

**DENSO and Yamato Transport Develop D-mobico,
Compact Mobile Refrigerator
– D-mobico enables temperature-controlled and eco-friendly
transport of chilled and frozen parcels in any vehicle –**

DENSO Corporation and Yamato Transport Co., Ltd. have co-developed D-mobico,*1 a compact mobile refrigerator. Yamato Transport began using D-mobico in its delivery trucks in February 2021. DENSO will market the product more broadly through DENSO Solution Japan Corporation by summer 2021.



D-mobico



Insulated thermal box



In combination with an
insulated thermal box

As e-commerce grows, there is increasing demand for delivery systems that can move sensitive products, such as food and pharmaceuticals, more securely, at a controlled temperature and with less environmental impact. These characteristics are even more important to organizations transporting small parcels of chilled and frozen products, another rising trend. On the other hand, many delivery vehicles are unrefrigerated and require dry ice to move cold products. A more efficient and sustainable delivery method is needed.

One solution to this dilemma is D-mobico, a compact, lightweight and portable refrigerator compatible with a variety of thermal boxes depending on cargo size and amount. Powered by a mobile battery, D-mobico does not require dry ice, nor does it draw energy from the engine, to refrigerate its freight. This helps reduce CO2 emissions and improves the vehicle's fuel efficiency. Such a system also supports the transition to electric delivery vehicles, a key development in creating cleaner transportation.

In addition to striving to make mobility greener for all, DENSO aims to achieve carbon-neutral manufacturing by reducing CO2 emissions from its products and plants, and by collecting and reusing CO2 in the atmosphere. Meanwhile, Yamato Transport has been working to reduce the use of dry ice and shift its fleet to electric vehicles in order to reduce the environmental impact

across its operations. DENSO and Yamato Transport will continue working together to achieve safe and environmentally friendly delivery of chilled and frozen parcels.

*1 "D-mobico" is a trademark of DENSO Corporation. We named it after "DENSO mobile cool," meaning compact mobile refrigerator.

Images of use



Specifications of D-mobico

Temperature setting	Frozen: -20°C , chilled: 5°C (for a 100L box)
Rated refrigeration performance	85 W (outside air: 35°C /in the refrigerator: -18°C)
Rated power consumption	185 W (outside air: 35°C /in the refrigerator: -18°C)
Rated current	7.7 A (max. 12 A at 24 V)
Size	W420xD140xH440 mm *2
Weight (refrigerator only)	5 kg
Capacity of insulated thermal boxes	130L
Power supply	Battery power supply: 24 VDC (connection using a DC cable) Stationary power supply: 100 VAC (connection using an AC adaptor)
Usage environment temperature	5°C to 40°C
Storage environment temperature	-20°C to 60°C
Continuous operating time	About 8 hours
Water-/dust-proof performance	Equivalent to IPX5*3

*2 Excluding insulated box

*3 A grade related to the waterproof function of electronic equipment. It indicates that there is no harmful effect on devices even under the explosion of a jet of water.

About DENSO

DENSO is a \$47.6 billion global mobility supplier that develops advanced technology and components for nearly every vehicle make and model on the road today. With manufacturing at its core, DENSO invests in its 200 facilities to produce thermal, powertrain, mobility, electrification, & electronic systems, to create jobs that directly change how the world moves. The company's 170,000+ employees are paving the way to a mobility future that improves lives, eliminates traffic accidents, and preserves the environment. Globally headquartered in Kariya, Japan, DENSO spent 9.9 percent of its global consolidated sales on research and development in the fiscal year ending March 31, 2020. For more information about global DENSO, visit <https://www.denso.com/global>.