



BYD



2023

BYD ATTO 3

M2F1C 60 kWh electric FWD automatic



10.0 
/10

Clean Air
Index

9.5 
/10

Energy Efficiency
Index

9.7 
/10

Greenhouse Gas
Index

10.0
/10



Clean Air Tests



Laboratory Test

	NMHC	NO _x	NH ₃	CO	PN
10.0/10 Cold Test	●	●	●	●	●
10.0/10 Warm Test	●	●	●	●	●
10.0/10 Highway	●	●	●	●	●
10.0/10 Cold Ambient Test	●	●	●	●	●



Road Test

10.0/10 On-Road Drive	●	●	●	●	●
5.0/5 On-Road Short Trip	●	●	●	●	●
8.0/8 On-Road Heavy Load	●	●	●	●	●
5.0/5 On-Road Light Load	●	●	●	●	●
2.0/2 Congestion	●	●	●	●	●



n.a.



good



adequate



marginal



weak



poor

Comments


With no tailpipe emissions, the electric ATTO 3 naturally scores the full 10 points in the Clean Air part of the assessment.

Energy Efficiency Tests



Laboratory Test

Energy

10.0/10	Cold Test		→	18.2 kWh/100 km
10.0/10	Warm Test		→	18.0 kWh/100 km
8.8/10	Highway		→	28.1 kWh/100 km
9.3/10	Cold Ambient Test		→	25.1 kWh/100 km

Consumption

Driving Range

Average	21.4 kWh/100 km	333 km
Worst-case	28.1 kWh/100 km	244 km



n.a.



good



adequate



marginal



weak



poor

Comments

The ATTO 3 proves low consumption in the Cold and Warm Laboratory Tests – ca. 18 kWh/100 km. In the Highway cycle, the electric SUV uses significantly more – 28.1 kWh/100 km, corresponding to a range of 244 km. The On-Road Drive was performed at around 19°C and the BYD needed about 18 kWh/100 km, leading to a range of around 376 km. The Chinese SUV surprises with unexpectedly low energy demand in the -7°C Cold Ambient Test – only 25.1 kWh/100 km, which seems to be the result of an advanced heating concept utilising different sources of powertrain waste heat.



Greenhouse gases

CO₂

N₂O

CH₄

10.0/10 Cold Test



10.0/10 Warm Test



9.3/10 Highway



9.8/10 Cold Ambient Test



n.a.



good



adequate



marginal



weak



poor

Comments

This Index is based on a Well-to-Wheel+ approach, meaning that the GHG emissions related to the supply of the energy are added to those of the tailpipe. The vehicle's production is not yet included in the assessment due to the implicit limitations of generic data about global supply chains, but its estimated value can be found in Green NCAP's LCA results [↗](#). As the BYD ATTO 3 is purely electric, its GHG emissions originate only from electricity supply – ca. 50-80 g CO₂-eq./km, depending on the test consumption. Thanks to its efficient powertrain and heating concept and the relatively low CO₂ emissions of the EU electricity mix, the car scores a high 9.7 out of 10.

Our Verdict

The Chinese brand BYD is a newcomer to the European market and arrives with a range of attractive electric models. Tested here is the ATTO 3 – a compact SUV with a maximum power of 150 kW and a declared usable battery capacity of 60 kWh. The mass of the empty vehicle is 1,750 kg. The measured test consumption values are creditable and let the vehicle compete with efficient electric vehicles from other manufacturers. A positive aspects worth mentioning is the relatively low energy demand at cold ambient conditions – in the -7°C lab test, the Atto 3 needed only 25.1 kWh/100 km, which is an excellent result and proves a well-designed heating system, utilising different sources of waste heat. At the battery capacity test the vehicle was charged with 11 kW charging power. With 59.3 kWh, the measured usable battery capacity matches closely the declared figure of 60 kWh. The full battery recharge takes 68.4 kWh from the electricity grid, which results in a rather moderate grid-to-battery output efficiency of 87 %. Improving the charging/discharging behaviour of the charger and the battery would boost up the results of the vehicle even higher. Overall, the BYD ATTO 3 finishes with a Weighted Overall Index of 9.7, easily collects all 5 Green Stars and challenges the popular EV brands in the European market.

Disclaimer

Specification

Tested Car

LGXCE4CB0N213XXX

Publication Date	Vehicle Class	Tyres	Emissions Class
09 2023	Small Family Car	235/50R18 V XL	Euro 6 AX
Mass	Engine Size	System Power/Torque	Declared CO ₂
1,750 kg	n.a.	150 kW/310 Nm	n.a.
Declared Battery Capacity	Declared Driving Range	Declared Consumption	
n.a.	Overall 420 km City 565 km	16 kWh/100 km	
	Heating Concept		
	0		



Think before you print