

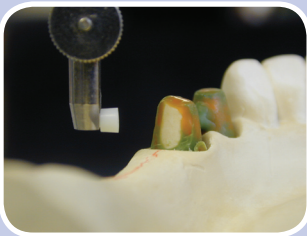
YTZP Zirconia Patrix Instructions for PFM

XPdent Corporation, the exclusive distributor of Bredent products in the U.S. is proud to announce the new precision engineered, YTZP Zirconia Ball Attachment that is used in conjunction with the VKS-SG's retentive matrices. XPdent's zirconia ball provides the same functional and aesthetic benefits that a cast alloy attachment does without the susceptibility of direct wear or breakage due to the high fracture toughness (1,200mpa) and low wear features of YTZP zirconia. Dental technicians can incorporate the YTZP zirconia ball patrix into traditional crowns, bridges, implant bars, custom implant abutments and of course, all ceramic restorations for totally specialized combinations of prosthetic and restorative work. Available in a 2.2mm diameter ball, the YTZP Zirconia Ball takes attachment cases to the next level by offering patients optimal aesthetics, biocompatibility and a wear resistance that only yttrium stabilized zirconia can provide.



YTZP Zirconia Ball
Bond-In Attachment System

Step 1



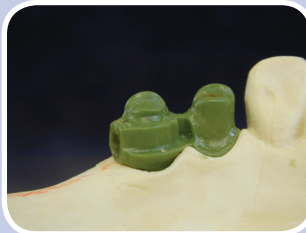
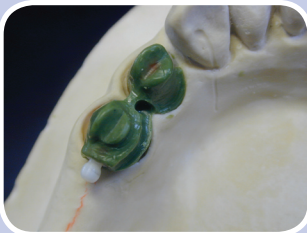
Using the 2.2mm VKS Paralleling Mandrel (# 360 01 130) and a surveyor, place the zirconia patrix right up against the die/prep wall, and keep the ball approximately 0.5mm above the crest of the ridge.

Step 2



Coat the die with a small amount of Vaseline as a separator and then apply Pikuplast Modeling Resin (Transparent colored Pikuplast was used in this picture but any color may be used) onto and around the base of the zirconia patrix and the die as well.

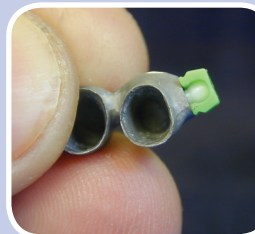
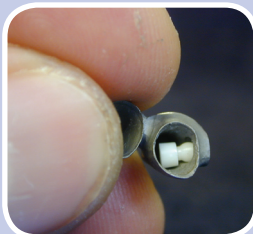
Step 3



Finish the wax-up and then carefully twist and push the zirconia ball patrix through the crown wall so that it comes out the bottom of the coping. Use a small hemostat or tweezers to aide in removing the zirconia ball from the coping. The coping now has a tapered receptacle for bonding-in the zirconia patrix later on.

IMPORTANT: A lingual arm shoulder rest with a mesio-lingual interproximal vertical groove is required for stability and the distribution of occlusal forces. Sprue and cast without the zirconia patrix.

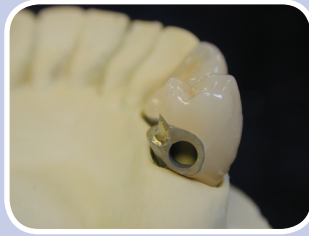
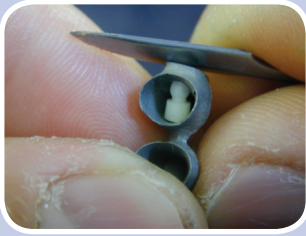
Step 4



After casting, fit the metal coping and inspect the tapered receptacle and carefully remove any casting discrepancies if any. **DO NOT** over adjust the tapered receptacle for bonding-in the zirconia patrix because it may create an inaccurate fit and a non-parallel path of insertion.

Tip: Test the zirconia patrix and make sure that it seats properly inside the tapered receptacle by pushing it up through the coping and out the tapered end.

Step 5



Remove zirconia ball patrices, finish the metal-work and bake porcelain on the copings (without the zirconia ball attachments). Make sure to keep the tapered receptacle clean and free of ceramic materials, then finish and glaze the crowns.

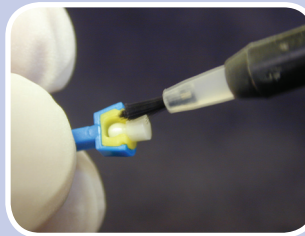
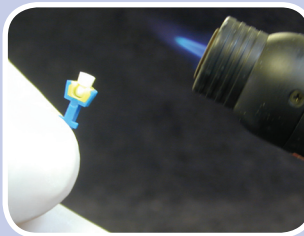
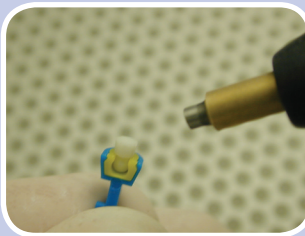
Step 6



Once the crowns are finished, you must be certain that they will not require additional oven firings. Any correctional bakes need to be done **PRIOR** to bonding-in the zirconia patrice. Oven firing will not be possible after bonding-in of zirconia ball patrice without damaging the component.

Tip: Test the zirconia patrice and make sure that it seats properly inside the tapered receptacle by pushing it up through the coping and out the tapered end.

Step 7



Snap a VKS-OC or SG green or yellow matrix over the zirconia ball to protect it and then sandblast its tapered base using 50 micron aluminum oxide. Tip: Use a 2.2mm Castable Matrix Housing to help you secure the zirconia patrice while sandblasting.

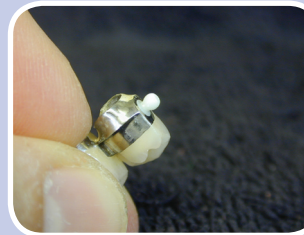
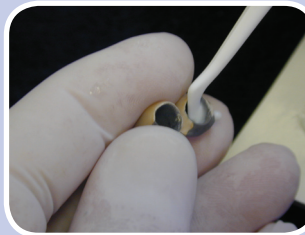
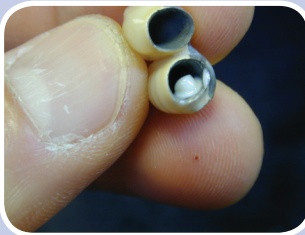
Strong Recommendation: Use the Silano-Pen system (#32000470) to chemically treat the tapered base of the zirconia ball patrice prior to bonding in order to enhance the bond strength. Follow Silano Pen instructions for correct silanization procedure.

Step 8



Install the zirconia patrice and make sure that it seats properly inside the tapered receptacle by pushing it up through the coping and out the tapered end, then leave it there.

Step 9



Tip: Perform this step off of the die model.

Slightly push the zirconia patrice from the ball, just enough to expose its tapered base through the inside of the coping. Do not remove the patrice completely. Using DTK adhesive (#54000106) coat the tapered base of the zirconia patrice then re-insert the patrice by pushing it through the coping and out the tapered end. Do not place crowns with zirconia ball back onto the model before DTK sets. Allow the adhesive to set according to Bredent's instructions. Afterwards, carefully remove any excess bonding material and check the crown fit on the die. Check for any excess adhesive on the ball and pick it off using a scalpel and proceed to fabricate the RPD.