

**VOLVO EXCAVATORS**

# **UTILITIES/PIPING**



**VOLVO**

# FROM CUT AND COVER TO LIFT AND PLACE, VOLVO KNOWS UTILITIES AND PIPING.

Power, water, sewer, gas, fiber optics — the infrastructure that brings the conveniences of life to the world. None of it would be possible without hydraulic excavators. Volvo B-Series excavators deliver the power, control and pure earth-moving force to install utilities in even the most demanding conditions.

## The excavator of choice

Whether the project involves shallow trenching for electrical conduit or deep digs for sewer lines, Volvo excavators excel in piping applications. The Volvo B-Series is increasingly the excavator of choice for utilities contractors.

It all starts with the rugged boom and arm that deliver the depth and strength to handle any soil condition. Volvo hydraulics provide outstanding breakout force and swing torque, and also the even-handed control needed for lifting and placing pipe or manholes.

## Fuel-efficient Volvo engines

Superior engineering shows in the engine, which is Volvo through and through. With fuel efficiency that will keep your Volvo B-Series excavator at work for two full shifts, these Volvo engines are closely matched to the hydraulic system for optimum performance. 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 "H" mode for digging, trenching and high production. For the control needed in handling pipes or manholes, switch to "F" mode for smooth and even operation.

## Taking care of the operator

Clear views from the operator-designed cab provide extra confidence to operators on complicated digs or delicate placement jobs. Operator comfort and convenience are built into every inch of the cab, to make those long workdays seem a lot shorter.

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

Add it all up and you have excavators made for utilities and piping.

**Commanding views:** Operator visibility



**Attachments:** Buckets, hammers, compaction



**Power:** Easily lift trench boxes or manholes



**Control:** Smooth hydraulics for precision placing





# B-SERIES EXCAVATORS CUT THROUGH WHATEVER THE EARTH DISHES OUT.

Hard clay. Hard pan. Heavy muck. Wet sand. Solid ledge. Shale. Caliche. Whatever soil conditions contractors face on the jobsite, Volvo B-Series excavators have the engineering, hydraulics and power to match. Whether it's compacted desert rock or frost-locked clay, Volvo excavators will master the trench.

## Powerful and responsive

With a high-strength, robotically welded boom and arm, B-Series excavators provide the backbone — and the dig depth — to break the earth and power through the trench. The boom and arm are designed for extreme conditions, providing the strength for digging, cutting, breakout and lifting.

## Advanced hydraulics

Highly responsive hydraulics allow the operator to feel changing soil conditions or obstacles, for precise and safe digging. A long undercarriage provides sure footing and stability for long-reach or deep-dig operations.

Low-effort wrist-control joysticks provide smooth hydraulic control, to make easy work of digging inside a trench box. 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 Advanced Work Mode control system detects the need for additional power in tough soils. Boom and arm regeneration, coupled with dual axial piston pumps, deliver digging performance for fast cycles and quicker job completion.

Volvo B-Series excavators come with factory-installed piping for hammer or shear — no add-ons or wet kits needed.

## Quick coupler extends capabilities

For the most efficient digs, the Volvo-designed quickcoupler allows the operator to easily switch bucket sizes and widths to best suit soil conditions and pipe diameter. 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.



## Key Features

Smart, productive hydraulics

- High breakout forces help cut through tough conditions.
- Easily pull trench boxes and return to digging.
- Power boost supplies ten percent more force as needed.
- System is like an extension of the operator's hands, allowing sensitive "feel" of soil conditions or obstacles.
- Precision control for trench sloping or digging within trench boxes.

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.

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.

Boom, arm options to match jobs

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



# PLENTY OF POWER TO LIFT, SMOOTH CONTROL TO SWING AND PLACE.

The excavator has always been a digging machine. But contractors expect more from their fleets, such as the ability to lift heavy pipe or manholes and carefully place them in the trench.

These pick-and-place operations demand power, torque and control. Volvo B-Series excavators deliver. More.

## Smooth lifting power

It all starts with the lift. Volvo excavators can hoist hefty retention basins, long sections of steel pipe, or heavy manholes with ease. Using the optional Volvo quickcoupler, remove the bucket to add capacity on especially heavy lifts.

With dual variable-action piston pumps, the hydraulic system produces high swing torque to smoothly move trench boxes, catch basins, manholes and sections of heavy 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.

## "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.

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.

## Finishing operations

Power and swing control are just the start. By carefully balancing hydraulic output to load demand, Volvo B-Series excavators also excel at delicate finishing operations such as placing gravel bedding under and around pipes or manholes. That precision gives the operator confident control to tamp and set manholes, or flatten and compact trench bottoms.

## 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 place objects in the trench, or efficiently complete cut-and-cover operations.



## Key Features

Enhanced controllability

- "F" mode delivers superior control and precise movement.
- Low-effort controls reduce operator fatigue and improve cycle times.
- Hydraulic oil flows to arm and boom for simultaneous lifting and placing motion.
- Rebound dampening lessens stress on the machine while maintaining balanced load.
- Control allows precision placement of pipe in section-joining operations.
- Easily complete finishing operations such as pipe bedding or tamping.

Lifting power

- Lift bulky manholes or sections of concrete or steel pipe.
- Ten percent more lifting power in "F" mode.

Quick coupler

- Lifting eye welded right on quickcoupler.
- Easily remove bucket to add lift capacity.



**Control:** Hydraulics allow precision placement



**Quick swing:** Allows for efficient backfilling



**Smooth movement:** Level and compact easily



# CAB BUILT FOR PRODUCTIVITY WITH COMFORT, COMMANDING VIEWS.

True productivity on utilities jobsites relies heavily on the 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

Utility and piping jobs demand good visibility for trenching, lifting, swinging and travel operations. 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 heating, cooling 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.



## Key Features

### Operator station

- Deluxe seat has nine adjustments to suit any size operator.
- Joystick consoles can be adjusted individually, 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 utility and piping 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 that 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.

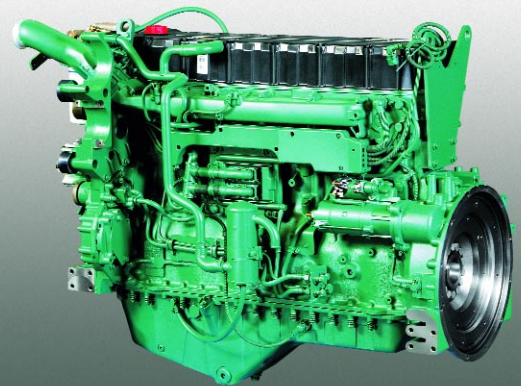
## **Focus on safety**





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.**



									
<b>Engine</b>		<b>Volvo EC140B LC</b>		<b>Volvo EC160B LC</b>		<b>Volvo EC210B LC</b>		<b>Volvo EC210B LNC</b>	
<b>Rated output, at</b>		Volvo D4D EAE2		Volvo D6D EBE2		Volvo D6D EAE2		Volvo D6D EAE2	
ISO 9249/SAE J1349, net	r/s kW	35 69	2,100 93	32 81	1,900 109	32 107	1,900 143	32 107	1,900 143
<b>Track length</b>	m	3,740		3,980		4,460		4,460	
	ft-in	12' 3"		13' 1"		14' 8"		14' 8"	
<b>Track gauge</b>	m	1,990		1,990		2,390		2,040	
	ft-in	6' 6"		6' 6"		7' 10"		6' 8"	
<b>Bucket capacity</b>	m <sup>3</sup>	0,6-0,98		0,78-1,18		0,83-1,55		0,75-1,38	
	yd <sup>3</sup>	0.78-1.28		1.01-1.54		1.08-2.03		0.98-1.80	
<b>Lifting capacity</b>									
along undercarriage	t	3.3	7,170	5.0	10,800	7.1	15,430	7.1	15,430
at reach/height	m	6.0/1.5	20'/5'	6.0/1.5	20'/5'	6.0/1.5	20'/5'	6.0/1.5	20'/5'
<b>Breakout force, SAE</b>	kN	87.3	19,620	105.2	23,660	130.4	29,330	130.4	29,330
<b>Max. digging reach</b>	m	8.3	27' 4"	9.0	29' 5"	9.9	32' 7"	9.9	32' 7"
<b>Max. digging depth</b>	m	5.5	18' 2"	6.0	19' 10"	6.7	22' 1"	6.7	22' 1"
<b>Operating weight</b>	t	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

									
<b>Engine</b>		<b>Volvo EC240B LC</b>		<b>Volvo EC290B LC</b>		<b>Volvo EC330B LC</b>		<b>Volvo EC360B LC</b>	
<b>Rated output, at</b>		Volvo D7E EBE3		Volvo D7E EAE3		Volvo D12D EBE3		Volvo D12D EBE3	
ISO 9249/SAE J1349, net	r/s kW	30 125	1,800 168	30 143	1,800 192	28 184	1,700 247	28 184	1,700 247
<b>Track length</b>	m	4,650		4,870		4,962		5,180	
	ft-in	15' 3"		16' 0"		16' 3"		17' 0"	
<b>Track gauge</b>	m	2,590		2,590		2,590		2,740	
	ft-in	8' 6"		8' 6"		8' 6"		9' 0"	
<b>Bucket capacity</b>	m <sup>3</sup>	1,05-1,98		1,03-2,1		1,25-2,5		1,6-3,0	
	yd <sup>3</sup>	1.37-2.58		1.34-2.75		1.64-3.27		2.09-3.92	
<b>Lifting capacity</b>									
along undercarriage	t	9.1	19,690	10.8	23,370	10.4	22,470	12.0	25,840
at reach/height	m	6.0/1.5	20'/5'	6.0/1.5	20'/5'	7.5/1.5	25'/5'	7.5/1.5	25'/5'
<b>Breakout force, SAE</b>	kN	156.9	35,280	172.6	38,810	209.0	47,190	209.0	47,190
<b>Max. digging reach</b>	m	10.3	33' 8"	10.7	35' 1"	11.1	36' 3"	11.2	36' 8"
<b>Max. digging depth</b>	m	7.0	22' 11"	7.3	24' 0"	7.4	24' 2"	7.5	24' 7"
<b>Operating weight</b>	t	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

					
<b>Engine</b>		<b>Volvo EC460B LC</b>		<b>Volvo EC700B LC</b>	
<b>Rated output, at</b>		Volvo D12D EAE3		Volvo D16E EAE3	
ISO 9249/SAE J1349, net	r/s kW	30 235	1,800 316	30 316	1,800 424
<b>Track length</b>	m	5,370		5,990	
	ft-in	17' 7"		19' 8"	
<b>Track gauge</b>	m	2,740		3,350	
	ft-in	9' 0"		11' 0"	
<b>Bucket capacity</b>	m <sup>3</sup>	1,73-3,78		2,48-6,6	
	yd <sup>3</sup>	2.26-4.94		3.24-8.63	
<b>Lifting capacity</b>					
along undercarriage	t	13.8	29,820	19.2	41,510
at reach/height	m	7.5/1.5	25'/5'	7.5/1.5	25'/5'
<b>Breakout force, SAE</b>	kN	244.2	54,900	356.0	80,030
<b>Max. digging reach</b>	m	12.0	39' 4"	13.2	43' 3"
<b>Max. digging depth</b>	m	7.7	25' 3"	8.4	27' 7"
<b>Operating weight</b>	t	44.3-48.6	97,570-107,120	68.3-70.6	150,600-155,670

							
<b>Engine</b>		<b>Volvo EC210B LR</b>		<b>Volvo EC240B LR</b>		<b>Volvo EC290B LR</b>	
<b>Rated output, at</b>		Volvo D6D EAE2		Volvo D7E EBE3		Volvo D7E EAE3	
ISO 9249/SAE J1349, net	r/s kW	32 107	1,900 143	30 125	1,800 168	30 143	1,800 192
<b>Track length</b>	m	4,460		4,650		4,870	
	ft-in	14' 8"		15' 3"		16' 0"	
<b>Track gauge</b>	m	2,390		2,590		2,590	
	ft-in	7' 10"		8' 6"		8' 6"	
<b>Bucket capacity</b>	m <sup>3</sup>	0,52		0,52		0,52/0,57	
	yd <sup>3</sup>	0.68		0.68		0.68/0.75	
<b>Lifting capacity</b>							
along undercarriage	t	3.0	6,410	3.9	8,450	4.7	10,160
at reach/height	m	10.5/1.5	35'/5'	10.5/1.5	35'/5'	10.5/1.5	35'/5'
<b>Breakout force, SAE</b>	kN	68.6	15,430	68.6	15,440	69.1	15,550
<b>Max. digging reach</b>	m	15.8	51' 10"	18.3	60' 1"	18.6	61' 0"
<b>Max. digging depth</b>	m	12.1	39' 8"	14.4	47' 1"	14.8	48' 6"
<b>Operating weight</b>	t	23.2	51,200	27.9	61,520	31.7	69,900



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**

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