

Model 2240Q

Articulator System



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Introduction

Whip Mix articulators are designed to enable the user to quickly and easily mount casts of a patient's dentition on a mechanical device that will reproduce their natural relationship and movements with an acceptable degree of accuracy. The simplicity and speed with which the necessary registrations are obtained and transferred to a Whip Mix articulator enables the operator to accomplish corrective and restorative dentistry with much greater precision than has ever been possible without the use of expensive equipment and time-consuming techniques.

Being arcon type instruments, Whip Mix articulators are ideal for the study of occlusion and the movements of the temporomandibular joints. With the condyle located on the lower member and the guidance on the upper member, Whip Mix semi-adjustable articulators have become the preferred choice of many teaching institutions.

Features

The 2240Q Articulator System Features:

Protrusive Condylar Inclination:

Adjustable 0 – 70°

Progressive Side Shift:

Fixed 7½°

Immediate Side Shift:

Adjustable 0 – 3mm

Fossa:

¾ inch (19mm) curved eminentia, *Figure 1*



Figure 1

Elastics:

Model 2240Q Bilateral elastics function to hold the upper and lower members of the articulator together during excursive movement when secured. (*Figure 2*)



Figure 2

Fixed intercondylar distance:

Fixed at 110 mm

“Accumount” system of interchangeability: Allows accurate transfer of casts between articulators. (*Figure 3*)



Figure 3

Ergonomic design with wide lingual access and ample interframe distance.
Easily positioned centric latch provides a quick way to return to centric position. (*Figure 4*)



Figure 4

Non-skid rubber feet for stabilizing articulator when open. (*Figure 5*)



Figure 5

2240Q Articulator System Articulator Manipulations:

To attach or remove the incisal guide pin, loosen or tighten the incisal guide pin screw. The upper and lower frames are made parallel by aligning the top of the pin boss with the dark line which completely encircles the pin. (*Figure 6*)



Figure 6

Centric Latch Operation:

Engage the centric latch on the articulator to keep the condyles in contact with the posterior and superior walls of the condylar guides. (Figure 7)



Figure 7

Elastics:

Model 2240Q attach the elastics to the lower frame. (Figure 8)



Figure 8

Articulator Adjustments:

Protrusive Condylar Inclination: the angle of the fossa in relation to the occlusal plane.

Model 2240Q: The inclination of the protrusive condylar path can be adjusted by loosening the large black clamp knob. (Figure 9)



Figure 9

The protrusive condylar path inclination scale is on the side of the upper member and is calibrated in increments of 5°. The protrusive adjustment range is 0 – 70°. (*Figure 10*)

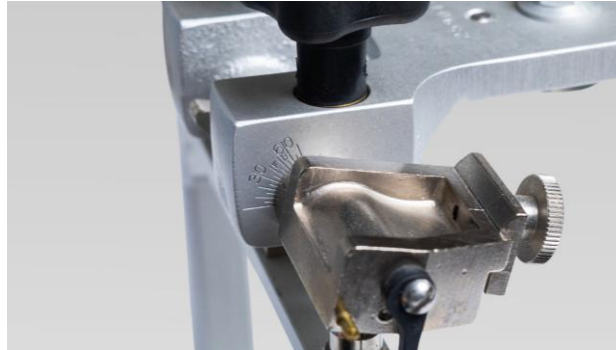


Figure 10

NOTE: Set each condylar guide to the “FB” (facebow) marking on the condylar inclination scale in preparation for attaching the facebow assembly to the upper frame of the articulator if utilizing a direct mount technique. (*Figure 11*)

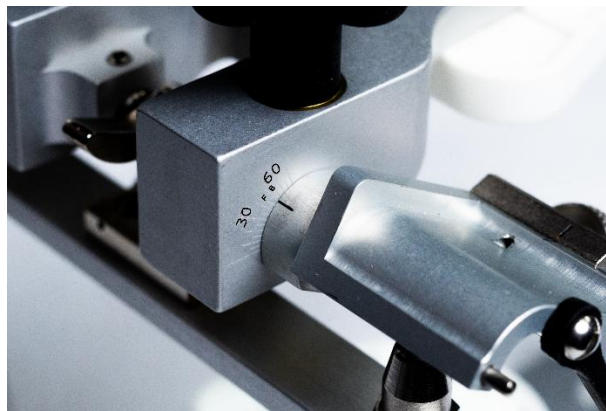


Figure 11

Progressive Side Shift: The path the orbiting condyle follows on the medial wall of the fossa as it orbits around the rotating condyle. On the Model 2240Q, the progressive shift is preset at 7-1/2°.

Immediate Side Shift: A mandibular side shift in which the orbiting condyle moves essentially straight medially as it leaves centric relation.

Model 2240Q: To set the immediate side shift, loosen the thumbscrew below the scale and align the marks of the upper scale with the single mark on the lower scale. The immediate side shift range is 0 – 3 mm. (*Figure 12*)



Figure 12

Mounting Casts on the 2240Q Articulators:

In addition to a facebow record, the only records needed for complete programming of the 2240Q articulator are:

- Lateral bite records
- Protrusive bite record

Indirect Mounting the Maxillary Cast:

Place the Transfer Base Assembly on the articulator. Secure the transfer base assembly with the metal disk that comes with the QMS mounting system or the maxillary fork support. (*Figure 13*)



Figure 13

NOTE: For the direct mounting technic on the 2240Q, set each condylar guide to the “FB” markings on the condylar inclination scale. (*Figure 14*)

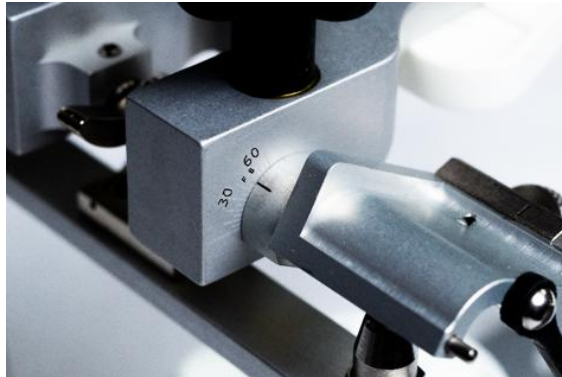


Figure 14

Set immediate side shift guides to the “0”. (*Figure 15*)



Figure 15

Place the vertical rod of the transfer assembly into the transfer base and lower it until the bottom of the vertical rod contacts the transfer base. Tighten with clamp screw. (*Figure 16*)



Figure 16

Place the upper member of the articulator onto the lower member with the incisal guide pin set to the zero mark to keep the members parallel. (*Figure 17*)



Figure 17

It is strongly recommended that a facebow fork support be used during the mounting process, as depicted in the photo above, *Figure 17*.

Position the maxillary cast into the facebow bite registration. To prevent expansion during the mounting process, use a stone with a low expansion quality specifically designed for mounting purposes. (Figure 18)



Figure 18

Mounting the Mandibular Cast:

NOTE: It is recommended to make a centric relation bite record for mounting upper and lower casts. (see *Dawson's Functional Occlusion textbook*).

Setting up the 2240Q using an Occlusal or CR Bite Record.

Using a pen, draw a thin line on the base of the upper and lower casts directly above the central incisors. Carefully hand articulate the cast into the MIP position. Using a millimeter ruler or Digital Boley Gage, measure the distance between the two lines. Make note of this measurement. (Figure 19)



Figure 19

Very carefully place the CR bite record onto the upper cast, *Figure 20*. If the doctor is using the Denar Bite Registration, use caution as this wax is brittle and could break easily.



Figure 20

Gently place the lower cast into the CR record. While holding the two casts together, measure the distance between the two lines. (*Figure 21*)



Figure 21

The difference between the two measurements will be the amount you will raise the incisal guide pin. (i.e. if the MIP measurement was 30 mm and with the CR Bite Record it was 32 mm, you would raise the pin 2 mm). Always raise the pin in a positive direction; above the zero mark. (*Figure 22*)



Figure 22

Secure the two casts together with the CR record in place using large paper clips, nails or precut coat hanger wires and complete mounting. (*Figure 23*)

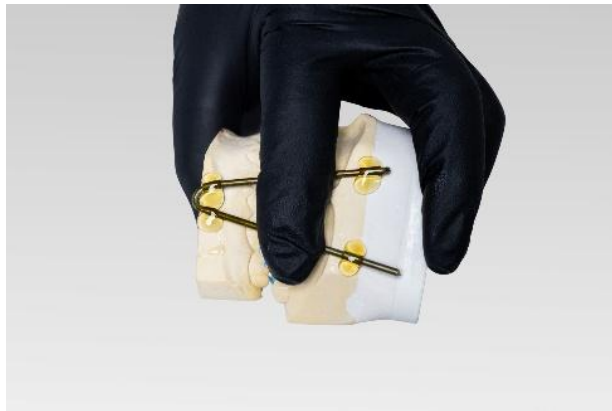


Figure 23

Engage the positive centric latch and secure the elastics to the lower member. (*Figure 24*)



Figure 24

Attach the mounting plate to the lower member. (*Figure 25*)



Figure 25

Complete the mounting of the casts. (Figure 26)



Figure 26

The completed mounting permits closure of the casts to contact in centric relation

Direct Mounting the Maxillary Cast:

Remove or sufficiently raise the incisal guide pin so the upper member of the articulator will be able to rest on the horizontal crossbar of the facebow. (Figure 27)



Figure 27

Model 2240Q Set each condylar guide to the "FB" markings on the inclination scale for articulators with immediate side shift. (Figure 28)

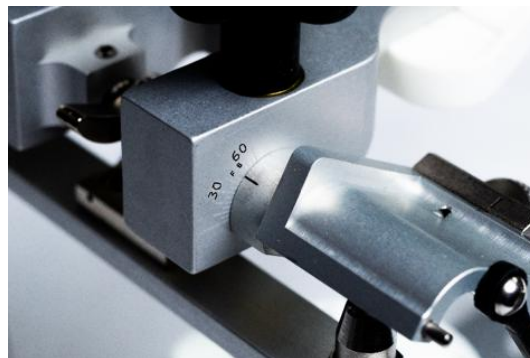


Figure 28

Attach the facebow earpieces onto the facebow mounting pins located on the outer edge of the condylar guides, *Figure 29*. There are holes located on the medial side of each plastic earpiece of the facebow.



Figure 29

Allow the anterior end of the upper member of the articulator to rest on the horizontal crossbar of the facebow. Make sure the articulator with attached facebow is stable.

NOTE: You may want to use a facebow fork support to stabilize the maxillary cast during mounting procedures.

Attach the mounting plate onto the upper member.

Position the maxillary cast into the bite registration.

Mounting the Mandibular Cast:

Follow procedure starting on page 12 - *Mounting the Mandibular Cast*

Accessories:

Whip Mix® Indirect Mounting Facebow



This facebow provides a convenient, quick and accurate method of securing an arbitrary hinge axis location without the use of expensive equipment and time-consuming techniques. Once the registration is obtained, the transfer assembly is removed for mounting, freeing the facebow for the next patient.

Maxillary Fork Support:

The adjustable “T” supports the bitefork and maxillary cast when mounting the facebow record on the articulator. Versions are available for both magnetic and screw type mounting.



Universal Occlusal Stand:

Allows you to mount the working casts at Bonwill's Equilateral Triangle. Includes two interchangeable tables – flat and curved. The flat table accepts the Kois index tray.

**Whip Mix® Verification Gage:**

Verify and calibrate articulators in the field to factory settings. With articulators in calibration, you can transfer the casts between compatible articulators.



Adjustable Guide Table:

May be moved anteriorly or posteriorly which minimizes having to adjust for the “x” dimension. Incline may be adjusted and locked from 0 to 40° protrusive. Adjustable lateral wings establish the degree of incisal freedom from 0 to 45°.

**The Whip Mix 2240Q Articulator features the Accumount Mounting System.**

The Accumount System makes it possible for the dental practitioner and the dental laboratory to interchange casts without exchanging articulators. This will reduce instrument damage caused by shipping the articulator.



Articulator Care and Maintenance:

Your Whip Mix articulator is a precision instrument and requires care and maintenance. Periodic cleaning and lubricating as described below will ensure prolonged life and dependability from the instrument. Failure to follow these instructions will void your warranty.

Cleaning Procedure:

If there is any debris on the device, be sure to remove debris before the cleaning process. Use a soft bristle brush and cold running water to remove any debris. After debris removal follow the guidelines below.

- Use mild soap and water solution with the aid of a soft bristle brush to dissolve accumulations of wax and to wash away carborundum grit then air dry completely. DO NOT use strong detergents, alkalis, gasoline or naphtha as cleaning agents.
- Remove excess stone to prevent corrosion of articulator surfaces.
- (Whip Mix Branded only) Apply a light coating of silicone spray to articulator surface to prevent plaster or stone from sticking.
- (Hanau and Denar only) A thin coating of petroleum jelly must be applied to all articulator surfaces that will be contacted by the gypsum mounting material.
- Lubricate working and bearing components with a thin film of lubricant or silicone to the surface upon which the condylar elements move to provide a smooth action during movements.
- Use lint-free cloth to dry

Storage:

Store the articulator in a clean, dry atmosphere free of plaster and carborundum dust, away from acids, alkalis or corrosive medicaments. Wait a full day after mounting casts before storing the articulator in a carrying case or corrugated carton. Moisture dissipation from the stone in an enclosed area causes alkalinity of the stone mixture which can damage the articulator's surface.

Warranty:

Refer to the website: www.whipmix.com

Symbols and Their Descriptions:

SYMBOL	DESCRIPTION
	Manufacture by
	Medical Device
	Lot number
	Item Number or Model Number
	eIFU- Electronic Instruction For Use
	Unique Device Identifier

Please check online at
www.whipmix.com
for the most current
instructions and parts list.



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