

**VOLVO WHEEL LOADER**

# **L120E**



**VOLVO**

# L120E – STRONG AND VERSATILE

Volvo's 20 ton wheel loader is packed with loads of power to make your job easier everyday. The tireless L120E represents yet another leap in the stride for higher productivity. The versatility of this Volvo wheel loader makes it the obvious choice in a wide range of industries and applications, including moving material in sand and gravel pits, loading cargo vessels and rail cars, handling wood chips at paper mills and unloading timber trucks.

Volvo has developed and manufactured wheel loaders for half a century. The goal has always been to create the optimal machine for maximum performance and productivity, high operator comfort, and unmatched flexibility. Now, the latest experiences and leading technology have resulted in the Volvo L120E. The high performance, low emission engine delivers close to maximum power already at low rpm. Furthermore, the powerful patented TP linkage, combined with Volvo's purpose-built range of attachments, provides the flexibility needed to handle a variety of tasks. Advanced technology helps to make this a swift, versatile and fuel efficient production machine in any application.

## Get more done

You'll find the L120E a pleasure to operate. In this respect, competing loaders simply can't compete. It's powerful, agile and easy to maneuver. Sitting comfortably in an ergonomically designed seat, you have total control

over the machine. Engine and hydraulics respond immediately to your commands. Visibility is panoramic and the air in the cab is always fresh. Both operator and machine get more done with a lot less haste.

## A great deal for your investment

Proven reliability, excellent financing, extremely low fuel consumption and a high trade-in value provide the cornerstones of a safe investment. Add to that outstanding handling and productivity, a market-leading operator environment to protect the person in the machine, quick and simple daily maintenance and modest service requirements.

And what do you get? The most cost efficient loader in its class, delivering unparalleled profitability — both now and in years to come.

With the L120E, everybody is a winner. Quite simply, a great deal for your money.



## Specifications L120E

Engine:	Volvo D7E LA E3 Stage III A/Tier 3
Max power at SAE J1995 gross ISO 9249,	28,3 r/s (1700 rpm) 180 kW (245 hp)
SAE J1349 net	179 kW (243 hp)
Breakout force:	162,2 kN*
Static tipping load at full turn:	12 020 kg*
Buckets:	2,5 – 9,5 m <sup>3</sup>
Log grapples:	1,1 – 2,4 m <sup>2</sup>
Operating weight:	19,0 – 21,0 t
Tires:	23.5 R25 750/65 R25

\* Bucket: 3,4 m<sup>3</sup> straight edge with bolt-on edges.  
Tires: 23.5 R25 L3. Standard boom.





# POWER UP YOUR PRODUCTIVITY

Load more tons per hour with the Volvo L120E. Its powerful engine and the Automatic Power Shift (APS) gear shifting system provide immediate response even in the toughest conditions. And Volvo axles are designed to ensure that the rimpull is there when needed. Torque Parallel linkage (TP linkage), load sensing hydraulics, smooth steering and stable operation help make the L120E a precision performer.

## **The only thing modest about this machine is its fuel consumption**

Even at low rpm, the 7-liter high performance engine delivers full power and maximum torque. The machine responds quickly and forcefully with excellent rimpull, full hydraulic power, low fuel consumption and low emissions. And thanks to the low rpm performance, the service life of the engine is extended.

## **Responds to your commands**

The Volvo fully automatic countershaft transmission provides smooth and effective gear shifting. All the operator has to do is select forward or reverse and APS automatically selects the right gear according to both engine rpm and ground speed. Volvo's in-house engineered axles and drivetrain are well matched and designed for top dependability. And Volvo's oil circulation cooled wet disc brakes provide smooth, effective braking — and, of course, a long service life.

## **Torque Parallel linkage — a breakthrough in the industry**

The reliable TP linkage, Volvo's patented lift-arm system, delivers high and even breakout torque throughout the entire lifting range. The system is exceedingly user-friendly. The operator can easily handle heavy materials and maintain full control in all positions.

## **Hydraulics that make sense**

The Volvo L120E features an intelligent load sensing system for both the main and steering hydraulics. Two variable piston pumps provide the exact flow and pressure required at any given moment, distributing power when and where it's needed. In addition to rapid response, this system facilitates smoother operation, lower fuel consumption, and precise control, even at low rpm.

## **Engine**

- Volvo D7E, a turbocharged, air-to-air intercooled low emission engine with electronically controlled fuel injection delivers high torque even at low rpm.
- The electronically controlled hydrostatic fan is only activated when necessary, thus saving fuel.

## **Transmission**

- With Volvo's 3rd generation of APS, the operator can select between four different operating modes, including the new AUTO function, which adaptively chooses the most convenient shifting program for the job at hand, equally weighing the operator's driving habits together with the operating cycle.
- The 3rd generation APS now has fully automatic shifting 1-4, meaning all the operator has to do is choose forward or reverse.

## **Axles/Brakes**

- The Volvo axles are fully integrated with the drivetrain, delivering superior rimpull.
- Oil circulation cooled wet disc brakes ensure effective braking and a long service life.
- An electronic brake test in Contronic gives you instant access to the status of the brakes.
- A brake wear indicator on each wheel allows you to easily check the brake pad wear.

## **Steering**

- Load-sensing steering only uses power when it's needed, thereby saving fuel.
- E-series loaders feature an accumulator system, providing stable, smooth steering and greater safety.

## **Frame**

- Rugged frame design for secure mounting of components increases the service life of the machine.
- Volvo's frame joint bearing design is a well-proven concept that's easy to maintain and renowned for its long service life.





**TP linkage**

- Unique patented lift-arm system, which provides two solutions in one: excellent breakout torque and parallel action throughout the entire lifting range.

**Load-sensing hydraulics**

- The load-sensing hydraulic system ensures that hydraulic oil is pumped around the system only when and where it's needed. This means greater efficiency and lower fuel consumption.

- Pilot-operated hydraulics allow precise control of the attachments, making life easier, and safer, for the operator.

# AN ALERT OPERATOR IS A PRODUCTIVE OPERATOR

Volvo Care Cab with the Contronic monitoring system reinforces Volvo's reputation as a leader in operator environments and cab comfort. We never forget the operator inside the machine. A comfortable, operator-friendly and safe environment makes the workday easier and more productive.

## **A clean and comfortable workplace**

The right cab climate does wonders for efficiency, keeping operators sharp during long shifts. In fact, all incoming air is filtered in two stages, making this one of the cleanest cabs on the market. Even the recirculated air is filtered. Furthermore, Volvo's state-of-the-art air-conditioning\* provides a pleasant temperature year-round, regardless of outdoor conditions. So even after a long work shift, the air in the cab is still fresh and the operator's mind is still clear.

## **Comfort and productivity go hand-in-hand**

There is a range of comfortable seats, all of them with multiple adjustment functions for optimal individual comfort. All instruments are visible at a glance, and all important information is right in front of the operator. The forward, reverse and kick-down functions are situated both on the lever on the left-hand side of the steering wheel and on the hydraulic console to the right. And thanks to Comfort Drive Control (CDC)\*, you can steer, change directions and kickdown to first gear with easy-to-use controls integrated into the left-hand armrest — an excellent way to combat fatigue and static muscle strain. Furthermore, to avoid monotonous arm movements, you can shift at any time from lever steering to using the steering wheel.

## **Contronic keeps an eye on everything**

Contronic, the highly reliable control and monitoring system from Volvo, continuously monitors the machine's operation and performance. The system is an electronic network made up of three computers. Operating at three levels, the system keeps an eye on the machine's various functions in real-time. If a potential problem should occur, the system generates an immediate warning, making the operator aware of the condition. All operating data is saved and can be used to analyze how the machine performs and also to trace its history since the latest service. The machine's functions can be updated for optimal adaptation to new and changing operating conditions via the Contronic service display tool. With VCADS Pro, it's also possible to check and adjust the machine's functions and performance characteristics.

## **Low noise levels**

Thanks to its ingenious rubber mounting system and heavy-duty insulation, the Care Cab is one of the quietest cabs on the market. By reducing tiresome earfuls and annoying vibrations, the operator will stay sharp throughout the shift. In short, it's a great place to work.



## **Care Cab**

- Unrivalled operator environment with one of the market's best cab filtration systems.
- Pleasant interior with superior finish makes it easy to maintain and keep clean.
- Adjustable seat, armrest, hydraulic lever console and steering wheel\* for optimal operator comfort and high production.
- Contronic, a superior control and monitoring system, designed to increase safety and productivity.
- All service platforms and entry ladders boast improved anti-slip surfaces. Sloped entry ladder for easy cab access.
- Large windscreens, narrow pillars and a sloped engine hood ensure good panoramic visibility, thus further increasing safety.
- Powerful halogen lighting to the front and rear provides good visibility over the entire work area.

\* Optional equipment





# VOLVO'S COMMITMENT TO NATURE AND MANKIND

Quality, safety, and care for the environment are Volvo's core values. Indeed, we see our commitment as an integral part of our operation. Few machines have to work in tougher conditions. The ultimate goal is maximized productivity and efficiency for the lowest cost per hour, with minimized environmental impact. For instance, plants and manufacturing processes are certified in accordance with ISO 14001. This is but one example of our tangible commitments and high quality standards. And that's why Volvo customers get one of the most environmentally considerate and dependable wheel loaders on the market.

## **A winner for years to come**

Your Volvo L120E has to be a winner — both in day-to-day and long-term operations, always operating economically with maximum consideration of the environment. The machinery has to be trusted in all aspects. It must deliver the anticipations of productivity and economy. High quality and easy maintenance are imperative for keeping up the work process. The high performance low emission engine is both good for your business and for the environment.

## **Comfortable and quiet operator's environment**

The operator inside deserves a comfortable, reliable and safe machine to work with. A good environment helps to spare operator, equipment and nature for years to come. The Volvo L120E is a super competitive wheel loader that puts the operator right in the middle, literally speaking. Tedious vibrations and noise have been heavily reduced. If the operator feels comfortable and secure, it's easier to stay attentive.

## **More than 95% recyclable**

The L120E is almost completely recyclable. We see it as a natural step in our commitment. Components such as the engine, transmission and hydraulics are re-engineered and re-used in our Parts Exchange program. The equipment has to be as trustworthy, service-friendly, productive and as cost-effective as possible. Choose this wheel loader for maximum productivity and minimal impact on operator, machinery and environment. Feel free to feel secure in a Volvo L120E.

## **Quality**

- The air is vented from all major components with easy to replace breather filters, used to prevent dirty air from entering the transmission, axles, fuel tank, and hydraulic tank.
- All electrical wires are routed through sturdy conduits, protected from water, dust, and abrasion with rubberized connectors and terminal caps.
- The L120E is designed from the beginning for easy service and maintenance. Easy access to all components lays the foundation for shorter service and maintenance time and longer life.

## **Safety**

- A dual-circuit service brake system that fulfills all requirements according to ISO 3450, electronic brake test in Contronic and easy to check brake wear indicators are all ways to ensure safe and effective braking.
- Volvo Care Cab is tested and approved according to ROPS ISO 3471 and FOPS ISO 3449 standards.
- Optimized panoramic visibility gives effective control over the entire work area.
- The L120E has steps and platforms that are equipped with anti-slip surfaces and well positioned hand rails.

## **Environment**

- The low rpm, high performance D7E engine meets all current emission requirements according to stage 3 legislation in Europe and the US.
- The L120E is manufactured in environmentally certified factories according to ISO 14001.
- The L120E is more than 95% recyclable according to material weight.
- Low external and internal sound levels.





# VOLVO L120E IN DETAIL

## Engine

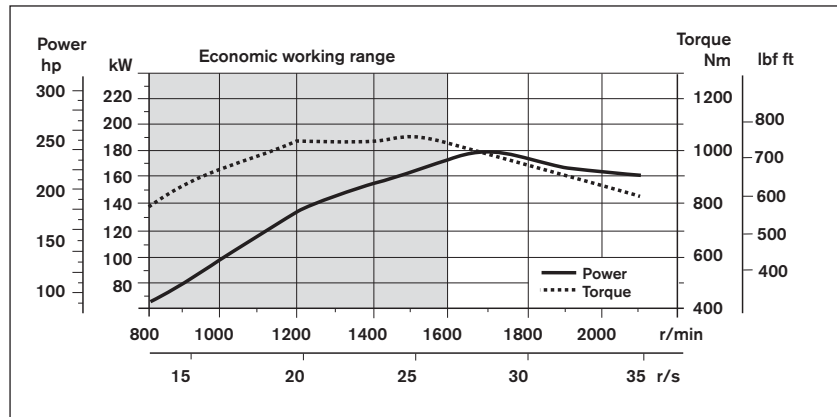
7 liter, 6-cylinder straight turbocharged diesel engine with common rail fuel injection system and switchable Internal Exhaust Gas Recirculation (I-EGR). The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats. The throttle application is transmitted electrically from the throttle pedal or the optional hand throttle. Air cleaning: three-stage. Cooling system: Air-to-air intercooler and hydrostatic, electronically controlled fan.

<b>Engine</b>	Volvo D7E LA E3
<b>Max power at</b>	28,3 r/s (1700 r/min)
<b>SAE J1995 gross</b>	180 kW (245 hp)
<b>ISO 9249, SAE J1349</b>	179 kW (243 hp)
<b>Max torque at</b>	25 r/s (1500 r/min)
<b>SAE J1995 gross</b>	1065 Nm
<b>ISO 9249, SAE J1349</b>	1059 Nm
<b>Economic working range</b>	800-1600 r/min
<b>Displacement</b>	7,1 l

## Electrical system

Central warning system: Central warning light for the following functions, (buzzer with gear engaged): Engine oil pressure, charge-air temperature, fuel temperature, transmission oil pressure, brake pressure, parking brake applied, hydraulic oil level, steering pressure, low coolant level, coolant temperature, transmission oil temperature, hydraulic oil temperature, overspeeding in engaged gear, brake charging, axle oil temperature.

<b>Voltage</b>	24 V
<b>Batteries</b>	2x12 V
<b>Battery capacity</b>	2x140 Ah
<b>Cold cranking capacity, approx</b>	1050 A
<b>Reserve capacity, approx</b>	270 min
<b>Alternator rating</b>	1540 W/55 A
<b>Starter motor output</b>	5,5 kW (7,5 hp)



## Drivetrain

Torque converter: single-stage. Transmission: Volvo countershaft transmission with single lever control. Fast and smooth shifting of gears between forward and reverse with Pulse Width Modulation (PWM) valve. Gearshifting system: Volvo Automatic Power Shift (APS) with fully automatic shifting 1-4 and mode selector with 4 different gearshifting programs, including AUTO. Axles: Volvo fully floating axle shafts with planetary hub reductions and cast steel axle housings. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle.

<b>Transmission</b>	Volvo HTE 205
<b>Torque multiplication</b>	2,85:1
<b>Maximum speed, forward/reverse</b>	
1	7,1 km/h
2	13,1 km/h
3	24,7 km/h
4	35,1 km/h
<b>Measured with tires</b>	23.5 R25 L2
<b>Front axle/rear axle</b>	Volvo/AWB 31/30
<b>Rear axle oscillation</b>	±13°
<b>Ground clearance at 13° oscillation</b>	460 mm

## Brake system

Service brake: Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated, fully sealed oil circulation-cooled wet disc brakes. The operator can select automatic disengagement of the transmission when braking using Contronic. Parking brake: Fully sealed, wet multi-disc brake built into the transmission. Applied by spring force and electro-hydraulically released with a switch on the instrument panel. Secondary brake: Dual brake circuits with rechargeable accumulators. Either one circuit or the parking brake fulfills all safety requirements. Standard: The brake system complies with the requirements of ISO 3450.

<b>Number of brake discs per wheel front/rear</b>	1/1
<b>Accumulators</b>	3x1,0 l
<b>Accumulator for parking brake</b>	1x1,0 l



### Steering system

Steering system: Load-sensing hydrostatic articulated steering. System supply: The steering system has priority feed from a load-sensing axial piston pump with variable displacement. Steering cylinders: Two double-acting cylinders.

<b>Steering cylinders</b>	2
<b>Cylinder bore</b>	80 mm
<b>Piston rod diameter</b>	50 mm
<b>Stroke</b>	486 mm
<b>Working pressure</b>	21 MPa
<b>Maximum flow</b>	120 l/min
<b>Maximum articulation</b>	±40°

### Cab

Instrumentation: All important information is centrally located in the operator's field of view on the Contronic monitoring system's display unit. Heater and defroster: Heater coil with filtered fresh air and fan with four speeds. Defroster vents for all window areas. Operator seat: Ergonomic seat with adjustable suspension and retractable seatbelt. The seat is mounted on a bracket, which is mounted on the rear cab wall. The forces from the retractable seat belt are absorbed by the seat rail. Standard: The cab structure is tested and approved according to ROPS (ISO 3471) and FOPS (ISO 3449). The cab meets all requirements according to ISO 6055 (Operator Overhead Protection - Industrial Trucks) and SAE J386 (Operator Restraint System).

<b>Emergency exits</b>	1
<b>Sound level in cab according to ISO 6396</b>	LpA 68 dB (A)
<b>External sound level according to ISO 6395 (Directive 2000/14/EC)</b>	LwA 106 dB (A)
<b>Ventilation</b>	9 m <sup>3</sup> /min
<b>Heating capacity</b>	11 kW
<b>Air conditioning (optional)</b>	8 kW

### Hydraulic system

System supply: Two load-sensing axial piston pumps with variable displacement. The steering system always has priority. Valves: Double-acting 2-spool valve. The main valve is controlled by a 2-spool pilot valve. Lift function: The valve has four positions including lift, hold, lower and float. Inductive/magnetic automatic boom kick-out can be switched on and off and is adjustable to any position between maximum reach and full lifting height. Tilt function: The valve has three functions including rollback, hold and dump. Inductive/magnetic automatic tilt can be adjusted to the desired bucket angle. Cylinders: Double-acting cylinders for all functions. Filter: Full flow filtration through 20 micron (absolute) filter cartridge.

<b>Working pressure maximum, pump 1</b>	25,0 MPa
<b>Flow at and engine speed</b>	145 l/min 10 MPa 32 r/s (1900 r/min)
<b>Working pressure, pump 2</b>	21,0 MPa
<b>Flow at and engine speed</b>	110 l/min 10 MPa 32 r/s (1900 r/min)
<b>Pilot system</b>	
<b>Working pressure</b>	3,5 MPa
<b>Cycle times</b>	
<b>Raise*</b>	5,4 s
<b>Tilt*</b>	2,1 s
<b>Lower, empty</b>	2,5 s
<b>Total cycle time</b>	10,0 s

\* with load as per ISO 14397 and SAE J818

### Lift arm system

Torque Parallel linkage (TP linkage) with high breakout torque and parallel action throughout the entire lifting range.

<b>Lift cylinders</b>	2
<b>Cylinder bore</b>	150 mm
<b>Piston rod diameter</b>	80 mm
<b>Stroke</b>	676 mm
<b>Tilt cylinder</b>	1
<b>Cylinder bore</b>	220 mm
<b>Piston rod diameter</b>	110 mm
<b>Stroke</b>	412 mm

### Service

Service accessibility: Large, easy-to-open service doors with gas struts. Swing-out radiator grille and cooling fan. Possibility to log and analyze data to facilitate troubleshooting.

### Refill capacities

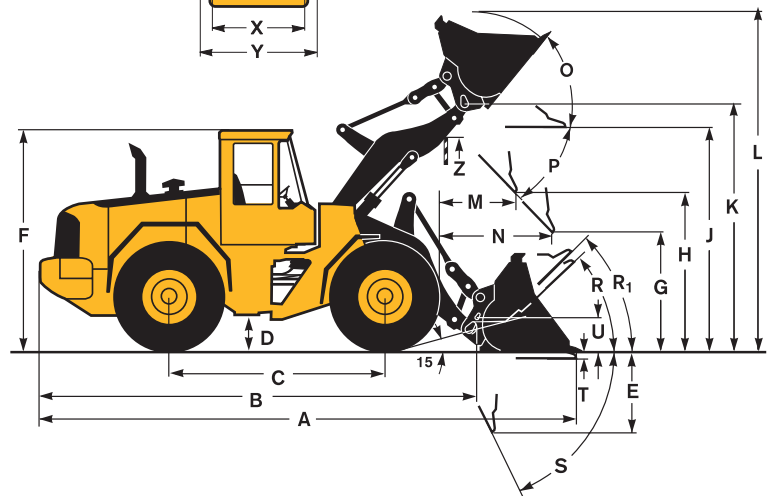
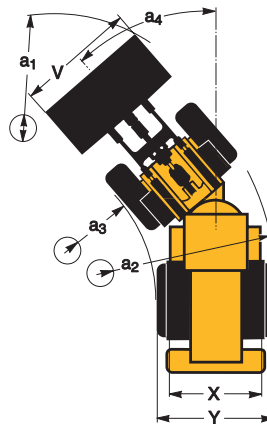
<b>Fuel tank</b>	269 l
<b>Engine coolant</b>	70 l
<b>Hydraulic oil tank</b>	143 l
<b>Transmission oil</b>	38 l
<b>Engine oil</b>	21 l
<b>Axles front/rear</b>	36/41 l

# SPECIFICATIONS

## Tires: 23.5 R25 L3

	Standard boom	Long boom
B	6540 mm	7040 mm
C	3200 mm	—
D	400 mm	—
F	3360 mm	—
G	2132 mm	—
J	3800 mm	4310 mm
K	4110 mm	4620 mm
O	55 °	—
P <sub>max</sub>	49 °	—
R	42 °	43 °
R <sub>1</sub> *	47 °	—
S	66 °	63 °
T	74 mm	123 mm
U	510 mm	630 mm
X	2060 mm	—
Y	2680 mm	—
Z	3340 mm	3720 mm
a <sub>2</sub>	5730 mm	—
a <sub>3</sub>	3060 mm	—
a <sub>4</sub>	±40 °	—

\* Carry position SAE

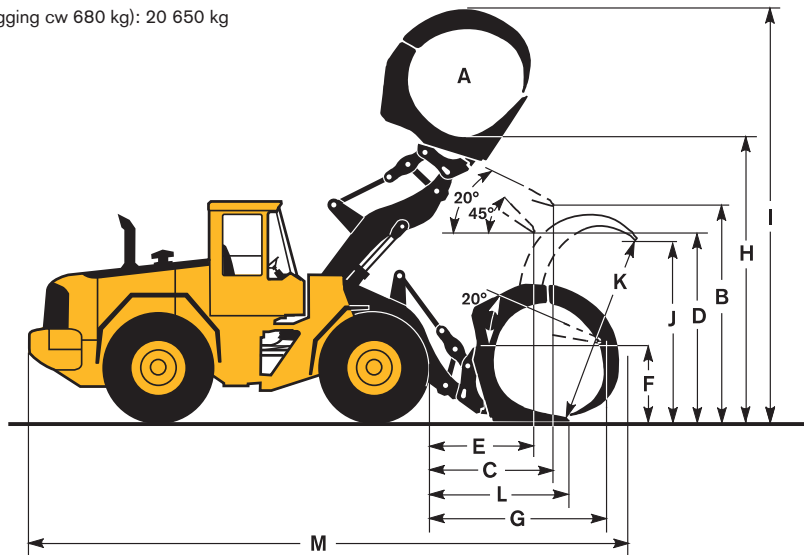


Where applicable, specifications and dimensions are according to ISO 7131, SAE J732, ISO 7546, SAE J742, ISO 14397, SAE J818.

## Tires: 750/65 R25

A	2,4	m <sup>2</sup>
B	3570	mm
C	1860	mm
D	2940	mm
E	1480	mm
F	1540	mm
G	2780	mm
H	4690	mm
I	6710	mm
J	2750	mm
K	2960	mm
L	2130	mm
M	8810	mm










Operating weight (incl. logging cw 680 kg): 20 650 kg  
Operating load: 6400 kg



## Supplemental Operating Data

Tires 23.5 R25 L3		Standard boom		
		23.5 R25 L5	750/65 R25	750/65 R25
Width over tires	mm	+40	+230	+230
Ground clearance	mm	+40	+20	+20
Tipping load, full turn	kg	+450	+360	+310
Operating weight	kg	+680	+560	+560



Tires 23.5 R25 L3	GENERAL PURPOSE						ROCK*	LIGHT MATERIAL		LONG BOOM	
											
Volume, heaped ISO/SAE	m <sup>3</sup>	3,0	3,1	3,3	3,4	3,4	3,6	3,0	5,5	9,5	—
Volume at 110% fill factor	m <sup>3</sup>	3,3	3,4	3,6	3,7	3,7	4,0	—	6,1	10,5	—
Static tipping load, straight	kg	14 330	14 100	14 180	13 720	14 080	13 150	14 300	12 560	12 630	-2610
at 35° turn	kg	12 730	12 520	12 580	12 130	12 490	11 620	12 670	11 050	11 070	-2370
at full turn	kg	12 660	12 050	12 110	11 670	12 020	11 170	12 190	10 600	10 160	-2300
Breakout force	kN	168,3	159,3	159,9	149,3	162,2	136,4	137,6	110,8	97,7	+6
A	mm	8180	8000	8250	8090	7980	8240	8380	8580	8880	+500
E	mm	1360	1200	1430	1280	1180	1410	1530	1720	2010	+30
H**)	mm	2800	2910	2750	2860	2930	2760	2680	2480	2260	+520
L	mm	5620	5620	5690	5770	5700	5800	5700	5900	6060	+520
M**)	mm	1300	1150	1350	1220	1130	1320	1440	1540	1760	-30
N**)	mm	1860	1770	1880	1810	1770	1850	1920	1870	1900	+430
V	mm	2880	2880	2880	3000	3000	2880	2880	3000	3400	—
a, clearance circle	mm	12 780	12 670	12 810	12 820	12 770	12 790	12 900	13 120	13 660	—
Operating weight	kg	18 880	18 980	18 960	19 290	19 060	19 340	19 970	19 640	19 920	+190

\*) with L5 tires










\*\*) Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge. Measured at 45° dump angle. (Spade nose buckets at 42°)

Note: This only applies to genuine Volvo attachments.

### Bucket Selection Chart

The chosen bucket is determined by the density of the material and the expected bucket fill factor. The actual bucket volume is often larger than the rated capacity, due to the features of the TP linkage, including an open bucket design, good rollback angles in all positions and good bucket filling performance. The example represents a standard boom configuration.

**Example: Sand and gravel. Fill factor ~ 105%. Density 1,65 t/m<sup>3</sup>. Result: The 3,3 m<sup>3</sup> bucket carries 3,5 m<sup>3</sup>. For optimal stability always consult the bucket selection chart.**

Material	Bucket fill, %		Material density, t/m <sup>3</sup>	ISO/SAE bucket volume, m <sup>3</sup>	Actual volume, m <sup>3</sup>
Earth/Clay	~ 110		~ 1,70	3,0	~ 3,3
			~ 1,50	3,3	~ 3,6
			~ 1,40	3,6	~ 4,0
Sand/Gravel	~ 105		~ 1,75	3,0	~ 3,1
			~ 1,65	3,3	~ 3,5
			~ 1,50	3,6	~ 3,8
Aggregate	~ 100		~ 1,90	3,0	~ 3,0
			~ 1,70	3,3	~ 3,3
			~ 1,60	3,6	~ 3,6
Rock	≤100		~ 1,80	3,0	~ 3,0

The size of rock buckets is optimized for optimal penetration and filling capability rather than the density of the material.

Type of boom	Type of bucket	ISO/SAE Bucket volume	Material density (t/m <sup>3</sup> )																		
			0,4	0,6	0,8	1,0	1,2	1,4	1,6	1,8	2,0										
Standard boom	General purpose	P 3,0 m <sup>3</sup>																			
		H 3,3 m <sup>3</sup>																			
		H 3,6 m <sup>3</sup>																			
	Rock	P 3,0 m <sup>3</sup>																			
		H 5,5 m <sup>3</sup>																			
		H 9,5 m <sup>3</sup>																			
Long boom	General purpose	P 2,6 m <sup>3</sup>																			
		H 5,5 m <sup>3</sup>																			
	Light material	H 5,5 m <sup>3</sup>																			
Bucket fill																					
110% 105% 100% 95%																					
		H = Hook-on P = Pin-on																			

## STANDARD EQUIPMENT

### Engine

Three stage air cleaner with ejector and inner filter  
Indicator glass for coolant level  
Preheating of induction air  
Fan air intake protection  
Muffler, spark arresting  
Fuel filter, extra large with water-trap  
Oil trap  
Exhaust heat insulation

### Electrical system

24 V, pre-wired for optional accessories

Alternator, 24 V/55 A

Battery disconnect switch

Fuel gauge

Hour meter

Electric horn

Instrument panel with symbols

Lighting:

- Twin halogen front headlights with high and low beams
- Parking lights
- Double brake and tail lights
- Turn signals with flashing hazard light function
- Halogen work lights (2 front and 2 rear)
- Instrument lighting

### Contronic monitoring system

ECU with log and analysis system

Contronic display

Fuel consumption

Ambient temperature

Engine 'Shutdown to idle' in case of malfunction indication:

- High engine coolant temperature
- Low engine oil pressure
- High transmission oil temperature

Start interlock when gear is engaged

Brake test

Test function for warning and indicator lights

Warning and indicator lights:

- Charging
- Oil pressure engine
- Oil pressure, transmission

## OPTIONAL EQUIPMENT

(Standard on certain markets)

### Service and maintenance

Tool box, lockable

Tool kit

Automatic lubrication system

Automatic lubrication system, stainless steel

Automatic lubrication system for long boom

Automatic lubrication system, stainless steel, for long boom

Automatic lubrication system incl. long boom

Automatic lubrication system for attachment bracket, cast

Autom. lubr. system, stainless steel, for attachment bracket, cast

Automatic lubrication system for attachment bracket, welded

Automatic lubrication system, stainless steel, for attachment bracket, welded

Refill pump for automatic lubrication system

Wheel nut wrench kit

Oil sampling valve

### Engine equipment

Engine block heater, 230 V

Engine auto shutdown

Increased engine protection

Disabled engine protection

Air pre-cleaner, oil-bath type

Air pre-cleaner, turbo type

Air pre-cleaner, Sy-Klone type

Hand throttle control

Fuel fill strainer

Fuel filter with water trap and heating

Coolant filter

Radiator, corrosion-protected

Reversible cooling fan

Reversible cooling fan and axle oil cooler

### Electrical system

Language kit 1 or 2

Alternator, 80 A

Air filter for alternator

Battery disconnect switch, additional in cab

Work light, attachments

Work lights front, extra

Work lights rear, extra

Work lights front, on cab, dual

Work lights front, high intensity

License plate holder, lighting

Asymmetrical lights for left-hand traffic

Back-up alarm

Back-up lights, automatic

Shortened headlight support brackets

Rotating beacon, collapsible

Side running lights

Anti-theft device

### Cab

Installation kit for radio, 11 A, 12 V left/right in cab

Radio with tape recorder

- Brake pressure
- Parking brake
- Hydraulic oil level
- Axle oil temperature
- Primary steering
- Secondary steering
- High beams
- Turn signals
- Rotating beacon
- Preheating coil
- Differential lock
- Coolant temperature
- Transmission oil temperature
- Brake charging
- Level warnings:
- Engine oil level
- Coolant level
- Transmission oil level
- Hydraulic oil level
- Washer fluid level

### Drivetrain

Automatic Power Shift with operator-controlled disengagement function for transmission cut-out when braking and mode selector with AUTO function

Fully automatic shifting gears 1-4

PWM-control between different gear positions

Forward and reverse switch by lever console

Differentials: reverse: 100% hydr. diff lock, rear: conventional

### Brake system

Wet oil circulation-cooled disc brakes on all four wheels

Dual brake circuits

Dual service brake pedals

Secondary brake system

Parking brake, el-hydraulic

Brake wear indicator

### Cab

ROPS (ISO 3471), FOPS (ISO 3449)

Single key kit door/start

Acoustic inner lining

Ashtray

Radio with CD-player

Sun blinds, front and rear windows

Sun blinds, side windows

Sliding window, right

Sliding window, door

Retractable lap-type belt, longer and wider than standard

Air conditioning

Air conditioning with corrosion protected condenser

Air conditioning with automatic temp. control (ATC)

Air conditioning with corrosion prot. condenser and automatic temp. control (ATC)

Ventilation air filter for work in asbestos environment

Cab air pre-cleaner, Sy-Klone type

Operator's seat with low backrest

Operator's seat with electrical heating

Operator's seat with low backrest and electrical heating

Operator's seat with high backrest and electrical heating

Operator's seat, air suspended, heavy-duty

Operator's seat, air suspended with electrical heating

Operator's seat, air suspended with high backrest and el. heating

Instructor's seat

Armrest (left) for operator's seat

Adjustable steering wheel

Steering wheel knob

Noise reduction kit

Rear-view camera incl. monitor

Rear view camera incl. monitor, colour

Rear-view mirrors, el-heated

Foot step, front frame

Cab ladder, rubber suspended

### Drivetrain

Limited slip rear

Speed limiter 20 km/h

Speed limiter 30 km/h

Wheel/axle seal guards

### Brake system

Parking brake alarm, audible

Oil cooler and filter for front and rear axle

Stainless steel brake lines

### Hydraulic system

Single lever control

Single lever control for 3rd hydraulic function

3rd hydraulic function

3rd hydraulic function for long boom

3rd-4th hydraulic function

3rd-4th hydraulic function for long boom

Detent for 3rd hydraulic function

Boom Suspension System

Single-acting lifting function

Biodegradable hydraulic fluid

Fire resistant hydraulic fluid

Hydraulic fluid for hot climate

Attachment bracket, cast

Attachment bracket, welded

Arctic kit, attachment locking hoses

Arctic kit, pilot hoses and brake accum. incl. hydraulic oil

Cigarette lighter

Lockable door

Cab heating with filter, fresh air inlet and defroster

Floor mat

Interior light

Interior rear-view mirror

2 exterior rear-view mirrors

Openable window right side

Tinted safety glass

Lap-type retractable seatbelt (SAE J386)

Adjustable lever console

Ergonomically designed operator's seat with adjustable suspension

Storage compartment

Sun visor

Beverage holder

Windshield washers front and rear

Windshield wipers front and rear

Interval function for front and rear windshield wipers

Service platforms with anti-slip surfaces on front and rear fenders

Speedometer

### Hydraulic system

Main valve, 2-spool

Pilot valve, 2-spool

Variable displacement axial piston pumps (3) for:

- working hydraulics
- steering system, pilot hydraulics and brakes
- fan motor

Boom lowering system

Boom kick-out, automatic, adjustable

Bucket positioner, automatic with position indicator, adjustable

Hydraulic oil cooler

Hydraulic power control

### External equipment

Noise and vibration dampening suspension of cab, engine and transmission

Lifting eyes

Easy-to-open side panels

Frame steering, joint lock

Vandalism lock prepared for batteries and engine compartment

Tow hitch

Separate attachment locking, standard boom

Separate attachment locking, long boom

Return-to-dig

### External equipment

Long boom

Mudguards

Mudguards, full coverage rear

Mudguards, full coverage front/rear

Mudflap kit for mudguards

Deleted front mudguards and rear wideners

Guardrails, on rear mudguards

Logging counterweight

Red/white warning paint, chevrons

### Protective equipment

Guards for front headlights

Guards for tail lights

Guards for tail lights, heavy-duty

Guards for side and rear windows

Guard for radiator grille

Windshield guard

Bellyguard front

Bellyguard rear

Cover plate for front frame, heavy-duty

Cover plate, under cab

Cover plates, rear frame

Guards for grease nipple

Guards for center hinge and rear frame

Guards for boom cylinder hose and tube

Guards for boom cylinder hose and tube, long boom

Corrosion-protection, painting of machine

Corrosion-protection, painting of attachment bracket

Bucket teeth protection

Battery boxes, steel

### Other equipment

Comfort Drive Control, CDC

Secondary steering

Sign, slow moving vehicle

Noise reduction kit, EU

Sign 50 km/h

CE-marking

Sound decal EU

### Tires

23.5 R25, 750/65 R25

### Attachments

Buckets:

- Straight with/without teeth
- Spade nose with/without teeth
- High tipping
- Light materials

Bolt-on and weld-on bucket teeth

Cutting edge in three sections, bolt-on

Bucket spill guard

Fork equipment

Material handling arm

Log grapples





**Boom Suspension System (BSS)\***  
 BSS utilizes gas/oil accumulators connected to the lift cylinders to absorb shocks and smooth out rough roads for faster cycle times, less spillage and increased operator comfort.



**Automatic Lubrication System\***

Our factory fitted Automatic Lubrication System takes care of greasing while the machine is in operation. This means less downtime for scheduled maintenance and more time for productive work.



**Comfort Drive Control (CDC)\***

CDC significantly reduces repetitive and tiring steering wheel movements. The operator can shift and steer easily with the aid of controls integrated in the left armrest.



**3rd and 4th hydraulic functions\***

Volvo wheel loaders can be equipped with third and fourth hydraulic functions, which are operated with additional control levers. These functions are necessary when there's a need to operate a third and fourth hydraulic function at the same time, such as when using a sweeper attachment or a timber grapple with hydraulic heel kick-out.

\* Optional equipment

**Genuine Volvo attachments**

Genuine Volvo attachments and wear parts, including the new Volvo Tooth System, are designed as an integral part of the loader, making the L120E a swift and versatile machine in a wide range of applications.

**Long boom\***

A long boom gives the extra dump height and reach necessary for loading high trucks or feeders.





Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from an engineering heritage of over 170 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. 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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