

VOLVO WHEEL LOADER
L180E



VOLVO

When it comes to feeding the hopper, we crush the competition

The new Volvo L180E is an outstandingly powerful machine. A big, strong 29-ton production loader with an impressive 300 hp under the hood. It's also dynamic, agile, easy-to-operate, while meeting all current emission requirements. Behind the wheel of the L180E, you'll be moving material both quicker and more cost-efficiently than you would with any competing machine. And you can be sure that impact on machine, operator and environment is minimized. The result? Superior profitability, making the L180E as much fun to own as it is to operate.



The Volvo L180E is ideal for tough tasks before and after the crusher. Typical applications include loading articulated haulers and trucks, feeding the crusher or just moving material. The key to its strength and agility lie in the electronically controlled engine and transmission, smart load-sensing hydraulics and our patented TP-Linkage. The result is high breakout torque, quick and precise movements, and, of course, low fuel consumption. All in all, it's a highly productive loader.

What's more, thanks to the market's highest breakout torque at the top, the L180E is a superb timber handler. It can unload a timber truck quickly and efficiently. In addition, a wide range of Volvo Genuine Attachments and other equipment help to make this a versatile production machine for the timber industry.

Higher productivity, less effort

The new Volvo L180E is a pleasure to operate. Despite weighing 29 tons, there's a lot more to it than sheer power – it's also agile and easy to maneuver. In fact, you'll find it handles so much better than competing machines. Furthermore, you'll be sitting comfortably, having total control over the machine. Engine and hydraulics respond immediately to your commands. You enjoy superb visibility in all directions. It's an environment any demanding operator will enjoy, even though the shifts are numerous and long. Indeed, both operator and machine can relax and produce more, three shifts a day, seven days a week.

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 sound investment. Add to that outstanding handling and productivity, a market-leading operator environment, quick and simple daily maintenance and modest service requirements. And what have you got? The most cost-efficient loader in its class, delivering unparalleled profitability – both now and in the years to come. The L180E is quite simply a great deal for your money.

Specifications L180E

● Engine:	Volvo D12C LC E2	● Buckets:	3,7–14,0 m ³
● Max power at SAE J1995 gross ISO 9249, SAE J1349 net	23,3 r/s (1400 r/min) 223 kW (303 hp) 221 kW (300 hp)	● Log grapples:	1,6–3,7 m ²
● Breakout force:	215,7 kN*	● Operating weight:	26–29 t
● Static tipping load: at full turn	18 320 kg*	● Tires:	800/65 R29 or 26.5 R25

* Bucket: 4,4 m³ straight edge w/teeth.
Tires: 26.5 R25, Standard boom



The art of loading as quickly and cheaply as possible

The Volvo L180E is a highly productive loader. Its powerful, low-rev engine and Automatic Powershift provide immediate response even in the toughest conditions. And the Volvo axles are designed to ensure that the power is there when it's needed. The result is superior productivity and unequaled operating economy.

The electronically controlled Volvo D12C engine offers rapid response and faster cycles

Even at low revs, the 12-liter high performance engine delivers almost maximum torque. The machine responds quickly and forcefully, with excellent rimpull and full hydraulic power, modest fuel consumption and very low emissions. And, thanks to the low r/min, the service life of the engine is extended. All in all, you're looking at unbeatable productivity and economy – both now and in the years ahead.

The L180E gives you revs and speed dependent automatic powershift

The Volvo countershaft transmission offers smooth gearshifting. All the operator has to do is select forward, reverse or kick-down – APS automatically selects the right gear, depending on engine revs, speed and the mode



selected. This allows you to maximize machine performance while minimizing fuel consumption – regardless of application.

The Volvo axles keep you on the ground

Volvo's in-house engineered axles and drivetrain are well matched and designed for maximum dependability. The L180E features a hydraulically operated front differential lock, and can also be equipped with a rear* Limited Slip differential for optimum traction even in the toughest terrain.

Give yourself a brake

The L180E features Volvo's fully sealed oil circulation-cooled wet disc brakes, designed for smooth, effective braking – and, of course, a long service life.

The external* axle oil cooler cools the brakes efficiently. Furthermore, the axle oil is filtered, doubling service intervals to 2 000 hours.

Engine

- Volvo D12C – a new electronically controlled, high performance low emission, 6 cylinder in-line turbocharger diesel engine with direct injection (unit injectors), overhead camshaft, 4 valve per cylinder and air-to-air intercooler – which delivers high torque even at low revs.
- The E-Series' electronically controlled engine provides quicker response, lower fuel consumption and faster work cycles.
- Optimum fuel economy ensures both high output and emission levels low enough to meet the demands of Step 2 emission legislation.
- The electronically controlled hydrostatic fan is only activated when necessary, thus saving fuel.

- The engine filters are easily accessible, simplifying service and maintenance.

Transmission

- Volvo's refined countershaft transmission together with the electronically controlled engine mean excellent rimpull especially on steep gradients.
- In 1981, Volvo launched the world's first wheel loader with automatic transmission.
- Thanks to APS, the operator can select one of four modes for optimum performance and minimum fuel consumption.

Axles

- The Volvo axles are fully integrated with the drivetrain, delivering superior rimpull.

Brakes

- Hydraulic dual-circuit system for enhanced safety.
- 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 two-stage oil temperature alert provides effective protection of components and a longer service life.
- A brake wear indicator allows you to monitor wear and tear.

* Optional



A smart machine doesn't get worn out in a hurry

TP-Linkage, load-sensing hydraulics, smooth steering and stable operation help make the Volvo L180E a precision performer. No unnecessary energy is wasted pumping excess oil around the hydraulic system. Which ultimately means you can load more material per liter of fuel with the L180E than any competing machine in its class.

Hydraulics with sense

The Volvo L180E features an intelligent, load-sensing hydraulic system. Two variable piston pumps provide the exact flow and pressure required at any given moment, distributing power where and when it's needed. In combination with rapid response, this system facilitates smoother operation, lower fuel consumption, quicker hydraulics and shorter working cycles even at low revs.

TP-Linkage – superior breakout torque throughout the lifting range

TP-Linkage, Volvo's patented lift-arm system, delivers a high and even breakout torque throughout the lifting range. The system is exceedingly user-friendly. The operator can easily handle heavy materials and maintain full control in all positions. No other lift-arm system can provide such a high, even breakout torque.

Even on rough surfaces

Thanks to the compact design and ingenious geometry of TP-Linkage, the bucket is kept in a firm grip close to the front axle, resulting in a stable load and carries work with less spillage, quicker load and carry cycles and more tons moved per hour. An optional Boom Suspension System, featuring gas/oil accumulators, also helps to absorb shocks and smooth out rough roads.

Precise steering and easy maneuverability

Even at low r/min, steering is smooth and responsive. The load-sensing hydrostatic steering system is only activated when the wheel is turned, which means neither fuel nor power is wasted.



TP-Linkage

- Unique patented lift-arm system, which provides two solutions in one: Z-bar linkage and parallel action.
- Clever geometry ensures smooth operation and full control, boosting productivity and handling.

Load-sensing hydraulics

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

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

- The Boom Suspension System* enhances the machine's stability in all applications, facilitating faster and smoother cycles.

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.
- E-Series loaders feature a three-point engine and transmission mounting, decreasing noise and vibrations.
- Volvo's frame joint bearing design is a well-proven concept that's easy to maintain and renowned for its long service life.

* Optional



An alert operator is a productive operator



A comfortable and safe environment makes life easier and more productive for the operator. That's why we've worked hard to make this cab as operator-friendly as possible. In fact, the new Care Cab reinforces Volvo's reputation as a leader in operator environments and cab comfort.

Care Cab.

A clean and comfortable workplace

The right cab climate does wonders for efficiency, keeping operators sharp during those long shifts. In fact, all incoming air is filtered in two stages, making this the cleanest cab on the market. How have we achieved this? Incoming air first passes through a pre-filter, and is then cleaned by repeated circulation through the main filter. Furthermore, Volvo's state-of-the-art air-conditioning* provides a pleasant temperature the year-round, regardless of outdoor conditions.

Comfort and productivity go hand-in-hand

Our wide range of comfortable seats, all of them adjustable, leave you spoilt for choice. What's more, the instrumentation and all key information is right in front of you.

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 at right. And thanks to CDC (Comfort Drive Control)*, you can steer, change gear (forward/reverse and kick-down) at the flip of a switch in the armrest

– an excellent way to combat fatigue and static muscle strain. Furthermore, to avoid monotony, you can shift at any time from lever steering to using the wheel.

Keeping a constant eye on operation and performance

The new Contronic monitoring system allows the operator to keep a constant eye on the machine in real-time. The information display on your control panel provides continuous updates on the machine's functions in a number of different languages, including outdoor temperature, fuel consumption and fluid levels.

No noise to shout about

Thanks to its ingenious rubber mounting system and heavy-duty insulation, the new Care Cab is one of the quietest cabs on the market. So, instead of getting tiresome earfuls, a low noise level ensures that the operator stays sharp throughout the shift.

Care Cab

- Unrivalled environment with the market's best cab filter.
- Pleasant interior with superior finish. Easy to keep clean.
- Adjustable steering wheel*, seat and lever ensure operator comfort and productive shifts.
- Contronic, a superior control and monitoring system designed to increase safety and productivity.
- All service platforms and entry ladders boast improved anti-skid surfaces. Easy access thanks to a tilted ladder.
- Large windscreens and narrow pillars ensure panoramic visibility, thus further increasing safety.
- A new tilting engine hood improves visibility to the rear.
- The visibility-optimized TP-Linkage provides a clear view of the attachments.



* Optional



Rapid service for maximum availability

Few machines have to work in a tougher environment than a wheel loader. And the machine has to keep running – day in, day out – without breaking down. Naturally, should something happen, we offer a wide range of warranties and service solutions specially adapted to the conditions you work in. The ultimate goal is maximum productivity, year after year.

More time for work. That's what we call service-friendly design

Now that you can check your levels electronically, daily service is that much easier. Filters and service points are readily accessible from ground level. The service doors are large, easy-to-open and supported by gas struts. The radiator grille and fan swing out, and the pressure check ports and quick connectors are grouped for quick and easy checks.

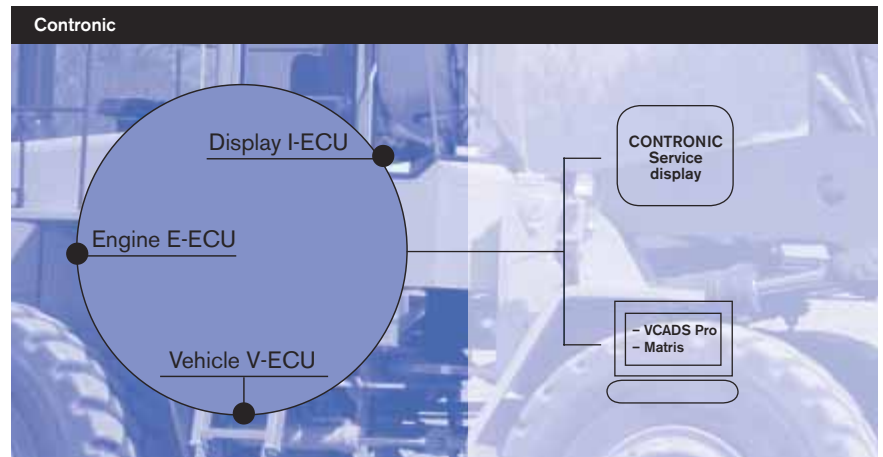
Contronic keeps an eye on everything

The machine's operation and performance are controlled and monitored by Volvo Contronic, a built-in electronic network made up of three computers (ECU). Operating on three levels, the system keeps an eye on the machine's functions in real-time.

Level 1: Should a potential problem occur, Contronic alerts the operator instantly. A service technician can then connect his Contronic service panel to the system, and trace the fault on the spot.

Level 2: All operational data is stored and can be used to analyze the machine's performance and trace its history since the latest service. This data is then presented in the machine tracking system, Matris, providing valuable information for fault tracing and service measures.

Level 3: This allows the machine's functions to be updated to optimize an adjustment to a change in working conditions – via the Contronic service display. Thanks to the new VCADS Pro analysis and programming tool, the engine's functions and performance can also be monitored and adapted to changing conditions.



Contronic (electrical system)

- Computerized power and monitoring system. Dependable and user-friendly for optimum performance.
- Display information in three categories: operational data, warning messages, error messages.
- Equipped with "shutdown to idle" safety function in the event of a problem, thereby minimizing potential damage.

Maintenance and availability

- Electronic level checks of oil and other key fluids, both making it easy for the operator as well as increasing dependability.
- Conveniently placed ventilation filters for transmission, axles, fuel and hydraulic tanks.
- An oil bath filter* more than doubles the service life of the standard filter in tough conditions.
- Volvo's factory fitted automatic lube system* keeps the machine lubricated, increasing availability.

- Readily accessible service points simplify maintenance.
- The lift arm system, with dual bushing seals, facilitates longer service life.
- Besides factory warranties, Volvo also offers extended warranties. These fall under our Component Assurance Program, CAP, and can be tailored to meet your needs.

* Optional



Environmental commitment is a natural part of Volvo

Care for the environment has always been one of Volvo's core values. Indeed, we see our commitment as an integral part of our operation. Not only our plants, but also our manufacturing processes are certified in accordance with ISO 14001. More than 95% of your Volvo L180E is fully recyclable. Fuel consumption is extremely modest, and the engine is low on both emissions and sound. These are but a few of the reasons why Volvo customers get one of the most environmentally considerate wheel loaders on the market.

Low revs mean low emissions and maximum power

The Volvo L180E is not only a winner in day-to-day and long-term operation, but also when it comes to operating economy and environmental consideration. The new, 12-liter turbo diesel engine delivers maximum torque already at low revs, which means low fuel consumption and extremely low emissions.

Comfortable and quiet operator environment

The low-rev engine and transmission's triple mounting minimizes vibrations. Both engine compartment and cab feature excellent sound insulation, which means operator and surroundings are spared needless noise.

More than 95% recyclable

The L180E is almost fully recyclable. Large components such as engine, transmission and hydraulics are re-engineered and re-used in our Parts Exchange program. Cast iron, steel and other metals are recyclable, as are glass,



plastics and other synthetic materials. Biologically degradable oil* can be used in the hydraulic system. The coolant in the air-conditioner is CFC-free. Even the oil particles from the crankshaft ventilation are separated and redirected

to the engine. All to ensure that the machine is as productive and economical as possible, while minimizing the impact on the environment.

The environment

- The electronically controlled Volvo diesel engine is specially designed for high performance and low emissions.
- The low r/min high performance engine meets all Step 2 emission requirements in Europe and the USA.

- Low external and internal noise levels.
- The L180E is more than 95% recyclable.
- Every Volvo loader is environmentally classified.
- All factories are certified in accordance with ISO 14001.

* Optional



The Volvo L180E in detail

Engine

Engine: 12 liter, 6-cylinder straight turbo-charged diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. Wet replaceable cylinder liners, replaceable valve guides and valve seats. Air cleaning: three-stage. Cooling system: Hydrostatic, electronically controlled fan and intercooler of the air/air type.

Engine.....	Volvo D12C LC E2
Max power at.....	23,3 r/s (1400 r/min)
SAE J1995 gross.....	223 kW (303 hp)
ISO 9249, SAE J1349.....	221 kW (300 hp)
Max torque at.....	20,0 r/s (1200 r/min)
SAE J1995 gross.....	1700 Nm
ISO 9249, SAE J1349.....	1690 Nm
Economic working range.....	1100–1600 r/min
Displacement.....	12 l

Drivetrain

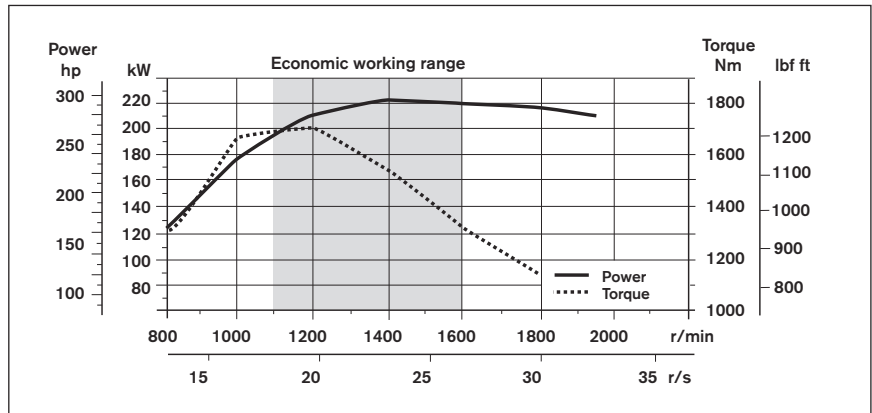
Torque converter: single-stage. Transmission: Volvo Countershaft-type transmission with single lever control. Fast and smooth shifting of gears between forward and reverse with PWM-valves (Pulse Width Modulated). Gearshifting system: Volvo Automatic Power Shift (APS) with mode selector. Axles: Volvo, fully floating axle shafts with planetary-type hub reductions. Cast steel axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle.

Transmission.....	Volvo HTE 220
Torque multiplication.....	2,04:1
Maximum speed, forward/reverse	
1.....	6,6 km/h
2.....	12,4 km/h
3.....	24,9 km/h
4.....	37,2 km/h
Measured with tires.....	26.5 R25 L3
Front axle/rear axle.....	Volvo/AWB 40/40
Rear axle oscillation.....	±15°
Ground clearance at 15° oscillation.....	610 mm

Brake system

Service brake: Volvo dual-circuit system with nitrogen-charged accumulators. Outboard mounted fully hydraulic operated, fully sealed oil circulation cooled wet disc brakes. The operator can select automatic declutch of the transmission when braking by a switch on the instrument panel. Parking brake: Fully sealed, wet multi-disc brake built into the transmission. Applied by spring force, electro-hydraulic release with a switch on the instrument panel. Secondary brake: Dual brake circuits with rechargeable accumulators. One circuit or the parking brake fulfill all safety requirements. Standard: The brake system complies with the requirements of ISO 3450 and SAE J1473.

Number of brake discs per wheel front/rear.....	1/1
Accumulators.....	2x1,0 and 1x0,5 l
Accumulator for parking brake.....	1x0,5 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. Pump: Axial piston pump with variable displacement. Steering cylinders: Two double-acting cylinders.

Steering cylinders.....	2
Cylinder bore.....	100 mm
Piston rod diameter.....	50 mm
Stroke.....	418 mm
Relief pressure.....	21 MPa
Maximum flow.....	190 l/min
Maximum articulation.....	±37°

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 four 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. The forces from the retractable seatbelt are absorbed by the seat rails. Standard: The cab is tested and approved according to ROPS (ISO/CD 3471, SAE J1040), FOPS (ISO 3449, SAE J231). The cab meets with requirements according to ISO 6055 ("protective roof for high-lift vehicles") and SAE J386 ("Operator Restraint System").

Emergency exits.....	1
Sound level in cab according to ISO 6396.....	LpA 70 dB (A)
External sound level according to ISO 6395.....	LwA 108 dB (A) (Directive 2000/14/EC)
Ventilation.....	9 m ³ /min
Heating capacity.....	11 kW
Air conditioning (optional).....	8 kW

Hydraulic system

System supply: Two load-sensing axial piston pumps with variable displacement. The steering function always has priority from one of the pumps. Valves: Double-acting 2-spool valve. The main valve is controlled by a 2-spool pilot valve. Lift function: The valve has four positions; raise, hold, lower and float 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 20 micron (absolute) filter cartridge.

Relief pressure maximum, pump 1.....	25,0 MPa
Flow.....	234 l/min
at.....	10 MPa
and engine speed.....	32 r/s (1900 r/min)
Relief pressure, pump 2.....	25,0 MPa
Flow.....	190 l/min
at.....	10 MPa
and engine speed.....	32 r/s (1900 r/min)
Pilot system	
Relief pressure.....	3,5 MPa
Cycle times	
Raise*.....	7,2 s
Tilt*.....	2,0 s
Lower, empty.....	3,7 s
Total cycle time.....	12,9 s

* with load as per ISO 5998 and SAE J818

Lift arm system

Torque parallel linkage with high breakout torque and exact parallel lift-arm action.

Lift cylinders.....	2
Cylinder bore.....	180 mm
Piston rod diameter.....	90 mm
Stroke.....	788 mm
Tilt cylinder.....	1
Cylinder bore.....	250 mm
Piston rod diameter.....	120 mm
Stroke.....	480 mm



Electrical system

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

Voltage..... 24 V
 Batteries.....2x12 V
 Battery capacity.....2x170 Ah
 Cold cranking capacity, approx.....1150 A
 Reserve capacity, approx 350 min
 Alternator rating..... 1540 W/55 A
 Starter motor output..... 7,0 kW (9,5 hp)

Service

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

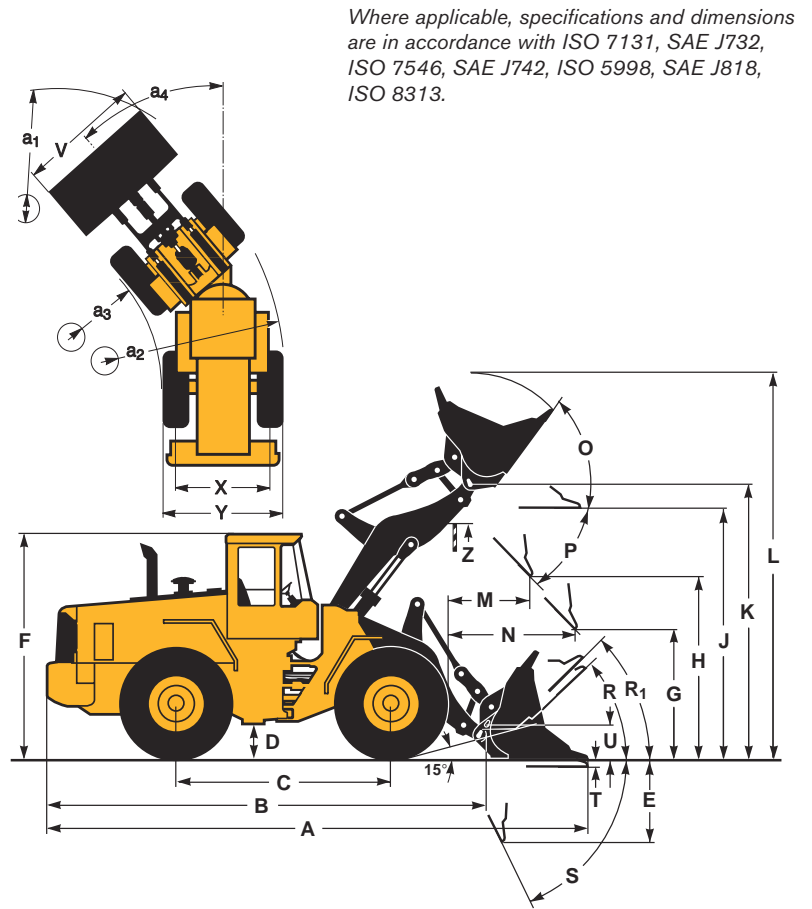
Refill capacities
 Fuel tank..... 370 l
 Engine coolant..... 70 l
 Hydraulic oil tank..... 156 l
 Transmission oil 45 l
 Engine oil 48 l
 Axles front/rear 45/55 l

Specifications

Tires: 26.5 R25 L3

	Standard boom	Long boom
B	7 180 mm	7 640 mm
C	3 550 mm	—
D	440 mm	—
F	3 580 mm	—
G	2 130 mm	—
J	4 070 mm	4 580 mm
K	4 480 mm	4 980 mm
O	57 °	—
P _{max}	49 °	49 °
R	45 °	48 °
R ₁ *	48 °	48 °
S	70 °	63 °
T	113 mm	—
U	560 mm	—
X	2 280 mm	—
Y	2 950 mm	—
Z	3 810 mm	4 170 mm
a ₂	6 780 mm	—
a ₃	3 830 mm	—
a ₄	±37 °	—

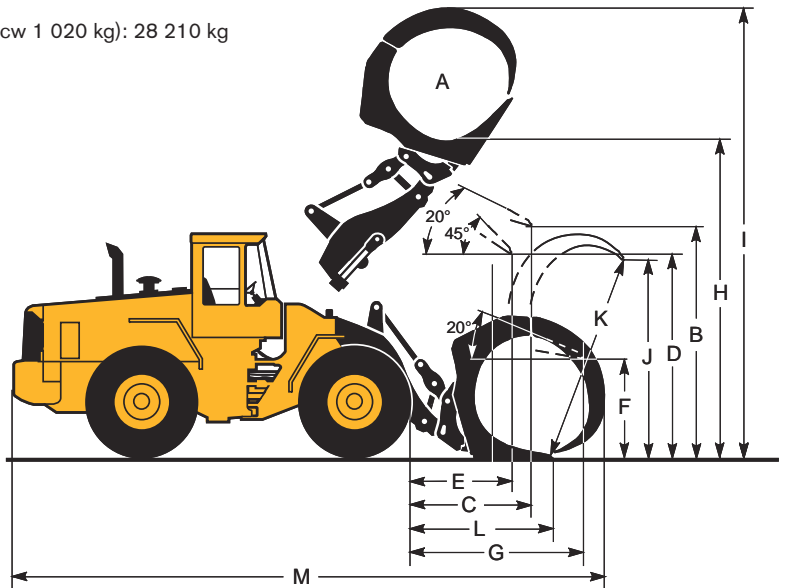
* Carry position SAE



Tires: 800/65 R29

A	3,1	m ²
B	3 810	mm
C	2 090	mm
D	3 110	mm
E	1 630	mm
F	1 630	mm
G	2 990	mm
H	5 130	mm
I	7 400	mm
J	3 080	mm
K	3 340	mm
L	2 410	mm
M	9 810	mm

Operating weight (incl. logging cw 1 020 kg): 28 210 kg
Operating load: 8 800 kg



SUPPLEMENTAL OPERATING DATA

		Standard boom		Long boom	
		26.5 R25 L5	800/65 R29	26.5 R25 L5	800/65 R29
Tires 26.5 R25 L3					
Width over tires	mm	+30	+130	+30	+130
Ground clearance	mm	+30	+20	+30	+20
Tipping load, full turn	kg	+700	+620	+680	+540
Operating weight	kg	+970	+920	+970	+920

Tires 26.5 R25	GENERAL PURPOSE						ROCK*	LIGHT MTRL	LONG BOOM
	Teeth & Segments	Teeth	Teeth	Bolt-on edges	Bolt-on edges	Bolt-on edges	Teeth	Bolt-on edges	
Volume, heaped ISO/SAE m ³	4,4	4,4	4,6	4,6	4,8	4,8	4,1	7,8	—
Volume at 110% fill factor m ³	4,8	4,8	5,1	5,1	5,3	5,3	—	8,6	—
Static tipping load, straight kg	20 460	20 970	20 770	20 700	20 530	19 760	21 480	19 580	-3 600
at 35° turn kg	18 110	18 590	18 410	18 340	18 190	17 460	19 030	17 270	-3 270
at full turn kg	17 840	18 320	18 140	18 070	17 930	17 200	18 750	17 010	-3 230
Breakout force kN	204,8	215,7	206,5	204,9	196,6	185,8	193,2	150,6	—
A mm	9 000	8 990	9 060	8 790	8 860	8 950	9 150	9 340	+450
E mm	1 530	1 520	1 580	1 340	1 400	1 480	1 660	1 840	—
H ^{***}) mm	2 990	3 000	2 950	3 120	3 080	3 040	2 910	2 700	+510
L mm	6 140	6 180	6 190	6 180	6 190	6 240	6 320	6 310	+490
M ^{***}) mm	1 400	1 400	1 450	1 230	1 280	1 380	1 530	1 580	+20
N mm	2 010	2 020	2 050	1 910	1 930	1 980	2 100	2 030	+420
V mm	3 200	3 230	3 230	3 200	3 200	3 200	3 230	3 400	—
a ₁ clearance circle mm	14 850	14 880	14 910	14 750	14 780	14 820	14 970	15 210	—
	26 540	26 350	26 400	26 430	26 480	26 790	27 650	26 830	+210

***) Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge (acc. SAE) + approx. 200 mm. Measured at 45° dump angle.

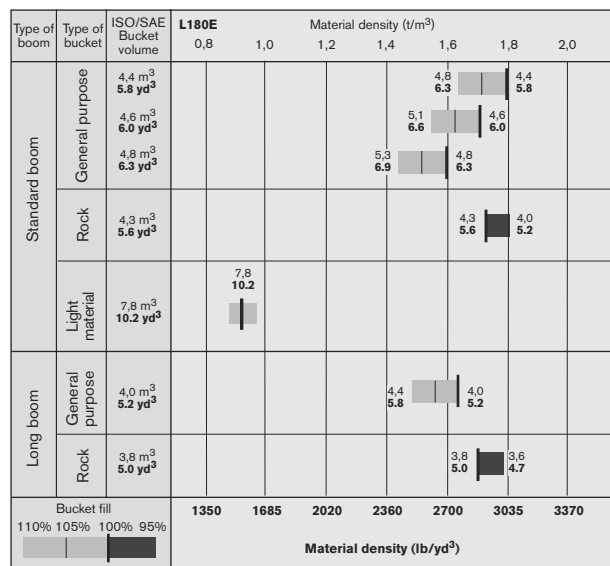
Note: This only applies to Volvo original attachments.

BUCKET SELECTION CHART

The choice of 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 TP Linkage features: • Open bucket design. • Very good roll back in all positions. • Good bucket fill performance. The below example and table are intended for Standard boom. **Example: Sand and gravel. Fill factor ~ 105%. Density 1,65 t/m³. Result: The 4,6 m³ bucket carries 4,8 m³. For optimum stability always consult the bucket selection chart.**

Material	Bucket fill, %		Material density, t/m ³	ISO/SAE bucket volume, m ³	Actual volume, m ³
Earth/Clay	~ 110		~ 1,60	4,4	~ 4,8
			~ 1,55	4,6	~ 5,1
			~ 1,45	4,8	~ 5,3
Sand/Gravel	~ 105		~ 1,70	4,4	~ 4,6
			~ 1,65	4,6	~ 4,8
			~ 1,50	4,8	~ 5,1
Aggregate	~ 100		~ 1,80	4,4	~ 4,4
			~ 1,70	4,6	~ 4,6
			~ 1,60	4,8	~ 4,8
Rock	≤100		~ 1,70	4,3	~ 4,3

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



STANDARD EQUIPMENT

Engine

Three stage air cleaner with ejector and inner filter
Indicator glass for coolant level
Preheating of induction air
Two fuel filters
Coolant filter

Electrical system

24 V, prewired 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 working lights (2 front and 2 rear)
- Instrument lighting

Contronic,

monitoring system, ECU with log and analysis system

Contronic display

Fuel consumption

Outdoor 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
- 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 clutch function for transmission cut-out when braking

PWM-control between different gear positions

Forward and reverse switch by lever console

Differentials:

- front: 100% hydraulic 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 (SAE J1040CC, ISO 3471), FOPS (SAE J231, ISO 3449)

Single key kit door/start

Acoustic inner lining

Ashtray

Cigarette lighter

Lockable door

Cab heating with filter, fresh-air inlet and defroster

Floor mat

Interior lights

Interior rear-view mirror

2 exterior rear-view mirrors

Openable window right-hand side

Tinted safety glass

Hip 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 vane pump

Variable displacement axial piston pumps (3) for:

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

Boom lowering system

Boom lever detent, adjustable

Boom kickout, automatic, adjustable

Bucket positioner, automatic with position indicator, adjustable

Hydraulic oil cooler

External equipment

Noise and vibration dampening suspension of cab, engine and transmission

Lifting lugs

Easy-to-open side panels and engine hood

Frame steering, joint lock

Vandalism lock prepared for batteries and engine hood

Towing hitch

OPTIONAL EQUIPMENT

(Standard on certain markets)

Service and maintenance

Tool box

Tool kit

Automatic lubrication

Automatic lubrication of attachment bracket

Refill pump for auto lub system

Wheel nut wrench kit

Engine equipment

Engine block heater

Oil bath pre-cleaner

Turbo air cleaner

Radiator and hydraulic oil cooler, corrosion prot.

Hand-operated throttle

Fuel fill strainer

Reversible fan

Electrical system

Air filter for alternator

Attachment working lights

Extra working lights front

Extra working lights rear

Light, licence plate

Assymetrical lights for left-hand traffic

Rotating beacon, collapsible

Side marker lamps

Acoustic back-up signal

Cab

Radio with tape recorder

Installation kit for radio

Sunblinds, front and rear windows

Sunblinds, side windows

Sliding window, right

Sliding window, door

Retractable hipbelt, longer and wider than standard

Air conditioning

Ventilation air filter for work in asbestos environment

Operator's seat with low backrest

Operator's seat with low backrest, heated

Operator's seat with high backrest, heated

Operator's seat air suspended with high backrest and electrical heating

Instructor's seat

Armrest (left) for ISRI operator seat

Lunchbox holder

Steering knob

Noise reduction kit

Rear view camera

Adjustable steering wheel

Automatic temp control (ATC)

Heated rear view mirrors

Drivetrain

Diff lock front 100%, limited slip rear

Diff lock front 100%, limited slip rear incl. oil cooler

Speed limiter 20 km/h, 30 km/h

Brake system

Oil cooler for front and rear axle

Hydraulic system

Single lever control

Single lever control for 3rd hydraulic function

3rd hydraulic function

3rd-4th hydraulic function

Boom Suspension System

Biodegradable hydraulic fluid

Attachment bracket

Arctic kit, attachment locking hoses

Arctic kit, pilot hoses and brake accum.

Separate attachment locking, standard boom

Separate attachment locking, long boom

External equipment

Long boom

Mudguards widener

Mudguards, fixed front and swing out rear

Protective equipment

Guards for front headlights

Guards for taillights

Guards for side windows and rear window

Guards for radiator grill

Windshield guard

Bellyguard front and rear

Other equipment

Comfort Drive Control, CDC

Secondary steering

Sign, slow moving vehicle

Tires

800/65 R29

26.5 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 and increased operator comfort. This Boom Suspension System provides quicker cycle times, less spillage and enhances 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)*

Monotonous steering movements are decreased drastically thanks to CDC. The operator can shift and steer easily with the aid of controls mounted on the left armrest of the seat.



3rd & 4th hydraulic functions

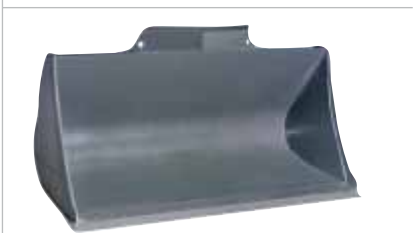
The hydraulic system of the L180E can be fitted with a third hydraulic function. This separate function, including lever and cables, is readily installed and will further increase the machine's flexibility.

What's more, the L180E can be equipped with a fourth hydraulic function essential for applications employing timber forks with a clamping tine.



Volvo's Genuine Attachments

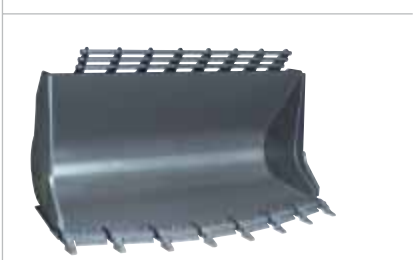
Volvo's Genuine Attachments are designed to match TP-Linkage, making the L180E quick and efficient in a wide range of applications. Can also be used with older models of the L150 and L180.



Standard bucket with edge savers



Standard bucket with teeth



Spade nose rock bucket with teeth



Log grapple/Sorting grapple

* Optional



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 web site:
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

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