



Press Information



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DAIHATSU MOTOR CO., LTD.



Concept

Protecting the global environment and effectively using natural resources. These are two increasingly urgent issues to which everybody on this planet must participate in finding solutions.

For decades Daihatsu has been responding to both of these issues by proposing a diversity of compact cars. This is because compact cars are intrinsically space efficient, economical and resource-saving.

Users of compact cars, however, want something else in addition to these advantages. They also want their compact cars to be easy to take care of, fun to use and friendly.

Combining the intrinsic advantages of the compact car with the needs of compact-car users in an uncompromising form that is optimised for everyday use in an urban setting, Daihatsu is proud to propose the “**ai**” — a brand new city commuter car based on an original new concept. The **ai** is a stylish and minimum sized 2 + 2 commuter that’s more comfortable, easier to use, more convenient and environmentally friendly than any other compact car on the market today. The name “**ai**” has been coined from the phrase “Attractive & Intelligent”. It’s a name that embodies Daihatsu’s passion for making attractive and intelligent compact cars that deliver both compact size and superb packaging.

Packaging

Within a compact exterior measuring 2650 mm by 1475 mm by 1550 mm (length × width × height), the **ai** has space for four occupants, giving it the world’s most efficient automotive packaging yet devised. The front seats have sufficient room for two adults. The rear seats, which are big enough for two children, can also be converted into a cargo space. The result is a minimal but sufficient interior space.

Design

The basic design concept was that the **ai**’s size had to be optimised for city commuters. The design had to express the fact that the car is easy to use and fun to drive. Comprised of modern and clean lines that do not restrict the types of users or the ways in which the car can be used, the exterior expresses a clear-cut and happy style. The simple and casual interior is comprised of functional forms that beautifully match contemporary city use.

Utility

The **ai** pursues the utility that makes it a perfect city commuter. And for city use, ease of manoeuvrability is one of the most important attributes that determine the car’s performance. The **ai**’s turning circle is only 6.8 m, which is the smallest of any 2 + 2 car in the world. You’d be surprised how easy it is to handle this car when making a U turn or parking in a narrow street. To make it easier for the passenger to get into and out of the car when parked in a narrow street, the **ai** has a slide-opening passenger door, which also saves parking space. What’s more, the rear seats can be folded down to create a flat cargo space with its floor just 373 mm above the ground. In short, the **ai** is a car that lives up to its claim of being the best city commuter around.

Power train

Four types of engines are available to choose from to match different geographical characteristics and uses. First, there is a popular, 3-cylinder, 660 cc petrol engine, which is one of the best selling engines in Japan on account of its cost performance and easy maintenance. Then there is a newly developed 2-cylinder, 2-cycle 660 cc diesel engine—the TOPAZ 2CDDI—which is highly efficient, clean and economical. Thirdly, there is an engine for hybrid use that achieves a surprisingly low fuel consumption of 42.0 km/L (10-15 mode in the Japanese emission standard). And finally, there's a direct injection petrol engine that achieves both high power and low fuel consumption—the TOPAZ DI. Each of these engines is combined with a matching transmission to draw out the potential of the high tech engines to their maximum while providing the driver with superb ease of driving.

*TOPAZ: Stands for “TOP from A to Z”. It's the name of Daihatsu's engine series aimed at delivering top class performance in all aspects including power and fuel consumption.

2-cycle diesel engine—TOPAZ 2CDDI

Originally started as an engine manufacturer in 1907, almost a century ago, Daihatsu Motor Company has the longest history of any car maker in Japan. On the foundation of its accumulated history and through a continuous succession of challenges, Daihatsu has perfected the 2-cycle direct injection diesel engine. Based on an overhead valve uniflow scavenging design, the engine pursues higher performance by using both a super charger and a turbo charger to force an optimum amount of air into the cylinders from the low to high load ranges. The air intake bypass control system of the super charger delivers the maximum intake and charging efficiency at low to medium loads, whereas the turbo charger delivers the maximum intake and charging efficiency at high loads.

The scavenging port is shaped so as to produce swirls that optimise the efficiency of air use. In addition to ensuring a fuel injection pressure that is optimised for the small cylinder displacement of 330 cc, a common rail system is employed that performs multiple stage injections.

To smoothly scavenge the burnt gases from the cylinder in the exhaust stroke, the engine employs four exhaust valves per cylinder with a DOHC mechanism. Moreover, the valves are made of a lightweight titanium material. The exhaust ports are divided into the left and right-hand sides of the cylinders to further improve the scavenging and exhaust efficiency and increase the durability of the engine.

The cooling system and the lubricating system are also strengthened for improved reliability. The high powered, clean, economical and compact 2-cylinder, 2-cycle direct injection diesel is a perfect engine for the next-generation city commuter.

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Specifications sheet—Qi

Dimensions and weight

Overall length		mm	2,650
Overall width		mm	1,475
Overall height		mm	1,550
Wheelbase		mm	1,750
Track	front	mm	1,320
	rear	mm	1,310
Road clearance		mm	130
Kerb weight		kg	570
Seating capacity			4 (2 + 2)
Turning circle	tyre	m	6.8

Engine (of the car on display)

Type		EF-SE
		Water-cooled, inline, 3 cylinder, 6-valve SOHC
Displacement	cc	659
Bore × stroke	mm	68.0 × 60.5
Max. power (net)	kW/rpm	35/6,400
Max. torque (net)	N·m/rpm	56/4,800
Fuel injection		EFI

Transmission (of the car on display)

Drive		Front wheel drive
Type		3-speed automatic

Chassis

Suspension	front	MacPherson strut with coil spring
	rear	Torsion beam with coil spring
Steering		Rack & pinion
Brakes	front	Disc brakes
	rear	Drums, leading/trailing
Tyres		135/60R13

