



EV FACT SHEET

Hyundai Inster

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Hyundai Inster. Image: Hyundai

INTRODUCTION

The Hyundai Inster is Hyundai Australia's smallest vehicle offering and is classified by VFACTS as a 'light SUV'.

Manufactured in Korea, it is based on the ICE Hyundai/Kia K1 platform. As such it shares many features (and looks) with the ICE Hyundai Casper (not sold here) as well as the Kia Picanto.

With its small dimensions plus seating for 4 rather than 5, the Inster could best be described as a 'city car'. Mind-you, with its surprisingly decent rear seat room, 10.5 kW three phase AC charging and DC charging up to 120 kW, the Extended Range version could do reasonable service in occasional regional driving and day tripping for 4 people for up to a 300-ish km round trip without needing a recharge.

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Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle.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

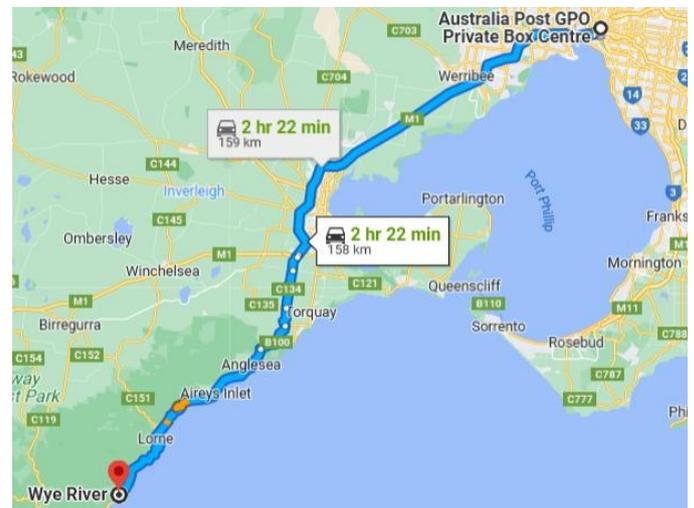
DRIVING RANGE (continued)

Version	National testing system range estimates:		
	NEDC (Aust)	WLTP (Euro)	US EPA
Base	Not rated	327 km	NA ¹
Extended Range	Not rated	360 km	NA ¹
Cross + roofbasket	Not rated	293 km	NA ¹

Table 1: Driving range estimates for the Hyundai Inster.

Using the WLTP rating with a 10% discount for extended highway use, the Inster with the extended range battery would, at its limit, make a round-trip from the Melbourne CBD to Wye River – 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 Hyundai Inster return trip range. Image: Google maps

CHARGING SPEEDS/REQUIREMENTS

Charging port

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



Notes:

1. The Inster is not sold in the USA.
2. The Hyundai Inster 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 Hyundai Inster is fitted with a type 2 AC socket.

Charging rates:

Single phase: maximum of 7.2 kW (32A)

Three phase: 10.5 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 Inster 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 (120+kW)
42 kWh: 18h	12h	6h	16A: 4h	45m	30m
49 kWh: 20.5h	13.6h	7h	16A: 4h, 35m	50m	30m

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

DC fast charging

The Hyundai Inster uses the CCS2 DC fast-charge connector uses the CCS2 DC fast-charge connector and can charge at up to 120kW DC.

V2X capability:

The Hyundai Inster offers V2L functionality at up to 3.6 kW (15A) via the exterior port (using an adaptor – which BTW is a \$625 accessory from Hyundai) as well as through a standard 3 pin outlet located inside at the rear of the centre console.

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 Hyundai Inster, 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

Seating: 4

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

- Boot under parcel shelf: 280-351 (sliding seats)
 - Rear seat folded, loading space to roof: 1,059
- Froot (front-boot): NA

Dimensions:

- Overall length: 3,825 mm
- Overall height: 1,575 mm
- Ground clearance: 144 mm
- Overall width (edge of doors): 1,610 mm
- Overall width (edge of mirrors): Not provided

Battery:

- Standard Range: 42 kWh
- Extended Range: 49 kWh

Energy consumption: (WLTP)

- 15.3 kWh/100km (42 kWh battery)
- 14.9 kWh/100 km (49 kWh, no roof basket)

Kerb weight:

- 1,375 kg (standard range)
- 1,405 kg (extended range)

Charging:

- 1 phase AC: 7.2 kW max.
- 3 phase AC: 10.5 kW max.
- DC: 120 kW max.

Charge port location:

- Front, slightly left of centre.

Drive configuration:

- Front-wheel drive

Towing: (unbraked/braked)

- The Inster is not rated for towing.

Performance:

Variant:	Max. Power (kW)	0 to 100km/h (Sec)
Base	71	11.7
Extended Range	84.5	10.6

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.