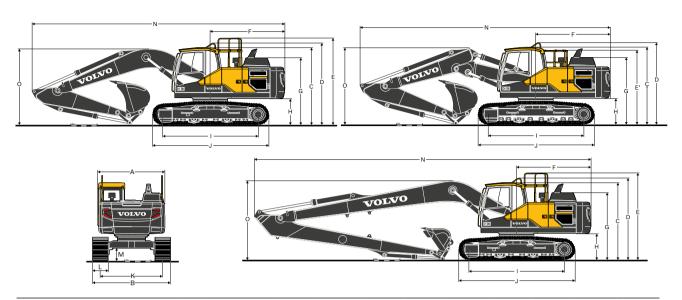
The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into 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 pressure level in cab according	g to ISO 6396	
L _{pA} (standard)	dB	69
L _{pA} (tropical)	dB	70
External sound level according to ISO 639	95 and EU Noise Dir	rective 2000/14/EC
L _{WA} (standard)	dB	102
L _{WA} (tropical)	dB	103
Service Refill		
Fuel tank	l (gal)	320 (85)
DEF/AdBlue® tank	l (gal)	27 (7)
Hydraulic system, total	l (gal)	290 (77)
Hydraulic tank	l (gal)	140 (37)
Engine oil	l (gal)	25 (7)
Engine coolant	l (gal)	35 (9)
Slew reduction unit	l (gal)	6 (2)
Travel reduction unit	l (gal)	2 x 5.8 (2 x 2)

Specifications



DIMENSIONS												
Description	nit	EC220EL								EC22	OELR	
Boom	m,	ft in	t in 5.7 (18'8") mono and 5.57 (18'3") 2-piece									
Arm	m	ft in	2.0	6'7"	2.5	8'2"	2.9	9'6"	3.5	11'6"	6.25	20'6"
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 0 2 5	3'4"	1025	3'4"	1 0 2 5	3'4"	1025	3'4"	1 0 2 5	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"
N1. 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"
O1. Overall height of boom * Without shoe grouser. 12-piece boom	mm	ft in	3 065	10'1"	3 065	10'1"	2 960	9'9"	3 310	10'10"	-	-

DIMENSIONS



Description	Unit	mo	no	me	ono	2-р	iece	Long-Reach		
Boom	m	5.7	18'8"	5.7 HD	18'8"	5.57	18'3"	8.85	29'0"	
Length	mm	5 910	19'5"	5 910	19'5"	5 780	19'0"	9 060	29'9"	
Height	mm	1 585	5'2"	1 585	5'2"	1 570	5'2"	1460	4'9"	
Width	mm	670	2'2"	670	2'2"	670	2'2"	670	2'2"	
Weight	kg	2 006	4,420	2 151	4,740	2 585	5,700	2 510	5,530	
* Includes cylinder	, piping and pin, exc	cludes boom cylinde	er 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"	6.25	20'6"
Length	mm	3 065	10'1"	3 525	11'7"	3 910	12'10	3 910	12'10	4 540	14'11	7 3 3 0	24'1"
Height	mm	980	3'3"	860	2'10"	860	2'10"	860	2'10"	855	2'10"	945	3'1"
Width	mm	440	1'5"	440	1'5"	440	1'5"	440	1'5"	440	1'5"	385	1'3"
Weight	kg	1 091	2,410	1 133	2,500	1 146	2,530	1 183	2,610	1226	2,700	1 309	2,890

^{*} Includes cylinder, linkage and pin

Specifications

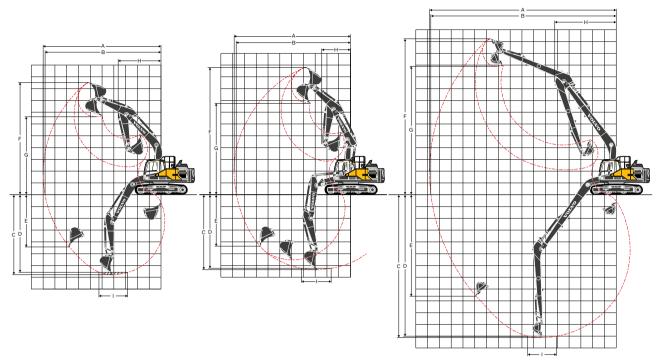
Description	Shoe	width	Operatin	g weight	Ground pressure		Overall width		Operatin	g weight	Ground pressure		Overal	l width
	mm	ft in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
								EC2	20EL					
	5.7m (18'8") boom, 2.9m (9'6") arm, 5.57m (18'3") 2-piece, 2.9m (9'6") arr 860kg / 0.92m³ (1,810lb) bucket, 860kg / 0.92m³ (1,810lb) bucket, 4 200kg (9,260lb) counterweight 4 200kg (9,260lb) counterweight													n,
	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"
Triple grouser	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"
	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"
Triple grouser HD	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"
Double 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"
Single 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"
					EC22	OELR								
			8.8	452kg /	0.52m³	, 6.25m ((1 000lb) lb) counte	bucket,	m,						
Tuinle auerren	800	32	23 690	52,250	37.3	5.4	3 190	10'6"						
Triple grouser	900	36	23 990	52,890	33.3	4.8	3 290	10'10"	_					

BUCKET S	ELECTION	GUIDE																	
									EC220EL										
Bucket type		Capa	acity	Cutting width		Weight		Teeth	5.	7m (18'	B") Boo	m	5.57m (18'3") 2-piece						
									800	800mm (32") shoe, 4 200kg (9 260lb) counterw									
		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")			
		480	0.63	600	23.40	666	1,468	3.00	С	С	С	С	С	С	С	С			
		590	0.77	750	29.25	711	1,568	3.00	С	С	С	С	С	С	С	С			
	General	750	0.98	900	35.10	792	1,746	4.00	С	С	С	С	С	С	С	С			
	purpose	920	1.20	1 050	40.95	862	1,900	4.00	С	С	С	С	С	С	С	С			
		1090	1.43	1200	46.80	951	2,096	5.00	С	С	С	С	С	С	С	С			
		1 270	1.66	1350	52.65	1038	2,289	5.00	С	С	С	С	С	С	С	С			
Direct fit		480	0.63	600	23.40	738	1,628	3.00	D	D	D	D	D	D	D	D			
Buckets		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			
	Hanne	750	0.98	900	35.10	808	1,783	4.00	D	D	D	D	D	D	D	D			
	Heavy	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			
		1090	1.43	1200	46.80	1046	2,307	5.00	D	D	D	D	D	D	D	D			
		1090	1.43	1200	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.

Maxi	Maximum materal density													
	kg/m³	lb/yd³												
Α	1200 - 1300	2,000 - 2,200	Coal, Caliche, Shale											
В	1400 - 1600	2,300 - 2,700	Wet earth and clay, Limestone, Sandstone											
С	1700 - 1800	2,800 - 3,100	Granite, Wet sand, Well blasted rock											
D	> 1900	> 3,200	Wet mud, Iron ore											

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.



WORKING	G RANG	ES																				
Description	n		U	nit	EC220EL															EC220ELR		
Boom			m	ft in		5.7 (18'8") mono 5.57 (18'3") 2-piece									iece		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. di	igging rea	ach	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. di ground	igging rea	ach on	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. di	igging de	pth	mm	ft in	5 830	19'2"	6 330	20'9"	6 730	22'1"	7 3 3 0	24'1"	5 410	17'9"	5 900	19'4"	6 300	20'8"	6 850	22'6"	12 100	39'8"
D. Max. di (2.44 m /		pth	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. ve digging de		II	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		3 790		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		WITH				KET																
Bucket rad	lius		mm	ft in	1528	5'0"	1528	5'0"	1528	5'0"	1528	5'0"	1528	5'0"	1528	5'0"	1528	5'0"	1528	5'0"	1250	4'1"
	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	125	28,100	68	15,290
Breakout	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	132	29,670	-	-
bucket	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	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	149	33,500	-	-
	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	92	20,680	44	9,890
Tearout force -	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	97	21,810	-	-
dipper arm	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	94	21,130	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	99	22,260	-	-
Rotation a	Rotation angle, bucket			0	16	66	1	75	1	75	1	75	1	75	1	175 17		175 175		75	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 1.5m (5') 3.0m (10') 4.5m (15') 6.0m (20') related to Along UC Across UC Along UC Across UC Along UC Across UC Along UC Across UC ground level Ιh m in lb lh lb lh lh t lh 25 Boom: 5.7m *5.5 *12.110 6.0 20 *12.110 *5.5 (18'8")15 *15,100 *6.0 *13,120 12,150 Àrm: 2.5m *19,400 *14,990 3.0 10 *9.0 8.2 17,660 *6.9 5.4 11,640 (8'2") 1.5 *10.8 *23,250 7.7 16,610 *7.8 *16.910 5.2 11,140 Shoe: 800mm 0.0 O *25,050 7.5 16,120 8.0 17,210 10,810 -1.5 *24,900 *10.8 *24.770 *10.8 *24.770 *11.5 7.5 16.050 7.9 17,100 5.0 10.710 CWT: 4,200kg -5 -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 (9,260lb) 4.5 -15 *24,370 *11.4 *24,370 16,940 7.5 *5.2 *5.2 25 Boom: 5.7m 6.0 20 *11,170 *11,170 (18'8") 4.5 15 *5.7 *12,330 *5.7 12,310 Arm: 2.9m 3.0 10 *18.180 17,980 *6.6 ^{*}14.300 11,780 (9'6")*10.4 *22,370 16,830 *16,400 5 *7.6 11,240 Shoe: 800mm *24.740 16.210 0 *12.560 7.5 17.270 5.0 10.860 (32")*23,490 *10.3 CWT: 4,200kg -1.5 -5 *6.3 *14.060 *10.3 *23.490 *11.6 *25.120 16.030 7.9 17.090 5.0 10,700 -3.0 *33.940 31.310 *23,640 16,180 17,190 10,790 (9,260lb)-4.5 -15 *27.330 *12.7 *27,330 *9.1 *19.310 16.680 7.5 25 Boom: 5.7m 20 6.0 (18'8")4.5 15 *4.9 *10,720 *4.9 *10.720 Arm: 3.5m *5.8 3.0 10 *12,590 11,980 (11'6") *14,710 11,380 1.5 *6.8 Shoe: 800mm 0.0 Λ *76 *16.460 51 10.900 (32")*10.8 *23,490 15,960 17,040 10,650 CWT: 4,200kg *10.6 *22,860 -3.0 *15.4 *33.360 14.4 30.840 15.980 *7.9 (9,260lb) -10 17.020 4.9 10.630 *38,240 *16.7 *28,240 *13.1 16,320 *14,650 10,920 Lifting hook 7.5m (25') 9.0m (30') Max. reach related to Along UC Across UC Along UC Across UC Along UC Across UC ground level ft m in lb lb lb lb lb m k5 7 *12 540 **45** 7 *12.540 5.6 18.0 Boom: 5.7m *12,350 20 *5.6 10,400 6.9 (18'8") *5.7 4.5 15 4.0 *12.530 3.9 8.630 7.6 24.8 Arm: 2.5m 3.0 10 6.0 12.850 3.9 8.370 5.4 11.970 3.5 7.790 26.2 (8'2") 1.5 5 12,610 3.8 8.140 5.3 11,580 3.4 7,490 8.1 26.5 Shoe: 800mm 0.0 12.450 7.990 11.890 7.650 25.8 Ω 5.8 3.7 5.4 3.5 7.9 (32")-1.5 5.9 13,090 8,380 7.4 24.1 -5 3.8 CWT: 4,200kg -3.0 -10 *7.0 *15,470 4.6 10,180 21.1 6.5 (9,260lb) 4.5 -15 *15,750 15,530 16.0 *4.9 7.5 25 *10,930 *10,930 19.9 *10,120 Boom: 5.7m 6.0 20 *4.6 4.2 9,480 7.3 23.8 (18'8")8.0 4.5 15 *54 *11.760 4 0 8.670 *4.5 *9.950 3.6 8,020 26.2 Arm: 2.9m 3.0 10 *12,560 3.9 8,450 *10,220 3.3 7,300 8.4 27.5 (9'6") 1.5 5.9 8.200 4.9 10.840 5 12,670 3.8 3.2 7.030 8.5 27.8 Shoe: 800mm 0.0 0 12,460 3.7 8,000 5.0 11,090 3.2 7,150 27.1 (32")-1.5 -5 5.8 12,400 3.7 7,950 5.5 12,060 3.5 7,750 7.8 25.5 CWT: 4,200kg -3.0 -10 6.5 14,380 4.1 9,180 6.9 22.7 (9,260lb) -4.5 *15,270 *6.9 12.930 18.0 *4.9 *10,920 23.0 25 4.5 10,160 Boom: 5.7m 6.0 20 *47 *10.360 49 8 940 *4 q *10.800 3.6 8,060 26.5 (18'8") 4.5 15 *4.8 *10,550 8,820 4.8 10,670 3.2 7,000 8.8 28.6 Arm: 3.5m *5.2 3.0 3.0 10 *11.410 4.0 8.560 4.6 4.5 9.900 2.9 6.450 9.1 29.8 (11'6") *5.7 8,250 2.9 9,640 6,250 30.1 1.5 ^{12,500} 3.8 4.4 Shoe: 800mm 0.0 8,000 6,340 0 5.8 12,460 3.7 4.5 9,820 2.9 9.0 29.5 (32")CWT: 4,200kg -1.5 -5 5.7 12,310 3.6 7,860 4.8 10,520 3.1 6,770 8.6 28.0

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.

5.5

*5.9

12,100

*12.990

7,760

25.5

(9,260lb)

-3.0

-10

12,390

7,930

LIFTING CAPACITY EC220ELR

3.0

0

-1.5

-3.0

-4.5

-6.0

-7.5

-9.0

-10.5

10

-5

-10

-15

-20

-25

-30

-35

*2.6

*2.8

2.82

2.74

2.69

2.67

*2.4

*5,770

*6,160

6,070

5,910

5,800

5,780

*3,580

1.9

1.8

1.7

1.6

1.6

1.6

1.6

4,060

3,850

3,660

3,510

3,410

3,380

3,460

*2.2

2.3

2.3

*4,230

*4,720

*4,830

*4,250

*2,460

1.5

1.4

1.4

1.3

3,220

3,090

2,980

2,890

*2460

*0.8

*0.9

*1.0

*1.1

*13

*1.6

*2.0

*3.0

*3.3

*1,710

*1,810

*1,950

*2,150

*2,430

*2,850

*3,490

*4,590

*6,990

*7,140

*0.8

*0.8

*0.9

*1.0

*1.1

*1.3

1.8

2.3

*3.3

*1,710

*1,810

*1,950

*2,150

*2,430

*2,850

3,460

4,100

5,280

*7,140

14.5

14.6

14.4

14.2

13.7

13.1

11.2

9.7

7.6

47.6

47.8

47.4

46.5

45.0

42.9

40.0

36.3

31.2

24.2

Lifting capacity at the arm end without bucket.

For lifting capa			ucket, s			actual w	eight o			ucket or	the bu			coupler	from th			ies.
		g hook		6.0m	(20')			7.5m	(25')			9.0m	(30')		10.5m (35			
	relat groun	id level Along		Along UC		Across UC		ng UC	Acro	ss UC	Along UC		Across UC		Along UC		Acro	ss UC
	m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb
	12.0	40																
	10.5	35														*3,530		*3,53
	9.0	30														*4,750		*4,750
	7.5	25													*2.2	*4,910	*2.2	*4,910
	6.0	20													*2.4	*5,240	*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	*11130	3.1	6,710	4.0	8,750	2.4	5,220	3.3	7,130	2.0	4,270
Boom: 8.85m	-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				
(29'0")	-10.5	-35	*4.4	*9,090	*4.4	*9,090	*3.4		*3.4									
Arm: 6.25m		g hook		12.0m	า (40')			13.5m	ı (45 ')		Max. reac				ch			
(20'6") Shoe: 800mm		ed to d level	Alor	ng UC	Acro	ss UC	Alon	ng UC	Across UC		Along UC		Across UC		m	ft		
(32")	m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb				
CWT: 5 000kg	12.0	40									*0.8	*1,950	*0.9	*1,950	10.3	33.1		
(11 030lb)	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	*2230	*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		

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 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

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)

Undercarriage

Undercover

Hydraulic track adjusters

Greased and sealed track link

Track Guard

800 mm (32") shoe with triple grousers

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

STANDARD EQUIPMENT

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

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

Master key

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

Volvo Smart View (VSV)

OPTIONAL EQUIPMENT

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

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

Machine control system

Dig assist 2D/In-field/Steelwrist

Volvo Active Control (Semi-autonomous)

Please refer to separate Brochure for more details

OPTIONAL EQUIPMENT

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 propotional

Falling object guard (FOG)

Frame-mounted

Cab-mounted

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

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.

