Digital impressioning — Passionate about precision
Passionate about precision.
Precision – at the top of its class

3M™ ESPE™ means impressioning at its best.

For over 40 years, 3M ESPE has been setting standards in dental medicine, particularly in impressioning. With our pioneering products and technologies, we help you achieve excellent results. That applies to both worlds – conventional and digital. Our aim always has been and always will be the same: We want you to have happy patients. And we do our utmost to make that happen!

Digital – the new quality level.

Thanks to sophisticated materials such as Impregum™, the classical impressioning method has achieved an extraordinary degree of precision. With the Lava™ C.O.S., you now have the possibility of further enhancing the production process – and thus the quality of your prosthetic restorations – by standardizing it. Scans can be sent in a timely manner by Internet to the lab where the digital processing takes place.

With Lava C.O.S. into the future.

Discover the new era of impressioning: with the Lava™ Chairside Oral Scanner C.O.S., the oral environment is scanned without touching – and extremely accurately – because we know you’re passionate about precision. As a result, the systems and materials of Lava™ precision solutions link together in a fully digital workflow.

We help you to be more productive – and help you to make your patients happier.

The Lava C.O.S. helps you save working steps and reduce unproductive retries.

Another substantial plus is the fact that your patients will be enthusiastic – and so will you: a unique combination of high-performance hardware and software allows you to observe the emergence of the impression in real time and review it afterwards. That way, you have a real-time check on your impressions. A fascinating technology – with inspiring results all around.
Precisely fitting restorations

Precise impressions – the basis for precisely fitting restorations.

Prepare for a pleasant surprise: it’s easy to learn how to work with the Lava™ C.O.S. The scan is done in an instant, and with the slim wand you have convenient access to the patient’s mouth. As well, the subsequent transmission of the digital impression by Internet is fast and timely.

Advantages for dentist and lab:
- Accurate digital impressions support the manufacturing of precisely fitting restorations
- High reliability
- Detailed real-time feedback during the treatment
- High patient convenience
- Immediate interaction between dentist and patient
- Elimination of time-consuming working steps

A clear gain in precision: with digital impressioning, the margin gap can be reduced measurably.*

Margin gap in the complete manufacturing process*


*In the digital manufacturing process for Lava™ crowns

Steps eliminated in the dental office:
- Tray selection
- Mixing and delivery of material
- Setting of material
- Disinfection of impression
- Packaging and shipping of impression

Steps eliminated in the dental lab:
- Plaster pouring
- Base and pin
- Die-cutting of the model
- Trimming
- Scanning
The crucial advance: ‘3D-in-Motion’ technology.

Conventional 3D scanners that work with grid technology just merge static single pictures. That may result in inaccuracy. The 3D-in-Motion technology, however, captures the data as a video sequence: every second, an enormous amount of data is created: around 20 3D datasets. This revolutionary procedure ensures that, in spite of its extreme speed, all surfaces are scanned in completely steadily.

Precision at the speed of light

The combination of precision and time saving is impressive: it takes only two minutes to scan a complete jaw with the Lava™ C.O.S. In this short time span, 24 million 3D data points are created (corresponding to 2,400 3D pictures). Thus, a virtually seamless stream of data emerges, leading to a uniquely precise image of the oral situation.

Blue LEDs work very efficiently: they have low energy needs but achieve very high performance while generating very little heat. In addition, the short wave blue light allows for extremely high imaging precision.

High tech right down the line

The software version 3.0 shows you the exact distance of the preparation from the opposite tooth on the touchscreen. It enables you to set the desired distance individually by colour coding, so simplicity conjoins with maximum freedom. Annoying artefacts can be eliminated during the scan process itself by the ‘data rubber’. Find out how enjoyable the process can be – for safe and quick scanning.
An inspiring solution for the lab as well

Fully digital workplace convenience: the Lava™ lab process

As a dental technician, you have all the options you need to transform the delivered data into precise 3D images with the Lava™ lab software and to process them further. The dye cuts and the margin marking of the preparation are performed digitally – quite easily on the screen.

As result, you get a modern stereolithographic model (SLA) taking the place of the conventional plaster model. This model can be inserted into almost any articulator.

Flexibility

Sheer flexibility: the Lava™ design process.

On this basis, you create the frame design as the second step. In doing so, you have complete flexibility: You can create your restorations with the Lava™ Design Software, Dental Designer (3shape) or DWOS (Dental Wings).

That means you work with familiar technology and yet remain inside the Lava™ Network – with your milling center or Lava™ Milling Center as the next station.

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The range of indications for the Lava™ C.O.S.

The applications:

Digital impressions made with the Lava™ C.O.S. enable the manifold manufacturing of CAD/CAM restorations by using the stereolithographic model – not only with the Lava™ system but also with conventional PFM or full ceramic systems. Released and clinically tested indications include crowns, inlays, onlays, several adjacent restorations, 3- and 4-unit bridges plus seated implant abutments. With the new Lava™ C.O.S. Software 3.0, digital impressions of the entire jaw are also feasible.

All the indications released for the digital workflow by 3M ESPE have been meticulously tested. As new clinical test results become available, the list will be updated on a regular basis. Please ask your 3M ESPE representative for newly incorporated indications.
The new digital dimension.
The digital workflow for dental implant prosthetics

1. Digital impressioning
   In the first step, the BIOMET 3i Encode® Healing Abutment is impressioned digitally using the Lava™ C.O.S. All of the necessary information is encoded in the abutment marks, such as implant type, emergence profile, abutment height, implant diameter and orientation of the implant.

2. Design
   BIOMET 3i receives the Lava C.O.S. scan data and designs and produces the individual implant abutment.

3. Lab Work
   Your dental lab sets the virtual dye cuts and marks the preparation margins. Afterwards the restoration is designed and produced by means of the conventional method or CAD/CAM (e.g. Lava™ Zirconia).

4. Result
   The individual implant abutment and the Lava Zirconia restoration in vivo.

Your advantages with digital implant impressioning:
- Elimination of conventional implant impressioning including impression copings
- Digital impressioning is more pleasant for patient and user
- Fast, precise and safe
The digital workflow – precision à la carte

We open up all possible paths to the precise result.

A fully digital workflow, from impressioning down to the highly aesthetic restoration: Lava™ precision solutions from 3M ESPE make it possible. All hardware and software components merge into a seamless, integrated process. All steps fit together harmoniously; all data are transmitted flawlessly. This concept is inspiring – and the results are even more so.

Digital impressioning
Digital impressioning with the Lava™ C.O.S. and transmission of the data to an authorized lab.

Technical processing of the digital impression in the lab
Digital dye cuts and marking of the preparation margin.

Practice
Lab

Regardless of whether you opt for a traditional PFM procedure or modern CAD/CAM manufacturing – the digital impression with the Lava C.O.S. always provides the perfect starting point.
Conventional procedure

Manufacture of the SLA model
The conventional plaster model is replaced by a modern stereolithographic model (SLA).

CAD/CAM procedure

Manufacture of the SLA model
The conventional plaster model is replaced by a modern stereolithographic model (SLA).

Manufacture of the restoration
Final manufacture and veneering of the restoration by the lab.

CAD/CAM manufacture
At the same time, the lab receives a virtual model so it can manufacture the frame.

Insertion of the restoration
In the dental office, the final restoration is inserted into the patient’s mouth.

Practice
Technical Data

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<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>Dimensions of the device</td>
<td>112 × 51 × 71 cm (H × W × D)</td>
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<tr>
<td>Length of the wand</td>
<td>33 cm</td>
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<tr>
<td>Weight of the wand</td>
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<tr>
<td>Width of the camera head (wand)</td>
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<tr>
<td>Touchscreen</td>
<td>17&quot;</td>
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<tr>
<td>Screen resolution</td>
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Ordering Information

<table>
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<tr>
<th>Item no.</th>
<th>Product Information</th>
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<tr>
<td>68901</td>
<td><strong>Lava™ Chairside Oral Scanner C.O.S.</strong>&lt;br&gt;Scanner incl. computer, touchscreen, wand, software, Wireless Access Point (WAP) plus 1 sprayer system, accessories for application, 2-day training session for dentist and dental assistant</td>
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<tr>
<td>69109</td>
<td><strong>Lava™ CAD Workstation</strong>&lt;br&gt;(computer, monitor, set of cables, keyboard, accessories), software package for scan processing incl. 3 hours of instruction, 10 exercise cases, software package for design incl. 2–3 hours of instruction</td>
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<tr>
<td>68914</td>
<td><strong>Lava™ C.O.S. Lab Software</strong>&lt;br&gt;Software package for Lava™ C.O.S. scan processing incl. 3 hours of instruction – (also suitable for 3shape and Dental Wings)</td>
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<tr>
<td>68903</td>
<td><strong>Lava™ camera cover for Lava™ C.O.S.</strong>&lt;br&gt;1 box with disposable camera protection covers (100 pieces)</td>
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<tr>
<td>68904</td>
<td><strong>Lava™ C.O.S. powder sprayer</strong>&lt;br&gt;Kit contains: 1 sprayer, 1 battery, 2 cleaning brushes, 6 nozzles, 1 screwdriver</td>
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<tr>
<td>68912</td>
<td><strong>Lava™ C.O.S. sprayer nozzles</strong>&lt;br&gt;1 bag with 3 sprayer nozzles</td>
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<tr>
<td>68913</td>
<td><strong>Lava™ C.O.S. powder</strong>&lt;br&gt;10 bottles, 3.75 g each</td>
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