

DENSO – Creating new value

Although rooted in the automotive industry, DENSO is not bound to a single sector, but has spread its considerable multi-discipline expertise across a wide range of industries, to allow them to benefit from its advanced technology and broad experience

Celebrating 30 years of the QR Code

Perhaps the best example of this multiple industry approach, is the everyday use across all societies, of the QR Code. In 1994, DENSO WAVE made technology history: Masahiro Hara developed the QR Code in Japan to improve logistics in automotive production, and today it is used by companies worldwide. In the following years, DENSO steadily expanded its role as a global technology pioneer. DENSO WAVE's Auto-ID solutions have been present in the European market for 35 years, initially under the umbrella of Toyota Tsusho and since 2019 through the European subsidiary DENSO WAVE EUROPE, which offers state-of-the-art Auto-ID and RFID solutions for mobile data collection. Today, DENSO WAVE is a leading provider of premium RFID readers, handheld terminals/mobile computers, barcode scanners, and complex and cloud-based IoT data management systems. Whether it is logistics, retail, healthcare, distribution, or events, DENSO WAVE's hardware and software solutions enable customers to optimize their processes in various areas.

DENSO AgriTech Solutions, Inc

Due to climate change and fewer people taking up farming as a profession, agricultural production has become unstable, which means there is a need to develop sustainable systems of production by establishing a cultivation environment that is less dependent on the climate and labour shortages.

To help address these food and agriculture issues, DENSO and Certhon formed a capital alliance in March 2020, and in May of the same year jointly established DENSO AgriTech Solutions, Inc., which sells horticultural facility products in Japan and other Asian countries. Since then, the two companies have been involved in the sale of agricultural greenhouses suited to each region of the world and are jointly developing solutions to solve future labour shortages and global food challenges.

DENSO Robotics

Did you know? DENSO Aftermarket and Industrial Solutions (AMIS) had a Robotics department!

It has extensive knowledge and experience in the field of robot-based automation and this knowledge transpires in the quality of industrial robots and Cobots, all developed and sold by DENSO Robotics.

With approximately 130.000 DENSO robots worldwide - of which more than 21.500 are used in its own production, DENSO Robotics product portfolio ranges from 4-axis robots (SCARAs) to 5 and 6-axis robots and Cobots, all of which stand out for their outstanding speed, precision and quality.

DENSO robots can move a weight of up to 60 kg and thus offer a high degree of functionality. Each model was developed to the highest quality standards.

DENSO robots are not only compact, light weighted and require minimal maintenance, they also come with a two-year warranty. For more cost-effectiveness and user-friendliness, there is a unified controller type RC8A/RC9 for all robot models from DENSO.

DENSO robot arms can be used in assembly applications, processing, pick & place, inspection, machine tending, screwing and other applications.

DENSO robots also work in dusty, damp, explosive, ESD, clean room and highly sterile environments and have correspondingly required protection classes. Thus, DENSO kinematics can be used in almost any environment.

In addition, DENSO Robotics provides solutions related to IoT tasks.

Residential CO₂ heat pump

In 2001, DENSO first introduced CO₂ refrigerant to its air to water heat pumps, in Japan. Known as 'Eco-Cute', the product's improved energy efficiency meant that less domestic electricity was required. As a result, the innovation won six globally recognised energy and environment awards, including the 2002 EPA Environmental Climate Protection Award from the U.S. Environmental Protection Agency.

Introduced into Europe in 2009, DENSO's CO₂ air to water heat pump has a unique ability to provide water temperatures up to 85°C, allowing it to be used for domestic hot water, as well as for high-temperature space heating.

DENSO's partner Vattenfall, has developed a solution that incorporates a buffer system which allows the DENSO CO₂ Heat Pump to act as a 'thermal battery', by running when renewable electricity is available at

low cost, and using the heat stored in the buffer tank when it is needed. This all-electric heat pump system fully eliminates the need for gas boilers in existing, moderately insulated homes. For further details of this project please refer to the [Vattenfall website](#).

Last-mile logistics with GreenZen Solutions

While societies around the world strive to achieve zero emissions, especially in the urban environment, last-mile logistics is growing in its importance and evolving rapidly. As a result, micro mobility solutions, including e-Cargo bikes, are emerging as pivotal players in these operations. However, with this shift comes the necessity for reliable, traceable, and connected transport refrigeration solutions that provides safe deliveries of goods, particularly in sensitive sectors such as food and pharmaceuticals.

Recognising this need and leveraging its extensive expertise in thermal engineering and collaborative partnerships, DENSO, under the brand, [GreenZen Solutions](#), has developed the Last-Mile Climate Control (LMCC) Cube, the industry's first active cooling unit that is both connected and lightweight, and offers dynamic traceability and compatibility, with a wide range of light -electric vehicle types.

The LMCC Cube represents a paradigm shift in last mile logistics, combining high efficiency climate control technology with state-of-the-art, real time cold chain monitoring.

Further details of the DENSO Aftermarket programme are available online at: www.denso-am.eu

ENDS

For more information, interviews or images please contact:

Germany **Annina Oppinger, Externe Marketing & PR**
email: annina.oppinger@externe-marketingabteilung.de

UK & IE **Steve Coombes, Chicane**
email: steve@chicane.marketing

Poland **Dawid Dziwosz, Agencja Publink, Poland**
email: ddziwosz@publink.com.pl

Ukraine **Lika Kolomiets, Lika Design**
email: lika@tgf.com.ua

Romania **Victor Gavronschi, Loopaa**
email: victor.gavronschi@loopaa.ro

Italy	Ludovica Giusa, DENSO Aftermarket Italy email: l.giusa@eu.denso.com
Spain/Portugal	Pablo Rodriguez, DENSO Aftermarket Iberia email: p.rodriguez@eu.denso.com
France	Sonkalou Konate, DENSO Aftermarket France email: s.konate@eu.denso.com
DENSO Europe	Fatiha Laauich, DENSO Aftermarket Europe email: f.laauich@eu.denso.com