



EV FACT SHEET

Fuso eCarter (4.5t version)

Created and written by:
Bryce Gatton
Contact:
Bryce@EVchoice.com.au



Fuso eCarter Image: Fuso

INTRODUCTION

The Fuso eCarter cab-chassis range is available in five wheelbase options, three battery sizes and two cabin widths. Being a cab-chassis, it is capable of being adapted to various uses such as tipper, enclosed van body, tray, etc. Overall, there are 14 variants¹ in the eCarter range:

| Model | GVM ¹ | Wheelbase | Cab | Battery | Drive range |
|-------|------------------|------------------|--------|---------|-------------|
| 515 | 4.5 | Short 2.5m | Narrow | Small | 100 km |
| 515 | 4.5 | Short 2.8m | Narrow | Small | 100 km |
| 515 | 4.5 | Medium 3.4m | Narrow | Small | 100 km |
| 515 | 4.5 | Medium 3.4m | Wide | Small | 100 km |
| 615 | 6.0 | Medium 3.4m | Narrow | Medium | 150 km |
| 615 | 6.0 | Medium 3.4m | Wide | Medium | 150 km |
| 615 | 6.0 | Long 3.85m | Wide | Medium | 150 km |
| 818 | 7.5 | Medium 3.4m | Wide | Medium | 150 km |
| 818 | 7.5 | Long 3.85m | Wide | Medium | 150 km |
| 918 | 8.6 | Long 3.85m | Wide | Medium | 150 km |
| 918 | 8.6 | Extra-long 4.45m | Wide | Medium | 150 km |
| 918LR | 8.6 | Extra-long 4.45m | Wide | Large | 240 km |
| 918 | 8.6 | XX-long 4.75m | Wide | Medium | 150 km |
| 918LR | 8.6 | XX-long 4.75m | Wide | Large | 240 km |

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Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle.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 quote this figure for their new releases. Instead, they commonly give 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 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)

No standardised test system estimates have been provided by Fuso. Fuso does however provide an in-house testing range estimate of 100 km (fully loaded) for an eCarter 515. (i.e. with the 41.3 kWh battery).

| National testing system range estimates in kilometres | | |
|---|--------------|-----------------|
| NEDC (Aust) | WLTP (Euro) | US EPA |
| Not provided | Not provided | NA ² |

Table 1: test cycle range estimates for the eCarter.

FLEET EV TRANSITION TIPS:

Key to increasing the efficient use of an electric light commercial vehicle is recharging whilst loading and unloading at delivery points, as well as during down-times at its home base. Installing the maximum AC charger size at the home base may be useful, as well as placing a charger or 3 phase outlet adjacent to the loading area.

Note: Planning for a business EV transition where more than one LCV is used will include the need to review the business location's power supply situation as well as an overall EV fleet use-case charging needs assessment.

Knowing, finding and using three phase outlets and DC fast-chargers is important for longer trips where you intend to take a 4.5t (GVM) eCarter on a single trip exceeding around 80 km. To navigate this new aspect of EV fleet management, fleet managers will need to provide information and training to drivers on higher power portable chargers (if supplied), DC charging and how to use the Apps from the major fast-charge providers. (These include Chargefox, Evie, BP Pulse and Ampol's AmpCharge, as well as the open source Plugshare³).

CHARGING SPEEDS/REQUIREMENTS

Charging port

The eCarter is fitted with a CCS2 socket allowing it to charge via Type 2 AC chargers⁴ as well as via CCS2 DC fast-chargers.



CCS2 charging plug and socket

Notes:

- Only the short (2 of) and medium wheelbase versions with the smallest battery option can be driven using a standard car licence. As such, this Fact Sheet is mainly focused on those variants.
- US EPA does not give driving range estimates for commercial vehicles
- <https://www.plugshare.com/>
- The eCarter can be charged at any AC EVSE, however an adaptor will be needed to use the (very few) remaining older EVSEs fitted with Type 1 (J1772) plugs. It will also charge at a maximum of 7.4kW on a Type 1 plug EVSE.

CHARGING SPEEDS/REQUIREMENTS (CONTINUED)

AC charging:

Like all new EVs sold in Australia, the Fuso eCanter is fitted with a type 2 AC socket as part of the CCS2 AC/DC charge plug system.

Charging rates:

Single phase: maximum of 7.4 kW (32A)

Three phase:

41.3 kWh battery: maximum of 11 kW (16A per phase)

82.6 & 124 kWh: maximum of 22 kW (32A/phase)

Charging speeds and times vary on the capacity of the EVSE (Electric Vehicle Supply Equipment) it is connected to and the chosen battery size. Approximate charging times for the Fuso eCanter are shown in table 2 below.

| 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 |
| 41 kWh: 19h | 12.6h | 6.3h | 16A: 4.2h 32A: 4.2h | 60m | 45m |
| 83 kWh: 38h | 25h | 12.6h | 16A: 9.6h 32A: 4.8h | 80m | 54m |
| 124 kWh: 57h | 38h | 19h | 16A: 12h 32A: 6h | 120m | 80m |

Table 2: Approximate charging times for the Fuso eCanter

DC fast charging:

The T5 uses the CCS2 DC fast-charge connector and can charge at up to 70 kW DC for the 41.3 kWh battery and 104 kW for the other battery sizes.

V2X capability:

The Fuso eCanter does not include any V2X capabilities, however it does provide the option for an electrically driven PTO (Power Take-Off).

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 a special connection)
- V2G: vehicle to grid (supply home or grid via spec. connection)

HOME CHARGING CONSIDERATIONS

General

To get the shortest home -base charging time for the Fuso eCanter, an 11 kW three phase AC EVSE would be needed for 41kWh battery versions and 22 kW for the larger battery sizes.

However, depending on your existing power supply and/or charging needs, a lower rated EVSE may only be practicable, or needed. (See notes below). Lower capacity EVSEs will increase charging times, as shown in table 2.

Important notes for any EVSE installation:

1. High charging rates are generally not needed for overnight charging.
2. Homes do not normally have three phase AC connected, although many businesses do.
3. Switchboard and/or electrical supply upgrades may be needed if your home or business is more than 20 years old. For more information on this item - read EV Information articles at EVchoice.com.au or see:
 - (a) Renew magazine edition 143. (EVSE wiring)
 - (b) Renew magazine edition 156. (EVSE buyer's guide)

SPECIFICATIONS

Seating capacity: 2 (city cab) or 3 (wide-cab)

Dimensions and weights: (4.5t cab-chassis)

| Dimensions/weights/volumes | Short WB | Med. WB |
|--|-------------------|----------------------|
| Length (mm) | 4766/5044 | 5,788 |
| Cabin Width ¹ (mm) – mirrors in | 1798/2098 | |
| Cabin Width (mm) – mirrors out | Not provided | |
| Overall width (mm) – at rear wheels | 1,869 | |
| Cabin Height (m) | 2.13-2.24 | 2.18-2.28 |
| Ground clearance (mm) | 250-265 (approx.) | |
| Wheel base (m) | 2.5/2.8 | 3.4 |
| Turning circle (m) | 9.8/10.8 | 12.8 |
| Gross vehicle mass (tonne) | 4.5 | |
| Payload (tonne) | 1.9 | 1.9/1.8 ² |
| Tare weight (tonne) | 2.6 | 2.6/2.7 ² |
| Spare wheel? | Yes | |
| Maximum rated speed (km/h) | 89 km/h | |

Notes to table:

1. city cab/wide cab
2. MWB, wide cab

Battery: 41.3/82.6/123.9 kWh (gross) options.

Charging:

- 1 phase AC: 7.4 kW (maximum)
- 3 phase AC:
 - 41.3 kWh battery: 11 kW (maximum)
 - 82.6 and 123.9 batteries: 22 kW (max)
- DC:
 - 41.3 kWh battery: 70 kW (maximum)
 - 82.6 and 123.9 batteries: 104 kW (max)

Charge port location:

- RH side, just below and to rear of driver's door

Vehicle to Load connection: (position and power):

- Not fitted

Energy consumption: (WLTP):

- Not provided

Drive configuration:

- rear wheel drive

Towing:

- Not rated for towing

Performance:

| Motor power | Motor torque | 0 – 100 km/h time |
|-------------|--------------|-------------------|
| 85 kW | 250 Nm | Not provided |

IMPORTANT NOTES:

Always check for the latest vehicle specifications with the manufacturer prior to any purchase. No responsibility accepted by AEVA or Bryce Gatton (EV Choice) 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.

This Fact Sheet is prepared by EV Choice and provided free to AEVA for non-commercial use. Other Fact Sheets at: aeva.au/fact-sheets