

VOLVO WHEEL LOADERS

# L180G HIGH-LIFT

33-34 t 334 hp



# LIFTING YOUR PRODUCTIVITY HIGHER.

The new Volvo L180G High-Lift gets a firm grip on your workload. Designed for log handling, the high-lift arm system lifts higher and further than a standard wheel loader so you can stack higher, load faster and reduce cost.

## Perform with less waste



Volvo's 13 litre, 6-cylinder turbo-charged diesel engine provides high torque at low speeds with Volvo's Combustion Technology, V-ACT. Low emission levels meet Tier 4 Interim/Stage IIIB engine requirements.

## Match power when it's needed

Load-sensing hydraulics deliver power to hydraulic functions when it's needed, without unnecessary oil pumping. Fuel consumption is lowered while performance is maintained.

## Get productive with OptiShift



New OptiShift technology features the torque converter with Volvo Lock-Up and patented Reverse By Brake (RBB) systems for less component stress, improved load cycles and fuel efficiency.



## Reduce emissions on the move

Reduce emissions without interrupting machine operation with Volvo's regeneration process. Particulate matter collected in the filter converts to non-toxic CO<sub>2</sub> as the machine works.

## Get attached and be flexible

Handle any log size with Volvo's grapple attachments ranging from 3,2-3,8 m<sup>2</sup>. Reach from all angles with the standard 360° attachment, powered by hydraulic motor for controlled manoeuvrability.

## Purpose-built quality

The engine, transmission, axles, hydraulics and steering are designed and manufactured by Volvo to operate as one unit for superb quality, performance and reliability.

## Save fuel with Automatic Power Shift

Always operate in the best gear with Volvo's Automatic Power Shift system, which works according to speed and engine RPM for optimum productivity and less machine wear.

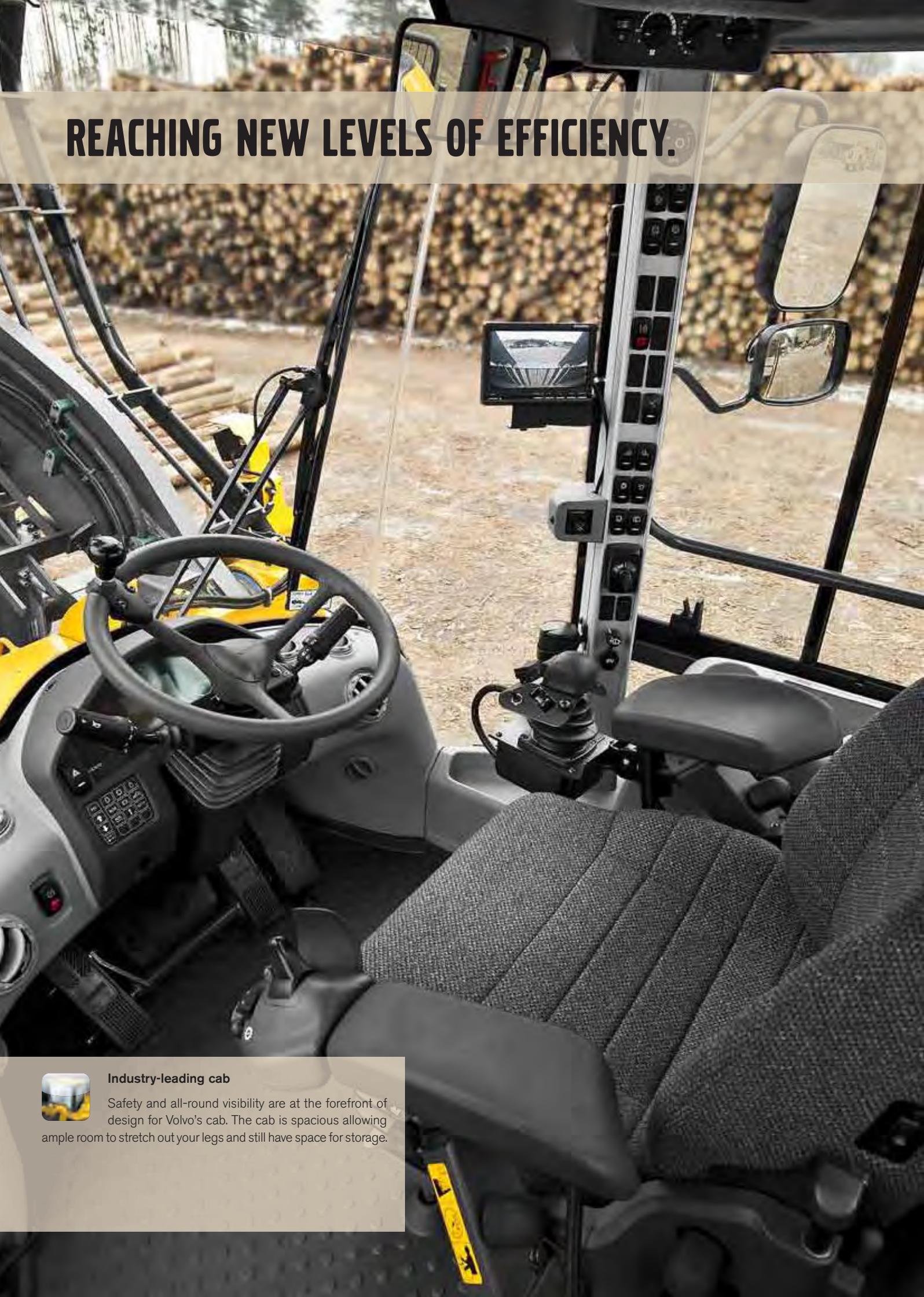




**Lift higher, reach further**

Reduce storage and increase turnover with Volvo's high-lift arm system with excellent lift height, long reach and stability. Standard grapple attachment offers 360° rotation.

# REACHING NEW LEVELS OF EFFICIENCY.



## Industry-leading cab

Safety and all-round visibility are at the forefront of design for Volvo's cab. The cab is spacious allowing ample room to stretch out your legs and still have space for storage.

Step inside Volvo's industry-leading cab and operate with optimum power and efficiency. Safe, spacious and quiet with excellent all-round visibility, operators remain focused when the work gets tough. See the results for yourself.

#### Reduce machine downtime

Volvo contronics continuously monitors machine performance in real time, so you don't have to. Diagnostics are communicated to the operator via a screen in the cab for reduced down-time and improved safety.

#### Operate efficiently

The eco pedal encourages the operator to engage the throttle pedal with the appropriate amount of mechanical counter pressure (push-back). Operator efficiency is increased and fuel consumption is lowered.

#### Access your machine - fast



Engine hood electrically opens backwards for easy access and fast maintenance. Wide opening angle gives a better engine overview.



#### Control your climate

Regardless of the weather, operators stay at the ideal temperature with Volvo's in-cab climate control system – choose Automatic Heat Control (AHC) or Air Conditioning (AC) to stay focused and efficient.

#### Breathe easy on site

Timber yards can be dusty places but an air filter located high in the machine cab, where the air is cleaner, separates coarse dust for a breath of fresh air.

#### Save fuel, not power

Hydraulically driven, electronically controlled cooling fan, located between the engine and radiator, speeds-up only when necessary to save fuel without affecting engine power.

### Get attached and be flexible

Volvo's grapple attachments range from 3,2-3,8 m<sup>2</sup>. The standard 360° attachment is powered by a hydraulic motor for controlled manoeuvrability.

### Match power when it's needed

Load-sensing hydraulics deliver power to hydraulic functions when required. Fuel consumption is lowered but performance is maintained.



### Industry-leading cab

Roomy cab with conveniently-placed controls, all-round visibility, air filter and climate control.

### Breathe easy on site

Air filter located high in the cab separates coarse dust so operators can breathe easy.



### CareTrack\*

Volvo's telematics system guides machine owners towards optimized productivity and their next service – remotely.



### Get productive with Optishift

Features the torque converter with Volvo Lock-Up and patented Reverse By Brake (RBB) systems for less component stress and lower fuel consumption.



\* In markets where CareTrack is available

# BUILT TO HANDLE YOUR WORKLOAD.

## Lift higher, reach further

Excellent high-lift arm system for high stacking and long reach. Superior force and stability throughout the load cycle

## Purpose-built quality

All components from engine to steering are manufactured by Volvo and designed to operate as one unit for superb performance and reliability.

## Reduce emissions on the move

Reduce emissions as the machine works with Volvo's regeneration process, which converts particulate matter into non-toxic CO<sub>2</sub>.



## Access your machine – fast

Engine hood electrically opens backwards for easy access and fast maintenance. Wide opening angle gives a better engine overview.



## Perform with less waste

Volvo's 13 litre, 6-cylinder turbocharged diesel engine with V-ACT meets Tier 4 Interim/Stage IIIB engine emissions requirements.

## Save fuel with Automatic Power Shift (APS)

Operate in the best gear with Volvo's APS system, which works according to speed and engine RPM for optimum productivity.

# TOP PERFORMANCE DESERVES SUPPORT.

The day you receive your new Volvo Wheel Loader is just the start of your working relationship with Volvo. From service and maintenance to our CareTrack telematics system – Volvo has a comprehensive and sophisticated aftermarket portfolio to continuously add value to your business.

Volvo designed and built your machines, so no-one knows how to keep them working in top condition more than us. When it comes to your machine, our Volvo trained technicians are the experts.

Our technicians work with industry leading diagnostic tools and techniques, using only Genuine Volvo Parts to deliver the highest levels of quality and service. Talk to your Volvo dealer about how genuine Volvo services can best provide the service and maintenance plan that is the right fit for you and your business.



State-of-the-art machines require state-of-the-art support and your Volvo dealer can provide a catalogue of services designed to get the most out of your machine, helping you maximise uptime, productivity and residual value. Your Volvo dealer can provide a number of sophisticated support offers, including:

Service plans ranging from routine wear inspections, through to comprehensive maintenance and repair agreements.

Analysis and diagnostics to help you understand how your machine is running, highlight potential maintenance issues and identify where performance can be improved.

Eco Operator training courses can help your operators work towards a safer, more productive and fuel efficient performance.



#### CareTrack\*

Each Wheel Loader comes standard equipped with CareTrack, the Volvo telematics system. CareTrack provides information for better planning and smarter working; including fuel consumption reports, location reports and service reminders. Save fuel. Reduce costs. Maximise profitability. You can with CareTrack.

\* In markets where CareTrack is available

# VOLVO L180G HIGH-LIFT IN DETAIL.



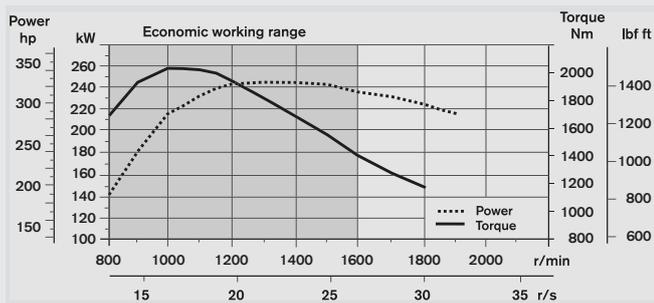
## Engine

V-ACT Stage III B/Tier 4i, 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:** Three-stage Cyclone precleaner - primary filter - secondary filter.

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

Engine		D13H-F (Stage III B) D13H-E (Tier 4i)
Max power at	r/s (r/min)	21,7 - 23,3 (1300 - 1400)
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 (1000)
SAE J1995 gross	Nm	2030
ISO 9249, SAE J1349 net	Nm	2024
Economic working range	r/min	800 - 1600
Displacement	l	12,8



## 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 fulfills all safety requirements.

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

Number of brake discs per wheel (front)		1
Accumulators	l	2 x 1,0 + 1 x 0,5

## 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	1000
Alternator rating	W/A	2280 / 80
Starter motor output	kW	7,0

## Drivetrain

**Torque converter:** Single-stage.

**Transmission:** Volvo countershaft transmission with single lever control. 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, including AUTO.

**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
	2nd gear	km/h
	3rd gear	km/h
	4th gear*	km/h
Measured with tires		800/65R29
Front axle/rear axle		AWB 40B
Rear axle oscillation ±	°	13
Ground clearance at 15° osc.	mm	610

\*) limited by ECU



### Cab

**Instrumentation:** All important information is centrally located in the operator's field of vision. Display for Contrinsic 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. 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 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
External sound level according to ISO 6395/SAE J2104		
LwA	dB(A)	108
Ventilation	m <sup>3</sup> /min	9
Heating capacity	kW	16
Air conditioning (optional)	kW	7,5

### 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	100
Piston rod diameter	mm	60
Stroke	mm	525
Working pressure	MPa	21 ± 0,35
Maximum flow	l/min	252
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	335
Engine coolant	l	46
Hydraulic oil tank	l	156
Transmission oil	l	48
Engine oil	l	50
Axle oil front/rear	l	45 / 55

### 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	140
Piston rod diameter	mm	110
Stroke	mm	2220
Tilt cylinder		2
Cylinder bore	mm	140
Piston rod diameter	mm	70
Stroke	mm	691

### Hydraulic system

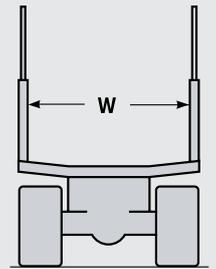
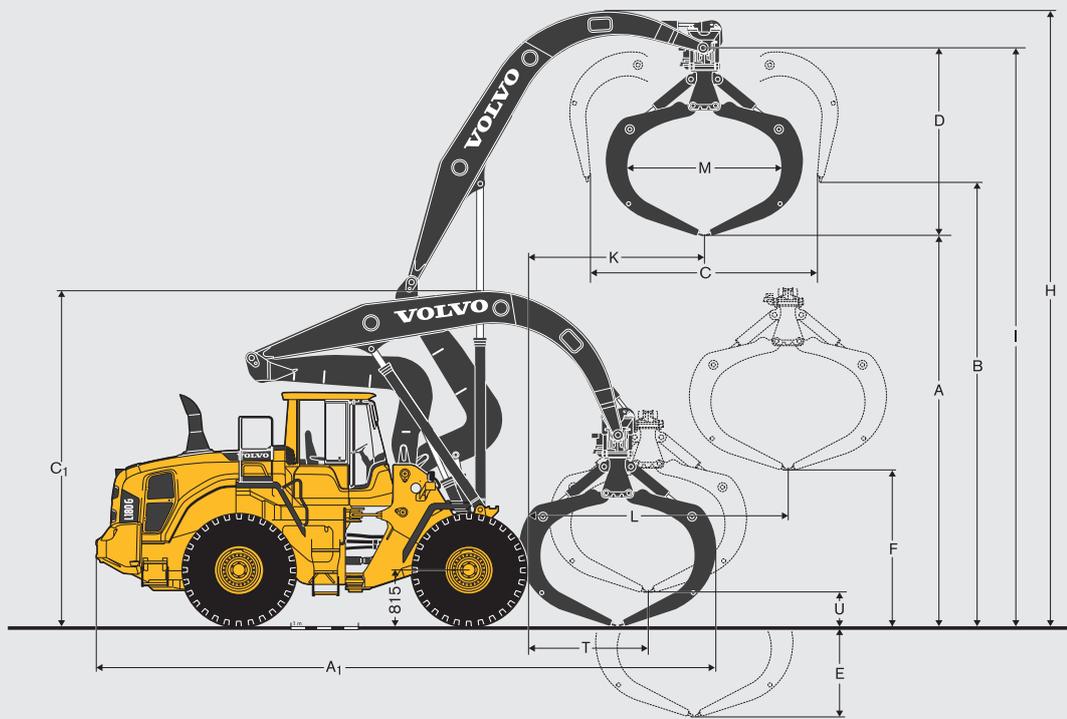
**System supply:** Two load-sensing axial piston pumps with variable displacement. The steering function always has priority from one of the pumps.

**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	20
Working pressure maximum, pump 2	MPa	21
Pilot system	MPa	3,2 - 4,0
Lower, empty (top to bottom)	s	6

# SPECIFICATIONS.

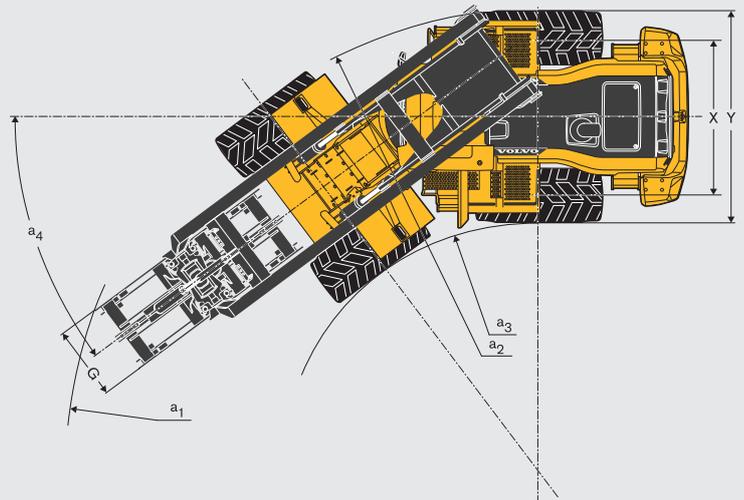


**Note:** When loading a vehicle, the log grapple's width (M-measure) should be 150 mm narrower compared to the distance between the "stakes" (W) on the vehicle.

Tires: 775/65 R29\*

Rotating grapple, 360°, 3,2 m<sup>2</sup>, 82127

A <sub>1</sub>	Grapple positioned lengthwise	mm	9 600
	- with log pusher	mm	9 916
A <sub>2</sub>	Grapple tilted forward	mm	10 590
C <sub>1</sub>	Grapple positioned lengthwise	mm	5 160
C <sub>2</sub>	Grapple tilted forward	mm	4 760
H		mm	9 132
I		mm	8 930
K		mm	2 760
L		mm	3 990
X		mm	2 280
Y		mm	3 080
a <sub>1</sub>		mm	7 630
a <sub>2</sub>		mm	6 840
a <sub>3</sub>		mm	3 830
a <sub>4</sub>		°	± 37



		Timber Length 5,0 m		Timber Length 4,0 m	Pulpwood Length 4,0 m	
Tires 775/65 R29*						
Grapple area	m <sup>2</sup>	3,2	3,2	3,5	3,8	3,8
Grapple weight	kg	1880	2050/1960	2150	2020/1940	2210
Working load	kg	8800	8600/8700	8500	8600/8700	8500
A	mm	5800	5800	5700	5350	5350
B	mm	6700	6700	6600	6450	6450
C	mm	3630	3630	3750	4500	4500
D	mm	2900	2900	2850	3350	3200
E	mm	1330	1330	1430	1780	1780
F	mm	2255	2255	2150	1800	1800
G	mm	1100	1100/900	11	1100/900	900
M	mm	2400	2400	2550	2350	2350
Operating weight*	kg	33 600	33 800/33 700	33 700	33 760/33 680	34 030
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.		91852	82127/82126	82128	94463/93607	82129

\* Including liquid in rear tires. Optional liquid in front tires increases the weight by 1830 kg.  
The log pusher increases operating weight by 800 kg. 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

### Engine

Exhaust after-treatment system  
Three stage air cleaner, pre-cleaner, primary and secondary filter  
Indicator glass for coolant level  
Preheating of induction air  
Fuel pre-filter with water trap  
Fuel filter  
Crankcase breather oil trap  
Exhaust heat insulation  
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

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

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

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

Rotator

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

Vandalism lock prepared for

- Batteries
- Engine compartment
- Radiator grille

Lifting eyes

Tie-down eyes

Tow hitch

Counterweight, pre-drilled for optional guards

## OPTIONAL EQUIPMENT

### General

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

### Service and maintenance

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

### Engine

Air pre-cleaner, cyclone type  
Air pre-cleaner, oil-bath type  
Air pre-cleaner, turbo type  
Engine auto shutdown  
Engine block heater  
ESW, disabled engine protection  
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

Alternator, 80 amp incl. air filter  
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  
Working lights front, extra  
Working lights rear, on cab  
Working lights rear, on cab, dual

### 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, KAB, 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  
Arctic kit  
Hydraulic fluid, biodegradable, Volvo  
Hydraulic fluid, fire resistant  
Hydraulic fluid, for hot climate

### Exterior

Cab ladder, rubber suspended  
Fire suppression system  
Mudguards, full cover, wideners and prot. Included

### Special equipment

Special hydraulic fixture for shipment protection

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

Comfort Drive Control (CDC)



Log pusher



Rear-view camera system



Headlight and tall light guards



Radiator grill guard



Fire suppression system



# VOLVO CONSTRUCTION EQUIPMENT



Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different.

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**

**Volvo Construction Equipment**  
[www.volvoce.com](http://www.volvoce.com)

Ref. No 20025850-A  
2011.05  
Volvo, Global Marketing

English (Global)  
WLO