

The Eastman CPD Clinical Crown & Bridge Bur Kit

This kit of burs has evolved through teaching provided at the UCL Eastman Dental Institute in the departments of Conservative Dentistry and Continuing Professional Development (CPD).

Optimum indirect restorations for teeth are demanding of the restorative dentist in a wide range of disciplines. The planned design of the tooth preparation is of major importance. This range of diamond grit burs aims to facilitate that preparation.

Burs were chosen with three main characteristics in mind:

- Profiles
- Associated medium and finer grit sizes
- Short and long reach options

Bur profiles determine the critical feature of wall alignment. Tooth preparations with near parallel walls and so minimal taper will provide the benefit of greatly enhanced resistance form. The Eastman experience has shown that parallel sided burs are less likely to lead to excessively tapered, minimally resistive, unfavourable preps. The optimum marginal configuration of a preparation for a cast metal restoration is considered to be a chamfer. For porcelain, a shoulder with rounded internal angle is preferred. Both these preparation cuts are made with the same profile bur but with a different depth of penetration by the side of the bur. These dome ended, parallel sided burs (881) are employed for both this axial preparation and are equally well suited to performing occlusal reduction on posterior teeth, with the preparation duly faceted to create sufficient clearance for the restorative material.

Medium grit diamonds (blue banded prefix M) used in an ultra-speed (air turbine) handpiece remove tooth structure or core material efficiently with only moderate heat generation aided by good access of coolant water at the contact interface. However a smoother surface on the preparation aids laboratory stages of crown construction and subsequent quality of fit. Some operators choose to polish their preps but the fine grit (red or yellow bands prefixes F and XF) diamond bur leaves a very adequate final finish. The increased width, and hence tip radius, of the finer grit burs creates the refined marginal contour.













Long and short teeth present in mouths with varied degrees of opening demand both long and short reach burs to perform the axial preparation with the parallel burs. Bear in mind that longer burs place greater demands on handpiece bearings and on operator skills and should be running at full speed before being applied to the tooth. Two of the dome ended parallel sided patterns are therefore also available with short shanks (881 010 8SS and 881 014 8SS).

Anterior teeth need equivalent clearance in the palatal (lingual) concavity. The matched burs with a shape likened to a rugby ball (pattern 379) are ideal for this and can be manipulated to cut curves of varying radii.

Four additional profiles have been included that enhance the versatility of the kit:

The small spherical (round) diamond (801 014) that is useful for some marginal preparation for all-porcelain restorations, for example. The fine flame-shape (862) that is particularly useful for breaking through a contact point whilst avoiding the adjacent tooth. The resulting space allows easier alignment of the dome-ended burs for precise axial preparation. A short flat ended taper bur (845) that is useful for refining or cutting retentive boxes and axial grooves. This leaves one further bur (811), which may be a useful addition for achieving appropriate reduction in situations of compromised or limited access.

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Pattern Number	Grit	Quick Order Code	Region of Use/Uses
801 014 1.4	Medium	M002 	Versatile bur with many applications.
845 012 4	Medium	M250 	Refining or cutting retentive boxes and axial grooves.
881 010 8	Medium	M240 	For axial, incisal and occlusal reduction.
881 014 8	Medium	M244 	For axial, incisal and occlusal reduction.
881 010 8SS	Medium	M241 	Short shank. Use as above typically in the posterior region.
881 014 8SS	Medium	M245 	Short shank. Use as above typically in the posterior region.
881 016 8	Fine	F246 	Finishing of preparation cut with smaller bur of the same profile.
881 016 8SS	Fine	F247 	Short shank. Use as above in the posterior region.
811 033 5	Medium	M041 	Versatile bur with many applications.
862 010 8	Fine	F391 	Breaking through a contact point whilst avoiding the adjacent tooth.
379 023 5	Medium	M054 	Providing clearance in the palatal (lingual) concavity.
379 023 5	X-Fine	XF054 	Final finishing of palatal (lingual) concavity reduction.