

# YTZP Zirconia Ball Attachment: Instructions for Use in Fabricating Implant Bars

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 (1,100mpa) and low wear features of YTZP zirconia. Dental technicians can incorporate the YTZP zirconia ball matrix 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**

A mandibular cast with 4 implants to be connected with a bar.

**Step 2**

Use a 0° plastic bar pattern and drill a 3mm hole in the area(s) where the zirconia ball attachment will be installed.

*Tip: Use Pikuplast modeling resin to connect the bar sections to the implant waxing sleeves. Pikuplast Transparent (#54000216) was used here; however any color may be used.*

**Step 3**

Using a surveyor and a 2.2mm VKS Paralleling Mandrel (#36001130); secure the zirconia ball and place it into the pre-drilled holes in the plastic bar pattern.

*Note: Make sure that the mandrel is flush with the plastic bar pattern to ensure a proper installation of the zirconia ball.*

**Step 4**

Use Pikuplast resin to connect the zirconia ball attachment to the plastic bar pattern as shown above.

**Step 5**

Contour the attachment areas of the bar with KBI Hard c&b milling wax (#51000920) in preparation for wax milling.

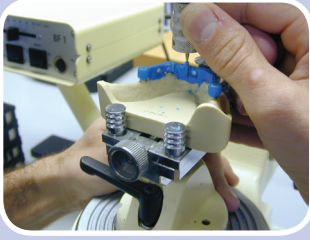
Prior to wax milling; carefully remove the excess Pikuplast resin that retains the zirconia ball to the plastic bar pattern using a small round bur

Gently push out the zirconia ball attachment.

**Step 6**

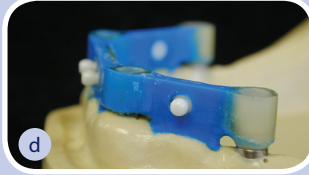
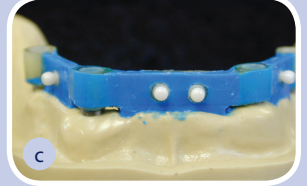
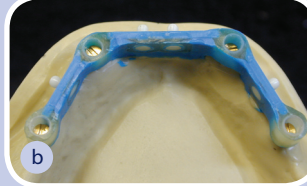
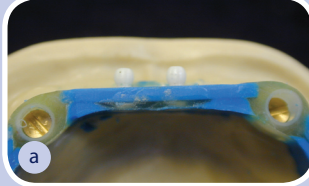
Check the attachment receptacles for a clean and accurate formation.

### Step 7



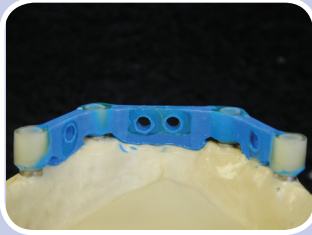
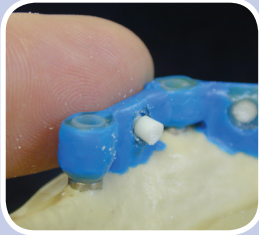
Place the zirconia ball attachments back into the plastic bar pattern for space references and begin milling the wax to an ideal contour.

### Step 8



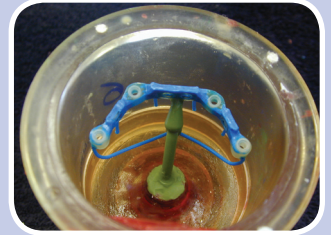
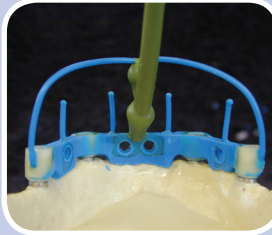
Finish the wax-up of the pre-milled implant bar and inspect the attachment interface areas for clean and accurate formations.

### Step 9



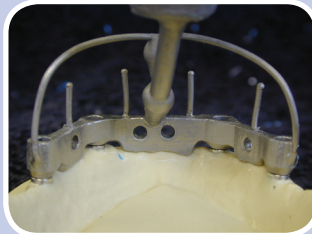
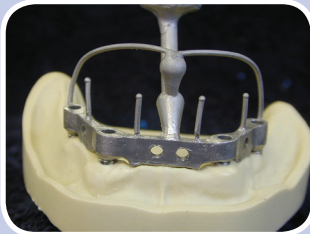
Once again, gently push out the zirconia ball attachments.

### Step 10



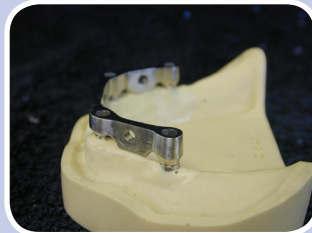
Sprue the implant bar pattern following the Bredent Casting Technique according to Sabath (#992961GB).

### Step 11



The implant bar casting

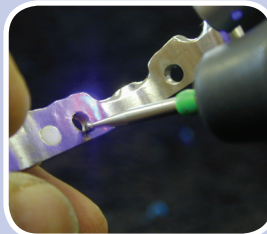
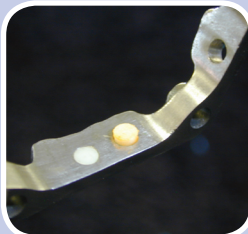
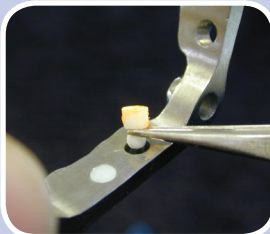
### Step 12



The implant bar frame is milled to a finish.

*Note: Low profile bar design with a flat occlusal surface to provide a wide stance platform for stabilizing an overdenture with overcasting.*

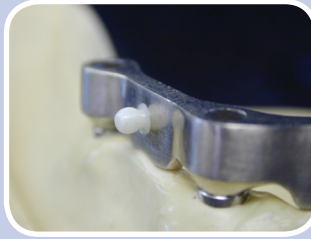
### Step 13



Use the XPdent Universal Wireless LED Black Light with UV paste (#X070040) to precisely fit-check the zirconia balls back into their receptacles. Paint the base of the zirconia ball attachment with the UV Paste and place it into the bar. Remove the ball and illuminate the area with the black light unit and selectively grind the bright orange "high-spots."

*Note: DO NOT over-adjust the attachment receptacles in the bar.*

### Step 14



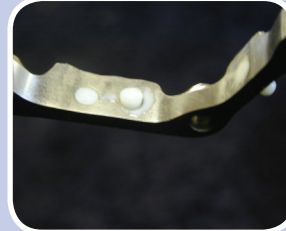
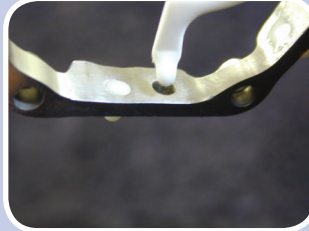
Make sure that all zirconia ball attachments are accurately fitting into the implant bar frame and then remove them.

### Step 15



We highly recommend using the Silano Pen bonding system (#32000470) to increase the bond strength of DTK Adhesive (#54000106) to the cast alloy implant bar when cementing the zirconia ball attachments

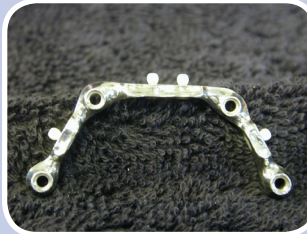
### Step 16



Apply DTK Adhesive following Bredent's instructions for the product. Place a small drop into the Silano-Pen treated receptacles and push in the zirconia ball attachment. Wipe excess DTK off with an instrument and make sure that the attachment base is flush with the implant bar. Check the ball and neck area of ball for excess adhesive.

*Tip: Use a VKS-SG 2.2mm green or yellow matrix to help secure the zirconia ball attachment while DTK adhesive is setting.*

### Step 17



The cast implant bar frame with bonded 2.2mm Zirconia Ball Attachments is finished and ready for the fabrication of the overcasting.