

Dual arch impression tray.

Features

- Ease of use, convenience, patient comfort
- Use of less impression material and time savings
- Super rigid design ideal for all VPS impressions applications
- For added accuracy, the posterior tray has a composite/metal hybrid design
- Each handle grip is made with a matte finish that can be written on for easy patient identification and date recording
- Available in an assortment of dual arch impression trays (anterior, full arch, full arch large, 3/4 arch and posterior)
- Each tray has a large handle for superior placement, low side walls and a soft-lined mesh for exceptional impression accuracy



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Single posterior crowns

Taking a dual arch impression using the Gripper tray

By Dr. Edward Lowe, BSc., DMD. Information provided by Discus Dental.

Whether you call them triple trays, check bite trays or dual arch trays, the use of these quadrant posterior trays to take definitive impressions are a vital element of a dentist's armamentarium.

Single posterior crowns are the staple of the restorative dentist's diet. The VPS capture of multiple restorations using a dual arch tray should be approached with discretion. The technique is ideal for a single unit restoration where the prepped tooth has teeth in stable occlusion mesial and distal to it. The possibility of accurately replicating the intra-arch occlusal relationship decreases as the number of restorations attempted with one dual arch tray increases.

Following are step-by-step procedures for taking a dual arch impression for a single posterior all-ceramic crown using **The Gripper** tray.

A female patient in her mid-20s presents with a large MODBL amalgam restoration on tooth 4.6 and an MO amalgam on tooth 4.7 (Fig. 1).

She had endodontic therapy on tooth 4.6 for more than 7 years prior. The radiographs show no significant findings. Her extraoral exam and TMJ exam was uneventful and her occlusion is sound. Her clinical intraoral exam revealed a healthy oral environment as she had been seeing her dentist for regular oral exams and hygiene. Quadrants 1, 2, and 3 had been previously restored with direct composites and indirect ceramic restorations.

The treatment plan is conservative. The amalgam on both teeth will be removed. Tooth 4.6 will be built up with composite and prepared for an IPS Empress (Ivoclar Vivadent) pressed porcelain crown. Tooth 4.7 will be restored with a direct composite resin restoration.

Preparation appointment

Treatment begins with digital photos of the adjacent teeth. Using a Chormoscop shade guide (Ivoclar Vivadent), a body shade of 040 and cervical 110 shade were selected for the restoration.

1. Take a pre-op impression of the existing restorations using Precision light body vinyl polysiloxane impression material (Discus Dental) and a Gripper tray lined with Pepspermint Snap clear bite registration material (Discus Dental) (Fig. 2).
2. Isolate teeth using rubber dam and use a 1557 carbide bur to remove amalgam restorations.
3. Check for recurrent decay using a caries detector.
4. Clean the preparations using hydrogen peroxide and dry using a steady stream of air.
5. Use an Odyssey soft tissue laser (Ivoclar Vivadent) to remove excess interproximal gingival tissue and expose the prep margin.
6. Using the laser, make a small trough alongside the tooth to ensure replication of the margin in the dental laboratory.
7. Etch and bond the tooth using Cabrio dual cure bonding agent (Discus Dental) and build up using Matrixx flowable and posterior micro-hybrid composite (Discus Dental).
8. Prepare the tooth for a crown using Zip! RSC 856-021 super coarse and a RF 856-016 fine round end taper diamond burs (Discus Dental).
9. Complete finishing using Soflex XT finishing disks (3M ESPE Dental Products).
10. Check prep for adequate occlusal clearance, smooth tapering walls, and visible margins.
11. Use the Gripper quadrant posterior tray to take the impression using Precision Extra Light Body and Medium body VPS (Discus Dental).

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Fig. 1 Pre-Operative view of existing amalgam restorations on teeth 4.6 and 4.7.



Fig. 2 Pre-operative impression of existing dentition for provisional fabrication.

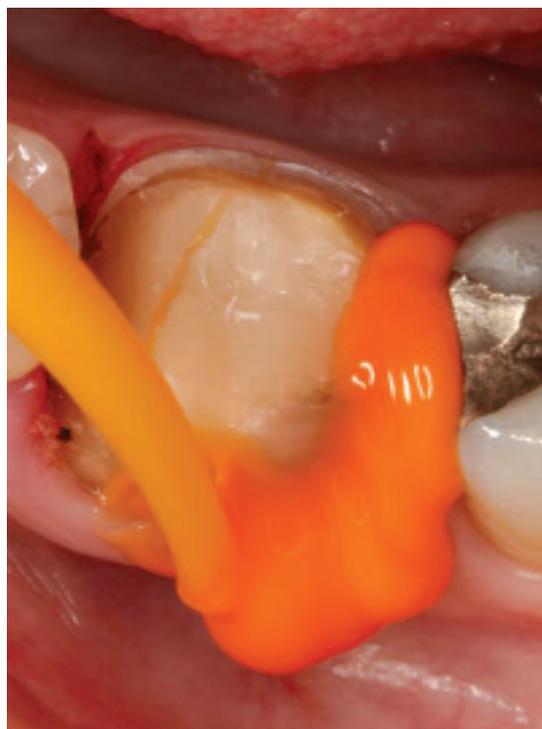


Fig. 3 Place light body impression material around the prep.



Fig. 4 Dispense medium body impression material in the tray.



Fig. 5 Inject a layer of light body material into the medium body material.

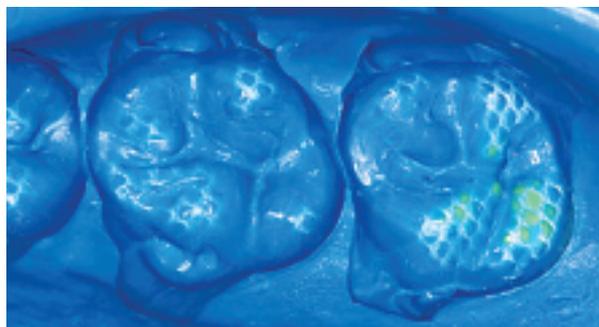


Fig. 6 Heavy body impression shows pulls and voids.

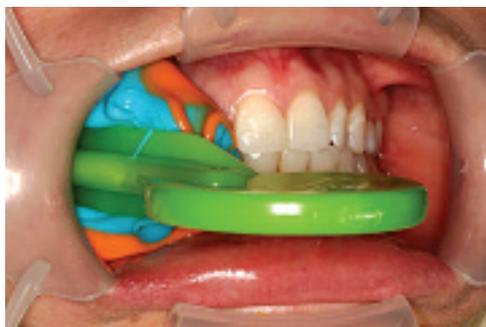


Fig. 7 Place the impression with the See More retractors in place.

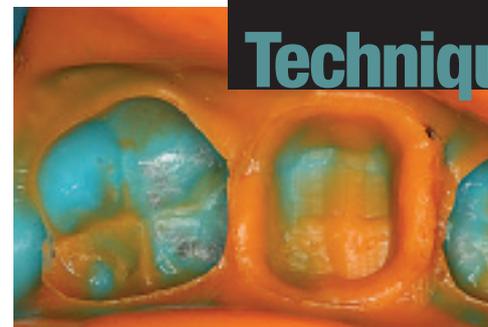


Fig. 8 Verify replication of the margins in the impression.



Fig. 9 The immediate post operative occlusal view of teeth 4.6 and 4.7.

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12. Inject the extra light body material around the dried crown preparation (Fig. 3) while the assistant loads the tray with medium body material (Fig. 4).
13. When the tray is loaded, inject the lower viscosity extra light body material into the center of the higher viscosity medium body material on both sides of the dual arch tray (Fig. 5). *Note:* This minimizes pulls and drags which often occur when using a higher viscosity PVS material in the heavy body or putty/wash technique (Fig. 6).
14. Position the tray over the teeth to be impressed using SeeMore self-retracting lip retractors (Discus Dental) for isolation and visibility.
15. Instruct the patient to gently close over the tray and bite into the PVS without biting the sides of the tray (Fig. 7).
16. Check impression for accurate detail, no bubbles, pulls, and drags (Fig. 8).
17. Record the ST1 prep shade and photograph.
18. Take a bite registration using Vanilla Bite VPS material (Discus Dental) to help ensure the accuracy of the mounting.
19. Apply a small amount of Liquid Strip glycerin gel (Ivoclar Vivadent) to the crown prep buildup to prevent adhesion of acrylic provisional material.
20. Add Perfectemp self-curing acrylic resin shade A1 (Discus Dental) to a pre-operative impression of the existing restorations.
21. After 2 minutes setting, gently tease the provisional off the tooth and finish outside the mouth using finishing disks and polishers.
22. Cement provisional on the clean and dry tooth prep using Provolink dual cured provisional cement (Ivoclar Vivadent).
23. Adjust occlusion and dismiss patient.
24. The clinician provides the lab with the impressions, bite records, a detailed lab prescription, digital photos, and shade using Easyshade shade match software (Vident).

After the seating appointment, the restorations reveal a return to esthetic and functional harmony (Fig. 9). **DPR**