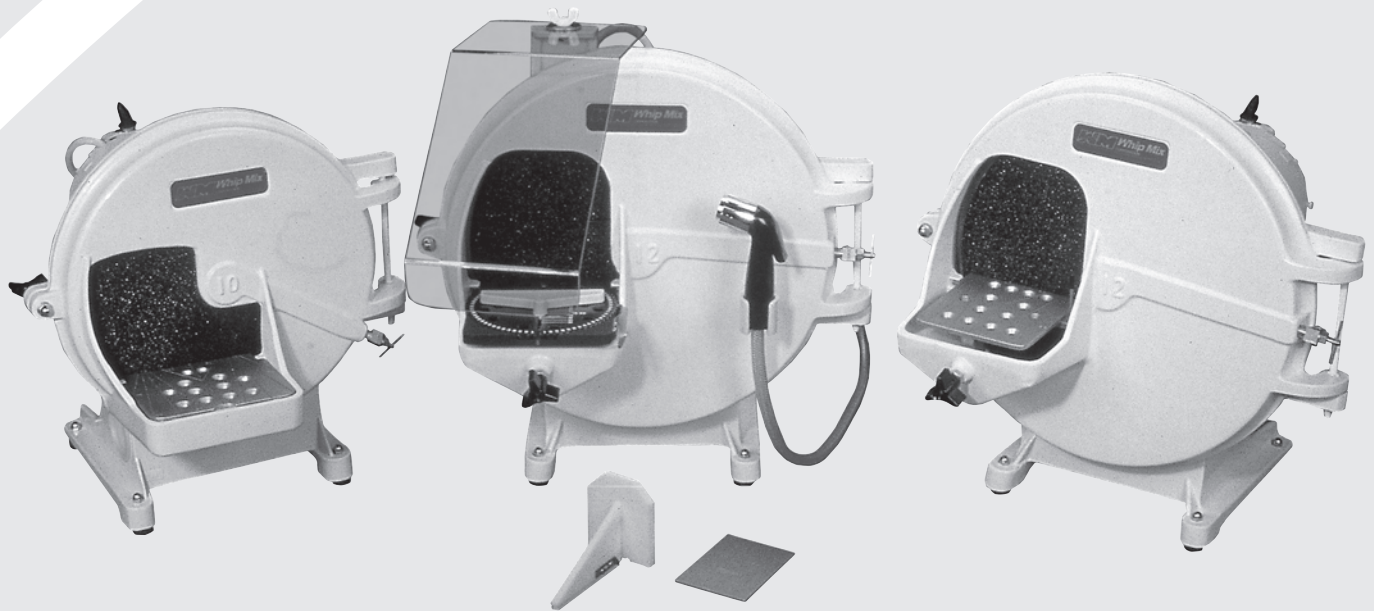




# Operating Manual 10", 12" and Orthodontic Model Trimmers



## Installation

Standard equipment packaged with the Model Trimmer includes:

- 1 – Orthodontic Work Table or Regular Work Table
- 1 – Coarse abrasive wheel installed
- 1 – 24" length of drain hose installed
- 1 – 30" length of plastic water hose installed
- 1 – Package of 4 rubber feet, two long and two short

Whip Mix Deluxe Model Trimmers include those items mentioned above and the following accessories:

- 1 – Electric Water Valve installed
- 1 – Water Spray Attachment installed
- 1 – Splash Shield

Remove the Model Trimmer from the shipping carton. It is a good idea to keep the shipping carton, should the model trimmer have to be moved or shipped. Select a location for the model trimmer that provides easy access for cleaning and maintenance. Electrical, water and drain hookups are required.

Space required by each unit:

10" Model Trimmer	14" W x 16" H x 15" D
12" Model Trimmer	16" W x 17" H x 15" D

Model Trimmers supplied without the electric water valve require the installation of a nearby manual on/off water valve. A 1/4" pipe fitting is provided in the accessory box for connecting the water supply. To assemble, insert tubing into fitting until it bottoms. A slight twisting motion will ease the insertion. Pull on tubing to verify it is properly retained in the fitting. To disassemble, simply push the release button against the body and remove tubing. It is recommended to trim the tubing after every disassemble to insure a proper seal.

**NOTE:** The valve provided on the water spray tube is for flow adjustment only and is not intended for use as an on/off valve.

Several methods of mounting are available. The most common method is to drill holes through the countertop to bolt the model trimmer in place. Rubber feet are provided as an alternative – use the two with long bolts in front and the two short ones in the back. A third possibility is to mount the model trimmer in the sediment tray (see accessories).

Plug the unit into a grounded receptacle having the same electrical characteristics as shown on the model trimmer data plate.

The 24" length of drain hose can be placed in a nearby sink or directed into a drain pipe. For either installation, a plaster trap is recommended.

Adjust angulation of the work table to the abrasive wheel. The 12" model trimmer provides a range of adjustment from 85° to 120° to the abrasive wheel. The locking nut can be tightened with a wrench to set permanently a particular angle.



Figure 1

The two-position work table, standard on the 10" model trimmer, is factory set perpendicular to the abrasive wheel. One other setting is available to increase this angle.

The orthodontic work table is readily adjustable, and the anodized parts dismantle easily for thorough cleaning. The following accessories are included with each orthodontic work table:

**Vertisquare** – Constructed of low friction, durable plastic, the vertisquare is utilized to aid in the trimming of the model base. An adhesive foam rubber pad attached to the vertisquare absorbs shock, helps prevent breakage of teeth, and provides a safe buffer zone between the hands of the user and the model trimmer wheel. Additional facing pads may be ordered in a package of 3 (part no. 30217).

**Angleguide** – The angleguide is constructed of the same special plastic as the vertisquare. This accessory helps position the model for trimming at the desired angle indicated by the degree plate of the work table.

**70mm Template** – This device is used to accurately set the table angle, the degree plate reading and the vertisquare distance indicator.



Figure 2

## Calibrating the Orthodontic Work Table

**Work Table Angle Adjustment** – Hold the 70mm template upright on the work table so the table is 90° (perpendicular) to the wheel. Tighten vertical adjustment knob (Fig. 3). Locking nut can be tightened with wrench for permanent installation. The vertisquare may also be used to hold the 70mm template in the upright position.

**Degree Plate Adjustment** – Loosen the 2 screws on the

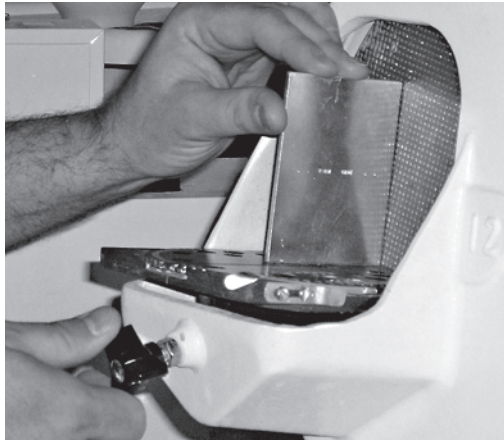


Figure 3

spring latch (A – Fig. 4). Place the 70mm template flat on the work table in front of the vertisquare and against the trimmer wheel. Rotate the degree plate until the vertisquare is parallel with the template. First, tighten the back screw on the spring latch, and then tighten the front screw. **NOTE:** The white indicator mark on the front of the work table is the approximate zero location.

**Vertisquare Calibration** – With the 70mm template flat on the work table, loosen both screws on vertisquare pointer (B – Fig. 4) and position the pointer so that it is even with the 70mm line (C – Fig. 4).

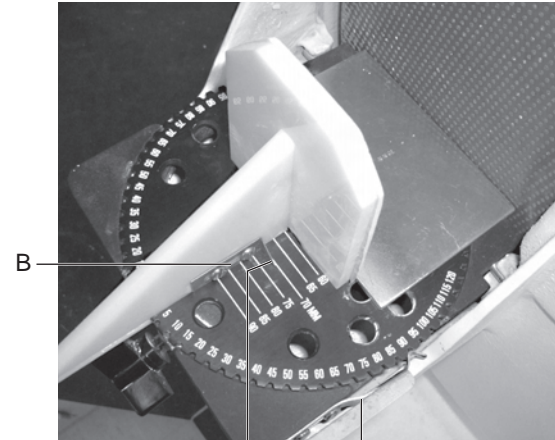


Figure 4

## Operation

The on/off switch is protected by a rubber cap – flip this switch to turn unit on. Turn on water supply and before each use; allow motor to run with water on for a minute to counteract vibration caused by water settling in the lower portion of the wheel.

The amount of water spraying the wheel is regulated by adjusting the water valve. Water flow is excessive if water drips steadily from the top of the window. The water spray tube located inside the door has been factory set to spray slightly downward for the best cleaning action (Fig. 5).

Always use water freely to keep wheel clean and sharp. Check spray tube holes for blockage occasionally. Use a straight pin to reopen holes should they become clogged. To prevent leaks in the door, keep gasket face and rubber gasket clean. To prevent leaks at shaft opening, keep trough over motor shaft (back of disc) clean.

Regardless of individual trimming technique, it is important that models not be pushed with excessive force against the

abrasive wheel. Loss of control can cause injury to hands or damage to the model trimmer should loose model become wedged in the housing.

Running the model trimmer for 30-60 seconds after each use will assure a clean abrasive wheel and decrease buildup of sediment on inside parts.

Always make sure the electrical switch and water supply valve are turned off when not trimming models.

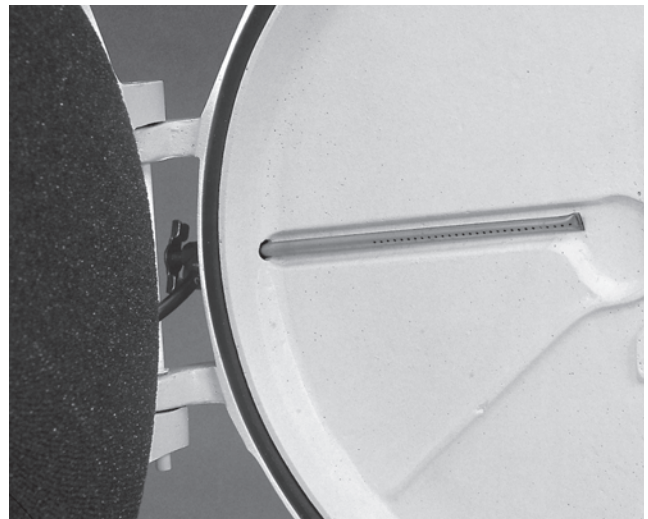


Figure 5

## Model Trimming Procedure

Well trimmed models are an integral part of orthodontic treatment planning. As an adjunct to the clinical exam, precise models enable the clinician to conduct a three-dimensional analysis of the patient's dentition without the constraints of the oral cavity. As a way to permanently record a patient's occlusion and maxillary-mandibular relationships at a specific point in time, well trimmed models are invaluable. It is important to remember that well trimmed study models are a direct reflection on the clinician and leave a lasting impression on the patient.

There are many factors which are essential and need consideration when developing a successful technique for producing models. This manual does not attempt to dictate the only technique to accurately trim models. A technique is presented that encompasses ideas obtained from a number of sources including those listed in the back of this manual and the comments of several practitioners regarding their successful trimmer techniques.

Obtaining accurate models first requires that impressions be taken which have the proper extensions and successfully record the proper anatomic landmarks.

Whip Mix offers the following selection of white gypsum products to suit specific needs.

	Working Time (min.)	Water/Powder Ratio (mL/100g)	Compressive Strength (psi)	Setting Expansion (%)
<b>Die Material</b>				
Silky-Rock	3-6	23	13,000	0.09
<b>Model Stones</b>				
Orthodontic Stone, Super White	5-7	28	8,500	0.09
Microstone	5-7	28	8,500	0.12
<b>Plasters</b>				
Orthodontic Plaster, Super White	7-9	37	6,500	0.20
Laboratory Plaster Fast Set	2-4	45	3,300	0.20
<b>Mounting Material</b>				
Mounting Stone	2-3	26	8,500	0.08
Bitestone	10-60 sec.	29	7,000	0.15

Research has shown that vacuum mixing produces a cast that is more dense, accurate and bubble-free than is attainable with casts that are hand mixed. Whip Mix suggests slow speed vacuum mixing (425 RPM) for 20-30 seconds using the Vacuum Power Mixer Plus, Combination Unit or VMP2 for superior results.

Once the models have been poured and separated from the impressions, inspect for satisfactory detail reproduction. Additionally, any positive bubbles or blemishes should be removed from the models at this time.

The flowing materials will be used during the trimming process:

- Compass, ruler or protractor
- Colored pencil
- Fine wet/dry sandpaper
- Model soap (Model Glow Fig. 6)



Figure 6

A good rule of thumb for the desired proportions of a model after trimming is 1/3 tooth portion, 1/3 anatomic and 1/3 base portion (Fig. 7). This rule is good as a generalization; however, many wish to trim their models to more specific guidelines.

Models	Upper Model Height	Lower Model Height	Total Height
Adult	1 1/2" (38mm)	1 1/4" (32mm)	2 3/4" (70mm)
Pedodontic	1 1/4" (32mm)	1" (25mm)	2 1/4" (57mm)

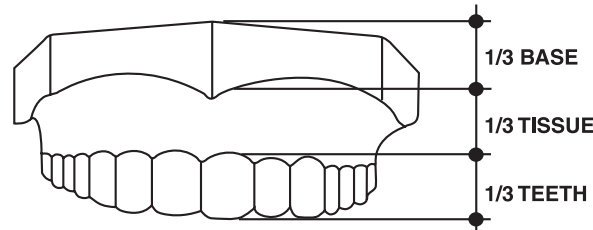


Figure 7

## Maxillary Model

### Removing Gross Excess

Using vertisquare, place teeth against foam facing and make a superficial cut on the base to establish a flat surface roughly parallel to the plane of occlusion. Trim away excess around the periphery of the model to a point no closer than 1/2" (12-13mm) from the buccal surfaces of the teeth (Fig. 8).

### Trimming the Upper Base

Place the teeth of the maxillary cast on a flat table top and, with the aid of a compass, draw a line 1 1/2" (38mm) above the table top completely around the base of the upper model (Fig. 9). Using the vertisquare, cut away excess base material down to this line (Fig. 10). There should be no rocking of the model when it is placed flat on its base.

### Trimming the Upper Heel

First, a line is drawn over the mid-palatal raphe which will serve as the main reference line for the rest of the model trimming procedure. All future angle cuts will be in reference to this midline so it is very important to accurately draw a line over the raphe that is clearly discernible (Fig. 11).

The upper heel cut should be made to the depth of the Hamular Notch (Fig. 12). Prior to making this cut, it is important to see if the lower arch has any anatomic landmarks (i.e., third molars) which may necessitate that a lesser amount be trimmed from the heel of the upper model.

For example, if the lower third molars extend past the Hamular Notch on the upper model when the casts are in occlusion. In such a situation, a line is drawn on the upper cast which corresponds to a position just distal to the third molars on the lower model. The heel of the upper model is then trimmed to this line rather than the depth of the Hamular Notch.

### Trimming the Upper Anterior Segments

Slide the angleguide onto the degree plate and then set the degree plate to 25° as indicated by the white indicator mark. With the heel of the upper model against the angleguide, trim the left and right anterior segments of the upper model from roughly the mid-point of the canines to an imaginary extension of the mid-palatal raphe. After trimming one side, it is necessary to reset the degree plate to the 25° setting on the other side of the zero point. The apex of the two anterior cuts should be about 1/4" (7mm) from the teeth (Fig. 13).



Figure 8



Figure 9



Figure 10



Figure 11

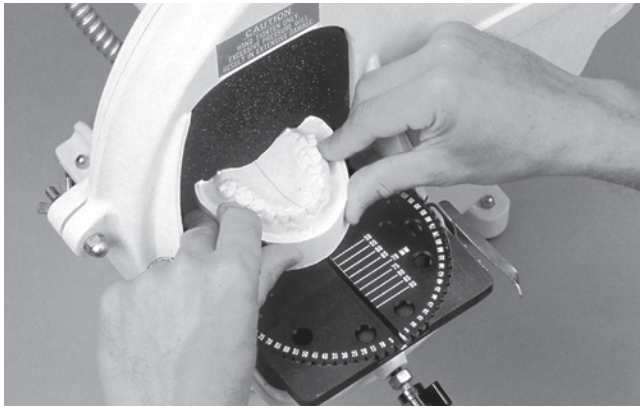


Figure 12



Figure 13



Figure 14



Figure 15

### Trimming the Upper Buccal Segments

With the angleguide in place, rotate the degree plate to 65°. Hold the base of the upper model against the angleguide and, with steady pressure, trim the right and left buccal segments until the anterior segments are of equal length (middle of the canines of a symmetric arch) (Fig. 14). The buccal cuts should be to the deepest portion of the buccal vestibule and should measure approximately 3/16" (5mm) from the buccal surface of the teeth.

**NOTE:** If the upper arch is asymmetrical (i.e., cross bite) and one buccal segment is closer to the mid-palatal raphe than the other buccal segment, some adjustments need to be made to produce anterior segments of equal length. With an asymmetrical case, first trim the segment that is farthest away from the mid-palatal raphe and stop approximately 3/16" from the buccal surface of the teeth. Next, measure the length of the anterior segment on this side and, using a marking pencil, mark the same distance on the opposite side. Now trim the other buccal segment stopping at the mark previously made.

### Trimming the Upper Posterior Segments

With the angleguide in place, rotate the degree plate to 115°. Hold the heel of the upper model against the angleguide and trim the posterior corners symmetrically to a width of about 5/8" (16mm) (Fig. 15).

Now is a good time to evaluate the trimming that has been done on the upper model. If the patient has a truly symmetrical arch form, the buccal segments should be equal distance from the mid-palatal raphe and equal distance from the buccal surfaces of the teeth. The mid-palatal raphe should be on the center line which should project to the apex of the anterior segment cuts. The depth of the hamular notch or a line parallel with the notch forms the heel of the model. The anterior segments and the posterior segments should be of equal length and symmetrical.

### Removing Gross Excess

If the gross excess around the periphery of the lower model was not trimmed when the peripheral excess of the upper model was trimmed, it should be done at this time. To review, the periphery of both models should be trimmed no closer than 1/2" (12-13mm) from the buccal surface of the teeth (Fig. 16).

### Trimming the Lower Heel

With the models articulated, invert the models on the tray table so that the lower model is on top of the maxillary model. Next, carefully trim the heel of the lower model parallel and flush with the upper model (Fig. 17). It is important that the upper model heel not be accidentally trimmed during this process.

Because it can be difficult to see the heel of the upper model at this time, it is sometimes preferable to first trim the lower heel to a point just short of the heel of the upper model. The operator may next proceed to trim the gross excess of the lower model base and then trim the lower heel flush with the upper heel.

### Trimming the Lower Base

With the models in occlusion, the vertisquare is utilized to trim the lower base parallel to the upper base. Slide the vertisquare onto the degree plate and with the base of the upper model against the pad of the vertisquare trim the base of the lower model until the pointer on the side of the vertisquare reaches the 70mm mark on the degree plate (Fig. 18). This cut will leave the articulated models at the desired height.

### Trimming the Lower Buccal Segments

Remove the vertisquare and slide the angleguide onto the degree plate. Rotate the degree plate to 55° and trim the right and left buccal segments to the deepest part of the buccal vestibule while making sure the integrity of the muscle attachments is retained. It is important to trim no closer than 1/2" from the buccal surfaces of the teeth (Fig. 19).

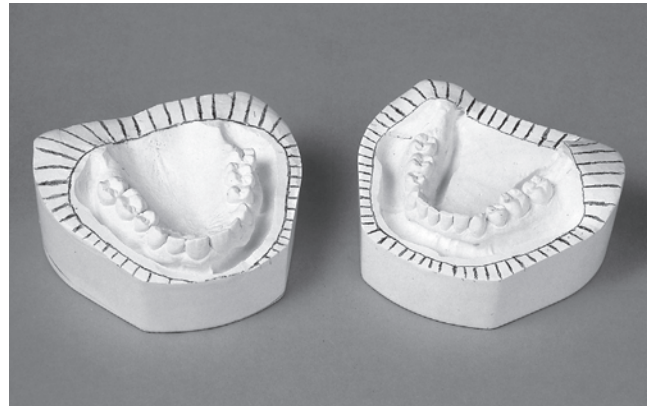


Figure 16



Figure 17



Figure 18

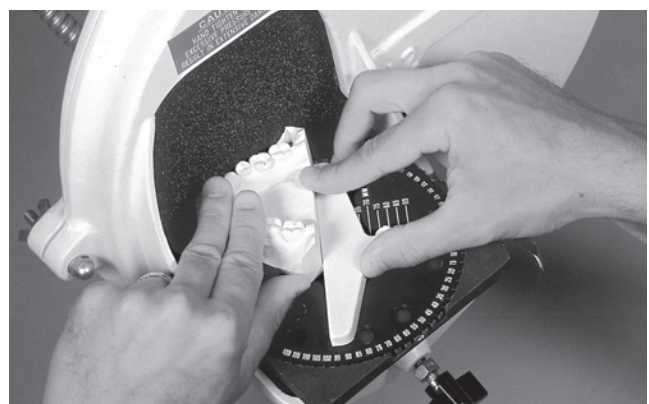


Figure 19

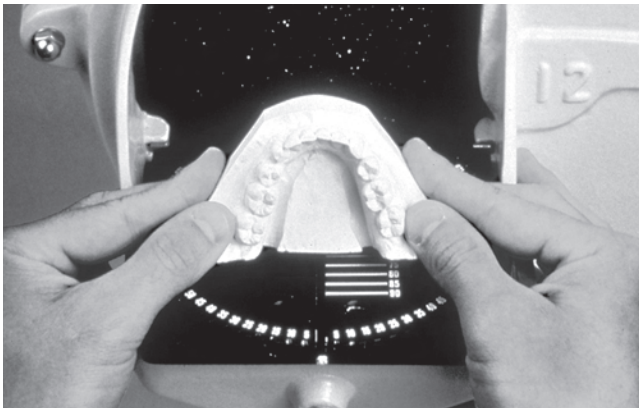


Figure 20



Figure 21

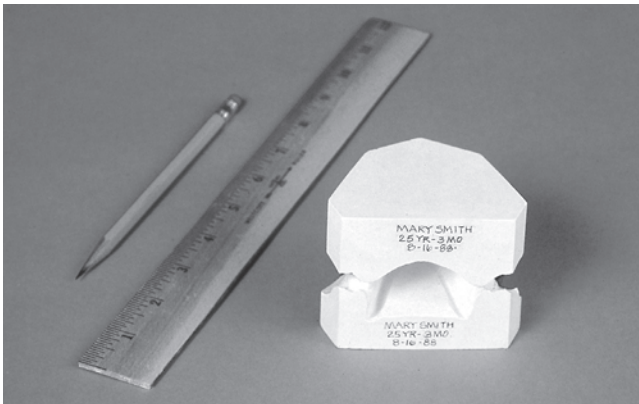


Figure 22

### Trimming the Lower Anterior Segments

Remove the angleguide from the degree plate and with the base of the lower model flat on the degree plate, trim the anterior (front) segment in a semicircle (Fig. 20).

The anterior segment is trimmed no closer than 1/4" from facial surfaces of the anterior teeth. The cut should be sharp and distinct approximately at the midlines of the canines and thereby create buccal segments that are of equal length. To ensure that the buccal segments are of equal length, the distance from the cut to the heel should be the same on each side.

### Trimming the Lower Posterior Segments

Return the angleguide to the degree plate and set the degree plate to 115°. With the upper and lower models together, place the heel of the lower model against the angleguide. Gently push the model and angleguide until the lower posterior trimmed corners are trimmed flush with the upper posterior corners (Fig. 21).

**Labeling Models:** The upper and lower model heels should both be labeled before soaping. The patient's name, age and the date the impressions were taken should be printed on the models. Using a sharp pencil, the lettering should be in capital letters and should not exceed 1/8" height (Fig. 22).

**Soaping Models:** To give models the best appearance possible, they should be soaked in a soap solution after they have been allowed to dry. Model Glow, available from Whip Mix, is an excellent model soap. It is important to rinse any excess soap off after soaping and polish with a dry cloth.



## Checklist for Properly Trimmed Models

A properly trimmed set of models should exhibit the following characteristics:

- Upper and lower models remain in occlusion when resting on the left or right posterior corners, and on the heels of the models (Fig. 23, 24)
- All bubbles or voids have been filled with stone and flat surfaces of models are smooth
- Any overlying base portion has been trimmed away so that the entire facial anatomical area may be viewed
- Line angles are sharp and parallel (Fig. 25, 26)
- Both heels of the upper and lower models are correctly labeled

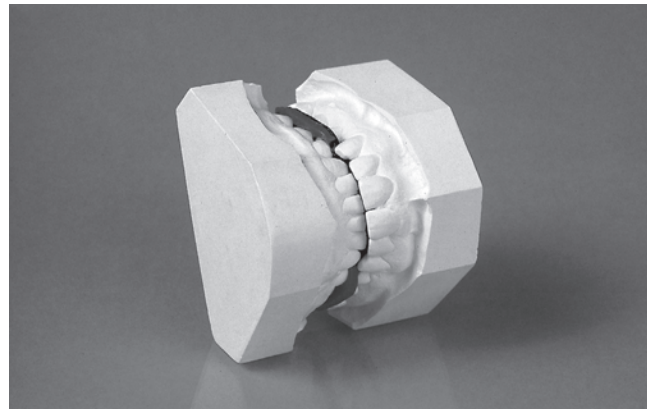


Figure 23

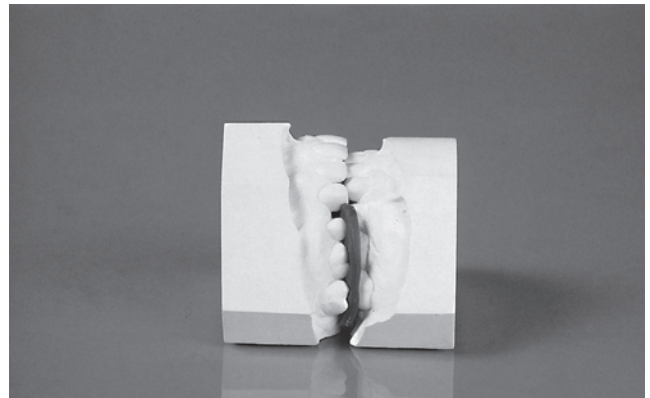


Figure 24

## References

For more detailed information on model trimming, please refer to the following articles and books.

Castaldi, C.R. and George Brass. **Dentistry for the Adolescent**. W.B. Saunders. Philadelphia, 1980.

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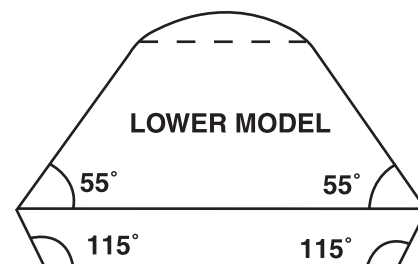


Figure 25

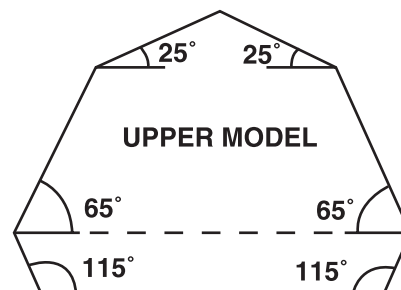


Figure 26

## Procedure Summary

Trim excess around periphery of upper and lower models no closer than 1/2" from facial surfaces of the teeth. Also trim heels of upper and lower models so they will not contact when placed in occlusion.

Trim upper model base to line drawn 1 1/2" (38mm) parallel to occlusal plane.

Carefully draw a reference line over the mid-palatal raphe. Next, trim the heel of the upper model to the depth of the Hamular Notch\*.

Set the degree plate to 25° and with the aid of the angleguide, trim the left anterior segment of the upper model. Next, reset the degree plate to 25° for the right side and trim the right anterior segment accordingly.

With the degree plate on the 65° setting and using the angleguide, trim the left and right buccal segments of the upper model.

With the degree plate on the 115° setting and using the angleguide, trim the left and right posterior segments of the upper model.

With the models articulated and inverted, trim the heel of the lower model flush with the heel of the upper model.

With the models in occlusion, trim the base of the lower model until the vertisquare pointer reaches the 70mm mark on the degree plate.

With the degree plate on the 55° setting, trim the right and left buccal segments of the lower model to the depth of the buccal vestibule.

Trim the anterior segment of the lower model in a semicircle from the midline of one canine to the midline of the other canine. Make sure to trim not closer than 1/4" from facial surfaces of the teeth. To ensure that the buccal segments are of equal length, the distance from the cut to the heel should be the same on each side.

Set the degree plate to 115° and with the models in occlusion, trim the right and left posterior segments of the lower model flush with the upper right and left posterior segments.

Use fine wet/dry sandpaper over all flat model surfaces under running water to produce a smooth finish. Be careful not to round the model edges.

Allow models to dry 24 hours before labeling the heels of the upper and lower models. Place models in a model soap such as Whip Mix Model Glow for no more than 30 minutes. Allow the models to dry and polish with a dry cloth.

\* For instructions on what to do if anatomic landmarks such as third molars are present on the lower model, consult the detailed instruction section.

## Maintenance

### Model Trimmer:

Before performing any maintenance function, unplug the unit.

Anytime the door is opened, wipe off all debris from the door gasket and opposing surface. A thin coat of petroleum jelly applied to the gasket will improve sealing ability and prevent sticking.

Door gasket replacement requires removal of gasket and cement which holds it in place. Line groove with fresh rubber gasket cement and spread evenly. Press gasket into cement starting one end at top of the door. Cut off excess length to fit ends of the gasket together. Close the door and tighten wing nut until cement sets.

To replace or reverse the abrasive wheel for better cutting action, remove the three attach button screws, attach button and then abrasive wheel. Look behind the top side of aluminum backing plate to see if any residue has built up on the deflector located above the shaft hole. Flush or wipe off any buildup to prevent water leaks.

Replace old gasket on attach button with new gasket. Place attach button in center hole of abrasive wheel. Align off-center hole of the abrasive wheel with the drive pin. Align attach button holes with backing plate holes. Tighten attach button screw evenly in rotation.

The water spray tube should periodically be checked for downward angulation and to be sure that none of the holes have become clogged. A straight pin may be used to remove any debris which may be blocking any of the holes.

The large clean out plug located on the side of the model trimmer base is easily removed for periodic cleaning inside the base.

### Orthodontic Work Table:

To prolong the life and ensure the accuracy of the orthodontic work table, thoroughly clean all parts and accessories after each use. Remove degree plate, rinse both sides and clean the track of the work table upon which the degree plate rests. A small abrasive brush is a useful tool when cleaning the work table and track.

# CAUTION



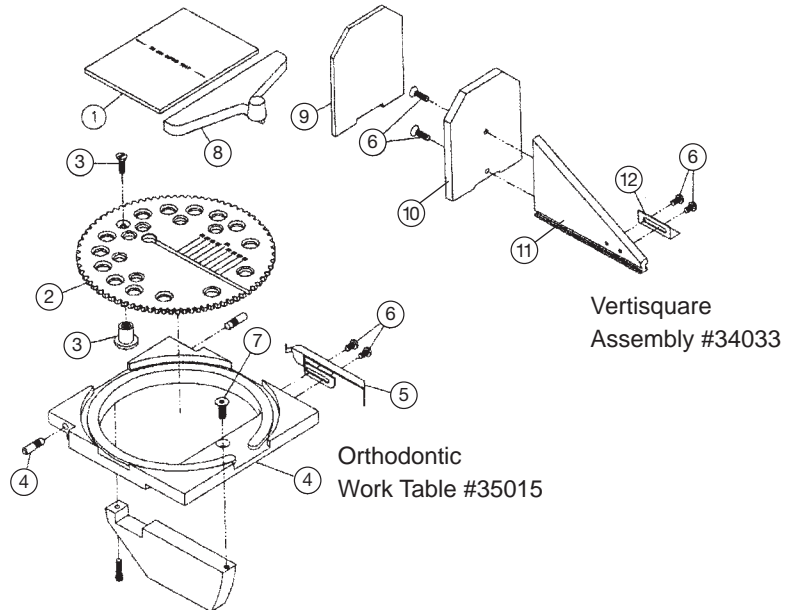
- UNPLUG THE UNIT BEFORE PERFORMING ANY MAINTENANCE OR REPAIR.
- DO NOT PUSH MODEL AGAINST ABRASIVE WHEEL WITH EXCESSIVE FORCE.
- BEFORE INSTALLATION, CHECK ELECTRICAL SUPPLY CHARACTERISTICS WITH MOTOR CHARACTERISTICS.
- SHOULD MOTOR FAIL TO START OR BEGIN TO SMOKE, TURN OFF IMMEDIATELY. REFER TO QUALIFIED SERVICE PERSONNEL.
- **WARNING!** TO PREVENT ELECTRICAL SHOCK DO NOT REMOVE GROUND PRONG ON PLUG. USE ONLY THREE-HOLE RECEPTACLE OR ADAPTER.
- MOVING PARTS MAY STILL BE IN MOTION AFTER OPENING DOOR.
- WEAR SAFETY GLASSES WHEN TRIMMING.
- SECURE ALL LOOSE CLOTHING AND HAIR IN PLACE TO PREVENT POSSIBLE INJURY.

THIS MODEL TRIMMER HAS BEEN DESIGNED TO BE SAFE AT LEAST UNDER THE FOLLOWING CONDITIONS:

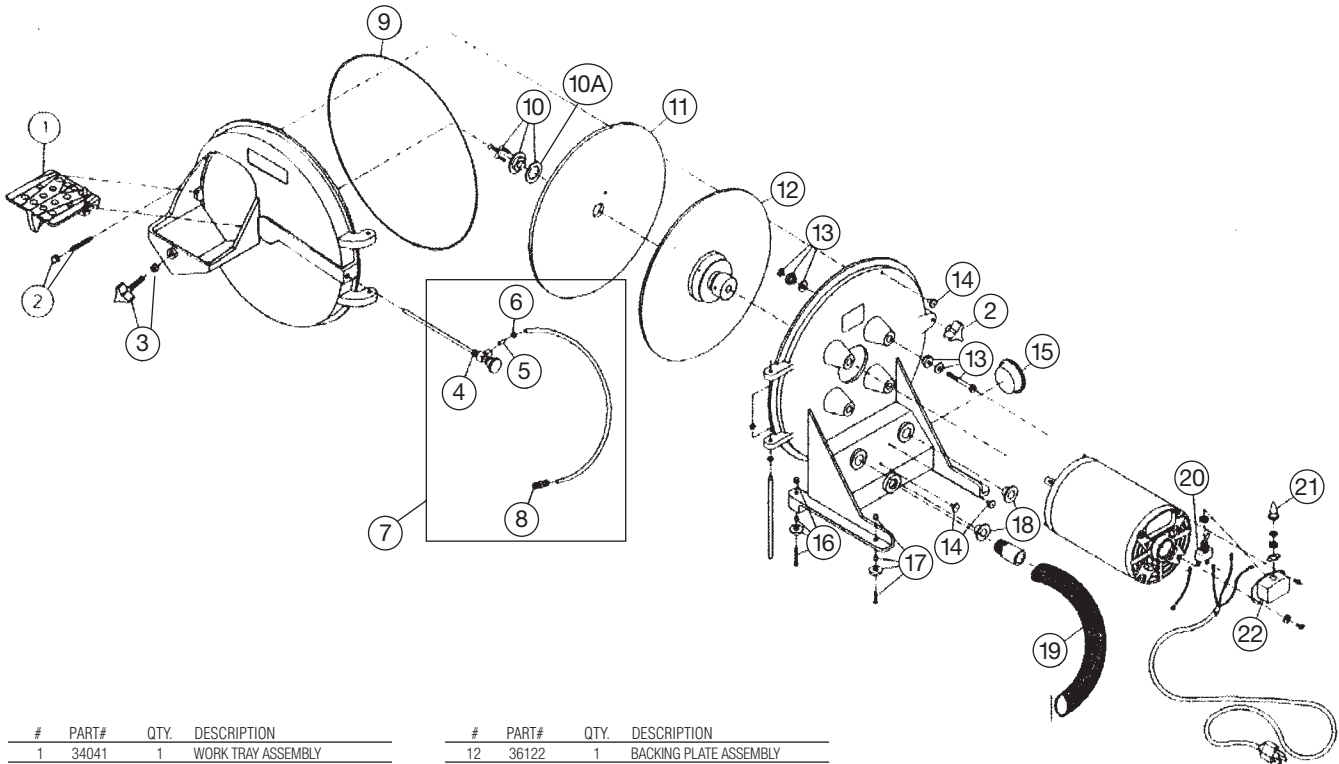
- INDOOR USE.
- ALTITUDE UP TO 2000 METERS.
- TEMPERATURE 5° C TO 40° C
- MAXIMUM RELATIVE HUMIDITY 80% FOR TEMPERATURES UP TO 31° C DECREASING LINEARLY TO 50% RELATIVE HUMIDITY AT 40° C.
- MAIN SUPPLY VOLTAGE FLUCTUATIONS NOT TO EXCEED PLUS OR MINUS 10% OF THE NORMAL VOLTAGE.
- TRANSIENT OVER VOLTAGES ACCORDING TO INSTALLATION CATEGORY II.
- POLLUTION DEGREE 2 IN ACCORDANCE WITH IEC 664.

## Parts - Vertisquare and Orthodontic Work Table

#	PART#	QTY.	DESCRIPTION
1	30045	1	Z0MM GAUGE
2	30034	1	DEGREE PLATE
3	30257	1	SAFETY STUD
4	30032	1	WORK TRAY ASSEMBLY
5	30044	1	INDEX LATCH
6	30459	4	SCREW (2/BAG)
7	30195	1	SCREW
8	30043	1	ANGLE GUIDE
9	30217	1	FACING (PKG OF 3)
10	30273	1	HEAD
11	30038	1	BLADE
12	30040	1	INDICATOR



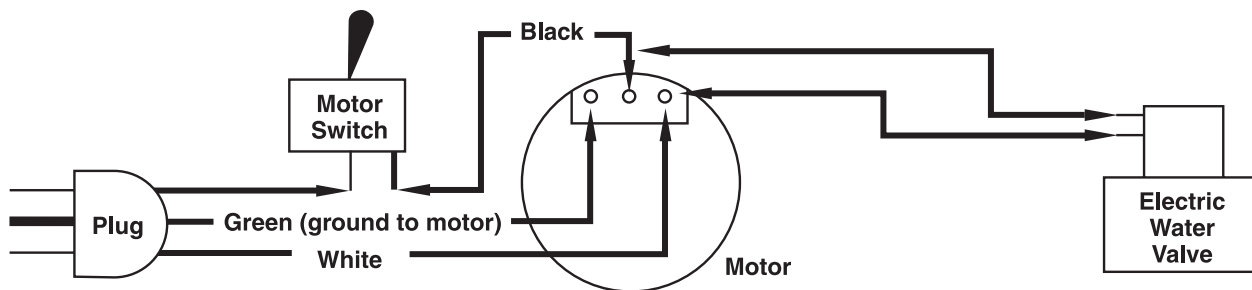
# Parts – 12" Trimmer



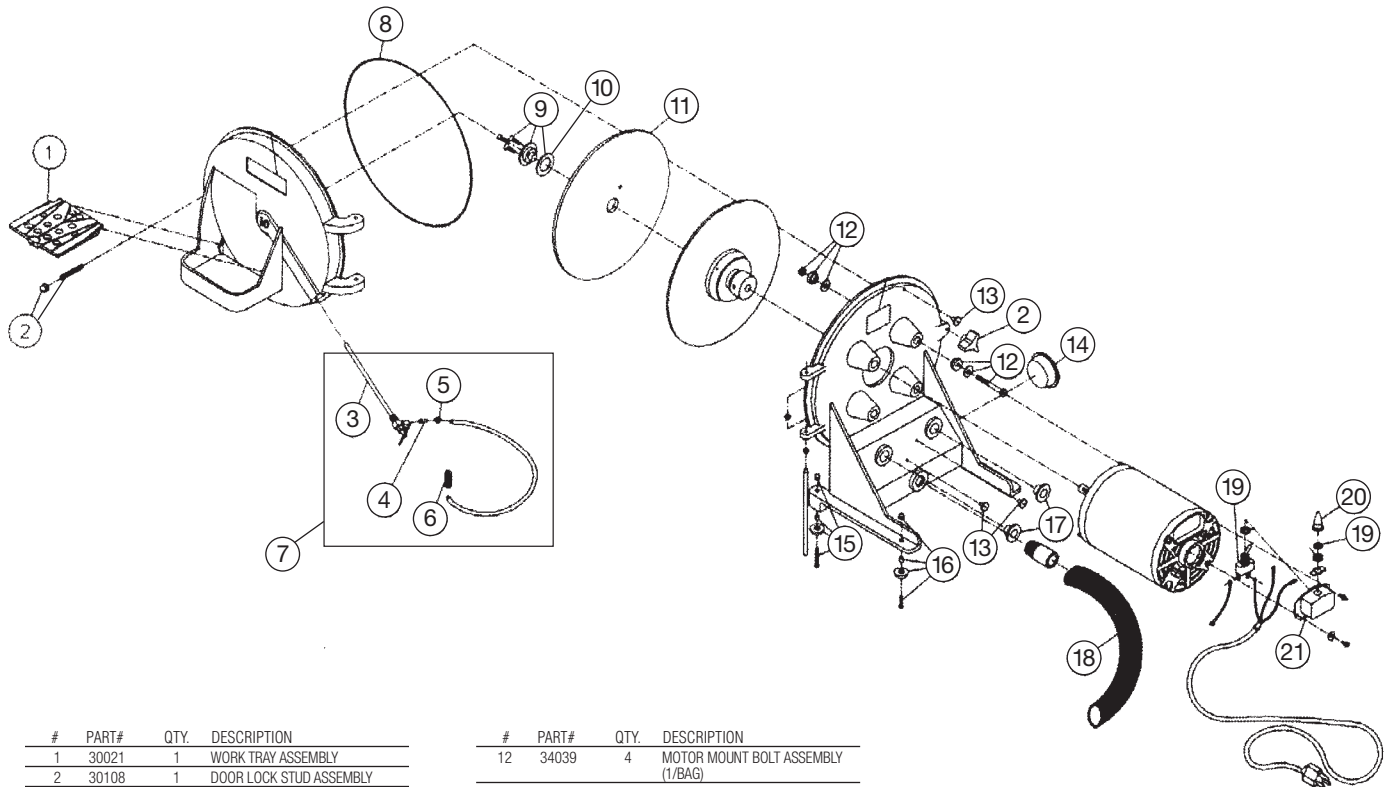
#	PART#	QTY.	DESCRIPTION
1	34041	1	WORK TRAY ASSEMBLY
2	30108	1	DOOR LOCK STUD ASSEMBLY
3	30058	1	THUMB KNOB
4	34017	1	SPRAY TUBE ASSEMBLY
5	30451	1	EYELET
6	30431	1	SLEEVE
7	30117	1	WATER INLET HOSE ASSEMBLY
8	30158	1	WATER INLET FITTING
9	30122	1	DOOR GASKET
10	34076	1	LOCK BUTTON ASSEMBLY
10A	30096	1	LOCK BUTTON GASKET ONLY
11	30097	1	MEDIUM 12" GRINDING WHEEL WITH GASKET
	30292	1	COARSE 12" GRINDING WHEEL WITH GASKET
	30138	1	X-COARSE 12" GRINDING WHEEL WITH GASKET

#	PART#	QTY.	DESCRIPTION
12	36122	1	BACKING PLATE ASSEMBLY
13	34039	4	MOTOR MOUNT BOLT ASSEMBLY (1/BAG)
14	30075	3	PLUG (1/BAG)
15	30136	1	CAPLUG
16	34082	2	FRONT FOOT ASSEMBLY (1/BAG)
17	34085	2	BACK FOOT ASSEMBLY (1/BAG)
18	30137	2	CAPLUG (1/BAG)
19	36125	1	DRAIN HOSE
20	6014A	1	SWITCH
21	30024	1	SWITCH CAP
22	30101	1	SWITCH BOX

## WIRING DIAGRAM



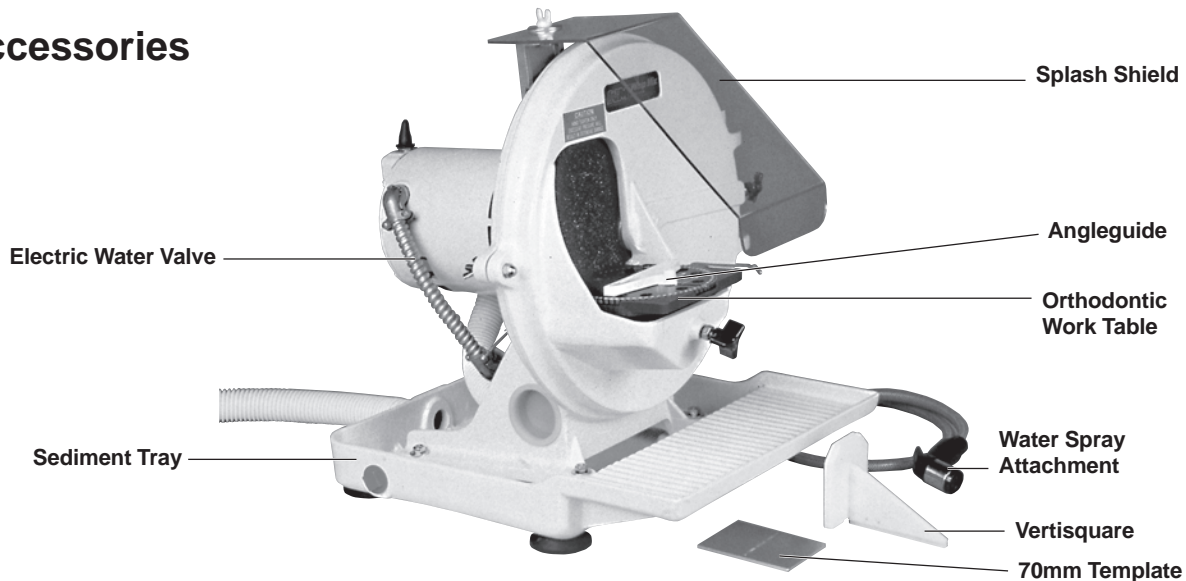
# Parts – 10" Trimmer



#	PART#	QTY.	DESCRIPTION
1	30021	1	WORK TRAY ASSEMBLY
2	30108	1	DOOR LOCK STUD ASSEMBLY
3	34017	1	SPRAY TUBE ASSEMBLY
4	30451	1	EYELET
5	30431	1	SLEEVE
6	30117	1	WATER INLET HOSE ASSEMBLY
7	30158	1	WATER INLET FITTING
8	30104	1	DOOR GASKET
9	34076	1	LOCK BUTTON ASSEMBLY
10	30096		LOCK BUTTON GASKET ONLY
11	30293	1	COARSE 10" GRINDING WHEEL WITH GASKET
	30102		MEDIUM 10" GRINDING WHEEL WITH GASKET

#	PART#	QTY.	DESCRIPTION
12	34039	4	MOTOR MOUNT BOLT ASSEMBLY (1/BAG)
13	30075	3	PLUG
14	30136	1	CAPLUG
15	34082	2	FRONT FOOT ASSEMBLY
16	34085	2	BACK FOOT ASSEMBLY
17	30137	2	CAPLUG (1/BAG)
18	36125	1	DRAIN HOSE
19	6014A	1	SWITCH
20	30024	1	SWITCH CAP
21	30101	1	SWITCH BOX

## Accessories



A variety of practical accessories are available to complement the Whip Mix product line:

### Orthodontic Work Table

Standard equipment on the 12" Orthodontic Model Trimmer, this innovative accessory may be used with the standard 12" Model Trimmer as well. Easy to use and very accurate, the orthodontic work table makes it possible for the user to quickly trim a complete set of models. The orthodontic work table includes the following accessories:

**Vertisquare** – Constructed of low friction, long-wearing plastic, the vertisquare is utilized to aid in the trimming of the model base. An adhesive foam rubber pad attached to the vertisquare absorbs shock, helps prevent breakage of teeth, and provides a safe buffer zone between the hands of the user and the model trimmer wheel. The foam rubber pads (#30217) may be ordered in a package of 3.

**Angleguide** – The angleguide is constructed of the same low friction, long-wearing plastic as the vertisquare. This accessory helps position the model for trimming at the desired angle indicated by the degree plate of the work table.

### Electric Water Valve

The electric water valve eliminates the hassle of having to separately turn on and off the water supply to the model trimmer each time the unit is used. The water supply to the machine is regulated by the motor switch.

### Sediment Tray

Featuring a built-in model shelf, the sediment tray provides convenient storage for models not being trimmed. Large restraint feet provide excellent stability.

### Water Spray Attachment

The spray head may be used to clean models or the model trimmer work table with minimal effort. It eliminates the

necessity of a separate water source in order to clean models on the tray table. May be either factory installed or added to an existing unit by the owner.

### Splash Shield

The splash shield protects the user from debris and water spray. Made of scratch resistant Lexan, the shield will withstand years of constant use. Its pivot design allows the operator to swing the shield to the left when not needed. Or, by tightening the wing nut, the shield may be secured in various positions. The splash shield fits any Whip Mix model trimmer.

#### Installation

1. Remove cap plug from pre-drilled hole on back of trimmer. Position mounting bracket and attach to the model trimmer using the bolt and lock washer.
2. Sandwich the shield between the two washers and place on mounting stud on the bracket. Tighten wing nut over washers and shield.
3. Tighten wing nut as needed to allow the shield to pivot freely.
4. Clean with wet cloth and mild soap.

**NOTE:** Splash Shield can be installed on the 10" Model Trimmer. Simply assemble shield to mounting bracket with washers and wing nut. Place mounting bracket against back of trimmer so the shield is in the desired position. Mark hole with a pencil. Drill with a 13/64" bit and thread with 1/4 - 20 tap. Attach assembly with mounting bold and lock washer.

## Model Trimmer Wheel

12" abrasive wheel is available in medium, coarse and extra coarse grits. The 10" wheel is available in medium and coarse grit only. The Blue Wonder™ Diamond Wheel is available for both the 12" and 10" model trimmers.

## Care and Cleaning Tips for Blue Wonder™ Diamond Wheels

The Blue Wonder™ Diamond Wheel is longer lasting than traditional model trimming wheels. The extra coarse diamond surface is designed for aggressive, yet cool cutting. It is durable and perfectly balanced for smooth operation. It easily grinds die material, stone and plaster casts and will not clog if used and cared for properly. In order to ensure that the Blue Wonder™ Diamond Wheel maintains maximum cutting efficiency, we recommend the following care and cleaning tips.

### Important

Before mounting be sure the back of the wheel and the mounting surfaces are free of any dirt, debris or build up. The slightest offset can cause uneven wear or loss of diamonds from the grinding surface.

It is important that no metal of any kind (including casting rings, articulators or dowel pins) come into contact with the surface of the wheel.

Blue Wonder™ Diamond Wheels are to be used on dental stone and plaster only. Do not use on plastic or wax. This type of material will permanently clog the wheel.

### Cleaning the Wheel

**Wet Trimming:** If using the wheel with a wet trimmer, be sure to check water flow rate. There must be sufficient water flow to remove cut material and prevent the wheel from clogging.

**Dry Trimming:** If using the wheel with a dry trimmer, the Whip Mix CleanCut Wheel Cleaner may be used to remove clogged material clinging to the wheel. Do not use the CleanCut Wheel cleaner with a wet trimmer.

Should the wheel appear to become dull, you may remove and clean the wheel with soapy water and a stiff bristle brush.

## 10"/12" PSA Disc

Pressure sensitive discs are available in 40 and 50 grit.

## PSA Backing Disc

A spacing disc for PSA conversion is available in 10" or 12" plastic or aluminum.

## Conversion Kit

The conversion kit allows conversion from the abrasive wheel to a Pressure Sensitive Adhesive Disc System (PSA). The standard kit contains three 50 grit discs, plus a 12" or 10" plastic backing disc or 12" aluminum backing disc.

