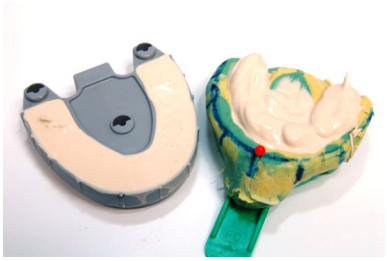
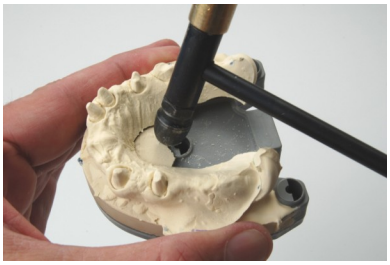
Full Arch; The Monotrac V2 Full Arch

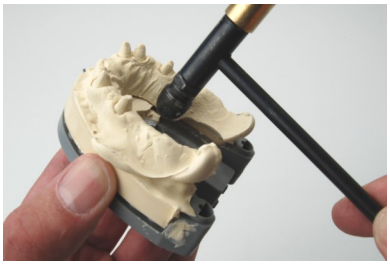
The Full Arch setup will feature a full mouth maxillary bridge that will require 3 Plug-in Stops with Cast-in-place Stop Heads. The opposing arch Pic-up Cups also demonstrated.

A full arch maxillary prep side impression, the opposing impression and bite registrations are presented. 1. The die side impression is trimmed flat and parallel to the occlusal plane to within approx 4mm of the preparation margins. 2. A map pin and Sharpie marker are used to indicate ideal alignment of the Monotrac base over the impression when the pour up is made, inverted and aligned over the impression. OPTIONAL: it is recommended to spray a light mist of Monotrac Stoner silicone onto the base prior to the pour if the model will be ejected from the base after more than 6 hours of set time. Spraying is also helpful if you are just beginning to experience the Monotrac.

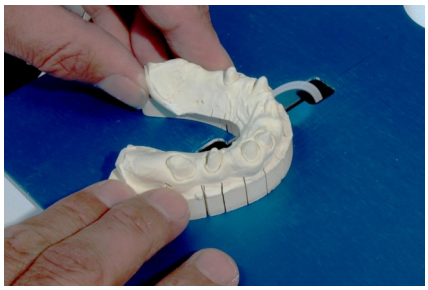


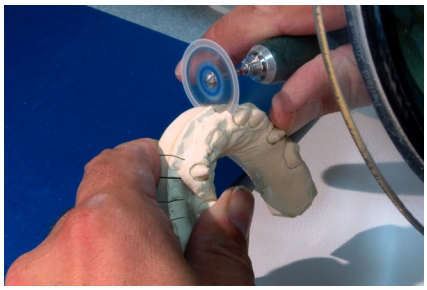
3. After sufficient set time, the impression is removed and the Tear-Away base wall is removed. Burnish and scrape the joint line smooth between the stone and the base with a lab knife. 4. To eject the model from the base, grasp the model and tap the palatal area forward and back in a circular motion to get the model to lift evenly from the base and not to bind. Binding will cause the model to break or chip.



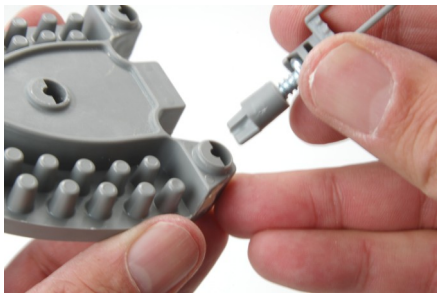
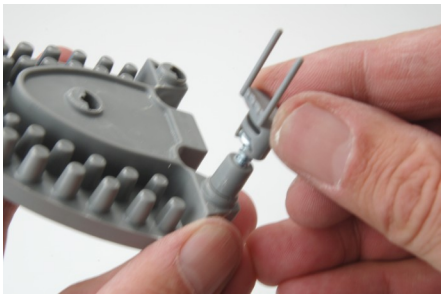
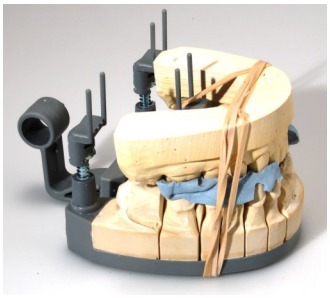


5. Section the model. One of the great advantages of Monotrac is the capability to section the model wherever you want with dies as thin as you want and still maintain die stability. For instance, Pindex models produce the thinner lower anterior dies with very little lateral stability where Monotrac dies are unusually very stable and in fact can be solid model stable by incorporating snap breaks —another subject. IMPORTANT! The key in stability and a perfect seat, is DUST AND DEBRIS CONTROL when the model is sectioned. The fine dust that collects in the Monotrac cone holes when sectioned with a motorized disk must be completely removed prior to seating the die back onto its base. The model must be placed into a food dehydrator (Wal-Mart) for 20 minutes to eliminate moisture, then cut while still warm and immediately air blasted to eliminate the fine dust that prevents a perfect seat back to the base. Models can be sectioned by hand saw, hand piece disk, or as shown here, the Monotrac Processing station and die cutter. 6. The dies are seated back onto its base. This model has had an optional gingival tissue mask added. Shown in the right hand figure, to complete the setup from top left, are the Flex Arm Hinge, bite registrations, the completed die model, the trimmed opposing model sitting inside the silicone Pic-Up Cup, at the bottom are Cast-In-Place Stop Heads with Plug-in Stop Plugs and adjustment screws.

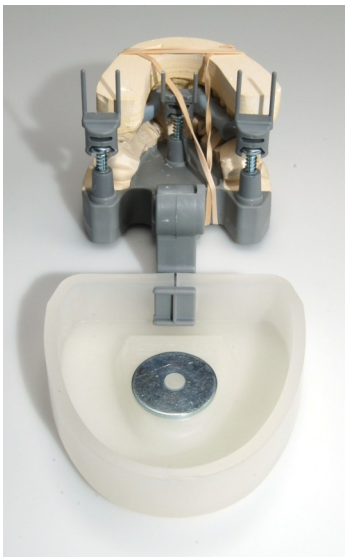




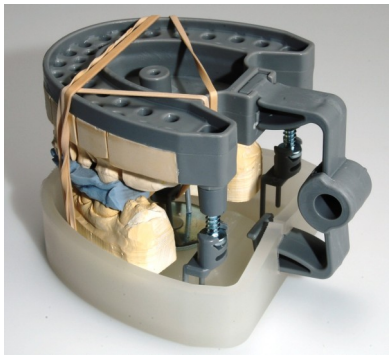
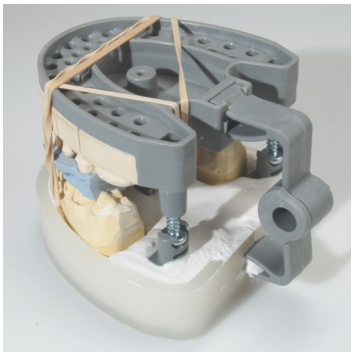
7. Because there are no natural vertical stops, this particular case will require full tripod vertical stabilization to hold solid centric location. A combination of plug-in vertical stop and Cast-In Place Stop Heads will be used at all three stop pocket locations, at both right and left distal and the palatal location to support solid vertical centric. Plug-In Stops can be conveniently placed at anytime at any pocket location required. 8. The Opposing model is positioned with the bite registrations and strapped down firmly into MIP (maximum intercuspal position) with rubber bands or can be sticky waxed into position. All Stops, the hinge arm, and opposing model are now ready for the "Pic-Up" pour.

9. Photo right; The Flex Arm Hinge for the opposing side is inserted through the opening of the V2 silicone Pic-Up Cup. Also shown is the OPTIONAL Split Cast Plate (see Split Cast Plate) which can be retained into the cast for magnetic attachment to semi or fully adjustable articulators.

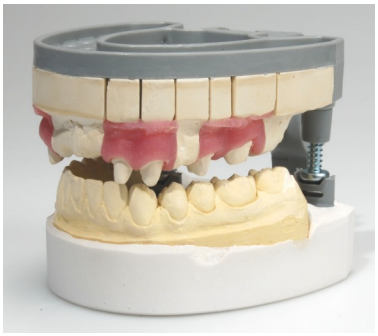


Below left; The model is closed into the cup to dry fit check for clearance. Below Right: The Pic-Up Cup is poured with dental plaster WITHOUT THE HINGE HALVES ENGAGED, the hinge is re engaged and closed over to submerge and capture the opposing model, the Cast-In-Place Stop Heads, and the Flex Arm Hinge.

After the plaster has set up, remove the cup, rubber bands and break away the retainer tabs (left photo) from the Stop Heads to allow the articulator to open up.





Monotrac Plug-In Stops provide solid vertical centric stability while allowing lateral and protrusive equilibration. The Stop Head also have lateral ramps which simulate average value cuspid rise in lateral movement. If need be the quick disconnecting hinge and Plug-In Stops are easily removed to allow convenient transfer to any other articulator using the magnetic split cast plate (see Split Cast). Monotrac is the only plastic disposable articulator with the capability to provide solid vertical stability for any and all cases eliminating the need for metal articulators.

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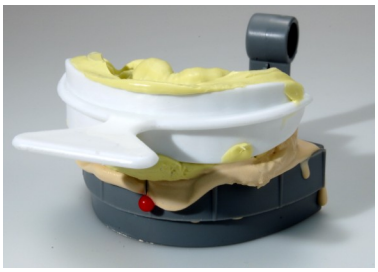
Anterior; The Monotrac V2 Anterior

MonoTrac ARTICULATION Model Performance

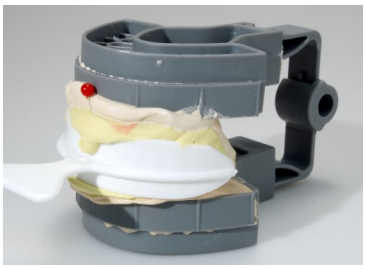
The Monotrac Anterior base tray is designed especially for the double bite anterior impression which captures the bicuspids and anterior teeth.

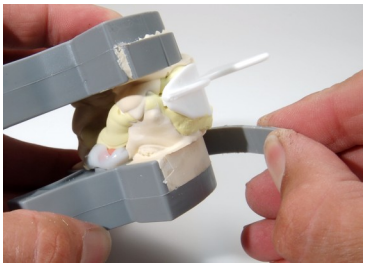
1. Trim the impression flat and parallel to the occlusal plane leaving room for the articulator to close to a parallel position.
2. Place a map pin at the midline of the impression to guide the center forward placement of the impression over the base (shown) or the base can be inverted over the impression. Pour the die side of the impression first (not the opposing) and the base with die stone and align, using the pin to center the tray with the impression. Let set.

Tip; Monotrac Trimmers are a great tool for cutting impressions flat and square for a clean straight set up - They can also be used to remove stone flash.

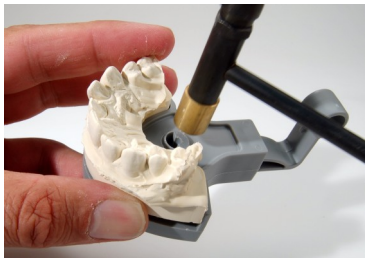


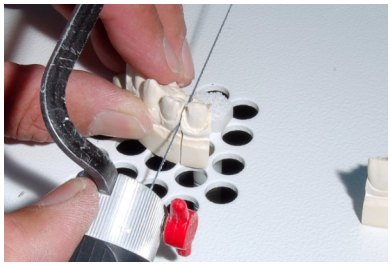
3. Pour the opposing side of the impression and opposing base. Engage the hinge and close over. let set. 4. Remove the impression and the Tear-Away wall formers. Scrape and smooth the junction line between the base and stone smooth with a lab knife. Remove stone flash. Smooth and remove any bulk with a lab bur (available from Monotrac, excellent quality and price).





5. The model is ejected from its base by tapping forward and back in a circular motion in the palatal area to achieve an EVEN LIFT OFF from the base. This will prevent chipping or cracking the model. Die section the model where needed. Tip; it is best to section out 2-3 teeth adjacent to the prep area to make it easier to remove the adjacent sections while working the model (sorry not shown here). Section with hand saw, hand piece disk, or the Monotrac Die Cutter Processing Station (shown) for faster straighter cuts. The top cut is made with a hand saw near the margin areas to meet the previous bottom cut. .





The finished case here is shown with optional cover caps for a nicer presentation. The restorations can be stored in the cap with a foam core for protection. Currently they come in blue, purple, grey, and turquoise. Call us if your lab would like custom colors or logos. Soon available.

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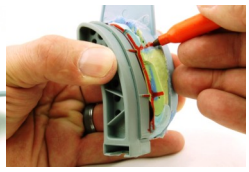
MonoTrac ARTICULATION
Model Performance

Radius Quad; The Monotrac V2 Radius Quad

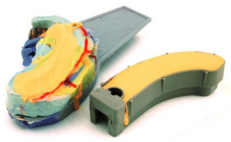
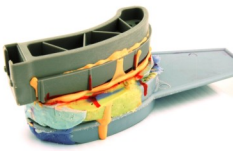
This setup will features a 3 unit posterior free end bridge and will utilize a Monotrac Plug-In Adjustable Vertical Stop to achieve accurate solid vertical stability.

1. The impression is trimmed flat and parallel to the occlusal plane to fit within the vertical confines of the articulator for straight parallel set up. 2. Align the Radius base over the die side of the impression in idealized centered position and make indicator marks with a Sharpie pen. This will guide you to a nice clean alignment and set up.

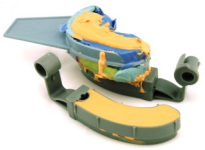
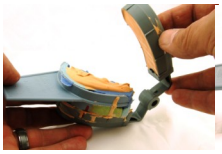




3.The die stone is mixed to manufacture specs; the Radius tray is poured WITHOUT the flex arm attached. The "die side" of the impression is poured up FIRST, not the opposing. The tray is aligned over the base according to the Sharpie markings and allowed to set. Note; it is important to always pour the "die side" first to avoid die distortion from the expansion properties of the opposing pour.

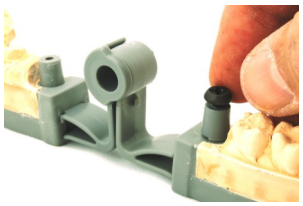
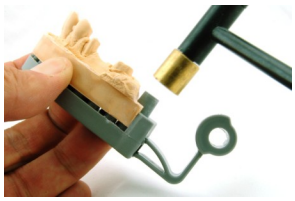
4. After the die side stone has set up, snap on the flex arm member to the tray. Prepare the opposing tray with its flex arm member. Pour the opposing side of the impression and the opposing tray. Engage the hinge and close over.

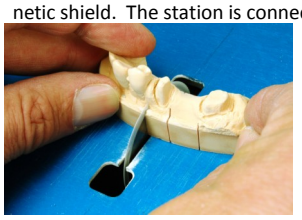

5. 6. 7. After the opposing stone has set. Remove the impression. Peel off the Tear-Away Walls. Scrape and burnish the parting line between the model and the base to make it smooth.

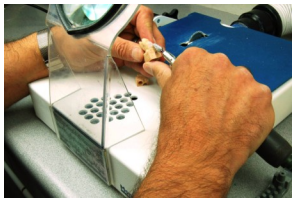


8. Because this case is an unsupported "free-end" bridge, it will require a Plug-in adjustable vertical stop. Stop plugs are very simply inserted into the hollow pockets in the bases - an adjustment screw placed into one of the stop plugs. Stops can be placed at any time desired. 9.The die side of the model is ejected from the tray by tapping the tray to separate the model from the base.

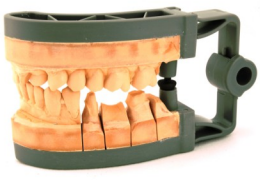



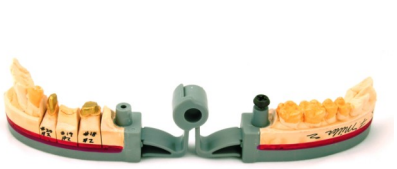
10. The model can now be sectioned with a hand saw, hand piece disk, or the Monotrac die cutter Processing station. One of the great advantages of the Monotrac system is that the models can be sectioned thick or thin in any location without regard to pin locations. Even thin lower anterior teeth can all be sectioned and still maintain solid accurate stability. Here the Processing Station is used to make bottom cuts with a diamond disk. The margin area is cut with a hand saw to meet the bottom cut. Also shown is bulk trimming at the station with magnetic shield. The station is connected to lab air and vac.



11. The Plug-in vertical stop is adjusted to the desired position. The finished model shown is sealed and hardened using a thin viscous cyanoacrylate on the working adjacent contacts, opposing occlusion and the dies. Varied color coding on the models can help to quickly orient dies to their respective models.



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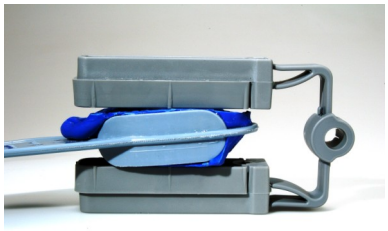
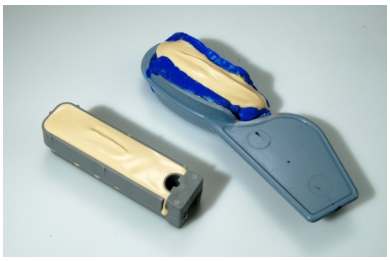
Straight Quad; The Monotrac V2 Straight Quad

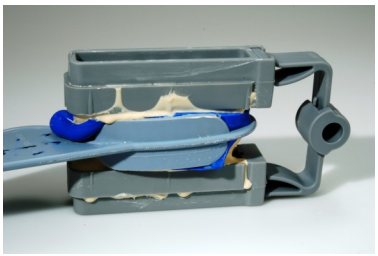
This setup will feature two free end molar preps and utilizing the Monotrac adjustable Plug-in vertical stop.

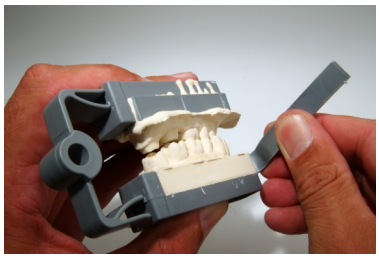
1. Trim the impression flat and parallel to the occlusal plane leaving clearance for the articulator to close. 2. Pour the base (without the hinge arm attached) and the die side of the impression. Avoid over filling or under filling the die stone. 3. invert and align the base over the impression paying close attention to a centered alignment. Note; if needed, use a Sharpie pen to make alignment markings prior to the pour up (see Radius Quad set up for details on marking).



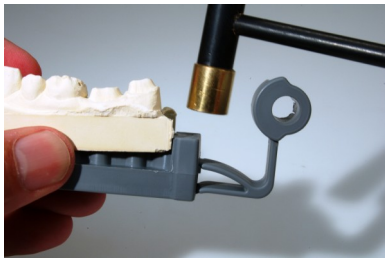


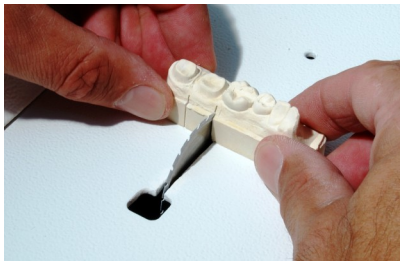
4. Attach and snap on the flex arm hinges to the bases. Pour the opposing side impression and base. Engage the hinge and close over, then let set.
5. After the stone has fully cured, remove the impression and tear -away base wall formers starting at the distal end.

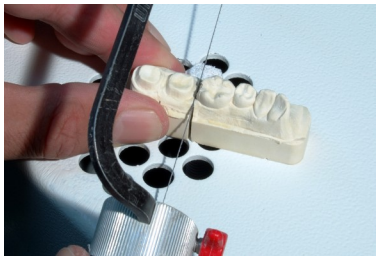




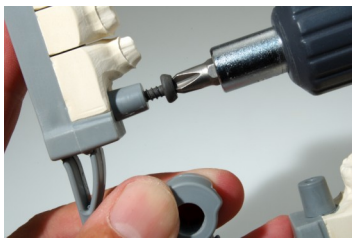
6. The model is ejected EVENLY from the base by grasping the model and tapping the distal block and striking the front anterior of the base at a 45 degree angle. Try to get the model to lift from the base evenly to prevent binding the model and chipping it. 7. The model can be sectioned by choice of hand piece disk, hand saw, or the Monotrac die cutter/Processing Station (shown here). IMPORTANT! If you're using a motorized disk or the Monotrac Processing Station, please refer to the " tools and techniques" section for special instructions on removing dust and debris to insure accurate die reseat.







8. It is very important to remove all dust and debris before attempting to seat the die back onto the base. 9. For "free-end" cases such as this, use the Monotrac Plug-in adjustable vertical stops to provide solid vertical stability. Simply insert the friction fit stop plugs into the opposing pockets, insert the adjustment screw and adjust to the required elevation.



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