**Volvo Construction Equipment** 





Volvo Wheel Loaders 17.9-18.8 t 245 hp



### A passion for performance

At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for industry experts. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

#### Helping you to do more.

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

#### Designed to fit your needs.

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.



#### You learn a lot in 180 years.

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

#### We're on your side.

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

#### We have a passion for performance.













Volvo Trucks

Renault Trucks



VOLN



















Volvo Buses







Volvo Penta

Volvo Financial Services

UD Trucks

Volvo Construction Equipment

## Loaded with productivity.

Volvo Construction Equipment began designing wheel loaders in 1954 and since then machine owners and operators have got to know the legendary reputation of these productive, fuel efficient machines. The new L120Gz provides the power, strength and reliability you need to maximize your productivity and profitability.

#### Volvo engine

Featuring advanced technology and built on decades of experience, the powerful Volvo engine delivers high torque at low rpm for superior performance and low fuel consumption.





#### Axles

Oil-cooled, wet disc brakes on both the front and rear axle deliver superior braking performance for smooth, safe control and long service life. For outstanding traction in slippery conditions, the front axle is equipped with 100% differential locks. Axle oil circulation allows the oil to flow and cool inside the axle – protecting components and increasing brake service life.

#### **Fully Automatic Power Shift**

Fully Automatic Power Shift ensures optimal operation by adjusting machine gears – from first to fourth – in line with parameters including engine and travel speed. This delivers smooth gear changes, fast cycle times and low fuel consumption.



#### Eco pedal

Volvo's unique eco pedal applies mechanical push-back force when the accelerator is used excessively and engine rpm is about to exceed the economic operating range. This encourages the operator to ease off the throttle, reducing fuel consumption.



VOLVO

#### Powertrain

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The ideally-matched, all-Volvo powertrain has been built to work together in perfect harmony. The Volvo design has been comprehensively tested to deliver optimized performance, high productivity, low fuel consumption and superior reliability.

### Lifting arm system

The Volvo designed Z-bar linkage provides high breakout force for strong, powerful digging and complete bucket fill even in the hardest materials. The durable system and quick hydraulic speeds deliver fast cycle times and high productivity.

### Move more with Volvo.

The new L120Gz features proven, advanced technology. With load-sensing hydraulics and a powerful, durable Z-bar linkage, these machines will increase your productivity – even in the most demanding conditions. Load more and get the job done with Volvo.

#### Hydraulic controls

For ease of operation and increased comfort during long work shifts, the operator can precisely control the bucket and lifting unit via the hydraulic lever controls.



#### Load-sensing hydraulics

Volvo's load-sensing hydraulics and steering system supply power to the hydraulic functions only when needed, lowering fuel consumption. The powerful systems provide fast response for shorter cycle times while delivering smooth operation through superior control of the load, attachment and steering.





#### **Bucket positioning**

The automatic bucket leveler and boom kick-out functions quickly and accurately stop the bucket and linkage in adjustable, pre-selected positions. When activated, this easy-to-use feature increases productivity and shortens cycle times.



#### **Double-sealing pins**

The bucket pins are double sealed to keep grease inside the bearing and dirt out. This ensures long pin and bearing life.

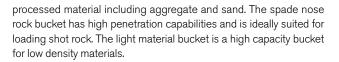
## The perfect match.

Exceptional design and superior durability are at the center of Volvo attachments. The robust buckets are engineered to perform in perfect harmony with Volvo wheel loaders, in the specific environments and applications machine owners operate in. Whatever material you need to load, Volvo has the right bucket for the job.

#### Bucket type

The general purpose, standard-duty bucket can be used for a variety of jobs while the heavy-duty version provides ultimate durability and wear resistance for unmatched life span and value for money. The re-handling bucket is optimized for handling, stockpiling and loading









#### Volvo bucket design

No manufacturer is better at designing buckets for Volvo machines than Volvo. The purpose-built buckets have been developed as an integrated part of the wheel loader for which they're intended – with properties perfectly matched to machine parameters including lifting arm geometry and breakout, rim pull and lifting force.

#### **Durable protection**

For superior performance and life span, Volvo buckets are constructed from high quality materials including wear-resistant steel in the most exposed areas. To support its durable, high-performance buckets, Volvo offers a selection of cost-effective, replaceable wear parts. With a range including bolt-on edge, teeth, adapters and segments, customers can tailor their wear protection to meet specific job demands.



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#### Volvo buckets

Volvo buckets and Volvo wheel loaders are perfectly matched to work together as one solid, reliable unit – delivering maximum productivity and long life. The entire range of high quality, durable buckets is designed for optimized performance.

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#### Volvo cab

The spacious ROPS/FOPS cab includes a tiltable steering wheel, vibration damping and ergonomically placed controls. With a comfortable seat, ample storage space and a powerful climate control system fitted as standard, the operator will experience a productive work shift.

## Comfort delivers productivity.

Comfort matters – especially in the cab where it has a direct impact on sustained productivity. That's why the industry-leading Volvo cab has been designed with the operator in focus. Step inside this spacious, comfortable environment and experience a space optimized for long, productive work shifts. Capitalize on comfort and increase your productivity with Volvo.

#### Visibility

All-around visibility from large expanses of glass and slim cab pillars helps to create a safe, productive and comfortable operating environment.



#### Cab air filter

The cab air intake is located high on the machine, where air is cleanest. The easy-to-replace pre-filter effectively separates coarser dust and particles before the air passes through the main filter and finally enters the cab. Volvo's industry-leading design allows 90% of the cab air to be recirculated through the main filter for continuous dust removal.





#### Easy access

Safely and easily access the cab via a three-point access ladder with anti-slip steps. Ideally positioned, sturdy handrails and a wide door frame with a 95° opening angle further increase operator safety and comfort.



#### Contronics

The Volvo Contronics system continuously monitors and records machine operation and performance in real-time. Contronics facilitates ease of operation by providing the operator with all the necessary information and diagnostics for optimal performance. Information including fuel levels and warning messages is relayed via the display in the cab.

# Uptime goes up with Volvo.

At Volvo we know that service and maintenance checks need to be quick and easy to perform in order to achieve maximum machine uptime. With excellent access to the engine compartment and ground level filters you'll benefit from time saving features that allow you to get the most out of every day.

#### **Radiator cleaning**

Easily access and clean the radiator from ground level. The cooling fan's optional reversible functionality – which blows air in the opposite direction – allows for self-cleaning of the cooling units.



#### Maintenance-free rear axle cradles

The rear axle is supported on maintenance-free cradles and includes lubricated-for-life bearings and bushings – reducing overall service cost and increasing machine uptime. The Volvo design minimizes force on the axle ensuring long component life.





#### Breather filter

The transmission, hydraulic tank, front and rear axle and fuel tank are ventilated by a replaceable breather filter. This reduces the risk of contamination and increases service life.



#### Brake wear indicator

The unique Volvo brake wear indicator enables brake pad wear to be monitored quickly and easily. The system increases safety and reduces the risk of machine damage.

#### Service access

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Excellent access to the engine compartment provides safe and easy maintenance access. This allows regular checks to be done faster, increasing machine uptime.

### **Exceed your expectations.**

#### Contronics

The Volvo Contronics system facilitates ease of operation by providing the operator with all the necessary information and diagnostics via the display for optimal performance.

#### Fully Automatic Power Shift

Fully Automatic Power Shift ensures optimal operation by adjusting the machine gears from first to fourth - in line with parameters including engine and travel speed.



#### Lifting arm system

The Volvo designed Z-bar linkage provides high breakout force for strong, powerful digging and complete bucket fill even in the hardest materials.

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Volvo's load-sensing hydraulics supply power to the hydraulic functions only when needed, lowering fuel consumption and delivering fast response for quick cycle times.

#### Volvo bucket design

The properties of Volvo buckets are perfectly matched to machine parameters including lifting arm geometry and breakout, rim pull and lifting force.



#### Volvo buckets

Volvo buckets and Volvo wheel loaders are perfectly matched to work together as one solid, reliable unit delivering maximum productivity and long life.



Volvo cab

Volvo's industry-leading ROPS/FOPS cab features all-around visibility, ergonomically placed controls, a powerful climate control system and ample storage space.

#### CareTrack\*

CareTrack is the state-of-the-art Volvo telematics system that provides access to a wide range of machine monitoring information designed to save machine owners time and money.



#### Service access

Excellent access to the engine compartment provides safe and easy maintenance access, increasing machine uptime.

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#### Powertrain

The ideally-matched, all-Volvo powertrain has been built to work together in perfect harmony. The powerful engine delivers the ultimate combination of high performance and low fuel consumption.

#### Eco pedal

Volvo's unique eco pedal reduces fuel consumption by applying mechanical push-back force when the accelerator is used excessively and engine rpm is about to exceed the economic operating range.

## Adding value to your business.

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to the positive return of your investment.





#### **Complete Solutions**

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of





#### **Genuine Volvo Parts**

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.

your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.





#### Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.





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PROFITABILITY

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#### **Customer Support Agreements**

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The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.

FUEL CONSUMPTION

### Volvo L120Gz in detail.

#### Engine

Volvo's V-ACT Tier 3 /Stage IIIA-approved, 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 Cyclone/oil bath precleaner - primary filter - secondary filter.

Cooling system: Air-to-air intercooler and hydrostatic, electronically controlled fan

Power kW Economic working ran 240	ige				Torque Nm
220					1 200
		·····			
140			····.		800
100				Power	600
60 1 000 1 200 1 4	00 16	00	1 800	Torque 2 000	
Engine					D7E LAE3
Max power at	r/s (r	/min)		28.	3(1700)
SAE J1995 gross	kW	/ / hp			180/245
ISO 9249, SAE J1349 net	kW	/ / hp			179/243
Max torque at	r/s (r	/min)		0(1500)	
SAE J1995 gross		Nm			1 065
ISO 9249, SAE J1349		Nm			1 065
Economic working range	r/s (r	/min)	13.3-2	26.6 (8	00-1 600)
Displacement		l			7.1

#### **Electrical system**

Contronic electrical system with central warning light and buzzer for following functions:

Serious engine fault

 Low steering system pressure
 Interruption in communication (computer fault) Central warning light and buzzer with the gear engaged for the following functions:

Low engine oil pressure, High charge air temperature, Low coolant level, High coolant temperature, Low transmission oil pressure, High transmission oil temperature, Low brake pressure, Engaged parking brake, Fault on brake charging, Low hydraulic oil level, High hydraulic oil temperature, Overspeeding in engaged gear, High brake cooling oil temperature front and rear axles

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	2 x 140
Cold cranking capacity, approx.	A	890
Alternator rating	W/A	2 280/80
Starter motor output	kW	5.5

#### Brake system

Diake 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 declutch of the transmission when braking through Contronics. Parking brake: Dry disc brake mounted on the transmission output shaft. Applied by spring force, electro-hydraulically released with a switch on the instrument panel. Secondary brake: Dual brake circuits with rechargeable accumulators. One circuit or the parking brake fulfills all safety requirements. Standard: The brake system complies with the requirements of ISO 3450								
Number of brake disc	cs per wheel	front/re	ar 1/1					
Accumulators			I 3 x 1					
*two for severe brake; one	for parking bra	ke						
Drivetrain								
Torque converter: Si Transmission: Volvo co control. Fast and smo Modulation (PWM) va Transmission: Volvo system with fully auto different gear shifting Axles: Volvo fully floa reductions and cast s oscillating rear axle. 1	ountershaft tr oth shifting o lve. Automatic Pc matic shifting programs, in ting axle shaf teel axle hous	f gears wer Sh 1-4 ar cluding ts with sing. Fix	with Pulse Width ift (APS) gear shifting ad mode selector with 4 AUTO mode. planetary hub ked front axle and					
Transmission		Volvo	HTE205B					
Maximum speed, forward/reverse	1st gear 2nd gear 3rd gear 4th gear*	km/h km/h km/h km/h	7.2 13.5 27.3 40					
Measured with tires								
weasured with thes			23.5R25					

0

mm

±13

428

\* limited by parameter

Rear axle oscillation ±

Ground clearance at 13° osc.

#### Cab

Instrumentation: All important information is centrally located in the operator's field of vision. Display for Contronic monitoring system

Heater and defroster: Heater coil with filtered fresh air and fan with auto and 11 speeds. Defroster vents for all window areas. Operator's seat: Operator's seat with adjustable suspension and retractable seatbelt. The seat is mounted on a bracket on the rear cab wall and floor. The forces from the retractable seatbelt are

absorbed by the seat rails. **Standard:** The cab is tested and approved according to ROPS (ISO 3471, FOPS (ISO 3449). The cab meets with requirements according to ISO 6055 (Operator overhead protection - Industrial trucks) and SAE J386 ("Operator Restraint System").

Emergency exit: Use emergency hammer to break window Sound lovel in och

ISO 6396/SAE J2105	dB(A)	74
External sound level according to ISO 6395/SAE J2104	dB(A)	108
Ventilation	m³/min	9
Heating capacity	kW	16
Air conditioning (optional)	kW	4.8

#### Hydraulic system

System supply: One load-sensing axial piston pump with

variable displacement. The steering function 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 three positions; raise, hold and lower position. Inductive/magnetic automatic boom kickout 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; 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 10 micron (absolute) filter cartridge.

FlowI/min128atMPa10engine speedr/s (r/min)32 (1 900)Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic systemMPa31ElowI/min128	Working pressure maximum, pump 1 for working hydraulic system	MPa	29
engine speedr/s (r/min)32 (1 900)Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic systemMPa31	Flow	l/min	128
Working pressure maximum, pump 2 for steering-, brake-, pilot- and working MPa 31 hydraulic system	at	MPa	10
for steering-, brake-, pilot- and working MPa 31 hydraulic system	engine speed	r/s (r/min)	32 (1 900)
Flow I/min 128	for steering-, brake-, pilot- and working	MPa	31
11000 1/1000 1/20	Flow	l/min	128
at MPa 10	at	MPa	10
engine speed r/s (r/min) 32 (1 900)	engine speed	r/s (r/min)	32 (1 900)
Working pressure maximum, pump 3 for brake- and cooling fan systemMPa21		MPa	21
Flow I/min 32	Flow	l/min	32
at MPa 10	at	MPa	10
engine speed r/s (r/min) 32 (1 900)	engine speed	r/s (r/min)	32 (1 900)
Pilot system, working pressure MPa 3.5	Pilot system, working pressure	MPa	3.5
Cycle times	Cycle times		
Lift s 5.2	Lift	S	5.2
Tilt s 1.5	Tilt	S	1.5
Lower, empty s 3.8	Lower, empty	S	3.8
Total cycle time s 10.5	Total cycle time	S	10.5

Lift arm system						
Z-bar linkage with high breakout force for st	rong, powerfu	I digging				
Lift cylinders		2				
Cylinder bore	mm	150				
Piston rod diameter	mm	80				
Stroke	mm	676				
Tilt cylinder		1				
Cylinder bore	mm	160				
Piston rod diameter	mm	100				
Stroke	mm	545				

#### 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.

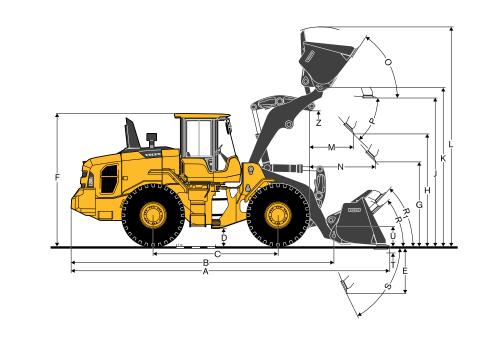
Steering cylinders		2
Cylinder bore	mm	75
Rod diameter	mm	50
Stroke	mm	486
Working pressure	MPa	26
Maximum flow	l/min	74.5
Maximum articulation	±°	38

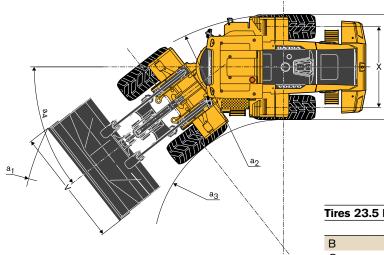
Service

Service accessibility: Large, easy-to-open hood covering whole engine department. Fluid filters and component breather air filters promote long service intervals. Possibility to monitor, log and analyze data to facilitate troubleshooting.

Refill capacity		
Fuel Tank	I	269
Engine coolant	I	37.8
Hydraulic oil tank (Hydraulic oil volume in tank)	I	130
Transmission oil	I	41
Engine oil	1	24
Axle oil front	I	36
Axle oil rear	Ι	41

### Specifications.





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

ïres 23.5 R25 L3									
		Standard boom	Long boom						
В	mm	6 747	7 191						
С	mm	3 200	3 200						
D	mm	428	428						
F	mm	3 368	3 368						
G	mm	2 134	2 134						
J	mm	3 766	4 240						
K	mm	4 031	4 502						
0	0	58	57.5						
Pmax	0	48.5	48.5						
R	0	44.4	45.1						
R <sub>1</sub> *	٥	50.8	52.3						
S	٥	64	63						
Т	mm	102	102						
U	mm	468	599						
Х	mm	2 064	2 064						
Y	mm	2 685	2 685						
Z	mm	3 616	4 004						
a <sub>2</sub>	mm	5 964	5 964						
a <sub>3</sub>	mm	3 270	3 270						
a <sub>4</sub>	±°	38	38						

Čarry position SAE

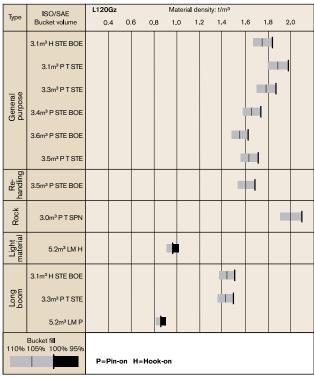
L120Gz													
General Purpose						Rehandling	Rock	LM	bo	ng om P	Long boom LM		
Tires 23.5R25 VJT L3		1							•		1		
		3.1 m³ STE H BOE	3.1 m <sup>3</sup> STE P T	3.3 m³ STE P T	3.4 m³ STE P BOE	STE	3.5 m³ STE P T	3.5 m³ STE P BOE	SPN	5.2 m³ LM P BOE	STE H	3.3 m³ STE P T	5.2 m³ LM P
Volume, heaped ISO/SAE	m <sup>3</sup>	3.1	3.1	3.3	3.4	3.6	3.5	3.5	3	5.2	3.1	3.3	5.2
Volume at 110% fill factor	m <sup>3</sup>	3.4	3.4	3.6	3.7	4	3.9	3.9	3.3	5.7	3.4	3.6	5.7
Static tipping load, straight		13 260								12 290			
at 35° turn	0	11 760							12 980		9 670	10 210	9 670
at full turn	kg	11 500	12 390	12 190	11 930	11 840	12 120		12 700	10 570	9 450	9 980	9 4 3 0
Breakout force	kΝ	177.1	213.6	204.3	192.5	187.6	198.4	192.5	180.7	139.8	169.3	195.1	151.5
A	mm	8 300	8 300	8 330	8 180	8 2 1 0	8 380	8 170	8 450	8 700	8 7 4 0	8 7 8 0	8 920
E	mm	1 350	1 350	1 390	1 240	1 270	1 430	1 240	1 480	1 700	1 350	1 390	1 500
Н	mm	2 820	2 810	2 800	2 900	2 870	2 760	2 900	2 740	2 540	3 280	3 270	3 1 6 0
L	mm	5 460	5 530	5 590	5 590	5 640	5 640	5 660	5 530	5 980	5 930	6 050	6 320
М	mm	1 280	1 270	1 340	1 210	1 230	1 350	1 210	1 410	1 540	1 260	1 330	1 390
Ν	mm	1 840	1 830	1 900	1 820	1 830	1 880	1 820	1 930	1 920	2 250	2 310	2 320
V	mm	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 200	3 000	3 000	3 200
a <sub>1</sub> clearance circle	mm	13 330	13 330	13 360	13 280	13 290	13 380	13 280	13 430	13 700	13 660	13 690	13 930
Operating weight	kg	18 120	17 890	18 010	18 140	18 190	18 050	18 160	18 830	18 680	18 390	18 280	18 630

#### **Bucket Selection Chart**

The volume handled varies with the bucket fill and is often greater than indicated by the bucket's ISO/SAE volume. The table shows optimum bucket choice with regard to the material density.

Material	Bucket fill, %	Material density, t/m <sup>3</sup>
Earth	110 - 115	1.4 - 1.6
Clay	110 - 120	1.4 - 1.6
Sand	100 - 110	1.6 - 1.9
Gravel	100 - 110	1.6 - 1.9
Rock	75 - 100	1.6 - 1.9

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



Supplemental Operating Data				
		Standard boom	Long boom	Standard boom
Tires 23.5R25 VJT L3		23.5R25 L5	23.5R25 L3	750/65 R25
Width over tires	mm	30	±0	200
Ground clearance	mm	50	±Ο	10
Tipping load, full turn	kg	508	-2 172	683
Operating weight	kg	670	±Ο	640

### Equipment.

STANDARD EQUIPMENT
Service and maintenance
Engine oil remote drain and fill
Lubrication manifolds, ground accessible Pressure test ports: transmission and hydraulic, guick connects
Service platforms with anti-slip surfaces
CareTrack, GSM
Toolbox, lockable Engine
Three stage air cleaner, pre-cleaner, primary and secondary filter
Indicator for coolant level
Preheating of induction air Fuel pre-filter with water trap
Fuel filter
Crank case breather oil trap
Exhaust heat insulation Electrical system
24 V, pre-wired for optional accessories
Alternator 24V/ 80A Battery disconnect switch with removable key
Battery box, steel
Fuel gauge
Hour meter Electric horn
Instrument cluster:
Fuel level
Transmission temperature Coolant temperature
Instrument lighting
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)
Contronic monitoring system
Monitoring and logging of machine data
Contronic display
Fuel consumption Ambient temperature
Clock
Test function for warning and indicator lights Brake test
Warning and indicator lights:
Battery charging
Parking brake Warning and display message:
Engine coolant temperature
Charge air temperature
Engine oil pressure Transmission oil temperature
Transmission oil pressure
Hydraulic oil temperature Brake pressure
Parking brake applied
Brake charging
Overspeed at direction change Axle oil temperature
Level warnings:
Fuel level
Engine coolant level Transmission oil level
Hydraulic oil level
Engine torque reduction in case of malfunction indication:
High engine coolant temperature Low engine oil pressure
High charge air temperature
Engine shutdown to idle in case of malfunction indication:
High transmission oil temperature Slip in transmission clutches
Key pad, background lit
Start interlock when gear is engaged Drivetrain
Automatic Power Shift
Fully automatic gear shifting, 1-4
PWM-controlled gear shifting Forward and reverse switch by hydraulic lever console
Indicator glass for transmission oil level
Differentials: Front, 100% hydraulic diff lock. Rear, conventional
23.5-25
Brake system
Dual brake circuits
Single brake pedal Secondary brake system
Parking brake, electrical-hydraulic
Brake wear indicators Wet disc brakes on all four wheels

Wet disc brakes on all four wheels

Cab
ROPS (ISO 3471), FOPS (ISO 3449)
Single key kit door/start
Acoustic inner lining
Ashtray
Cigarette lighter, 24 V power outlet
Lockable door
Cab heating with fresh air inlet and defroster
Air conditioner
Fresh air inlet with two filters
Manual heat control
Floor mat
Single interior lights
Single interior rearview mirrors
Dual exterior rearview mirrors
Sliding window, right side
Tinted safety glass
Retractable seatbelt (SAE J386)
Adjustable steering wheel
Storage compartment
Document pocket Sun visor
Beverage holder Windshield washer front and rear
Windshield wipers front and rear
Interval function for front
East stan left side (tealbay leakable included)
Foot step, left side (toolbox lockable included)
Hydraulic system
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots Variable displacement axial piston pumps (3) for:
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots Variable displacement axial piston pumps (3) for: Working hydraulics,
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots Variable displacement axial piston pumps (3) for: Working hydraulics, Working hydraulics, pilot hydraulics, steering system, brakes
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots Variable displacement axial piston pumps (3) for: Working hydraulics, Working hydraulics, pilot hydraulics, steering system, brakes Cooling fan, brakes
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots Variable displacement axial piston pumps (3) for: Working hydraulics, Working hydraulics, pilot hydraulics, steering system, brakes Cooling fan, brakes Hydraulic control levers
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots Variable displacement axial piston pumps (3) for: Working hydraulics, Working hydraulics, pilot hydraulics, steering system, brakes Cooling fan, brakes Hydraulic control levers Mechanical level lock
Hydraulic system Main valve, double acting 2-spool with hydraulic pilots Variable displacement axial piston pumps (3) for: Working hydraulics, Working hydraulics, pilot hydraulics, steering system, brakes Cooling fan, brakes Hydraulic control levers Mechanical level lock Boom kick-out, automatic
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment         Basic fenders, front and rear
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic ic ooler         External equipment         Basic fenders, front and rear         Viscous cab mounts
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment         Basic fenders, front and rear         Viscous cab mounts         Rubber engine and transmission mounts
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment         Basic fenders, front and rear         Viscous cab mounts         Rubber engine and transmission mounts         Frame, joint lock
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment         Basic fenders, front and rear         Viscous cab mounts         Rubber engine and transmission mounts         Frame, joint lock         Vandalism lock prepared for:
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic ic cooler         External equipment         Basic fenders, front and rear         Viscous cab mounts         Rubber engine and transmission mounts         Frame, joint lock         Vandalism lock prepared for:         Batteries
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment         Basic fenders, front and rear         Viscous cab mounts         Rubber engine and transmission mounts         Frame, joint lock         Vandalism lock prepared for:         Batteries         Engine compartment
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment         Basic fenders, front and rear         Viscous cab mounts         Rubber engine and transmission mounts         Frame, joint lock         Vandalism lock prepared for:         Batteries         Engine compartment         Lifting eyes
Hydraulic system         Main valve, double acting 2-spool with hydraulic pilots         Variable displacement axial piston pumps (3) for:         Working hydraulics,         Working hydraulics, pilot hydraulics, steering system, brakes         Cooling fan, brakes         Hydraulic control levers         Mechanical level lock         Boom kick-out, automatic         Bucket positioner with position indicator, automatic         Double acting hydraulic cylinders         Indicator glass for hydraulic oil level         Hydraulic oil cooler         External equipment         Basic fenders, front and rear         Viscous cab mounts         Rubber engine and transmission mounts         Frame, joint lock         Vandalism lock prepared for:         Batteries         Engine compartment

OPTIONAL EQUIPMENT
Service and maintenance
Auto Lubrication System
Tool kit
Wheel nut wrench kit
Engine
Air pre-cleaner, cyclone type
Air pre-cleaner, oil-bath type
Water Separator
Fuel filter extra
Engine auto shutdown
Engine block heater, 230V / 550W
Fuel heater
Fuel fill strainer
Max. fan speed, hot climate
Reversible cooling fan
High Altitude kit

Electrical	Protective equipment
Headlights, assym. left	Anti-theft device
Rear view camera incl. Monitor, colour	Footsteps, right-hand side
Reverse alarm	Cover plates rear frame
Warning beacon, rotating	Guards for front head lights
Working lights front, extra 2 halogen lamps	Guards for tail lights
Cab	Other equipment
Operator's seat, Volvo air susp, heavy-duty, high back, heat, headrest	CareTrack, GSM (Global)
Operator's seat, Volvo air susp, heavy-duty, high back, headrest	3-year subscription CareTrack, GSM (Global)
Operator's seat, Volvo air susp, heavy-duty, high back, heat, headrest, parking	CareTrack, GSM/Satellite
brake alarm	3-year subscription, CareTrack, GSM/Satellite (Global)
Operator's seat, ISRI, high back	Long Boom
Radio installation kit without radio	PIN PLATE for non-Russia
Radio with MP3	PIN PLATE for Russia
Rear view mirrors, std	Plastic rear fender
Rear view mirrors, heated	Tires and Rims
Rear view mirrors, long arm right	Rims 25-19.5/2.5 3 piece wood (Rims for 23.5R25)
Rear view mirrors, el. heated, long arm right	Rims for Bias tire(for 23.5-25)
Rear view mirrors, engine hood	Rims for Radial tire 25-19.5/2.5(for 23.5R25)
Universal door/ignition key USA	20.5-25
Universal door/ignition key, std	Attachments
Steering wheel knob	Buckets:
Foot step, right side	General purpose(Straight)
Steering system	Rock Straight (or spade nose)
Secondary steering	Rehandling
Brake system	Light material
Parking brake alarm, audible, for air susp. seats	Wear parts:
lydraulic system	Bolt-on edge
Hydraulic 2 functions	Bolt-on or weld-on bucket teeth
Hydraulic 2 functions, Arctic (Servo system Std/OptiShift, Arctic)	Segments
Hydraulic 3 functions (only for std boom)	Fork equipment
Arctic kit for 3rd function (only for std boom)	Attachment Bracket VAB L weld
Option without attachment lock (only diff.lock), std	
Option without attachment lock (only diff.lock), std, arctic	
Separate attachment locking, Std boom	
Arctic kit, attachment locking (only for std boom)	
Separate attachment locking, Long boom	
Brackets for 3rd function and attachment lock	
O-ring for normal climate	
O-ring for cold climate	
Mineral hydraulic fluid, std	
Mineral oil for cold climate	
Hydraulic fluid, for hot climate	

#### Selection of Volvo optional equipment

#### Oil bath pre-cleaner



#### Rear view camera



#### Fuel filter extra



#### Long boom



#### **Reversible fan**



#### Attachment bracket



Not all products are 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