



# EVI XSCAN 3D

*yes, we SCAN*



BREAKING THE LIMITS

PROFESSIONAL WORLDWIDE

**3D services**

3D SCANNING SOLUTIONS

**Heavy Duty**

D I S C O V E R

# Heavy Duty

Groundbreaking 3D scanning solutions  
Accurate 3D scanning in all external & internal conditions



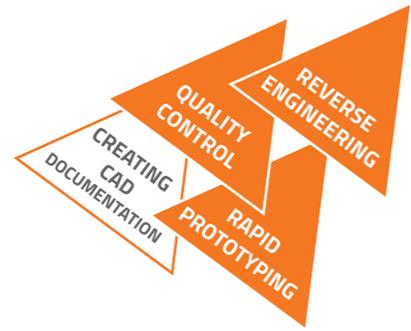
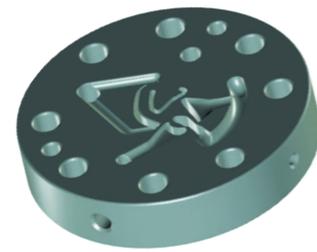
# Examples of the application of eviXscan 3D



automotive

## Cooper Standard Automotive

Cooper Standard Automotive is one of the leading suppliers of plastic and rubber components for the automotive industry. This global leader specializes in the production of car body seals, braking systems, fuel hoses, and air-conditioning systems for a wide portfolio of automotive brands.



## REVERSE ENGINEERING

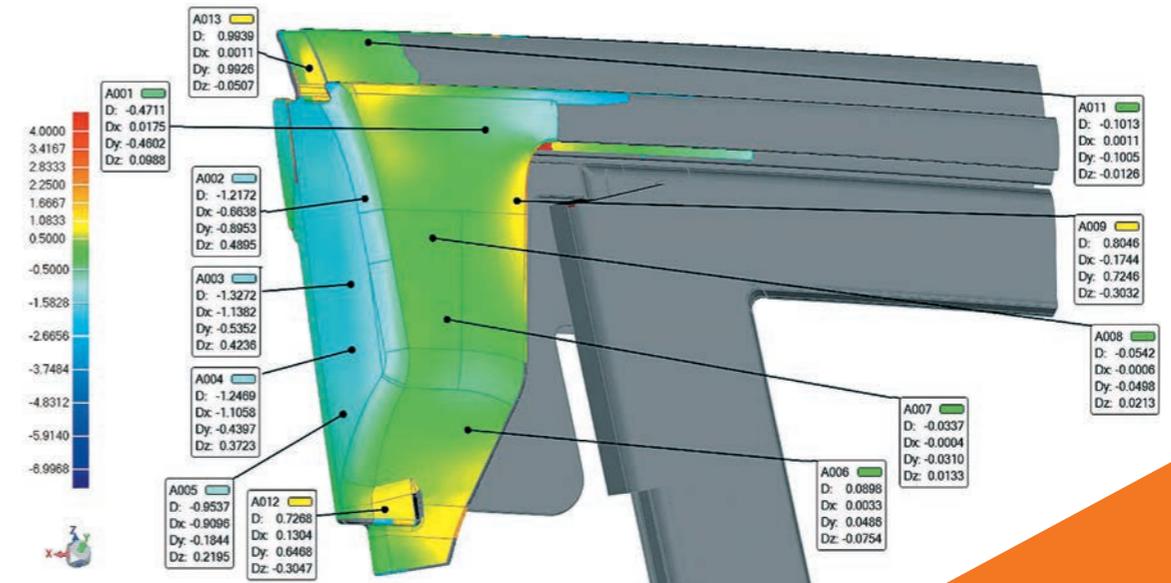
Cooper Standard based in Bielsko-Biała (Poland) introduced an eviXscan 3D solution into their maintenance section. The use of 3D scanning enabled restoration of technical documentation of molds used in production. Now, preparation of new forms and tools is not only faster, but above all, much less expensive by producing them in their factory tooling department or outsourcing their production to external suppliers. As a result of implementing an eviXscan 3D solution, Cooper Standard has shortened production time of such elements by **400%**, and lowered costs by **500%**, generating savings of more than **15 000 €** quarterly.

## QUALITY CONTROL

The use of 3D scanning in the quality control department ensures the highest quality of finished products by comparing them to the CAD models supplied by the customer. Our

customer thanks to the use of 3D scanning has the full confidence that their products meet the highest standards of the automotive industry, and that the product quality is in line

with the expectations of their customer. Implementation of an eviXscan 3D solution enabled precise quality control of no finished rubber products, and shortened the measuring time by **300%**.



## RAPID PROTOTYPING

The use of the 3D scanning in the R&D department has enabled rapid and less expensive improvement of the molds and tools used in production. Modifying prototypes has been done **four times faster** which accelerates the ramp up of commercial production of ordered components thereby generating annual savings above **60 000 €**.

More information:  
[www.eviXscan3d.com](http://www.eviXscan3d.com)

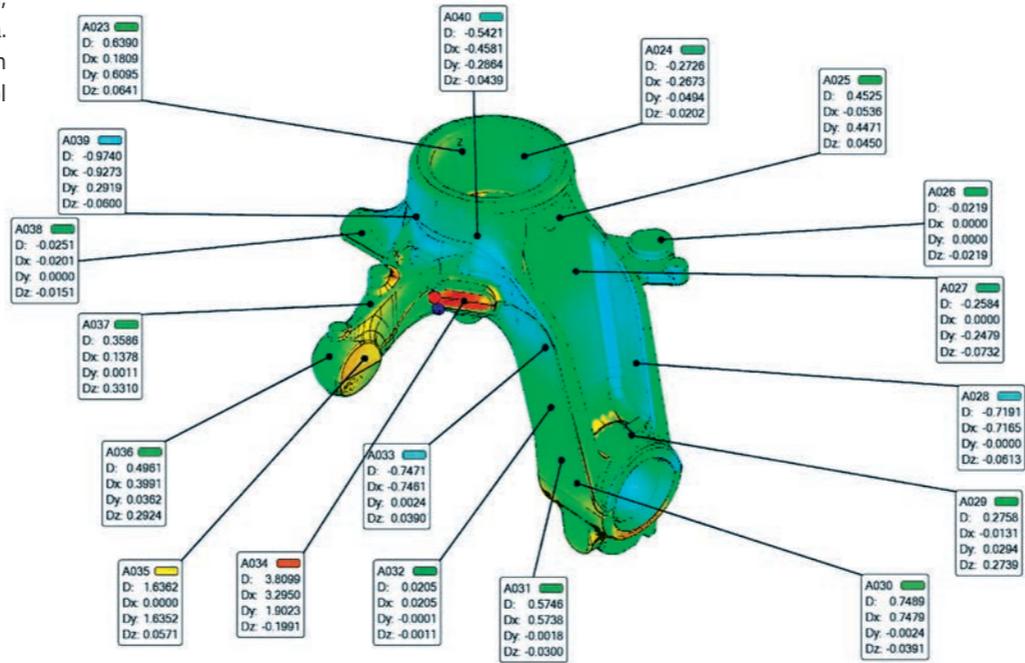
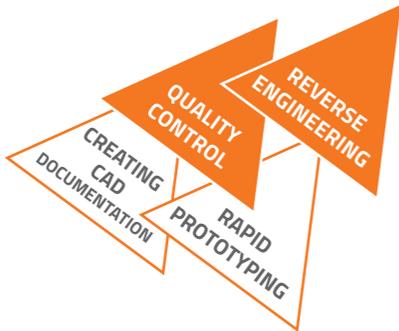
# Examples of the application of eviXscan 3D



metallurgy

## Metalpol foundry

Metalpol, the oldest foundry in Poland, has many customers in Europe and Asia. The company implemented an eviXscan 3D solution in the area of quality control and reverse engineering.



## QUALITY CONTROL

eviXscan 3D solutions have been implemented in the quality control department. 3D Scanning has enabled very high quality control of produced castings. By using an automated 3D scanning system which consists of the eviXscan 3D Pro + scanner and a rotary table with a capacity of up to 200 kg, scanning of large size and heavy castings is done very quickly. Thanks to strict quality control, our client has the ability to evaluate a trial casting by comparing it to a CAD model supplied by the customer. When the trial casting is approved by the QC department, a full quality control report is sent to the client and, based on it, the client approves the start of commercial production of the ordered products. The 3D scanning process reduced the time to launch commercial production by **300 %** and lowered costs by **10 000 €** per quarter due to the time saved.

## REVERSE ENGINEERING

Using 3D scanning increased Metalpol's competitiveness by allowing them to serve customers who do not have the technical documentation for the products they want to order. The company uses an eviXscan 3D scanner to build a CAD model of the customer's product. A prototype is produced from this CAD model. After approval of the prototype, commercial space production begins. The savings are clear Metalpol generates an additional profit of **50 000 €** and acquires more than **10 new** clients annually.



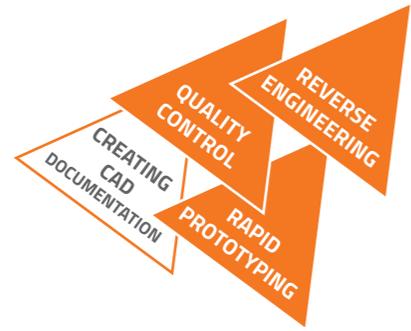
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# Examples of the application of eviXscan 3D



## Rosinski Packaging

Rosinski Packaging manufactures polypropylene and polyethylene packaging for household chemicals, para-pharmaceutical products and cosmetics. Our client's product portfolio is continuously updated with new designs of bottles and caps according to the latest technological solutions and customer requirements.



plastic industry

## REVERSE ENGINEERING

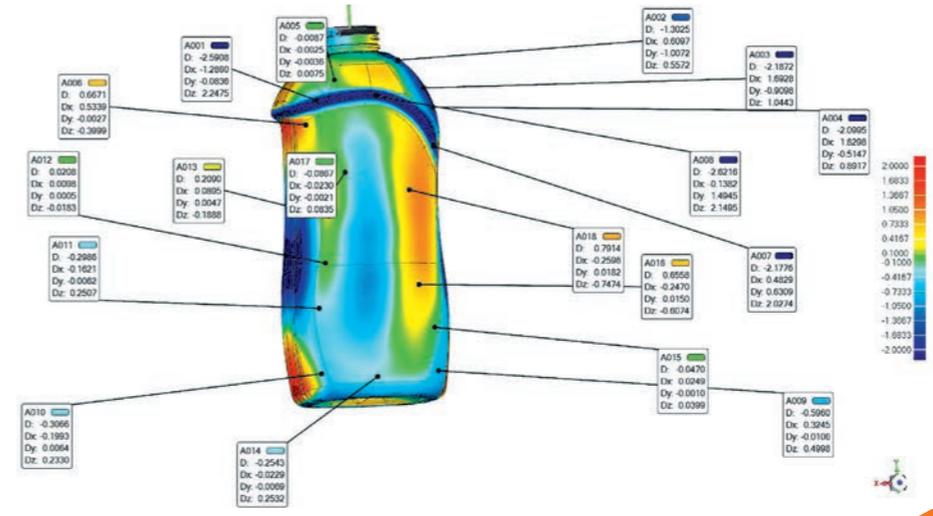
With implementation of an eviXscan 3D solution the company has gained a tool that provides support to orders that they previously could not accept due to lack of the technical documentation from the customer. A reference product is provided by the customer, scanned, a CAD model is made from the scans and finally, a production mold is prepared. The use of 3D scanning technology significantly reduced preparation time of molds and tools necessary in production.

## QUALITY CONTROL

The use of eviXscan 3D Pro+ scanner in the quality control department allows for precise control of the quality of finished products by comparing them to original CAD models supplied by customers. This allows the company to be confident that

products meet the expectations of the contracting customers.

Implementation of eviXscan 3D solutions enabled precise quality control of finished products and shortened time to production by **300%**.



## RAPID PROTOTYPING

The use of 3D scanning in the R&D department has allowed lower cost and faster improvement of molds and tools used in production. Modifying tools and form prototypes takes place twice as fast, which directly accelerates the start-up of commercial production of customer products - generating substantial savings.

More information:  
[www.eviXscan3d.com](http://www.eviXscan3d.com)

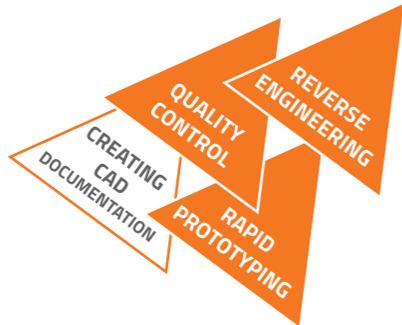
# Examples of the application of eviXscan 3D



energy industry

## ZRE Katowice

ZRE Katowice has a rich 60-year tradition in the area of repairs and regeneration of: boilers, turbines, auxiliary equipment and production of spare parts for power plants and CHP plants. They also specialize in the production of pipelines and provide renovating services for other industries.

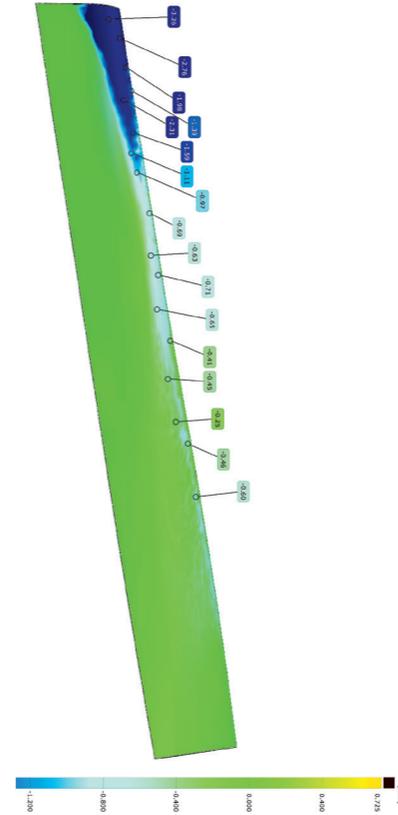


Turbine blade

## QUALITY CONTROL

The use of 3D scanning in their quality control department enabled precise measuring of steam turbine blades. By using the eviXscan 3D Heavy Duty scanner that scanning process can take place under conditions too harsh for other measuring devices. Our specially designed Heavy Duty scanner lets them scan in almost any environmental conditions.

Because they can perform quality control in the repair and production hall, time and the associated costs have been reduced by **150%**. Detailed results of quality control are presented in the form of colour deviation maps. Thanks to the accuracy of these reports the Quality Control department is able to correlate the impact of working time to the level of erosion rate of steam turbine blades. This allows the company to optimally use its production capabilities for better planning of manufacturing and repair services.



## REVERSE ENGINEERING & RAPID PROTOTYPING

Thanks to 3D scanning and precise quality control, the R&D department now has the ability to recover CAD models from used steam and gas turbines blades.

After recreating a CAD model, the company produces a new replacement in the factory tooling department or performs a remodelling process to improve the part performance and wear resistance.

In this way, through the use of an eviXscan 3D solution, ZRE Katowice has expanded its range of services and products. Being able to offer repairing and improving of worn parts generates an additional profit of **60 000 €** per year.

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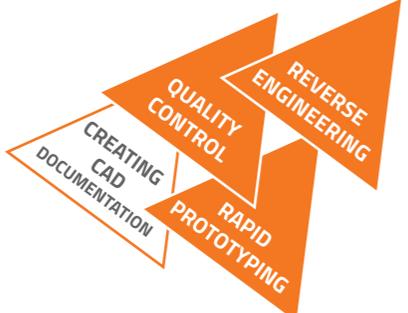
# Examples of the application of eviXscan 3D



processing glass industry

## Glaspo Sp.z o.o.

Glaspo specializes in processing glass for industry and construction. The company carries out orders for customers around the world. It provides windows for industries like: automotive, ship building, furniture and many others. Dynamically growing requirements and expectations of the market, opened up the possibility of our cooperation in the implementation of eviXscan 3D solutions in the areas of quality control and reverse engineering.



## QUALITY CONTROL

eviXscan 3D solutions have been implemented in the quality control department. The use of a 3D scanner made it possible to measure the surface of produced glass. With such a detailed inspection, the company is confident that its products meet the highest requirements of its customers.

Through the combination of high precision 3D scanning with the one of the best 3D control software applications, Geomagic Control, each prototype is studied in detail. The coloured map of deviations, obtained during generation of a quality report, highlights any distortion in relation to the reference CAD model. Thanks to eviXscan 3D application, production start-up time has been reduced three times, and costs by 5 000 € quarterly.



## REVERSE ENGINEERING & RAPID PROTOTYPING

The company builds many prototypes for the shipbuilding industry. The company's customers expect comprehensive services from design to implementation often in situations when there is no CAD documentation available. During the modernization work the company uses an eviXscan 3D scanner to recreate CAD models from physical parts. Based on this model, molds and production tools are made. Through a process of precise reverse engineering the company is confident that its products are always made to measure.

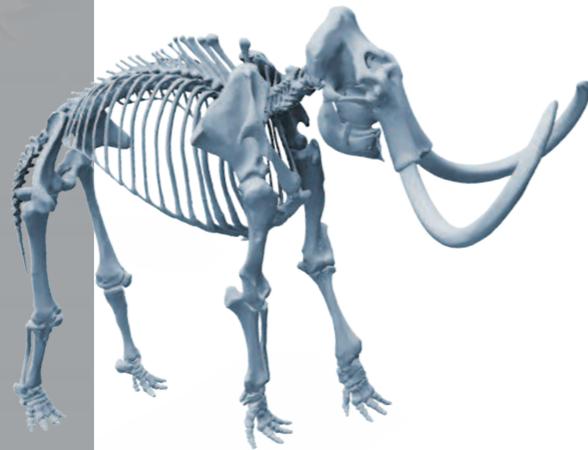
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## Examples of the application of eviXscan 3D



### Geological Museum

Geological Museum of the Polish Geological Institute stores and exposes the full range of scientific materials. In its collection are numerous specimens of minerals and fossils such as skeletons of extinct animals from the ice age and reconstructions of dinosaurs.



science  
& education

### 3D DOCUMENTATION

The value of museum collections are priceless. At the same time, the number of items exceeds the capabilities of exhibiting them. The solution to this problem is archiving collections and then exhibiting them in a virtual museum.

Our partner uses a 3D scanner to create three-dimensional models of creatures extinct millions of years ago. Precise mapping of shapes, textures and colours allows them to create virtual exhibits available to visitors from all around the world through the museum website.

A high precision eviXscan 3D Loupe+ scanner ensures precise reproduction of the original model. This virtual copy is then used by researchers around the world in a comparative analysis with models in their collections.



design

### Loster

Loster specializes in designing tuning parts for a wide range of motorcycles.



### REVERSE ENGINEERING

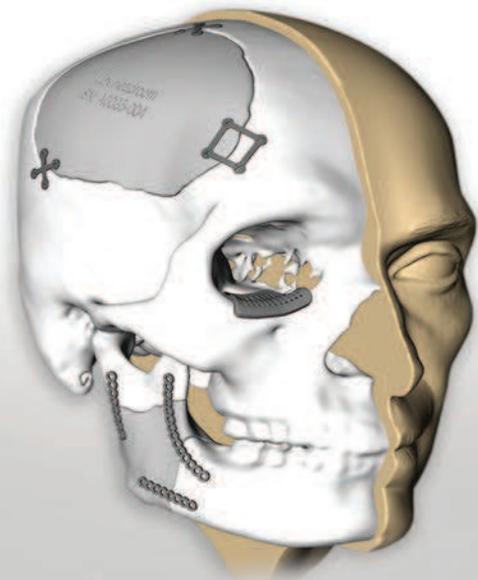
Our partner uses an eviXscan 3D scanner to design new components for motorcycles (tuning). The scanning process significantly optimizes the design phase and guarantees the company's products are always compatible with the base product. Developing a portfolio of new products begins with scanning the original element. Then, based on the scan, the company creates a 3D CAD model, which is modified according to the guidelines of the customer or Loster designer's.

### RAPID PROTOTYPING

Thanks to 3D scanning, the company expanded its offer with the production of additional or missing motorcycle accessories such as covers, fairing, fenders. In such cases, the company scans the surface shape of a motorcycle, in which the client would like to implement modification. Through 3D modelling, the company designs the missing parts based on the scan of the place where the element is missing.



## Examples of the application of eviXscan 3D



medical industry

### Medgal

Medgal specializes in the design, manufacture and sale of medical implants.



### REVERSE ENGINEERING

Our partner uses a 3D scanner in the design and modelling of implants. Emerging implants and prosthesis are accurately matched to the patient. Because they can now recreate the geometry of existing implants, the R&D department can conduct research aimed at the refinement of existing implants and thereby improves the condition of their patients. A wide range of their own designs allows the company to attract new customers and continue the systematic development of their products. Implementation of 3D scanning in the design process significantly shortens the time and reduces cost of final product.



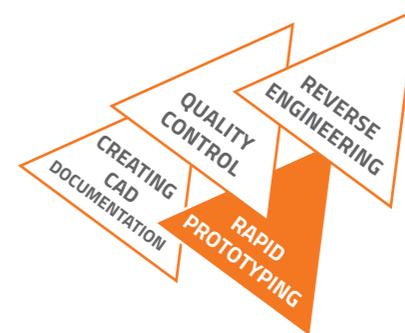
food industry

### Unilever

Unilever is a world leader in the manufacture of food products and chemicals. Its portfolio has more than 400 brands well-known to consumers in almost every country.



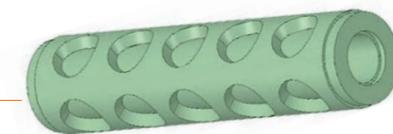
part of production mold - made of brass



### RAPID PROTOTYPING

Our partner Unilever applied an eviXscan 3D solution in their maintenance department. To ensure production continuity, the Company applies a reverse engineering process to recreate the elements that wear out in everyday production work.

Unilever, by recreating 3D geometry of machines, tools and components, can produce their replacements much faster and cheaper than before. Thanks to the reconstruction of broken parts using 3D printing technology or by CNC machining in the factory tooling department, maintenance costs have been reduced by **20 000 €** quarterly.



CAD model obtained with 3D scanning

# Advantages of **eviXscan 3D scanners - Heavy Duty Line**

## ACCURACY, STRENGTH AND COMFORT

- High quality lenses and cameras
- Certified precision according to VDI/VDE 2634 Part 2, 4.1 Ps
- Long life strong power LED light source
- Variable scanning ranges in one unit
- Complete system in a handy mobile case
- Strong aluminium body
- High resistance to dust and moisture
- Ability to scan also in external conditions
- Low power consumption
- Possibility of calibration by the end user
- Temperature compensation

## SOFTWARE

- Intuitive software eviXscan in two language versions English and Polish
- Export results to the most popular formats (stl, ply, obj, asc, bin)
- eviCAD software for editing point clouds and meshes
- Regular software enhancements and updates

## SUPPORT

- Training for 2 operators included in the price of the scanner
- Full technical support
- 24 months warranty



## CASING

Made of oxidized aluminium – resistant to changing environment conditions (IP62).

## SIMULTANEOUS SCANNING WITH TWO CAMERAS

The usage of two cameras speeds up the scanning process and guarantees high accuracy.

## LED LIGHT SOURCE

Strong power LED structural light sources make the device work even in the most challenging internal & external lighting conditions.

## INNOVATIVE COOLING SYSTEM

Automatic multi-source thermal regulation system enables the device to operate in harsh environment and guarantees results repetitiveness.

## VARIABLE SCANNING RANGES

The possibility to scan using variable ranges (from wide to narrow) enables precise scanning of small, complex objects as well as larger items.

## Innovative design of eviXscan 3D Heavy Duty **Quadro**

## eviXscan 3D Heavy Duty **Basic**



### **1** 5Mpix CAMERAS

Four cameras with large CCD sensor, installed in wide and narrow scanning range

### **2** DISTANCE INDICATORS

Laser distance indicators speed up precise setting of the scanner relative to the object

### **3** CAMERAS PORTS (WIDE RANGE)

Cameras ports used in scanning in a wide range

### **4** POWER SUPPLY SOCKET

Hermetic power supply socket guarantees safety of use in difficult conditions

### **5** CAMERAS PORTS (NARROW RANGE)

Camera ports used in narrow scanning ranges

### **6** CONTROL PORT

Scanner control port



### **1** 1.3Mpix CAMERAS

Two high quality cameras

### **2** LED LIGHT

Long life strong LED light source

### **3** CAMERAS PORTS

Two USB 2.0 ports used to connect scanner cameras

### **4** CONTROL PORT

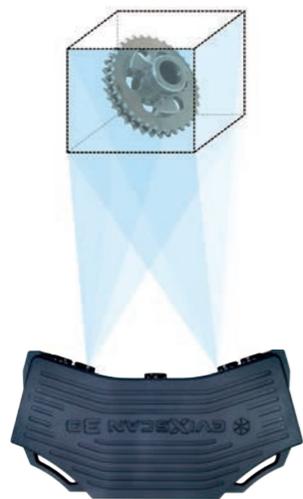
Scanner control port (HDMI)



### **5** POWERS SUPPLY SOCKET

Hermetic power supply socket guarantees safety of use in difficult conditions

## Vairable **scanning** ranges

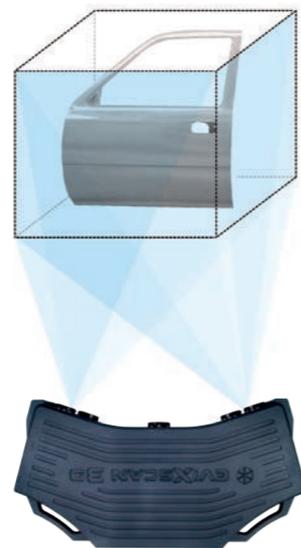


### **Narrow scanning range**

In the narrow range cameras are mounted closer to each other, so you can scan very small items with the highest accuracy and density of the points. This range is recommended to use for scanning items of very complicated shapes.

### **VARIABLE SCANNING RANGES RANGES IN ONE UNIT**

eviXscan 3D scanners family consists of wide range of professional devices. Some models have variable scanning ranges allowing them to scan objects of different sizes and levels of complexity.



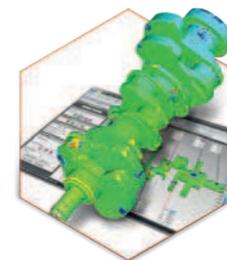
### **Wide scanning range**

In this range, the cameras are widely spaced, which allows the measurement of large objects much faster. High accuracy and density of the points is achieved to match the requirements for larger objects.



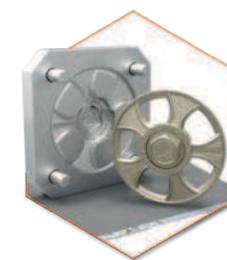
### **REVERSE ENGINEERING**

Triangle mesh imitates the surface allowing to create a CAD model of the object. This allows the development of technical documentation of the scanned item. Arisen CAD model can be used for the production of a substitute or as a starting point for the design of new parts.



### **QUALITY CONTROL**

Scanned product is compared with the reference CAD model by creation of a colour deviations map. It allows precise verification of the executive drawing and measurements of elements difficult to measure with other methods.



### **RAPID PROTOTYPING**

Fastest and cheapest production of prototypes is nowadays one of the most important factors to gain advantage over competition. Precise 3D scanner, such as eviXscan 3D Heavy Duty, is an essential link in fast processes prototyping.

For more informations about our 3D scanners and provided services visit: [evixscan3d.com](http://evixscan3d.com)

# Software offer



An advanced software for reverse engineering. It combines 3D modelling functions like in CAD software with data processing obtained from the scanning process. Based on data from the eviXscan 3D scanner user can create fully parametric and editable models in a format compatible with used CAD software.

[www.geomagicdesignx.com](http://www.geomagicdesignx.com)



Versatile and precise solution in the field of metrology and quality control. Combination of the advantages of touch and non-invasive measurement technology, enables fast and accurate verification of its produced elements. Function intelligent feature detection allows to define the orientation, dimensions and tolerances of the model. The end result is a detailed deviations map presented with colours for specific deviation ranges.

[www.geomagic-control.com](http://www.geomagic-control.com)



It is a fast, reliable and easy to use software that allows to process data obtained from 3D scanning. It enables advanced edition of clouds of points and meshes, as well as perform basic tasks for reverse engineering. It also allows the base verification of elements by comparing them with the CAD model or another scanned object.

[www.leios3d.com](http://www.leios3d.com)



It is a program for reverse engineering. It allows to create parametric CAD models, also for freeform surfaces based on the data obtained from 3D scanner. SpaceClaim enables visualization, computation and advanced preparations for 3D printing.

[www.spaceclaim3dsoftware.com](http://www.spaceclaim3dsoftware.com)

eviXscan 3D scanners are compatible with leading professional software: **3D Systems** (Geomagic® Solutions), **InnovMetric Software** (PolyWorks), **Dassault Systèmes** (CATIA V5 and SolidWorks), **PTC** (Pro/ENGINEER), **Siemens** (NX and Solid Edge), **Autodesk** (Inventor, Alias, 3ds Max, Maya, Softimage), **SpaceClaim**, **Leios2**

specification	MODEL		HEAVY DUTY QUADRO	HEAVY DUTY OPTIMA	HEAVY DUTY BASIC	PRO+	LOUPE+						
Light-source type			R/G/B LED	Blue LED	Blue LED	White	White						
Number and type of cameras			4 x 5Mpix	2 x 5Mpix	2 x 1.3Mpix	2 x 5Mpix	2 x 5Mpix						
Scanning accuracy according to DE VDI/VDE2634 Part 2, 4.1 Ps			from 0.013 mm	from 0.0183 mm	from 0.02 mm	from 0.023 mm	from 0.02 mm						
Scanning time			5 seconds			4 seconds							
Measuring ranges [mm]	Large 370 x 265 x 150	Small 150 x 115 x 90	250 x 170 x 120		260 x 210 x 150		Large 430 x 330 x 150	Medium 360 x 260 x 120	Small 300 x 200 x 90	Large 460 x 340 x 180	Medium 210 x 150 x 90	Small 160 x 100 x 45	High Depth 370 x 265 x 150
Points density	41 pt/mm <sup>2</sup>	232 pt/mm <sup>2</sup>	95 pt/mm <sup>2</sup>		24 pt/mm <sup>2</sup>		29 pt/mm <sup>2</sup>	43 pt/mm <sup>2</sup>	67 pt/mm <sup>2</sup>	26 pt/mm <sup>2</sup>	127 pt/mm <sup>2</sup>	250 pt/mm <sup>2</sup>	41 pt/mm <sup>2</sup>
Computer connection	1x ExpressCard 34mm or 3x Gigabit Ethernet		USB 3.0 and HDMI		2 x USB 2.0 and HDMI		2 x Gigabit Ethernet, HDMI/VGA/DVI						
Export formats							stl, ply, obj, asc, bin						
Hardware requirements	Windows 7 (64-bit) 16 GB RAM, CPU i5		Windows 7 (64-bit), 16 GB RAM, CPU i5		Windows 7 (64-bit), 4 GB RAM, CPU i5		Windows 7 (64-bit), 16 GB RAM, CPU i5		Windows 7 (64-bit), 16 GB RAM, CPU i5			Windows 7 (64-bit), 4 GB RAM, CPU i5	
Software							eviXscan + eviXCAD						
<b>Dimensions [mm]</b>													
Scanner	520x280x95		430 x 220 x 65		430 x 220 x 65		740x400x200		470x470x200 (without wings) 870x470x200 (with wings)				
Scanner on tripod							1000 x 1000 x 1000						
<b>Weight [kg]</b>													
Scanner	7		5		5		13		14 (without wings) 16 (with wings)				
<b>Temperature</b>													
Ambient operating temperature							from +10°C to +30°C						
Storage temperature							from -20°C to +40°C						
<b>Electrical</b>													
AC input							110/230ACV, 50/60Hz						
International Protection Rating	IP62						IP31						
Power consumption	66,5W				20W		360W						

# Set of **eviXscan 3D Heavy Duty**

Sales & support channels **EVIXSCAN 3D**

## In set



Scanner



Tripod



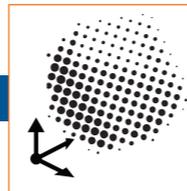
Calibration targets



Communication module for PC or laptop use



Case



eviXscan + eviCAD software

## Optional equipment



Rotating table



Column stand



Tripod base



Mobile workstation



Workstation



3D manipulator



3D printer

### Type 20:

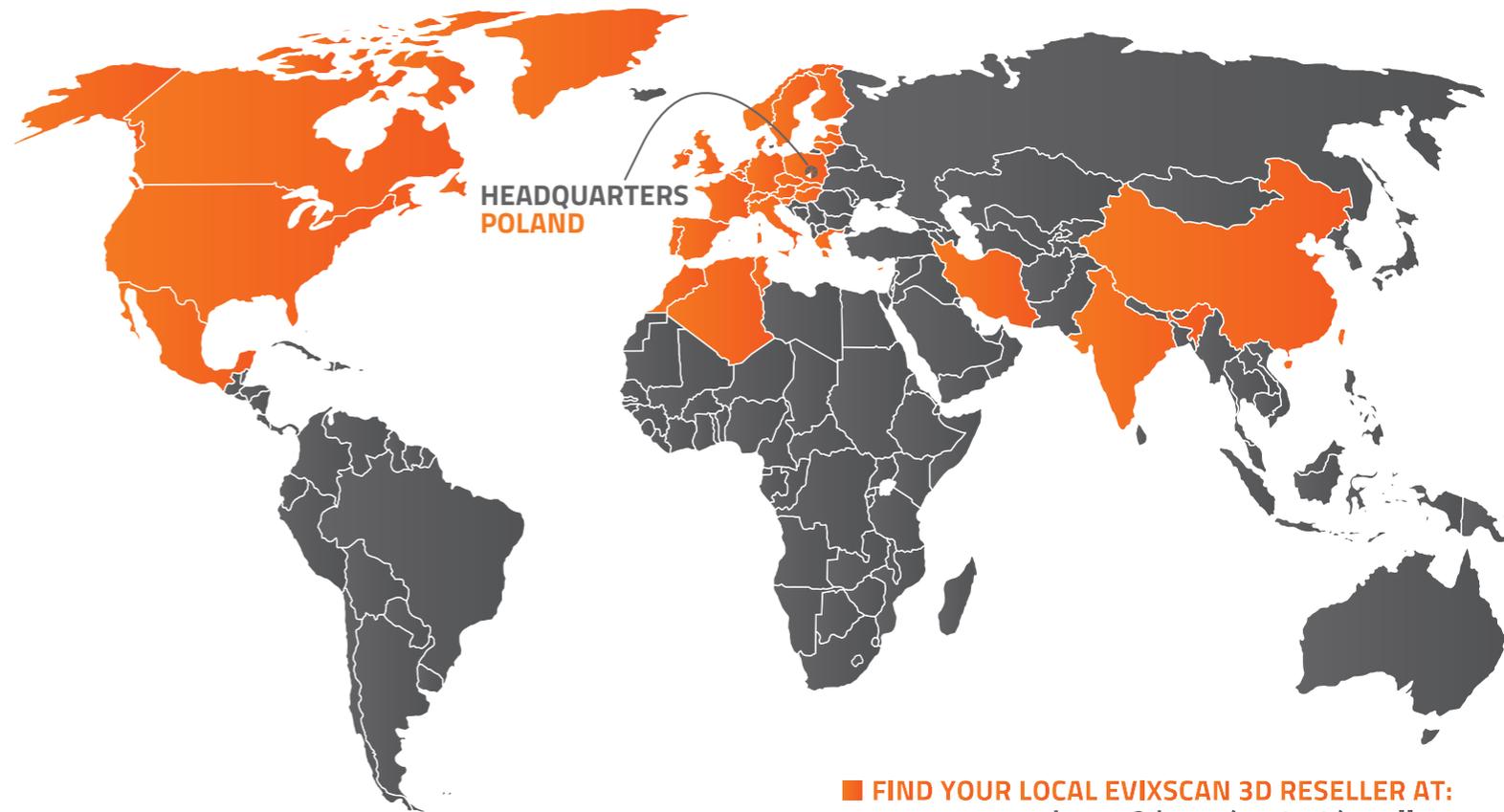
Ø 20cm,  
up to 20 kg

### Type 60:

Ø 60cm,  
up to 200 kg

### Type 100:

Ø 100cm,  
up to 1000 kg



**FIND YOUR LOCAL EVIXSCAN 3D RESELLER AT:**  
[www.evixscan3d.com/contact/resellers](http://www.evixscan3d.com/contact/resellers)



**Contact:**

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W. Przybyły 2  
Poland

phone +48 33 499 59 11  
+48 698 628 234  
scanners3d@evatronix.com

Your local reseller

[www.evixscan3d.com](http://www.evixscan3d.com)