

## SRM12 PLANETARY MIXER OPERATOR'S MANUAL



Persons under age 18 are not permitted to operate or have accessibility to operate this equipment per U.S. Dept. Of Labor Employment Standards Administration Fact Sheet No. ESA913.

SRM12 REV A

#### Welcome to Univex

Thank you for purchasing this Univex Product.

Your new SRM12 mixer has been designed with advanced performance and safety features that make it an excellent addition to your food preparation equipment. Like all Univex mixers, slicers, meat grinders and accessories, this mixer is engineered to provide years of reliable service.

If you have any questions concerning the operation of this unit, or if we can be of further assistance, please call our Customer Service Department for the location of your nearest service representative.

Univex Customer Service: USA & Canada 800-258-6358 International 603-893-6191 Or visit us on-line at www.univexcorp.com under service agents.

#### Safety is our top priority

**READ** AND MAKE SURE THAT YOU UNDERSTAND THE INSTRUCTIONS AND SAFETY WARNINGS IN THIS BOOKLET BEFORE ATTEMPTING TO OPERATE THE MIXER OR ATTACHMENTS.

**NEVER** PUT FINGERS OR HANDS IN THE BOWL WHILE THE MIXER IS OPERATING OR SERIOUS INJURY COULD RESULT.

**NEVER** ATTEMPT TO CLEAR A JAMMED ATTACHMENT OR STALLED MIXER WITHOUT SHUTTING THE POWER OFF AND DISCONNECTING THE ELECTRICAL POWER SUPPLY CORD.

**ALWAYS REPLACE** THE POWER TAKE-OFF (PTO) CAP WHEN ATTACHMENTS ARE NOT IN USE.

DO NOT OPERATE THIS MIXER WITHOUT THE BOWL IN PLACE.

DO NOT OPERATE THIS MIXER WITHOUT THE SWING RING SAFETY GUARDS IN PLACE.

#### **TABLE OF CONTENTS**

#### DESCRIPTION

#### PAGE

TABLE OF CONTENTS, LIST OF ILLUSTRATIONS	2
CHOOSING THE RIGHT LOCATION FOR YOUR MIXER	3
USER FRIENDLY SWING RING SAFETY GUARD	3-4
OPERATING THE SRM12 MIXER	4-5
USING THE POWER TAKE-OFF	6
USING THE INGREDIENTS CHUTE	6
TABLE OF MIXING CAPACITIES AND RECOMMENDED AGITAT	ORS7
BEATERS, AGITATORS, BOWLS, AND ACCESSORIES	8
CLEANING YOUR MIXER	10
OPERATOR'S PREVENTIVE MAINTENANCE	
TROUBLESHOOTING GUIDE	11
WARRANTY	BACKCOVER

#### LIST OF ILLUSTRATIONS

#### **ILLUSTRATION**

FIGURE 1 OVERALL VIEW OF M	1IXER	9
FIGURE 2A WIRING DIAGRAM	115V, 60HZ, 1PH / 220-240V,50HZ, 1PH	
	230V, 60HZ, 1PH / 100V, 50/60HZ, 1PH	.12
FIGURE 2B WIRING DIAGRAM	115V,60HZ,1PH (CANADA ONLY)	
	220-240V, 50HZ, 1PH (EUROPE ONLY)	.13
FIGURE 2C WIRING DIAGRAM	380-400V, 50HZ, 3PH (EUROPE ONLY)	.14

#### CHOOSING THE RIGHT LOCATION FOR YOUR NEW MIXER

When selecting the best location for the mixer, it is helpful to consider the following:

Where is the best location for the operator, both for saving steps and easy viewing? Is this a good location for product flow as in: Easy to get ingredients to the mixer? Destination of the mix after mixing? Is there existing electrical service at this location? Does this location provide easy access for cleaning and service? Check to be sure that your mixer with attachments does not extend out into heavy traffic areas. If stands and / or portable equipment are to be used along side of your mixer, can they be moved easily to and from your mixer?

#### **IMPORTANT ELECTRICAL SERVICE INFORMATION**

Electrical wiring instructions are found in the wiring diagram (Figures 2A thru 2C) on pages 12 through 14. Before making electrical connections, CHECK the specifications on the nameplate to make sure that they agree with the available electrical service.

#### **USER FRIENDLY SWING RING SAFETY GUARD**

Your SRM12 mixer features a two part safety guard. The Swing Ring Safety Guard is easily removed and installed, as well as dishwasher safe. It conveniently swings out of the way without having to be removed to place or sample ingredients in the bowl. Only one side of the guard needs to be open when adding ingredients. This two-piece design handles and fits conveniently in your sink or dishwasher. It also provides a clear view of the product throughout the mixing cycle.

This mixer will not operate unless the Swing Ring Safety Guard is properly engaged. The guards activate safety switches that enable the mixer to operate only when the guards are closed. These switches protect against accidental operation of the mixer when the guards are open or removed from the mixer. The mixer will automatically stop if the guard is opened. An additional switch in the bowl lift automatically stops the mixer if the bowl is lowered from the "up" (mixing) position.

To install the Swing Ring Safety Guard, insert the pointed end of the rod at the rear of the guard into the lower mounting bracket on the mixer housing. Then insert the top end of the rod into the upper bracket by aligning the groove in the rod with the slot in the bracket. Press the rod in and allow it to drop down into position. Swing the two halves of the guard forward. Magnets located on the transmission will hold the guards in position. When the guard is properly closed, the switches will be activated and the mixer can be operated.

To remove the guard, simply reverse the installation procedure. Grip the two halves of the guard and pull it open. Use an upward motion to release each half of the guard from the bracket on the machine body.

To open the guard for access to the bowl, **first turn the mixer off** by pushing the red "Stop" pushbutton (Figure 1 [16]). Pull open the two halves of the guard and swing one or both guards outward. It is not necessary to remove them. Close the guards and press the green "Start" push-button (Figure 1[15]) to resume mixing operations.

#### **OPERATING THE SRM12 MIXER**

Your Univex mixer is designed to meet the cook's and baker's demand for an efficient, dependable appliance. It should give unfailing performance over a period of years when operated and maintained according to the instructions contained herein.

The mixer drives various agitator attachments through a beater head shaft to beat, mix, or whip liquid, viscous, or dry ingredients. The shaft is driven by a sturdy motor whose power is transmitted by a rugged, cogged belt and a continuously variable transmission (CVT) through a gear train and a planetary gear set. The speed of the beater shaft can be varied from approximately 48 to 128 revolutions per minute (RPM). (See page 8 for part numbers of various agitators, attachments and accessories.)

The SRM12 mixer is optionally equipped with a power take-off (PTO) that operates other attachments such as slicers, graters and grinders. The PTO speed can be varied from 117 to 316 rpm. **Be sure to read and follow all safety instructions provided by the manufacturers of attachments that you operate on the PTO.** The PTO hub should be covered with the PTO cap provided with your mixer when not in use to prevent accidental insertion of fingers into the PTO housing during operation.

## Warning: Never put hands, spoons, utensils or other objects into the bowl while the mixer is operating!

Note: Noise emissions for this mixer are below 70db (A).

#### SECURING THE BOWL AND INSTALLING THE MIXER AGITATOR

Place the bowl on the bowl support (Figure 1 [1]). The pin at the rear of the bowl must align with the corresponding slot on the bowl support. Align the holes in the bowl mounting brackets over the pins on the bowl support (Figure 1 [3]) and lower the bowl into position.

With the bowl in the "down" position, install the desired agitator by sliding it upward on the beater shaft (Figure 1[4]). Rotate the agitator counter-clockwise until it is engaged.

**Note:** Serious injury may result if the bowl is not fully secured to the bowl support using the bowl support pins.

With the bowl secured, add ingredients. Liquids should be added first. The bowl is now ready to be raised to the "up"(mixing) Position by turning the bowl lift handle (Figure 1 [17]) clockwise.

**Note:** Exceeding the mixer capacity (page 7) can cause damage to the mixer and will void the factory warranty.

When using the wire whip agitator, raise the bowl to the "up" position first and then add ingredients to avoid wire whip damage.

Close and secure the Swing Ring Safety Guard before proceeding.

#### USING THE BOWL LIFT

The mixer will not operate unless the bowl is in the "up" position. Raise the bowl by turning the bowl lift handle (Figure 1 [17]) clockwise. To lower the bowl, turn the bowl lift handle counter-clockwise. It is necessary to lower the bowl to change the agitator. This also makes the bowl accessible for filling.

#### **START/STOP CONTROLS**

This mixer will start only when the Swing Ring Safety Guard is closed and the bowl is in the raised position. (If the optional timer is installed, the timer must be set). To start the mixer, push the Green "Start" push-button (Figure 1 [15]). For safety and operator ease, this mixer is equipped with an oversized, red mushroom style stop button (Figure 1 [16]).

**NOTE**: Although the motor shuts off instantly when the Swing Ring Safety Guard is opened, or the bowl is lowered, or the stop button is pushed, the agitator may **NOT** come to a complete stop for several revolutions. **DO NOT PUT HANDS OR UTENSILS INTO THE BOWL OR NEAR THE BEATER HEAD SHAFT UNTIL IT HAS FULLY STOPPED.** 

Both the Start and Stop push-buttons are momentary contact type buttons. They provide low voltage protection and prevent accidental start-up in the event of power interruption.

#### **SETTING THE TIMER (if provided)**

When the mixer is equipped with a timer, the mixer will not operate unless the timer has been set or placed in the "HOLD" position. To start the mixer, first turn the timer (Figure 1 [13]) to the desired mixing time. Then push the green "Start" push-button (Figure 1 [15]). The mixer will automatically stop when the timer has reached "0". To stop the mixer before the timer has reached "0", push the red "Stop" push-button (Figure 1 [16]). The timer may be set for up to 15 minutes or may be set to the "HOLD" position for continuous operation. When setting a time of less than 5 minutes, turn the timer beyond 5 minutes and then return it to the desired time.

## NOTE: The mixer will start only when the Swing Ring Safety Guard is closed and the bowl is in the raised position. Do not operate the mixer without the bowl in place.

#### VARI-SPEED CONTROL

A major advantage of Univex mixers is there Continuously Variable Transmission (CVT). Unlike other mixers, CVT lets you change speeds while the mixer is running. To change speeds move the speed control lever (Figure 1 [9]) to the desired speed. The speed indicator (Figure 1 [14]) shows four speeds. Numerous intermediate speeds give the cook or baker tremendous flexibility.

Use speed "1" (slow) for heavy mixtures like pizza, bread or roll dough. Speed "1" should also be used with the meat and food chopper attachment. For most mixing tasks, start on speed "1" and progress to higher speeds as needed. Use high speeds for whipping cream, beating eggs, and thin batter. To avoid damaging your mixer, follow the speed, volume limits and attachments recommendations shown in the table of mixing capacities on page 7.

If you notice any slippage during mixing, the mixer may be overloaded. Reduce the load, or reduce the speed until the mixing action is smooth. Refer to the Trouble-Shooting Guide on page 11.

If the mixer jams and the motor stalls, immediately press the "Stop" push-button. Take necessary steps to reduce the load. Never put hands in the bowl to clear a jam.

# NOTE: Always return to speed "1" before shutting the mixer off. Do not move the speed control lever when the mixer is not running, because this will cause the belt to become loose and the mixer will not operate properly.

If the mixer has been shut off by the timer, or the stop button in speed 2, 3 or 4, follow these steps to avoid belt slippage or jerky start: Empty the bowl. Set the timer to "HOLD". Press the "Start" push-button and as the mixer begins to operate, move the speed control lever back to speed "1". Press the "Stop push-button and return the timer to "0". Your mixer is now ready for use.

#### **USING THE INGREDIENTS CHUTE**

The ingredients chute provided with your mixer enables you to add ingredients to the bowl while the mixer is running and without opening the Swing Ring Safety Guard. The chute may be installed on the front or side of either half of the guard. Once the chute is properly installed, it can remain in place permanently, if desired.

#### **INGREDIENTS CHUTE INSTALLATION**

Slide the bottom of the chute between horizontal safety guard rings and engage the chute onto the safety guard.



#### USING THE POWER TAKE-OFF (PTO)

The Power Take-Off (PTO) hub (Figure 1 [8]) accommodates #12 tapered attachments such as a vegetable slicer and shredder, or a meat and food chopper. The mixers speed control lever also controls the PTO drive speed.

Before installing attachments, turn the mixer off. Remove the PTO cap and loosen the thumb screw (Figure 1 [9]) on the PTO hub. Insert the attachment with a slight twist until it is firmly in place. Tighten the thumb screw. Be sure to read and follow all safety instructions provided for the attachments that you operate on the PTO.

#### **SAFETY NOTES:**

When grinding meat, chopper attachments must never run faster than speed "1". For vegetables, attachments may run at a higher speed.

Always turn the mixer off to install or remove the attachment.

Always return to speed "1" before shutting the mixer off.

Cover the PTO hub with the PTO cap when the PTO is not in use.

#### **Table of Mixing Capacities and Recommended Agitators**

MODEL		SRM 12	
Bowl Capacity Attachment Hub Size Motor		15 qt. #12 1/3 hp.	14.2 L.
Kitchen Capacities (single batches)	Agitator		
Mashed potatoes Whipping cream Mayonnaise Egg whites Meringue Waffle or pancake batter	Batter beater, 4-Wing beater Wire whip, 4-Wing beater Batter beater, Wire whip, 4-Wing beater Wire whip Wire whip Batter beater		<ul> <li>4.5 kg.</li> <li>2.4 L.</li> <li>4.3 L. (oil)</li> <li>0.6 L.</li> <li>0.4 L. (water)</li> <li>4.7 L.</li> </ul>
Bakery Capacities (single batches)	Agitator		
Pie dough Cake Sponge cake batter Angle food batter (8-10 oz. cake) Marshmallow icing	Pastry knife Batter beater, 4-Wing beater Wire whip, 4-Wing beater Wire whip, 4-Wing beater 4-Wing beater	11 lb. 12 lb. 6 1/2 lb. 7 cakes 1 1/4 lb.	5.0 kg. 5.5 kg. 3.0 kg. 7 cakes 0.6 kg.
Fondant icing Shortening & sugar creamed Egg & sugar for sponge cake Bread / roll dough light to medium 60%AR	Batter beater Batter beater Batter beater, 4-Wing beater Dough hook	7 lb. 9 1/2 lb. 5 lb. 13 lb.	3.2 kg. 4.3 kg. 2.3 kg. 5.9 kg.

**NOTES:** Recommended speeds are for the capacities listed.

Dough capacities for bread and rolls are based on a 12% flour moisture and 70°F (21°C) water temperature. Reduce capacity by 10% if cold water is used.

If higher gluten flour is used, reduce total capacity by 10%.

AR% (Absorption Ratio) = the weight of the water divided by the weight of the flour.

The lower the AR% the stiffer and more difficult the dough is to mix.

AR% below 40% will reduce total capacity

1 gallon of water = 8.3 lb. (1 liter of water = 1 kg.)

#### Do not use the SRM 12 for mixing pizza, doughnut or heavy bread doughs.

#### **Beaters, Agitators, Bowls, and Accessories**

#### Available for the SRM 12 Mixer

Part numbers (size in quarts)

A. Batter Beater 1012231 (12)	F. Sweet Dough Beater Optional 1012238 (12)
B. Wire Whip 1012149 (12)	G. Bowl 1012494 (12)
C. Dough Hook Optional 1012232 (12)	H. Vegetable Slicer/Grater Optional VS9 Slicer 1000950 VS9H Grater 1001050
D. Pastry Knife Optional 1012233 (12)	I. Meat & Food Chopper Optional ALMFC12 1000550
E. 4-Wing Beater Optional 1012297 (12)	J. Ingredient Chute 1000541

#### OVERALL VIEW OF FOOD MIXER FIGURE 1



- 1. BOWL SUPPORT
- 2. BOWL
- 3. BOWL SUPPORT PIN
- 4. BEATER HEAD SHAFT
- 5. INGREDIENT CHUTE
- 6. SWING RING SAFETY GUARD
- 7. MAGNET
- 8. PTO HUB
- 9. THUMB SCREW

- 10. LOWER MOUNTING BRACKET
- 11. UPPER MOUNTING BRACKET
- 12. SPEED CONTROL LEVER
- 13. TIMER (OPTIONAL)
- 14. SPEED INDICATOR LABEL
- 15. START PUSH-BUTTON (GREEN)
- 16. STOP PUSH-BUTTON (RED)
- 17. BOWL LIFT HANDLE
- 18. REAR ACCESS PANEL

#### **CLEANING YOUR MIXER**

Consistent use of the following procedures will ensure that your mixer is in optimum operating condition.

#### • Warning: disconnect the power supply cord before cleaning.

- Wash the body of the mixer, the bowl support, and the beater shaft with warm water and mild soap.
- Avoid excess water in the area of the safety switches that protrude from the housing where the
- Swing Ring Safety Guard is mounted.
- Do not rinse the mixer with a hose.
- Do not use abrasive pads to wash the mixer.
- Dry the mixer thoroughly with a soft cloth.
- Wash the bowl and beater immediately after use. If an egg mixture or flour batter have been used, rinse the bowl and beater with cold water before washing with hot water.
- Wash the Swing Ring Safety Guard in the same manner, or in a dishwasher.
- Dry bowls and beaters and the Swing Ring Safety Guard thoroughly.

#### **OPERATOR'S PREVENTIVE MAINTENANCE**

For best long-term performance, operators should follow these simple practices:

- Lightly lubricate the beater head shaft (Figure 1 [4]) after washing with a food grade lubricant.
- Do not cover the mixer with a plastic bag, as this traps humidity inside the mixer.
- If the electrical supply cord becomes damaged, it must be replaced with an approved cord or assembly available from Univex directly or from a Univex service agent.
- Do not overload the mixer.
  - **Overloading is the #1 cause of mixer failure**.
  - Follow the Table of Mixing Capacities on page 7. It may be helpful to post a copy of this table adjacent to the mixer.
- Keep the mixer properly lubricated.
  - Lack of lubrication is the #2 cause of mixer failure.
- Only change speeds with the mixer running.
- Changing speeds with the mixer off will cause the belts to loosen, and the mixer will not turn (see the Trouble-Shooting Guide on page 11).
  - Return to speed "1" before shutting the mixer off.
  - Use the procedure described on page 6 to return the mixer to speed "1" if the mixer is shut off in a higher speed.

#### **LUBRICATION**

The lubrication instructions are in Figure 2. The motor has pre-lubricated bearings with a service interval of ten years. The transmission and beater head gearing are packed with Nevastane 5P7 grease. They must be repacked every 500 working hours of the mixer.

#### **WARNING:** NEVER WORK ON THE TRANSMISSION WITH THE MIXER RUNNING. IT IS RECOMMENDED THAT THE ELECTRICAL SERVICE POWER CORD BE DISCON-NECTED TO PREVENT ACCIDENTAL START UP.



#### LUBRICATION INSTRUCTIONS FIGURE 2

#### SRM12 TROUBLE-SHOOTING GUIDE

TROUBLE	POSSIBLE CAUSE	REMEDY
1. Mixer will not	1.1 Electrical service down.	1.1 Check electrical service. Replace fuse
operate		or reset circuit breaker as necessary.
-r*	1.2 Burned switch contacts.	1.2 Replace or clean. *
	1.3 Timer not turned on.	1.3 Turn timer on.
	1.4  Motor capacitor defective	1.4 Replace motor.*
	(1 PH only)	
	1.5 Burned out motor.	1.5 Remove, test, repair or replace. *
	1.6 Safety Ring not mounted and closed.	1.6 Install Safety Ring.
	1.7 Bowl not raised.	1.7 Raise bowl completely.
2. Mixer runs but	2.1 Shifting speed with the mixer not	2.1 With mixer running, slowly move
agitator will not	running.	speed control lever forward then
turn.	Tunning.	backward to re-engage belt.
ιμπ.	2.2 Prokon or glipping halt	
	2.2 Broken or slipping belt.	2.2 Tighten or replace.*
	2.3 Key or pin sheared on input shaft,	2.3 Notify service agent.
	input gear, bevel pinion, vertical	
3. Agitator stalls	shaft or beater shaft 3.1 Loose belt.	3.1 Readjust pulley center distance to
during mixing.		tighten belt. *
during mixing.	3.2 Mixer bowl is over-loaded.	3.2 Adjust contents of bowl per Capacity
	3.2 WIXEL DOWLIS OVEI-IDaded.	Table.
	2.2 Speed get too high for the mix	
	3.3 Speed set too high for the mix.	3.3 Shift speed lower till beater head
	2.4 Contomination of halt with arrange	rotates smoothly.
	3.4 Contamination of belt with grease.	3.4 Clean pulleys and replace belt. *
4. Speeds will not	4.1 Loose belt.	4.1 Readjust pulley center distance to
change		tighten belt. *
properly.	4.2 Vari-speed pulley inoperable.	4.2 Remove, clean and lubricate or
		replace.*
5. Mixer runs, but	5.1 Mixer bowl is over-loaded.	5.1 Adjust contents of bowl per Capacity
repeatedly		Table.
stops.	5.2 Speed set too high for the mix.	5.2 Shift speed lower till beater head
		rotates smoothly.
	5.3 Service voltage too low or	5.3 Check electrical voltage. *
	fluctuating electrical supply.	Reset circuit breaker.
6. Attachments	6.1 Dented bowl.	6.1 Remove dent or replace bowl.
contact bottom	6.2 Bowl height is set too high.	6.2 Adjust bowl height.*
or side of bowl.		
7. Difficulty in	7.1 Lack of adequate lubrication on	7.1 Lubricate with grease per Figure 2,
raising or	bowl lift slide assembly and housing.	page 13.
lowering bowl.		
8. Excessive	8.1 Gears need to be repacked with	8.1 Notify service agent.
noise.	grease.	8.2 Replace belts. *
	8.2 Badly worn or frayed drive belts.	
	8.3 Attachments hitting bowl.	8.3 Inspect for cause Ref: 6 and 7.
	8.4 Overloaded mixing bowl.	8.4 Adjust contents of bowl per Capacity
		Table.

\* Remedies designated with \* require the services of an authorized Univex service agent.

#### <u>ELECTRICAL WIRING DIAGRAM</u> 115V, 60HZ, 1PH / 220-240V, 50HZ, 1PH / 230V, 60HZ, 1PH 100V, 50/60HZ, 1PH FIGURE 2A



 ATTACH DOUBLE CRIMF 1/4 FEMALE QUICK DISCONNECT FULLY INSULATED.
 MATERIAL: 16GA 1015 TEW CSA AND UL APPROVED.

**IMPORTANT:** Before making electrical connections, check the specifications on the data plate (located on the left side near the power cord) to assure they agree with those of your electrical service.

**WARNING:** Whenever maintenance is being performed or whenever the top cover or rear access panel have been removed, **DISCONNECT** the electrical power supply cord and place a tag on it indicating the mixer is being worked on.



3. MATERIAL: 16GA 1015 TEW CSA AND UL APPROVED.

**IMPORTANT:** Before making electrical connections, check the specifications on the data plate (located on the left side near the power cord) to assure they agree with those of your electrical service.

**WARNING:** Whenever maintenance is being performed or whenever the top cover or rear access panel have been removed, **DISCONNECT** the electrical power supply cord and place a tag on it indicating the mixer is being worked on.

#### <u>ELECTRICAL WIRING DIAGRAM</u> 380-400V, 50HZ, 3PH (FOR EUROPE ONLY) FIGURE 2C



Notes: 1. ATTACH DOUBLE CRIMP FERRULE.

- 2. ATTACH DOUBLE CRIMP 1/4 FEMALE QUICK DISCONNECT FULLY INSULATED.
- 3. MATERIAL: 16GA 1015 TEW CSA AND UL APPROVED.
- 4. ATTACH #10 RING TERMINAL

**IMPORTANT:** Before making electrical connections, check the specifications on the data plate (located on the left side near the power cord) to assure they agree with those of your electrical service.

**WARNING:** Whenever maintenance is being performed or whenever the top cover or rear access panel have been removed, **DISCONNECT** the electrical power supply cord and place a tag on it indicating the mixer is being worked on.

### Warranty

The Univex SRM12 mixer carries a two-Year, on-site, parts and labor warranty against any defects in materials or workmanship. The two-year period begins on the date of purchase by the end user and remains in full effect provided the unit is used properly in accordance with our instructions. Any Work to be performed under this warranty must be performed between the hours of 8:00 a.m. and 5:00 p.m. local time, Monday through Friday. Univex will not cover overtime charges of any kind. Please call the Univex Warranty Service Department at (800) 258-6358 to report any warranty claims before arranging repair or attempting to return the unit to Univex Corporation.

Damages incurred in transit or incurred because of installation error, accident, alteration or misuse are not covered. Transit damages should be reported to the carrier immediately.

Univex will not be liable for any consequential, compensatory, incidental or special damages.

