

# Sharp 3D Measurement



Optimet is a provider of sophisticated non-contact measurement sensors and solutions, based on innovative optical metrology technology.



NobelProcera™ 3-D CAD/CAM Scanner

Jerusalem, Israel, June 2009

## Global Launch of New NobelProcera™ 3-D CAD/CAM Scanner Next-generation optical scanner based on innovative Optimet technology

**Optimet** is pleased to announce the Global launch of the new NobelProcera™ CAD/CAM 3-D innovative optical scanner developed by **Optimet**. The launch done by Nobel Biocare followed an exclusive strategic partnership between **Nobel Biocare** and **Optimet** to offer globally a new generation of optical scanners with impression scanning capabilities.

Nobel Biocare, a world leader in innovative restorative and esthetic dental solutions, globally launched the new NobelProcera™ system in Q2 2009. The NobelProcera™ system comprising an innovative new optical scanner and a prosthetic design software package sets new standards in the CAD/CAM dental field.

### New innovative optical scanner

The new NobelProcera™ optical scanner developed and manufactured by **Optimet** is based on Optimet's patented technology, which offers precision, speed, and accuracy as well as new scanning ability as well-proven already in the aerospace, automotive and flat panel display industries and special metrology applications. The new optical scanner provides clear advantages for dental laboratories: ease of use, highly precise measurements and an intuitive holder design that enables fast batch scanning. Most important, Optimet's scanner enables scanning of steep angulations and undercuts, thereby, opening up new opportunities such as direct impression scanning.



*Launch of the NobelProcera™ 3D scanner  
International Dental Show – Cologne Germany, Q2 2009*

# Sharp 3D Measurement



## How the scanner works and its capabilities:

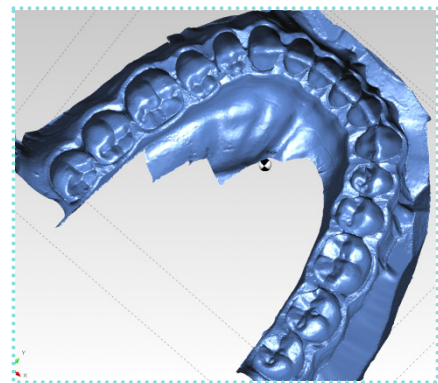
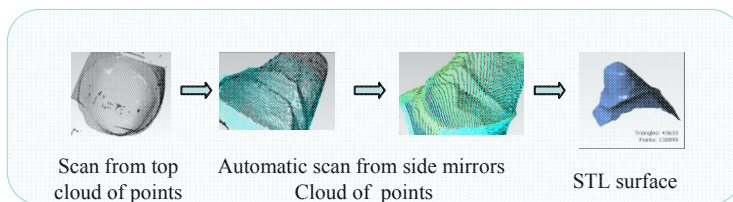
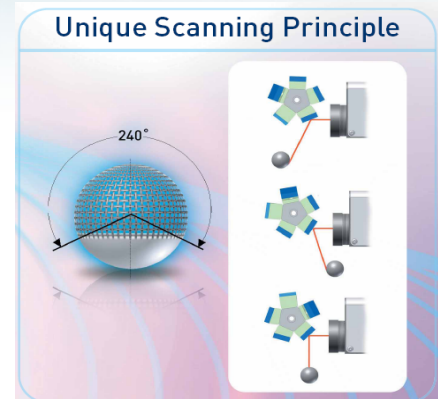
The scanner's unique technology enables 3-D coverage of the entire contour of an object without moving the object in relation to the XY plane.

The patented, multi facet, optical apparatus, directs a laser beam at various angles and permits actual measurement coverage of up to 240 degrees of the object contour, including undercuts. This mechanism replaces the 5 to 6 axes machines with 2 to 3 axes.

The apparatus has oscillating capability thereby creating a line for an accurate 3-D scan of the object with minimal movement.

The system synchronizes in real time the readings from all motion axes with the system measurement sensor.

The measurements from all facets are merged and transformed accurately into a cloud of points in one coordinate system and processed to a surface (STL).



full jaw impression - automatic 3D scan  
Including deep cavities

## Optimet innovative technology breakthrough

In addition to the conoscopic holography sensor technology, **Optimet** developed and implemented new revolutionary measurement and processing capabilities bringing this scanner to a technological breakthrough. Among the scanner novelties:

### OPS synchronizer

A special firmware module embedded in the Conoprobe sensor electronics which records motion (encoders) output and synchronizes the accurate position of the motion axis with the sensor measurement at the rate of 60MHz.

### Oscillating apparatus

The Optical apparatus comprises of polygon mirror assembly is operated in an oscillating mode which transforms the point sensor into a line providing by that the most accurate and material independent 3-D line sensor in the market.

### Scanning path

Complex and multiple scanning paths, rectangles or splines can be defined by a mouse click on a video image of the object and automatically optimized by the system.

### PSRB

Enhanced operation mode enables the sensor to measure semi-transparent materials (such as impression, wax and plastic materials) previously impossible.

### Double side object scan

Dedicated holders and sophisticated software allow object scan from all directions (360°) with automatic registration and surface reconstruction (STL).

### Unique scanner design

Unique open designed system with dedicated application jigs and exclusive metal look.

# Sharp 3D Measurement



Optimet is a provider of sophisticated non-contact measurement sensors and solutions, based on unique optical metrology technology.

**About Optimet:** [Optimet](#) (Optical Metrology Ltd.) - a member of [Ophir Optronics](#) group - is a developer and provider of sophisticated Non-Contact measurement sensors and solutions, with up to sub-micron precision, for distance, 2-D & 3-D measurements. Optimet implements practical application of its unique and patented conoscopic holography technology. Established in 1995, Optimet is a member of the [Ophir Optronics](#) group, a world leader in Laser Measurement Instruments, Optical Infra-Red components and lens-assemblies. Sold worldwide, with several thousand installations, Optimet products offer measurement solutions for a wide range of markets and applications, among which are the Automotive, Aerospace, Dental CAD/CAM, Steel and LCD / PDP. Optimet solutions and sensors are used for in-process inspection, quality control and reverse engineering applications. **Optimet** is ISO9001-2000 certified..