

**VOLVO EXCAVATORS**

**EC140B/EC160B/EC210B/EC240B  
EC290B/EC330B/EC360B/EC460B**



**VOLVO**

# The new B-series excavators. In performance, comfort and economy, they dig deeper.

To create a class-leading excavator, we started with you. Your opinions and suggestions were designed into these machines. The result is a luxurious cab, a highly reliable engine that is matched to the hydraulics for maximum fuel economy, enhanced hydraulics to improve ease of operation, a focus on serviceability to make your life easier.



## The Volvo B-series- innovation at every turn

When we designed the B-series, we examined every component of our excavators to determine how to maximize comfort, reliability, productivity and serviceability. We focused on a few key areas to make it happen. The results? A new Volvo-designed engine that is reliable and performance-driven, built to perfectly match hydraulic output

levels for maximum productivity. A hydraulic system that is both tough and intelligent, designed to respond to the slightest operator command. A cabin with a full range of operator conveniences and comforts to help the work day go smoothly. And features throughout the machine that have been designed to simplify routine maintenance for more up-time to get the job done.

## It's all in the details

Look ahead to see the wide variety of innovations we've added to the Volvo B-series Excavators, then contact your local Volvo dealer for the details. Remember that every Volvo excavator is backed by complete customer support from the Volvo worldwide network of dealers and their sales, service and parts organizations.

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- All-new turbocharged Volvo engine with charged air cooler built specifically for use in Volvo excavators easily meets low-emission EPA Tier 2 standards.
  - Operator-designed cab with industry-leading visibility, improved ergonomic seat, more efficient heating and cooling, and more storage space.
  - Booms and arms built to withstand extreme stress and provide long, reliable life.
  - Integrated electronic system (Contronics with advanced mode control system) for more efficient balance of available engine power and hydraulic output.
  - State-of-the-art hydraulics are highly responsive for timely work cycles and high efficiency.
  - Powerful breakout and lifting forces.
  - Long and stable undercarriage is built tougher than ever.



# A cab for every work environment



Every operator works under different conditions. Differing conditions demand different cab features. Features like electronic climate control, top-notch windshield wiping, and even extra cabin room. B-series cabs have the versatility to make your job comfortable and convenient throughout the work day.

**Comfortable inside, no matter how tough the job outside**  
Through wind, snow, sun or rain, the Volvo easy-access cab has a list of features to help you maintain productivity more comfortably. First and foremost is the machine's industry-leading visibility, which minimizes operator fatigue and

maximizes productivity and safety. The improved visibility is a result of expanded window area, a larger window wiping area with parallel-working wipers, an optional lower wiper, and no interfering cross bar.

The roomy cab has plenty of storage space for personal items and features an ergonomically-correct environment. The operator's seat is adjustable and includes control consoles that move independently to meet any operator's shape and size. In addition, the B-series include electronic climate control with cooling capacity to 25,790 BTU (6500 Kcal/h), and heating capacity to 28,570 BTU (7200 Kcal/h). Noise and shock are kept to a minimum with shock-reducing mounts and sound-absorbing material. Additional rearview mirrors with a large viewing area promote safer, more controlled machine operation.

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## Cab comfort

- Ergonomic cab provides greater operator comfort for higher operator efficiency and productivity.
- Instrument panel redesigned to enable even faster operating status checks and greater work efficiencies.
- Increased cooling and heating capacity, with a four-speed fan and thirteen vents.
- Gas-spring windows with easily removable panes.
- Flat, spacious cab floor makes it easy to clean.
- High quality, comfortable seat with nine different adjustments.
- Optional FOPS (Falling Object Protective Structures) and optional cab-mounted FOG (Falling Object Guard).



# It's all Volvo

If a machine isn't reliable, productivity will suffer. That is why Volvo has made reliability a priority, building a strong foundation of proven systems and components designed to keep the B-series up and running. At the core of B-series' reliability is the new Volvo engine.

## Command performance

The new Volvo engine is one of the most exciting additions to Volvo's B-series line of excavators. This turbocharged 6-cylinder (EC140B: 4-cylinder) diesel engine with direct injection and charged air cooler is built to respond to the unique demands of excavation. Among the highest horsepower in its class, the engine is well matched to the hydraulic system's components and design. Combined, the powerful new Volvo engine and high-performance hydraulics provide exceptionally high fuel efficiencies, especially during hard trenching or mass excavation.

A number of features keep the engine running smoothly and reliably. A new charged air cooler works with the engine's turbocharger for more efficient combustion and low emissions. Three-stage air cleaning prolongs the engine's life and increases up-time by effectively filtering out particles before they reach the engine. An optional oil bath pre-cleaner also provides excellent particle filtration and easier maintenance.

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## Engine

- All-new low-emission Volvo engine with charged air cooler (Except EC140B) precisely matched to hydraulic system components and design, for more power and control than ever.
- Three-stage air cleaning for longer engine life and lower operating costs.
- Auto idling system reduces noise and fuel consumption.
- Optional oil bath pre-cleaner for additional particle filtration.





# Advanced technology



## Hydraulics

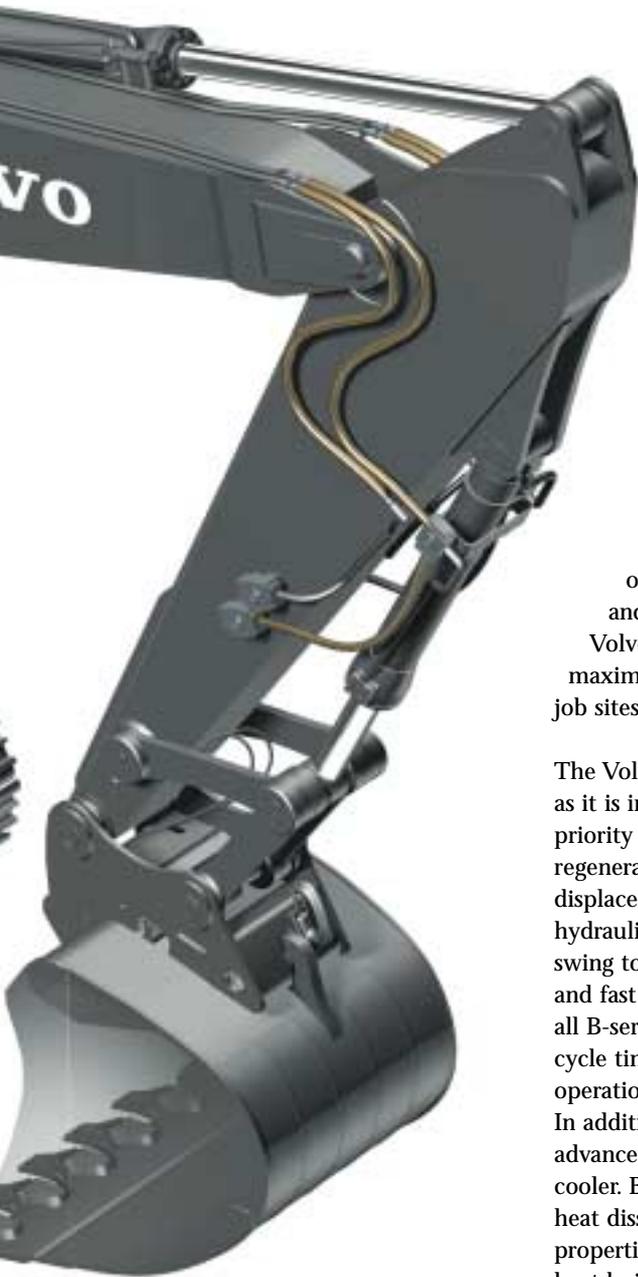
- Advanced work mode control system is activated according to joystick control lever movements, for ease of operation and excellent controllability. Machine automatically optimizes the working mode.
- Boom and arm flow regeneration ensures efficient operation and fuel economy.
- Advanced-engineered hydraulic oil cooler built of aluminum to maximize heat dissipation and minimize corrosiveness.
- One-touch power boost for surge increase in breakout forces.

## Electrical system

- The Contronics system balances available engine power with hydraulic output, for maximum productivity and minimum fuel consumption.
- Self-diagnostic system has error codes and status indicators to ease troubleshooting.
- Powerful 80 A alternator provides greater capacity for machines that work in 24-hour shifts (EC140B/EC160B EC210B).
- High-capacity halogen lights – two or four boom lights, and two lights on forward superstructure – provide good visibility under low-light conditions.

## Superstructure and digging equipment

- Digging equipment designed and tested for tough conditions for proven durability and reliability.
- Excellent digging and lifting capacities.
- Fuel tank capacity equals two full work shifts.
- Reinforced idler motor frame track motor protection cover and optional skid rail.



A state-of-the-art hydraulic system performs as a direct extension of the operator's thoughts and movements. That's why the B-series

hydraulic system is designed with operator controllability and precision as its focus.

With four different power modes, B-series hydraulics respond automatically to the operator's joystick movements and pilot pressure. This allows

Volvo machines to achieve maximum efficiency on a full range of job sites.

The Volvo hydraulic system is as tough as it is intelligent. Boom, arm and swing priority system, boom and arm flow regeneration, and two variable axial displacement piston pumps enhance hydraulic performance resulting in high swing torque, powerful breakout forces and fast bucket-in and swing speeds in all B-series models. That means faster cycle times and more efficient operation across the board.

In addition, the B-series includes an advanced-engineered hydraulic oil cooler. Built of aluminum for maximum heat dissipation and anti-corrosive properties, the new oil cooler minimizes heat build-up, allowing the system to operate at full potential.

And when the job requires a change of bucket or tools, Volvo's hydraulic quick coupler makes it relatively easy, promoting the flexibility and versatility modern job sites demand.

#### **An evolved electrical system**

With this new generation of excavators comes a new generation electrical system – Contronics. The new Volvo excavators are equipped with a technologically-advanced electronic system. It consists of an on-board computer (V-ECU), Machine Display Unit (MDU) and an Engine Electronic Control Unit (E-ECU). They are all connected through a data link. All machine information is stored in the V-ECU.

Information necessary for service can be shown on the external service display. All machine information can be downloaded to a PC using the MATRIS program. This data is an effective resource for diagnostics and service work. The MDU monitors and provides information on all vital machine functions. The information is shown on the display screen located on the right console.

The Contronics balances available engine power with hydraulic output for maximum performance.

# At your service

A low-maintenance machine is a valuable investment. It means more up-time, greater productivity, and fewer hassles on the job site. That is why the B-series incorporates features to make service and routine maintenance as quick and easy as possible.



## Low-maintenance design

All areas of the machine have enhanced features to make serviceability easier. These features include a new long-life hydraulic filter; improved air filter efficiency and serviceability; a quick and common oil drain with valve, high filter capacities for longer service intervals, and a hinged-type undercover for easy access to the engine oil filter.

In addition, many of our service parts have been reorganized within the

excavator to provide easier service access than ever. The result? Filters that are more easily replaced, centralized lubrication points, a more convenient electric relay box location, and large, easy-to-open doors and hoods with locks.

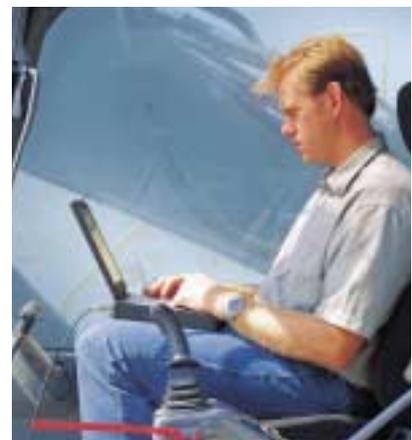
But our easy maintenance features don't stop there. Volvo excavators have always had a three-stage air cleaning system to keep dust and dirt out of the intake system. Now it's also available with a high-performance oil-bath precleaner for highly effective particle filtration. Volvo also provides service technician and machine owners with three advanced diagnostic tools designed for assisting with routine maintenance and troubleshooting.

## Taking our responsibility seriously

One of Volvo's core values is safety. That's why we also incorporate extra measures to protect our operators, their surroundings, and the environment from harm.

The safety and environmental features on our new B-series excavators meet or exceed ISO 14001 regulatory

requirements, including EPA Tier 2 emissions standards. The total machine is recyclable up to 97%. In addition, our machines have a number of safety features to keep the job site secure. We've designed our superstructure walkway with anti-slip punched-metal and convenient steps and handrails. We've included a hydraulic pressure relief system for safer changing of attachments and safer emergency shutdowns. And we've always incorporated high capacity halogen lights to ensure good visibility under low-light conditions.



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## Serviceability

- Large, easy-to-open doors and hoods with locks.
- Long life hydraulic filter.
- High air filter efficiency and serviceability.

- Checkpoints for hydraulic pressure measurements grouped together for easy access.
- New, hinged-type undercover for easy access to the engine oil filter.

## Environment & safety

- Low-emission engines meeting EPA Tier 2 emission standards.
- Electrical master switch.
- Optional front window safety screens, FOPS (Falling Object Protection Structure) and FOG (Falling Object Guard).



**Volvo EC140B LC**  
Volvo D4D EAE1

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	35	2,100
	kW	hp	69	93
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	0.60-0.98	0.78-1.28
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	3.5	7,600
at reach/stick height	m	ft	6.0 / 1.5	20' / 5'
<b>Reach</b> (max.)	m	ft-in	8.3	27' 4"
<b>Digging depth</b> (max.)	m	ft-in	5.5	18' 2"
<b>Breakout force</b> (max.) (SAE)	kN	lb	87.3	19,620
<b>Operating weight</b>	t	lb	13.4-15.2	29,529-33,450



**Volvo EC160B LC**  
Volvo D6D EBE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	32	1,900
	kW	hp	81	109
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	0.78-1.18	1.01-1.54
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	5.0	10,800
at reach/stick height	m	ft	6.0 / 1.5	20' / 5'
<b>Reach</b> (max.)	m	ft-in	9.0	29' 5"
<b>Digging depth</b> (max.)	m	ft-in	6.0	19' 10"
<b>Breakout force</b> (max.) (SAE)	kN	lb	105.2	23,660
<b>Operating weight</b>	t	lb	16.5-19.2	36,340-42,340



**Volvo EC210B LC**  
Volvo D6D EAE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	32	1,900
	kW	hp	107	143
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	0.83-1.55	1.08-2.03
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	7.1	15,430
at reach/stick height	m	ft	6.0 / 1.5	20' / 5'
<b>Reach</b> (max.)	m	ft-in	9.9	32' 7"
<b>Digging depth</b> (max.)	m	ft-in	6.7	22' 1"
<b>Breakout force</b> (max.) (SAE)	kN	lb	130.4	29,330
<b>Operating weight</b>	t	lb	20.8-22.3	45,950-49,260



**Volvo EC240B LC**  
Volvo D7D EBE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	33	2,000
	kW	hp	125	168
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	1.05-1.98	1.37-2.58
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	9.1	19,760
at reach/stick height	m	ft	6.0 / 1.5	20' / 5'
<b>Reach</b> (max.)	m	ft-in	10.3	33' 8"
<b>Digging depth</b> (max.)	m	ft-in	7.0	22' 11"
<b>Breakout force</b> (max.) (SAE)	kN	lb	156.9	35,280
<b>Operating weight</b>	t	lb	24.2-25.8	53,360-56,820



**Volvo EC290B LC**  
Volvo D7D EAE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	32	1,900
	kW	hp	143	192
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	1.03-2.10	1.34-2.75
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	10.8	23,440
at reach/stick height	m	ft	6.0 / 1.5	20' / 5'
<b>Reach</b> (max.)	m	ft-in	10.7	35' 1"
<b>Digging depth</b> (max.)	m	ft-in	7.4	24' 0"
<b>Breakout force</b> (max.) (SAE)	kN	lb	172.6	38,810
<b>Operating weight</b>	t	lb	28.2-29.9	62,180-65,930



**Volvo EC330B LC**  
Volvo D10B EAE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	28	1,700
	kW	hp	184	247
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	1.25-2.50	1.64-3.27
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	9.9	21,250
at reach/stick height	m	ft	7.5 / 1.5	25' / 5'
<b>Reach</b> (max.)	m	ft-in	11.1	36' 3"
<b>Digging depth</b> (max.)	m	ft-in	7.4	24' 2"
<b>Breakout force</b> (max.) (SAE)	kN	lb	209.0	47,190
<b>Operating weight</b>	t	lb	32.4-34.7	71,440-76,560



**Volvo EC360B LC**  
Volvo D10B EAE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	28	1,700
	kW	hp	184	247
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	1.60-3.00	2.09-3.92
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	11.6	24,980
at reach/stick height	m	ft	7.5 / 1.5	25' / 5'
<b>Reach</b> (max.)	m	ft-in	11.2	36' 8"
<b>Digging depth</b> (max.)	m	ft-in	7.5	24' 7"
<b>Breakout force</b> (max.) (SAE)	kN	lb	209.0	47,190
<b>Operating weight</b>	t	lb	36.5-38.4	80,480-84,580



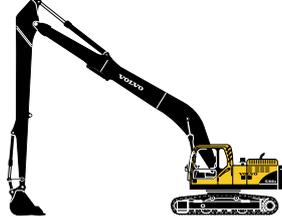
**Volvo EC460B LC**  
Volvo D12C EAE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	32	1,900
	kW	hp	228	306
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	1.73-3.78	2.26-4.94
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	13.8	29,820
at reach/stick height	m	ft	7.5 / 1.5	25' / 5'
<b>Reach</b> (max.)	m	ft-in	12.0	39' 4"
<b>Digging depth</b> (max.)	m	ft-in	7.7	25' 3"
<b>Breakout force</b> (max.) (SAE)	kN	lb	244.2	54,900
<b>Operating weight</b>	t	lb	44.3-47.8	97,570-105,580



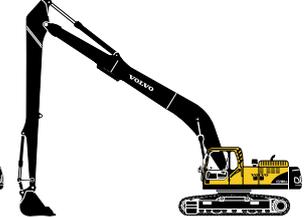
**Volvo EC210B LR**  
Volvo D6D EAE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	32	1,900
	kW	hp	107	143
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	0.52	0.68
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	3.0	6,410
at reach/stick height	m	ft	10.5 / 1.5	35' / 5'
<b>Reach</b> (max.)	m	ft-in	15.8	51' 10"
<b>Digging depth</b> (max.)	m	ft-in	12.1	39' 8"
<b>Breakout force</b> (max.) (SAE)	kN	lb	68.6	15,430
<b>Operating weight</b>	t	lb	23.2	51,200



**Volvo EC240B LR**  
Volvo D7D EBE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	33	2,000
	kW	hp	125	168
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	0.52	0.68
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	3.3	7,240
at reach/stick height	m	ft	10.5 / 1.5	35' / 5'
<b>Reach</b> (max.)	m	ft-in	18.3	60' 1"
<b>Digging depth</b> (max.)	m	ft-in	14.4	47' 1"
<b>Breakout force</b> (max.) (SAE)	kN	lb	68.6	15,430
<b>Operating weight</b>	t	lb	27.6	60,790



**Volvo EC290B LR**  
Volvo D7D EAE2

<b>Engine</b>				
<b>Rated output</b> , at ISO 9249/DIN 6271 (net)	r/s	r/min	32	1,900
	kW	hp	143	192
<b>Bucket capacity</b> (SAE)	m <sup>3</sup>	yd <sup>3</sup>	0.52 / 0.57	0.68 / 0.75
<b>Lifting capacity</b>				
along undercarriage (max.)	t	lb	4.2	9,140
at reach/stick height	m	ft	10.5 / 1.5	35' / 5'
<b>Reach</b> (max.)	m	ft-in	18.6	61' 0"
<b>Digging depth</b> (max.)	m	ft-in	14.8	48' 6"
<b>Breakout force</b> (max.) (SAE)	kN	lb	69.1	15,550
<b>Operating weight</b>	t	lb	31.6	69,680



## Technology on Human Terms

The Volvo Construction Equipment Group is one of the world's leading manufacturers of construction machines, with a product range encompassing wheel loaders, excavators, articulated haulers, motor graders and more.

The tasks they face vary considerably, but they all share one vital feature: technology, which helps man to perform better: safely, efficiently and with care of the environment. We refer to it as Technology on Human Terms.

The sheer width of the product range means it is always possible to choose exactly the right machine and attachment for the job. Each machine also comes with the quality, continuity and security which is represented by the

Volvo name. The security of the service and parts organisation. The security of always having immediate access to leading-edge research and technical development. A machine from Volvo meets the very highest demands in all kinds of jobs, under all conditions. The world over.

*The Volvo Construction Equipment develops, manufactures and markets construction equipment. We are a Volvo company with production facilities on four continents and a market presence in over 100 countries.*

For more information please visit our web site:  
[www.volvo.com](http://www.volvo.com)

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

# **VOLVO**

**Volvo Construction Equipment  
North America Inc.**

One Volvo Drive, Asheville, N.C. 28803-3447  
[www.volvoce.com](http://www.volvoce.com)

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