

VOLVO WHEEL LOADERS

EXTRACTION LOADING



VOLVO

Moving mountains just got a lot easier





With a Volvo wheel loader on the job, moving material quickly and efficiently with minimum impact on the machine, operator, and environment is easily done. That's because Volvo wheel loaders are designed and built from the beginning for maximum productivity and efficiency, high operator comfort and safety, and easy access for daily maintenance and service.

With the L330E at the top of the range, Volvo wheel loaders have the power, force, and durability required in quarries and hard banks. High penetration capacity and excellent rimpull is the result of well-matched components working together in perfect harmony.

When properly equipped with original attachments and extra equipment, Volvo wheel loaders can effectively challenge much larger wheel loaders thanks to their superior speed, maneuverability, operator comfort, and overall operating economy. Together with a well-established service and support network, Volvo Wheel Loaders offers the complete package solution for your business needs.

So whether your face loading shot rock, rehandling processed materials, or working in an underground mine, you'll be hard pressed to find a more dependable or durable wheel loader than a Volvo.

Created for the toughest environments. Purpose-built for demanding customers. - Volvo standard features

Building on 50 years in the industry, Volvo wheel loaders are no strangers to extraction loading. Many standard features on the Volvo E-series wheel loaders are specifically developed to withstand the abuse encountered in tough environments like loading blasted rock.



Productive

- All systems and components are perfectly matched for operator efficiency, quality and reliability, and higher productivity.
- Load sensing working hydraulics are smooth and responsive, easy to operate, and designed for all operators.
- Load sensing steering hydraulics give quick response and precise movements for safe operation during transport.
- Volvo's linkage systems feature excellent rollback angles at carry position for good load retention and less spillage.



Economical

- Volvo's high performance low emission engines, Volvo developed drivetrains, and efficient hydraulics result in extremely low fuel consumption and higher availability.
- The load sensing hydraulic system only distributes the exact amount of oil required to the function being used for minimal power losses and low fuel consumption.
- Rugged frames and widely spaced, well-sealed center hinge bearings contribute to long life and low operating costs.
- Air entering the engine first passes through a 3-stage cleaning system, helping to increase service life. Also, the air is ventilated from all major components with easy to replace breather filters, used to prevent impurities from entering the transmission, axles, fuel tank and hydraulic tank.



Comfortable

- The ergonomic design of the operator's workstation with adjustable controls and well-placed instruments means less fatigue and increased Operator efficiency during long shifts.
- Volvo's Care Cab is vibration-isolated and sound insulated for extremely low internal sound levels.
- The cab filtration system not only cleans the incoming air, but also the re-circulated air inside the cab, making it one of the cleanest cabs on the market.
- The frames feature a long wheel base, wide center hinge spacing, and a 3-point power train mounting, resulting in less vibrations and a more comfortable ride.





Safety and Environment

- Angled ladders, anti-slip walkways, and a large door opening provide easy and safe access to the machine.
- Excellent panoramic visibility gives effective control over the entire work area.
- Electronic brake test in Contronic, easy-to-check brake wear indicators and an automatically activated parking brake are all ways to ensure safe and effective braking.
- Low exhaust emissions and low fuel consumption for minimal environmental impact.

Service Friendly

- Large, easy-to-open service panels and a swing-out cooling fan make it quick and easy to access necessary service points for cleaning or maintenance.
- Standardization and commonality of components reduces the number of spare parts and helps to simplify service and repair methods for minimal downtime.
- Contronic electronic monitoring system continuously controls, monitors, informs, and warns the operator of the machine's status. Other features include monitoring of oil and fluid levels, fuel consumption data, and service intervals.
- Extended service intervals, up to 500 hours for engine oil and filter and 4000 hours for hydraulic oil, mean less downtime for maintenance.



Whatever the job, we have the tools to get it done

- optional equipment

Volvo offers a full range of equipment that has been specifically designed for your business. You pick the options that are right for you and your application. The following equipment is recommended in extraction loading to help increase productivity, economy, comfort, serviceability, and safety.

Boom Suspension System (BSS)

BSS effectively absorbs shocks and reduces the bouncing and rocking that often occurs when operating on rough ground. Volvo's Boom Suspension System offers two different operating modes for faster cycle times, higher productivity and improved operator comfort in all types of extraction applications.

Comfort Drive Control (CDC)

When operating with CDC, there is a significant reduction of repetitive and tiring steering wheel movements. Comfort Drive Control provides comfortable operation of steering and shifting with user-friendly controls integrated in the left armrest. CDC is especially effective in short cycle loading applications, where continuous operation with the steering wheel can cause fatigue and static muscle strain.

Central lubrication system

Volvo's factory mounted central lubrication system automatically lubricates service points on the machine so you don't have to. Uniform application of lubricant ensures that the lubrication points always have the correct amount of grease. It cuts maintenance costs and downtime, which means higher productivity and reduced operating costs.

Rearview camera with color monitor

Engine hood mounted camera eliminates blind spots when reversing. The color monitor located inside the cab shows the operator what's happening to the rear. This is especially useful when working in tight areas or where there is a lot of traffic and people working around the machine.



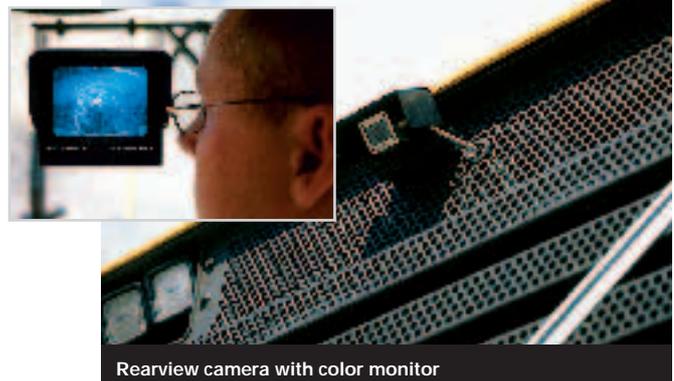
Boom Suspension System (BSS)



Comfort Drive Control (CDC)



Central Lubrication System



Rearview camera with color monitor

Operator seats

Volvo offers a wide variety of ergonomic operator seats that are designed with the operator's comfort and protection in mind. All seats provide excellent support and are individually adjustable to suit all sizes and types of operators. From the simplest to the most advanced air-suspended model, these seats are made to absorb the severe stresses encountered in tough applications so you don't have to.

Long boom

A long boom gives the extra dump height and reach necessary for loading high trucks or feeders. The additional reach also gives added protection when loading the bucket by keeping the machine further away from the material. (L120E-L330E)

Differential options

An automatic limited slip differential on the rear axle can be combined with the 100% differential lock on the front axle for maximum traction in all types of conditions. Furthermore, a limited slip option on both axles exists for the L220E (std on L330E).

External axle oil cooling

Axle oil coolers provide effective cooling of the axle oil and brakes in applications where heavy loads, frequent braking and long transport distances are common.

Return-to-dig

Return-to-dig is an electrically controlled hydraulic function that automatically lowers the boom to a preset dig position. Movement is dampened until the boom comes to a smooth stop at the preset position. Return-to-dig simplifies bucket handling for increased productivity and higher operator comfort, especially during short cycle loading operations.

Higher amperage alternator

Extra current from the larger alternator promotes faster battery charging and gives more electrical power for two way radios, cell phones, etc.

Air filter for alternator

An air filter connected to the alternator cleans all incoming air. In dirty and dusty environments, it greatly increases both the effectiveness and lifetime of the alternator (std. on L330E).

Engine air pre-cleaners

Sy-Klone and Turbo II branded pre-cleaners, as well as Volvo's own oil bath pre-cleaner, are available for increased purification of the engine induction air. In addition to increased cleaning capacity, these air pre-cleaners lengthen service intervals, therefore reducing maintenance time.

Asbestos cab filter

This air filter helps protect the operator in conditions where the air is contaminated with asbestos or other small, harmful particles.

Flexible cab access ladders

Flexible rubber side members have been extended to support two steps of the cab access ladders. In addition to being flexible, they have also been brought closer to the machine, making it difficult to damage or destroy the access ladders in extreme conditions. (L150E-L220E)

Tires

- **L-3:** Recommended where traction and self-cleaning are required. Cut resistance is not as important due to nature of the material being handled. Typical applications include sand and gravel loading, rehandling processed materials or load and carry operations on good roads. Wide base (65-series) L-3 tires are recommended in applications where extra stability and floatation are required, e.g. soft underfoot conditions such as sand.
- **L-4:** Recommended in applications where abrasive material is being handled and extra protection against cut resistance is necessary. Examples include rock loading, aggregate loading or loading material with poor underfoot conditions. L-4 tires can even be used in L-5 type applications where better heat resistance is required, e.g. long load and carry operations.
- **L-5:** These tires are necessary in aggressive environments where tire damage is common. Extra deep tread increases useful life and provides protection when loading material like blasted rock.

Other optional equipment

Air conditioning with Automatic Temperature Control (ATC)
Full coverage mudguards
Protection options
Secondary steering
Warning beacon
Extra worklights
Reverse lights
Fast fill fueling system (L330E)

Working together

- Volvo genuine buckets and wear parts

Volvo genuine buckets and wear parts are built to the same quality standard as our wheel loaders. As a machine manufacturer, we have both the knowledge and information to design our attachments as an integral part of the loader. Machines and attachments that are made for each other obviously work best together.

Buckets for bank loading and loading from stockpiles

General purpose straight edge bucket

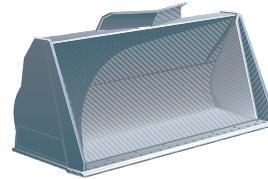
The general purpose bucket has an angled floor for good penetration and excellent fill factors. It can be equipped with either bolt on edge savers or teeth, enabling it to be used in many different applications or materials. Recommended for loading sand, gravel or other materials from banks or stockpiles.



Volvo	Volume range
L110E	2,5-3,3 m ³ (3.3-4.3 yd ³)
L120E	2,5-3,5 m ³ (3.3-4.6 yd ³)
L150E	3,5-4,5 m ³ (4.6-5.9 yd ³)
L180E	3,8-4,8 m ³ (5.0-6.3 yd ³)
L220E	4,7-6,5 m ³ (6.1-8.5 yd ³)
L330E	7,0-8,3 m ³ (9.2-10.9 yd ³)

Flat floor straight edge bucket

Flat floor buckets have a smooth, flat floor, which is good for maintaining a clean and level work area. This type of bucket can be fitted with bolt on edge savers or teeth and is recommended for loading trucks from banks or stockpiles.

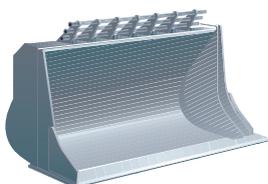


Volvo	Volume range
L110E	3,0 m ³ (3.9 yd ³)
L120E	3,0-3,4 m ³ (3.9-4.4 yd ³)
L150E	4,0-4,2 m ³ (5.2-5.5 yd ³)

Buckets for rock handling or other abrasive material

Straight edge rock bucket

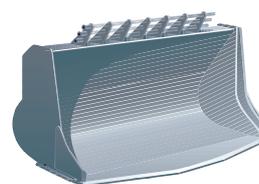
Straight edge rock buckets are good for removing easily broken material from banks that require higher penetration and break-out capacity. The straight edge gives better dump height and load retention than a spade nose bucket. It can be equipped with either bolt on edge savers or teeth in combination with segments.



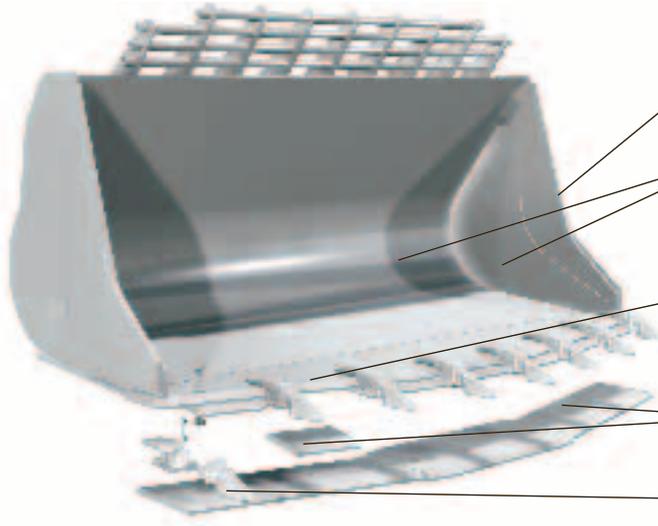
Volvo	Volume range
L110E	3,0 m ³ (3.9 yd ³)
L120E	3,0 m ³ (3.9 yd ³)
L150E	3,6-3,8 m ³ (4.7-5.0 yd ³)
L180E	4,2-4,4 m ³ (5.5-5.8 yd ³)
L220E	4,3-4,5 m ³ (5.6-5.9 yd ³)
L330E	6,1-6,9 m ³ (8.0-9.0 yd ³)

Spade nose rock bucket

The spade nose rock bucket is the best choice for breaking out hard and stony material or blasted rock. It is most commonly fitted with teeth and segments, but when loading gravel, crushed rock or ore, it can be fitted with bolt on edge savers.



Volvo	Volume range
L110E	2,6-2,9 m ³ (3.4-3.8 yd ³)
L120E	2,6-2,9 m ³ (3.4-3.8 yd ³)
L150E	3,4-3,5 m ³ (4.4-4.6 yd ³)
L180E	3,7-4,2 m ³ (4.8-5.5 yd ³)
L220E	4,4-5,0 m ³ (5.8-6.5 yd ³)
L330E	6,1-7,5 m ³ (8.0-9.8 yd ³)



- Side cutters with extra hardened and tempered steel wear plates provide high abrasion resistance (up to 500 Brinell)
- Bucket shell and side plates (up to 400 Brinell)
- Reinforced load transition structures reduce wear and increase useful life
- Base cutting edge manufactured from abrasion resistant steel (500 Brinell)
- Replacable bolt-on bottom wear plates (500 Brinell)
- Bolt on edge savers and segments help protect the cutting edge from excessive wear (500 Brinell)
- Volvo Tooth System with bolt on or weld on adapters for excellent penetration and reduced bucket wear (up to 515 Brinell)

Volvo genuine wear parts

Because all applications are different, Volvo offers a wide selection of replacable wear plates, bolt on edge savers, segments, and the Volvo Tooth System. Volvo's wear parts are specifically designed to boost productivity, lower operating and maintenance costs and reduce wear on your wheel loader and attachments.

Bolt on edge savers and segments

Bolt on edge savers and segments are available for either straight edge or spade nose buckets. They are easy to fit and are both reversible and movable, resulting in a more even wear pattern, longer service life, and lower maintenance costs. Segments between teeth provide a smooth clean floor while at the same time increasing useful wear life for both the base cutting edge and adapters. Segment kits are not to be used in combination with flush mounted adapters.

Volvo Tooth System

Volvo's unique tooth system is designed for excellent break-out penetration and long life. The wide range of adapters and teeth encompasses all applications, from handling easily broken bank materials to hard and rocky materials, such as blasted rock. Adapters are available in both weld on and bolt on versions, including flush mounted, 1 1/2 leg and 2 leg strap designs. Teeth are available in four different types and vary in abrasion resistance according to the material being loaded.



Support you can depend on - Volvo Customer Support

The foundation of success for all Volvo Construction Equipment products is your local Volvo Dealer. When you're backed by Volvo, your wheel loader is backed by thousands of skilled parts and service people all over the world.

Genuine Volvo parts are manufactured to the most stringent specifications, guaranteeing compatibility, superior performance and a long service life. Factory remanufactured components give you the same performance, service life and warranty as a new component with minimum downtime for replacement. Volvo's PC-based MACHine TRacking Information System (MATRIS) provides a comprehensive report on your Volvo wheel loader's working history. Using Contronic to download key performance data, MATRIS analyzes the data and provides you with a detailed report outlining the machine's operating history. With this information, you can maximize control of your machine's operation to increase

profitability, efficiency and uptime. Volvo also offers a wide range of customer support agreements individually tailored to ensure that your equipment and fleet continuously deliver the high productivity and availability you expect from Volvo.

Your local Volvo Dealer is fully equipped and trained to support every aspect of our products and your business with parts support, service assistance and training. When you select Volvo, you select a global organization that knows your machine. Our support network has the parts, equipment and knowledge to keep your operation running day after day.



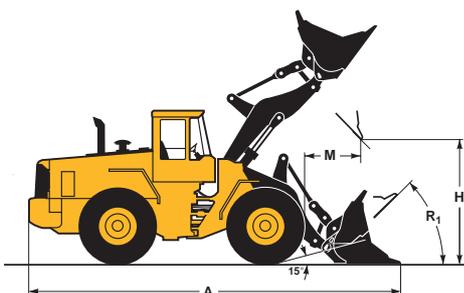
Specifications



	Volvo L110E STE P BOE		Volvo L120E STE P BOE		Volvo L150E STE P BOE	
	Standard	Long Boom	Standard	Long Boom	Standard	Long Boom
Engine						
SAEJ1995 gross kW(hp)	155 (210)		165(224)		211(287)	
ISO 9249, SAEJ 1349 net kW(hp)	154 (209)		164(223)		210(284)	
Volume, heaped ISO/SAE	m ³	2,9	3,6	2,6	4,0	3,7
Static tipping load, straight	kg	13 070	13 840	11 740	17 440	14 060
at full turn	kg	11 230	11 790	9 970	15 320	12 250
Breakout force	kN	156,5	147,3	181,2	170,7	190,8
A Overall length	mm	7 850	8 130	8 380	8 640	9 060
H Dump height at full lift and 45° discharge	mm	2 870	2 830	3 520	3 000	3 640
M Reach at full lift and 45° discharge	mm	1 110	1 230	1 040	1 220	1 140
R₁ SAE carry position	°	45	48	50	48	48
Operating weight	kg	18 170	19 130	19 080	23 170	23 400
Tire size		23.5R25 L3	23.5R25 L3		26.5R25 L3	



	Volvo L180E SPN P T SEG		Volvo L220E SPN P T SEG		Volvo L330E SPN P T SEG	
	Standard	Long Boom	Standard	Long Boom	Standard	Long Boom
Engine						
SAEJ1995 gross kW(hp)	223(303)		259(352)		370(503)	
ISO 9249, SAEJ 1349 net kW(hp)	221(300)		258(351)		369(502)	
Volume, heaped ISO/SAE	m ³	4,2	4,2	4,5	4,5	6,7
Static tipping load, straight	kg	21 630	18 030	23 920	21 100	34 860
at full turn	kg	18 900	15 670	20 960	18 410	30 760
Breakout force	kN	184,4	197,0	191,4	195,6	366,0
A Overall length	mm	8 920	9 370	9 570	9 890	10 930
H Dump height at full lift and 45° discharge	mm	3 050	3 560	3 040	3 400	3 250
M Reach at full lift and 45° discharge	mm	1 350	1 370	1 700	1 670	2 190
R₁ SAE carry position	°	48	53	47	47	51
Operating weight	kg	27 760	27 970	32 660	32 870	50 730
Tire size		26.5R25 L5	26.5R25 L5	29.5R25 L5	29.5R25 L5	35/65R33 L5



Notes: Dimensions only apply to Volvo original attachments.
For additional dimensions, see standard machine specification brochure.



Technology on Human Terms

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

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 website:
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

Construction Equipment

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