

magtrack

Magnetic 3D Tracking System



smart magnetic solutions



Contact & information

Matesy GmbH
Loebstedter-Str. 101-103
D-07749 Jena
Germany

Tel.: +49 (0) 03641 79799 00
Fax: +49 (0) 03641 79799 01
E-mail: info@matesy.de
Web: www.matesy.de



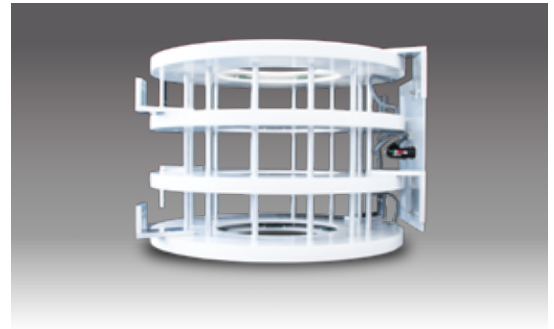
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The magtrack system is based on the magnetic marker monitoring process. It was developed to record, analyze and, if necessary, optimize the motion sequences in closed systems.

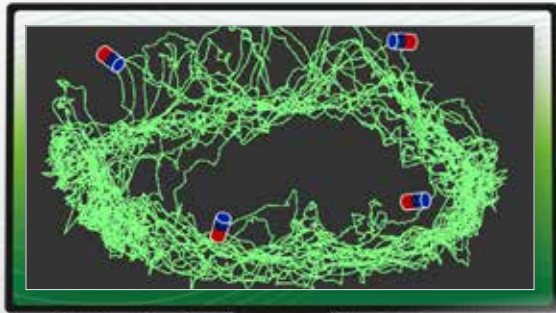
Product Description

The magtrack makes it possible to detect the absolute 3D position in space as well as the orientation of a magnetically markers over a course of time. The magtrack system is modular and can therefore be adapted to any installation and system.

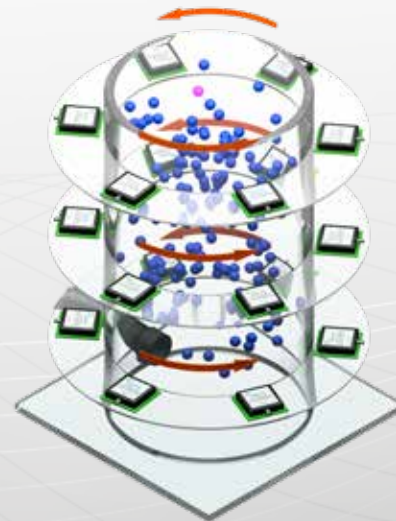


Design & Function

The optimization of motion analysis in mixing, coating, and drying processes requires the seamless tracking of at least one marker. Process parameters can be adjusted by analyzing the movement of this marker. This allows the overall system to be operated and monitored more effectively, ultimately saving costs. The measurement method underlying the magtrack is based on the 3D localization of a magnetic marker.



3D visualization of the measurement results



The movement of the marked object can be tracked in real time. Detailed, up to 1 kHz fast evaluation of the marker path is performed offline to provide precise and statistically reliable information about the overall process. The main advantages over all other methods such as PIV (Particle Image Velocimetry) or PEPT (Positron Emission Particle Tracking) are that the measurement is non-contact and non-optical and can be performed without the use of ionizing radiation, where the marker orientation is recorded in addition to the path.

Technical Specifications

- Sensors: AMR (up to 72 channels)
- Measurement data: 3D position, marker orientation
- Measurement frequency: up to 1 kHz, synchronous
- Mag. markers 8 mm³ to 1,000 mm³
- Accuracy: up to 0.1 mm
- PC software: measurement and evaluation software
- Interface: USB 2.0
- Mains connection: 80-260VAC/47-63Hz



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