EVIXSCAN 3D

Accessories / ToolKit Box

Photogrammetry system for **3D scanning**

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What are the benefits?

Speed: scan large objects 3x faster than in a traditional way, i.e. using non-coded markers.

User comfort: save time in preparing the scanning object for scan; reduce by 60% the number of targets (artifacts & markers) to be attached to the object.

Money saving: use repeatedly artifacts and coded markers with magnetic layers.

Automatic alignment: (automatically) align group of scans with complicated shapes to one coordinate system; just put one coded marker or artifact on object – and save your time.

Comfortable transport: coded artifacts and coded markers on magnetic support or on stickers fit into one portable and robust case.

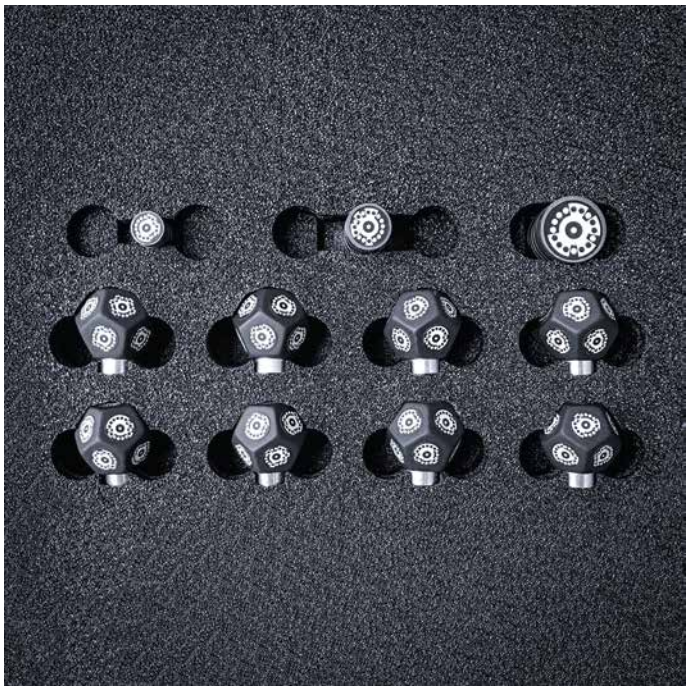
Intuitive controls and operations: experience ultra-short training and be ready to start scanning!

The ToolKit Box is a close-range, photogrammetry-based system which provides enhanced capability to the scanning process of large-volume objects and/or complicated shapes.

The ToolKit Box system is composed of pre-calibrated feature reference 3D objects called artifacts and coded markers.

The artifacts can be used e.g. in multiple-scan strategy, where the scans must be aligned automatically to a single coordinate system with an excellent accuracy.

The fact that the artifacts and markers are calibrated, decreases the scanning time by reducing the number of placements of targets on scanned object.



From 2D to 3D

The usage of artifacts, included in the ToolKit Box, increases the working comfort and helps in efficient alignment of scans.

Thanks to the cubic shape (properly referred to as dodecahedron platonic solid with 12 facets), the volume geometry and the calibration of every artifact's facet, each of the artifacts is considered as a local coordinate system that allows for automatic alignment of scans.

In addition in the entire scanning process, the scanner does not have to see exactly the same coded marker on the artifact (i.e. the same facet of artifact) to connect scans – it is sufficient that any of the facets of one artifact will be captured on multiple scans, to allow proper identification.

The **eviXscan 3D Suite** software algorithm will recognize the artifact and its exact 3D position, flawlessly matching the scan data to the common coordinate system.

This unique feature eliminates the necessity to capture exactly the same targets on multiple shots, like with standard 2D marker stickers.

Multiple Usage – lower cost – higher efficiency

The artifacts and magnetic markers can be used many times, in several scanning tasks – at the end of each scanning process the artifacts and magnetic markers can be cleaned and packed back to the dedicated transportation case that offers a safe way to store and transport them.

This ensures the reduction of use cost and time in comparison to one-time non-removable standard markers on stickers.

Coded markers with/without magnets

Coded artifact

Adapted to your needs

The ToolKit Box is provided in two packages for various implementations.

The standard package includes 8 small artifacts, 30 magnetic coded markers in three sizes and is dedicated to improve the alignment of scanning series obtained from rotary table or scanning of small and medium-sized objects.

The ToolKit Box MAX contains 48 unique artifacts and 60 magnetic coded markers and is particularly adapted for scanning of large-volume objects.

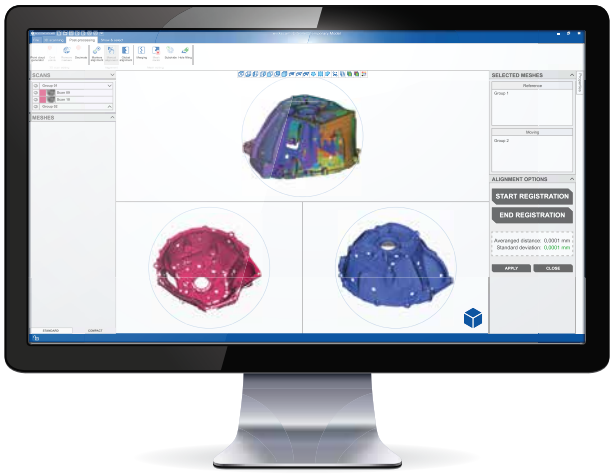
Software support

ToolKit Box can only by used with **eviXscan 3D Suite** software, which powers the entire fleet of **eviXscan 3D scanning** and **mesh processing** technologies.

It combines all essential tools you need for data acquisition in user-friendly, ergonomic and well-designed environment.

In addition, the artifacts and coded markers provide additional support for rotary table scanning strategy – one coded marker or artifact provides auto-alignment between scan-series, significantly reducing the time of post-processing.

The targets are automatically erased by the software algorithm from the scan data to preserve the clear scan information and reduce the final mesh cleaning time.



Package content	ToolKit Box	ToolKit Box MAX
No. of unique artifacts	8	48
No. of 9 mm magnetic targets	30	10
No. of 12 mm magnetic targets	10	30
No. of 18 mm magnetic targets	10	30
No. of 8 mm coded stickers	320	960
No. of 12 mm coded stickers	384	768
No. of 18 mm coded stickers	160	640
Dimensions	25.1 x 14.2 x 6.7 cm	48.7 x 32.5 x 17.5 cm
Weight	0,7 kg	4 kg

Compatibility		
eviXscan 3D Heavy Duty Quadro USB	✓	✓
eviXscan 3D Heavy Duty Quadro	✓	✓
eviXscan 3D Heavy Duty Optima	✓	✓
eviXscan 3D Heavy Duty Basic	✓	✓
eviXscan 3D Loupe+	✓	✓
eviXscan 3D Pro+	✓	✓

ToolKit Box

ToolKit Box MAX

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