



EV FACT SHEET

KGM Musso EV

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KGM Musso EV Image: KGM

INTRODUCTION

KGM (formerly SsangYong Motor) is a large (and 70-year-old) Korean automotive manufacturer. As SsangYong Motor, KGM has been selling vehicles here for some time and, since 2018, has been a fully factory backed importer. More recently, with a major investment from KG Group, SsangYong Motor have rebranded as KGM.

The Musso EV is KGM's new all-electric version of its popular Musso dual cab ute – although it shares the name only as the ICE version is built on a different platform. The Musso EV is a unibody on the same platform (and using the same electric drivetrain) as the Torres EVX SUV.

Built in South Korea, the Musso EV has an extremely well appointed interior: including heated and adjustable reclining rear seats! As such, it is perhaps a more family/outdoors oriented ute than a full-on 'tradie ute', although it does have a decent payload (905kg in 2WD form), vehicle to load (V2L) functionality for charging power tools and an 1,800 kg braked tow rating.

As such, this electric version is likely to also appeal to many lighter-use tradies who are keen to reduce their business carbon footprint ... and/or their running costs!

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Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle.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 most recent releases. Instead they 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 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:		
	ADR 81/02 (=NEDC) (Aust)	WLTP (Euro)	US EPA
2WD	Not rated	420 km	NA ¹
AWD	Not rated	380 km	NA ¹

Table 1: comparison of mandated test cycle driving ranges.

FLEET EV TRANSITION TIPS:

Key to increasing the efficient use of an electric LCV 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 is recommended, as well as placing a three-phase charger (or three-phase outlet for portable chargers) 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.

Staff training needs: Knowing, finding and using three phase outlets and DC fast-chargers is important for longer trips. 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 Plugshare.com for finding charger locations.

CHARGING SPEEDS/REQUIREMENTS

Charging port

The Musso EV is fitted with a CCS2 socket allowing it to charge via Type 2 AC chargers² as well as via CCS2 DC fast-chargers.



CCS2 charging plug and socket

Notes:

1. The Musso EV is not sold in the USA.
2. The Musso EV 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 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 Musso EV is fitted with a type 2 AC charging socket.

Charging rates:

Single phase: maximum of 7 kW (30A)

Three phase: maximum of 10.5 kW (15A per 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 Musso EV are shown in table 2 below.

(a) AC: 0 – 100% time				DC: 0 – 80% time	
10 A (power point)	15 A 1 phase (Caravan outlet)	32 A (1 phase Home EVSE)	16 or 32 A (3 phase public AC EVSE)	DC Fast charge (50kW)	DC Fast charge (130+kW)
36h	30.6h	15.3h	16A: 10.2h 32A: 10.2h	1.5h	42m

Table 2: Approximate charging times for the Musso EV.

DC fast charging:

The Musso EV uses the CCS2 DC fast-charge connector and can charge at up to 130 kW DC.

V2X capability:

The Musso EV is capable of V2L at up to 3.5 kW (15A).

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 a Musso EV, an 11 kW three phase AC EVSE would be needed.

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 3 above.

Important notes for any EVSE installation:

1. High charging rates are generally not needed for overnight charging.
2. Homes do not normally have 3 phase AC connected, although most commercial premises will have 3 phase power available.
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: 5

Dimensions and weights:

Dimensions/weights/volumes	
Length (mm)	5,160
Width – mirrors in (mm)	1,920
Width – mirrors out (mm)	Not provided
Height (mm) mid/high roof	1,750
Ground clearance	181.4
Wheel base (mm)	3,150
Turning circle (m)	Not provided
Tub internal length (mm)	1,345
Tub internal width (mm)	1,515
Tub internal height (mm)	510
Kerb weight (kg) 2WD/AWD	2165/2285
Payload (kg) 2WD/AWD	905/805
Gross vehicle mass (kg) 2WD/AWD	3070/3090
Gross Combined Mass (kg) 2WD/AWD	4870/4890
Spare wheel?	No

Battery:

- 80.6 kWh (LFP)

Charging:

- 1 phase AC: 7 kW (maximum)
- 3 phase AC: 10.5 kW (maximum)
- DC: 130 kW (maximum)

Charge port location:

- Front-left (in front of passenger door)

Vehicle to Load connection (position and power):

- Via charge port using a provided adaptor.
- Power: 3.5kW/15A.

Energy consumption: (WLTP):

- 2WD: 23 kW/100km
- AWD: 26 kWh/100km

Drive configuration:

- Front wheel drive (2WD) or all-wheel drive (AWD)

Towing: unbraked/braked

- 750kg/1,800kg

Performance:

Variant:	Max. Power/torque (kW/Nm)	0 to 100km/h (Sec)
2WD	152/339	Not provided
AWD	175/630	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.

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