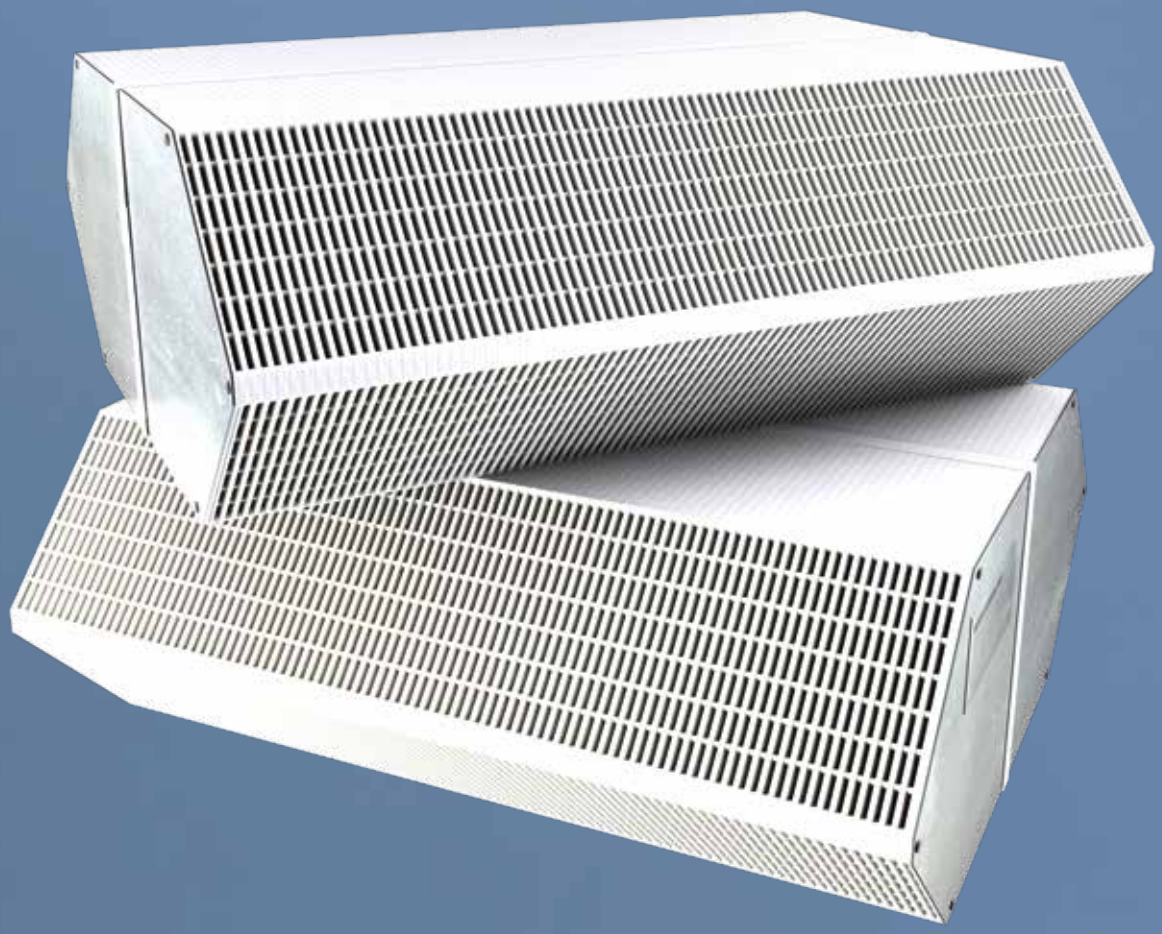
ZERN ENGINEERING

NEW ENTHALPY TECHNOLOGY

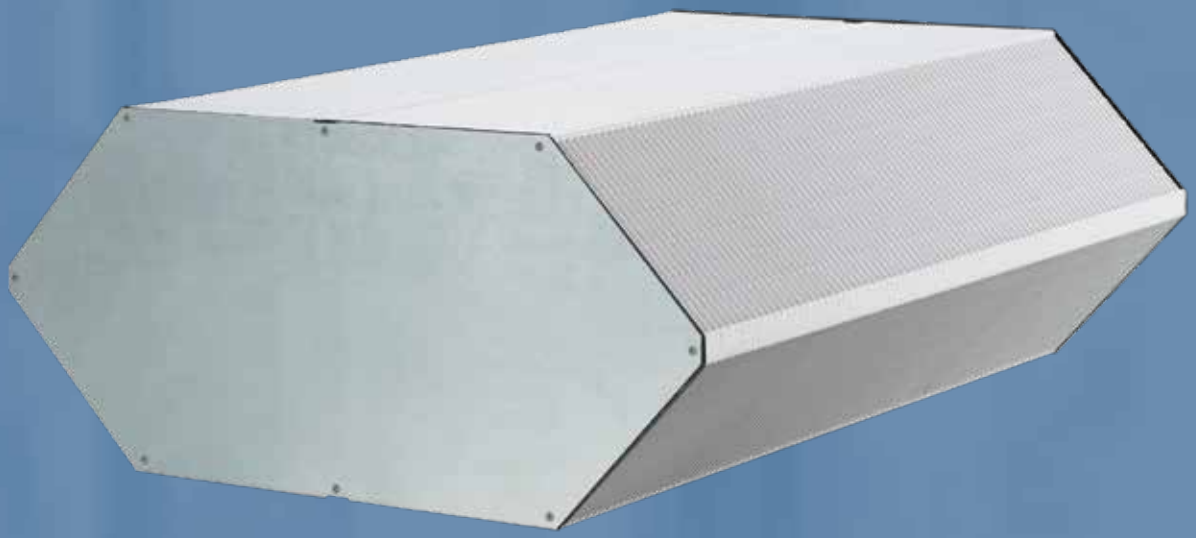
ECD-EX6 172 SERIES

- UNIQUENESS
- INNOVATION
- RESULT



ZERN-ENGINEERING.COM

COST-EFFECTIVE SOLUTION WITHOUT GLUE



MAIN ADVANTAGES

Optimised heat and moisture transfer

The enthalpy heat exchanger achieves high efficiency in transferring both thermal energy and moisture, minimising energy loss and improving overall system performance.

Minimal pressure drop

Despite its compact dimensions of 172x397 mm, the heat exchanger ensures minimal pressure drop.

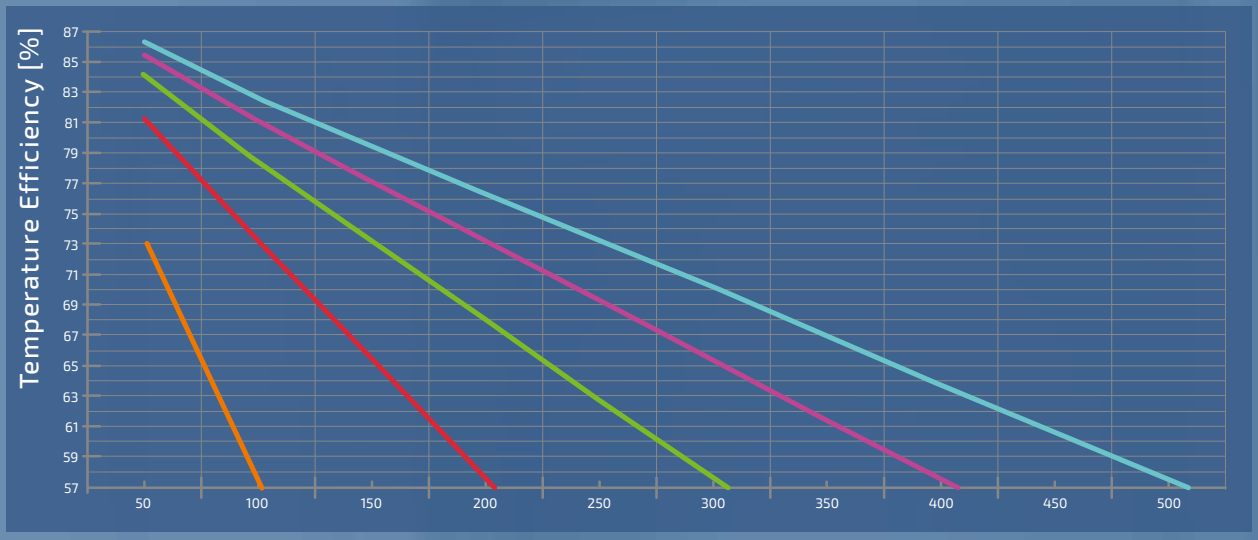
Versatile integration

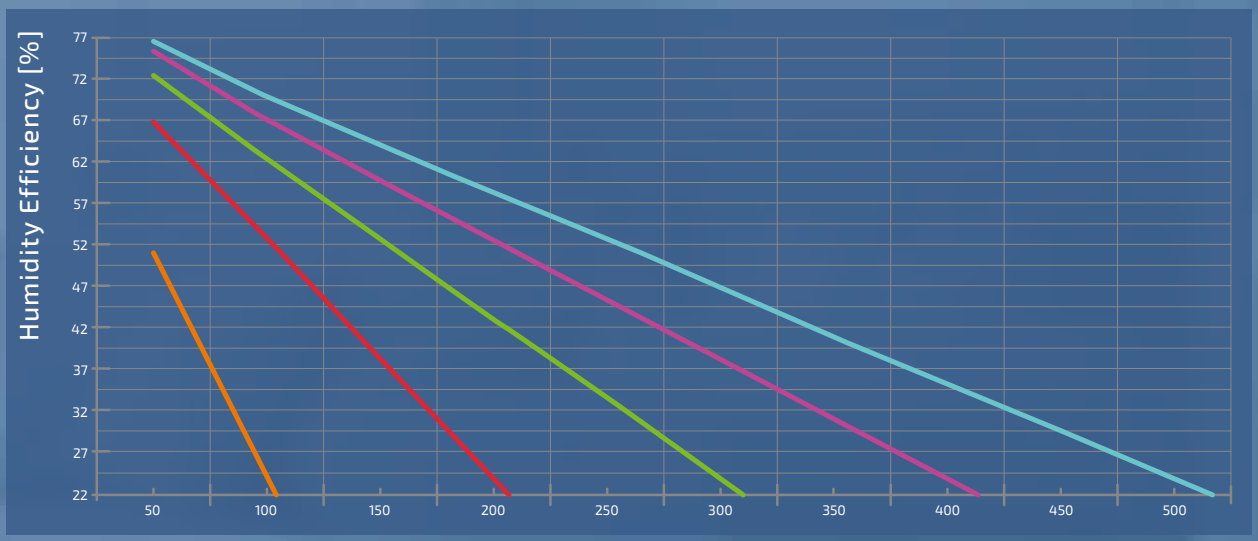
With its adaptable size, the heat exchanger integrates seamlessly into a wide range of HVAC systems, providing flexibility for a variety of residential or commercial applications.

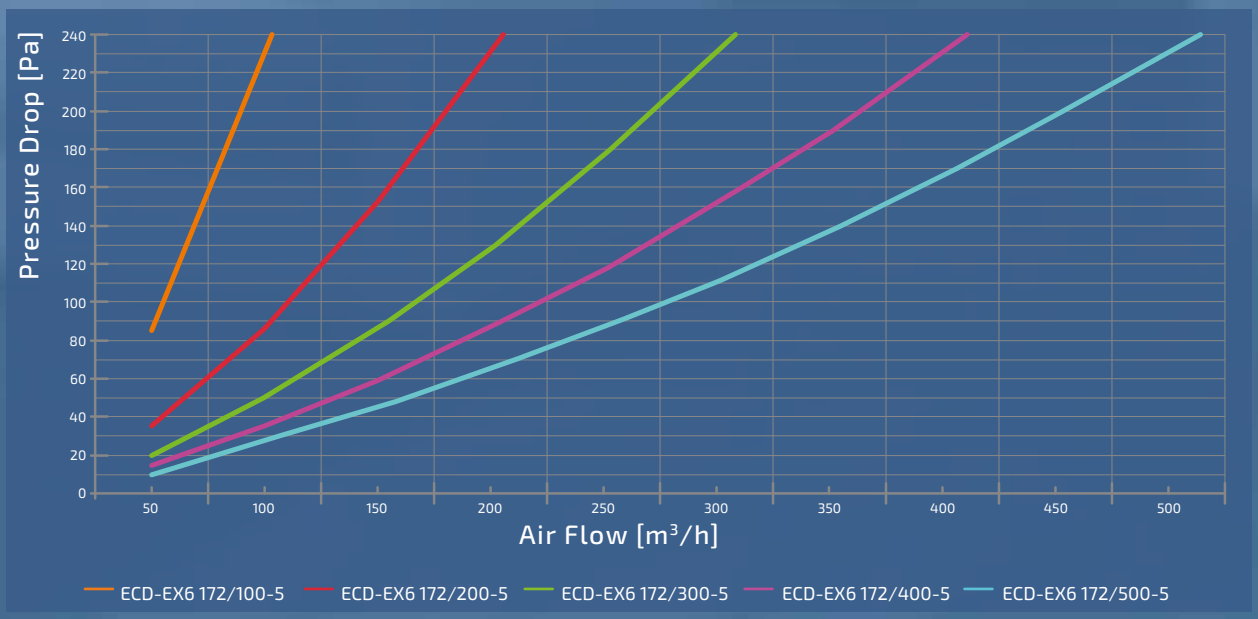
Improved indoor environment control

By precisely controlling temperature and humidity levels, the enthalpy heat exchanger enhances indoor comfort and air quality.

ECD-EX6 172 SERIES DEPENDENCY DIAGRAMS

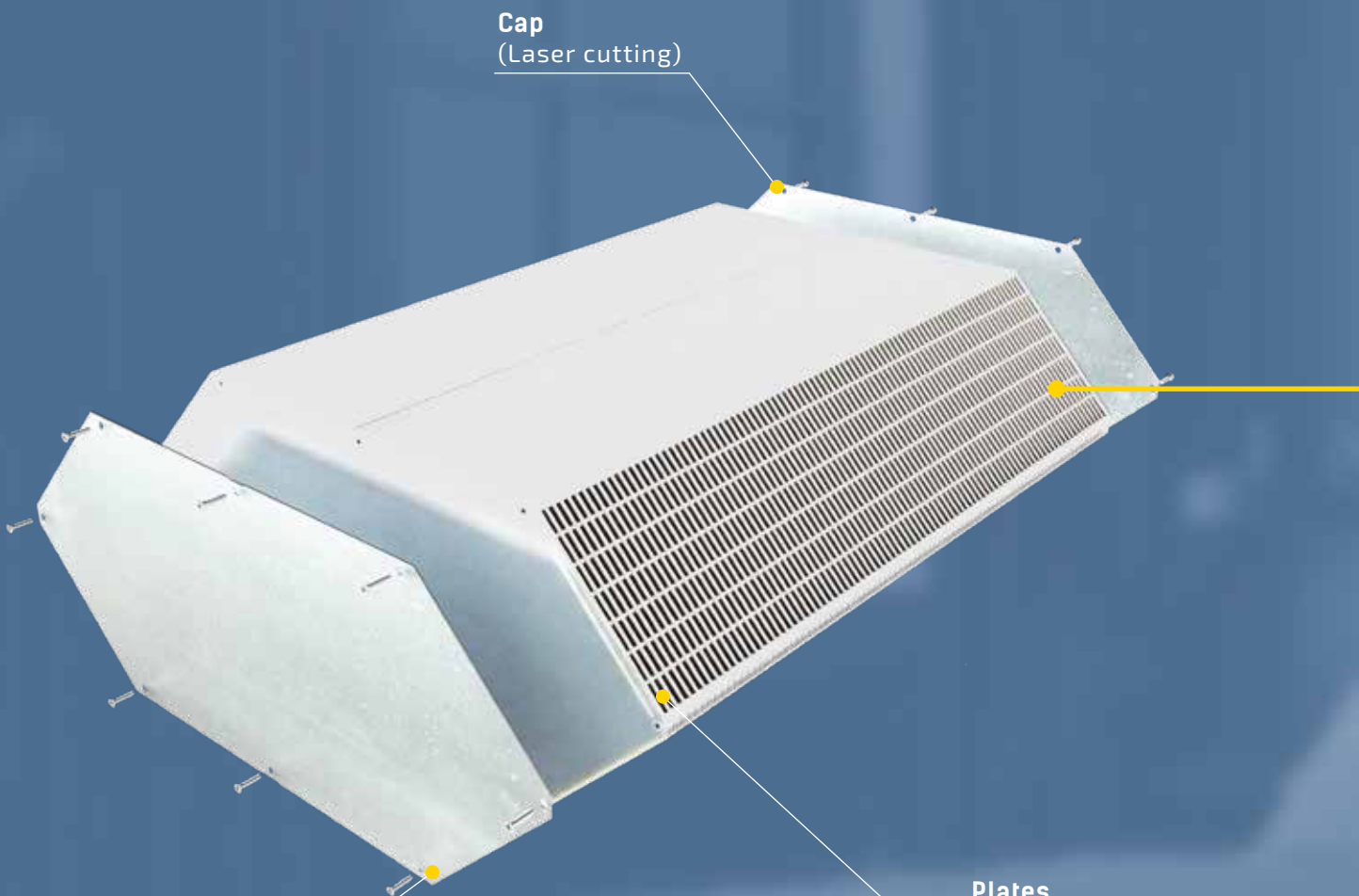






Test results on a ECD-EX6 172/100...500-5 model with a depth of 100...500 mm, test conditions according to DIN EN 13141-7 (as well as EN 308)

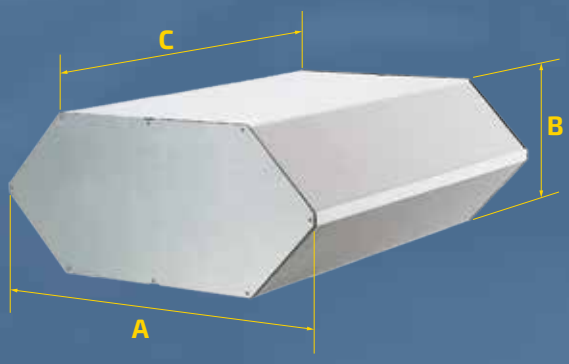
NEW CONSTRUCTION



At the heart of our new assembly technology is a stacked structure of panels that act as a robust frame. A special membrane is carefully placed between these plates, and the plates are then securely fastened together using an advanced locking mechanism. This innovative approach allows for a lighter, stronger and more cost-effective structure by minimising the use of materials without compromising performance.

OVERALL DIMENSIONS

MODEL	DIMENSIONS [MM]			
	A	B	C	Casing design
ECD-EX6 172/100...600-5 (5.1)	397	172	100...600	5/5.1

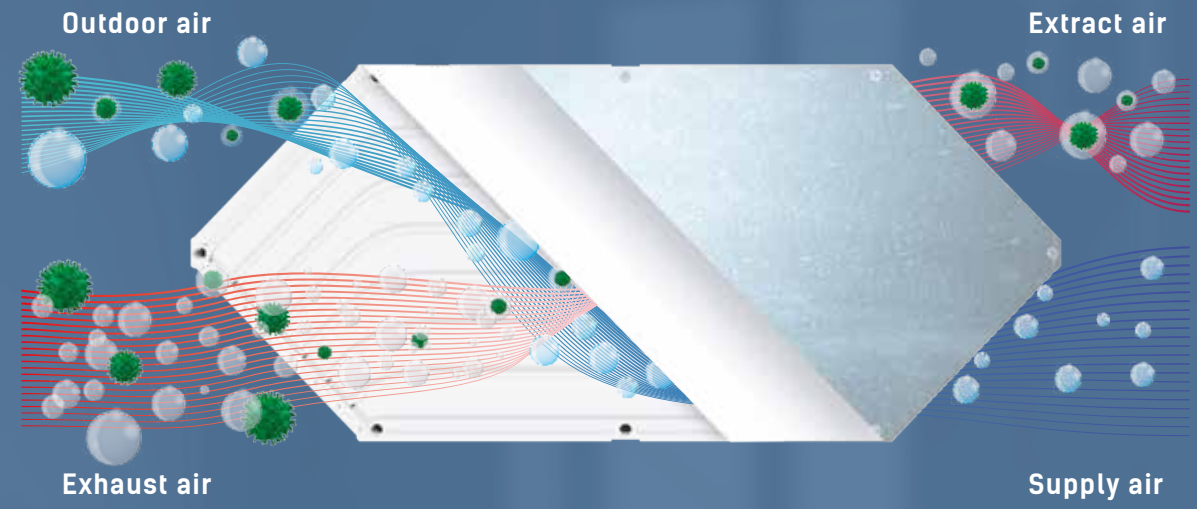


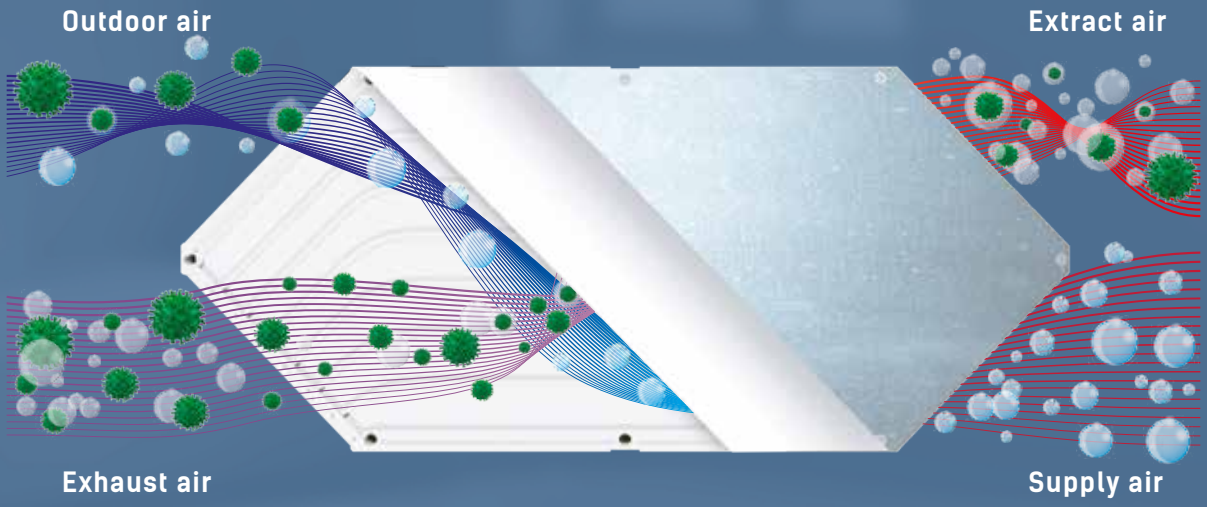
Casing design

5 – stainless steel

5.1 – stainless steel with a T-profile

WHY ENTHALPY?





In enthalpy heat exchangers, a vital component known as the vapour-permeable membrane plays a crucial role in optimising performance. Manufactured from a hybrid polymer material, this innovative membrane is carefully engineered to provide exceptional thermal efficiency and moisture transfer capabilities.

Enthalpy heat exchangers excel at recovering both heat and moisture from outgoing air streams, effectively reducing the workload on HVAC systems. By transferring this recovered energy to incoming fresh air, they significantly improve energy efficiency, resulting in significant cost savings on utility bills.

Maintaining optimum humidity levels is essential for indoor comfort and health. Enthalpy heat exchangers excel in this area, preventing problems such as mould growth, condensation and stale air. The precise control of temperature and humidity ensures a consistently comfortable and healthy indoor environment for the occupants.

Whether you are designing an HVAC system for a residential, commercial, or industrial setting, enthalpy heat exchangers offer unmatched versatility and adaptability.

High thermal efficiency

Our vapour-permeable membrane ensures efficient heat transfer, allowing thermal energy to be exchanged between incoming and outgoing air streams.

Moisture transfer

The membrane has a superior moisture transfer, maintaining optimal humidity levels in your indoor environment for comfort and good health.

Cost-effective solution

Long-term savings on maintenance and utility costs while maximizing the lifespan of HVAC system.

Improved indoor air quality

Prevent mould growth, condensation, and stale air by maintaining optimal humidity levels and ventilation.

Environmental impact

Reduces carbon footprint by enhancing overall energy efficiency.

Climate adaptability

Provide comfortable environment in any weather according to climate conditions.

ZERN ENGINEERING

PART OF BLAUBERG GROUP

Stäblistraße 6
81477 Münich

HQ Tel. +49 89 23166620
HQ Fax. +49 89 78069521

sales@zern-engineering.com
zern-engineering.com

2026-02