



Individual Tools for Controlling and Positioning Porcelain Veneers: Easychecker – The Aesthetic Key

Ralf Barsties, CDT and Dr. Franka Meuter

Ceramic veneers are one of the hottest topics in modern dentistry. The areas of application are numerous, from pure aesthetics for front teeth - for example to close a diastema - passing by the palatal parts to reconstruct a lost canine guide, up to the occlusal parts to restore or improve function and vertical dimension. In all cases preparation can be minimally invasive, making it possible to retain the tooth substance and satisfy the patients' desire for treatment without complications and with little or no pain.

Today dental laboratories and dental offices offer materials, ceramics and work techniques that make it possible to create and position perfect veneers. With the numerous enamel and dentin bondings and with suitable composites, the doctor has all the materials possible to ensure a lasting bond between the ceramic veneers and the tooth. You would think that it couldn't be easier, but as usual the problems are hidden in the details. The situation might look like this: at first a wax-up was produced from a model of the initial situation. This was followed by a Mock-Up which was agreed upon based on the patient's desires and the dental and medical possibilities. The preparation did not present problems, the impression was perfect. The laboratory had respected all aesthetic standards, contact points were made to perfection, and of course, everything had been checked on

the model and adjusted where necessary. Each veneer had been tried in the mouth before fixing with adhesive. Every single veneer - presumably - was perfectly suited to the patient's mouth, yet the last one could no longer be inserted because suddenly the proximal spaces were too tight.

The doctor of course assumes that the contact points were not made with precision, otherwise all the parts should have been inserted without problems, not only individually but also as a whole. The technician, who was so careful, speculated that at the time of passage one of the veneers was not positioned correctly and therefore they had all moved slightly. But what did really happen? Both explanations are plausible, surely there is also a third, fourth or fifth option. Normally, however, the real reason cannot be identified with certainty. The fact is that despite the fact that both the technician and the doctor worked to perfection, somewhere in the passage from the laboratory to the studio - something went wrong.

To bring the latest certainties into the proceedings and to perfect the laboratory- studio passage, for some time we have been working with a tool to control the placement of veneers, which we produce individually and deliver together with the finished work. In our language this aesthetic key is known as "Easychecker" (Fig. 1).



Fig. 1



Fig. 2

Fig. 1: Perfect fit-individual veneers in situ with Easychecker, not yet fixed

Fig. 2: Primosplint kit with system components specifically developed for combined use



Fig. 3

Fig. 3: For Easychecker less than half a bar of Primosprint is needed

With Easychecker, during the last trial before adhesive fixing, we can control exactly if all the ceramic parts fit well in the mouth - not only individually but also as a whole. It is a tool that gives us great assurance, because without this control any differences in fit between the model and the mouth, are usually not noted until the last two veneers are inserted.

This aesthetic key is made with the light-cured composite Primosplint (Fig. 2), that we have been using for some time also for our calibrated bytes. We chose this material because by using it, it is very easy to make Easycheckers highly precise and stable, but at the same time small and manageable.

It is simple, because Primosplint is sold in bars (Fig. 3) and is malleable at room temperature. Therefore, contrary to the usual red resins PM MA (powder - liquid), modeling is very accurate and it only hardens when polymerized under UV rays in appropriate equipment.

Before proceeding with modeling, the model with the veneers in situ should be insulated with Primosep (Fig. 4). The insulator has been specially designed for the composite Primosplint and after polymerization allows Easychecker to be simply and rapidly detached from the template. Normally half a bar of Primosplint is sufficient for one Easychecker. As the material is thixotrope, it must be slightly manipulated by hand to make it



Fig. 4



Fig. 5

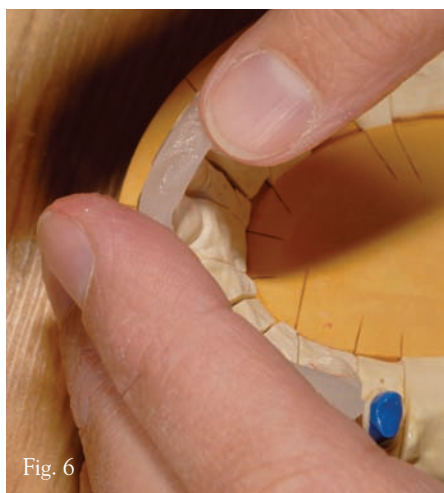


Fig. 6



Fig. 7



Fig. 8

Fig. 4: The insulation must be dry before starting to model

Fig. 5: Primosplint is placed on the incisal edge, because it must grip on the veneers with precision ...

Fig. 6: ... and brought into place with light taps

Fig. 7: Palatal and labial modeling to the desired height

Fig. 8: The Metatouch insulator of the Primosplint kit is also perfect for smoothing surfaces



Fig. 9



Fig. 10

Fig. 9: Simply smooth Easychecker by spreading Metatouch with a finger

Fig. 10: It's simple! - Easychecker on the model

plastic and to form a long thin bar (Fig. 5). When modeling it is important to include, with precision, the incisal edge of the ceramic parts, ensuring that no material reaches the undercuts.

It is recommended that Primosplint be placed on the incisal; subsequently shape the materials by tapping it lightly so that it will slide and will adhere in a precise and uniform way (Fig. 6), and thus determining the height and size (Fig. 7). Any excess Primosplint can be removed with a suitable instrument. To avoid having to finish Easychecker after curing, the surface must be smoothed with Metatouch insulator (Fig. 8). It is sufficient to take a little of this insulator and spread it on the molded material pressing it lightly (Fig. 9).

Since Primosplint does not present significant contractions during the polymerization, when it hardens the Easychecker obtained is absolutely accurate and does not require further finishing before insertion (Fig. 10). If necessary, the surface can be slightly sandpapered, and then spread with Primoglaze lacquer and polymerized.

The result obtained with an Easychecker made in Primosplint is, in the true sense of the word, an **Aesthetic Key** that allows for safe and easy controls (before) and fixing (later).

Whether the number of veneers to be fixed is six, eight or fourteen, we are certain that none will move vertically nor lose their alignment.

Now we will describe the practical use of this tool in the adhesive bonding of veneers.



Call Dave Dalgleish R.D.T.
Director - Consultant & Designer

The ADAM Centre

Ancaster Design and Milling 1-866-926-1226

www.ADAMcentre.com - info@AdamCentre.com



Custom Abutments



- Hybrid custom abutment design
- Cost effective & time saving

ZENOSTAR

Full contoured bridges & crowns

100% Zirconia - no ceramic layering



Screw Retained Zirconia Bridge



(coming soon)

Before looking at the clinical process step-by-step, let's take a quick look at the "pre-Easycheck" preparatory stage in studio. Both we and the patient could not wait for the day when the veneers would be finally placed, in fact there was some apprehension about the final result. Will everything be okay? Is the midline correct? Is the position of the veneers correct with respect to the vertical alignment of the teeth? Did we achieve the best possible cosmetic result? Will the patient be satisfied? And will we be too?

Of course with our experience we know what we can expect and where any possible difficulties may hide, but we cannot really predict the results. Unfortunately we discover them only after fixing the second to last or last veneer.

The situation has changed radically since we

have been using Easychecker. Now, before fixing the first veneer, we will know if they will all fit perfectly in the mouth, not only individually, but altogether. The result becomes predictable, which gives us tremendous peace of mind when we go to fix the job.

Generally, for each case that requires the use of porcelain veneers as a prosthetic solution, we receive an Easychecker (Fig. 11) together with the work. This aesthetic key, as fully explained in the first part of the report, is made with the light-curing composite Primosplint (Fig. 2) that we have been using for some time for our calibrated bytes. The material is ideal because it allows to easily produce instruments that are highly precise and stable and at the same time small and handy to use.



Fig. 11



Fig. 12



Fig. 13



Fig. 14

Fig. 11: Easychecker fits perfectly over the incisal edges, but does not go into the undercuts

Fig. 12: It is often suggested to proceed with etching with the dam — even if not essential

Fig. 13: Spread the Bonder for each "aesthetic" element...

Fig. 14: ... and light-cure according to the manufacturer's instructions

primosplint

Light cured composite splint material

- very quick and easy to work with
- modelling playdough like consistency at room temperature – no heat needed
- cures reliably in most conventional light curing units
- extremely precise, no noticeable shrinkage, expansion or distortion
- MMA and peroxide free – lowest allergic potential for the patient
- fully autoclavable – no distortion on implant surgical guide during steam autoclaving
- can be easily bonded to other materials (PMMA-acrylic or suck down matrix)
- no taste or smell and easy to repair



easy, precise, versatile, fast

light cured composite rods, MMA and peroxide free – for function therapy bite splints and many more applications.



866-643-3129

www.primotecusa.com
info@primotecusa.com





Fig. 15



Fig. 16



Fig. 17



Fig. 18

Fig 15: Any excess composite is removed without stress and hurry

Fig 16: The proximal distal space is cleaned with Superfoss

Fig 17: Excess material in the mesial area can easily be eliminated by moving the veneer 21

Figure 18: Minimum thickness - with Easychecker, excesses are eliminated by applying a light pressure

In order: the first step of the cementation process is to control the veneers in the mouth, both individually and inserted as a whole. Porcelain veneers are first placed one by one on the prepared teeth and then the Easychecker is placed over the veneers: including the incisal edge with precision (Fig. 1).

If there are problems positioning the aesthetic key, it means that something is wrong, probably there are differences between the model and the actual situation in the mouth. Without Easychecker we would discover this only when the last two veneers are inserted.

In this case, however, if the veneers do not fit well we can immediately step back, review, correct, and lastly move on to the next step without the fear of having made any irreversible errors. Once the work is in place it is possible to proceed with the cementation of the individual veneers. Usually we work from the back to front, therefore starting from the last veneer. In this

case, all the veneers up to the two central ones have already been cemented.

An example of the procedure is element 11, which is firstly etched (Fig. 12), the Bonder is spread and polymerized (Figs. 13 and 14) and only now is the Easychecker removed; the composite adhesive is spread on veneer 11 and it is pressed gently into the correct position. Veneer 21, which has still not been cemented, remains temporarily in situ.

Any excess adhesive composite which at this stage has not yet been polymerized, can quickly and calmly be removed without problems (Fig. 15). Since veneer 12 has already been fixed, any excess composite in the space between 11 and 12 can be removed without problems using Superfoss.

To ensure that veneer 11 will not move during this operation, it is held in place with, moderate pressure of the finger (Fig. 16). Veneer 21, not yet fixed, can also be temporarily removed to



Fig. 19

Fig. 19: Final fixing with UV lamp

Fig. 20: The patient is happy – everything is simple with an excellent team and with Easychecker in Primosplint



Fig. 20

perfectly clean the mesial area (Fig. 17). Once the mesial area is freed from all waste materials, first veneer 21 and then Easychecker will be put back in place.

The purpose of the next step is to obtain a composite film of adhesive as thin as possible. Therefore pressure continues to be placed on the veneer Easychecker, following an imaginary line that goes from the incisal to the oral area. It always happens that a small amount of excess material spills out from under the veneer. Maintaining pressure over the veneer is also a simple matter thanks to the Easychecker tool, since it is impossible to move or damage the

veneer (Fig. 18). Once the last remnants of material are removed, the ceramic veneer is permanently fixed with a UV lamp. Here too, Easychecker, made with Primosplint, gives us one last certainty: that the veneer is positioned correctly in relation to the others (Fig. 19).

In conclusion, the best result is our happy patient (Fig. 20). When we can obtain these results with perfect team work between the laboratory, the studio and Easychecker Primosplint, in addition to the relaxation given by the predictability of the outcome, success is even more enjoyable. ❏

Where Nature & Art Become One
Your Source for Straumann CAD/CAM Custom Abutments

RjSmith
DENTAL LABORATORY LTD.

552 Upper James
Hamilton, ON L9C 2Y4
1-800-258-0056
rjsmithdental.com

Simply Achieving Reality