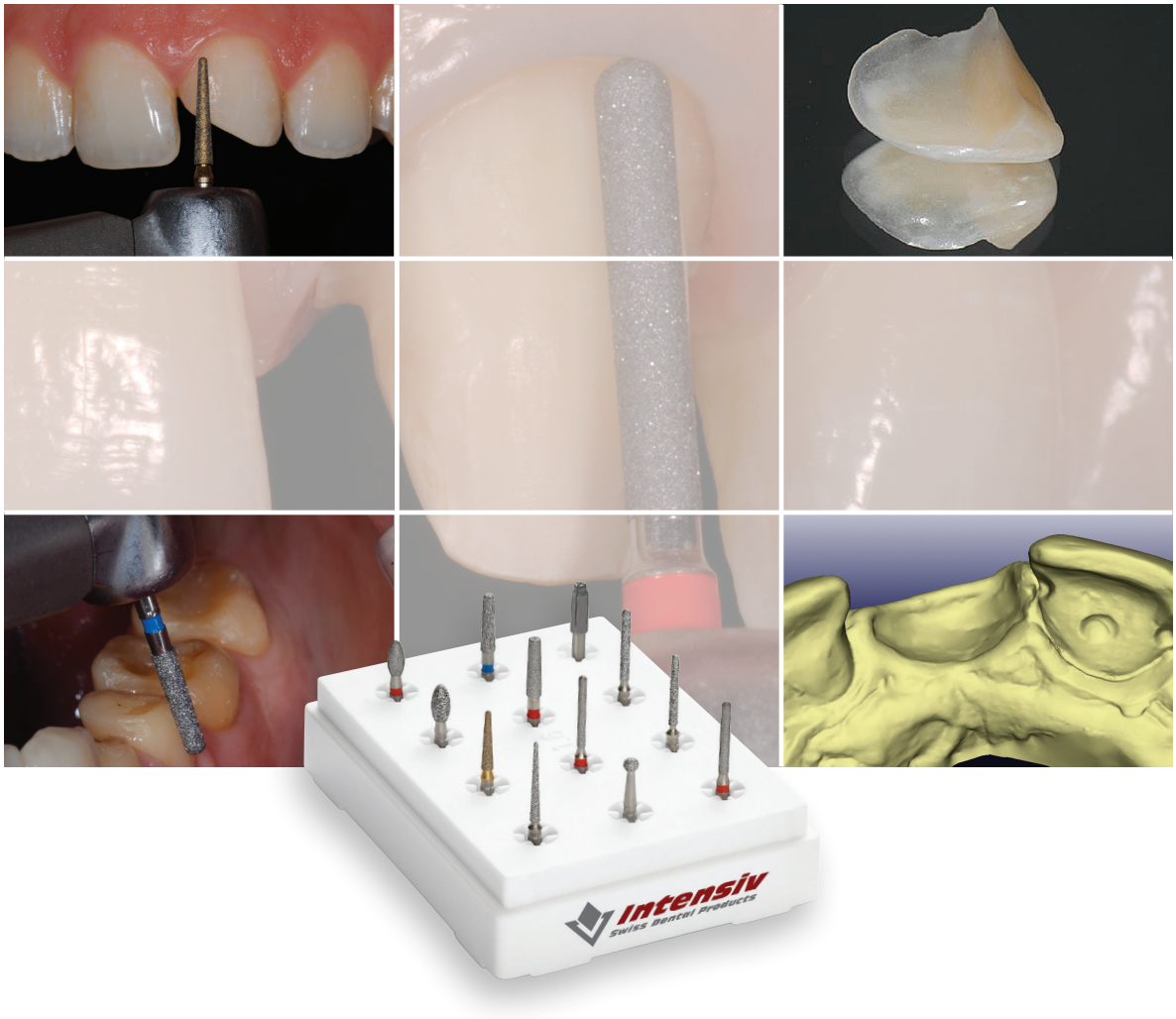
Intensiv Universal Prep Set

Prof. Christoph Hämmerle, University of Zurich
Prof. Irena Sailer, University of Geneva

New

Veneers, partial crowns, inlays/overlays, adhesive bridges, crowns and bridges



- For all forms of modern dental reconstruction
- From minimal invasive to conventional preparation techniques
- Suitable for optical impression
- Suitable for CAD/CAM generated restorations
- Universal use for full ceramic and metal-ceramic

Intensiv
Swiss Dental Products

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The spectrum of reconstructive dentistry is today more versatile than ever, as both requirements for minimal invasiveness as well as high aesthetics and stability of the reconstruction must be fulfilled.
Preparation with veneers, overlays (tabletops) and adhesive bridges, which aim at minimal tooth substance removal and are merely defect-oriented, are often used today where formerly conventional crowns and bridges were used. Through the adhesion to the tooth substance, modified requirements are now placed on the preparation.
In addition, a great variety of dental materials and manufacturing techniques are used at present. Full ceramic and metal-ceramic restorations can be used equally for almost all indications. Numerous stable ceramics have been developed in recent years, whose dental processing has been facilitated by new CAD/CAM technologies. These have different requirements for the preparation than conventional procedures.

Methods for optical impression, and therefore to digitize tooth stumps, are increasingly being used instead of classic impressions commonly applied in dental surgeries. All these computer-based technologies lead to the need for new approaches in the teeth preparation.
A modern instrument set for preparation must meet all these requirements, be universally applicable and still be clear and well-structured.
The "St. Moritzer Preparation Set" has been revised in collaboration with Dr. D. Thoma and Dr. G. Benic and is now adapted to modern-day requirements under the name "Universal Prep Set".
With this well-structured, rational set of instruments, various preparations for minimally invasive reconstruction, conventional crowns and bridges, for full ceramic and metal-ceramic, can be made.

Indications

- **Veneer preparation**
- **Crown preparation**
- **Full ceramic reconstructions**
- **Reconstructions with zirconium oxide ceramic**
- **Optical impression and CAD/CAM**
- **Minimal-invasive to conventional preparation technique**

The diameter of preparation burs and associated finishing instruments are ideally coordinated so that all prepared surfaces can be easily smoothed. With the 90 µm grit size of the burs, it is possible to efficiently and gently remove tooth material (no trauma to the pulp).The rounded shape of the shoulder preparation diamond instrument ensures both instruments can be easily guided between the buccal and interdental gingival line, even with large differences in level.

Also different abutment lengths can be easily treated with the 10 mm long working length. By selecting this comprehensive set with 11 diamond instruments, the user is guided through the individual steps and can achieve constant and long lasting preparation results.
Diamond-coating: the burs used for abutment reduction have a uniform diamond coating of 90 µm. The matching finishing diamonds have a grit of 40 µm.

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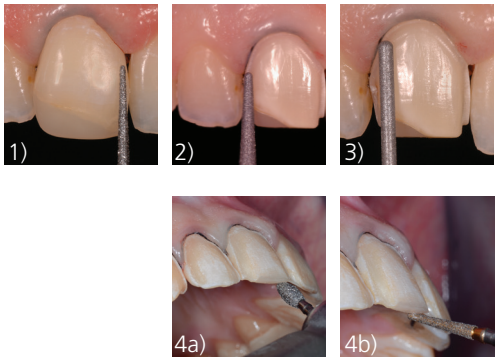
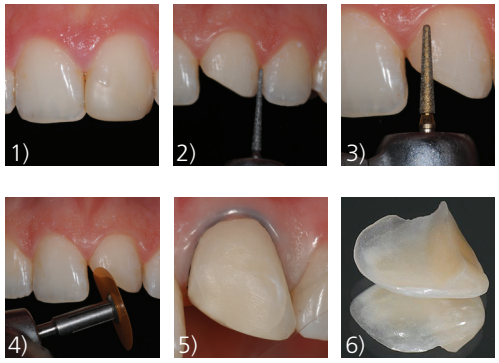


Classic veneer

1) Before preparation, an ultra-fine retraction thread was placed in the sulcus to protect the gingival margin. Interdental preparation with separation instrument FG D3
2) Axial reduction with veneer preparation instrument FG D18 GB, 0.5 mm wide shoulder preparation
3) Finishing of surface with narrow shoulder finishing instrument FG 307A
4a/b) Palatal completion with football instrument FG 250 or alternatively with veneer instrument FG D18 GB

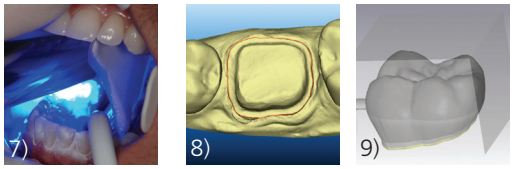


Additional veneer (purely defect-oriented preparation)

1) Initial finding: old aesthetically insufficient composite class IV restoration on tooth 21
2) Interdental defect-oriented preparation with separation instrument FG D3
3) Axial defect-oriented reduction with veneer preparation instrument FG D18 GB, tapering edge
4) Finishing of surfaces with Soflex discs, mounted in a mandrel
5) Veneer detail
6) Detail of completed one-sided zirconium oxide adhesive bridge

Full crown preparation

1) Shoulder preparation on tooth 21: placing of an ultra thin thread, inter-den¬tal separation with separation instrument FG D3, 1 mm wide circular internally rounded shoulder preparation with shoulder instrument FG 305L. The preparation set includes a narrow shoulder preparation instrument FG 307A for narrow tooth abutments and tight spaces
2) Incisal axial bevelling, prepared with shoulder instrument FG 305L, alternatively with FG 307A
3) Palatal concavity with front-side rounded football instrument FG 250
4) Finishing of the shoulder and axial walls: the stump is smoothed with the newly developed – analogous to the dimensions of the preparation instrument – cylindrical finishing instrument FG 4307N (wide) or FG 4305L (narrow)
5a/b) Finishing of the palatal concavity and breaking of all sharp edges with the football-shaped finishing instrument FG 4520
6) Completed buccal and occlusal preparation. Universal preparation suited for full ceramic and metal-ceramic, for CAD/CAM and hand-made reconstructions



7) Optical impression of a tooth stump 46 prepared for a full crown according to the procedure described above
8) Advantage of clear shoulder preparation – simple digital definition of preparation edge
9) Digital design of the full ceramic crown

Clinical images KBTM, ZZM Zurich

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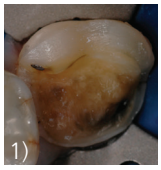
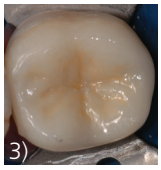
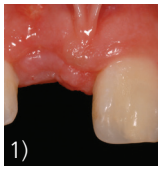
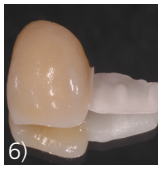


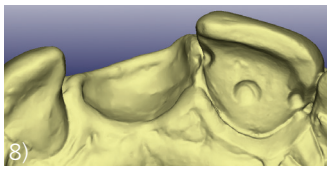


Partial crown, overlay (tabletop) preparation

1) Defect-oriented partial crown preparation with preparation instrument FG 8526, posterior finishing with finishing bur FG 4526
2) Full ceramic partial crown made of lithium disilicate reinforced glass ceramic
3) Status after the adhesive cementation under the rubber dam
4) Defect-oriented overlay (tabletop) preparation on a patient with dentition damaged by erosion and abrasion, rough preparation with preparation instrument FG 8526, occlusal preparation with football instrument FG 250
5) Finishing with appropriate finishing burs FG 4526 and FG 4250, posterior breaking of all sharp edges with Soflex discs clamped into the mandrel







Clinical images KBTM, ZZM Zürich

Adhesive bridge preparation

1) Initial clinical situation: loss of tooth 11 caused by trauma, young female patient, adjacent teeth caries-free – clinical indication for one-sided full ceramic adhesive bridge
2) Definition of a mesial and distal groove in the enamel in the desired direction of insertion, slightly palatal to the future contact point, with separation instrument FG D3
3) Expansion of groove in the enamel with conical veneer preparation instrument FG D18 GB, thereby fulfilling currently valid requirements for full ceramic and CAD/CAM production (apically rounded, 6° conicity, clear groove definition)
4) Detail of the clearly visible conical mesial groove
5) Preparation of a cingulum support in the enamel with ball instrument FG 201
6) Detail of the finished, one-sided zirconium oxide adhesive bridge, transference of grooves and support into the structure
7) Final clinical situation after adhesive cementation
8) Digital model of a similar adhesive bridge after optical impression – note the clearly visible mesial and distal grooves and the support

Various courses on dental preparation at Zurich University Zentrum für Zahnmedizin ZZM Zürich

Full ceramic reconstructions – a modular course for dentists and dental technicians

Further information:
www.zzm.uzh.ch/zahnaerzte/fortbildung/kursangebot/kbtm/vkrmodulkurs.html

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