

Volvo EX30

SINGLE MOTOR EXTENDED RANGE ULTRA ELECTRIC RWD AUTO-
MATIC



Sustainability Rating

2025



89%



Clean
Air

9.2 /10



Energy
Efficiency

8.2 /10



Greenhouse
Gases

9.5 /10

Driving Experience



Consumption
& Range

● ADEQUATE



Cold Winter
Performance

● GOOD



Charging
Capability

● ADEQUATE

Our verdict

The EX30 is Volvo's smallest fully electric SUV. Tested here is the Single Motor Extended Range version. It comes with a battery of 69 kWh nominal capacity and weighs almost 1.8 tonnes. The vehicle's balanced design and adequate consumption values make it possible to achieve an average score of 89% and by that just closely miss a fifth Green star.

- › The EX30 has no tailpipe emissions and performs well in tyre and brake abrasion, though production and energy supply emissions slightly reduce its air quality score.
- › Energy consumption is reasonable overall, with higher demand in cold starts and highway driving; most lifecycle energy use comes from production and electricity supply.
- › A balanced mass, battery size, and consumption, combined with the relatively clean European electricity mix, give it a high greenhouse gas performance score.

Disclaimer

Think before you print



Comments

The electric EX30 naturally doesn't have any tailpipe emissions. Additionally, it scores high in the assessment of tyre and especially brake abrasion and takes an advantage compared to other competitors. The pollutant emissions of the vehicle production and energy supply have a moderately negative impact on the good performance in this part of the assessment.

Exhaust emissions

Exhaust pollutant emissions are produced from combustion engines. Although current emission legislation is very strict, this type of emission directly affects air quality, and not all vehicles perform equally well. [Read more](#)

GOOD 

10.0 /10

In laboratory

GOOD 

10.0 /10

Green NCAP performs a wide range of tests on cars in the laboratory. This is the best way to ensure controlled conditions and guarantee that all cars are tested in the same way, making their results comparable. [Read more](#)

	NMHC	NO _x	NH ₃	CO	PN	PM	Score
Legal test (WLTP)							8.0 /8
Warm weather							10.0 /10
Highway							10.0 /10
Winter cold start							10.0 /10
Winter warm start							10.0 /10

On road

GOOD 

10.0 /10

An on-road driving test , using portable emissions measuring equipment complements Green NCAP's laboratory tests. [Read more](#)

	NMHC	NO _x	NH ₃	CO	PN	PM	Score
Real-world mixed drive							10.0 /10
Short city trip							10.0 /10
Congestion							2.0 /2

 good  adequate  marginal  weak  poor  not applicable



9.2 /10

Non-exhaust emissions

Driving a vehicle also produces emissions different from those of the exhaust pipe. Green NCAP evaluates vehicle properties that contribute to tyre and brake abrasion.

ADEQUATE 

8.2 /10

Tyre wear

ADEQUATE 

4.5 /6

Tyre abrasion releases small particles during driving, and some vehicle properties have major impact on it. Heavier vehicles, wheel alignment causing increased slip angle, and aggressive acceleration responses all increase tyre wear and particle emissions. [Read more](#)

	Result	Score
Influence of mass		1.5 /3
Wheel alignment		1.0 /1
Accelerator response		2.0 /2

Brake wear

ADEQUATE 

5.3 /6

Brake dust, produced by friction brakes, can be mitigated through filters, enclosed brake systems (like drums), or by reducing friction brake use with regenerative braking in electrified vehicles. Containment keeps dust inside the system, while recuperation lowers brake wear. However, heavier vehicles still generate more brake abrasion due to their greater stopping demands. [Read more](#)

	Result	Score
Brake dust mitigaton		0.0 /4
Brake dust containment		0.0 /6
Recuperative braking - warm test		5.3 /6



 good  adequate  marginal  weak  poor  not applicable

Additional Life Cycle Assessment information

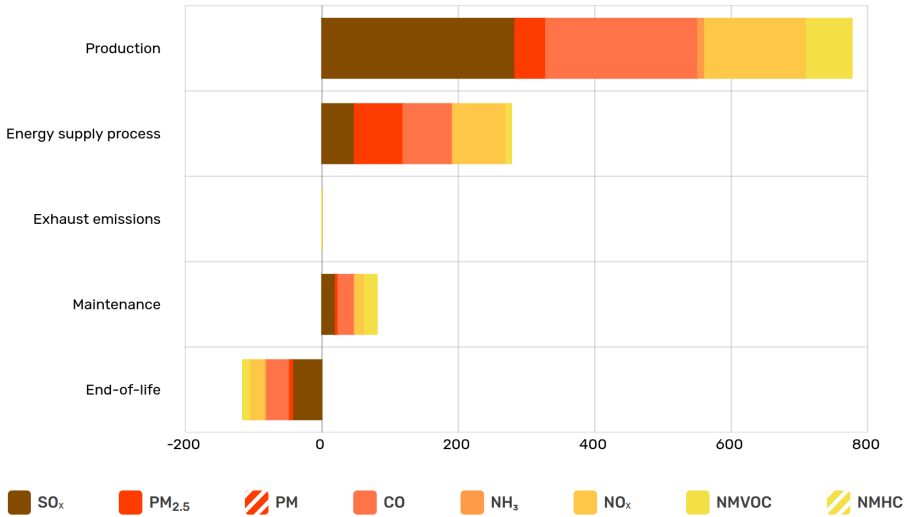
Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime, 'from cradle to grave'. In this section, pollutants are estimated in the various stages of a vehicle's life other than use. The chart also displays the measured emissions related to usage, which are taken as an average from the tests and are scored separately in the 'Exhaust emissions' part above. The end-of-life approach uses results in negative values because the benefit of materials recovery and recycling exceeds the effort of obtaining and processing virgin raw materials.

ADEQUATE ●

7.9 /10

Pollutants

Most of the vehicle exhaust pollutant species are also emitted in others life cycle phases. These are health- and nature-damaging compounds, the amount of which should be reduced as well.



* Exhaust emissions are not contributing to the score in Additional Life Cycle Assessment information because they are scored in the Exhaust emissions section above



Energy Efficiency

8.2 /10

Comments

The consumption values are adequate, despite the SUV character. Heating up the cabin quickly in cold winter conditions would increase the electricity demand notably, but once the desired comfort level is reached, the consumption figures will drop significantly. Aggressive highway driving needs relatively much. However, the real-world test and the short urban trip demonstrated credible results. Most of the life cycle primary energy demand comes from the processes of vehicle production and energy supply.

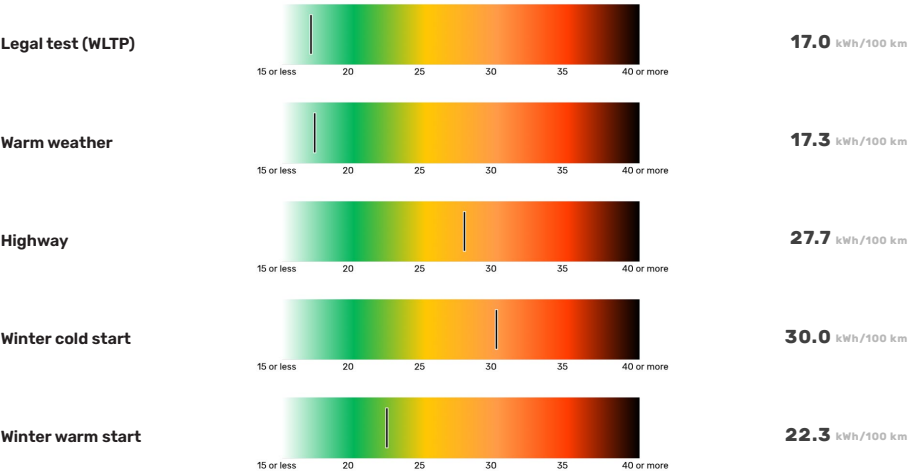
Energy demand

ADEQUATE 8.4 /10

Propulsion energy consumption in laboratory

GOOD 9.4 /10

The vehicle's measured consumption figures are displayed in the bar chart. The colour scheme positions the values relative to low and high figures in a typical range. The ranges are different for combustion engine and pure electric vehicles.



good adequate marginal weak poor not applicable

Energy Efficiency

8.2 /10

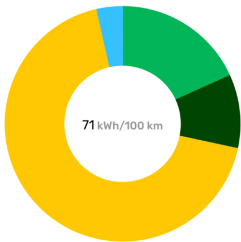
Additional Life Cycle Assessment information

ADEQUATE

8.6 /10

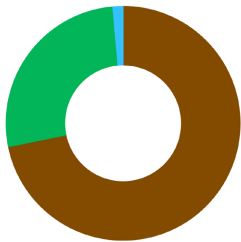
Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime 'from cradle to grave'. In this section, the total vehicle life cycle primary energy demand is displayed. The scoring does not consider the direct propulsion energy use, because it is scored separately in the 'Propulsion energy consumption in laboratory'.

Total LCA energy consumption



- Production & recycling 18.3%
- Battery production 10.1%
- Fuel/Energy supply 68.1%
- Maintenance 3.5%

Energy source share in total LCA consumption



- Fossil 71.8%
- Renewable 26.8%
- Other 1.4%

Direct propulsion energy share is not shown, it is included in 'Fuel/energy supply'

Rolling resistance

Rated here is the vehicle's resistance to movement at low speeds. Different factors have an impact on it, but the most significant one is mass.

MARGINAL

4.6 /10



good adequate marginal weak poor not applicable

Greenhouse Gases

9.5 /10

Comments

The good balance between mass, battery size and consumption lead to a high score in this index. The relatively green European average electricity mix benefits the operation phase of the car. The production of the vehicle and its battery are accounted for and add about half of the life cycle greenhouse gas emissions.

Exhaust GHG emissions

Combustion of conventional fuels releases greenhouse gases at the vehicle's tailpipe. The most significant of these gases are the emissions of CO₂. Green NCAP's assessment considers methane (CH₄) and laughing gas (N₂O) as well. Together, these are counted with their global warming potential to a sum known as CO₂ equivalent.

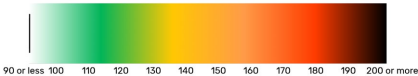
GOOD

10.0 /10

In laboratory

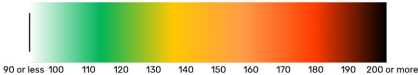
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Legal test (WLTP)



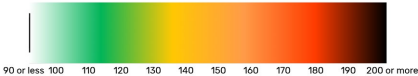
0.0 g CO₂-eq./km

Warm weather



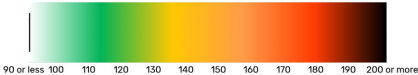
0.0 g CO₂-eq./km

Highway



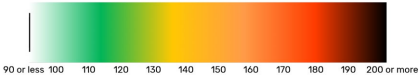
0.0 g CO₂-eq./km

Winter cold start



0.0 g CO₂-eq./km

Winter warm start



0.0 g CO₂-eq./km

 Greenhouse Gases

9.5 /10

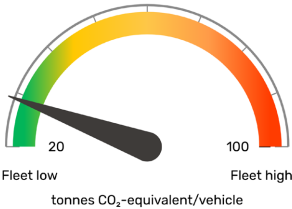
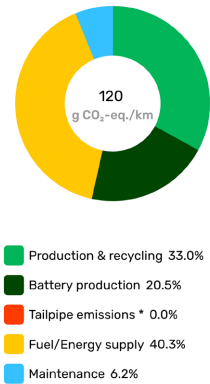
Additional Life Cycle Assessment information

Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime, 'from cradle to grave'. In this section, the total vehicle life cycle greenhouse gas emissions are displayed.

ADEQUATE 

6.1 /10

Total LCA GHG emissions



Vehicle Life Cycle average emissions 29 (+/-)
(best 26 | worst 33)

* The scoring does not consider the direct exhaust GHG emissions at the tailpipe, because they are scored separately in 'Exhaust GHG emissions' above.





Driving Experience



Consumption & Range

● ADEQUATE



Cold Winter Performance

● GOOD



Charging Capability

● ADEQUATE

Green NCAP Comment

- › The EX30 is an SUV and this is reflected in its estimated real-world consumption values, which fall in the range for 'adequate' for all scenarios – warm weather and cold winter, urban, rural, highway and mixed driving. Thanks to the 69 kWh battery, the expected driving ranges are also seen as adequate for most consumer's needs. The consumption readings on the board computer display are accurate.
- › Drivers are advised to preheat the vehicle before cold winter trips, if possible. By doing so, a significant increase of driving range can be achieved. The EX30 impresses with a very quick heat-up of the cabin in cold ambient conditions, ensuring good thermal comfort.
- › The vehicle's home charging efficiency is good with a grid-to-battery-output value of 91%. The fast DC charging is seen as adequate. The EX30 doesn't offer any kind of bidirectional charging functionalities.



Consumption & Range

ADEQUATE

Estimated actual consumption

ADEQUATE

What consumption can be expected in real world conditions?

In-laboratory measured consumption values are only partially representative of real-world use. Green NCAP's estimates aim at providing more realistic figures, which are based on measured results, modified by correction factors.

Conditions	Urban	Rural	Highway	Mixed	
Warm weather	16.7	18.2	21.4	18.5	kWh/100 km
Cold Winter	29.3	21.9	26.8	26.1	kWh/100 km

Driving range

ADEQUATE

What driving range can be expected in real world conditions?

Of special importance to consumers is the real-world driving range of electric vehicles. Green NCAP estimates this based on measured data, modified by correction factors.

Conditions	Urban	Rural	Highway	Mixed	
Warm weather	453	415	354	410	km
Cold Winter	258	345	282	289	km

Accuracy of display

GOOD

Is the consumption figure on the display correct?



good adequate poor not applicable



Cold Winter Performance

GOOD 

Driving range benefit of pre-warming

GOOD 

How much further can you drive in winter, if the car is pre-warmed?

A cold vehicle has increased energy consumption at the start of its trip, mostly due to the cabin heating demand. Pre-warming the car while it is plugged, when possible, can significantly benefit its driving range in cold weather conditions. Green NCAP's winter tests are performed at -7°C.

Type	Driving Range Benefit	Result
Urban trip	+174 km	
Mixed trip	+87 km	

Cabin heating

GOOD 

Does the vehicle get warm quickly in winter?

This indicates the time needed to reach 16°C in seconds at different positions in the cabin.

	Front	Rear
Head area	194 s 	328 s 
Footwell	169 s 	

The rear footwell reached 16 C in 175 (left) and 449 (right) seconds.





Cold Winter Performance

GOOD

Additional heating functions

What functions can be used to improve heating comfort?

Unlike a combustion car, which usually uses the engine's waste heat to provide warmth to the cabin, in electric vehicles, the energy needed comes from the battery. Therefore, there is a trade-off between thermal comfort and energy consumption. Some additional heating functions can deliver good thermal comfort performance at lower energy use compared to heating up the entire cabin. If they can be scheduled or remotely activated before a trip, while the vehicle is still plugged, both comfort and driving range can be notably improved.

	Y/N	Fitment
Heat pump	✓	Standard for the tested version
Seating heating front	✓	Standard for the tested version
Seating heating rear	✗	
Steering wheel heating	✓	Standard for the tested version
Sheduled pre-heating of seats	✓	Standard for the tested version
Scheduled steering wheel pre-heating	✗	
Scheduled cabin air pre-heating	✓	Standard
Smart cabin heating management	✗	

Cabin thermal insulation

ADEQUATE

How well does the cabin maintain its temperature?

Assessed here is the average cabin temperature drop after 30 minutes, starting from 18°C when the outside temperature is -7°C and the vehicle is inactive.





Charging Capabilities

ADEQUATE

Battery pre-conditioning

Does the vehicle have the ability to optimize the battery temperature for fast charging?

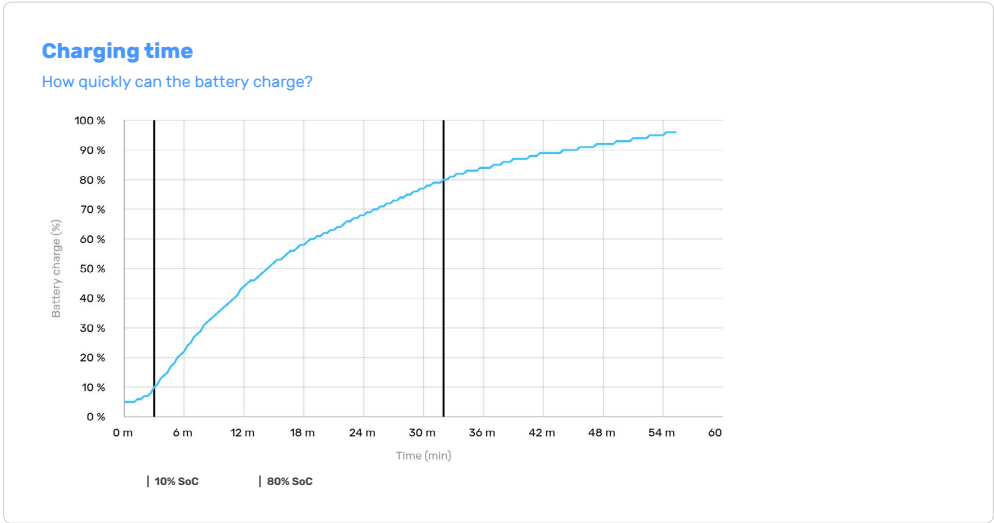
Fast charging is quicker when the battery temperature is in a certain range, and many vehicles possess the function to actively prepare for a coming fast charging event. Most use the charger destination in the navigational system to control the process, and some would offer a manual activation function.

	Manual	Automatic
Battery pre-conditioning	☐	☒

Fast charging

ADEQUATE

Green NCAP's fast charging test verifies the vehicle's ability to recharge fast, which is crucial at long trips or tight schedules. Although constantly improving, not all vehicles offer the same capabilities.



good adequate poor not applicable

Charging Capabilities

ADEQUATE

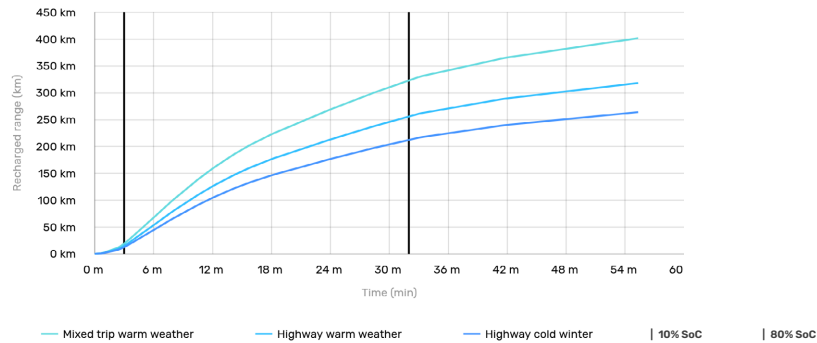
Fast charging

ADEQUATE

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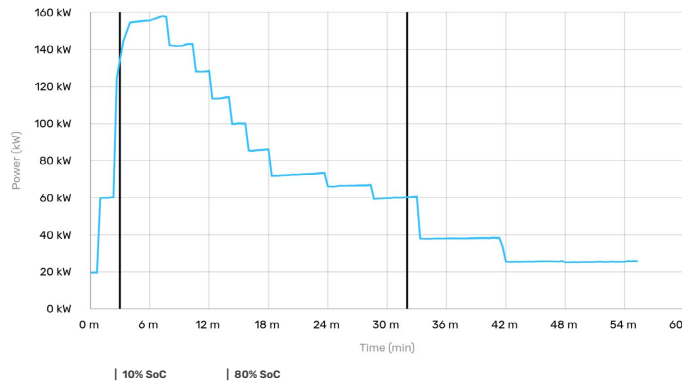
Recharged range gain per charging time

How long do you need to fast charge to drive a certain distance?



Charging power

How quickly does energy flow into the battery, depending on its charge level?





Charging Capabilities

ADEQUATE

Home charging efficiency

GOOD

Is charging at home efficiently utilizing the energy withdrawn from the grid?

The assessed efficiency value is the grid-to-battery-output efficiency, which describes what share of the energy taken from the electricity grid is available for the vehicle to use for propulsion and other auxiliary functions. The value encompasses not only the charger efficiency but considers several other losses as well.

Home charging efficiency	91%	
Maximum home charging power	22.0 kW	Optional

Bidirectional charging

POOR

How capable is the vehicle of supplying energy from its battery to other devices or systems?

Bi-directional charging is available in some vehicles and is gaining increasing popularity. It comes with different power and functionality levels. However, battery usage for purposes additional to regular vehicle driving and charging might be disadvantageous for its durability and manufacturers might introduce limitations to protect it.

Power output Not available		
Compatibility		
× Vehicle-to-Load (V2L) The inlet or the interior socket can provide AC power through an electrical domestic socket.	× Vehicle-to-Household (V2H) The vehicle can provide power to a household through a charger.	× Vehicle-to-Grid (V2G) The vehicle can return power to the grid.
Grid integration		
× Basic No integration (just a socket for a stand-alone load). No scheduling option. Very basic visualisation.	× Limited Energy management system through the vehicle app (timers availability and power monitoring). Dedicated interface in the car, with mobile app monitoring.	× Advanced Advanced settings available such as tariff and consumption control, linked to distributor energy prices. Advanced real time energy flow visualization. AI powered suggestions for optimal usage.



Specifications

Vehicle class
Small SUV

System power/torque
200 kW / 343 Nm

Engine size
n.a.

Declared consumption
17 kWh/100 km

Declared driving range
Overall 474 km
City 657 km

Declared CO₂
n.a.

Declared battery capacity
Usable (net) 65.0 kWh
Installed (gross) 69.0 kWh

Mass
1,787 kg

Heating concept
Waste heat & high voltage
heater & heat pump

Tyres
245/40R20

Emissions class
AX

Tested car
YV12ZEL90T260xxx

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09 2025



