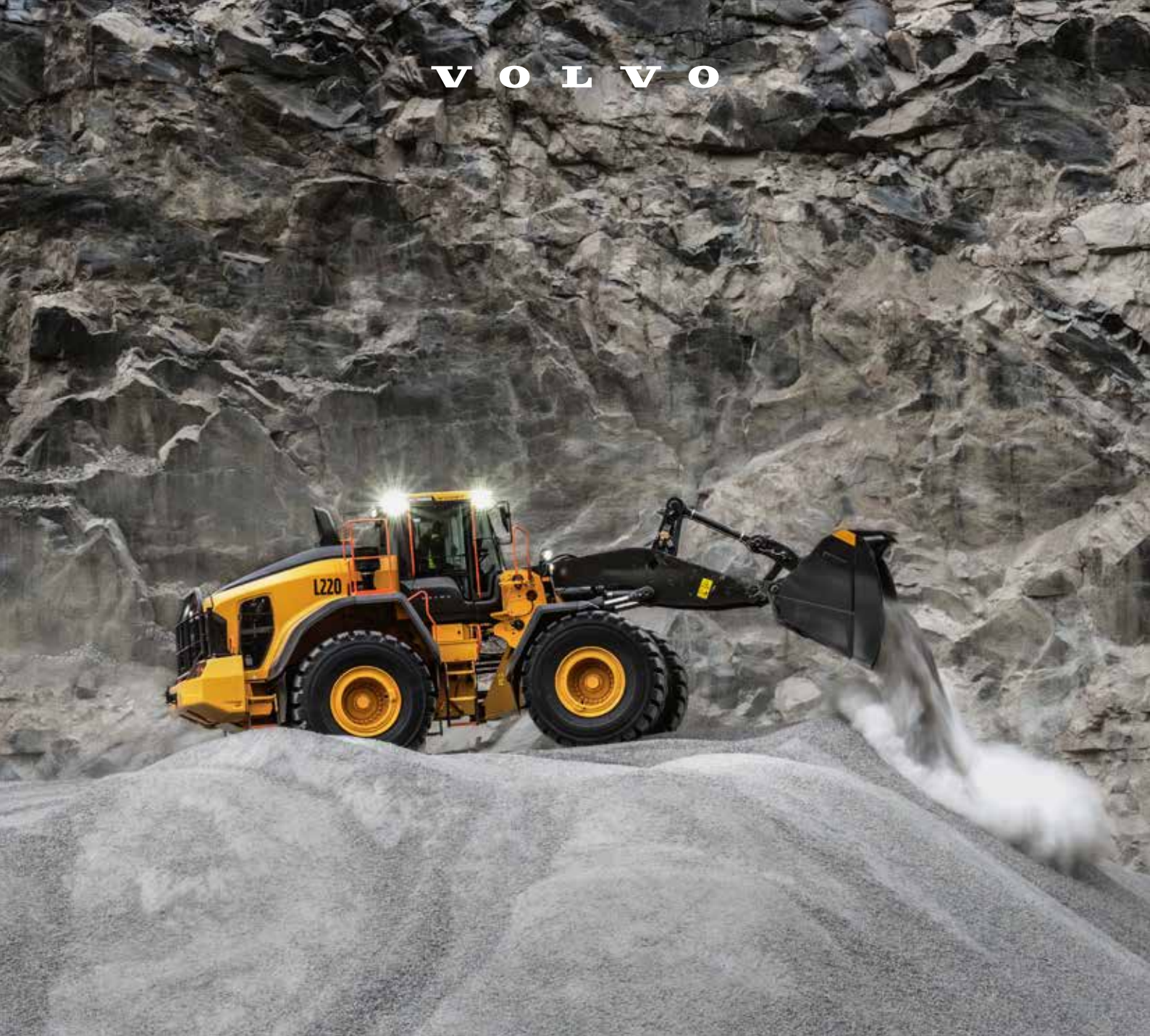


V O L V O



Volvo Wheel Loaders 31.2-33.1 t / 68,734-72,973 lb 375 hp

L220

Volvo Construction Equipment

L220

Powerful and efficient, the L220 boosts productivity in rehandling, quarrying and material handling. Smart technology and durability you can count on.



Fast cycle times



- Second generation load sensing hydraulics
- Automatic traction control
- Bucket leveling function
- Entirely Volvo powertrain
- Reduced steps between gears for faster acceleration and smooth operation.
- Volvo Torque Parallel Linkage
- Volvo Attachments

Efficient and profitable operations



- Powerful and efficient engine
- Second generation OptiShift
- Reverse By Braking
- Smart control with reduced fuel consumption
- Attachment optimization
- External dry P-Brake, which eliminates drag losses
- Auto bucket fill
- Compatible with HVO

Powerful, efficient and high-performance loading

From rehandling and quarrying to bulk material handling, the Volvo L220 Wheel Loader is designed to deliver unmatched efficiency and power. Featuring faster cycle times, an unrivalled operator environment, and Volvo quality, durability and safety you can depend on, this is a machine which delivers maximum uptime and performance in the toughest of conditions. What's more, a host of Volvo solutions including Load Assist, On-Board Weighing and Load Ticket further help optimize every load, ensuring maximum efficiency and profitability in your operations.

The operator's choice



- Interactive, integrated Volvo Co-Pilot display
- Dynamic instrument cluster
- Comfort Drive Control (CDC)
- Customizable operator settings

Durable by design



- A durability leader in its class
- Outstanding uptime
- Volvo-renowned quality runs throughout every component
- Strong frame structure and robust axles, ideally matched to the Volvo powertrain
- Self-cleaning hydraulically driven cooling fan
- Outboard mounted brakes
- Front and rear axles are cooled by the oil circulation
- You demand a durable machine to withstand extreme work site conditions. Volvo assures it with the Lifetime Frame and Structure warranty.

Ultimate performance across a range of segments



- Rehandling
- Block handling
- Log handling
- Slag handling
- Quarry / Aggregate
- Waste & Recycling
- And more...

Loaders and beyond



- Load Assist with On Board Weighing
- Load Ticket
- Connected Map with Performance Indicator
- Operator Coaching
- CareTrack telematics system

A new level in cab comfort



- Most comfortable and quietest cab on the market
- Enhanced storage options
- New armrest, new cupholder and USB chargers
- Extensive range of seats - including premium seats with heating and cooling functionality.

Industry leading serviceability



- Cab can be tilted to either a 30° or 70° angle
- Electronically operated engine hood
- Captive oil filters, captive fuel filters with electric pump
- Optional fast fuel fill
- Service light under the grille
- Brake wear indicators

Safety inside and out



- Excellent in-cab visibility and field of vision
- High definition rear view camera integrated in the Volvo Co-Pilot display
- Volvo Smart View with 360°
- Collision Mitigation System
- Battery disconnect/service switch with lockout/tagout
- Radar detect system
- Orange handrails
- Remote door opening
- Enhanced LED lighting packages
- New service platform

Fast cycle times

Achieve fast cycle times with second generation load sensing hydraulics.

The second generation load sensing hydraulics are designed to enhance the responsiveness of the hydraulic system and improve the lifting and lowering speed of the boom.

Boost productivity further with the bucket leveling function which automatically returns the bucket to level from both dump and curl positions, enhancing operator performance.

Fuel efficiency, lower emissions

Do more with less fuel, thanks to the industry-renowned fuel efficiency of Volvo Wheel Loaders.

Contributing to the fuel-efficient performance is Smart Control, powerful engine, second generation OptiShift, attachment optimization and external dry P-Brake, which eliminates drag losses.

What's more, the renewable synthetic diesel fuel, HVO (Hydro-treated Vegetable Oils), has been approved for use in Volvo Construction Equipment diesel engines with the potential to reduce CO₂ emissions by up to 90%.



Intuitive operator interface

Operators can stay in-the-know and focused on the task at hand thanks to all essential in-cab information conveniently displayed on just two screens.

The interactive, integrated Volvo Co-Pilot display offers easy control over essential functions such as media, camera settings, climate control and machine status.

This is combined with the dynamic instrument cluster, positioned in front of the steering wheel, which provides essential vehicle data at a glance.

Durable by design

A durability leader in its class, Volvo Wheel Loaders deliver outstanding uptime.

Volvo-renowned quality runs throughout every component, including a strong frame structure and robust axles, ideally matched to the Volvo powertrain.

Quality is synonymous with the Volvo brand, and has been central to the products we engineer and produce for more than 175 years; that is why we are passing that on to you through the Lifetime Frame and Structure Warranty.

The hydraulically driven cooling fan regulates component temperature and can be automatically reversed to permit self-cleaning of the cooling units.

For long service life, the brakes are outboard mounted and the front and rear axles are cooled by the oil circulation.

Safety first

Excellent in-cab visibility and field of vision is complemented by a host of safety-enhancing features including high definition rear view camera integrated in the Volvo Co-Pilot display, Collision Mitigation System and radar detect system that provides visual and audible alerts when encountering unseen objects.

Orange handrails and steps improve visibility for operators and maintenance staff, while automatic door opening allows the door to be opened with the key or button.

Ultimate performance across a range of applications

Get ready to achieve maximum results across a wide range of applications in the Volvo L220 thanks to a range of options and attachments which equip the machine to take on the unique challenges and requirements of your segment.

A comprehensive range of attachments designed to work in perfect harmony provide the ideal match of machine and attachment to succeed across applications including rehandling, log loading, slag handling, block handling and more.



Volvo L220 in detail

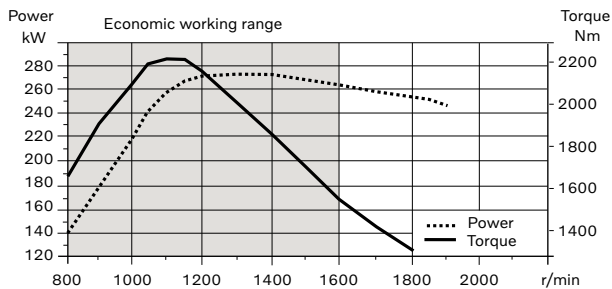
Engine

V-ACT Tier 4 Final, 13-liter (3.43 gal), 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 application is transmitted electrically either from the throttle pedal or the optional hand throttle.

Air cleaning: 2 stages.

Cooling system: Hydrostatic, electronically controlled fan and intercooler of the air-to-air type.

Engine	Volvo	D13J
Max. power at	rpm (rps)	1,300 - 1,400 (21.7 - 23.3)
ECE R120 net	kW (hp)	280 (376)
ISO 9249, SAE J1349 net	kW (hp)	279 (374)
Max. torque at	rpm (rps)	1,100 (18.3)
ECE R120 net	Nm (lbf ft)	2,276 (1,679)
ISO 9249, SAE J1349 net	Nm (lbf ft)	2,265 (1,671)
Economic working range	rpm (rps)	800 - 1,600 (13.3 - 26.7)
Displacement	lit (in ³)	12.8 (781)



Drivetrain

Torque converter: Single-stage torque converter with lockup.

Transmission: The electronically controlled Volvo countershaft transmission features the Full Automatic Power Shift (FAPS) function, which offers fully automatic shifting in all four forward gears and from the second to the fourth gear in reverse. It is complemented by a mode selector with four gear-shifting programs. The Rimpull Control function helps prevent wheel spin and optimizes bucket filling. The single lever control and the Pulse Width Modulation (PWM) valves ensure effortless, fast, and smooth shifting, providing higher precision and reliability.

Axles: Volvo's fully floating drive shafts with planetary hub reductions and cast iron axle housing. The axles are now equipped with the innovative Automatic Traction Control (ATC) system, which enhances traction capability significantly. This system automatically engages a 100% differential lock, providing superior grip and stability. The ATC is standard on the front axle, ensuring optimal performance in challenging conditions, and is available as an optional feature for the rear axle, offering additional flexibility and control.

Transmission	HTL 310
Torque multiplication, stall ratio	2.02:1
Maximum speed, forward/reverse	
1st gear	km/h (mph) 6.7 / 6.6 (4.2 / 4.1)
2nd gear	km/h (mph) 11.6 / 11.4 (7.2 / 7.1)
3rd gear	km/h (mph) 21.7 / 21.4 (13.5 / 13.3)
4th gear	km/h (mph) 36.5 / 36.1 (22.7 / 22.4)
Measured with tires	29.5 R25 L4
Front axle/rear axle	Volvo/AWB 50/41
Rear axle oscillation	±° 15
Ground clearance	mm (in) 600 (23.6)
at oscillation	° 15

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	3,640 / 130
Starter motor output	kW	7

Brake System

Service brake: Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated, fully sealed oil circulation-cooled wet disc brakes. The operator can select automatic disengagement of the transmission when braking using Contronic.

Parking brake: Dry disc brake. 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/rear	2/1
Accumulators	lit (gal.) 2 x 1.0 + 1 x 0.5 (2 x 0.26 + 1 x 0.13)

Cab

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

Heater and defroster: Heater coil with filtered fresh air and fan with auto and manual settings (11 speeds). Defroster vents for all window areas.

Operator's seat: Operator's seat with adjustable air suspension and retractable seatbelt. The seat is mounted on a bracket on the rear cab wall and floor. The forces from the retractable seatbelt are absorbed by the seat rails.

Standards: The cab is tested and approved according to ROPS (ISO 3471, SAE J1040), FOPS (ISO 3449). The cab meets with requirements according to SAE J386 ("Operator Restraint System"). Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1.430 t CO₂-eq.

Emergency exit: Use emergency hammer to break window

Ventilation	m ³ /min (yd ³ /min)	9 (11.8)
Heating capacity	kW	16
Air conditioning (optional)	kW	7.5

Sound Level

Sound level in cab according to ISO 6396 - L _{pA}	dB	70
External sound level (ISO 6395 and EU Noise Directive 2000/14/EC) - L _{WA}	dB	109

Hydraulic System

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

Valves: Double-acting 2-spool valve. The main valve is electro operated.

Lift function: The valve has four positions; raise, hold, lower and floating 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 including rollback, hold and dump. Inductive/magnetic automatic tilt can be adjusted to the desired bucket angle.

Cylinders: Double-acting cylinders for all functions.

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

Working pressure maximum, pump 1 for working hydraulic system	MPa (bar)	29 (290)
---	-----------	----------

Flow	l/min (gal/min)	252 (66.6)
------	-----------------	------------

at	MPa (bar)	10 (100)
----	-----------	----------

engine speed	rpm (rps)	1,900 (31.7)
--------------	-----------	--------------

Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa (bar)	31 (310)
---	-----------	----------

Flow	l/min (gal/min)	202 (53.4)
------	-----------------	------------

at	MPa (bar)	10 (100)
----	-----------	----------

engine speed	rpm (rps)	1,900 (31.7)
--------------	-----------	--------------

Working pressure maximum, pump 3 for brake- and cooling fan system	MPa (bar)	25 (250)
--	-----------	----------

Flow	l/min (gal/min)	83 (21.9)
------	-----------------	-----------

at	MPa (bar)	10 (100)
----	-----------	----------

engine speed	rpm (rps)	1,900 (31.7)
--------------	-----------	--------------

Pilot system, working pressure	MPa (bar)	3.5 (35)
--------------------------------	-----------	----------

Cycle times

Lift	s	6.8
------	---	-----

Tilt	s	1.6
------	---	-----

Lower, empty	s	3.2
--------------	---	-----

Total cycle time	s	11.6
------------------	---	------

Steering System

Steering system: Load-sensing hydrostatic articulated steering.

System supply: The steering system has priority feed from a loadsensing axial piston pump with variable displacement.

Steering cylinders: Two double-acting cylinders.

Steering cylinders		2
--------------------	--	---

Cylinder bore	mm (in)	100 (3.94)
---------------	---------	------------

Rod diameter	mm (in)	60 (2.36)
--------------	---------	-----------

Stroke	mm (in)	525 (20.7)
--------	---------	------------

Working pressure	MPa (bar)	21 (210)
------------------	-----------	----------

Maximum flow	l/min (gal/min)	202 (53.4)
--------------	-----------------	------------

Maximum articulation	±°	37
----------------------	----	----

Service Refill

Service accessibility: Large, easy-to-open hood covering whole engine compartment, electrically operated. Fluid filters and component breather air filters promote long service intervals. A quick-fit adapter on the hydraulic tank provides faster hydraulic oil fill. Possibility to monitor, log and analyze data to facilitate troubleshooting.

Fuel tank	lit (gal.)	366 (96.7)
-----------	------------	------------

DEF/AdBlue® tank	lit (gal.)	31 (8.19)
------------------	------------	-----------

Engine coolant	lit (gal.)	55 (14.53)
----------------	------------	------------

Hydraulic oil tank	lit (gal.)	226 (59.7)
--------------------	------------	------------

Transmission oil	lit (gal.)	48 (12.7)
------------------	------------	-----------

Engine oil	lit (gal.)	50 (13.2)
------------	------------	-----------

Axle oil front	lit (gal.)	77 (20.3)
----------------	------------	-----------

Axle oil rear	lit (gal.)	71 (18.8)
---------------	------------	-----------

Lift Arm System

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

Lift cylinders		2
----------------	--	---

Lift cylinder bore	mm (in)	190 (7.48)
--------------------	---------	------------

Lift cylinder piston rod diameter	mm (in)	90 (3.54)
-----------------------------------	---------	-----------

Lift cylinder stroke	mm (in)	768 (30.2)
----------------------	---------	------------

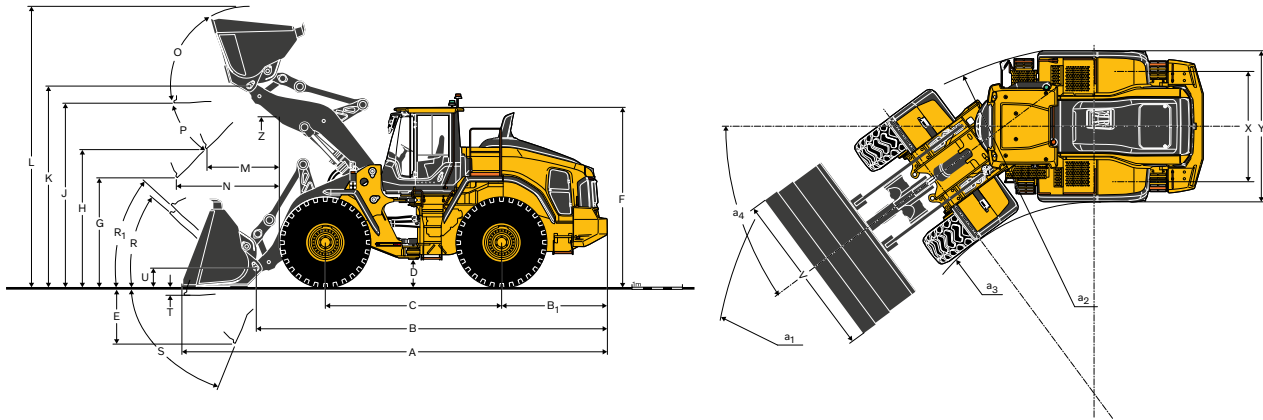
Tilt cylinder		1
---------------	--	---

Tilt cylinder bore	mm (in)	250 (9.84)
--------------------	---------	------------

Tilt cylinder piston rod diameter	mm (in)	120 (4.72)
-----------------------------------	---------	------------

Tilt cylinder stroke	mm (in)	455 (17.9)
----------------------	---------	------------

Specifications



DIMENSIONS

Tires: 29.5 R25 L3 Tire deflection: standard

		Unit		L220			
				Standard boom		Long boom	
B	Overall length w/o bucket / attachm. bracket	mm	ft in	7,490	24'7"	7,810	25'7"
B ₁	Rear overhang	mm	ft in	2,240	7'4"	2,240	7'4"
C	Wheel base	mm	ft in	3,700	12'2"	3,700	12'2"
D	Ground clearance	mm	ft in	520	1'8"	510	1'8"
F	Height to top of ROPS	mm	ft in	3,710	12'2"	3,710	12'2"
G	Specific height for reach (N)	mm	ft in	2,132	7'0"	2,133	7'0"
J	Lift height under level bucket	mm	ft in	4,230	13'10"	4,590	15'1"
K	Height to hinge pin	mm	ft in	4,640	15'3"	5,010	16'5"
O	Rollback angle, max., fully raised	°		56		56	
P _{max}	Dump angle, max., fully raised	°		48		48	
R	Rollback angle, max., at ground level	°		43		44	
R ₁ *	Rollback angle at SAE carry position	°		47		49	
S	Digging angle, max.	°		65		63	
T	Digging depth	mm	in	125	4.92	131	5.16
U	Hinge pin height at carrying position	mm	ft in	590	1'11"	670	2'2"
X	Track width	mm	ft in	2,400	7'10"	2,400	7'10"
Y	Machine width over tire	mm	ft in	3,150	10'4"	3,150	10'4"
Z	Max. load-over height	mm	ft in	4,040	13'3"	4,370	14'4"
a ₂	Turning radius outer circle	mm	ft in	7,100	23'4"	7,100	23'4"
a ₃	Turning radius inner circle	mm	ft in	3,960	13'0"	3,960	13'0"
a ₄	Max. articulation	±°		37		37	

* Carry position SAE

Bucket: WLA87132 5.2 m³ (6.8 yd³) GP STE P BOE

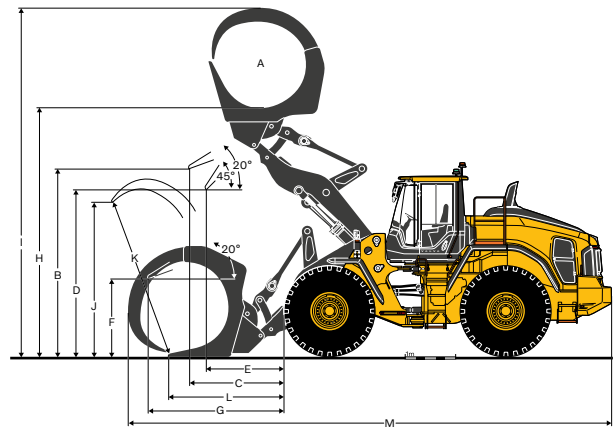
Grapples:

Sales code: WLA80852

Operating weight (incl. logging cw 870 kg (1,920 lb)): 33,800 kg (74,520 lb)

Operating load: 10,080 kg (22,220 lb)

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



DIMENSIONS

Tires: 875/65 R29 L4

		Unit		L220	
A	Grapple Area	m ²	yd ²	4.0	4.8
B	Dumping clearance at max. HPH, dump 20°	mm	ft in	3,900	12'10"
C	Dumping reach at max. HPH, dump 20°	mm	ft in	2,270	7'5"
D	Dumping clearance at max. HPH, dump 45°	mm	ft in	3,140	10'4"
E	Dumping reach at max. HPH, dump 45°	mm	ft in	1,780	5'10"
F	Dumping clearance at parallel lifting arm pos.	mm	ft in	1,620	5'4"
G	Dumping reach at parallel lifting arm pos.	mm	ft in	3,230	10'7"
H	Max. dumping clearance	mm	ft in	5,330	17'6"
I	Overall operating height	mm	ft in	7,700	25'3"
J	Height upper clamp at K	mm	ft in	3,620	11'11"
K	Max. opening width	mm	ft in	3,940	12'11"
L	Reach at ground position	mm	ft in	2,650	8'8"
M	Overall machine length	mm	ft in	10,410	34'2"

Specifications

L220

Tires 29.5 R25 L3			REHANDLING ⁽¹⁾								GENERAL PURPOSE						ROCK ⁽²⁾		LIGHT MATERIAL		LONG BOOM			
																					-			
			WLA86759		WLA86760		WLA86761		WLA86758		WLA87132		WLA87135		WLA87137		WLA87526		WLA93450		-			
			5.6 m³ (7.3yd³) STE P BOE		5.9 m³ (7.7 yd³) STE P BOE		6.3 m³ (8.2 yd³) STE P BOE		6.3 m³ (8.2 yd³) STE H BOE		5.2 m³ (6.8 yd³) STE P BOE		5.6 m³ (7.3 yd³) STE P T SEG		6.0 m³ (7.8 yd³) STE P T SEG		5.0 m³ (6.5 yd³) SPN P T SEG		8.2 m³ (10.7 yd³) LM P BOE		-			
Volume, heaped ISO/SAE			m³	yd³	5.6	7.3	5.9	7.7	6.3	8.2	6.3	8.2	5.2	6.8	5.6	7.3	6.0	7.8	5.0	6.5	8.2	10.7	-	-
Volume at 110% fill factor			m³	yd³	6.2	8.1	6.5	8.5	6.9	9.1	6.9	9.1	5.7	7.5	6.2	8.1	6.6	8.6	5.5	7.2	9.0	11.8	-	-
Static tipping load, straight			kg	lb	25,150	55,450	24,990	55,100	24,810	54,710	23,950	52,810	23,770	52,420	23,410	51,620	23,540	51,900	24,370	53,740	22,740	50,140	-2,830	-6,240
at 35° turn			kg	lb	22,340	49,270	22,190	48,930	22,020	48,560	21,210	46,770	21,150	46,640	20,790	45,850	20,900	46,080	21,660	47,770	20,160	44,450	-2,600	-5,730
at full turn			kg	lb	22,020	48,560	21,870	48,230	21,700	47,850	20,900	46,080	20,850	45,980	20,500	45,190	20,600	45,410	21,360	47,090	19,860	43,800	-2,580	-5,690
Breakout force			kN	lbf	228.8	51,460	223.1	50,170	215.1	48,350	204.6	46,000	240.8	54,150	232.7	52,320	235.7	52,990	194.3	43,690	190.9	42,920	+3.3	+742
A	Overall length		mm	ft in	9,270	30'5"	9,320	30'7"	9,390	30'10"	9,480	31'1"	9,180	30'2"	9,480	31'1"	9,450	31'0"	9,740	31'11"	9,590	31'5"	+310	+1'0"
E	Digging depth, max dump (S)		mm	ft in	1,470	4'10"	1,510	5'0"	1,570	5'2"	1,650	5'5"	1,400	4'7"	1,650	5'5"	1,630	5'4"	1,860	6'1"	1,750	5'9"	-20	-0.8"
H ⁽³⁾	Dump clearance		mm	ft in	3,160	10'4"	3,130	10'3"	3,080	10'1"	3,080	10'1"	3,220	10'7"	3,020	9'11"	3,040	10'0"	2,870	9'5"	2,910	9'7"	+360	+1'2"
L	Overall operating height		mm	ft in	6,360	20'10"	6,410	21'0"	6,470	21'3"	6,520	21'5"	6,370	20'11"	6,440	21'2"	6,590	21'7"	6,350	20'10"	6,450	21'2"	+360	+1'2"
M ⁽³⁾	Dump reach		mm	ft in	1,400	4'7"	1,430	4'8"	1,480	4'10"	1,610	5'4"	1,340	4'5"	1,540	5'0"	1,520	5'0"	1,730	5'8"	1,610	5'3"	-30	-1'2"
N ⁽³⁾	Reach at 45° discharge, pos. G		mm	ft in	2,100	6'11"	2,120	6'11"	2,150	7'1"	2,190	7'2"	2,070	6'9"	2,180	7'2"	2,170	7'1"	2,300	7'6"	2,180	7'2"	+270	+0'11"
V	Bucket width		mm	in	3,400	133"	3,400	133"	3,400	133"	3,400	133"	3,400	133"	3,400	133"	3,400	133"	3,430	135"	3,700	145"	0	0'0"
a ₁	Outer clearance circle (diameter)		mm	ft in	15,810	51'10"	15,830	51'11"	15,870	52'1"	15,920	52'3"	15,760	51'8"	15,920	52'3"	15,910	52'2"	16,120	52'11"	16,250	53'4"	+260	+0'11"
Operating weight without load			kg	lb	32,480	71,610	32,580	71,840	32,690	72,070	33,100	72,970	31,550	69,560	31,810	70,130	31,920	70,390	33,850	74,650	32,120	70,810	+380	+840

(1) Measured with additional counterweight.

(2) Measured with 29.5 R25 L5 tires.

(3) Measured to the tip of the bucket teeth or bolt-on edge. Dump height to bucket edge measured at 45° dump angle.

Note: This only applies to genuine Volvo attachments.

Bucket Selection Chart

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

Example: Sand and gravel. Fill factor ~ 105%. Density 1.6 t/m³ (2,697 lb/yd³).

Result: The 5.2 m³ (6.8 yd³) bucket carries 5.5 m³ (7.2 yd³). For optimum stability always consult the bucket selection chart.

Material	Bucket fill, %		Material density		ISO/SAE bucket volume		Actual volume	
			t/m ³	lb/yd ³	m ³	yd ³	m ³	yd ³
Earth/Clay	~110		~1.6	~2,698	4.9	6.4	~5.4	~7.1
			~1.5	~2,530	5.2	6.8	~5.7	~7.5
			~1.4	~2,361	5.4	7.1	~5.9	~7.7
Sand/Gravel	~105		~1.7	~2,867	4.9	6.4	~5.1	~6.7
			~1.6	~2,698	5.2	6.8	~5.5	~7.2
			~1.5	~2,530	5.4	7.1	~5.7	~7.5
Aggregate	~100		~1.8	~3,035	5.6	7.3	~5.6	~7.3
			~1.7	~2,867	5.9	7.7	~5.9	~7.7
			~1.6	~2,698	6.3	8.2	~6.3	~8.2
Rock	≤100		~1.7	~2,867	4.5	5.9	~4.5	~5.9

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

Type of boom	Type of bucket	ISO/SAE Bucket volume	Material density: t/m³ (lb/yd³)						
			0,8 (1349)	1,0 (1686)	1,2 (2024)	1,4 (2361)	1,6 (2698)	1,8 (3035)	2,0 (3373)
Standard boom	Rehandling*	5,6 m³ (7.3 yd³)					5,9 (7.7)	5,6 (7.3)	
		5,9 m³ (7.7 yd³)				6,2 (8.1)	5,9 (7.7)		
		6,3 m³ (8.2 yd³)			6,6 (8.6)	6,3 (8.2)			
	General purpose	4,9 m³ (6.4 yd³)					5,4 (7.1)	4,9 (6.4)	
		5,2 m³ (6.8 yd³)				5,7 (7.5)	5,2 (6.8)		
		5,6 m³ (7.3 yd³)			6,2 (8.1)	5,6 (7.3)			
	Rock	4,5 m³ (5.9 yd³)						4,5 (5.9)	4,3 (5.6)
		5,0 m³ (6.5 yd³)					5,0 (6.5)	5,3 (6.9)	
Light material	8,2 m³ (10.7 yd³)	8,2 (10.7)							
Long boom	Rehandling*	5,6 m³ (7.3 yd³)					5,9 (7.7)	5,6 (7.3)	
		5,9 m³ (7.7 yd³)				6,2 (8.1)	5,9 (7.7)		
	General purpose	4,9 m³ (6.4 yd³)					5,4 (7.1)	4,9 (6.4)	
	Rock	4,5 m³ (5.9 yd³)					4,5 (5.9)	4,3 (5.9)	
Light material	8,2 m³ (10.7 yd³)	8,2 (10.7)							
Bucket fill			110%	105%	100%	95%	Pin-on		

How to read bucket fill factor

* Including counterweight

SUPPLEMENTAL OPERATING DATA

Tires 29.5 R25 L3	Unit		Standard boom						Long boom					
			29.5 R25 L4		29.5 R25 L5		875/65 R29 L4		29.5 R25 L4		29.5 R25 L5		875/65 R29 L4	
Width over tires	mm	in	+20	+0.8	+60	+2.4	+120	+4.7	+20	+0.8	+60	+2.4	+120	+4.7
Ground clearance	mm	in	+30	+1.2	+50	+2.0	-10	-0.4	+30	+1.2	+50	+2.0	-10	-0.4
Tipping load, full turn	kg	lb	+500	+1,100	+1,290	+2,840	+560	+1,240	+460	+1,010	+1,190	+2,620	+510	+1,120
Operating weight	kg	lb	+710	+1,570	+1,780	+3,920	+1,010	+2,230	+720	+1,590	+1,790	+3,950	+1,020	+2,250

Equipment

STANDARD EQUIPMENT
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
Electric fuel prime pump
Crankcase breather oil trap
Exterior radiator air intake protection
Drivetrain
Automatic Power Shift
Fully automatic gearshifting, 1-4
PWM-controlled gearshifting
Forward and reverse switch by hydraulic lever console
Rimpull control
Smart control
Indicator glass for transmission oil level
Differentials: Front, 100% diff lock with Automatic Traction Control. Rear, conventional.
Optishift with Lock-up, RBB
Lock-up first gear
Electrical system
24V, pre-wired for optional accessories
Alternator 24V/130A/3479W
Battery disconnect (service) switch
Electric horn
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)
Dual LED reversing strobe lights

STANDARD EQUIPMENT
Dynamic Instrument Cluster
8-inch dynamic instrument cluster display
Fuel consumption
Diesel Exhaust Fluid/AdBlue consumption
Ambient temperature
Clock
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
Safety Belt Warning
Level warnings:
Fuel level
Diesel Exhaust Fluid/AdBlue level
Engine oil level
Engine coolant level
Transmission oil level
Hydraulic oil level
Washer fluid level
Climate control temperature and fan speed
Speed indicator
Engine revolutions per minute indicator
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
Start interlock when gear is engaged

STANDARD EQUIPMENT
Integrated Volvo Co-Pilot
12.8-inch High Definition vertical Co-Pilot display
Machine integration
Machine information
Machine settings
Service information
Service mode
Smart View with rear view camera
Climate controls
Radio and media (with Bluetooth and USB connection)
Load Assist portfolio
Operator Coaching Start
Toolbox applications
Remote support
Help center (digital operator's manual)
Hydraulic System
Main valve, double acting 2-spool with hydraulic pilots
Variable displacement axial piston pumps (3) for:
1 Working hydraulics, Pilot hydraulics and Brake system
2 Working hydraulics, Pilot hydraulics, Steering and Brake system
3 Cooling fan and Brake system
Secondary steering with automatic test function
Electro-hydraulic servo controls
Electronic hydraulic lever lock
Automatic boom kick-out
Automatic bucket positioner
Double-acting hydraulic cylinders
Indicator glass for hydraulic oil level
Hydraulic oil cooler
Brake system
Dual brake circuits
Dual brake pedals
Secondary brake system
Parking brake, electro-hydraulic
Brake wear indicators

STANDARD EQUIPMENT
Cab
ROPS (ISO 3471), FOPS (ISO 3449)
Harness Anchor Points
Single key kit door/start
Acoustic inner lining
Cigarette lighter, 24V power outlet
Lockable door
Cab heating with fresh air inlet and defroster
Fresh air inlet with two filters
Automatic heat control
Floor mat
Interior lights
Interior rear-view mirrors
Dual exterior rear-view mirrors
Sliding window, right side
Tinted windshield 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
Service and Maintenance
Engine oil remote drain and fill
Volvo High Performance oil filters with 1,000 hours service interval
Transmission oil remote drain and fill
Quick-fit transmission oil change
Lubrication manifolds, ground accessible
Pressure check connections: transmission and hydraulic, quick-connects
Quick-fit hydraulic oil fill
Service platform on the front frame
Tool box, lockable
External equipment
Orange hand rails
Fenders, front and rear
Reflecting stickers (decals), machine contour and cab
Viscous cab mounts
Rubber engine and transmission mounts
Frame, joint lock
Vandalism lock prepared for
Engine compartment
Radiator grille
Lifting eyes
Tie-down eyes
Fabricated counterweight
Counterweight, pre-drilled for optional guards

Equipment

OPTIONAL EQUIPMENT
Engine
Air pre-cleaner, cyclone type
Air pre-cleaner, oil-bath type
Air pre-cleaner, turbo type II
Air pre-cleaner, turbo type III
Engine auto shutdown
Engine delayed shutdown
Engine block heater 230V/110V
Fuel fill strainer
Fuel heater
Hand throttle control
Max. fan speed, hot climate
Radiator, corrosion-protected
Reversible cooling fan
Reversible cooling fan and axle oil cooler
Drivetrain
Automatic Traction Control 100% diff lock, front & rear
Speed limiter
Wheel/axle seal guards
Electrical system
Anti-theft device
Emergency stop
Locking device, Tag out Lock out
License plate holder, lighting
Rear view mirrors, Long arm
Rear view mirrors, adjustable, el.heated, Long arm
Reduced function working lights, reverse gear activated
Reverse alarm, audible
Reverse alarm, white noise
Seatbelt indicator, external
Shortened headlight support brackets
Side marker lamps
Warning beacon LED
Site services enabled
Warning beacon LED automatic
Halogen Economy package
Halogen Feature package
Halogen Power package
Headlights, assymetric left, halogen
Working lights, attachments, halogen
LED Economy package
LED Feature package
LED Power package
LED Intense package
Headlights, assymetric Left, LED
Headlights, assymetric Right, LED
Working lights, attachments, LED
Electrical distribution unit 24 volt
Parking brake alarm, audible for air susp seats
Jump start connector, ISO-Type
Max Boom height
Can Bus Interface

OPTIONAL EQUIPMENT
Integrated Volvo Co-Pilot
Tire pressure monitoring system
Handsfree telephone
Smart View
Smart View with 360°
Smart View with radar detect system
Forward camera
Dual forward cameras
Collision Mitigation System
Load Assist portfolio
Load Assist OBW
Load Assist Task Modes
Operator Coaching Advanced
Site Operations
Connected Map
Load Ticket
File Upload
Performance indicators
Task Manager
Media player
Hydraulic System
Boom suspension system
Separate attachment locking
Arctic kit, for 3rd function
Auto bucket fill
Boom cylinder hose and tube guards
Hydraulic fluid, biodegradable, Volvo
Hydraulic fluid, fire-resistant
Hydraulic fluid, for hot climate
Hydraulic 3rd function
hydraulic 3rd-4th function
Single lever control, hydraulics 2 functions
Single lever control, hydraulics 3 functions
Single lever control, hydraulics 4 functions
Brake system
Oil cooler and filter front & rear axle

OPTIONAL EQUIPMENT
Cab
Anchorage for Operator's manual
Automatic Climate Control, ACC
ACC control panel, with Fahrenheit scale
Asbestos dust protection filter
Ashtray
Cab air pre-cleaner, cyclone type
Carbon filter
Cover plate, under cab
Lunch box holder
Volvo Armrest, operator's seat, left
Operator's seat, Mechanical ISRI, 2pt seat belt
Operator's seat, Volvo Air Suspension, Heavy Duty, 2pt seat belt
Operator's seat, Volvo Air Suspension, 2pt seat belt
Operator's seat, Volvo Air Suspension, 3pt seat belt
Operator's seat, Comfort ISRI, 2pt seat belt
Operator's seat, Comfort ISRI, 3pt seat belt
Operator's seat, Premium ISRI, 2pt seat belt
Operator's seat, Premium ISRI, 3pt seat belt
Subwoofer
Steering wheel knob
Sun blinds, rear windows
Sun blinds, side windows
Timer cab heating
Window, sliding, door
Universal door/ignition key
Remote door opener
Forward view mirrors
Cab heater power outlet 240V
Cab, Hot applications. Roof, steel
Fire extinguisher cab
Outside steel protection cab
Rear view mirrors long arm, cab
Reinforced windshield, flat
Service and Maintenance
Automatic lubrication system
Automatic lubrication system for long boom
Grease nipple guards
Oil sampling valve
Quick engine oil change
Refill pump for grease to lube system
Tool kit
Wheel nut wrench kit
CareTrack, GSM, GSM/Satellite
Telematics, Subscription
Belly guard front
Belly guard rear
Cover plate, heavy-duty, front frame
Cover plate, rear frame
Cab roof, heavy-duty
Guards for front headlights
Guards for radiator grill
Guards for tail lights
Windows, side and rear guards
Windshield guard
Corrosion protection, painting of machine
Option for machines without dinitrol

OPTIONAL EQUIPMENT
Wheel/Tires
29.5 R25
875/65 R29
External equipment
Cab ladder, rubber-suspended
Escape Ladder, left fender
Handles on counterweight
Deleted front mudguards
Fire suppression system
Mudguards, full cover, front and rear for 80-series tires
Mudguards, full cover, front and rear for 65-series tires
Long boom
Tow hitch
Other equipment
CE-marking
Comfort Drive Control (CDC)
Counterweight, logging
Counterweight, signal painted, chevrons
Sound decal, EU
Sound decal, USA
Noise reduction kit, exterior
Block Handler package
Log Loader package
Rehandler package
Scrap Handler package
Slag Handler package
Waste Handler package
Attachments
Buckets:
Rock straight or spade nose
General purpose
Rehandling
Side dump
Light material
High tip
Refuse
Wear parts:
Bolt-on and weld-on bucket teeth
Segments
Cutting edge in three sections, bolt-on
Fork equipment
Material handling arm
Log grapples
Log pusher

V O L V O