Technical Data

Scan Volume: 62*46*46mm³
Scan Time: Average scan time is 1.40 minutes for a single crown
Scan Type: Non-contact, optical scanner with fringe projection triangulation for high accuracy
Scan Handling: Ergonomic design and convenient handling with one hand height adjustment
Scanner Size: Width: 545mm; Height: 800mm; Depth: 465mm; Weight: 45kg
Electrical: Line Voltage: 100 – 240 Volts; Frequency: 50 Hz – 60 Hz; Power: 250 Watt

Scanner accuracy: A function of scanner size. As illustrated at right, the greater the “W” and “D” dimensions are, the better the accuracy of your scans. We designed our tall scanner for optimal accuracy. The sleek design also has a small footprint to save workspace.

Nested scanning. Helping you do more in the same amount of time.
To save time, you can nest multiple cases in a single scan. Within nested scanning the maximum scan length is 51mm.

Indications for Use
- Single crowns
- Primary crowns
- 3-unit bridges
- 4-unit bridges
- 5- and 6-unit bridges
- Curved and long-span bridges up to 46mm length (with the release of the “Multi XL” size of Lava™ Frame Zirconia)
- Cantilever bridges (excluded for patients with bruxism)
- Inlay/onlay bridges (excluded for patients with bruxism)
- Anterior adhesive bridges (excluded for patients with bruxism)
- Implant abutments cemented to a titanium base

Please refer to the Lava Frame Instructions for Use for details on framework design rules. The guidelines set forth by the relevant national health care oversight agencies must also be observed for the respective indications.
Lava™ Precision Solutions – the straight way to the future.

Three criteria are essential for indirect restorations: fit, aesthetics and long-term stability. With Lava Precision Solutions, you meet them all in a perfect manner. Lava® Crowns & Bridges are a shining example of naturalness: they have a translucent, individually colorable framework made of zirconium oxide – a material that combines strength with impressive aesthetics. Consequently, it comes as close to nature as anything can.

3M ESPE – a name you can trust in.

In 3M™ ESPE™, you have a partner that has been developing successful solutions for the dental industry – whether in practice or in the lab – for decades. Not only do we strive for the best quality at all times, but we want you to be able to work with it expertly. 3M ESPE’s innovations always set new standards and make entire treatment procedures much easier with integral systems. In short, we’re always thinking about you. And that’s how we’ve won the trust of people around the world who are as committed to dentistry as we are.

For quality and productivity, this is the complete package.

The first Lava™ scanner was developed to be a digital design aid for milling centers. Today, our second-generation scanner is something far greater: a gateway to complete zirconia and metal restoration production.

Starting with a precise, high-quality scanner, the Lava system now allows you to take any of several routes to your destination. You can choose many materials. Create implant abutments and full contour designs, and selectively communicate with other systems, as needed, along the way. Any route you take leads you to more productivity.

A unique bunch of benefits:
- Step into a bright digital future
- High flexibility
- Multiple materials
- Selectively open architecture
- Advantage in productivity
- Training and service
- Convenient online software updates

Aesthetics

Digital

* You will find further information in Lava™ study brochures.

1This feature will be made possible with the V. 5.0 upgrade to Lava™ Design Software scheduled for release in 2009.
A journey that starts with a precise scanner

With the Lava Scan ST, you have state-of-the-art scanner technology for frame design at your disposal. It is your access to the digital world of modern dentistry. The actual software version Lava™ Design Software 5.0 is the newest supplement to the Lava Precision Solutions and interlinks material science with sophisticated digital technology. In doing so, 3M ESPE focuses on your success. We develop and improve our hardware, software and materials so that you can increase your productivity and offer more indications to your customers.

As is usual, we additionally assist you with training, marketing documents and technical support.

Better marginal fit versus competitive systems.

Marginal gap of 3-unit bridges scanned and milled with different systems. The Lava™ Scan ST device shows a good marginal fit in comparison to competitor systems. F. Beuer et al., University of Munich.*

Full contour CAD/CAM restoration.

Lava™ Zirconia restoration, porcelain work created with the Lava™ Digital Veneering System.1

Sintering Process.

High-temperature, high-speed Lava™ Furnace 200.2

Scanner accuracy: A function of data density.

Microphotography reveals another accuracy advantage in the Lava Scan ST scanner: data density. We are able to achieve this level of quality without sacrificing scan time. Our fast scanner also enables nested scanning so you can scan multiple cases with just one scan.


1Scheduled for release in 2009.

2Scheduled for release in 2009 in selected markets. Please ask your local 3M ESPE contact.

3Now available in selected markets. Please ask your local 3M ESPE contact.
Software that guides you – step by step

Support

Support traditional processes.
If you prefer to design a wax-up, you can simply scan in your wax-up for milling.

Automatically place cement gap. This feature will be made possible with the V. 5.0 upgrade to Lava™ Design Software scheduled for release in 2009.

Fine tune connectors. You can use the virtual wax knife tool to fine tune your connectors for more esthetic outcomes. To assure proper design, you can measure the connector cross section in every position.

Mouse-based design. It’s easy to modify your designs by simply moving the arrows you like.

Virtual wax knife tool. It’s easy to fine tune your design with our wax knife tool. You can easily add or remove the exact amount of wax that you need.

Guidance

Designed by dental technicians for dental technicians.

We understand you have work to do. That’s why our software development is guided by dental technicians instead of software architects. Our goal is to continually make our system easy and efficient to use. Even our first version of Lava™ Design Software was designed to take dental technicians through the process step by step. This philosophy continues to be appreciated by new and experienced users alike. Every year, we have added more user-friendly features and updates. These are not just bells and whistles, but features that deliver real productivity. Our latest version adds full contour design, integrated libraries for implant abutments and more tools designed to increase your productivity, step by step.

Offer a wide range of indications.
The Lava CAD/CAM system is approved for many indications, from crowns to custom abutments to 8-unit bridges. (See back page for complete list and details.)

1Scheduled for release in 2009.
2This feature will be made possible with the V. 5.0 upgrade to Lava™ Design Software scheduled for release in 2009.
It’s your choice …

1 Design a Lava™ Zirconia coping and glass ceramic final contour for production with the Lava™ CNC 500 milling machine.¹

2 Design a wax pattern coping and final contour for production with the Lava CNC 500 milling machine.¹

Where do you need to go? Selectively open architecture takes you there.

The Lava Scan ST Design System now does more than create Lava™ Zirconia restorations. You can also use an optional software module to transfer designs for metal restorations and wax/resin patterns to selective third party equipment. This equipment can be located at your own lab or another 3M ESPE authorized lab or rapid manufacturing center. You simply send your design work via our secure Lava Connect Portal. Because 3M ESPE has tested the process, it’s easy to expand your digital world.

¹ The Lava Digital Veneering System is scheduled for release in 2009.

The Lava™ CNC 500 Milling Machine is scheduled for release in 2009 in selected markets. A software upgrade scheduled for 2009 will make it possible to mill wax patterns for pressable ceramics using the Lava™ Wax block and Lava™ Form and Lava™ CNC 500 Milling Machines.
Design wax/resin patterns for production with selective wax/resin printers.

Design full contour. Reduce automatically to coping.

Data is sent through the Lava™ Connect Portal to a compatible printer.2

Substructure2 Final Contour2

3

Design metal substructures with selective laser-sintering printers.

Reduce automatically to coping.

Data is sent through the Lava™ Connect Portal to a compatible selective laser-sintering device.2

Substructure2 Final Contour2

4

* We have found that due to the high quality of the scan input from the Lava Scan ST, the precision of the wax patterns are much higher than what we got previously with our other scanner.*

Dick Pilsner, President, D&S Dental Lab, Waunakee, Wisconsin

* The systems shown represent compatible. For a list of systems, please refer to the 3M ESPE website at 3MESPE.com/lava.

1 The Lava Digital Veneering System is scheduled for release in 2009.

2 The Lava™ CNC 500 Milling Machine is scheduled for release in 2009 in selected markets. A software upgrade scheduled for 2009 will make it possible to mill wax patterns for pressable ceramics using the Lava™ Wax Block and Lava™ Form and Lava™ CNC 500 Milling Machines.
Implant Abutments

Design abutment and coping with just one scan.
This saves time in your lab. Plus, because both are made from Lava Zirconia, your implant abutment and your coping can be the same shade.

Customize easily.
Abutment shapes are easy to customize. And when your design is produced on the new Lava CNC 500 Milling Machine, the screw hole is automatically milled into the abutment.

All tools provided.
A library of abutment shapes and compatible interfaces eliminates the need to create a wax-up design. 3M ESPE even provides a scan locator for precision and fit.*

Optimal porcelain support.
The full contour design is cut back to create an anatomically designed coping. This provides optimal support for your veneering.

Occlusion can be adapted.
Just use the bite registration to reposition the cusps. The cusps can then be digitally “trimmed” to fit the bite with just one click.

Adapt to adjacent teeth.
It’s easy to adapt the full contour of the design to the size and contour of the adjacent teeth.

Abutments design that elevates your productivity.
With the Lava™ Design Software 5.0, you can design the abutment and coping all from one scan. This saves time and ensures accuracy for a precise fit. In addition, you can now digitally design Lava™ Zirconia for implant abutments by choosing an abutment shape from the integrated library. You can also digitally select a compatible interface design. If desired, you can also scan a wax-up and abutment interface.

A standard point of origin. Flexibility at every turn.
Lava Design Software 5.0 allows you to digitally create a full contour design by customizing the tooth shape provided. The standard tooth library automatically places the correct tooth number on the die. Then you can modify the design to fit opposing and adjacent teeth. You can also control the emergence profile, cusp position and anatomy. Frameworks and copings are created by reducing the full contour design. This ensures that they will optimally support the veneering. Occlusion can be properly adapted, too, utilizing the bite registration to reposition the cusps. The cusps can then be digitally “trimmed” to fit the bite with just one click, enabling fast, precise designing.

1Scheduled for release in 2009 in selected markets. Please ask your local 3M ESPE contact.
2Scheduled for release in 2009.
*Additional fee applies.
Full Contour Production

Today, it’s not enough to offer high esthetics and strong clinical performance. You also need a system that is flexible, easy to use and improves productivity. In other words, a system that supports your business needs and clinical outcomes. The Lava™ Digital Veneering System has been designed to do both. Supported by full contour Lava™ Design Software 5.0 and the Lava™ CNC 500 milling machine, this system will enable you to produce esthetically pleasing, digitally precise porcelain work that is designed for Lava™ Zirconia copings. Along the way, it can help you grow your business.

1 Scheduled for release in 2009.
2 Scheduled for release in 2009 in selected markets. Please ask your local 3M ESPE contact.

Beauty

Adjust the contour.
The software allows you to individually adapt to opposing and adjacent teeth. Additional features allow control of emergence profile, cusp position and anatomy.

Create final restoration.
It’s easy to characterize the crown with shades, stains and glaze.

Productivity

Design full contour.

Reduce automatically to coping.
Anatomically designed coping provides optimal support for porcelain work.

Mill both materials.
Mill the coping from Lava Zirconia. Mill the porcelain work from Lava DVS1 materials on the Lava CNC 500 Milling Machine.

Fuse both parts.
This step can be done by the milling center or by their dental lab customers. It’s easy to do with Lava DVS Fusion Porcelain. This cross section shows all three layers – the zirconia coping, the fusion porcelain and the glass ceramic final contour.

Create final restoration.