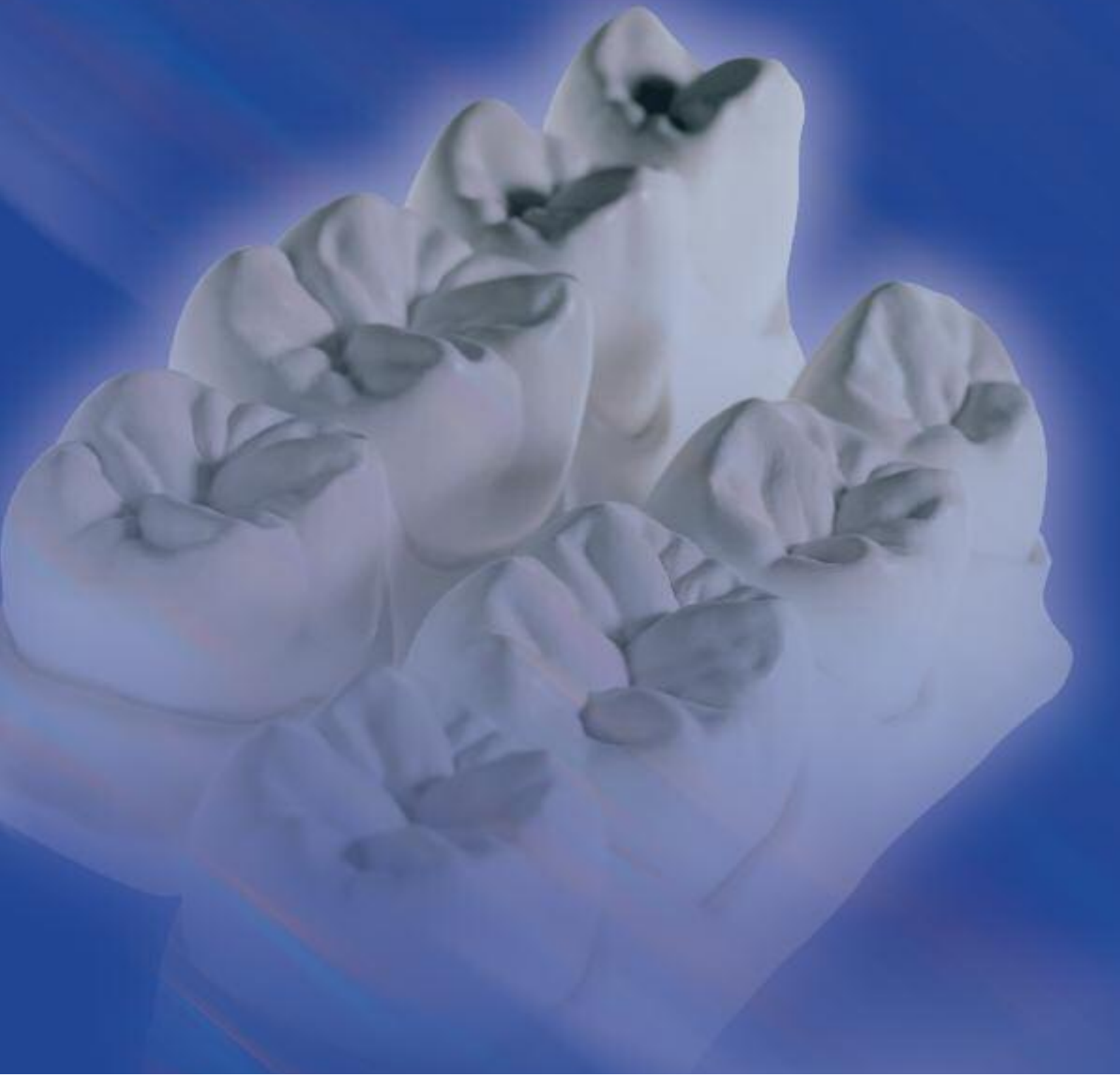
SR Postaris DCL

Dental Technical Documentation



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Material type

For experts like you: Ivoclar Vivadent **ICDE (International Centers for Dental Education)**

Part of the **BPS (Biofunctional Prosthetic System)**

The SR Postaris DCL posterior tooth

Today, the excellently developed methods in the wax-up technique permit professional design of dentures. Modelling teeth according to given antagonists is considered the latest standard of technology.

However, it is very difficult to develop a prefabricated denture tooth that can be adapted to various antagonists. Furthermore, such a tooth most meet all the requirements of modern set-up techniques according to the principles of complete denture prosthetics.

In human dentition, all concepts of occlusion described in scientific literature can be found. This tooth morphology was integrated in the development of the SR Postaris DCL tooth line according to the standards set by nature.

Ivoclar Vivadent, one of the leading manufacturers with over 70 years of experience, has succeeded in meeting all the above requirements. The result is a prefabricated tooth than can be used of a wide range of indications.

As for the SR Vivodent DCL anterior tooth, the design of the tooth was based on comprehensive examinations of natural teeth. These tooth measurements were carried out at the University of Münster, Germany, under the supervision of Prof. Dr. Marxkors.

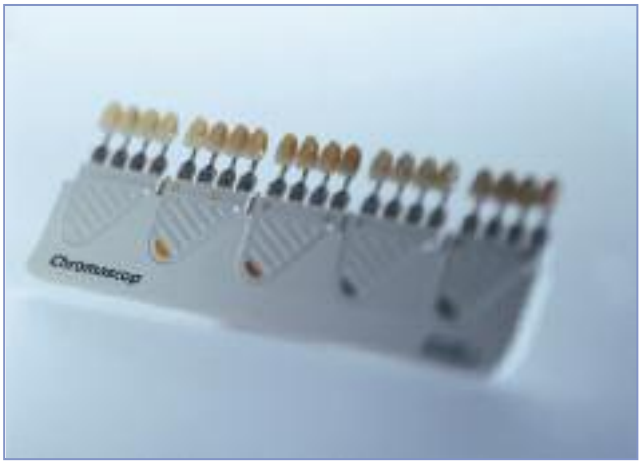
SR Postaris DCL demonstrates excellent properties especially as far as its suitability of partial denture prosthetics is concerned. Lost teeth may, therefore, be replaced with prefabricated teeth for removable dentures.

Patients who have already benefited from the SR Postaris DCL in its development phase have confirmed the increase in masticatory efficiency achieved with the tooth.

Universal range of indications

- Partial dentures
- Combinations dentures
- Hybrid dentures
- Complete dentures
- Implant-supported, removable dentures

SR Postaris DCL is available with six upper and lower moulds and, like SR Vivodent DCL, in 20 Chromascop shades, as well as A–D and Bleach shades.



The occlusal surface

The six antagonist tooth sets are autonomous. However, they follow the principles of the concepts of occlusion schematically depicted in this documentation.

The colours indicate the movement patterns that can be executed starting at the respective contact point.

1 With existing anterior/canine guidance

Beginning at the centric, there are concave areas permitting unimpeded movement of the working cusps.

2 Within group functions

The coloured movement patterns in the diagram have guiding functions, as thee is no disclusion of the posterior teeth originating from the anterior area.

The corresponding guidance can be achieved by means of the biofunctional set-up method without extensive corrections being necessary.

The tooth may, therefore, be used partial dentures with existing anterior/canine guidance that require disclusion of the posterior teeth. Groups contacts may be achieved for complete dentures.

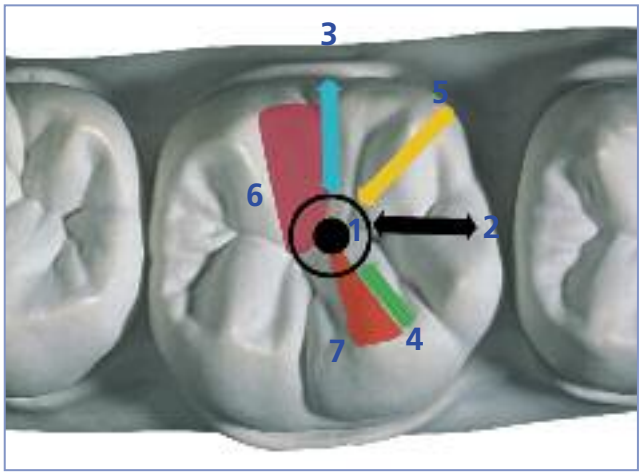
Fundamental principles of the concept of occlusion

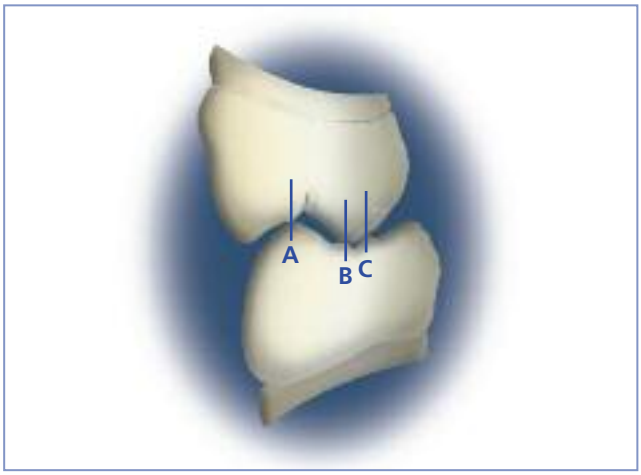
The concept of occlusion is based on intercuspation by means of A, B, C contacts.

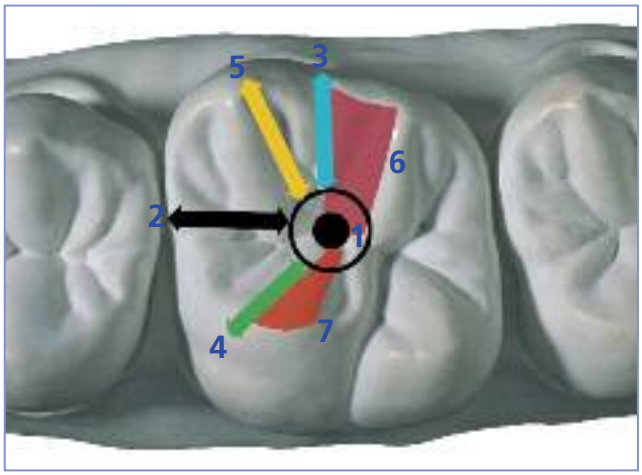
This is ideal for both the statics (transmission of force) and the distribution of the masticatory forces (vectors of force) on the denture supporting area.

Moreover, this three-point intercuspation in combination with the interocclusal freeway space permits optimum masticatory efficiency.

The patient thus needs to exert less masticatory forces. This again has a positive effect on the denture supporting area (bones and mucous membrane).







Left

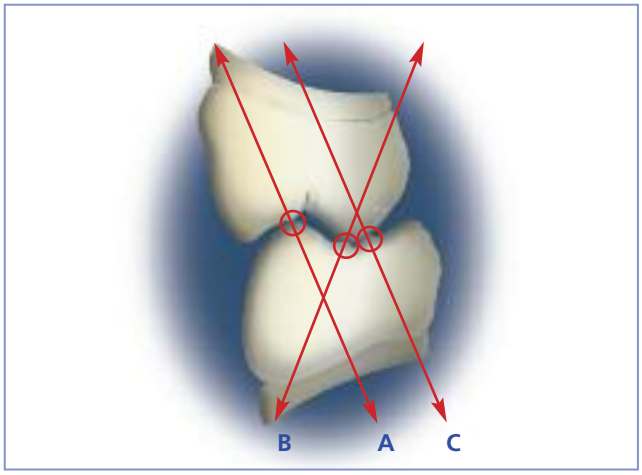
1) Centric
2) Protrusion
3) Laterotrusion
4) Mediotrusion
5) Latero-Protrusion
6) Retrusion
7) Side-Shift

Right

A = Working side contact
B = Balancing side contact
C = Centric contact

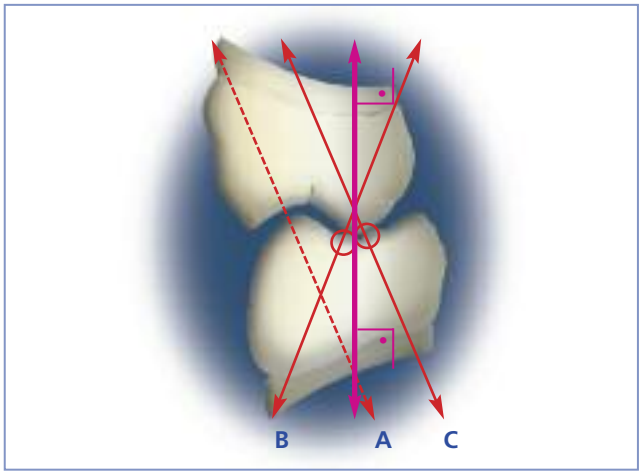
Distribution of force on the denture supporting area

In case of normal contact relation, the mandible is favoured, as the resulting force is directed towards the lower ridge.



= Vector for force

In the maxilla, the force is directed towards the buccal. Static difficulties in the maxilla (poor ridges and/or small jaw) may result in dislodged upper dentures.



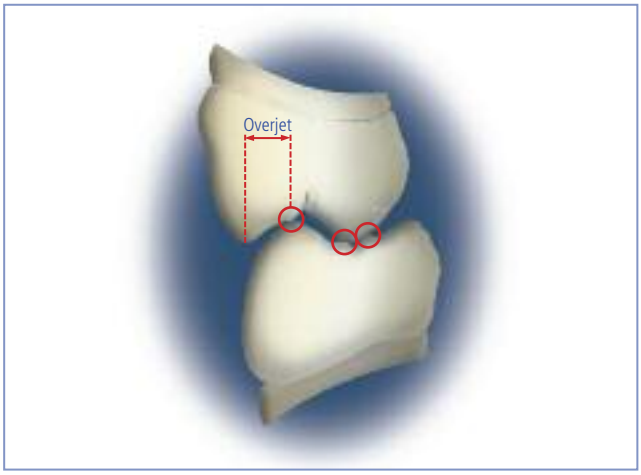
Here, reliving the A contact is recommended. The resulting force of the two remaining vectors thus meets the upper and lower ridges almost perpendicularly. The stability of the upper denture may thus be increased, whereas that of the lower denture is maintained.

If these measures do not achieve appropriate stability, a cross bite set-up is recommended.

See also Ivoclar Vivadent's Handbook of Complete Denture Prosthetics and BPS – Prothetik mit System zum Ziel; Kurt Fiedler; Verlag Neue Merkur GmbH)

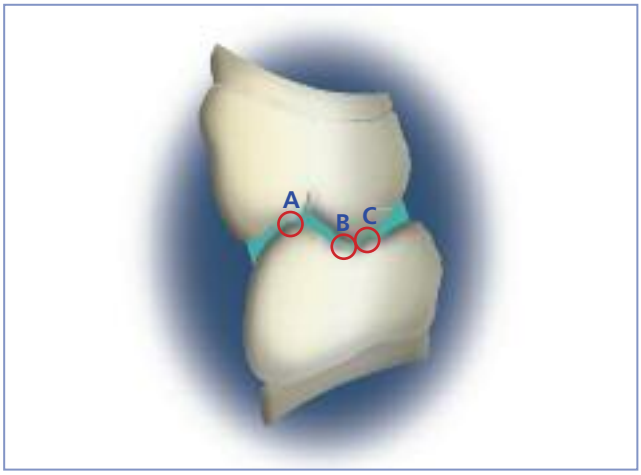
Overjet

The overjet of the buccal cusp in the maxilla is used to keep the cheeks away from the masticatory center. This avoids 'biting the cheeks' and ensures undisturbed mastication. The same function, with regard to the tongue, however, is assumed by the lingual cusps in the lower posteriors.



Interocclusal free-way spaces

The contact relation of the SR Postaris is centred on convex areas. This results in interocclusal freeway spaces that should be maintained at all costs. They permit optimum mastication and escape of the chewed food.



Occlusal free-way spaces

Set-up in partial and combined denture prosthetics

In contrast to complete denture prosthetics, this field mostly deals with anterior/canine guidance and disclusion of posterior teeth.

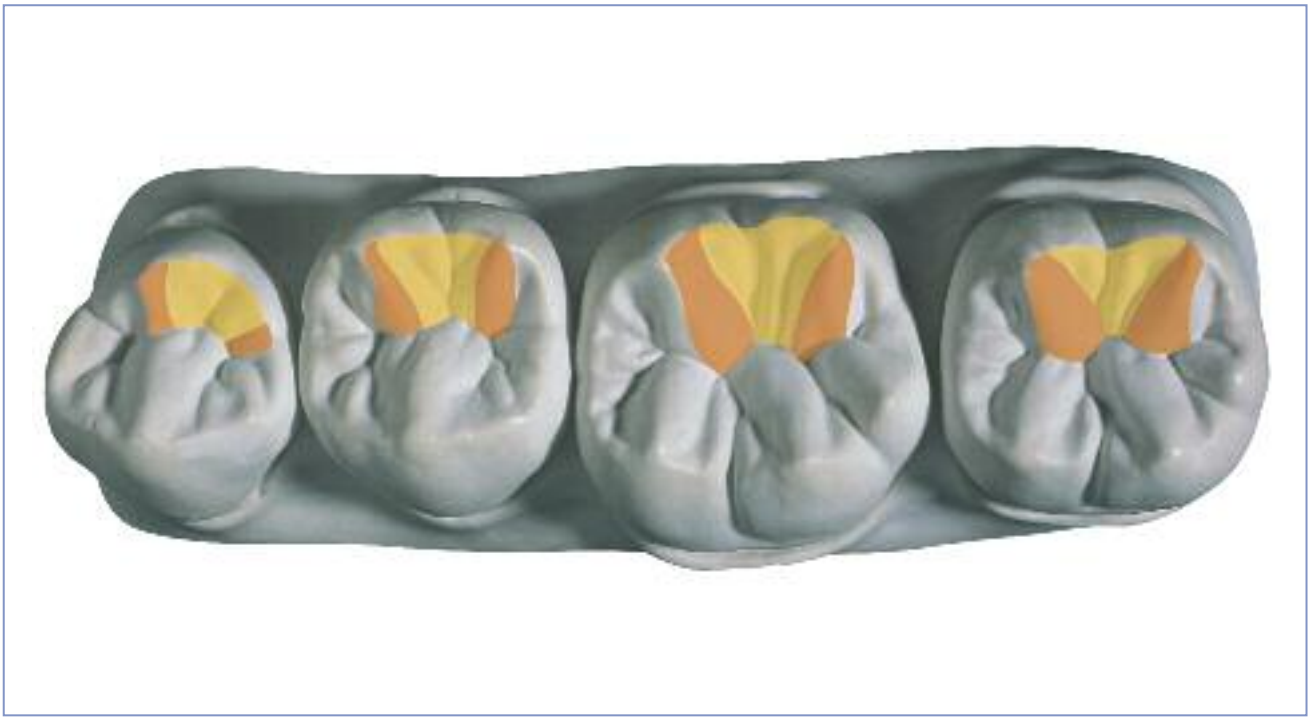
Furthermore, there is often an antagonist present that places certain requirements on the occlusion.

The SR Postaris DCL also demonstrates considerable advantages in this respect. The cusps, which are widely spaced apart, and the integrated concave freeway spaces of the cusp inclines are characteristics of the occlusal surface design. The working cusp has thus similar room to move as with the wax.-up technique. Ground in adjustments may well be necessary to match existing antagonists.

The design of the occlusal surfaces of the SR Postaris DCL with deep fissures, concave and convex cusp inclines, as well as interocclusal free-way spaces permit functionally appropriate results even under difficult conditions.

As for complete dentures, the following points have to be considered:

- A, B, C contacts are the objective
- The free spaces for movements according to the functional compass should be simulated in the Stratos 200
- An overjet should be included in posterior teeth



Cusps widely-spaced apart

tolerante Fossa

Set-up in complete denture prosthetics and implant-supported complete dentures

Integration of the most important set-up principles

This conception of the SR Postaris DCL basically permits the set-up according to the following principles taking the corresponding specific requirements into consideration:

- Concept of group function of laterotrusion and mediotrusion (Strack, Ivoclar Vivadent)
- Concept of sequential guidance on the laterotrusion side (Slavicek/Kulmer)
- Concept of lingualized normal bite situation (Mörser-Pistill principle, Gerber)
- Concept of balanced occlusion (Gysi/Hanau)
- Concept of anterior/canine control (Gausch)
- Concept of anterior/canine guidance (gnathology)

These methods can be applied in the Stratos 200 or specifically designed articulators.

Interlocking in normal bite and deep overbite situations

according to the biofunctional method from Ivoclar Vivadent.

Today, gnathology requires rather steep cusp inclinations that may be selectively and individually corrected.

Especially in partial denture prosthetics, steep cusp inclinations are a prerequisite for fabricating dentures adequate for the patient, as such restorations are influenced by the remaining dentition. In most cases, the preliminary stage of a complete denture is a partial denture. Therefore, angle class II often has to be considered during the fabrication of a complete denture. Hence, this was also kept in mind during the development of the SR Postaris DCL. The moulds of SR Postaris DCL, therefore, demonstrate a steeper cusp inclination than SR Orthotyp moulds.

Set-up is generally carried out according to the guidelines described in the "Handbook of Complete Denture Prosthetics" or "BPS – Prothetik mit System zum Ziel" by Kurt Fiedler. However, there are several differences between the concepts of occlusion of SR Orthotyp and SR Postaris DCL.
When setting up SR Postaris DCL posterior teeth, the following points have to be considered:

Mandible

First premolars

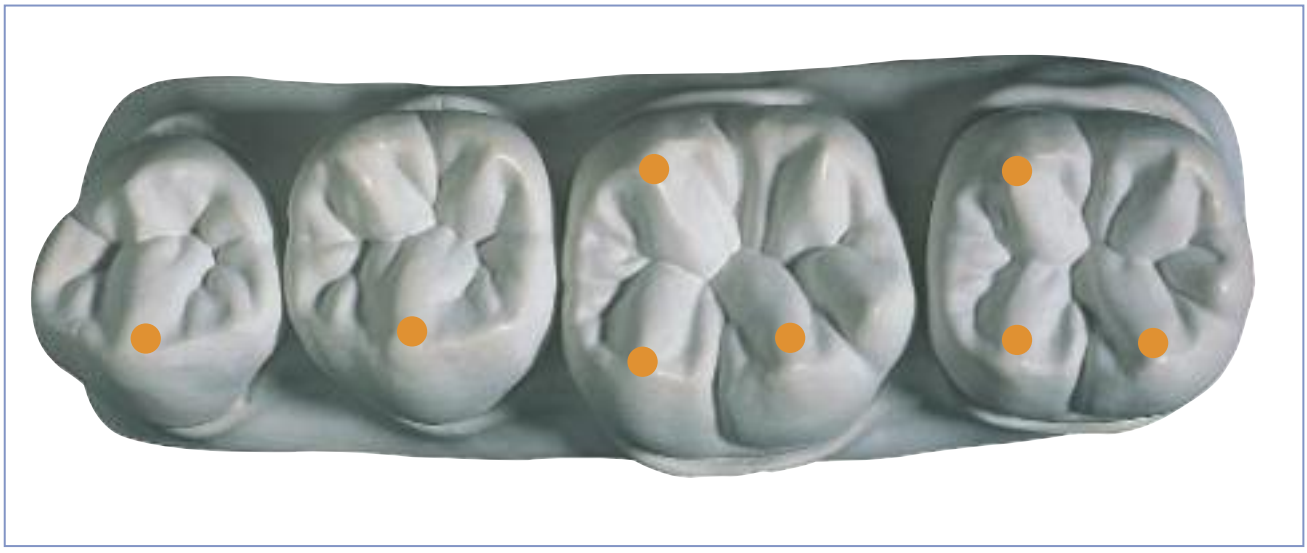
It has to be made sure that the cervical area is placed more to the buccal than it is with SR Orthotyp; hence, alignment directly in the line of the lower canine, same as natural teeth. The buccal cusp tip touches the template.

Second premolars

Only the buccal cusp should touch the template. The labial curvature should be aligned according to teeth numbers 3 and 4.

First and second molars

The molars are placed on the setting-up template according to the contact points pictured below. **Here, a harmonious course of the curve of Spee has to be observed.** The mesio-buccal cusp contact is not mandatory.



Contacts with the setting-up template

Maxilla
Basically, it has to be made sure that the **palatal** cusps come into contact with the **fossa** in the mandible. In the buccal area, an overjet of the upper cusp has to be aimed at.
The palatal cusps should touch the fossa of the antagonist tooth. This results in a buccal "one-to-two-tooth relation". Contacts of the marginal ridges are to be avoided if possible.

First premolars
The mesial fossa accommodates the buccal cusp tip of the lower first premolar. The palatal cusp touches the distal fossa of the lower first premolar. Therefore, the palatal cusp rotates mesially.

Second premolars
The palatal cusp come into contact with the distal fossa of the lower second premolar. The tip of the buccal cusp of the lower tooth number 5 touches the buccal incline of the cusp of the upper tooth number 5. The buccal cusp is located between the lower teeth numbers 5 and 6 and placed in contact to both teeth.

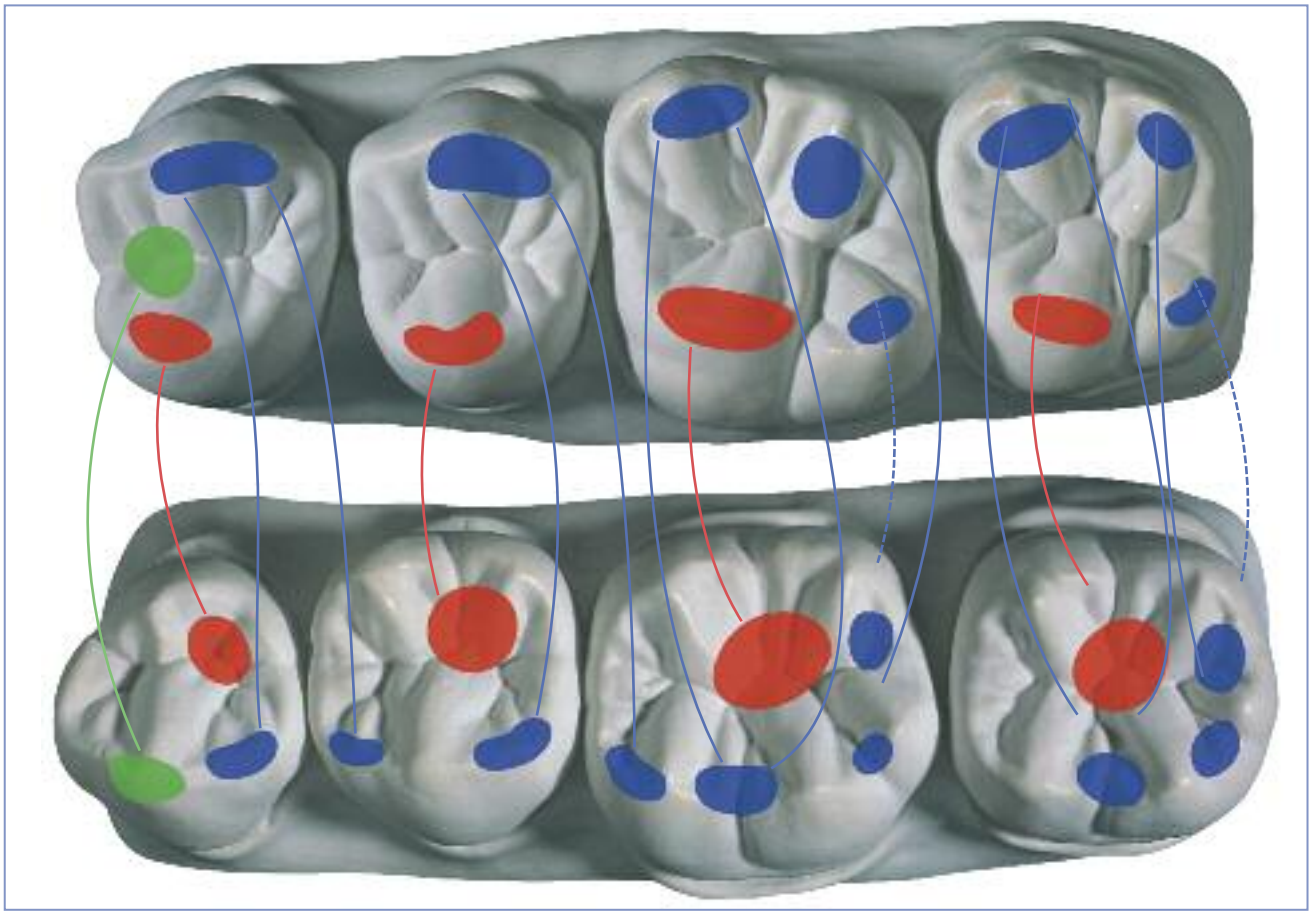
First molars
The mesio-buccal cusp lies between the two buccal cusps of the lower tooth number 6.

The mesio-palatal cusp of the upper first molar touches the central fossa of the lower first molar.

The disto-palatal and the disto-buccal cusp contacts to the antagonists are not necessary.

Second molars
The second molars are aligned in the same way as the first molars.

Recommendation
We recommend beginning the set-up of the **upper** posterior region with the first molar in reference to the antagonist.



Primary contact areas (cusp-fossa) Secondary contact areas Reverse contact areas (fossa-cusp)

Set-up in Complete Denture Prosthetics

Interlocking in a cross bite situation

The are basically two different variants for cross bite situations:

Variant 1

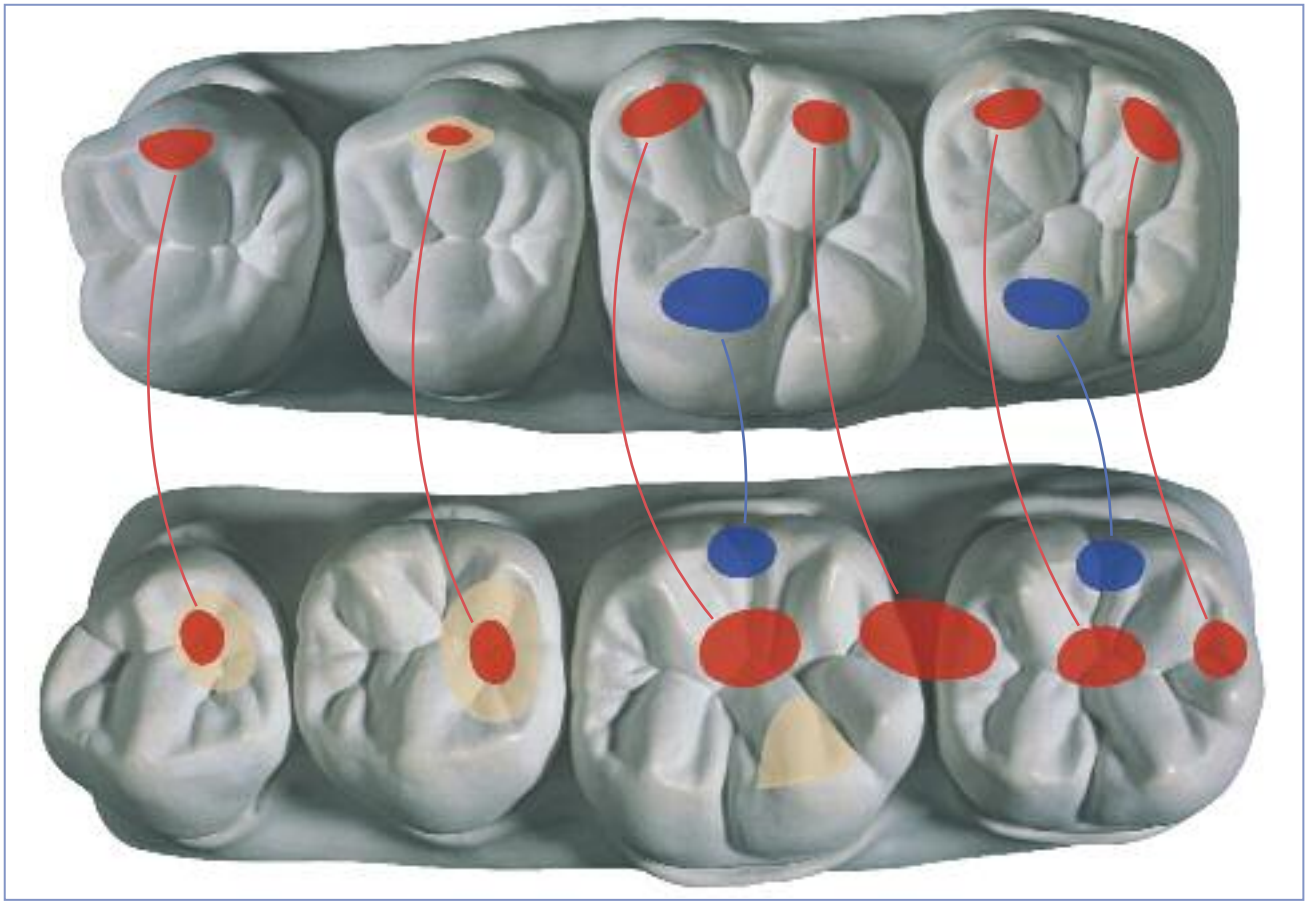
Set-up of anteriors already progenic and all posterior teeth in a cross bite situation.

Variant 2

Normal to edge-to-edge set-up in the anterior region and changing to cross bite in teeth 15/45 and 25/35.

Variant 1

If the anteriors are already set-up in a progenic situation (Strack) the posteriors have to be **slightly** modified by grinding, as shown in the following pictures. The modification of the lower tooth number 6 is necessary for undisturbed lateral movement. Subsequently, the teeth are aligned as shown in the picture below.



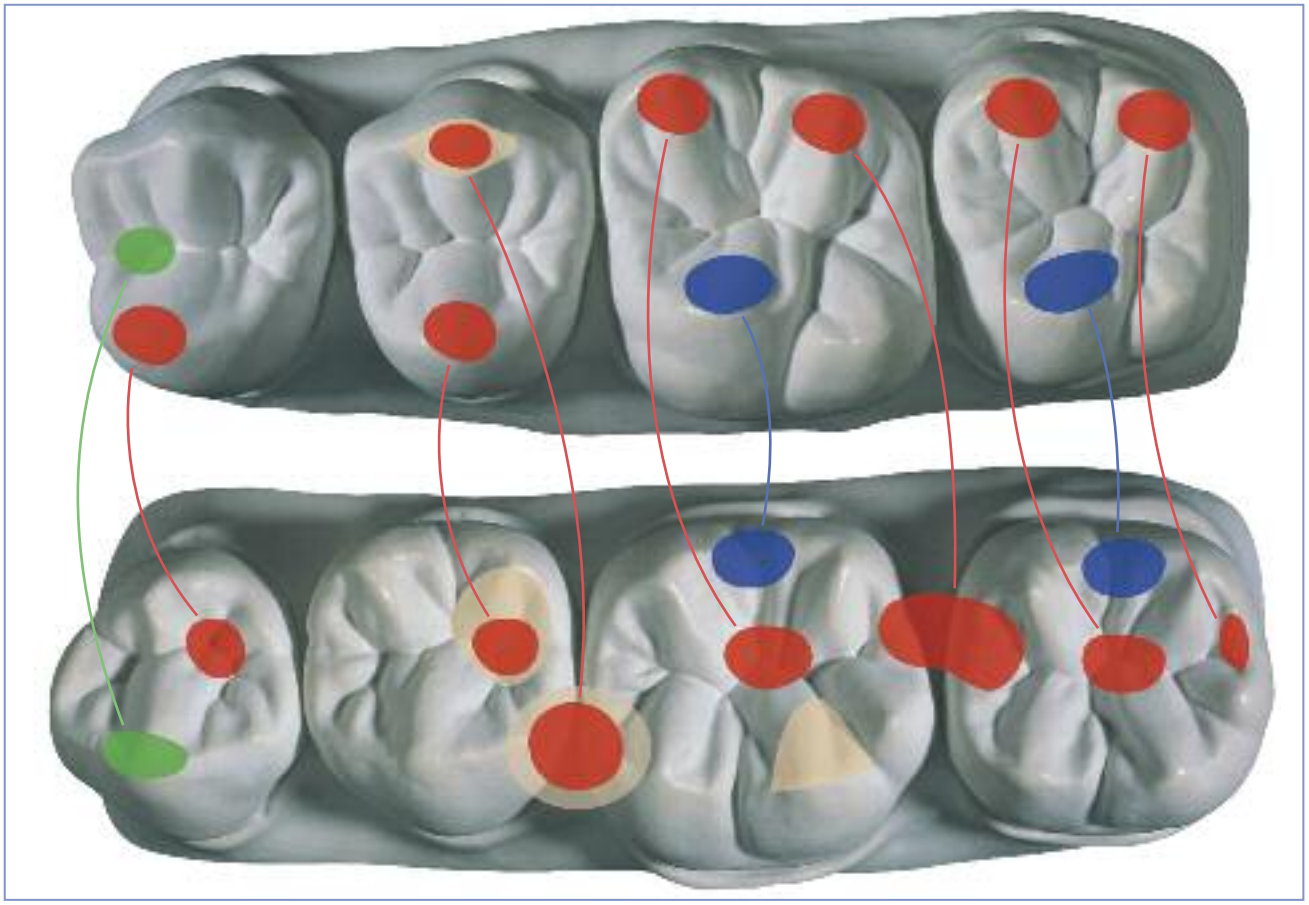
Recommended adjustment by grinding Primary contact areas (cusp-fossa) Secondary contact areas

Variant 2

Here, the set-up is effected in the usual manner up to the upper first premolar. Subsequently, the teeth have to be modified by grinding as shown in the picture. Now the upper second premolar is aligned. For that purpose, the buccal cusp of the upper premolar should be slightly rounded. Fossae have to be included in the lower teeth according to the position of the upper tooth. The two cusps of the upper tooth number 5 should be placed in one fossa of the lower tooth number 5.

In the buccal area, this fossa is located between the lower second premolar and the first molar, and in the lingual area approximately in the position of the disto-lingual cusp of the lower second premolar. This means that this cusp has to be modified to a fossa beforehand.

The mesio-buccal cusps of the upper first and second molars, i.e. the working cusps, should touch the central fossa of the lower first and second molars. For static reasons, it is important that the mesio-palatal cusps of the upper first and second molars contact the lower molars.



Recommended adjustment by grinding

Primary contact areas (cusp-fossa)

Secondary contact areas

Reverse contact areas (fossa-cusp)

Notes on grinding

Partial dentures

If contacts to existing antagonists have to be established, the occlusal surfaces have to be modified by grinding to achieve functional contacts.

It has to be kept in mind that the occlusal surfaces should be modified as little as possible. A, B, C contacts or A, B contacts, or B, C contacts have to be established if possible.

The working cusps should have enough freeway space to carry out free functional movements according to the functional compass, even when anterior/canine guidance is already present.

Complete dentures

Generally, adjustment by grinding should not be carried out before the set-up has been processed in acrylic. For this purpose, the use of an injection system (SR Ivocap) is favourable to avoid an increase in vertical dimension.

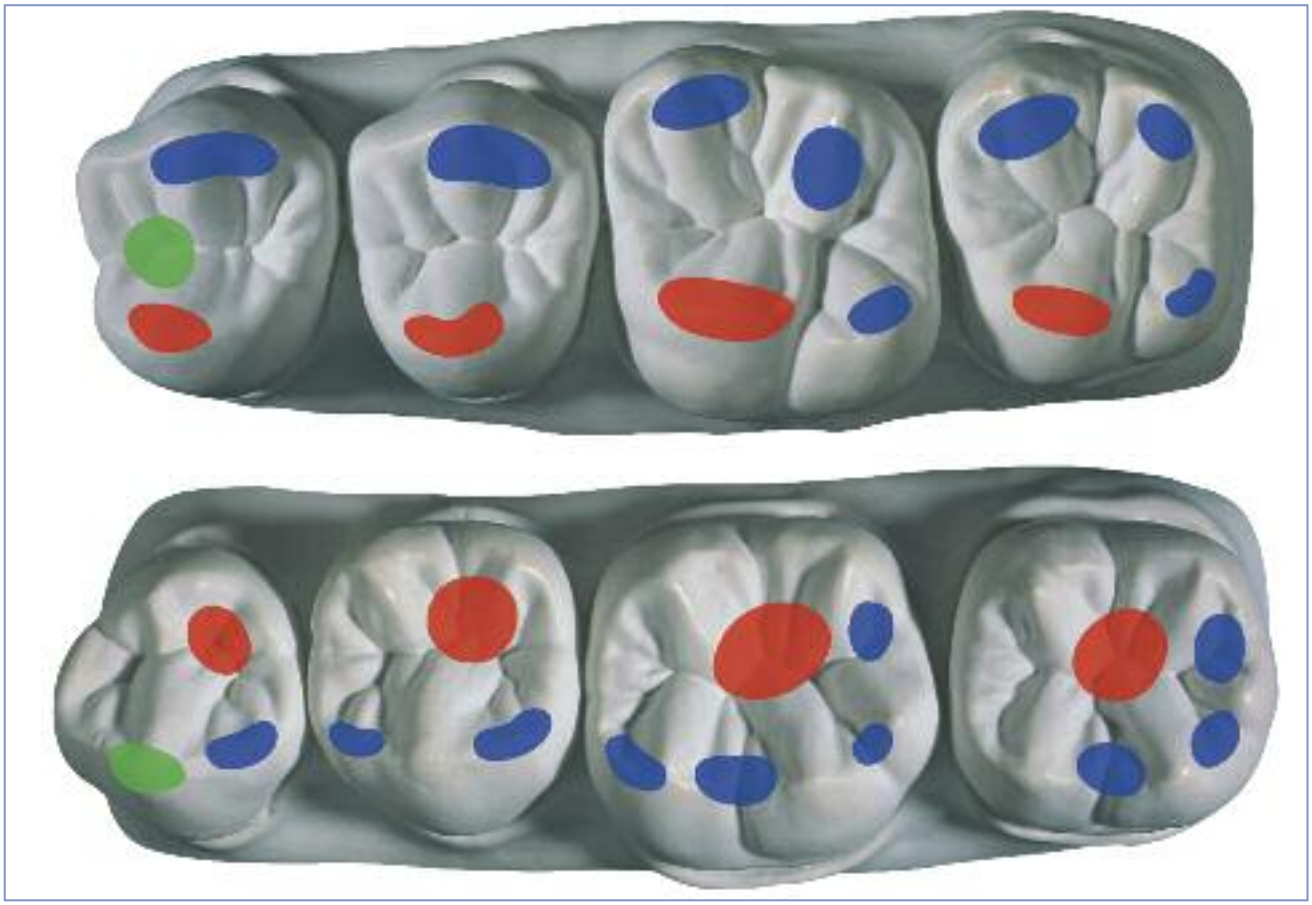
If the conventional packing technique is used, the increase in vertical dimension has to be corrected in a first step. This is carried out as follows:

- The working cusps should not be adjusted by grinding.
- Preliminary contacts in the antagonist fossa have to be reduced.
- A-contacts should be ground in the upper tooth.

As soon as the vertical dimension has been adjusted, the movement patterns have to be checked according to the functional compass.

The following antagonistic contact relations have to be aimed at, whereas it is not indicated to concentrate on mere 'points'. It is important, however, the achieve the principle of A, B, C contact areas.

These contacts must not be further ground!



Primary contact areas (cusp-fossa) Secondary contact areas Reverse contact areas (fossa-cusp)

Starting from these contacts, the following guiding facets are required. They should be checked in the recommended sequence. If necessary, they may be modified.

Protrusion

Retrusion

Laterotrusion

Lateroprotrusion

Mediotrusion

Side-Shift

Final functional pattern

SR Postaris DCL

Characterization of SR Vivodent DCL / SR Postaris DCL

The increasing aesthetic requirements place on removable dentures call for individual characterization of resin teeth. This has become an indispensable feature in the field of combine denture prosthetics to achieve state-of-the-art dentures.

The material composition of SR Vivodent DCL / SR Postaris DCL permits adjustments of shape and shade by means of SR Adoro (according to the corresponding Instructions for Use).

General notes

- Inhalation of grinding dust should be avoided.
- We recommend roughening the teeth carefully and wetting them with monomer to achieve an optimum bond with the denture base material (except when working with SR Ivocap).

Type of material

Modified, functionally cross-linked DCL (Double Cross-Linked) material.

For experts like you: Ivoclar Vivadent ICDE (International Centers of Dental Education)

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Part of the BPS System

SR Postaris DCL is a basic component of the trend-setting Biofunctional Prosthetic System with individual marketing for laboratory and dental practice.

BPS®

Advantages

BPS is a brand product permitting particularly efficient working with this functional interplay of the individual components. It is cost-effective and practice-oriented. Moreover, it provides the reliability of well founded, certified training, as well as personal consultation and support in all areas.

The most important components…

- Ideal materials, tools, and equipment based on years of research and development in our own laboratories.
- Well-founded education and training of our BPS partners in order to ensure correct processing of the materials in the dental offices and laboratories.
- The certificate confirming the correct use of the BPS products thus setting an international standard.
- Well-founded knowledge of all dental fields combined to a system, the first priorities of which are quality and the comfort of customers.

…and the result

All these valuable components have been combined to form a brand product that meets even the highest requirements. Each stage in life offers a wealth of opportunities. High-quality dentures help people explore them and enjoy their life to the fullest.

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Ivoclar Vivadent AG
Bendererstrasse 2
FL 9494 Schaan
Principality of Liechtenstein
Phone +423 / 235 35 35
Fax +423 / 235 33 60
www.ivoclarvivadent.com

ivoclar vivadent®
passion vision innovation