EV FACT SHEET

BYD Dolphin

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2023 BYD Dolphin. Image: BYD

INTRODUCTION

The BYD Dolphin is the second passenger car offering to be brought to Australia from Chinese manufacturer, BYD. Built on the same dedicated electric car platform as its stablemate the Atto 3 SUV, the Dolphin is marketed as a small passenger hatchback with seating for 5.

Like the Atto 3, the Dolphin can only be purchased online (like Polestar, Tesla and the Hyundai Ioniq 5). However, like Tesla and Polestar, BYD 'experience centres' for viewing and test-drives are either open or being built in most state/territory capitals (See BYD website for locations). Servicing and warranty work is done through BYD service centres as well as the independent mycar network.

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Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle.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.

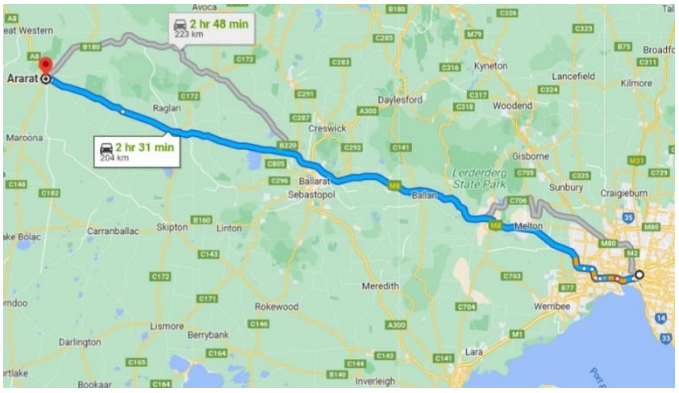
Note: Sadly, BYD are one of the few who still prominently display NEDC range figures on their website, however their vehicle brochures do list the WLTP numbers alongside NEDC.

DRIVING RANGE (continued)

Version	National testing system range estimates:		
	NEDC (Aust)	WLTP (Euro)	US EPA
45 kWh	410 km	340 km	NA[1]
60.5 kWh	490 km	427 km	NA[1]

Table 1: Driving range estimates for the BYD Dolphin.

Using the WLTP rating (with a slight discount for extended highway use) a BYD Dolphin fitted with the 60.5 kWh battery would, at its limit, make a round-trip from the Melbourne CBD to Ararat in Victoria's central west – provided the heating or air conditioning were not heavily used. For this sort of trip, a short DC top-up charge in either Ballarat Central or Warrenheip (6.5 km east of Ballarat on the Western Highway) would be recommended or perhaps plug-in over lunch at the AC charger in Ararat itself. (For further charging options and availability, see: https://www.plugshare.com/).



Typical BYD Dolphin return trip range. Image: Google maps

CHARGING SPEEDS/REQUIREMENTS

Charging port

The BYD Dolphin is fitted with a CCS2 socket allowing it to charge via Type 2 AC chargers[2] as well as CCS2 DC fast-chargers.

CCS2 charging plug and socket

Notes:

1. The BYD Dolphin is not sold in the USA.
2. The BYD Dolphin 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.

CHARGING SPEEDS/REQUIREMENTS (CONTINUED)

AC charging:

Like all new EVs sold in Australia, the BYD Dolphin 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 Dolphin 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 (100+kW)
45kWh: 23h	12.5h	6h	16A: 4h	45m	36m
60kWh: 30h	16.7h	8h	16A: 5.5h	60m	36m

Table 2: Approx. charging times for the two battery sizes

DC fast charging

The BYD Dolphin uses the CCS2 DC fast-charge connector and can charge at up to 60 kW DC with the smaller (45 kWh) battery and 80 kW DC for the larger (60.5 kWh) battery.

V2X capability:

The BYD Dolphin offers V2L functionality through a plug-in adaptor for the AC charge socket.

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 outlet in car)
- 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 BYD Dolphin, 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 or read articles in:
   (a) Renew magazine edition 143. (EVSE wiring)
   (b) Renew magazine edition 156. (EVSE buyer's guide)

SPECIFICATIONS

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

- Boot under parcel shelf: 345
- Rear seat folded, loading space to roof: 1,310

Dimensions:

- Overall length: 4,290 mm
- Overall height: 1,570 mm
- Ground clearance: TBC
- Overall width (edge of doors): 1,770 mm
- Overall width (edge of mirrors): 2,012 mm

Battery:

- Dynamic: 46 kWh (44.9 kWh usable)
- Premium: 62 kWh (60.5 usable)

Energy consumption: (WLTP)

- 15.2 kWh/100 km (45 kWh battery)
- 15.9 kWh/100 km (60.5 kWh battery)

Kerb weight:

- 1,520 kg (45 kWh)
- 1,658 (60.5 kWh)

Charging:

- 1 phase AC: 7.2 kW max.
- 3 phase AC: 11 kW max.
- DC: 60/80 kW max (45 kWh/60.5 kWh).

Charge port location:

- Right-hand front guard.

Drive configuration:

- Front-wheel drive

Towing:

- Not rated for towing

Performance:

Variant:	Max. Power (kW)	0 to 100km/h (Sec)
Dynamic: 45 kWh	70	12.3
Premium: 60 kWh	150	7.0

IMPORTANT NOTE

Always check all specifications with the manufacturer prior to any purchase. No responsibility accepted by AEVA or Bryce Gaton (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.