

Subject:
Product Release: Gold Abutments - Non-Engaging - Implant Level

Date: 9-06-08

To: Implant Direct Customers

Gold/Plastic Abutments for multi-unit screw-retained restorations!!!!!!

Implant Direct introduces the Non-Engaging, Implant Level, **Gold/Plastic Abutment** line of prosthetics for the RePlant, RePlus and ReActive product line. Available for the 3.5mmD, 4.3mmD and 5.0mmD tri-lobe platforms, these abutments are 100% compatible with corresponding tri-lobe platform diameters from competitor product lines.



6035-41 3.5mmD Platform

6043-41 4.3mmD Platform

6050-41 5.0mmD Platform

Implant-Level Non-Engaging Gold/Plastic Abutments are used in the laboratory fabrication of implant-level multi-unit splinted restorations: 1) A screw-retained partial denture. 2) An implant level multi-unit bar (limited clearance).

The plastic sheath is modified and incorporated into the wax framework pattern. The laboratory converts the plastic/wax design into a metal of choice utilizing the “Lost Wax” technique. The gold base (referred to as gold due to its high noble metal content is NOT gold in color) is incorporated into the final metal framework providing a machined interface which contacts the top of the implant directly.

These abutments are supplied with the NEW **Dual-Grip Abutment Screw**, [1000-22] with the 4.3mmD and 5.0mmD abutments and the [1000-23] with the 3.5mmD abutments. The screw is designed to accommodate both the standard 1.25mmD Hex Tool and the competitor’s Uni-Grip Driver. Please review Product Release on new Dual-Grip Screws.

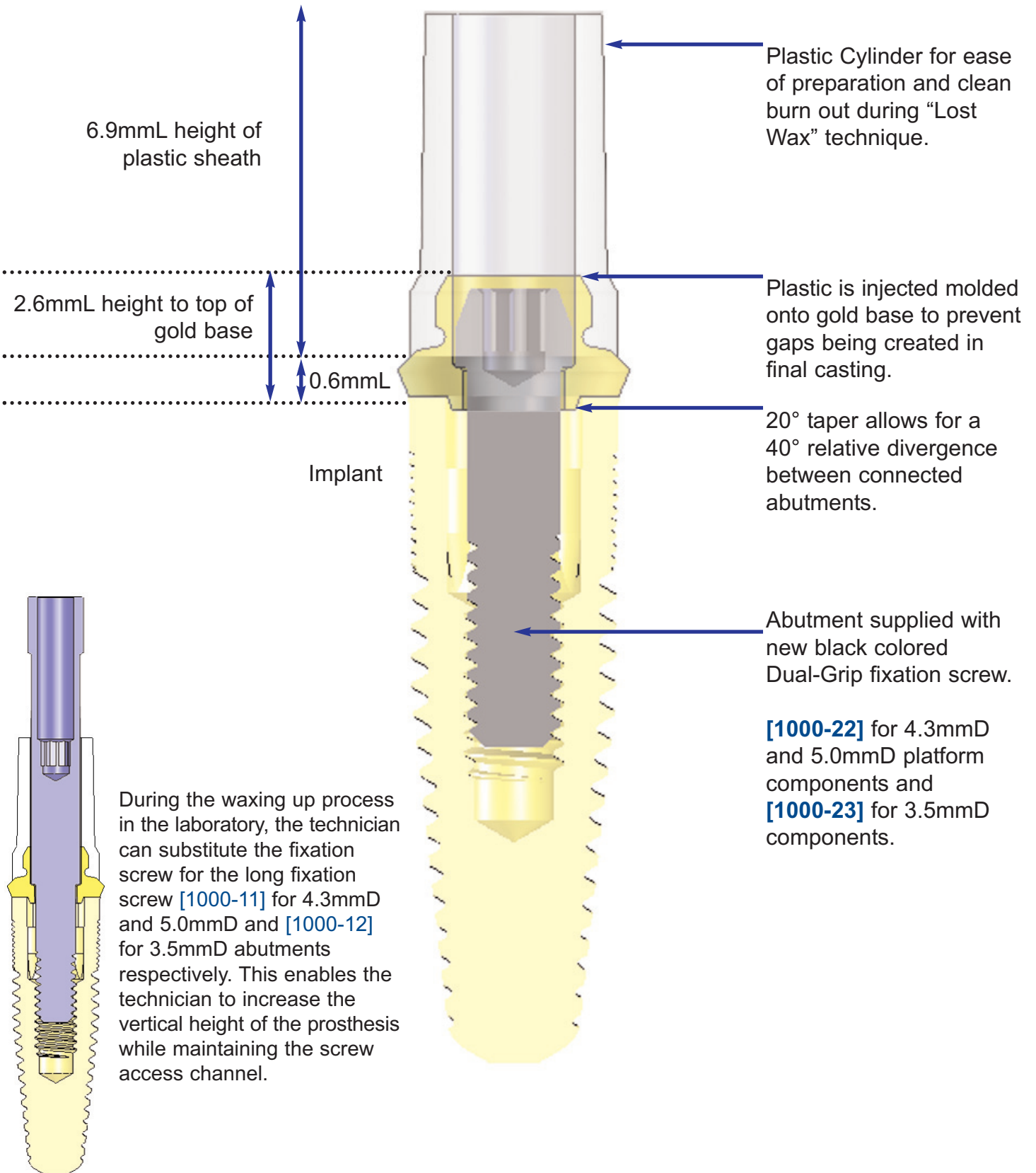
The USA list price for the Gold/Plastic Abutments is \$100.00.

27030 Malibu Hills Road, Calabasas Hills, CA 91301

Phone: 818.444.3333 opt2: 888-NIZNICK (649-6425) Fax: 818.444.3400

w w w . i m p l a n t d i r e c t . c o m

Abutment Dimensions and Specifications:



Casting to Gold Abutments/Copings

STEP 1-FABRICATE A WORKING CAST:

Fabricate a working cast containing an Implant Analog according to routine procedures.

STEP 2-ASSEMBLE AND PREPARE THE PATTERN:

Use the abutment screw to attach the gold alloy base (60% Gold, 20% Palladium, 19% Platinum and 1% Iridium) and plastic sheath assembly to the Implant Analog in the working cast. If adjustment for occlusal clearance or angulation is necessary, reduce the plastic sheath in height. Do not reduce its thickness, however, in order to ensure complete casting. Create the abutment pattern directly over the plastic sheath. Apply a thin flash of wax to seal the margin between the plastic sheath and the base. Because porcelain will not bond to the gold alloy base, extend the flash of wax onto the base to wherever porcelain will be applied. A system specific waxing screw is available as an option to using the plastic sheath.

STEP 3-SPRUE THE PATTERN:

Attach the main sprue to the thickest part of the pattern. An optional auxiliary sprue may be placed close to the junction of the assembled base and plastic sheath [Fig. 1]. Place a vent sprue [Fig. 1] opposite the casting sprue. This will help remove gasses and facilitate the inflow of alloy during casting.

Carefully flow a thin layer of wax around the hexagon/octagon of the base component, if present, to act as a heat gap while casting. This will also facilitate divesting the cast abutment. Caution: To prevent unwanted casting, be careful not to wax an access trough from the thin flash of wax to the machined hexagon. A single abutment per casting ring is recommended. This will minimize the risk of damage to the abutment during its removal from the casting ring, or when cutting it off the sprue.

Step 4-Invest, Burnout and Cast the Pattern:

Invest the pattern according to the investment manufacturer's instructions. A high-heat, phosphate-bonded investment material is recommended. Carefully pour the investment material to prevent the formation of air bubbles. Follow the investment manufacturer's instructions for burnout to be sure that all of the plastic and wax or acrylic are removed from the invested pattern. A two-stage burnout procedure should be used. Caution: The temperature of the casting alloy must not exceed 2,350°F (1,288°C). If an open-flame torch is used to melt the casting alloy, care must be taken not to exceed this casting temperature.

Carefully follow the casting instructions from the manufacturer of the casting alloy. The coefficient of thermal expansion for the gold alloy base is $11.9 \times 10^{-6} / ^\circ\text{C}$ (25-500°C). The casting alloy and porcelain should be compatible. Allow the ring to bench-cool before divesting.

STEP 5-DIVEST, REFINE, FINISH AND POLISH THE CASTING:

Extreme care must be taken when divesting the cast abutment in order to prevent structural damage. Investment stripping solutions can be safely used, as in any porcelain-fused-to-metal (PFM) procedure.

Attach the cast abutment(s) to a corresponding Implant Analog(s). This will serve as a handle to facilitate finishing procedures, and will protect the component's implant mating surfaces, which must not be altered.

STEP 6-COMPLETE THE RESTORATION:

When applying porcelain, carefully follow the instructions and temperature guidelines provided by the manufacturer. Be sure to apply the porcelain only to the cast PFM alloy. Follow standard laboratory procedures to highly polish only those areas of the metal abutment that will contact the soft tissues. Caution: Do not polish any of the implant mating surfaces.

STEP 7-DELIVER THE FINISHED PROSTHESIS:

Tighten the abutment screw to 30 Ncm with a 1.25mmD Hex Tool [HT1.25] and properly calibrated Torque Wrench [TW30].

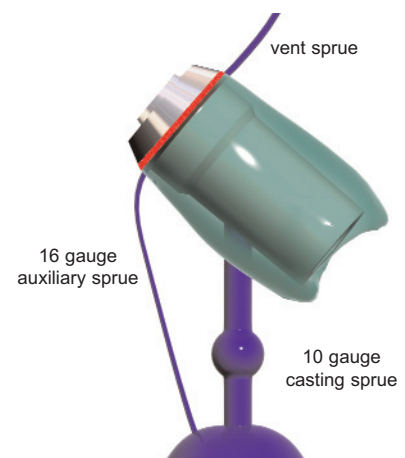
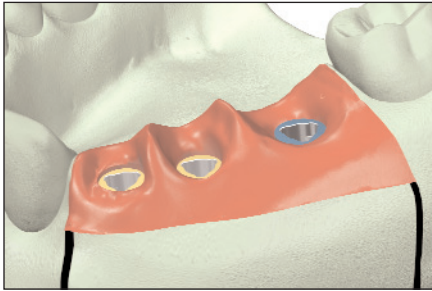
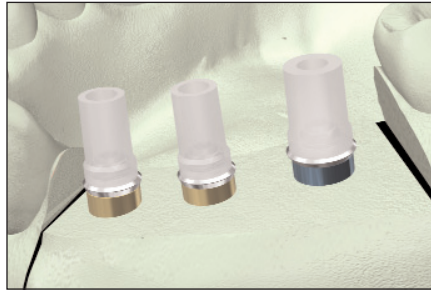


FIGURE 1: Example of sprued sheath pattern with auxiliary vent.

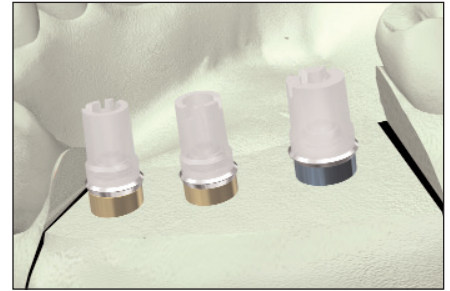
Gold/Plastic Non-Engaging Abutment Technique Sheet



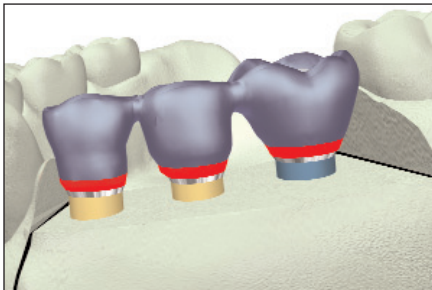
1. Use the fixture mounts or implant level transfers to make impression. Follow standard laboratory procedures to fabricate the soft tissue working cast.



2. Remove soft tissue from working cast and attach platform specific non-engaging gold/plastic abutments to implant analog with corresponding fixation screw.



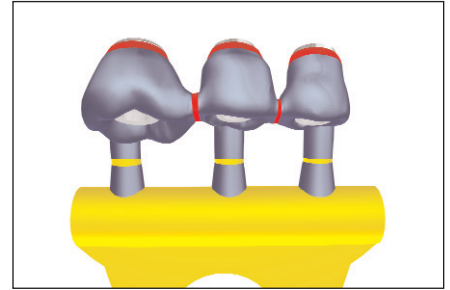
3. Trim the plastic sheath to provide adequate clearance with adjacent and opposing dentition. If additional height is required use waxing screw to maintain screw access channel.



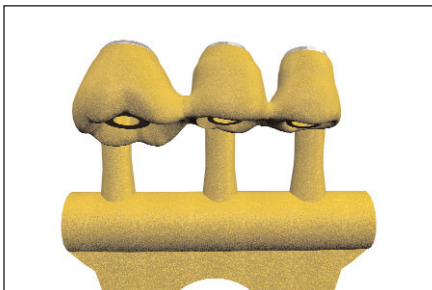
4. Use a combination of wax and burnout resin to fabricate the framework pattern. Carefully apply a thin layer of wax at the junction of the plastic sheath and gold base to ensure a smooth transition between cast alloy and gold base.



5. Place a narrow cut between the sections and then lute together with burnout resin or wax. This procedure is followed to relieve the inherent contraction distortion between adjacent components during the waxing process. This contraction distortion can lead to inaccuracies in the final restoration.



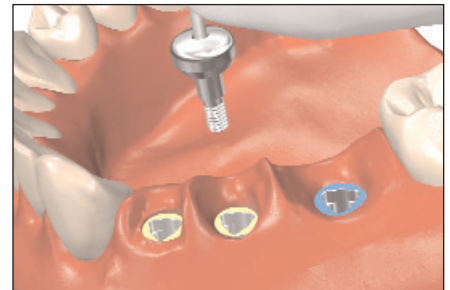
6. Sprue and connect framework to a runner bar then assemble to rubber casting base. Remove finger oils from metal base and do not use a debubbler when investing the gold/plastic components. Invest, burnout and cast framework (Noble or High Noble alloys) following standard laboratory procedures.



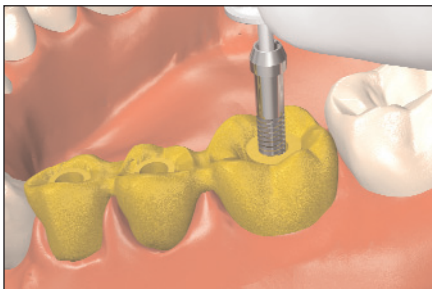
7. Divest the casting using a combination of chemical investment removers and blasting with glass bead. Care must be taken to prevent damage to abutment interface.



8. Place framework back on working cast, thread fixation screws through access holes and finger tighten to confirm a passive fit. Send back to clinician for framework try-in.



9. Remove framework from working cast. Clean and sterilize according to standard clinical procedures. Use corresponding tool to remove healing components.



10. Seat framework on implants. Thread a fixation screw through the most distal component. Inspect and confirm passive fit. Return the framework to laboratory.



11. Prepare the framework for application of veneering material of choice, either porcelain or composite. Polish and return to clinician for final placement.



12. Remove healing components. Sterilize and seat prosthesis. Confirm fit, contour and occlusion. Occlude screw access holes with materials of choice.