



Guide Pin | Set 4410



for all-ceramic preparations with guide pin instruments as suggested by Dr. Julian Brandes.

The most vital advantages of an all-ceramic restoration are the aesthetically pleasing result and the acknowledged biocompatibility. In order to meet the high demands placed in all-ceramic restorations it is essential, in view of the limited tensile strength, to provide a suitable preparation. One of the decisive factors is the creation of a continuous supportive shoulder. Even in case of an exact shoulder of sufficient width it is essential to ensure the maximum conservation of hard dental substance.

A preparation Set specially adapted to adhesive restorations was compiled under the direction of Dr. Julian Brandes, Cologne. This Set fully meets the expectations placed in all-ceramic preparations and facilitates treatment even under difficult conditions. The focus is on the main instrument of the Set which comes with guide pins in two different lengths in order to guarantee adherence to the minimum wall thickness stipulated by the manufacturers of the ceramics when creating an even horizontal shoulder. The two different lengths of the guide pin not only allow the creation of an

exact continuous shoulder even in awkward situations; they even permit an old tangential or chamfered preparation to be converted into a shoulder preparation without problems. The auxiliary instruments also contained in Set 4410 are adapted to the shape of the main instrument and cover the entire treatment spectrum for all-ceramic preparations, ranging from inlays via partial crowns and crowns to post build-ups, in order to provide for the multiple indications which are particularly commonplace in quadrant reconstructions.

The Set 4410 introduces the newly developed Dentin-Scratcher which is used immediately prior to the adhesive integration for the mechanical conditioning of the dentin.

Most of the instruments are covered with fine grit which guarantees a gentle, conservative treatment. The easily manageable composition of instruments comes up to all expectations placed in a sophisticated preparation technique.

-  ● **8372P**.314.023
-  ● **8372PL**.314.023
-  ● **8847KR**.314.023
-  ● **8845KR**.313.025
-  ● **8846KR**.314.018
-  ● **8845KR**.314.018
-  ● **379**.314.023
-  ● **H50A**.314.010
-  ● **9653**.204.060
-  ● **6830LGK**.204.014

Controlled preparation with a short or a long guide pin:

These two new tapered diamond instruments with rounded edge and uncoated guide pin (P = pin) are the centrepiece of the Set 4410. The instruments' highly retentive cone angle favours the intensive support of the shoulder to the crown margin.

What distinguishes these two fine-grain instruments is the length of their guide pins.

They share an identical horizontal shoulder width of 0.60 mm and the same fine-grain coating to help achieve a workable compromise between an ideal surface roughness and a precise impression, however each instrument has its own merit: a controlled preparation can usually be realised with a 1.1 mm long guide pin (8372P.314.023), whereas preparations in hard-to-see areas of the mouth, where only tactile work can be carried out, are best prepared with the 1.6 mm guide pin (8372PL.314.023).



- Optimal result of an exact, homogeneous shoulder preparation thanks to a two-dimensional preparation based on a horizontal support with the aid of the pin and a vertical support resulting from the prepared shoulder at the same time.
- The choice of two guide pin lengths facilitates a completely controlled preparation even under adverse conditions: the shorter guide pin is used for aesthetical preparations and profound defects, whereas the longer version is recommended for large differences in height and for work in areas with poor visibility.



● 8372P.314.023



● 8372PL.314.023

Optimal shaping
for CAD/CAM
laser scanning



Its inorganic nature makes dental enamel an ideally suited base for a stable adhesive joint. Etching the surface of the enamel forms a basis for the micro mechanic interlocking with curing resin.

The application of the restoration becomes more difficult when the contact surface consists of dentin only. Dentin is not only a lot less stable and provides far less adhesion, it also gets contaminated with a range of different materials during the course of the preparation (saliva, blood, inorganic saline solutions, impression materials containing silicone, provisional plastics that cure in the mouth, provision cement etc.). In order to avoid complications during treatment, the contaminated dentin layer is slightly roughened with the DentinScratcher prior to adhesion, thus slightly freshening the surface. The mechanical conditioning of the dentin guarantees a successful treatment and a sound restoration.



The exact observance of the indication is imperative for successful all-ceramic restorations and convincing results. In order to avoid a potential contraindication, the preparation margin should always remain clearly visible. Creating a wall of sufficient thickness and the exact preparation of the shoulder prevent the fracture and consequential loss of the crown. Nowadays, exceeding the enamel limit is no longer a contraindication for all-ceramic restorations.

 ● 6830LGK.204.014



Application range:

(shown on a model)

1. The preparation is accomplished in one stroke. Shaping of subgingival crown margins by placing (several) threads, taking advantage of the temporary retraction (8372P.314.023).

2. The longer guide pin is used in case of great vertical differences in height (partial crowns), "closing" of shoulders in case of non-visible areas, box-shaped preparations for post build-ups (8372PL.314.023).

3. Creation of proximal boxes in case of inlays/partial crowns, for the widening of (vestibular) shoulders (8847KR.314.023).

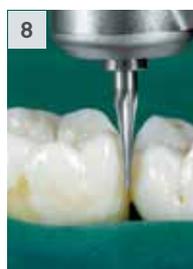
4. Setting the proximal preparation margin in case of close-knit teeth or small teeth (8846KR.314.018).

5. Preparation of inlays or intracoronal preparation in partial and complete crowns (Isthmus), particularly in the molar area (8845KR.313.025).

6. Shaping occlusal fissures in the molar and premolar area; for improved formfit and safe cementation; specially suited for small teeth and cervical inlays (8845.314.018).

7. For working on concave surfaces such as the palatal area of anteriors and occlusal surfaces of molars (379.314.023).

8. For working on surfaces that are to remain uncovered by the restoration, for example in case of inlay preparations for enlarging the proximal interspaces at enamel level or, in case of close-knit teeth, for separation in the root area (H50A.314.010).



9. For rounding the coronal part of the preparation; for easier impression taking and simplified manufacture of provisional appliances, improved fit especially in case of CAD/CAM restorations by creating convex minimum radii ≥ 1 mm (9653.204.060).

10. For roughening the dentin surface (dentin scratching) prior to insertion for decontamination and additional mechanical fixation (6830LGK.204.014).

Recommendations for use:

- Any periodontal treatments carried out at the same time should be completed prior to the finishing procedure.
- Fillings in the core can be placed at a later point as, contrary to conventional methods, a plane support of the instrument on the tooth during the preparation is no longer necessary in case of significant loss of substance.

- Guide pin instruments:
 - _{opt.} 40.000 rpm
 - red contra-angle

Dentin-Scratcher:

- _{opt.} 400 – 500 rpm
- blue or green contra-angle



Scientific advice:
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