



EV FACT SHEET

Volvo EX90

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Volvo EX90. Image: Volvo Media

INTRODUCTION

The Volvo EX90 is the electric equivalent of Volvo's popular XC90 large SUV. Offering a third row of seats to accommodate up to 7 passengers, it is one of the few full-electric 7 seaters available that is not a van-based people mover. (It is worth noting here that anyone over 178cm tall will be cramped for headroom in the third row).

The EX90 is equipped with multiple sensors (including Lidar) and as a result has a slightly unusual front profile with many of its sensors mounted in a 'bump' at the top of the windscreen.

Built in China for the Australian market, the EX90 is based on the electric-only SPA2 platform, which it shares with the Polestar 3.

DRIVING RANGE

Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle. However few manufacturers now give this figure for their new releases. Instead, they generally quote the more achievable ranges found using the newer European WLTP test cycle.

Therefore, to avoid disappointment always check which test cycle has been used when assessing an EV for your needs. As a rough guide, NEDC is generally 30% too high, WLTP a good estimate if doing mostly urban and outer suburban driving and US EPA the better guide if doing mostly outer suburban to regional driving.

DRIVING RANGE (continued)

Version	National testing system range estimates:		
	NEDC (Aust)	WLTP (Euro)	US EPA
Twin	Not rated	570	500
Twin Performance	Not rated	570	483

Table 1: Driving range estimates for the Volvo EX90.

Using the US EPA rating, a Twin version of the EX90 would, at its limit, make a round-trip from the Melbourne CBD to Golden Beach (near Sale) on Victoria's south-east coast – provided the heating or air conditioning were not heavily used. For this sort of trip, a short DC top-up charge in at one of the many DC charger sites popping up on this route would be recommended: for further charging options and availability, see: <https://www.plugshare.com/>



Example Volvo EX90 return trip range. Image: Google maps

CHARGING SPEEDS/REQUIREMENTS

Charging port

The Volvo EX90 is fitted with a CCS2 socket allowing it to charge via Type 2 AC chargers¹ as well as CCS2 DC fast-chargers.



Notes:

1. The Volvo EX90 can be charged at any AC EVSE, however an adaptor will be needed to use the (few) remaining older EVSEs fitted with Type 1 (J1772) plugs. In addition, the EX90 will only charge at the single-phase rate on a Type 1 EVSE.

CHARGING SPEEDS/REQUIREMENTS (CONTINUED)

AC charging:

Like all new EVs sold in Australia, the Volvo EX90 is fitted with a type 2 AC socket.

Charging rates:

Single phase: maximum of 7.4 kW (32A)

Three phase: 11 kW (16A per phase)

Charging speeds vary on the capacity of the EVSE (Electric Vehicle Supply Equipment) the car is connected to. Approximate AC charging times for the Volvo EX90 are shown in table 2.

AC: 0 – 100% time				DC: 0 – 80% time	
10 A (power point)	15 A 1 phase (Caravan outlet)	32 A (1 ph. Home EVSE)	16 or 32 A (3 phase public AC EVSE)	DC Fast charge (50kW)	DC Fast charge (250+kW)
48h	32h	16h	16A: 10.7h 32A: 10.7h	1h 50m	35m

Table 2: Approx. charging times for the Volvo EX90

DC fast charging

The Volvo EX90 uses the CCS2 DC fast-charge connector uses the CCS2 DC fast-charge connector and can charge at up to 250 kW DC.

V2X capability:

The Volvo EX90 has been announced as ‘capable’ of V2L and V2H/G, however no information has been released about when/if these features will be enabled for the version sold here in Australia.

Notes:

V2X is the generic term covering the options of getting 230V AC power from the battery and supplying it as:

- V2L: vehicle to load (230V power available from car outlet)
- V2H: vehicle to home (supply home via special connection)
- V2G: vehicle to grid (supply home or grid via spec. connection)

HOME CHARGING CONSIDERATIONS

General

To get the shortest home charging time for the Volvo EX90, an 11kW AC charger would be needed. However, depending on your existing power supply and/or charging needs, it may only be practicable to fit a lower rated EVSE. (See notes below). Lower capacity EVSEs will increase charging times, as shown in table 2.

Important notes for any home EVSE installation:

1. High charging rates are generally not needed for overnight charging.
2. Homes do not normally have three phase AC connected.
3. Switchboard and/or electrical supply upgrades may be needed if your home is more than 20 years old. For more information on this item – see Fact Sheets at [EVchoice.com.au](https://www.evchoice.com.au) or read articles in:
 - (a) Renew magazine edition 143. (EVSE wiring)
 - (b) Renew magazine edition 156. (EVSE buyer’s guide)

SPECIFICATIONS

Seating: 7

Boot volumes in litres (1 litre = 10 x 10 x 10 cm)

- Boot:
 - All seats up, below parcel shelf: 360 (Including 65L under rear load floor space)
 - 3rd row seats folded: 655
 - 2nd and 3rd row seats folded: 1,955
- Froot (front-boot): 46

Dimensions:

- Overall length: 5,037 mm
- Overall height: 1,747 mm
- Ground clearance: 216 mm
- Overall width (edge of doors): 1,964 mm
- Overall width (edge of mirrors): 2,113 mm

Battery:

- 111 kWh (107 kWh usable)

Energy consumption: (WLTP)

- 16.9 kWh/100km

Kerb weight:

- 2,779 kg (Twin)
- 2,787 kg (Twin Performance)

Charging:

- 1 phase AC: 7.4 kW max.
- 3 phase AC: 11 kW max.
- DC: 250 kW max.

Charge port location:

- Left-hand rear.

Drive configuration:

- All-wheel drive (AWD)

Towing: (unbraked/braked)

- 750/2200 kg

Performance:

Variant:	Max. Power (kW)	0 to 100km/h (Sec)
Twin	300	5.9
Twin Performance	380	4.9

IMPORTANT NOTE

Always check all specifications with the manufacturer prior to any purchase. No responsibility accepted by AEVA or Bryce Gatton (EVchoice) for errors factual or due to reproduction in this Fact Sheet. Whilst all efforts are made to ensure the accuracy of the material in this Fact Sheet, manufacturers regularly make changes (often unannounced) to their model ranges and specifications.