



Volvo Construction Equipment

# L180H HIGH-LIFT

VOLVO WHEEL LOADERS 33-34t (72,700-75,000lbs) 334hp



# 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





Mack Trucks



UD Trucks



Volvo Buses



Volvo Construction  
Equipment



Volvo Penta



Volvo Financial Services





#### **Volvo high-lift arm system**

Increase productivity and maximize your timber yard with Volvo's superior high-lift arm system – designed for high stacking and long reach. Benefits of the system include quick, safe loading and unloading as well as faster ground speeds when travelling with a load due to excellent stability.



# Sky-high productivity.

Lift higher and reach further with the L180H HL and Volvo's range of grapples. Designed for log handling, this purpose-built machine allows you to stack higher and load faster – increasing productivity and profitability. Get the job done with Volvo.

## Boom Suspension System

The Boom Suspension System (BSS) boosts productivity by up to 20% by absorbing shock and reducing the bouncing that occurs when operating on rough ground. This enables faster and more comfortable work cycles and increases machine life.



## Grapple with rotator unit

For ease of use when placing and picking up logs from the middle of the stack, or when operating over uneven terrain, the grapple with rotator unit and built in shock absorbers can be rotated and tilted. The grapple-tilt cylinder has an integrated damping function which effectively counteracts swaying and provides better control of the load.

# Loaded with efficiency.

The new L180H HL is a purpose-built, high-lift wheel loader designed by Volvo Construction Equipment for log handling. Loaded with innovations and fuel-saving features, this machine works in the most efficient and productive way. One example of this is Volvo's unique OptiShift technology which reduces fuel consumption by up to 18% and increases machine performance.

## Reverse By Braking (RBB)

The Volvo patented RBB function senses the loader's direction and slows the machine when the operator changes direction by applying the service brakes automatically. This increases fuel efficiency and improves operator comfort. RBB is ideal for short cycle or truck loading applications.

## Intelligent hydraulics

Volvo's load-sensing hydraulics supply power to the hydraulic functions according to demand, lowering fuel consumption. The powerful system ensures fast response for shorter cycle times while delivering smooth operation through superior control of both the load and the attachment.



## 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.





#### **OptiShift**

Volvo's OptiShift technology combines the company's patented Reverse By Braking (RBB) technology and a torque converter with lock-up. Lock-up creates a direct drive between the engine and transmission – eliminating power losses in the torque converter and reducing fuel consumption by up to 18%.





#### **Powertrain**

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



# New levels of reliability.

Experience top to bottom quality with the Volvo L180H HL. Featuring proven, advanced technology including the premium Volvo Tier 4 Final/Stage IV engine, this dependable machine has been built to last. With reliability you can count on, trust Volvo to help you reach new levels of uptime.

## Volvo engine

Featuring advanced technology and built on decades of experience, the powerful Volvo Tier 4 Final/Stage IV engine delivers high performance and low fuel consumption. During the fully automatic regeneration process, particulate matter collected in the DPF is burnt off without interrupting operation, performance or productivity.



## Reversible cooling fan

The hydraulically-driven, electronically controlled cooling fan regulates the temperature of the vital components. It automatically activates only when it's needed – reducing fuel consumption and noise. The optional reversible functionality – which blows air in the opposite direction – allows for self-cleaning of the cooling units.



## Axle oil cooling

Both the front and the rear axle feature an axle oil circulation which allows the axle oil to flow and cool inside the axle – protecting components.



# Innovative access.

Access greater uptime and spend longer working with the L180H HL. With a tilting cab and an electrically activated, wide-opening engine hood, it's easy to see that this machine has been designed for quick and easy service and maintenance checks. Get the most out of each working day with Volvo.

## Maintenance-free batteries

Two heavy-duty, maintenance-free 12V batteries in series provide a 24V electrical system. The batteries are located in a well-sealed compartment on the right side of the machine.



## Lubrication system

The automatic lubrication system controls greasing when the machine is in operation, resulting in more uptime and reduced maintenance. The operator can alter the lubrication cycle to suit the application.



## Engine access

Electrically activated, the wide-opening engine hood allows quick and easy service access to the engine and components for maximum uptime.



## Maintenance-free rear axle cradles

The rear axle is supported on maintenance-free cradles and includes greased-for-life bearings and bushings – reducing overall service cost, increasing machine uptime and ensuring long life. Cradle oscillation pins are sealed to keep grease in and dirt out.





#### **Tilting cab**

The cab can be tilted in two positions – 35° and 70°. Tilting the cab greatly improves service and maintenance access which leads to more uptime and increased machine availability. The cab is tilted via a manually operated pump.





#### **High-lift arm system**

Volvo's high-lift arm system is designed for high stacking and long reach – allowing you to increase productivity and maximize your timber yard.

#### **Grapple with rotator unit**

The grapple can be tilted and rotated for easy placement and pick-up of logs from anywhere in the stack.

#### **Fire suppression system**

For added safety, the optional fire suppression system consists of up to 16 nozzles that are automatically activated inside the engine compartment when excessive heat is detected.



#### **OptiShift**

Volvo's OptiShift technology reduces fuel consumption by up to 18%, increases operator comfort and reduces stress in the drivetrain.

#### **Boom Suspension System (BSS)**

The BSS boosts productivity by up to 20% by absorbing shock and reducing the bouncing that occurs when operating at speed on rough terrain.



#### **Powertrain**

The ideally-matched, all-Volvo powertrain has been built to work together in perfect harmony – ensuring optimized performance.



# Set your targets higher.



## **Volvo cab**

Volvo's industry-leading, certified ROPS/FOPS cab features ergonomically placed controls, low internal noise levels, vibration protection and ample storage space.



## **Tilting cab**

The cab can be tilted in two positions – 35° and 70° – for improved service and maintenance access. This leads to more uptime and increased machine availability.

## **Diesel Exhaust Fluid (DEF)**

Volvo offers a total DEF solution that is quality assured, cost efficient and easily accessible. Contact your Volvo dealer for more information.

## **Volvo engine**

Volvo's Tier 4 Final/Stage IV engine delivers high performance and low fuel consumption. Regeneration is automatic and is done without interrupting operation, performance or productivity.

## **Easy service access**

Electrically activated, wide-opening engine hood allows quick and easy service access to the engine compartment.

## **Reversible cooling fan**

The cooling fan automatically activates only when it's needed to regulate the temperature of components. The reversible functionality allows for self-cleaning of the cooling units.

## **Intelligent hydraulics**

Volvo's load-sensing hydraulics supply power to the hydraulic functions according to demand, lowering fuel consumption.







#### **Volvo cab**

The spacious ROPS/FOPS certified cab provides a comfortable operating environment with ergonomically placed controls and ample storage space. With low internal noise levels and vibration protection, operators will experience a productive work shift.

# Unparalleled operator comfort.

Volvo's industry-leading cab provides operators with the most effective workplace in the business. Featuring ample leg room, easy to access controls and built in safety, it's clear to see that the cab has been designed with productivity in mind. But don't just take our word for it, step inside and take a look for yourself.

## Visibility

Volvo offers a variety of options to improve safety and visibility when working in the dark. This includes reflectors which follow the contour of the machine, LED entrance lights which illuminate the cab for safe entry and exit and additional LED work lamps which increase visibility around the machine.



## Cab air filter

The cab air intake is located high on the machine, where air is cleanest. The easy-to-replace pre-filter 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.

## Fire suppression system

For added safety, the optional fire suppression system consists of up to 16 nozzles that are automatically activated inside the engine compartment if excessive heat is detected. The system has been rigorously tested and is purpose built for Volvo wheel loaders. It is a semi-automatic system which also can be manually activated both inside and outside the cab.



# 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 increasing the positive return on your investment and maximising uptime.



## Complete Solutions

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

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



## 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.



## 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.





# Volvo L180H high-lift in detail.

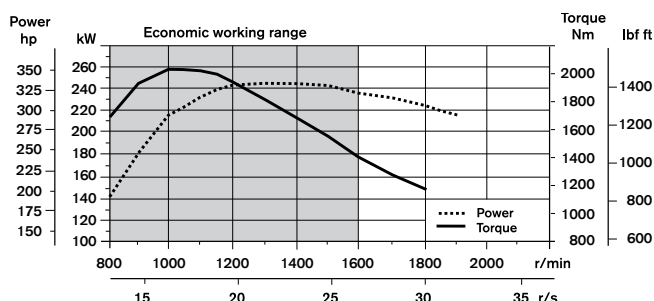
## Engine

V-ACT Stage IV/Tier 4F, 13 liter, 6-cylinder straight turbocharged diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats. The throttle applications is transmitted electrically from the throttle pedal or the optional hand throttle.

**Air cleaning:** Two-stage: - primary filter -secondary filter.

**Cooling system:** Hydraulically driven radiator cooling fan.

Engine			D13J
Max power at	r/s (r/min)	21.7 - 23.3 (1 300 - 1 400)	
SAE J1995 gross	kW / hp	246 / 334	
ISO 9249, SAE J1349 net	kW / hp	245 / 333	
Max torque at	r/s (r/min)	16.7 (1 000)	
SAE J1995 gross	Nm lbf-ft	2 030 1,497	
ISO 9249, SAE J1349 net	Nm lbf-ft	2 024 1,493	
Economic working range	r/s (r/min)	13.3-26.7 (800 - 1 600)	
Displacement	l in <sup>3</sup>	12.8 781	



## Brake system

**Service brake:** Volvo dual-circuit system. Outboard-mounted fully hydraulic operated, fully sealed oil circulation-cooled wet disc brakes.

**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 fulfills all safety requirements.

**Standard:** The brake system complies with the requirements of ISO 3450.

Accumulators	l US gal	2 x 1.0 + 1 x 0.5	2 x 0.26 + 1 x 0.13
Number of brake discs per wheel (front)			1

## Electrical system

**Central warning system:** Contronic electrical system with central warning light and buzzer for following functions: - Serious engine fault - Low steering system pressure - Over speed warning engine - Interruption in communication (computer fault) Central warning light and buzzer with the gear engaged for the following functions. - Low engine oil pressure - High engine oil temperature - High charge air temperature - Low coolant level - High coolant temperature - High crank case pressure - 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 170
Cold cranking capacity, approx	A	1 000
Alternator rating	W/A	2 280 / 80
Starter motor output	kW	7

## Drivetrain

**Torque converter:** Single-stage.

**Transmission:** Volvo countershaft transmission. Fast and smooth shifting of gears with Pulse Width Modulation (PWM) valve. Torque converter with lockup.

**Transmission:** Volvo Automatic Power Shift (APS) with fully automatic shifting 1-4 and mode selector with 4 different gear shifting programs.

**Axles:** Volvo fully floating axle shafts with planetary hub reductions and nodular iron axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle.

Transmission	Volvo HTL 221			
Torque multiplication, stall ratio	1,856:1			
Maximum speed, forward/reverse	1st gear	km/h	mph	6.5 3.7
	2nd gear	km/h	mph	12.5 7.5
	3rd gear	km/h	mph	26 16.2
	4th gear*	km/h	mph	38 23.6
Measured with tires	800/65R29			
Front axle/rear axle	AWB 40B			
Rear axle oscillation ±	°			13
Ground clearance at 13° osc.	mm	in	610	24

\*) limited by ECU

## Cab

**Instrumentation:** All important information is centrally located in the operator's field of vision. Display for Contronic 3.0 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.

**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").

Sound level in cab according to ISO 6396/SAE J2105

LpA	dB(A)		70
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External sound level according to ISO 6395/SAE J2104

LwA	dB(A)		108
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Ventilation	m³/min	yd³/min	9	11.8
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Heating capacity	kW		16
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Air conditioning (optional)	kW		7.5
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## Steering system

**Steering system:** Load-sensing, hydrostatic articulated steering.

**System supply:** The steering system has priority feed from a load-sensing axial piston pump.

**Steering cylinders:** Two double-acting cylinders.

Cylinder bore	mm	in	100	3.9
Piston rod diameter	mm	in	60	2.4
Stroke	mm	in	525	2.7
Working pressure	MPa	bar	21 ± 0.35	210 ± 3.5
Maximum flow	l/min	gal/min	252	66.6
Maximum articulation	± °		37	

## Service

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

Fuel Tank	l	gal	366	96.7
DEF Tank	l	gal	31	8.2
Engine coolant	l	gal	55	14.5
Hydraulic oil tank	l	gal	156	41.2
Transmission oil	l	gal	48	12.7
Engine oil	l	gal	50	13.2
Axle oil front/rear	l	gal	46/55	12.2/14.5

## Lift arm system

The Volvo high-lift arm system is a rugged and stable in-house design, with optimized visibility throughout the work cycle. The new lift arm design gives increased lift height and the possibility to rotate the grapple 360 degrees fully open at top position. The lift height is 5,8 meters under closed grapple.

Lift cylinders	2			
Cylinder bore	mm	in	140	5.5
Piston rod diameter	mm	in	110	4.3
Stroke	mm	in	2 220	87.4
Tilt cylinder	2			
Cylinder bore	mm	in	140	5.5
Piston rod diameter	mm	in	70	2.8
Stroke	mm	in	691	27.8

## Hydraulic system

**System supply:** Two load-sensing axial piston pumps with variable displacement. The steering function always has priority from one of the pumps.

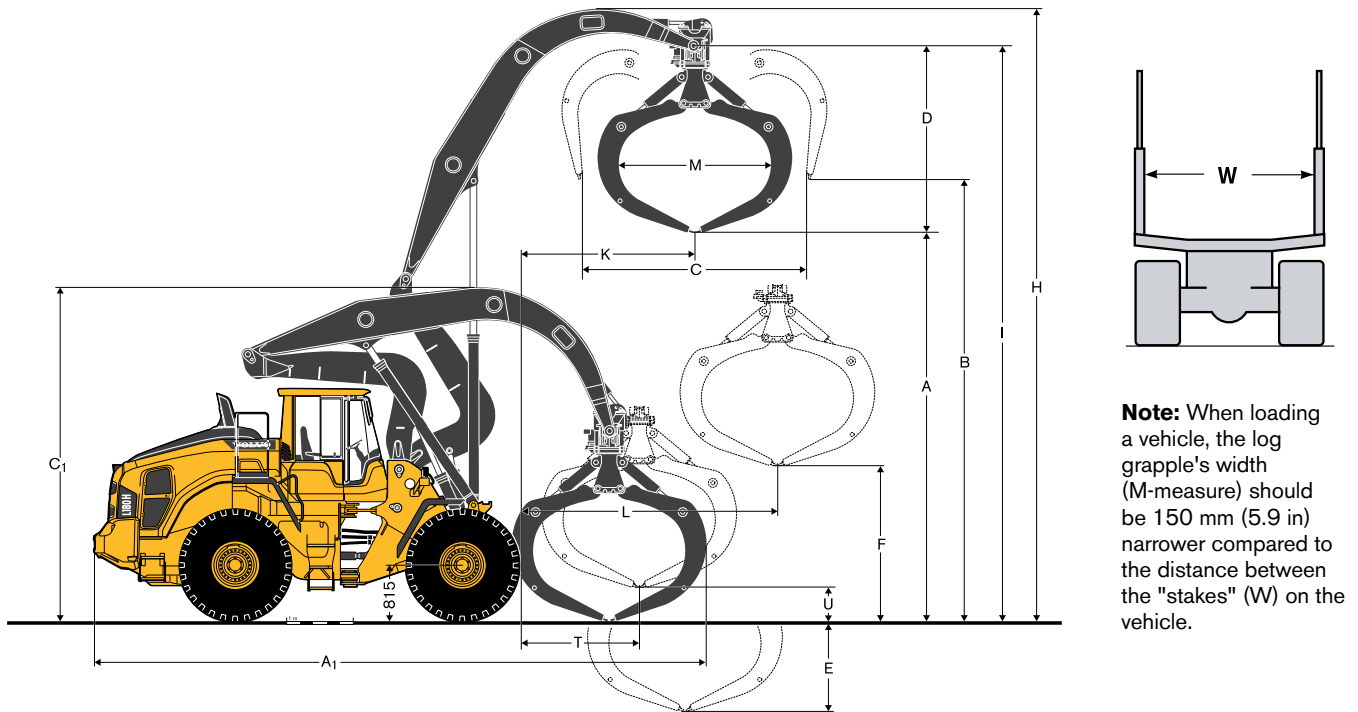
**Valves:** Two main valves. Main valve 1: 2 spool control valve for lift- and tilt function. Main valve 2: 4 spool control valve for grapple, grapple tilt, rotator and log pusher (extra equipment).

**Filter:** Full flow filtration through 10 micron (absolute) filter cartridge.

Working pressure maximum, pump 1	MPa	bar	20	200
Working pressure maximum, pump 2	MPa	bar	21	210
Pilot system	MPa	bar	3.2 - 4.0	32 - 40
Lower, empty (top to bottom)	s		6	



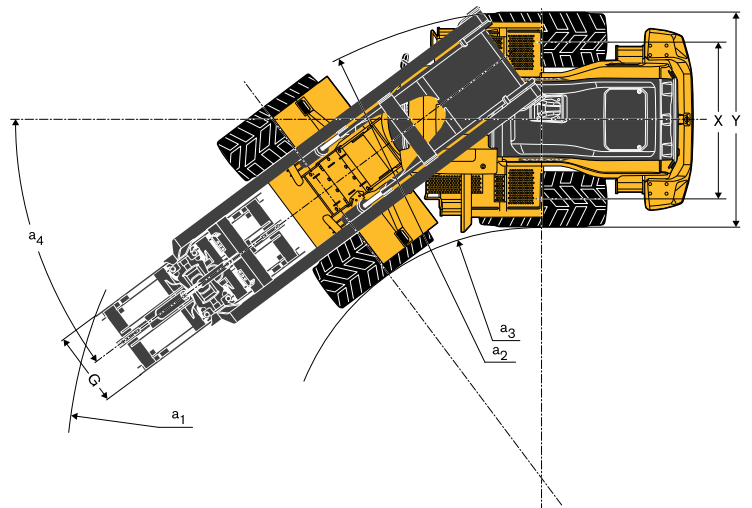
# Specifications.









**Tires: 775/65 R29\***

**Rotating grapple, 360°, 3.2 m<sup>2</sup> (3.8 yd<sup>2</sup>), 82127**

A <sub>1</sub>	Grapple positioned lengthwise	mm	in	9 600	378
	– with log pusher	mm	in	9 916	390.4
A <sub>2</sub>	Grapple tilted forward	mm	in	10 590	416.9
C <sub>1</sub>	Grapple positioned lengthwise	mm	in	5 160	203.1
C <sub>2</sub>	Grapple tilted forward	mm	in	4 760	187.4
H		mm	in	9 132	359.5
I		mm	in	8 930	351.6
K		mm	in	2 760	105.7
L		mm	in	3 990	157.1
X		mm	in	2 280	89.8
Y		mm	in	3 080	121.3
a <sub>1</sub>		mm	in	7 630	300.4
a <sub>2</sub>		mm	in	6 840	269.3
a <sub>3</sub>		mm	in	3 830	150.8
a <sub>4</sub>					± 37



			Timber Length 5.0 m (16'5" ft in)				Timber Length 4.0 m (13'1" ft in)		Pulpwood Length 4.0 m (13'1" ft in)			
Tires 775/65 R29*												
Grapple area	m <sup>2</sup>	yd <sup>2</sup>	3.2	3.8	3.2	3.8	3.5	4.2	3.8	4.5	3.8	4.5
Grapple weight	kg	lb	1 880	4,145	2 050/ 1 960	4,519/ 4,321	2 150	4,740	2 020/ 1 940	4,453/ 4,277	2 210	4,872
Working load	kg	lb	8 800	19,401	8 600/ 8 700	18,960/ 19,180	8 500	18,739	8 600/ 8 700	18,960/ 19,180	8 500	18,739
A	mm	in	5 800	228.3	5 800	228.3	5 700	224.4	5 350	210.6	5 350	210.6
B	mm	in	6 700	263.8	6 700	263.8	6 600	259.8	6 450	253.9	6 450	253.9
C	mm	in	3 630	142.9	3 630	142.9	3 750	147.6	4 500	177.2	4 500	177.2
D	mm	in	2 900	114.2	2 900	114.2	2 850	112.2	3 350	131.9	3 200	126.0
E	mm	in	1 330	52.4	1 330	52.4	1 430	56.3	1 780	70.1	1 780	70.1
F	mm	in	2 255	88.8	2 255	88.8	2 150	84.6	1 800	70.9	1 800	70.9
G	mm	in	1 100	43.3	1 100/ 900	43.3/ 35.4	11	43.3	1 100/ 900	43.3/ 35.4	900	35.4
M	mm	in	2 400	94.5	2 400	94.5	2 550	100.4	2 350	92.5	2 350	92.5
Operating weight*	kg	lb	33 600	74,075	33 800/ 33 700	74,516/ 74,296	33 700	74,296	33 760/ 33 680	74,428/ 74,252	34 030	75,023
Shortwood (pulpwood)										x		x
Timber				x		x		x				
Terminal handling				x		x		x		x		x
Unloading/loading of vehicles				x		x		x		x/x		x/x
Unloading against wall										x		x
With hydraulic clamping arms						x		x				x
With triplex chain				x						x		
Order no.			91 852		82 127/82 126		82 128		94 463/93 607		82 129	

\* Including liquid in rear tires. Optional liquid in front tires increases the weight by 1 830 kg (4,035 lbs).  
The log pusher increases operating weight by 800 kg (1,764 lbs). Log pusher, order no. 84184.



# Equipment.

## STANDARD EQUIPMENT

### Service and maintenance

Engine oil remote drain and fill  
Transmission oil remote drain and fill  
Lubrication manifolds, ground accessible  
Pressure check connections: transmission and hydraulic, quick-connects  
Tool box, lockable  
CareTrack  
Telematics, 3-Year Subscription  
Automatic lubricating system

### Engine

Exhaust after-treatment system  
Two stage air cleaner, primary and secondary filter  
Preheating of induction air  
Fuel pre-filter with water trap  
Fuel filter  
Crankcase breather oil trap  
Exterior radiator air intake protection

### Electrical system

24 V, pre-wired for optional accessories  
Alternator 24V/ 80A  
Battery disconnect switch with removable key  
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

Test function, sound level at max fan speed

Warning and indicator lights:

Battery charging  
Parking brake

Warning and display message:

Regeneration  
Engine coolant temperature  
Charge-air temperature  
Engine oil 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  
Steering pressure  
Crankcase pressure  
Attachment lock open

Level warnings:

Fuel level  
Engine oil level  
Engine coolant level  
Transmission oil level  
Hydraulic oil level  
Washer fluid level

Engine torque reduction in case of malfunction indication:

High engine coolant temperature  
High engine oil temperature  
Low engine oil pressure  
High crankcase pressure  
High charge-air temperature

Engine shutdown to idle in case of malfunction indication:

High transmission oil temperature  
Slip in transmission clutches

Keypad, background lit

Start interlock when gear is engaged

### Drivetrain

Automatic Power Shift  
Fully automatic gearshifting, 1-4  
PWM-controlled gearshifting  
Indicator glass for transmission oil level  
Oil cooler and filter for front + rear axle  
Differentials:  
Front, 100% hydraulic diff lock. Rear, conventional.  
OptiShift

### Brake system

Dual brake circuits  
Dual brake pedals  
Secondary brake system  
Parking brake, electrical-hydraulic  
Brake wear indicators

### Cab

Tiltable Cab  
ROPS (ISO 3471), FOPS (ISO 3449)  
Single key kit door/start  
Acoustic inner lining  
Ashtray  
12/24 V power outlet  
Lockable door  
Cab heating with fresh air inlet and defroster  
Fresh air inlet with two filters  
Automatic heat control  
Floor mat  
Dual interior lights  
Dual interior rear-view mirrors  
Dual exterior rear-view mirrors  
Sliding window, right side  
Operator's seat, Volvo air susp, heavy-duty, high back, heat, for CDC  
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 and rear wipers

### Hydraulic system

Main valve, double acting 2-spool with hydraulic pilots  
Variable displacement axial piston pumps (3) for:  
1 Working hydraulic system  
2 Working hydraulic system,  
Steering- and Brake system  
3 Cooling fan and Brake system  
Electro-hydraulic servo controls  
Tilt arm positioner, automatic with position indicator, adjustable  
Rotor  
Boom Suspension System (BSS)  
Indicator glass for hydraulic oil level  
Hydraulic oil cooler

### External equipment

Fenders, front and rear  
Viscous cab mounts  
Rubber engine and transmission mounts  
Frame, joint lock  
Footsteps front frame  
Footstep, right-hand side  
Vandalism lock prepared for  
Engine compartment  
Radiator grille  
Lifting eyes  
Tie-down eyes  
Tow hitch  
Counterweight, pre-drilled for optional guards  
Counterweight, logging

## OPTIONAL EQUIPMENT

### General

CE-marking  
CareTrack  
Sign, slow moving vehicle  
Sound decal, EU  
Warning decals, text version  
Year of manufacturing plate

### Service and maintenance

Oil sampling valve  
Refill pump for grease to lube system  
Tool kit  
Wheel nut wrench kit

## OPTIONAL EQUIPMENT

### Engine

Air pre-cleaner, cyclone type  
Air pre-cleaner, oil-bath type  
Air pre-cleaner, turbo type  
Engine auto shutdown  
Engine block heater  
Fuel fill strainer  
Fuel filter, extra  
Fuel heater  
Hand throttle control  
Max. fan speed, hot climate  
Radiator, corr. prot.  
Radiator grille, guard  
Reversible cooling fan

### Electrical system

Anti-theft device  
Battery disconnect switch, additional in cab  
Headlights, assym. left  
Headlights, front, guards  
License plate holder, lighting  
Rear view camera incl. monitor, colour  
Reduced func. working lights, reverse gear activated  
Reverse alarm, audible  
Reversing warning light, Strobe lightning  
Side marker lamps  
Taillight guards, heavy-duty  
Warning beacon, rotating  
Working light, attachments Halogen  
Working lights front, extra Halogen  
Work lamp, front above head lamps, 2 LED lamps  
Working lights front, on cab, dual , 4 Halogen lamps  
Working lights rear, on cab halogen  
Work lamp, rear on cab, 2 LED lamps  
Work lamp, rear on cab, 4 LED lamps  
Working lights rear, on cab, dual Halogen  
Work lamp, rear in grille, 2 Halogen lamps, std  
Work lamp, rear in grille, 2 LED lamps  
Without work lamp side on cab, std  
Work lamp, side on cab, 1 LED lamp  
Work lamp, side on cab, 4 LED lamps  
Tail light LED

### Transmission

Speed limiter, 20/30 km/h

### Steering

Comfort Drive Control, CDC  
Steering, secondary

### Frame

Belly guard, rear  
Belly guard rear, oil pan  
Center hinge and rear frame guard  
Log pusher

### Cab

Anchorage for Operator's manual  
Automatic Climate Control, ACC, corr prot. condenser  
ACC control panel, with Fahrenheit scale  
Asbestos dust protection filter  
Cab roof, heavy duty  
Carbon filter - cab  
Cover plate, under cab  
Lunch box holder  
Armrest, operator's seat, Volvo, left only  
Radio installation kit  
Radio with CD player  
Rear view mirrors, el.adjusted and heated  
Steering wheel knob  
Sun blinds  
Timer cab heating  
Universal door/ignition key  
Window, sliding, door  
Windows, side and rear, guards

### Hydraulics

Accumulator, cold climate  
Hydraulic fluid, biodegradable, Volvo  
Hydraulic fluid, fire resistant  
Hydraulic fluid, for hot climate  
Hydraulic fluid, Mineral for cold climate

### Exterior

Hydraulic fluid, Mineral, for cold climate  
Cab ladder, rubber suspended  
Fire suppression system  
Mudguards, full cover, wideners and prot. Included  
Reflecting stickers (decals), machine contour  
Reflecting stickers (stripes), machine contour Cab

### Special equipment

Special hydraulic fixture for shipment protection

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.

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

**Comfort Drive Control (CDC)**



**Log pusher**



**Fire suppression system**



**Radiator grill guard**



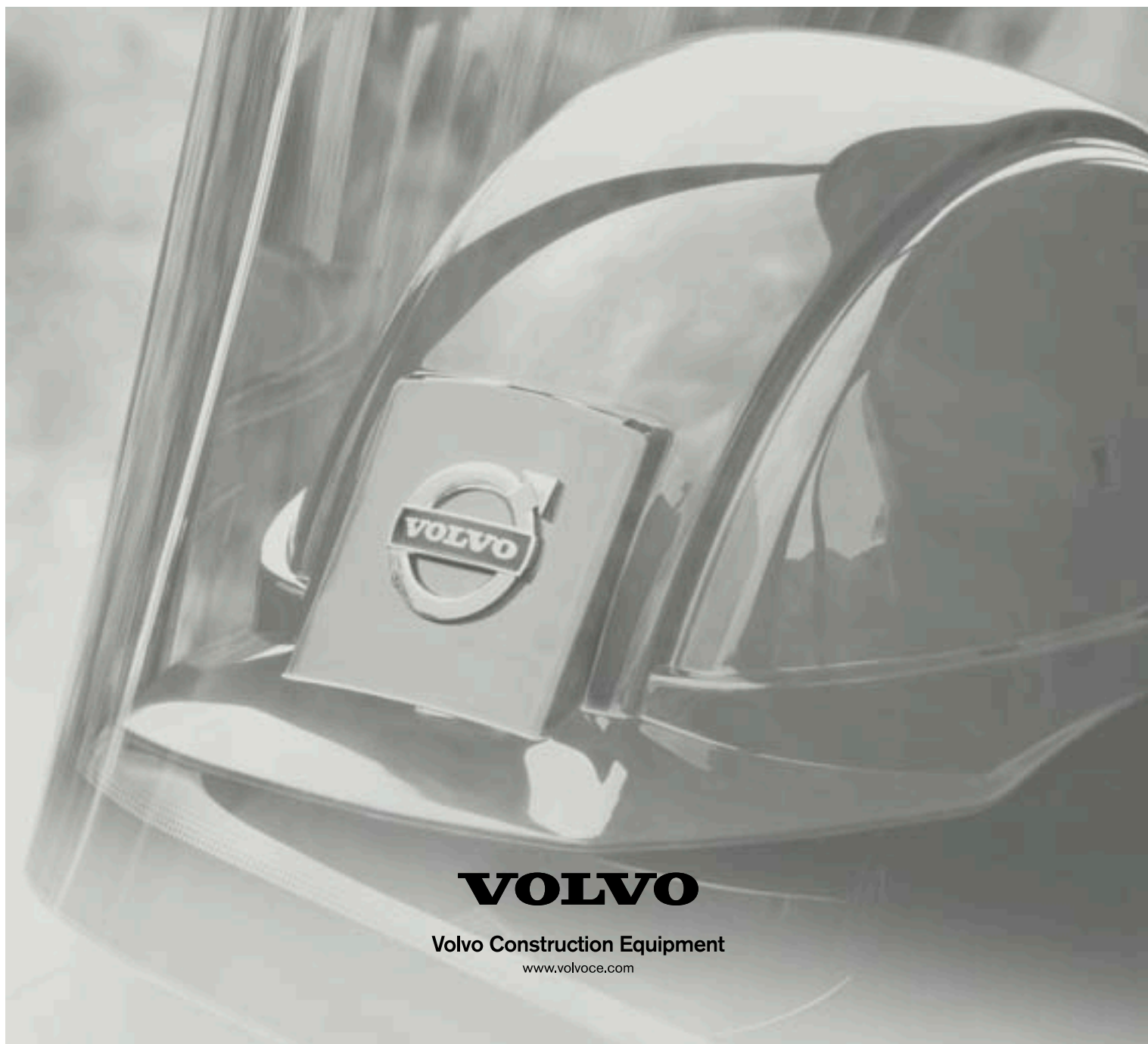
**Lights guards**



**Rear-view camera**







**VOLVO**

Volvo Construction Equipment

[www.volvoce.com](http://www.volvoce.com)