

VOLVO EXCAVATORS

HEAVY & CIVIL



VOLVO

BIG PROJECTS, BIGGER PERFORMANCE. VOLVO KNOWS HEAVY CONSTRUCTION.

Bridges. Interstate highways. Airports. Harbors. Tunnels. Water treatment plants. The world's transportation systems and its major public works projects owe their success in large part to the hydraulic excavator. Volvo B-Series excavators provide the muscle and engineering to really move heavy construction projects.

Taming heavy construction

Heavy construction projects demand maximum excavator performance. Whether the job requires excavating millions of yards of earth for a superhighway or ripping out old rebar and concrete on a rehab project, civil engineering construction puts the best machines to the test.

Volvo B-Series excavators are built to tame the challenges of heavy construction. It all starts with the rugged boom and arm — made to conquer tough soils, rock, concrete or the heaviest clay. Volvo hydraulics provide outstanding breakout forces, swing power and fast cycle times to maximize production.

Fuel-efficient Volvo engines

Superior engineering shows in the Volvo engine, which has been engineered to match hydraulic and engine horsepower under any loading condition. Outstanding fuel efficiency can keep your Volvo B-Series excavator at work for two full shifts on one full tank. And because it's a Volvo engine, you can be confident of reliable operation and long life.

Hydraulics match the task

The hydraulic system is designed to match conditions on the job. Operate in general mode for the control and load retention for mass excavation or truck loading. For the control needed in shaping banks or fine grading, switch to fine mode for smooth operation. When the job calls for auxiliary hydraulics and any attachment, be confident the flow and power will match the demand.

Taking care of the operator

The operator's cab provides ample visibility that gives the operator a clear view at all times. Operator comfort and convenience are built into every inch of the cab to minimize fatigue on long work days.

Volvo knows what contractors need in an excavator. We're there on jobsites all over the world, making sure Volvo is meeting all heavy and civil engineering construction challenges.

When you face the toughest challenges in heavy construction, answer them with Volvo B-Series excavators.

Capacity: Quickly load haulers in fewer passes



Power: Cut through extreme digging conditions



Hydraulics: Smooth, efficient loading cycles



Multi-task: Range of machine sizes match the job





FOR HEAVY CONSTRUCTION CHALLENGES, VOLVO DELIVERS TOTAL PERFORMANCE.

When heavy construction truly lives up to its name, you need an excavator with the brawn and backbone to respond. Heavy construction jobs demand wide-open production, power, strength, fast cycles — and reliability. Volvo B-Series excavators deliver.

Powerful and responsive

It's called heavy construction for a good reason. Volvo B-Series excavators are engineered for heavy-duty performance for the same reason: extreme demand.

With a high-strength, robotically welded boom and arm, B-Series excavators provide the backbone — and the dig force — to power through tough soils, tear through old rebar and chunks of concrete, or excavate blasted rock. The boom and arm are designed for extreme conditions, providing the strength for digging bridge abutments or excavating densely packed cobble and old road bed.

Performance hydraulics

Hydraulic flow and engine output are closely matched to provide optimum performance — and fuel efficiency.

For mass excavation, boom and arm regeneration coupled with dual axial piston pumps deliver digging performance for fast cycles and quicker job completion. A range of boom and arm configurations will help further match the machine to the job.

One-touch power boost on the right joystick provides ten percent more breakout force to power through clay, rock, tree roots — whatever gets in the way. The highly responsive hydraulics allow the operator to feel changing conditions when tearing up old roadbed, doing over-excavation or trenching for road or runway drainage.

Advanced Work Mode

The Advanced Work Mode control system detects the need for additional power in tough soils. Operate in general mode for production in digging and dumping. For power and control when pulling trench boxes or lifting and setting large-diameter drainage culvert, switch to fine mode for ten percent more power and fine precision.

Low-effort wrist-control joysticks provide smooth hydraulic control, to make easy work of repetitive tasks such as bench loading and provide control when grading or leveling. A long undercarriage provides sure footing and stability for ditch digging with a long stick, or for deep-dig operations.



Key Features

Smart, productive hydraulics

- High breakout forces help cut through rock, tough soils.
- Quick cycle times for loading trucks or over-excavation.
- Power boost supplies ten percent higher digging forces to easily fill the bucket in tough conditions.
- System is like an extension of the operator's hands, allowing sensitive "feel" of soil conditions or obstacles.
- Precision control for grading, placing loads or laying blasting mats.

Advanced Work Mode

- Range of system settings matches engine power with hydraulic pump output.
- Work modes automatically match output to job demands.
- Integrated controls boost fuel efficiency.

Boom, arm options to match jobs

- Range of boom and arm configurations deliver the right depth, from short stick to long reach.

Volvo-designed quickcoupler

- Control attachment changes right from the cab by simply depressing two switches.
- Plate-to-plate interface reduces loss of breakout force for optimum performance.
- Attachment lock indicator gives operator visible signal that attachment is engaged.



FROM FIRST CUT TO FINISHING TOUCH, VOLVO EXCAVATORS SIMPLY DO MORE.

Heavy construction is about more than just power, so Volvo builds its excavators for extreme versatility. Such as the mobility and multiple-tool capability of a wheeled excavator. And ability to easily swap attachments and buckets with the Volvo quickcoupler. And the precise hydraulics to carefully set giant drainage culvert.

Extend your capabilities

Volvo B-Series excavators are built for auxiliary attachments, with factory-installed piping for hammer or shear. No add-ons or wet kits needed. That means you are ready to go when the job requires chipping a bridge deck or breaking up old roadbed with a hammer.

For the most efficient digs, the Volvo-designed quickcoupler allows the operator to easily switch bucket sizes and widths to best suit soil conditions. The smart design of the coupler means minimal loss of breakout force.

Swapping buckets or attachments is done quickly, right from the cab. So when frozen clay or rocky conditions demand a hammer or ripper, attachments are switched easily for maximum productivity.

"F" mode enhances control

Switch to the "F" mode for optimum lifting and placing performance, improved load levelling and total control. "F" mode delivers ten percent more lifting power at all times. That gives you confidence to lift and accurately place masonry tiles for highway sound barriers, or blocks for retaining walls.

The responsive joystick controls are an extension of the operator's hands, allowing precise movement and placement of loads into the trench. A boom and arm holding valve is standard, to keep loads from slipping during lift, travel and place operations.

Controls require low effort to keep the load in steady motion, lessening operator fatigue. And the engine operates at 75 percent of normal RPMs for fine control and maximum fuel efficiency.

By carefully balancing hydraulic output to load demand, Volvo B-Series excavators also excel at delicate finishing operations such as grading slopes or placing ston. Combined with an articulating bucket, you have wrist-like action that allows creation even grades or efficient placement of materials.

Lift and place

With dual variable-action piston pumps, the hydraulic system produces high swing torque to smoothly move concrete traffic barriers, manholes or concrete drainage pipe.

Special shockless valves ensure that swing starts and stops are fast and smooth. A swing rebound-dampening system prevents rebound, ensuring the load stays stable.

Confident visibility

Outstanding all-around visibility gives clear command of even cramped jobsites, meaning more confident operation when lifting and placing heavy loads. With unobstructed views from the cab, you avoid overhead obstacles, safely feather loads into a truck, or efficiently complete cut-and-cover operations.



Rolling performance

The Volvo wheeled excavators give you the features of tracked B-Series units in a highly mobile, compact package.

With these, you can quickly set hundreds of yards of concrete barrier on a highway job, then move miles down the road to do ditch cleaning, slope grading or jobsite cleanup.

Volvo wheeled excavators also ideal for site cleanup, or pick-and-place operations, such as installing masonry facia on highway sound barriers.

The power, control and mobility of the wheeled excavators make it the perfect multi-task job-site tool.



Control: Hydraulics allow precision placement



Smooth control: Easily shape and grade



Versatile: Hydraulic buckets, hammers and more



VOLVO CAB BUILT FOR PRODUCTIVITY WITH COMFORT, COMMANDING VIEWS.

Productivity on heavy construction projects depends in large part on a skilled excavator operator. And the key to a productive operator is a great cab.

With industry-leading visibility, superior comfort and adjustable, low-effort controls, the Volvo B-Series cab delivers what operators value most.

Industry-leading visibility

Heavy construction jobs demand good visibility for mass excavation, digging footers, trenching, lifting and swinging. Volvo delivers the cleanest lines of sight you'll find on any excavator. Good visibility means safer, more effective digging, with low operator fatigue.

For trenching or digging operations, the lower front window is easily removed and stored securely on the cab door. The windshield quickly slides up into the ceiling when the operator wants the front of the cab completely open.

Even with the cab closed, the ample front glass is joined with only a thin crossbar that does not impede visibility. In rainy weather, a large windshield wiper keeps the front glass clear.

For lifting operations, or when looking out for overhead power lines or other obstructions, the cab ceiling is made of tinted, low-glare glass. Side and rear glass — coupled with strategically placed rearview mirrors — provide superior visibility for swinging, placing or travel.

Roomy, adjustable features

To keep the operator comfortable and prevent fatigue on those long workdays, Volvo engineered the B-Series cab with productivity in mind.

The cab offers easy-access through a wide swing-out door. Operators will find plenty of legroom, joystick consoles that adjust individually and a fully adjustable seat with nine settings for optimum fit and comfort.

Comfort in any weather

The high-capacity climate control unit and ventilation system keeps the cab comfortable even in extreme weather conditions. Air flow is delivered at four fan speeds through 13 ducts.

The filtered, pressurized system keeps the cab free of dust and the operator unaffected by heat, cold or wind. Electronic climate control offers large capacity heating 28,570 BTU (7,200 Kcal/h) and cooling 25,790 BTU (6,500 Kcal/h).

Low-noise, low-vibration design

The Volvo B-Series cab design shields the operator from noise and vibration, lessening fatigue and boosting performance. Sound-absorbing material installed in the cab and engine and pump compartments greatly reduces noise levels.

The cab is mounted on viscous dampening mounts to greatly reduce shock, vibration and noise.

Volvo knows how important the operator is to excavator productivity. That's why the operator is at the center of the B-Series design.



Key Features

Operator station

- Deluxe seat has nine adjustments to suit any size operator.
- Joystick consoles can be adjusted lengthwise and for height, providing customized operator comfort.
- Easy-to-read instrument panel provides status on all machine functions.
- Low-effort controls improve productivity and reduce fatigue.
- Smart design provides easy access to all controls and machine functions.

Cab visibility

- Expansive front and top glass for unobstructed views.
- Gas-spring front window lifts easily for increased visibility.
- Removable lower front window stows easily in cab door.
- Thin window crossbar does not inhibit forward visibility.

Cab comfort

- Sound-absorbing material provides low noise levels.
- Viscous-mounted cab lessens shock and vibration.
- Electronic climate-control system keeps cab air comfortable in any weather.



VOLVO MEANS RELIABLE PERFORMANCE, SAFETY AND TOTAL CUSTOMER SUPPORT

For heavy-construction contractors, having great iron is only part of the equation for success on the jobsite. Customers want more than a machine. They want support. They want solutions. They need to know their excavator — and their brand — will be there. They need to know Volvo.

With Volvo B-Series excavators, it all starts with superior design and reliability. Volvo Construction Equipment has a heritage of making machines that perform over the long haul. It's all backed up with great dealer service and customer support.

Proven Volvo engine performance
The heart of performance with Volvo B-Series excavators is the turbocharged Volvo engine. The six-cylinder engine has direct fuel injection and charged-air cooling to meet the unique demands of excavation jobs. For long engine life and reliable performance, Volvo engines feature high horsepower, three-stage air cleaning and a fuel-efficient auto-idling system.

Easy maintenance and service
Volvo B-Series excavators are as easy to maintain as they are to run. An in-cab monitor provides the operator constant information on machine operating conditions.

Long-life, high-capacity air and fluid filters mean reliable operation and less downtime. Volvo B-Series excavators have parts commonality with other Volvo products, meaning even better parts availability.

Swing-out doors provide easy access to the engine, filters, hydraulic pumps and other components. Grouped remote lubrication banks and sight gauges for

fuel and hydraulic oil make daily checks quick and easy. Grouped pressure-check points with quick fittings also speed up service.

In the unlikely event of a controller failure, Volvo excavators are equipped with an emergency engine-speed-control system that allows operation to continue until a technician arrives.

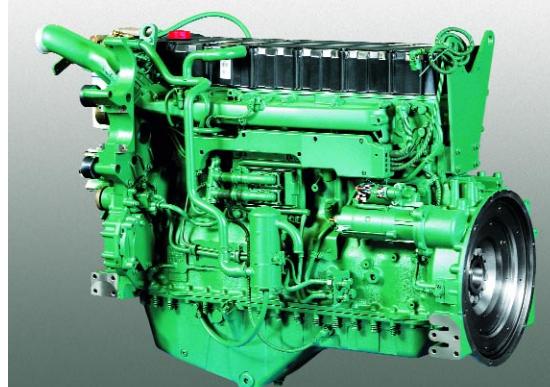
Focus on safety

Like all Volvo products, Volvo B-Series excavators are engineered for safety. Steps and superstructure walkways are made for sure footing with rugged, punched-plate metal and secure handrails. A hydraulic pressure-relief system delivers safer attachment changes and emergency shutdown. High-capacity halogen work lights on the boom and forward superstructure deliver visibility in low-light conditions.

Volvo dealer support

Volvo Construction Equipment's dealer network provides outstanding customer support with extended warranties, preventive maintenance programs, service contracts and more.

Whether you need maintenance for your whole fleet, or just someone to back you up during a machine outage, Volvo dealers are there. After all, it's about more than iron. It's what we call **More care. Built in.**





| Engine | | | Volvo EC140B LC | | Volvo EC160B LC | | Volvo EC210B LC | | Volvo EC210B NLC | |
|----------------------------|----------------|-----------------|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|-------------------------|----------------------|
| Rated output, at | r/s | r/min | 35 | 2,100 | 32 | 1,900 | 32 | 1,900 | 32 | 1,900 |
| ISO 9249/SAE J1349, net | kW | hp | 69 | 93 | 81 | 109 | 107 | 143 | 107 | 143 |
| Track length | m | ft-in | 3,740 | 12' 3" | 3,980 | 13' 1" | 4,460 | 14' 8" | 4,460 | 14' 8" |
| Track gauge | m | ft-in | 1,990 | 6' 6" | 1,990 | 6' 6" | 2,390 | 7' 10" | 2,040 | 6' 8" |
| Bucket capacity | m ³ | yd ³ | 0.6-0.98 | 0.78-1.28 | 0.78-1,18 | 1.01-1.54 | 0.83-1,55 | 1.08-2.03 | 0.75-1,38 | 0.98-1.80 |
| Lifting capacity | | | | | | | | | | |
| along undercarriage | t | lb | 3.3 | 7,170 | 5.0 | 10,800 | 7.1 | 15,430 | 7.1 | 15,430 |
| at reach/height | m | ft | 6.0/1.5 | 20' 5" | 6.0/1.5 | 20' 5" | 6.0/1.5 | 20' 5" | 6.0/1.5 | 20' 5" |
| Breakout force, SAE | kN | lb | 87.3 | 19,620 | 105.2 | 23,660 | 130.4 | 29,330 | 130.4 | 29,330 |
| Max. digging reach | m | ft-in | 8.3 | 27' 4" | 9.0 | 29' 5" | 9.9 | 32' 7" | 9.9 | 32' 7" |
| Max. digging depth | m | ft-in | 5.5 | 18' 2" | 6.0 | 19' 10" | 6.7 | 22' 1" | 6.7 | 22' 1" |
| Operating weight | t | lb | 13.4-15.2 | 29,529-33,450 | 16.5-19.2 | 36,340-42,340 | 20.8-22.3 | 45,950-49,260 | 21.5-22.2 | 47,460-48,900 |



| Engine | | | Volvo EC240B LC | | Volvo EC290B LC | | Volvo EC330B LC | | Volvo EC360B LC | |
|----------------------------|----------------|-----------------|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|
| Rated output, at | r/s | r/min | 30 | 1,800 | 30 | 1,800 | 28 | 1,700 | 28 | 1,700 |
| ISO 9249/SAE J1349, net | kW | hp | 125 | 168 | 143 | 192 | 184 | 247 | 184 | 247 |
| Track length | m | ft-in | 4,650 | 15' 3" | 4,870 | 16' 0" | 4,962 | 16' 3" | 5,180 | 17' 0" |
| Track gauge | m | ft-in | 2,590 | 8' 6" | 2,590 | 8' 6" | 2,590 | 8' 6" | 2,740 | 9' 0" |
| Bucket capacity | m ³ | yd ³ | 1,05-1,98 | 1.37-2.58 | 1,03-2,1 | 1.34-2.75 | 1,25-2,5 | 1.64-3.27 | 1,6-3,0 | 2.09-3.92 |
| Lifting capacity | | | | | | | | | | |
| along undercarriage | t | lb | 9.1 | 19,690 | 10.8 | 23,370 | 10.4 | 22,470 | 12.0 | 25,840 |
| at reach/height | m | ft | 6.0/1.5 | 20' 5" | 6.0/1.5 | 20' 5" | 7.5/1.5 | 25' 5" | 7.5/1.5 | 25' 5" |
| Breakout force, SAE | kN | lb | 156.9 | 35,280 | 172.6 | 38,810 | 209.0 | 47,190 | 209.0 | 47,190 |
| Max. digging reach | m | ft-in | 10.3 | 33' 8" | 10.7 | 35' 1" | 11.1 | 36' 3" | 11.2 | 36' 8" |
| Max. digging depth | m | ft-in | 7.0 | 22' 11" | 7.3 | 24' 0" | 7.4 | 24' 2" | 7.5 | 24' 7" |
| Operating weight | t | lb | 24.5-26.1 | 54,000-57,460 | 28.3-30.0 | 62,340-66,080 | 33.7-36.6 | 74,310-80,640 | 36.8-39.2 | 81,140-86,440 |



| Engine | | | Volvo EC460B LC | | Volvo EC700B LC | | | | | |
|----------------------------|----------------|-----------------|------------------------|-----------------------|------------------------|------------------------|-----------|------------------------|-----------|------------------------|
| Rated output, at | r/s | r/min | 30 | 1,800 | 30 | 1,800 | 30 | 1,800 | 30 | 1,800 |
| ISO 9249/SAE J1349, net | kW | hp | 235 | 316 | 316 | 424 | 316 | 424 | 316 | 424 |
| Track length | m | ft-in | 5,370 | 17' 7" | 5,990 | 19' 8" | 5,990 | 19' 8" | 5,990 | 19' 8" |
| Track gauge | m | ft-in | 2,740 | 9' 0" | 3,350 | 11' 0" | 3,350 | 11' 0" | 3,350 | 11' 0" |
| Bucket capacity | m ³ | yd ³ | 1,73-3,78 | 2.26-4.94 | 2,48-6,6 | 3.24-8.63 | 2,48-6,6 | 3.24-8.63 | 2,48-6,6 | 3.24-8.63 |
| Lifting capacity | | | | | | | | | | |
| along undercarriage | t | lb | 13.8 | 29,820 | 19.2 | 41,510 | 19.2 | 41,510 | 19.2 | 41,510 |
| at reach/height | m | ft | 7.5/1.5 | 25' 5" | 7.5/1.5 | 25' 5" | 7.5/1.5 | 25' 5" | 7.5/1.5 | 25' 5" |
| Breakout force, SAE | kN | lb | 244.2 | 54,900 | 356.0 | 80,030 | 356.0 | 80,030 | 356.0 | 80,030 |
| Max. digging reach | m | ft-in | 12.0 | 39' 4" | 13.2 | 43' 3" | 13.2 | 43' 3" | 13.2 | 43' 3" |
| Max. digging depth | m | ft-in | 7.7 | 25' 3" | 8.4 | 27' 7" | 8.4 | 27' 7" | 8.4 | 27' 7" |
| Operating weight | t | lb | 44.3-48.6 | 97,570-107,120 | 68.3-70.6 | 150,600-155,670 | 68.3-70.6 | 150,600-155,670 | 68.3-70.6 | 150,600-155,670 |



| Engine | | | Volvo EC210B LR | | Volvo EC240B LR | | Volvo EC290B LR | | | |
|----------------------------|----------------|-----------------|------------------------|----------------|------------------------|---------------|------------------------|---------------|-----------|------------------|
| Rated output, at | r/s | r/min | 32 | 1,900 | 30 | 1,800 | 30 | 1,800 | 30 | 1,800 |
| ISO 9249/SAE J1349, net | kW | hp | 107 | 143 | 125 | 168 | 143 | 192 | 143 | 192 |
| Track length | m | ft-in | 4,460 | 14' 8" | 4,650 | 15' 3" | 4,650 | 15' 3" | 4,870 | 16' 0" |
| Track gauge | m | ft-in | 2,390 | 7' 10" | 2,590 | 8' 6" | 2,590 | 8' 6" | 2,590 | 8' 6" |
| Bucket capacity | m ³ | yd ³ | 0.52 | 0.68 | 0.52 | 0.68 | 0.52 | 0.68 | 0.52/0.57 | 0.68/0.75 |
| Lifting capacity | | | | | | | | | | |
| along undercarriage | t | lb | 3.0 | 6,410 | 3.9 | 8,450 | 4.7 | 10,160 | 4.7 | 10,160 |
| at reach/height | m | ft | 10.5/1.5 | 35' 5" | 10.5/1.5 | 35' 5" | 10.5/1.5 | 35' 5" | 10.5/1.5 | 35' 5" |
| Breakout force, SAE | kN | lb | 68.6 | 15,430 | 68.6 | 15,440 | 69.1 | 15,550 | 69.1 | 15,550 |
| Max. digging reach | m | ft-in | 15.8 | 51' 10" | 18.3 | 60' 1" | 18.6 | 61' 0" | 18.6 | 61' 0" |
| Max. digging depth | m | ft-in | 12.1 | 39' 8" | 14.4 | 47' 1" | 14.8 | 48' 6" | 14.8 | 48' 6" |
| Operating weight | t | lb | 23.2 | 51,200 | 27.9 | 61,520 | 31.7 | 69,900 | 31.7 | 69,900 |



| Engine | | | Volvo EW160B mono boom | | Volvo EW160B 2-piece boom | | Volvo EW180B mono boom | | Volvo EW180B 2-piece boom | |
|----------------------------|----------------|-----------------|-------------------------------|----------------------|----------------------------------|----------------------|-------------------------------|----------------------|----------------------------------|----------------------|
| Rated output, at | r/s | r/min | 33 | 2,000 | 33 | 2,000 | 32 | 1,900 | 32 | 1,900 |
| ISO 9249/SAE J1349, net | kW | hp | 103 | 138 | 103 | 138 | 112 | 150 | 112 | 150 |
| Wheel base | m | ft-in | 2,600 | 8' 6" | 2,600 | 8' 6" | 2,600 | 8' 6" | 2,600 | 8' 6" |
| Max. travel speed | km/h | mph | 35 | 21.7 | 35 | 21.7 | 35 | 21.7 | 35 | 21.7 |
| Bucket capacity | m ³ | yd ³ | 0.19-0.83 | 0.25-1.08 | 0.19-0.83 | 0.25-1.08 | 0.42-1,1 | 0.55-1.44 | 0.42-1,1 | 0.55-1.44 |
| Lifting capacity | | | | | | | | | | |
| along undercarriage | t | lb | 5.2 | 11,330 | 5.2 | 11,330 | 7.7 | 16,730 | 7.1 | 15,430 |
| at reach/height | m | ft | 6.0/1.5 | 20' 5" | 6.0/1.5 | 20' 5" | 6.0/1.5 | 20' 5" | 6.0/1.5 | 20' 5" |
| Breakout force, SAE | kN | lb | 98.5 | 21,144 | 98.5 | 21,144 | 111.2 | 25,020 | 111.2 | 25,020 |
| Max. digging reach | m | ft-in | 9.0 | 29' 8" | 9.1 | 29' 10" | 9.3 | 30' 6" | 9.4 | 30' 10" |
| Max. digging depth | m | ft-in | 5.5 | 18' 1" | 5.7 | 18' 8" | 5.8 | 19' 0" | 6.0 | 19' 8" |
| Operating weight | t | lb | 15.8-17.5 | 34,830-38,580 | 15.8-17.5 | 34,830-38,580 | 17.7-19.2 | 39,030-42,340 | 18.3-19.8 | 40,350-43,660 |



Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from our 170-year engineering heritage. 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. And we're proud of what makes Volvo different – **More care. Built in.**



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

VOLVO

Construction Equipment

Volvo Construction Equipment North America, Inc.

One Volvo Drive, Asheville, NC 28803-3447

www.volvoce.com

Ref. No. 22 B 100 1645
Printed in USA 04/06 – 3,0
Volvo, Asheville

English
USA