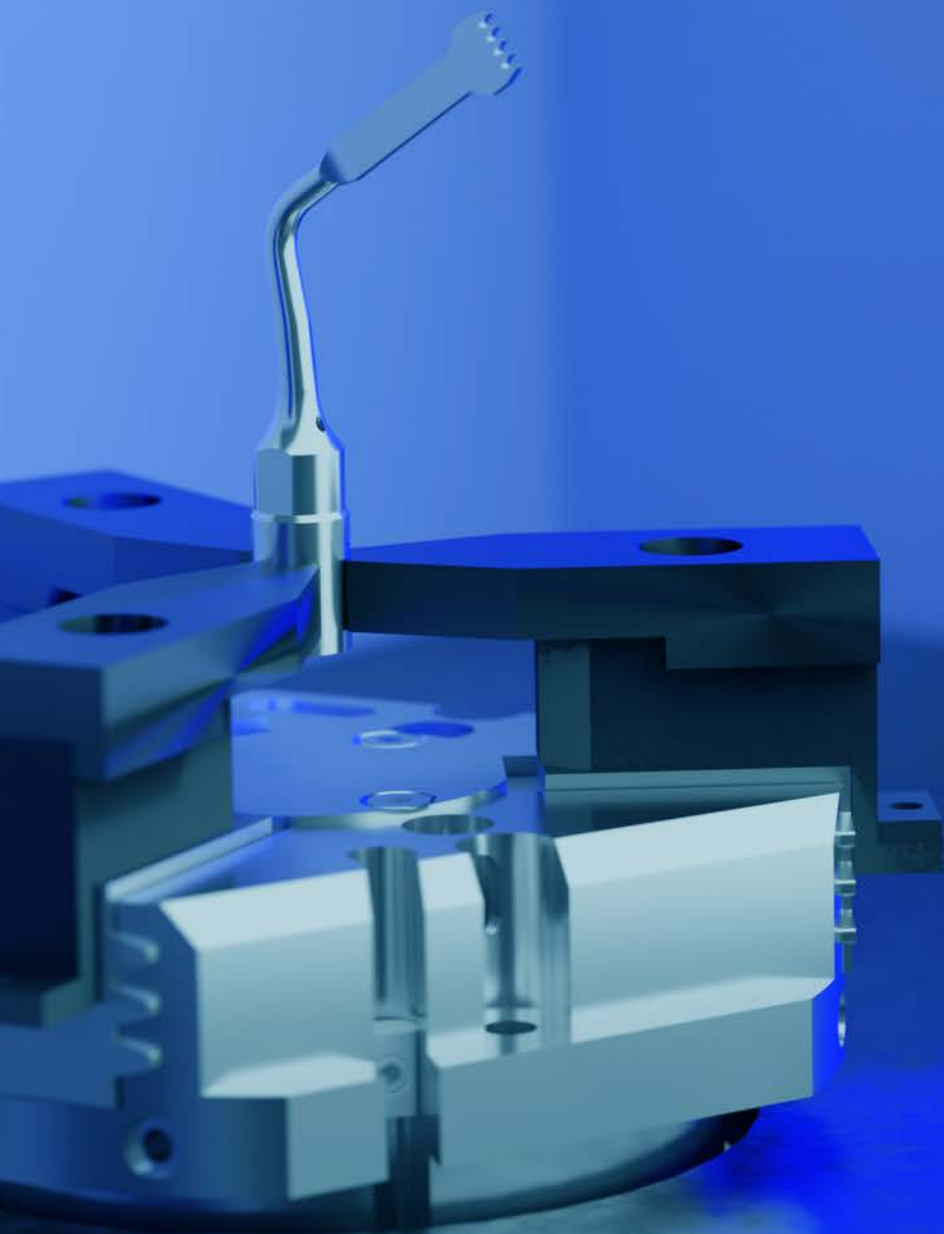


OPTOFLASH

OPTICAL SOLUTION FOR
DENTAL APPLICATIONS



MARPOSS

FAST, FLEXIBLE, SUPER-PRECISE. ALL-IN-ONE

SUPER-PRECISE

- Optoflash™ is the perfect product for accurate quality control of dental implants and dental tools.
- Industrial super-high resolution 2D image sensors and precision motor for part rotation over 360°
- Optoflash high accuracy means an improved production quality and a sensitive scrap reduction.

FAST, FLASH

- Optoflash is an optical measuring unit based on the acquisition of side-by-side 2D image architecture combined together to generate one single image.
- The absence of Z-axis motion makes the image acquisition almost instantaneous.
- The speed and precision of Optoflash allows a 100% quality control on the work floor.

FLEXIBLE

- A single Optoflash can measure a wide variety of work parts with different dimensions and shape with no additional tools with a large cost saving.
- Due to the automatic image part acquisition the part program does not need the part's CAD or vector files.



DRILLING TOOL



ABUTMENT



DENTAL SCREW

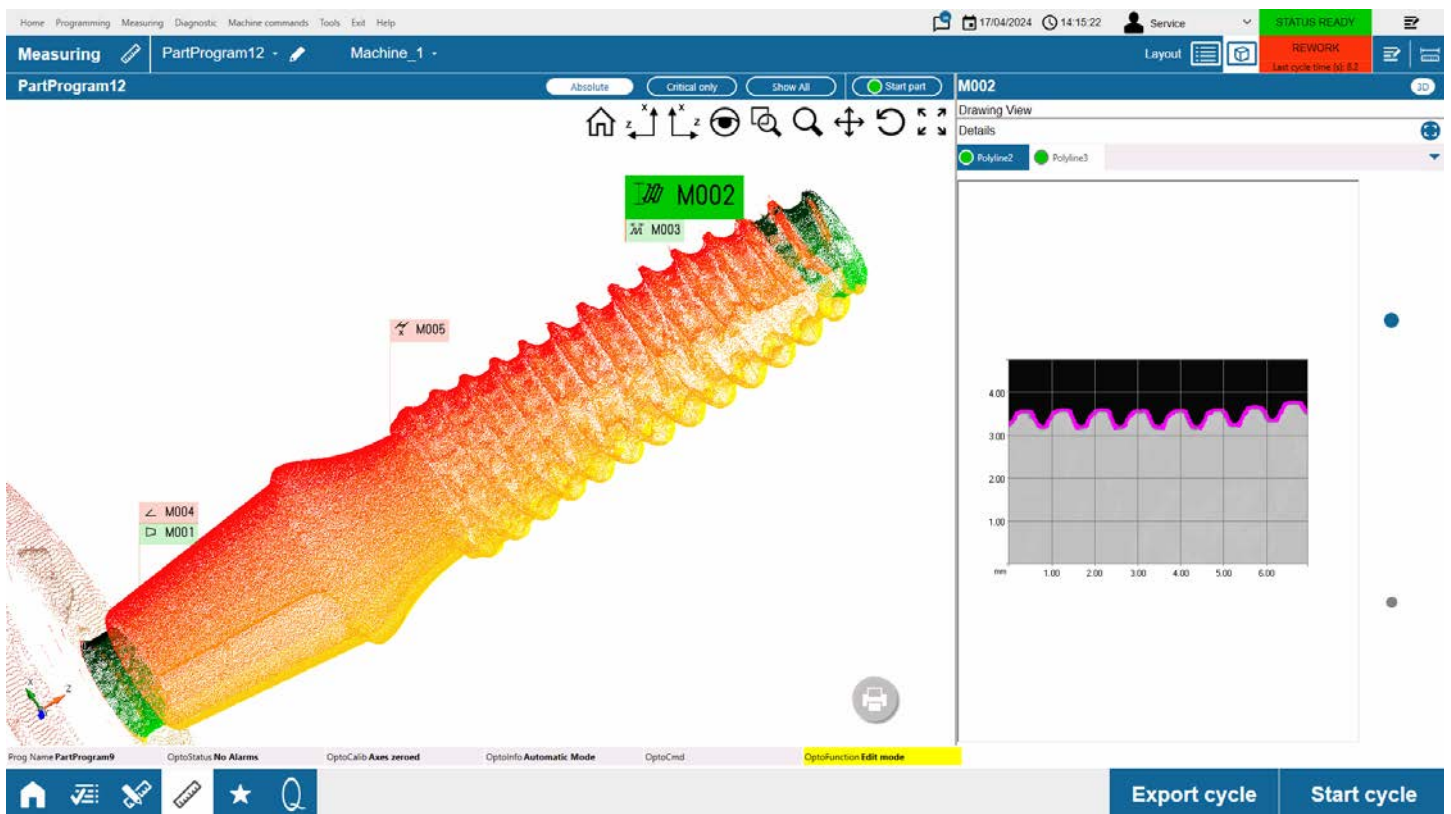


SCALPEL



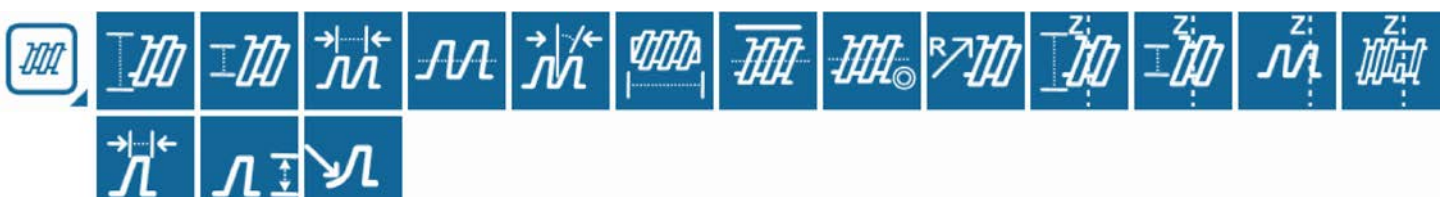
3D SW DESIGNED FOR EASE-OF-USE

- It is sufficient to load the part to control on the OptoFlash and to press the start cycle button.
- In less than 10 seconds, the system acquires the 3D point-cloud of the part surface, it executes the pre-defined measurements and it generates a visual report for immediate evaluation of part quality compliancy.
- Optoflash greatly contributes to reduced production costs and to increased productivity



Features that are usually difficult to check with traditional systems are easily tested by means of the functional inspection. In addition to standard measurements (i.e. diameter, length, angle, radius and chamfers) the specific software allows to measure dimensions for threaded elements, screws and drill tools (i.e. axis, arc, crest, diameter at fixed Z) during a cycle time of few seconds.

So for dental implants manufactures is easy to accurately and objectively obtain immediate feedback when measuring turned threads, typical features on each orthopaedic, abutment and implant body.



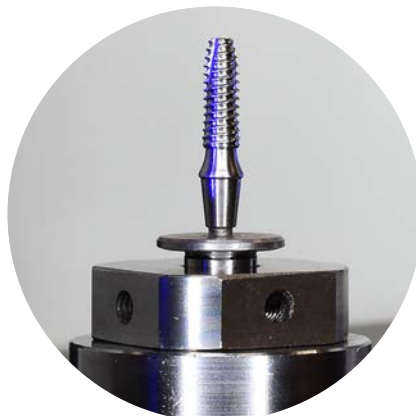
SOLUTION FOR THE SHOPFLOOR



Operators can quickly validate the output of the measurement task on the display of the Optoflash. The super-intuitive visualization and the 3D style interactive navigation are designed by Marposs in order to easily diagnose non-compliances directly by images.

Super-large number of different part program are stored directly in the memory of the Optoflash and operator can quickly activate a part program by selection from a list or even automatically, by using a common barcode reader.

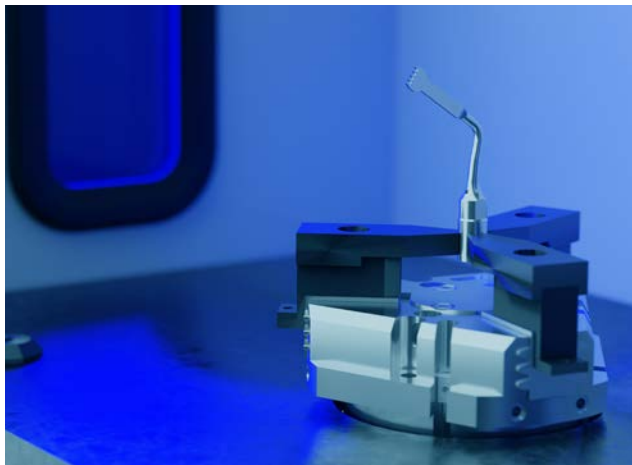
Optoflash product is ultra-flexible in software and also in hardware, and at operator level. In fact operator can switch from a clamping tool to another in a matter of seconds. The Optoflash comes with standard accessories, as plugs for cave parts, signed flexible chucks or opposite live centers.



SOLUTION FOR THE AUTOMATIC LINE

With the absence of Z-axis movements, Optoflash is extremely fast and guarantees consistent and stable measurement performance over millions of cycles. This is why it is so successful in automatic applications, with robot loading.

Cycle time is super fast and, even more important, independent by the number of measurements. This relevant advantage is the result of the 2D fixed sensor architecture that does not spend any time in scanning operations.



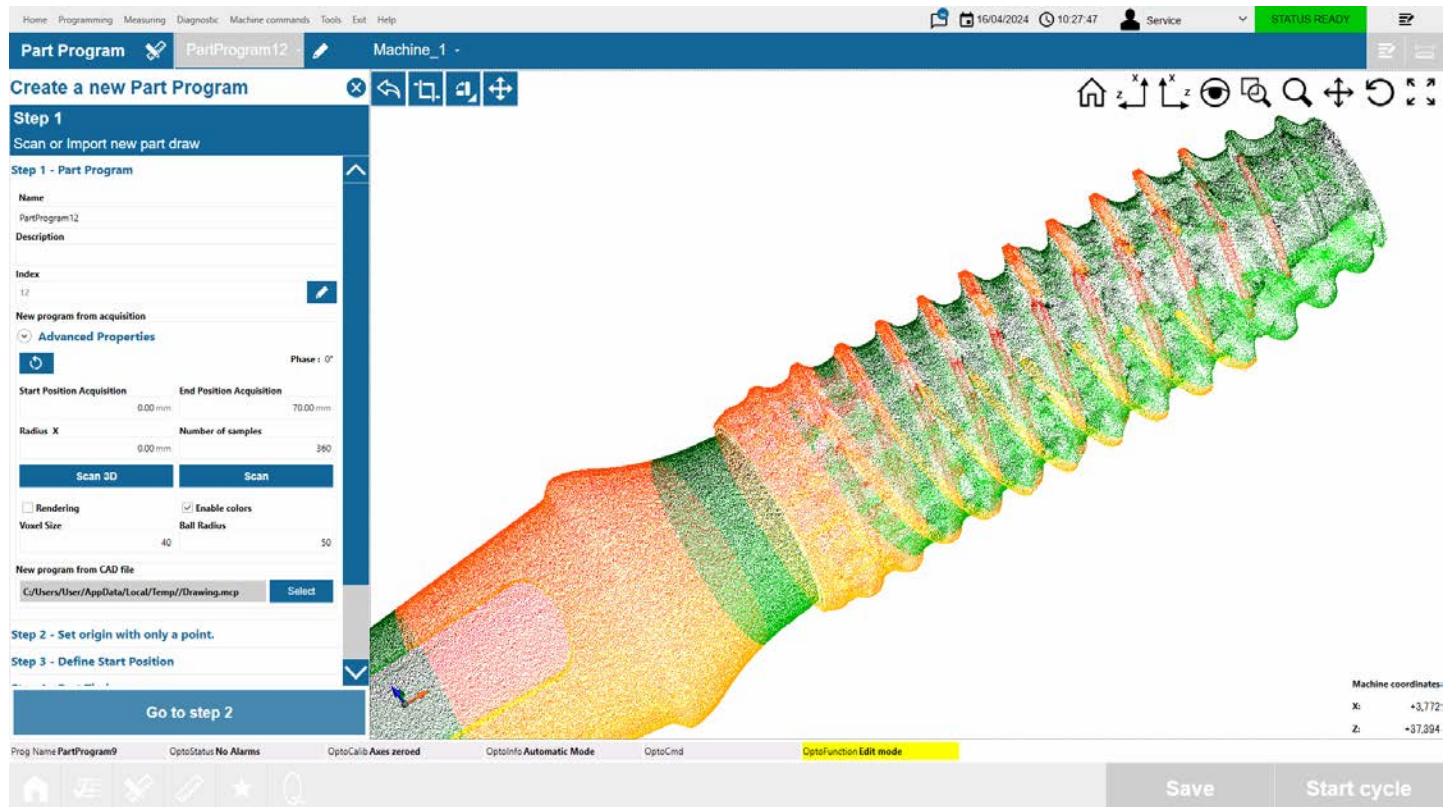
A gripper designed by Marposs maintains the part in position while inspecting so it allows to keep stable the part in automatic loading applications and at the same time to see the necessary details for the complete validations of the part.

Marposs GagePod™ is the interfacing accessory to PLC and robot. GagePod integrates I/O and fieldbus as Profinet® or EtherNet/IP™. Though the digital signal managed by the GagePod it is possible to control the automatic electric chuck



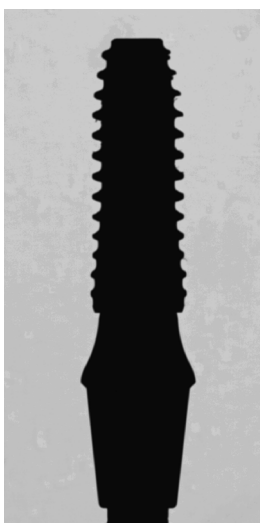
OPTOFLASH WITH 3D CAPABILITIES. SIMPLY UNIQUE

The 3D measurement is not only more performing than a traditional 2D projection. The 3D software engine of the Optoflash can easily reconstruct the workpiece in a 3D format, enabling both a new level of quality controls and a superior ease-of-use.

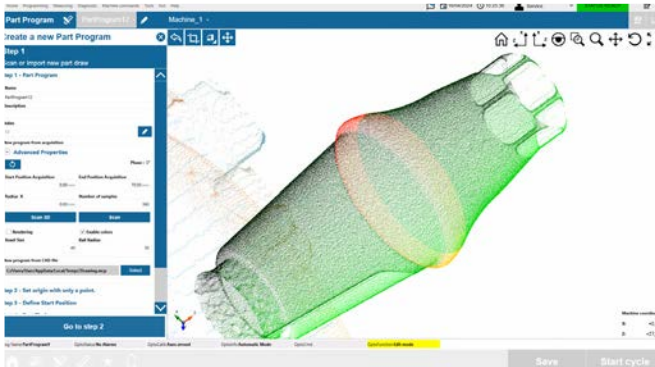


TRADITIONAL 2D

3D USING OPTOFLASH

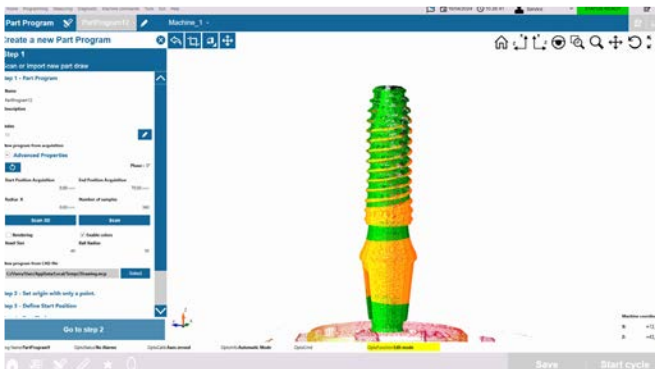


3D measurements are based on thousands of points from the surface of the workpiece. For this reason, irregular part profiles, interrupted surfaces or threads are perfect applications where the Optoflash and its 3D engine gives distinctive performance with respect to the traditional approaches.



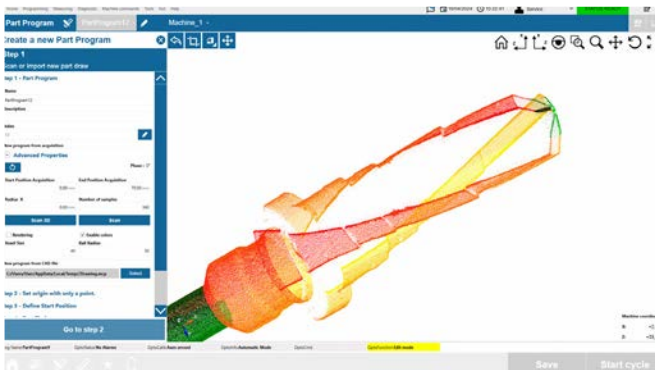
Typical measurements:

- Optical Axis calculation
- Keyslot angle
- Hexagonal portion diameters
- Conical portion sizing
- Diameter at fixed Z-position



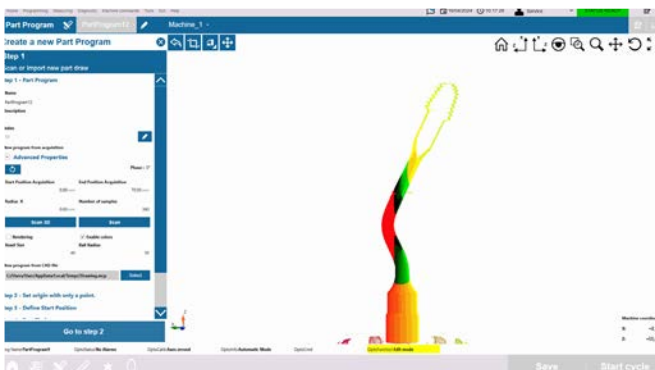
Typical measurements:

- Extensive Thread validation
- Total height
- Hexagonal portion diameters
- Conical portion sizing
- Chamfer at lower border
- Diameter at lower border



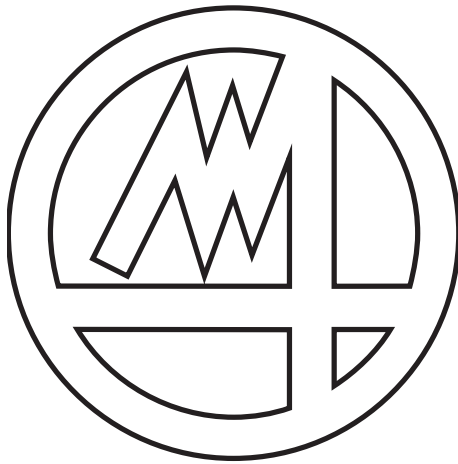
Typical measurements:

- Diameters at different height
- Coaxiality of the cutting profile
- Total length



Typical measurements:

- Angle of the working element
- Blade profile dimensioning
- Total height



MARPOSS

For a full list of address locations, please consult the Marposs official website

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