

VOLVO EXCAVATORS

# EC220D

20.9-24.6 t 175 hp



Courtesy of Machine.Market



# 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 industry experts. 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 175 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.



Volvo Trucks



Renault Trucks



Mack Trucks





UD Trucks



Volvo Buses



Volvo Construction Equipment



Volvo Penta



Volvo Aero



Volvo Financial Services

# DESIGNED FOR EFFICIENCY.

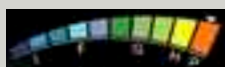
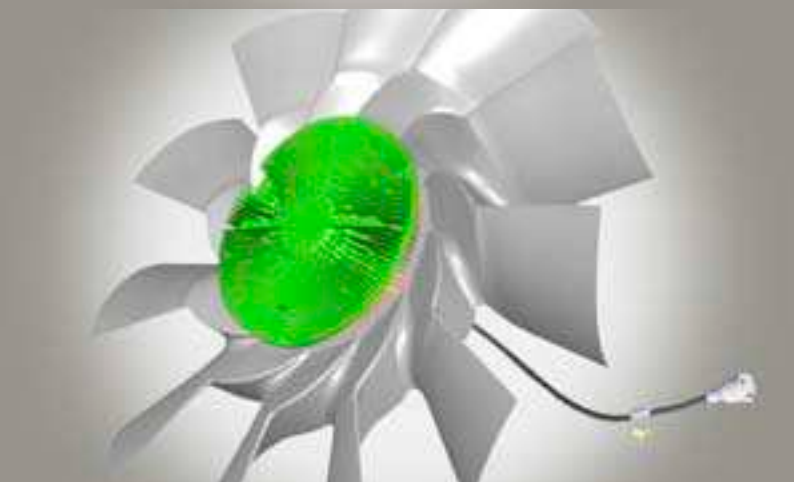
Introducing Volvo's powerful, fuel efficient and environmentally responsible D-Series crawler excavators. Featuring Volvo's unique, award-winning ECO mode, the D6 Stage IIIB/ Tier 4 Interim engine and improved hydraulics, these machines deliver reduced fuel consumption and cycle times resulting in up to 12% rise in fuel efficiency improvement as well as increased digging performance.

## **Volvo D6 Stage IIIB/ Tier 4 Interim engine**

Volvo's new fuel efficient engine features an active-type Diesel Particulate Filter (DPF) and a regeneration process to lower emissions. The unique method does not interrupt operation, performance or productivity.

## **ECO mode**

Volvo's unique, award-winning ECO mode features sophisticated electronic pump control technology which contributes to up to 5% of the machine's total improved fuel efficiency without any loss of performance in most operating conditions.



## **Work modes**

Operators can select the best work mode for the task at hand to ensure optimum performance and fuel efficiency. Choose the correct mode according to your working conditions for added versatility and increased performance.

## **Proportional controlled viscous-clutch**

Optimized fan speed control from the new proportional controlled viscous-clutch for reduced fuel consumption.





#### Fuel efficiency

For ultimate fuel efficiency Volvo's efficient diesel engine, enhanced hydraulic system and well matched components give you more power, while consuming less fuel. Volvo's D6 Stage IIIB/ Tier 4 Interim engine features low emission levels for increased environmental care.



# CONTROL IN COMFORT.



## Volvo Care Cab

All-round visibility and a premium operator environment are at the heart of Volvo's cab design. The spacious cab, with ample storage and leg room, features an adjustable seat for excellent operator comfort, reduced whole body vibration and increased productivity.

Step inside Volvo's care cab and enjoy excellent all-round visibility. In this safe and comfortable environment operators will feel efficient and in control all day long. See more and do more with Volvo.

#### Rubber/Silicone oil viscous mounts

Spring is added to the mounts to improve shock absorption and reduce vibration. Increased operator comfort means more productivity.

#### I-ECU monitor

Large color monitor provides excellent clarity in all light conditions. Using a control panel the operator and service technician can make quick visual and diagnostic checks, increasing uptime and productivity. The monitor also displays camera images – up to four at a time.

#### ROPS

The cab features Roll Over Protective Structure (ROPS) which meets the ISO 12117-2 safety standard for increased peace of mind in the unlikely event of machine roll over.



#### Smart consoles and switches

High quality consoles and conveniently located switches for easy access and improved operator efficiency.

#### Automatic climate control system

Operators can set their ideal temperature with Volvo's powerful climate control system. Industry leading air circulation and defrosting capability is delivered with 14 well-spaced vents for increased comfort and productivity.

#### Rear view camera

Rear view camera provides visibility via the color I-ECU monitor for increased safety. The camera sits on top of the counterweight to project the area behind the machine.



# CONTROL IT. FASTER.

Volvo gives you more. More power, more capacity and more weight – command the new D-Series crawler excavators to handle your workload and enjoy increased total performance from our improved hydraulic system. Trust Volvo to put you in control.

## Digging power and speed

Enhanced digging force and faster cycle times, particularly when working with hard materials, from increased engine power and improved hydraulics.



## Lifting capacity

Excellent lifting capacity and stability allows the machine to lift heavier objects ensuring greater productivity.



## Grading

Superb grading performance from improved hydraulic system. Effortlessly smooth surfaces with harmonized flow control and well-matched attachment speed.



## Attachment Management System

Allows storage of up to 18 different attachment presets and permits hydraulic flow (standard) and pressure (optional) to be adjusted to enable the use of various attachments for increased versatility. Operators can change attachments quickly without manual setup.





#### **Controllability**

Smart hydraulic system enables smooth and highly responsive combined operation and travel. The system automatically prioritizes oil flow to the boom, arm or slew function according to requirements, resulting in faster cycle times.



# SERVICEABILITY. SIMPLIFIED.



## Serviceability

Grouped filters and accessible radiators are quick to access from ground level via large, wide compartment doors – increasing safety. Easy access for maintenance means regular checks get done faster, giving you more uptime.



With built in serviceability the new Volvo D-Series crawler excavators guarantee you more uptime. Easy access to grouped service points allows for fast and effortless maintenance and service checks. Achieve more with Volvo.

#### Grouped filters

Grouped, ground level filters in the pump compartment are accessible via one door for faster servicing and more machine uptime. This reduces the need for conducting maintenance at height, increasing safety.

#### Safe access

Safe and convenient access to service points from ground level for reduced maintenance time and more machine uptime. Volvo's automatic stays prevent doors being blown closed and automatic locks ensure doors shut.



#### Service intervals on I-ECU

A service mode is incorporated into the I-ECU color monitor to enable diagnostic checks. Four separate service intervals – the engine oil/filter, fuel filter/water separator, hydraulic oil and hydraulic oil filter – are displayed on the monitor.

#### Anti-slip plates

Added operator and service mechanic safety from punched anti-slip plate which provides superb grip, especially in wet or icy conditions.



# TOP PERFORMANCE DESERVES SUPPORT.

The day you receive your new Volvo Excavator is just the start of your working relationship with Volvo. From service and maintenance to our CareTrack telematics system – Volvo has a comprehensive and sophisticated aftermarket portfolio to continuously add value to your business.

Volvo designed and built your machines, so no-one knows how to keep them working in top condition more than us. When it comes to your machine, our Volvo trained technicians are the experts.

Our technicians work with industry leading diagnostic tools and techniques, using only Genuine Volvo Parts to deliver the highest levels of quality and service. Talk to your Volvo dealer about how genuine Volvo services can best provide the service and maintenance plan that is the right fit for you and your business.



State-of-the-art machines require state-of-the-art support and your Volvo dealer can provide a catalogue of services designed to get the most out of your machine, helping you maximise uptime, productivity and residual value. Your Volvo dealer can provide a number of sophisticated support offers, including:

Service plans ranging from routine wear inspections, through to comprehensive maintenance and repair agreements.

Analysis and diagnostics to help you understand how your machine is running, highlight potential maintenance issues and identify where performance can be improved.

Eco Operator training courses can help your operators work towards a safer, more productive and fuel efficient performance.





#### CareTrack\*

Each Volvo Excavator comes standard equipped with CareTrack, the Volvo telematics system. CareTrack provides information for better planning and smarter working; including fuel consumption reports, location reports and service reminders. Save fuel. Reduce costs. Maximise profitability. You can with CareTrack.

\* In markets where CareTrack is available



# TAKE A LOOK AROUND.



## Fuel efficiency

The Volvo D6 Stage IIIB/ Tier 4 Interim engine together with improved hydraulics deliver up to 12% rise in fuel efficiency and shorter cycle times for increased performance.

## ECO mode

Volvo's unique, award-winning ECO mode gives more fuel efficiency without any loss of performance.

## Work modes

Achieve optimum performance and increased fuel efficiency by selecting the best work mode for the task at hand.

## Digging power and speed

Perform at a higher level with increased digging power and faster cycle times for greater productivity.



## Controllability

Smart hydraulic system for smooth and highly responsive combined operation and travel by prioritizing oil flow according to requirements.







#### **CareTrack\***

Volvo's telematics system guides machine owners towards optimized productivity and their next service – remotely.



#### **Volvo Care Cab**

Enjoy all-round visibility, easy to access controls and excellent air ventilation in Volvo's spacious cab which meets ROPS safety standards.

#### **Grouped filters**

Grouped, ground level filters in the pump compartment enable faster servicing and more machine uptime.

#### **Powerful engine**

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



#### **Serviceability**

Premium serviceability from large, wide opening doors featuring automatic stays and locking devices.

\* In markets where CareTrack is available



# VOLVO EC220D IN DETAIL.

## Engine

The latest generation, Volvo engine Tier 4i (Stage IIIB) emissions compliant diesel engine fully meets the demands of the latest, emissions regulations. 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 Tier 4i (Stage IIIB)	Volvo	D6H
Max power at	r/s / r/min	30 / 1 800
Net, ISO 9249/SAE J1349	kW / hp	128 / 174
Gross, ISO 14396/SAE J1995	kW / hp	129 / 175
Max torque at	Nm / r/min	849 / 1 350
No. of cylinders		6
Displacement	l	5.7
Bore	mm	98
Stroke	mm	126

## Electrical system

High-capacity electrical system that is well protected. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard. Contronics provides advanced monitoring of machine functions and important diagnostic information on the I-ECU.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	140
Alternator	V / Ah	28 / 110

## Swing system

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and anti-rebound valve are standard.

Max. slew speed	r/min	12.1
Max. slew torque	kNm	76.7

## 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	183
Max. travel speed	km/h	3.3 / 5.5
Gradeability	°	35

## Undercarriage

The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard.

EC220DL		
Track shoe		2 x 49
Link pitch	mm	190
Shoe width, triple grouser	mm	500/600/700/800/900
Shoe width, triple grouser (HD)	mm	600
Shoe width, double grouser	mm	700
Bottom rollers		2 x 8
Top rollers		2 x 2
EC220DNL		
Track shoe		2 x 49
Link pitch	mm	190
Shoe width, triple grouser	mm	500/600/700
Shoe width, triple grouser (HD)	mm	600
Shoe width, double grouser	mm	700
Bottom rollers		2 x 8
Top rollers		2 x 2
EC220DN		
Track shoe		2 x 46
Link pitch	mm	190
Shoe width, triple grouser	mm	600/700/800/900
Shoe width, triple grouser (HD)	mm	600
Bottom rollers		2 x 7
Top rollers		2 x 2

## Hydraulic system

The hydraulic system, also known as the "Automatic Sensing Work Mode", is designed for high-productivity, high-digging capacity, high-maneuvering precision and excellent fuel economy. The summation system, arm and swing priority along with boom, arm and bucket regeneration provides optimum performance.

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 2 x 207

Pilot pump, Type Gear pump	
Maximum flow	l/min 1 x 18

## Hydraulic motors

Travel: Variable displacement axial piston motor with mechanical brake

Slew: Fixed displacement axial piston motor with mechanical brake

Relief valve setting		
Implement	MPa	34.3 / 36.2
Travel circuit	MPa	34.3 / 34.3
Slew circuit	MPa	27.9 / 27.9
Pilot circuit	MPa	3.9 / 3.9

## Hydraulic cylinders

Mono boom		2
Bore x Stroke	ø x mm	125 x 1 235
2 piece boom		1
Bore x Stroke	ø x mm	160 x 1 070
Arm		1
Bore x Stroke	ø x mm	135 x 1 540
Bucket		1
Bore x Stroke	ø x mm	120 x 1 065
Bucket for LR boom		1
Bore x Stroke	ø x mm	100 x 865

## Service refill capacities

Fuel tank	l	335
Hydraulic system, total	l	300
Hydraulic tank	l	150
Engine oil	l	32
Engine coolant	l	41
Swing reduction unit	l	6
Travel reduction unit	l	2 x 5.8

## 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 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009		
LwA (standard)	dB(A)	102
LwA (tropical)	dB(A)	103



# SPECIFICATIONS.

## VOLVO BUCKETS

Loose soil, re-handling material or abrasive rock; excavators and attachments work hand in hand to move almost any type of material. Volvo's experience together with excavator and attachment technology ensures a reduction in cycle times, increased productivity and lower fuel costs through higher breakout forces and quicker bucket fill times.

The efficiency of any type of excavation depends upon the selection of the right bucket therefore a broad bucket offering available from the same retailer as your excavator means the machine can be easily adjusted to operate in any conditions.

As the technology and experience in design for both Volvo's attachments and excavators stems from the same origin, availing from another service like Volvo's aftermarket support ensures the machine is running harder for longer.



### (GP) General purpose bucket

Designed for digging and re-handling soft to medium materials e.g. soils with low wear characteristics, the GP bucket has anti-abrasive side cutters, a hardened lip plate and self-sharpening bucket teeth.

### (HD) Heavy-duty bucket

Intended for digging in dense materials such as hard packed clay and gravel. The HD bucket has heavier overall fabrication with a thicker side cutting edge and hardened plating on all critical ground-engaging areas.

### (RK) Rock bucket

Together with harder and thicker plating on all critical leading edges the rock bucket provides digging performance in soils with a high degree of rock content and well blasted rock.

### (FD) Fixed ditching bucket

A wide face, round profile and drain holes make the FD bucket ideal for ditch cleaning or removal of other soft material. An inner stiffener and optional bolt-on cutting edge bolster performance.

### Volvo quick couplers

Direct fit attachments will always deliver a high performance however with the need for excavators to handle more tasks than ever before, Volvo offer a diverse range of Attachment Quick Couplers providing various levels of versatility and performance to meet every need.

## VOLVO TOOTH SYSTEM



### Self-Sharpening Tooth System Cuts Through the Toughest Jobs

Volvo perfects the excavator bucket's point of attack with a robust tooth system that delivers performance and long life. Cast and tempered from a high-strength alloy, Volvo teeth resist stress and deliver optimum penetration in hard or abrasive material. An innovative design lessens internal wear between tooth and adapter — and makes it easy to change teeth.

#### LOCKING DEVICE

Patented vertical locking device. The steel pin with flexible lock retainer tightly secures the tooth to the adapter. Smart design transfers working stresses away from the locking device, saving wear on the steel pin and extending pin life. Self-sharpening Volvo teeth are designed for a small penetration area, which reduces stress and wear at the point of contact.

#### GPE

Self-sharpening general-purpose tooth with good penetration and long service life.

#### AMRE / ARXE

Tooth with extra-wear metal and longer service life intended for rock and abrasive material. Self sharpening.

#### PPE

Pick-point excavator tooth delivers maximum penetration in hard clay or frozen ground.

#### SNE

Spade nose tooth is designed for finishing work such as leveling, grading, cleaning & backfilling.

#### TPE

Twin pick point with sharp, dual-point profile is ideal for compact or frozen ground.

#### Wear Cap & BLW Adapter

Wear cap protects the adapter from unnecessary wear.

BLW: Bottom leg adapter for wear cap with extra long top leg for welding to both sides of the cutting edge. Long bottom leg.

BL: 1 1/2 bottom leg adapter for welding to both sides of the cutting edge



# SPECIFICATIONS.

## MAXIMUM PERMITTED BUCKETS

### EC220DL with 4 200kg counterweight

Boom, Direct Fit	m	5.7		
Arm	m	2.5	2.9	3.5
Max. bucket	t/m <sup>3</sup>	liter	liter	liter
GP Bucket	1.5	1 500	1 350	1 200
	1.8	1 325	1 200	1 075
HD Bucket	1.8	1 250	1 125	1 000
	2.0	1 175	1 050	950
Boom, Quick Coupler	m	5.7		
Arm	m	2.5	2.9	3.5
Max. bucket	t/m <sup>3</sup>	liter	liter	liter
GP Bucket	1.5	1 350	1 225	1 075
	1.8	1 200	1 075	950
HD Bucket	1.8	1 150	1 025	900
	2.0	1 075	950	825

### EC220DNL with 5 000kg counterweight

Boom, Direct Fit	m	5.7		
Arm	m	2.5	2.9	3.5
Max. bucket	t/m <sup>3</sup>	liter	liter	liter
GP Bucket	1.5	1 400	1 300	1 125
	1.8	1 225	1 150	1 000
HD Bucket	1.8	1 175	1 100	950
	2.0	1 100	1 025	900
Boom, Quick Coupler	m	5.7		
Arm	m	2.5	2.9	3.5
Max. bucket	t/m <sup>3</sup>	liter	liter	liter
GP Bucket	1.5	1 250	1 175	1 000
	1.8	1 100	1 025	875
HD Bucket	1.8	1 050	975	850
	2.0	975	925	775

### EC220DN with 4 200kg counterweight

Boom, Direct Fit	m	5.7		
Arm	m	2.5	2.9	3.5
Max. bucket	t/m <sup>3</sup>	liter	liter	liter
GP Bucket	1.5	1 350	1 275	1 100
	1.8	1 200	1 125	975
HD Bucket	1.8	1 125	1 050	925
	2.0	1 050	1 000	850
Boom, Quick Coupler	m	5.7		
Arm	m	2.5	2.9	3.5
Max. bucket	t/m <sup>3</sup>	liter	liter	liter
GP Bucket	1.5	1 225	1 125	950
	1.8	1 075	1 000	850
HD Bucket	1.8	1 025	950	800
	2.0	950	875	750

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

2. "Max. permitted sizes" are for reference only and are not necessarily available from the factory.

3. Bucket widths are less than bucket's tip radius.



## MACHINE WEIGHTS AND GROUND PRESSURE

EC220DL 5.7m boom 2.9m arm 776kg bucket 4 200kg counterweight					5.57m 2-piece boom 2.9m arm 776kg bucket 4 200kg counterweight			
Description	Shoe width	Operating weight	Ground pressure	Overall width	Shoe width	Operating weight	Ground pressure	Overall width
	mm	kg	kPa	mm	mm	kg	kPa	mm
Triple grouser	500	21 870	54.9	2 890	500	22 560	55.9	2 890
	600	22 130	46.1	2 990	600	22 810	47.1	2 990
	700	22 580	40.2	3 090	700	23 260	41.2	3 090
	800	22 860	35.3	3 190	800	23 550	36.3	3 190
	900	23 150	32.4	3 290	900	23 830	33.3	3 290
Triple grouser HD	600	22 300	46.1	2 990	600	22 980	48.0	2 990
Double grouser	700	22 860	40.2	3 090	700	23 550	42.2	3 090

EC220DNL 5.7m boom 2.9m arm 776kg bucket 5 000kg counterweight					5.57m 2-piece boom 2.9m arm 776kg bucket 5 000kg counterweight			
Description	Shoe width	Operating weight	Ground pressure	Overall width	Shoe width	Operating weight	Ground pressure	Overall width
	mm	kg	kPa	mm	mm	kg	kPa	mm
Triple grouser	500	22 590	55.9	2 540	500	23 280	57.9	2 540
	600	22 850	47.1	2 640	600	23 540	49.0	2 640
	700	23 300	41.2	2 740	700	23 990	42.2	2 740
Triple grouser HD	600	23 020	48.0	2 640	600	23 710	49.0	2 640
Double grouser	700	23 590	42.2	2 740	700	24 270	43.1	2 740

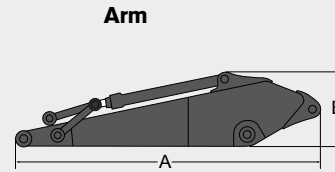
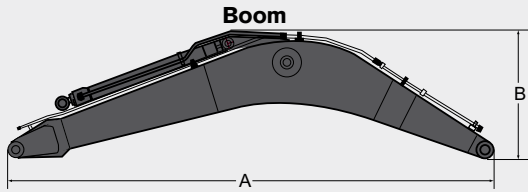
EC220DN 5.7m boom 2.9m arm 776kg bucket 4 200kg counterweight					5.57m 2-piece boom 2.9m arm 776kg bucket 4 200kg counterweight			
Description	Shoe width	Operating weight	Ground pressure	Overall width	Shoe width	Operating weight	Ground pressure	Overall width
	mm	kg	kPa	mm	mm	kg	kPa	mm
Triple grouser	600	21 780	49.0	2 800	600	22 470	50.0	2 800
	700	22 210	42.2	2 900	700	22 890	44.1	2 900
	800	22 470	37.3	3 000	800	23 160	39.2	3 000
	900	22 740	34.3	3 100	900	23 420	35.3	3 100
Triple grouser HD	600	21 940	49.0	2 800	600	22 630	51.0	2 800

EC220DLR 8.85m boom 6.25m arm 452kg bucket 5 000kg counterweight				
Description	Shoe width	Operating weight	Ground pressure	Overall width
	mm	kg	kPa	mm
Triple grouser	800	23 860	37.3	3 190
	900	24 140	33.3	3 290



# SPECIFICATIONS.

## DIMENSIONS

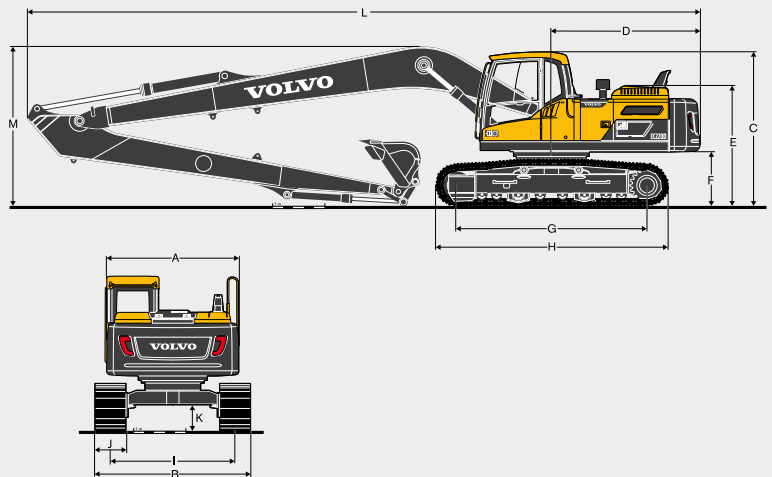
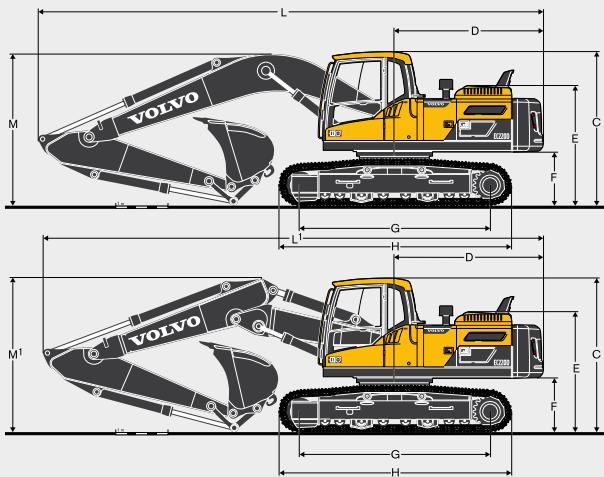


### EC220D

Description	Unit	mono	mono	2-piece	Long reach	Description	Unit						
<b>Boom</b>	<b>m</b>	<b>5.7 GP</b>	<b>5.7 HD</b>	<b>5.57</b>	<b>8.85</b>	<b>Arm</b>	<b>m</b>	<b>2.0 ME</b>	<b>2.5 HD</b>	<b>2.9 GP</b>	<b>2.9 HD</b>	<b>3.5 GP</b>	<b>6.25 LR</b>
Length (A)	mm	5 910	5 910	5 780	9 060	Length (A)	mm	3 065	3 525	3 910	3 910	4 540	7 330
Height (B)	mm	1 585	1 585	1 570	1 460	Height (B)	mm	980	860	860	860	855	945
Width	mm	670	670	670	670	Width	mm	440	440	440	440	440	385
Weight	kg	1 995	2 135	2 585	2 510	Weight	kg	1 091	1 126	1 121	1 176	1 226	1 309

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

\* Includes cylinder, linkage and pin



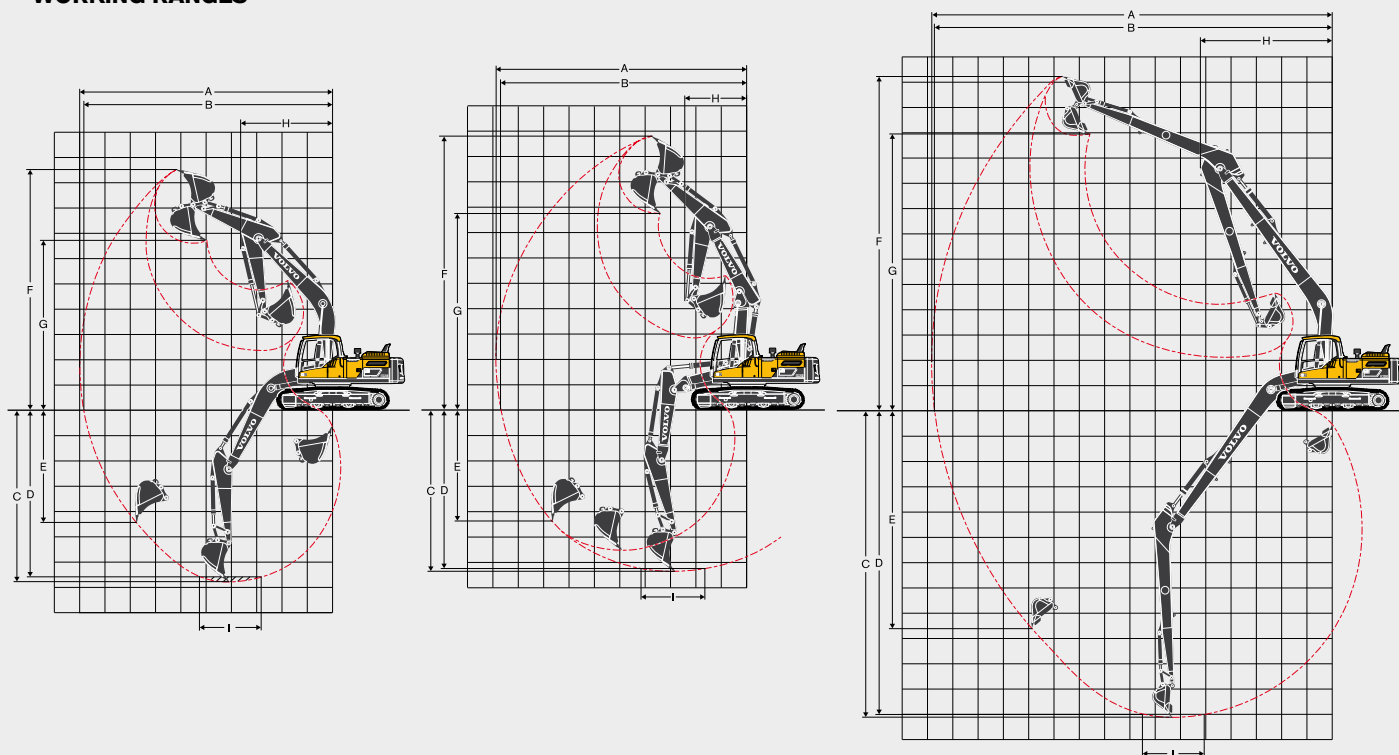
Description	Unit	EC220DL				EC220DNL				EC220DN				EC220DLR
<b>Boom</b>	<b>m</b>	<b>5.7 mono or 5.57 2-piece</b>				<b>5.7 mono or 5.57 2-piece</b>				<b>5.7 mono or 5.57 2-piece</b>				<b>8.85</b>
<b>Arm</b>	<b>m</b>	<b>2.0</b>	<b>2.5</b>	<b>2.9</b>	<b>3.5</b>	<b>2.0</b>	<b>2.5</b>	<b>2.9</b>	<b>3.5</b>	<b>2.0</b>	<b>2.5</b>	<b>2.9</b>	<b>3.5</b>	<b>6.25</b>
A Overall width of upper structure	mm	2 540	2 540	2 540	2 540	2 540	2 540	2 540	2 540	2 540	2 540	2 540	2 540	2 540
B Overall width	mm	2 990	2 990	2 990	2 990	2 640	2 640	2 640	2 640	2 800	2 800	2 800	2 800	3 190
C Overall height of cab	mm	2 930	2 930	2 930	2 930	2 930	2 930	2 930	2 930	2 930	2 930	2 930	2 930	2 930
D Tail slew radius	mm	2 850	2 850	2 850	2 850	2 850	2 850	2 850	2 850	2 850	2 850	2 850	2 850	2 850
E Overall height of engine hood	mm	2 305	2 305	2 305	2 305	2 305	2 305	2 305	2 305	2 305	2 305	2 305	2 305	2 305
F Counterweight clearance *	mm	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025
G Tumbler length	mm	3 660	3 660	3 660	3 660	3 660	3 660	3 660	3 660	3 370	3 370	3 370	3 370	3 660
H Track length	mm	4 460	4 460	4 460	4 460	4 460	4 460	4 460	4 460	4 160	4 160	4 160	4 160	4 460
I Track gauge	mm	2 390	2 390	2 390	2 390	2 040	2 040	2 040	2 040	2 200	2 200	2 200	2 200	2 390
J Shoe width	mm	600	600	600	600	600	600	600	600	600	600	600	600	800
K Minimum ground clearance *	mm	460	460	460	460	460	460	460	460	460	460	460	460	460
L Overall length	mm	9 795	9 745	9 690	9 720	9 795	9 745	9 690	9 720	9 795	9 745	9 690	9 720	12 880
L <sup>1</sup> Overall length	mm	9 660	9 610	9 570	9 560	9 660	9 610	9 570	9 560	9 660	9 610	9 570	9 560	-
M Overall height of boom	mm	3 100	3 080	2 940	3 260	3 100	3 080	2 940	3 260	3 100	3 080	2 940	3 260	3 055
M <sup>1</sup> Overall height of boom	mm	3 065	3 065	2 960	3 310	3 065	3 065	2 960	3 310	3 065	3 065	2 960	3 310	-

\* Without shoe grouser

<sup>1</sup> 2-piece boom



## WORKING RANGES



Description			Unit	EC220DL/EC220DNL/EC220DN								EC220DLR
Boom			m	5.7 mono				5.57 2-piece				8.85
Arm			m	2.0	2.5	2.9	3.5	2.0	2.5	2.9	3.5	6.25
A Max. digging reach			mm	9 090	9 550	9 930	10 390	8 980	9 450	9 840	10 310	15 800
B Max. digging reach on ground			mm	8 910	9 380	9 770	10 240	8 800	9 280	9 670	10 150	15 700
C Max. digging depth			mm	5 830	6 330	6 730	7 330	5 410	5 900	6 300	6 850	12 100
D Max. digging depth (l = 2440 mm level)			mm	5 560	6 100	6 540	7 130	5 290	5 790	6 200	6 750	12 000
E Max. vertical wall digging depth			mm	4 880	5 620	6 090	6 470	4 390	4 990	5 410	5 930	11 290
F Max. cutting height			mm	8 940	9 220	9 460	9 460	10 010	10 380	10 710	10 920	13 300
G Max. dumping height			mm	6 190	6 430	6 650	6 700	7 100	7 460	7 780	8 010	10 950
H Min. front swing radius			mm	3 790	3 670	3 640	3 660	2 890	2 740	2 470	2 730	5 200
<b>Digging forces with direct fit bucket</b>												
Bucket radius			mm	1 470	1 470	1 470	1 470	1 470	1 470	1 470	1 470	1 250
Breakout force - bucket	Normal	SAE	kN	151	130	130	130	151	130	130	130	68
	Power boost	SAE	kN	160	137	137	137	160	137	137	137	-
	Normal	ISO	kN	168	145	145	145	168	145	145	145	77
	Power boost	ISO	kN	178	153	153	153	178	153	153	153	-
Tearout force - dipper arm	Normal	SAE	kN	146	119	102	93	146	119	102	93	44
	Power boost	SAE	kN	155	125	108	98	155	125	108	98	-
	Normal	ISO	kN	150	122	105	95	150	122	105	95	45
	Power boost	ISO	kN	159	129	111	100	159	129	111	100	-
Rotation angle, bucket			°	175	175	175	175	175	175	175	175	178



# SPECIFICATIONS.

## LIFTING CAPACITY EC220DL

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	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		
		Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	m
Boom 5.7m	7.5 m kg													*5 680	*5 680	5.6
Arm 2.5m	6.0 m kg							*5 510	5 440					*5 610	4 340	6.9
Shoe 600mm	4.5 m kg					*7 010	*7 010	*6 030	5 280	5 680	3 700			5 560	3 620	7.6
CWT 4 200kg	3.0 m kg					*9 030	7 640	*6 920	5 030	5 580	3 610			5 060	3 270	8.0
	1.5 m kg					*10 790	7 160	7 630	4 800	5 460	3 510			4 890	3 150	8.1
	0 m kg					*11 580	6 950	7 460	4 650	5 380	3 430			5 020	3 210	7.9
	-1.5 m kg			*10 850	*10 850	*11 490	6 920	7 410	4 600					5 520	3 510	7.4
	-3.0 m kg			*14 770	13 720	*10 570	7 020	7 490	4 680					6 730	4 250	6.5
	-4.5 m kg			*11 410	*11 410	*8 150	7 310							*7 170	6 370	5.0
Boom 5.7m	7.5 m kg							*5 190	*5 190					*4 920	*4 920	6.2
Arm 2.9m	6.0 m kg							*5 090	*5 090					*4 590	3 960	7.3
Shoe 600mm	4.5 m kg							*5 670	5 350	*5 360	3 760			*4 530	3 360	8.0
CWT 4 200kg	3.0 m kg					*8 450	7 800	*6 600	5 100	5 620	3 650			*4 650	3 070	8.4
	1.5 m kg					*10 380	7 270	*7 580	4 850	5 490	3 530			4 580	2 950	8.5
	0 m kg			*5 430	*5 430	*11 440	6 990	7 490	4 670	5 390	3 440			4 680	3 000	8.3
	-1.5 m kg	*6 280	*6 280	*10 330	*10 330	*11 600	6 910	7 400	4 600	5 350	3 410			5 090	3 250	7.8
	-3.0 m kg	*11 390	*11 390	*15 670	13 610	*10 940	6 980	7 440	4 630					6 040	3 830	6.9
	-4.5 m kg			*12 750	*12 750	*9 060	7 200							*6 930	5 330	5.6
Boom 5.7m	7.5 m kg													*4 910	4 180	7.1
Arm 3.5m	6.0 m kg									*4 620	3 860			*4 860	3 330	8.1
Shoe 600mm	4.5 m kg							*4 870	*4 870	*4 760	3 790			4 460	2 890	8.8
CWT 4 200kg	3.0 m kg							*5 750	5 150	*5 180	3 660	4 210	2 710	4 140	2 670	9.1
	1.5 m kg							*6 730	4 860	5 480	3 510	4 150	2 660	4 030	2 580	9.2
	0 m kg							7 460	4 640	5 340	3 390			4 100	2 610	9.0
	-1.5 m kg					*10 760	6 800	7 320	4 520	5 270	3 320			4 390	2 790	8.6
	-3.0 m kg			*15 310	13 260	*10 480	6 810	7 310	4 510	5 300	3 350			5 040	3 200	7.8
	-4.5 m kg	*16 730	*16 730	*13 030	*13 030	*9 270	6 970	*6 840	4 630					*5 840	4 100	6.6
Boom 5.57m 2-piece	7.5 m kg					*8 610	8 590							*8 490	7 740	4.8
Arm 2.0m	6.0 m kg					*8 600	8 520	*7 480	5 280					*7 410	5 010	6.2
Shoe 600mm	4.5 m kg					*9 590	8 050	*7 680	5 140					6 260	4 010	7.0
CWT 4 200kg	3.0 m kg					*10 900	7 400	7 800	4 890					5 600	3 560	7.4
	1.5 m kg							7 540	4 660	5 400	3 410			5 390	3 400	7.5
	0 m kg					*10 880	6 770	7 390	4 530					5 570	3 490	7.3
	-1.5 m kg					*9 370	6 800	*7 130	4 530					*5 900	3 910	6.7
	-3.0 m kg					*6 700	*6 700									5.7
Boom 5.57m 2-piece	7.5 m kg					*7 850	*7 850							*6 810	6 260	5.5
Arm 2.5m	2.5m kg					*8 010	*8 010	*7 030	5 420					*6 240	4 420	6.7
Shoe 600mm	4.5 m kg			*12 740	*12 740	*9 050	8 270	*7 370	5 250					5 660	3 640	7.5
CWT 4 200kg	3.0 m kg					*10 500	7 620	7 910	4 990	5 560	3 550			5 130	3 270	7.9
	1.5 m kg					*11 430	7 080	7 620	4 730	5 440	3 440			4 960	3 140	8.0
	0 m kg					*11 260	6 820	7 430	4 560	5 360	3 360			5 090	3 210	7.8
	-1.5 m kg			*11 500	*11 500	*10 090	6 790	7 380	4 520					5 620	3 520	7.3
	-3.0 m kg					*7 840	6 930	*5 680	4 620					*5 020	4 310	6.3
Boom 5.57m 2-piece	9.0 m kg													*6 140	*6 140	4.0
Arm 2.9m	2.9m kg					*7 040	*7 040	*5 150	*5 150					*4 950	*4 950	6.0
Shoe 600mm	6.0 m kg					*7 090	*7 090	*6 690	5 520					*4 570	4 010	7.2
CWT 4 200kg	4.5 m kg			*9 150	*9 150	*8 570	8 440	*7 100	5 340	5 730	3 710			*4 480	3 380	7.9
	3.0 m kg					*10 100	7 790	*7 730	5 060	5 610	3 600			*4 580	3 060	8.3
	1.5 m kg					*11 280	7 200	7 680	4 790	5 470	3 470			4 630	2 940	8.4
	0 m kg			*5 950	*5 950	*11 420	6 870	7 460	4 590	5 360	3 370			4 740	2 990	8.2
	-1.5 m kg			*10 860	*10 860	*10 540	6 790	7 370	4 510	5 340	3 350			5 170	3 250	7.7
	-3.0 m kg			*11 000	*11 000	*8 610	6 870	*6 390	4 570					*4 990	3 870	6.8

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 EC220DNL

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	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		m
		Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	
Boom 5.7m	7.5 m kg													*5 680	5 630	5.6
Arm 2.5m	6.0 m kg							*5 510	5 090					*5 610	4 090	6.9
Shoe 600mm	4.5 m kg					*7 010	*7 010	*6 030	4 940	*5 690	3 490			*5 700	3 410	7.6
CWT 5 000kg	3.0 m kg					*9 030	7 040	*6 920	4 710	*6 000	3 400			5 460	3 090	8.0
	1.5 m kg					*10 790	6 580	*7 810	4 480	5 900	3 300			5 290	2 970	8.1
	0 m kg					*11 580	6 380	8 060	4 340	5 820	3 230			5 440	3 030	7.9
	-1.5 m kg			*10 850	*10 850	*11 490	6 350	8 000	4 290					5 970	3 300	7.4
	-3.0 m kg			*14 770	12 070	*10 570	6 450	*7 800	4 360					*7 020	3 980	6.5
	-4.5 m kg			*11 410	*11 410	*8 150	6 720							*7 170	5 890	5.0
Boom 5.7m	7.5 m kg							*5 190	5 180					*4 920	*4 920	6.2
Arm 2.9m	6.0 m kg							*5 090	*5 090					*4 590	3 740	7.3
Shoe 600mm	4.5 m kg							*5 670	5 010	*5 360	3 540			*4 530	3 170	8.0
CWT 5 000kg	3.0 m kg					*8 450	7 180	*6 600	4 770	*5 760	3 440			*4 650	2 890	8.4
	1.5 m kg					*10 380	6 680	*7 580	4 530	5 930	3 320			4 960	2 790	8.5
	0 m kg			*5 430	*5 430	*11 440	6 420	8 080	4 360	5 830	3 230			5 070	2 830	8.3
	-1.5 m kg	*6 280	*6 280	*10 330	*10 330	*11 600	6 340	8 000	4 290	5 790	3 200			5 510	3 060	7.8
	-3.0 m kg	*11 390	*11 390	*15 670	11 970	*10 940	6 400	8 040	4 320					6 530	3 590	6.9
	-4.5 m kg			*12 750	12 320	*9 060	6 610							*6 930	4 960	5.6
Boom 5.7m	7.5 m kg													*4 910	3 930	7.1
Arm 3.5m	6.0 m kg									*4 620	3 640			*4 860	3 140	8.1
Shoe 600mm	4.5 m kg							*4 870	*4 870	*4 760	3 570			4 820	2 730	8.8
CWT 5 000kg	3.0 m kg							*5 750	4 820	*5 180	3 440	4 560	2 560	4 480	2 520	9.1
	1.5 m kg							*6 730	4 540	*5 690	3 300	4 490	2 500	4 370	2 430	9.2
	0 m kg							*7 530	4 320	5 780	3 180			4 450	2 460	9.0
	-1.5 m kg					*10 760	6 230	7 920	4 200	5 710	3 120			4 760	2 630	8.6
	-3.0 m kg			*15 310	11 650	*10 480	6 240	*7 840	4 190	5 740	3 140			5 460	3 000	7.8
	-4.5 m kg	*16 730	*16 730	*13 030	11 950	*9 270	6 390	*6 840	4 320					*5 840	3 840	6.6
Boom 5.57m 2-piece	7.5 m kg					*8 610	7 900							*8 490	7 150	4.8
Arm 2.0m	6.0 m kg					*8 600	7 840	*7 480	4 920					*7 410	4 670	6.2
Shoe 600mm	4.5 m kg					*9 590	7 390	*7 680	4 790					6 750	3 750	7.0
CWT 5 000kg	3.0 m kg					*10 900	6 780	*8 150	4 550					6 040	3 330	7.4
	1.5 m kg							8 130	4 330	5 840	3 190			5 830	3 180	7.5
	0 m kg					*10 880	6 180	7 990	4 200					6 030	3 260	7.3
	-1.5 m kg					*9 370	6 210	*7 130	4 200					*5 900	3 640	6.7
	-3.0 m kg					*6 700	6 400									5.7
Boom 5.57m 2-piece	7.5 m kg					*7 850	*7 850							*6 810	5 820	5.5
Arm 2.5m	6.0 m kg					*8 010	*8 010	*7 030	5 060					*6 240	4 130	6.7
Shoe 600mm	4.5 m kg			*12 740	*12 740	*9 050	7 600	*7 370	4 900					6 100	3 420	7.5
CWT 5 000kg	3.0 m kg					*10 500	6 990	*7 940	4 640	6 000	3 330			5 540	3 070	7.9
	1.5 m kg					*11 430	6 470	8 220	4 400	5 880	3 220			5 360	2 940	8.0
	0 m kg					*11 260	6 230	8 030	4 240	5 800	3 150			5 510	3 000	7.8
	-1.5 m kg			*11 500	*11 500	*10 090	6 210	*7 600	4 190					*5 710	3 290	7.3
	-3.0 m kg					*7 840	6 330	*5 680	4 290					*5 020	4 020	6.3
Boom 5.57m 2-piece	9.0 m kg													*6 140	*6 140	4.0
Arm 2.9m	7.5 m kg					*7 040	*7 040	*5 150	5 120					*4 950	*4 950	6.0
Shoe 600mm	6.0 m kg					*7 090	*7 090	*6 690	5 150					*4 570	3 770	7.2
CWT 5 000kg	4.5 m kg			*9 150	*9 150	*8 570	7 770	*7 100	4 980	6 170	3 480			*4 480	3 170	7.9
	3.0 m kg					*10 100	7 150	*7 730	4 720	6 050	3 370			*4 580	2 870	8.3
	1.5 m kg					*11 280	6 590	*8 280	4 450	5 910	3 240			*4 860	2 760	8.4
	0 m kg			*5 950	*5 950	*11 420	6 280	8 060	4 260	5 800	3 150			5 130	2 800	8.2
	-1.5 m kg			*10 860	*10 860	*10 540	6 200	*7 880	4 180	5 780	3 130			*5 500	3 040	7.7
	-3.0 m kg			*11 000	*11 000	*8 610	6 280	*6 390	4 240					*4 990	3 610	6.8

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.



# SPECIFICATIONS.

## LIFTING CAPACITY EC220DN

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	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		
		Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	m
Boom 5.7m	7.5 m kg													*5 680	5 460	5.6
Arm 2.5m	6.0 m kg							*5 510	4 930					*5 610	3 930	6.9
Shoe 600mm	4.5 m kg					*7 010	*7 010	*6 030	4 770	5 050	3 340			4 940	3 270	7.6
CWT 4 200kg	3.0 m kg					*9 030	6 850	*6 920	4 540	4 950	3 250			4 490	2 950	8.0
	1.5 m kg					10 440	6 380	6 720	4 310	4 840	3 150			4 340	2 830	8.1
	0 m kg					10 190	6 170	6 550	4 160	4 760	3 080			4 450	2 880	7.9
	-1.5 m kg			*10 850	*10 850	10 160	6 140	6 500	4 110					4 880	3 150	7.4
	-3.0 m kg			*14 770	11 950	10 270	6 240	6 580	4 190					5 940	3 810	6.5
	-4.5 m kg			*11 410	*11 410	*8 150	6 520							*7 170	5 700	5.0
Boom 5.7m	7.5 m kg							*5 160	4 990					*4 910	4 740	6.2
Arm 2.9m	6.0 m kg							*5 060	4 990					*4 580	3 560	7.3
Shoe 600mm	4.5 m kg							*5 630	4 820	5 080	3 370			*4 520	3 010	8.0
CWT 4 200kg	3.0 m kg					*8 410	6 950	*6 560	4 570	4 960	3 260			4 170	2 730	8.4
	1.5 m kg					*10 320	6 430	6 730	4 320	4 830	3 140			4 030	2 620	8.5
	0 m kg			*5 420	*5 420	10 180	6 150	6 530	4 140	4 730	3 050			4 120	2 660	8.3
	-1.5 m kg	*6 270	*6 270	*10 320	*10 320	10 090	6 080	6 450	4 070	4 700	3 020			4 470	2 880	7.8
	-3.0 m kg	*11 380	*11 380	*15 590	11 760	10 170	6 140	6 490	4 100					5 300	3 400	6.9
	-4.5 m kg			*12 680	12 140	*9 010	6 360							*6 890	4 740	5.6
Boom 5.7m	7.5 m kg													*4 910	3 790	7.1
Arm 3.5m	6.0 m kg									*4 620	3 500			4 530	3 010	8.1
Shoe 600mm	4.5 m kg							*4 870	*4 870	*4 760	3 430			3 960	2 600	8.8
CWT 4 200kg	3.0 m kg							*5 750	4 650	5 010	3 300	3 740	2 440	3 670	2 390	9.1
	1.5 m kg							*6 730	4 370	4 850	3 150	3 670	2 380	3 570	2 310	9.2
	0 m kg							6 550	4 150	4 720	3 030			3 630	2 330	9.0
	-1.5 m kg					10 040	6 020	6 410	4 030	4 650	2 970			3 880	2 490	8.6
	-3.0 m kg			*15 310	11 510	10 050	6 030	6 400	4 020	4 670	2 990			4 450	2 860	7.8
	-4.5 m kg	*16 730	*16 730	*13 030	11 830	*9 270	6 190	6 540	4 140					5 730	3 670	6.6
Boom 5.57m 2-piece	7.5 m kg					*8 610	7 750							*8 490	6 990	4.8
Arm 2.0m	6.0 m kg					*8 600	7 680	7 280	4 760					6 910	4 520	6.2
Shoe 600mm	4.5 m kg					*9 590	7 220	7 140	4 630					5 540	3 600	7.0
CWT 4 200kg	3.0 m kg					10 780	6 590	6 860	4 390					4 950	3 190	7.4
	1.5 m kg							6 610	4 160	4 770	3 040			4 760	3 040	7.5
	0 m kg					10 060	5 980	6 470	4 030					4 910	3 120	7.3
	-1.5 m kg					*9 370	6 010	6 470	4 030					5 520	3 490	6.7
	-3.0 m kg					*6 700	6 200									5.7
Boom 5.57m 2-piece	7.5 m kg					*7 850	*7 850							*6 810	5 660	5.5
Arm 2.5m	6.0 m kg					*8 010	7 870	*7 030	4 900					6 060	3 990	6.7
Shoe 600mm	4.5 m kg			*12 740	*12 740	*9 050	7 440	7 260	4 740					5 020	3 280	7.5
CWT 4 200kg	3.0 m kg					*10 500	6 810	6 970	4 480	4 920	3 190			4 540	2 930	7.9
	1.5 m kg					10 410	6 280	6 690	4 230	4 800	3 070			4 380	2 810	8.0
	0 m kg					10 120	6 030	6 510	4 070	4 720	3 000			4 490	2 860	7.8
	-1.5 m kg			*11 500	*11 500	*10 090	6 010	6 460	4 020					4 950	3 140	7.3
	-3.0 m kg					*7 840	6 130	*5 680	4 120					*5 020	3 850	6.3
Boom 5.57m 2-piece	9m kg													*6 140	*6 140	4.0
Arm 2.9m	7.5 m kg					*7 040	*7 040	*5 150	4 970					*4 950	4 900	6.0
Shoe 600mm	6.0 m kg					*7 090	*7 090	*6 690	5 000					*4 570	3 620	7.2
CWT 4 200kg	4.5 m kg			*9 150	*9 150	*8 570	7 600	*7 100	4 830	5 090	3 340			*4 480	3 030	7.9
	3.0 m kg					*10 100	6 980	7 050	4 560	4 970	3 230			4 240	2 740	8.3
	1.5 m kg					10 550	6 400	6 750	4 280	4 830	3 100			4 100	2 630	8.4
	0 m kg			*5 950	*5 950	10 180	6 080	6 530	4 090	4 730	3 010			4 180	2 670	8.2
	-1.5 m kg			*10 860	*10 860	10 080	6 000	6 450	4 010	4 700	2 990			4 560	2 900	7.7
	-3.0 m kg			*11 000	*11 000	*8 610	6 080	*6 390	4 070					*4 990	3 460	6.8

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 EC220DLR

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		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m			
				Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across		
Boom	8.85m	12.0 m	kg														
Arm	6.25m	10.5 m	kg														
Shoe	800mm	9.0 m	kg														
CWT	5 000kg	7.5 m	kg														
		6.0 m	kg														
		4.5 m	kg												*2 830	*2 830	
		3.0 m	kg					*6 310	*6 310	*4 600	*4 600	*3 730	*3 730	*3 220	2 920		
		1.5 m	kg					*7 380	6 940	*5 580	4 770	*4 340	3 520	*3 610	2 700		
		0 m	kg					*5 280	*5 280	*6 360	4 310	*4 860	3 220	*3 970	2 500		
		-1.5 m	kg	*2 420	*2 420	*3 130	*3 130	*5 350	*5 350	*6 860	4 040	5 080	3 010	3 930	2 350		
		-3.0 m	kg	*3 370	*3 370	*4 130	*4 130	*6 080	5 880	6 830	3 900	4 940	2 880	3 820	2 250		
		-4.5 m	kg	*4 360	*4 360	*5 230	*5 230	*7 170	5 910	6 790	3 860	4 880	2 830	3 770	2 200		
		-6.0 m	kg	*5 420	*5 420	*6 460	*6 460	*8 590	6 020	6 830	3 900	4 890	2 840	3 770	2 200		
		-7.5 m	kg	*6 590	*6 590	*7 890	*7 890	*8 460	6 210	*6 480	4 010	4 970	2 910	3 840	2 260		
		-9.0 m	kg			*9 610	*9 610	*7 350	6 490	*5 710	4 200	*4 560	3 050	*3 640	2 390		
		-10.5 m	kg					*5 620	*5 620	*4 390	*4 390	*3 360	3 320				
			Lifting hook related to ground level	10.5 m		12.0 m		13.5 m		Max. reach							
				Along	Across	Along	Across	Along	Across	Along	Across	m					
			12.0 m	kg							*890	*890	10.5				
			10.5 m	kg							*810	*810	11.8				
			9.0 m	kg			*1 640	*1 640			*770	*770	12.8				
			7.5 m	kg	*2 250	*2 250	*2 190	2 020	*770	*770	*750	*750	13.5				
			6.0 m	kg	*2 410	*2 410	*2 350	1 970	*1 530	1 520	*740	*740	14.1				
	4.5 m	kg	*2 630	2 420	*2 490	1 890	*1 990	1 480	*750	*750	14.4						
	3.0 m	kg	*2 880	2 270	*2 660	1 790	*2 330	1 420	*770	*770	14.6						
	1.5 m	kg	*3 150	2 120	2 770	1 690	2 280	1 360	*810	*810	14.7						
	0 m	kg	3 270	1 990	2 680	1 600	2 220	1 300	*860	*860	14.6						
	-1.5 m	kg	3 160	1 880	2 600	1 530	2 180	1 260	*940	*940	14.3						
	-3.0 m	kg	3 080	1 810	2 550	1 480	*1 960	1 240	*1 050	*1 050	13.9						
	-4.5 m	kg	3 040	1 770	2 530	1 460			*1 210	*1 210	13.3						
	-6.0 m	kg	3 050	1 780	2 560	1 490			*1 440	1 430	12.4						
	-7.5 m	kg	3 120	1 840					*1 830	1 690	11.3						
	-9.0 m	kg							*2 600	2 140	9.9						
	-10.5 m	kg							*3 070	*3 070	7.9						

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 4i EU (Stage IIIB) requirements

Air filter with indicator

Air intake heater

Cyclone pre-cleaner

Electric engine shut-off

Fuel filter and water separator

Fuel filler pump: 50 l/min, with automatic shut-off

Alternator, 110 A

Standard cooling system by fan clutch (40 deg. C)

### Electric/Electronic control system

Contronics

Advanced mode control system

Self-diagnostic system

Caretrack GSM/GPS

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 lights:

Frame-mounted 2

Boom-mounted 2

Batteries, 2 x 12 V / 200 Ah

Start motor, 24 V / 5.5 kW

### Hydraulic system

Hose rupture valve: boom

Overload warning device

Automatic sensing hydraulic system

Summation system

Arm priority

Swing priority

"ECO" mode fuel saving technology

Boom, arm and bucket regeneration valves

Swing anti-rebound valves

Boom and arm holding valves

Multi-stage filtering system

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

Under cover (heavy duty)

Full height counterweight:

4200 kg Long Crawler (L), Narrow Crawler (N)

5000 kg Narrow Long Crawler (NL), Long Reach (LR)

### Cab and interior

ROPS (ISO12117-2) certified cab

Silicon oil and rubber mounts with spring

Adjustable operator seat with heater and joystick control console

Control joysticks with 4 switches each

Heater & air-conditioner, automatic

Flexible antenna

AM/FM stereo with CD player and MP3 input

Hydraulic safety lock lever

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

Rain shield

Windshield wiper with intermittent feature

Rear view camera

Master key

### Undercarriage

Under cover (heavy duty)

Hydraulic track adjusters

Greased and sealed track link

Track Guard

### Track shoes

600 mm with triple grousers

800 mm with triple grousers Long Reach

### Digging equipment

Boom: 5.7 m monoblock

Arm: 2.9 m

Boom: 8.85 m monoblock, Long Reach

Arm: 6.25 m, Long Reach

Manual centralized lubrication

## OPTIONAL EQUIPMENT

### Engine

Block heater: 120 V, 240 V

Oil bath pre-cleaner

Diesel coolant heater, 5 kW

Water separator with heater

Auto engine shutdown

Fuel filler pump, 35 lpm

Tropical cooling system (50 deg. C)

### Electric

Extra work lights:

Cab-mounted 3

Counterweight-mounted 1

Travel alarm

Anti-theft system

Rotating warning beacon

## OPTIONAL EQUIPMENT

### Hydraulic system

- Hose rupture valve: arm
- Boom float function with HRV
- Boom float function without HRV
- Hydraulic piping:
  - Work tool management system (up to 20 programmable memories)
- Hammer & shear, 1 and 2 pump flow
- Hammer & shear:
  - variable flow and pressure pre-setting
- Additional return filter
- Slope & rotator (40lpm or 60lpm)
- Grapple
- Oil leak (drain) line
- Quick coupler piping

- Volvo hydraulic quick coupler S1
- Volvo hydraulic quick coupler S1 without hook
- Volvo hydraulic quick coupler U21
- Hydraulic oil, biodegradable 46
- Hydraulic oil, longlife oil 32
- Hydraulic oil, longlife oil 46
- Hydraulic oil, longlife oil 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
- Opening top hatch
- Falling object guard (FOG)
  - Frame-mounted
  - Cab-mounted
- Cab-mounted falling object protective structure (FOPS)
- Smoker kit (ashtray and lighter)
- Safety net for front window
- Sunlight protection, roof (steel)
- Lower wiper with intermittent control
- Anti-vandalism kit
- Specific key

### Undercarriage

- Full track guard

### Track shoes

- 500/600/700/800/900 mm with triple grousers
- Track shoes 600 mm HD with triple grousers
- Track shoes 700 mm with double grousers

### Digging equipment

- Boom: 5.7 m monoblock, heavy duty
- Boom: 5.57 m 2 piece boom
- Arm: 2.0 m; 2.5 m; 2.9 m; 3.5 m
- Linkage with lifting eye

### Service

- Tool kit, daily maintenance
- Tool kit, full scale

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

Auto engine shutdown



Boom float



2 piece boom



X3



Lifting eye



FOG





# VOLVO CONSTRUCTION EQUIPMENT

Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo.

Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

# **VOLVO**

**Volvo Construction Equipment**  
**[www.volvoce.com](http://www.volvoce.com)**

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