

V O L V O



Volvo Electric Compact Wheel Loaders 4.5 - 5.4 t

L20 ELECTRIC

Volvo Construction Equipment

L20 ELECTRIC



Uptime you can count on



- Work a full day – Operating time calculator available (contact your dealer)
- Make the most of every charge: fully electric driveline with energy recovery function and auto-shutoff function
- Choice of charging solutions | 0-100% in up to 2 hours
- 2-year free servicing, 2-year full machine warranty

Open up new opportunities



- Perfect fit for noise sensitive areas
- Ability to work out of standard hours
- Zero-tailpipe emissions: work indoors and in emission-restricted zones

Electrifying performance



Proven performance

- High lifting and breakout forces, superior roll-back and dump angles for bucket applications
- 100% parallel movements, outstanding lifting height and forward visibility for fork applications
- Rigid planetary axles, with 100% mechanical differential locks on the front and rear axles, offer maximum traction and minimal tire wear
- Articulating-oscillating center joint provides the best off-road capability and stability



30% less maintenance

- Maintenance-free electric motors, featuring auto shutoff to save wear
- Fully electric driveline reduces hydraulic oil need by half
- Easy ground level access to lubrication and maintenance points



The best battery technology

- Lithium-Ion 48 V battery – 40 kWh or 56 kWh
- On-board charging done via Type 2 automotive standard inlet
- Comes standard with up to 4.6 kW on-board charger capacity. Up to 9.2 kW or 13.6 kW on-board charger capacity available as option.
- Fast charging possibilities
- Can be charged at any State Of Charge (SOC)
- Theft protected fixed battery



A new level of operator comfort

- Low vibration, low noise levels, no exhaust fumes
- Wide 3-point cab access
- Best all-round visibility
- Intuitive interface, Electrohydraulic controls
- Electric parking brake with hill hold functionality
- Programmable cab heater (Option)
- Air conditioning system (Option)



Work anything, anywhere

- Perfect fit for confined and narrow spaces
- Wide range of Volvo Attachments
- Attachment bracket with integrated third hydraulic function
- Customizable work modes including traction force, joystick and accelerator pedal sensitivity, flow control third hydraulic function
- Maximum speed of 20 km/h

Explore the machine in our walkaround video ▶



Volvo L20 Electric in detail

Electrical Motor

Induction motor		
Driveline Motor power (net)	kW	22
Permanent magnet synchronous motor		
Working Hydraulics Motor power (net)	kW	14

Electrical System

Battery type	Lithium-ion	
Battery Voltage	V	48
Indicative runtime	hours	Up to 8

Standard battery capacity 40 kWh / 900 Ah

On board charging time (10-100%)*:

Charging cabel AC, 4.6 kW	hours / min	~6 h 45 min
Charging cabel AC, 9.2 kW	hours / min	~3 h 25 min
Charging cabel AC, 13.8 kW	hours / min	~2 h 15 min

Off board fast charging time (20-80%)*:

400 VAC, 16A / 9.6 kW	hours / min	~2 h 25 min
400 VAC, 32A / 17.3 kW	hours / min	~1 h 20 min

Optional battery capacity 56 kWh / 1 250 Ah

On board charging time (10-100%)*:

Charging cabel AC, 4.6 kW	hours / min	~9h 30 min
Charging cabel AC, 9.2 kW	hours / min	~4h 45 min
Charging cabel AC, 13.8 kW	hours / min	~3 h 10 min

Off board fast charging time (20-80%)*:

400 VAC, 16A / 9.6 kW	hours / min	~3 h 20 min
400 VAC, 32A / 17.3 kW	hours / min	~1h 50 min

*Specifications for charging power and time refer to optimum conditions. The maximum charging capacity depends on the local grid conditions. For detailed information, please visit Charging calculator on www.volvoce.com or contact your local dealer.

Auxiliary Battery

Type	AGM	
Voltage	V	12
Capacity	Ah	50

Linkage

The parallel linkage system offers 100% parallel lift with the loading fork. The linkage system and the attachment bracket are designed for an excellent visibility to the front attachment, fork tines and fork tines end. The Volvo Attachment Bracket P (parallel) is equipped with long guide pins and an additional sealing ring for protection against dust and mud.

Linkage system	P-Kinematics	
Lift cylinders		1
Tilt cylinders		1
Lift time (loaded)	s	6
Lowering time (empty)	s	4
Dump time	s	2.5

Wheels and Tires

Size	335/80 R18	
Rim	11 x 18	

Brake System

Central wet disc brake, hydraulic activated service brake and SAHR (spring applied hydraulically released) parking brake.

Hydraulic System

Thermal controlled oil circuit with integrated cooling system.
Electric-Hydraulic control valve: double acting control valve with three spool system. Independent flow share function and fully controllable via joystick.

Flow	l/min	55
Working pressure max	MPa	23
3rd Hydraulic circuit flow	l/min	55
3rd Hydraulic circuit pressure max	MPa	17.5

Drivetrain

Angle of oscillation	±°	10
Track	mm	1,300
Travel speed, forward/reverse		
1st gear	km/h	8
2nd gear	km/h	20

Steering System

Hydrostatic steering. Central articulating-oscillating joint. Gear pump with priority valve.

Steering cylinders	1	
Working pressure	MPa	19
Max articulation	±°	38

Service Refill

Hydraulic tank	lit	40.5
Transmission oil	lit	0.6
Front axle oil	lit	3.9
Rear axle oil	lit	4.1

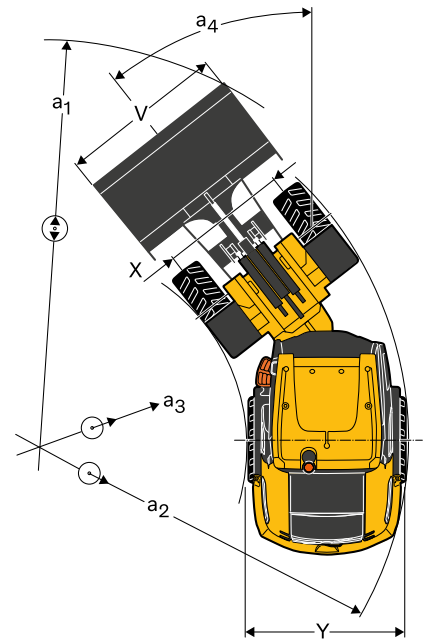
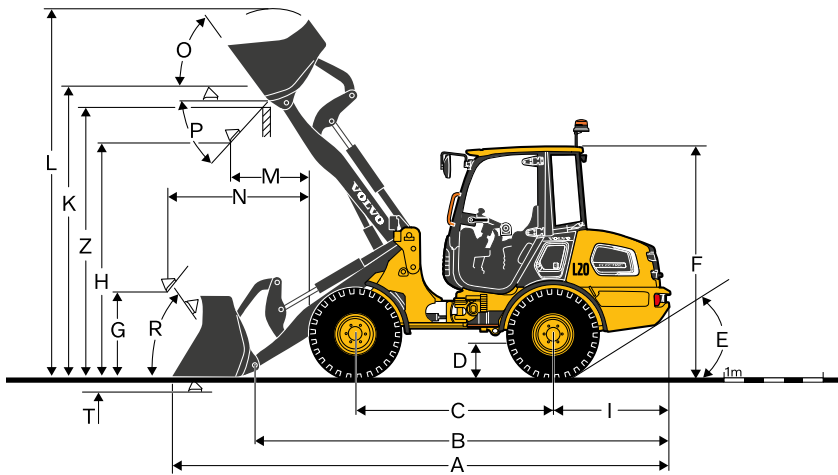
Cab




Instrumentation: All important information is located in the operator's field of vision.

Sound Level

Sound level in cab according to ISO 6396		
L _{pA}	dB	72
Sound level in cab, without cab fan		
L _{pA}	dB	59.6
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
L _{WA}	dB	89
External sound level		
L _{WA}	dB	86.3

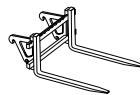
Specifications



Bucket type		General Purpose	Light Material	4 in 1
		55278500	11391063	11391094
L20 Electric with P-Kinematics, P-attachment bracket and 335/80R18 tires				
Capacity heaped	m³	0.8	1.2	0.65
Material density	kg/m³	1 900	1 200	2 100
Hydraulic lifting capacity, max.	kN	35	34	33
Breakout force	kN	35	28	40
A Total length	mm	5 120	5 300	5 035
G Height of the lowest bucket edge	mm	715	710	765
L Lift height, max.	mm	4 170	4 300	4 060
V Bucket width	mm	1 650	1 800	1 650
a ₁ Radius to outer point of machine incl. Bucket	mm	4 195	4 275	4 170
T Digging depth	mm	45	40	70
H Dump height, 45°	mm	2 350	2 340	2 400
M Reach at max. height	mm	800	810	690
N Reach, max.	mm	1 630	1 640	1 520
Operating weight	kg	4 500	4 550	4 650

L20 Electric P-Kinematics, P-attachment bracket and 335/80 R18 tires

Data with loading fork frame 1345 mm (11390275) and tines 1000 mm (2890382)
Centre of gravity 500 mm

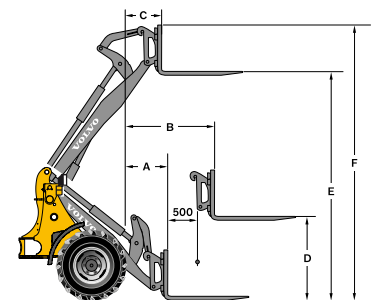


Payload according to EN 474-3, 60/80%	kg	1 350 / 1 800
A	mm	695
B	mm	1 170
C	mm	350
D	mm	1 385
E	mm	3 025

DIMENSIONS

L20 Electric with P-Kinematics, P-attachment bracket and 335/80 R18 tires

B	mm	4 280
C	mm	2 050
D	mm	290
E	°	31
F	mm	2 480
I	mm	1 263
K	mm	3 140
O	°	56
P	°	42
R	°	56
X	mm	1 300
Y	mm	1 635
Z	mm	2 905
a ₂	mm	3 890
a ₃	mm	2 100
a ₄	°	±38



Equipment

STANDARD EQUIPMENT

Electric / Electronic control system

Maintenance-free 48 V battery - protected and embedded in the machine structure

5 Pack Battery System - 40 kWh Gross Capacity

4.6 kW On-board charger with country specific charging socket

Maintenance-free 12 V auxiliary battery

High quality connectors

Protected battery cut-off switch

In-cab 12 V power socket

Full LED lights - Travel light equipment (Main Head Lights, Parking-, Rear-, Brake-, Hazard warning lights and direction indicators)

LED lights - Working lights 2 000 lm (2 front and 2 rear)

Electric powertrain

Full electric drive

Operator-selected 100% differential locks in both axles

Electric parking brake with hill hold function

Maintenance free wet brake system

Hydraulic System

Gear-type pump

Electric-Hydraulic control valve three-spool system with flow share function

3rd hydraulic circuit with proportional flow regulation

Hydraulic couplings for 3rd hydraulic circuit

Instrumentation & controls

Single lever including 3rd function - Electroproportional

12 Volt accessories socket

USB charging socket (USB-A + USB-C)

Signal horn

Hazard warning switch

Jogwheel for menu navigation

5 inch multicolor display

Digital information on 5 inch display:

Battery state of charge (SOC)

Working hours

Vehicle speed

Differential locks

Battery charging

Indicators (left/right)

Main beam head lamp

Direction (forward/reverse)

Hydraulic oil temperature

Hydraulic oil filter

Electrically operated parking brake

Jog-Dial for menu navigation and machine controls

Preset Work modes for different applications

STANDARD EQUIPMENT

Safety

Driveline shut off via buckle

Orange handrail on cab

Anti-theft system

Cab, Exterior

ROPS/FOPS-cab

Adjustable steering column

Lockable door

All-round tinted safety glass

Windscreen wiper (front/rear)

Windscreen washer (front/rear)

Openable & lockable window on the right side

Door & window stops

External rear view mirrors (right/left)

4-way adjustable operator's seat

2 inch orange seat belt

Sunvisor

Heater with air-filter and defroster (front/rear)

Cab heating & ventilation navigation fully integrated in display

Storage box in cab

Working Equipment

Hydraulic P-Attachment bracket

Bucket level indicator

Carriage Body

Fenders (front/rear)

Lockable engine hood

Towing device

Lifting eyes

Tying down eyes

Service and Maintenance

Tool kit

Official approval

Quality: DIN/ISO 9001

Environment: DIN/ISO 14001

Safety: CE compliant acc. Machinery Directive 2006/42/EC and EN 474-series

Electromagnetic compatibility (EMC) confirming to European directive 2014/30/EC

Noise Emission Directive: 2000/14/EC

Tipping load / Payload: ISO 14397-1

ROPS conforming to ISO 3471

FOPS conforming to ISO 3449 (Level 2)

ECE R100 (approval of vehicles with regard to specific requirements for the electric power train)

Vehicle Homologation for public road traffic usage according German StVZO-Requirements

OPTIONAL EQUIPMENT
Electric / Electronic control system
7 Pack Battery System - 56 kWh Gross Capacity
On board charger up to 9.2 kW capacity
On board charger up to 13.8 kW capacity
Preparation for fast charger
AC-Charging cable
Off Board Fast charger IP54 360A – 17.3 kW Outdoor
Off Board Fast charger IP21 200A – 9.6 kW Indoor
Off Board Fast charger IP21 360A – 17.3 kW Indoor
Hydraulic System
Return line direct to filter
Leakage line direct to hydraulic tank
Boom Suspension system
Safety valves on lift and tilt cylinders (hose rupture valves)
Combination of Boom Suspension system & Safety valves
BIO degradable hydraulic oil
4th independent proportional hydraulic function with flow control
Instrumentation & controls
Configurable joystick buttons
Cruise Control
Simplified HMI
Safety
Safety brace
Preparation for LED Rotating beacon (magnetic)
LED Rotating beacon (magnetic)
Foldable LED rotating beacon
3 inch orange seat belt
Audible reverse alarm
Audible reverse alarm 92 dB (white noise)
Audible reverse alarm switchable
Rear view camera
Wheel chock
Cab, interior
Programmable cab heater
Air conditioning system
LED work lights (2 000 lm) on cab roof, 4 front / 4 rear
Daytime running headlights
Preparation for DAB radio incl. speakers & antenna
DAB Radio with Bluetooth/USB and AUX connection
Extended backrest for mechanical seat
Air suspended and heated operator's seat
Rear view mirror inside cab
Enhanced rear view mirrors outside cab
Heated rear view mirrors
Additional document box

OPTIONAL EQUIPMENT
Carriage Body
Full light protection
Headlight protection
Worklight protection
Rearlight protection
Protective wax coating for overseas transport only
Wheels and tires
335/80R18
340/80R18
365/70R18
400/70R18
405/70R18
Working equipment
Attachment bracket SSL
Socket front 7 pin (sweeper preparation)
Socket attachment control 8 pin
Other
Special colour painting
Slow Moving Vehicle (SMV) warning triangle
Preparation for license plate (520x110 mm) front and/or rear
Preparation for multiline license plate (340x245 mm) rear
Attachments
Forks with mechanical tines movements
Fork with hydraulically operated tines positioning
Fork with hydraulically operated tines positioning & side shift
Refuse bucket with clamp
Light Material bucket
Side-Tip bucket
High-Tip bucket
Material Handling Arm
Multi-Purpose bucket
Grading bucket with / without extension
General Purpose bucket
Custom-Built Attachments

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.

V O L V O