



ZEISS CARFIT eMOBEE

The Mobile Honeycomb Plate with E-Drive



ZEISS CARFIT eMOBEE

The remote controlled self-propelled CARFIT eMOBEE honeycomb plate efficiently transports components from A to B and provides sustainable support for loading processes in the measuring lab. And that with minimum weight and maximum stiffness at the same time.

The new measuring fixture solution combines several advantages in one product: it is lightweight thanks to its honeycomb core, and at the same time particularly strong and stiff. In addition, thanks to the four-wheel suspension and powerful drive, the plate can be steered omnidirectionally on almost any surface. ZEISS CARFIT eMOBEE thus significantly accelerates the measuring process and helps to save resources and space capacities.

Greater measuring machine capacity

The increase in the variety of parts available and companies' intensive efforts to inspect their components at an even faster rate means measuring areas must be properly equipped to achieve the necessary efficiency. With ZEISS CARFIT eMOBEE, the individual components fixtured on the honeycomb gridplate travel-ready prepared from the production line to the measuring lab and even to the designated measuring machine as scheduled. If multiple grid plates are used at the same time, then machine downtime is drastically reduced.

Remote controlled without tracks

The system is navigated by remote control; it finds the final position in the measuring cell semi-automatically using a positioning system. The electronic markings, which are about two centimeters in size, are applied by ZEISS on site and also coded accordingly so that they can be read by the integrated camera. It is not necessary to prepare the floor with additional tracks.

Batteries instead of a pile of cords

ZEISS CARFIT eMOBEE features an electric motor and is powered by built-in batteries. The battery life depends on the load, the travel path and the frequency – under normal operating conditions, a single charge is sufficient for several days of use. With the charging stations, the batteries can be recharged within three hours. Since no cable gets in the way of the honeycomb gridplate or limits its movement, ZEISS CARFIT eMOBEE can be used in various working conditions.

Precisely fixtured components

The high-precision hole grid enables the setup of fixtures for all workpieces that need to be measured. Since the mobile plate is extremely light, it is also possible to clamp heavy or multiple parts on the system.

Lightweight and stiff

Integrated honeycombs made from aluminum give the plate the necessary stiffness. Nature proved a source of inspiration during the design process because, much like in beehives, the weight is spread around the hexagonal walls on the ZEISS CARFIT eMOBEE rather than at individual points. Thus the structure can handle a load that is 30 percent heavier as compared to other transportation solutions.

Four-wheel drive for easy maneuvering

Each of the four wheels on ZEISS CARFIT eMOBEE is controlled separately. Thanks to this omnidirectional drive, the plate can travel in any direction at all times. This allows diagonal and lateral movements and space-saving navigation and thus makes the plate suitable for small measuring labs.

Together with the powerful drive, the special Mecanum wheels are unaffected to uneven ground: ZEISS CARFIT eMOBEE can be used on almost all surfaces.

Standardized design

The pallet comes in different sizes. The smallest is 2x1 meters, and the largest is 5x2 meters.

Due to the high degree of standardization of the plate components, orders can be realized within a few weeks.

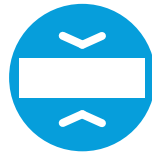
ZEISS CARFIT eMOBEE Features



Low net weight



High load capacity



High stiffness by honeycomb core

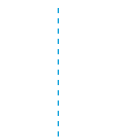


Strong electric drive



Light, maximum loadable and extremely stiff:

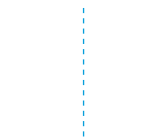
the mobile honeycomb grid plate CARFIT eMOBEE revolutionizes the loading processes in the measuring room



Quiet operation



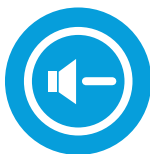
Insensitive to uneven floors



Omnidirectional driving options



Quick availability



The benefits at a glance:

- ZEISS CARFIT eMOBEE supports automation processes in the measuring lab.
- ZEISS CARFIT eMOBEE increases the capacity of the measuring machines.
- ZEISS CARFIT eMOBEE reduces the amount of time metrology engineers need for setup and enables greater process monitoring.
- The light, stabile honeycomb structure of ZEISS CARFIT eMOBEE enables multiple parts to be loaded at the same time for more efficient transport.
- Thanks to its four-wheel drive, ZEISS CARFIT eMOBEE takes up limited space and is also suitable for small measuring labs.

ZEISS CARFIT eMOBEE - Technical data for the mobile honeycomb plate

Dimensions	2000 mm x 1000 mm, 4000 mm x 2000 mm, 5000 mm x 2000 mm
Weight	from 630 kg (smallest version)
Drive	Electric motor
Travel path definition	DMC matrix; travel path defined using adhesive markers on the floor
Hole grid versions	50 mm x 50 mm, 100 mm x 100 mm, 200 mm x 200 mm
Operation	manual (remote with joystick, wireless) or half automatic
Maximum load	up to 6.000 kg *
Speed	1 m / sec. *
Positioning accuracy	+/- 1 mm
Movement options	Freely navigable: lateral movements and 360° rotation possible

** If the vehicle weight is over 6400 kg, which corresponds to a payload of approx. 4200 kg, the maximum speed of the vehicle must be reduced. In this case, the maximum speed depends on the ground conditions, load distribution, driving distance and driving direction (proportion of longitudinal or transverse driving) under load.*

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