

**MELANGE 5L**  
**Semi Automatic Gyroscopic Mixer**

Operating and Service Manual



User's Manual

MELANGE 5L

Version Phoenix 1.1 \_ 01-04-2019

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## 1.SAFETY INSTRUCTIONS

- **Read safety instruction carefully and follow them for your own protection.**  
This Product is use on a nominal 115 or 230 Volt circuit, as shown on the Name plate.  
Connect the Product to an outlet having the same configuration as the Plug.  
Wear safety Shoes when installing or relocating the machine.  
Make sure the machine stands securely.  
Keep your place clean & tidy. There is risk of accidents at untidy work place.
- **Close the Machine when it is not being used.**  
Machine shall be connected to dedicated electrical circuit- No other device shall be connected to this circuit.  
This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.  
This product shall be connected to a dedicated electrical circuit – no other devices shall be connected to this circuit.  
Removal of the plug from the outlet is the means for isolating the mixer from the power supply. Ensure that the mixer is installed with the plug easily accessible to the operator.  
This product is designed to operate only when the door is closed. **DO NOT ATTEMPT TO ALTER ELECTRICAL INTERLOCK MECHANISM**  
In case of emergency, press the Red Emergency Stop button.
- **Do not overload the machine. Check that the weight and dimension of the mixing can are suitable**  
Use only undamaged and sturdy Mixing Can, If you don't, the container may burst.  
Never lift large and heavy Can into the machine.  
The mixing Can has to be closed completely.
- **Make sure that the mixing Can sits in central position on mixing table. Secure the container handle with rubber bands or adhesive tape.**  
Take good care of the machine. Make sure that the moving parts move smoothly and without restriction. Follow the maintenance instruction.
- **Do not use high pressure equipment to clean the machine.**  
Make sure that the safety devices work properly and are clean.
- **Do not use the machine if the door or the plastic shutter is damaged. if the shutter strip is broken, do not reach into the interior. There is risk of injury from rotating components.**
- **Do not start the machine with shutter open. Pull out power plug! There is high risk of accidents!**  
Before switching on the machine after maintenance work, check that no spanners or setting tools are left inside the machine.  
Examine the machine for signs of damage. Check regularly that all parts are in good working condition. Have repairs carried out only by the manufacturer or an approved specialist.  
**Trained and authorized personnel shall use this product.**

## 2. INTRODUCTION

MELANGE 5L is a revolutionary mixer, which is ideal for all your mixing requirements. MELANGE 5L Mixer performs gyroscopic action, which enables in effective mixing, uniform blending and making homogeneous mixer.

The MELANGE 5L mixer is specifically designed for point-of-sale color mixing applications as well as for semi-industrial applications.

This mixer is ideal for mixing small cans up to 7kgs.

MELANGE 5L is user friendly.

The MELANGE 5L has been designed to meet the demands of the retail market.

The dimension of the machine makes it versatile and suitable for use in all environments.

The unique design results in reduced maintenance and in color mixing at the lowest cost per liter produced.

MELANGE 5L is a rugged and reliable mixer which performance and design exhibits the qualities of a strong and sturdy engineering product and low maintenance.



**Phoenix shall not be liable for any damage or injury incurred by non-compliance with these regulations, or by not taking the usual and accepted precautions in handling, operation or repair, even if not expressly stated in this manual.**

### 3. TECHNICAL SPECIFICATIONS

FEATURES	MELANGE 5L
MAXIMUM CAN WEIGHT	7 KG
MAXIMUM CAN HEIGHT	215 MM
MAXIMUM CAN DIAMETER	250 MM
OVAL AND MULTIPLA CANS	YES
CAN LOADING	MANUAL
CAN MIXING (MIN-MAX) 1LIT.	1 - 3 NOS(Adaptor Disc)
CAN MIXING (MIN-MAX) 4LIT.	1 NO
MINIMUM CAN HEIGHT	85 MM
GYRO OPEN (MAX)	220 MM
GYRO CLOSE (MIN))	65 MM
GYRO RPM	100 RPM
BOTTOM DISC RPM	180 RPM
CLAMPING	MANUAL
MAIN MOTOR	0.25 HP,SINGLE PHASE,230/110Vac,50/60 Hz.1425/1750 RPM
MAXIMUM NOISE LEVEL	55 Db
POWER SUPPLY	230V/50-60 Hz
POWER SUPPLY (OPTIONAL)	110 V/60Hz
TIMER	MACHANICAL TIMER (5 Min.)
LOCKING DOOR DEVICE (Safety Door S/W)	AVAILABLE / MECHANICAL LOCK
GYROSCOPIC MOTION	CLOCKWISE
EMERGENCY SWITCH	AVAILABLE
TRANSPORT ROLLER (Custer Wheel)	NOT AVAILABLE
MACHINE DIMENSION (WxDxH)	560x625x596 MM
PACKING DIMENSION (WxDxH)	580x645x640 MM
MACHINE NET WEIGHT	61 KG
MACHINE GROSS WEIGHT	73 KG

- EN 292 Part 1 and 2: 1991 Safety of Machinery – Basic concepts, general Principles for design
- EN 418: 1992 Safety of Machinery – Emergency stop equipment, Functional aspects
- EN60204 Part 1: 1997 Safety of machinery – Electrical equipment of Machines-Specifications for general requirements.
- EN 954-1: 1996 Safety of Machinery – Safety related parts of control Systems- Part 1: General principles for design
- EN 1088: 1995 Safety of machinery-Interlocking devices associated with guards.
- EN 294: 1992 Safety of machinery – Safety distances to prevent danger zones being reached by the upper limbs.
- EN 953: 1997 Safety of machines – Guards -General requirements for the design and construction of fixed and movable for coating materials.
- PrEN 12757-1 Mixing machinery for coating materials
- Materials used by Phoenix to manufacture the machine doesn't undergo corrosions or deteriorations (They are compatible) with the paints which have to be mixed.

## 4. WARRANTY

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**LIMITED WARRANTY:** Phoenix warrants each unit manufactured to be free of defects in material and workmanship for a period of twelve months. This warranty applies to single-shift operation and is counted from the date of initial start-up. It covers all defects arising from faulty material or workmanship.

Please Note that all warranty claims must be accompanied by the original delivery note or initial start – up report.

All essential warranty repair work must only be carried out by trained service engineers or by third parties authorization from Phoenix. Unauthorized repair may render the warranty null and void.

Please return any defective parts or machines carriage-paid to our factory. Phoenix reserves the rights to decide on whether cost-free parts replacement is applicable. Parts and labour covered by the warranty will be supplied free of charge. The warranty does not cover travel cost, expenses or possible overnight accommodation resulting from warranty repairs carried out off our premises.

Any other responsibility, with particular reference to damage claims, including foregone profit or other material losses on the part of the customer, is expressly excluded.

Warranty and liability claims for personal or material damage are excluded if attributable to one or more of the following causes.

The part unit shall be returned with transportation charges prepaid. If the fault has been caused by misuse or abnormal conditions of operation, repairs will be billed at a normal cost. In this case, an estimate will be submitted before works is started, if requested.

Always include serial number in any correspondence concerning the part unit.

The warranty expires: Twelve month after date of invoicing

- Operation of the machine with defective safety or protection device.
- Incorrect operation of the machine, as define in the operation instructions.
- Failure to observe the instruction in the operating manual with respect to set up, initial start up, operation and maintenance of the machine.
- Fault and damage cause by dirt or incorrect cleaning schedules, with particular reference to leaks and damaged Cans.
- Unauthorized structural modification to the machine.
- Incorrect monitoring of parts subject to wear and consumables.
- Unauthorized repairs or fitting of non original parts.
- Damage caused by the impact of foreign bodies or majeure force.

We reserve the right to make amendments as a result of on going advance in the technical field.



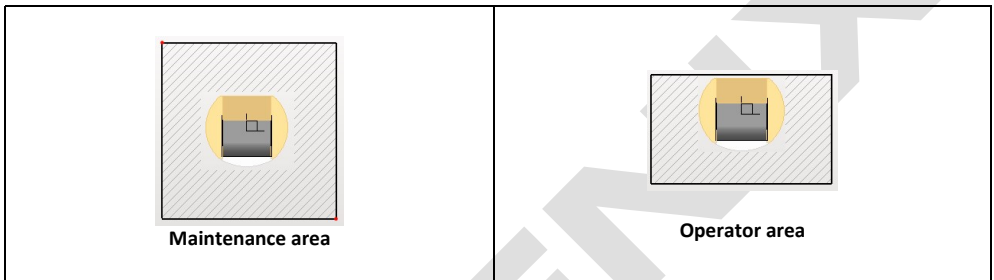
## 5. SAFETY SPECIFICATIONS

### Compliance with safety requirements:

This mixer must be used and serviced by authorized and trained personnel only. Improper use or servicing may result in dangerous situations or accidents.

Risk to personnel is possible in two areas:

Operator area  
Maintenance area



### **THIS EQUIPMENT MUST BE GROUNDED.** **Attention!!!**

Connect this product to a dedicated electrical circuit – no other devices shall be connected to this circuit. Do not use extension cords to connect this product.



### **Attention!!!**

Only trained personnel shall be permitted access to the electrical wiring within the machine. DO NOT USE THIS PRODUCT IF THE BACK PANEL IS NOT IN PLACE.

The machine is equipped with a power supply cable having the following specifications:

Length : 8 FT

Size : 20 AWG

The machine shall be connected to a dedicated, grounded circuit, protected by a 15 A circuit breaker. All wiring shall be in accordance with local codes

### Important:

The power supply cable conductors are color-coded as follows:

GREEN or GREEN/YELLOW	—	<b>GROUND</b>
WHITE or BLUE/BLACK	—	<b>NEUTRAL</b>
BLACK or BROWN/RED	—	<b>LINE</b>

### Service safety rules:

1. Prior to performing any maintenance or inspection of the MELANGE disconnect the power plug from the electrical outlet in order to ensure that the MELANGE cannot start unexpectedly.
2. To prevent injuries to personnel ensure that all removable panels are in place and properly secured except for any necessary inspections or maintenance.
3. Do not disable or override any of the installed safety features such as the door lock system.
4. The MELANGE 5L shall be installed in an environment conforming to the appropriate local regulations. A permit issued by the local authority may be required. Keep the number of paint cans in the immediate area of the machine to a minimum.
5. Do not store flammable materials or other materials inside the machine. The area in which the MELANGE 5L is installed must be kept free of exposed flames, incandescent fixtures or other devices that might create sparks.
6. It is recommended that a ventilation system, guaranteed to maintain the concentration of dangerous vapors around electrical components at less than 30%, be installed.
7. When the MELANGE 5L is not being used for a period of time (such as at the end of the work day), ensure that it is empty (no paint can inside), close the door and unplug the power plug from the outlet.
8. Ensure that all tools are removed from inside the machine after any maintenance work.

### RESIDUAL RISK

#### Residual risks list for the user:

The MELANGE 5L, and its operating and service instructions, have been developed giving careful consideration to the safety of the user and service technician. However, there are situations where risks can be reduced but not eliminated completely.

RISK	PRECAUTION
Injury or crushing during loading and unloading operations.	Use protective gloves and safety shoes during loading and unloading operations.
Abrasions and injuries caused by sharp edges on the cans being used	Use protective gloves during loading and unloading operations.
Liquid leakage form the cans being used	Thoroughly clean the operator and maintenance areas. Keep these areas clean.

### **Personal protection for user:**

The MELANGE 5L, when properly operated and maintain, presents minimal risk to the user. However, it is recommended that the user wear suitable protective equipment (safety glasses, safety shoes with non-slip soles and gloves), in particular when loading and unloading the mixer.

### **General danger situations:**

There are no specifically identified hazard related to the operation and maintenance of the MELANGE (e.g. fire risk, issue or dispersion of dangerous products). However, it is recommended that a powder type fire extinguisher, suitable for electrical fires, be readily accessible.

### **Safety devices:**

The machine is equipped with the following safety devices:

- Emergency Stop Button
- Mechanical Door Lock / Limit Switch

### **Emergency Stop Button**

For safety reasons, all users should know the location of the Emergency Stop button, and how to use it.

The RED Emergency Stop push button is located on the Left Hand control panel on the top front of the mixer – to the left of the door. Pushing the button will immediately cut power to the motor control relay, stopping the motor. To reset the button and restore the mixer to normal operation mode, rotate the button clockwise.

### **Mechanical Door Lock and Limit Switch**

The MELANGE 5L is equipped with a safety device which prevents start up of the mixing cycle when the door is in the open position. It also locks the door in the closed position during the mixing cycle.

## 6. INSTALLATION

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### INSTALLATION CONDITIONS:

Before unpacking and installing the MELANGE Mixer, please make sure of the following:

- The crate/packaging in which the MELANGE 5L was shipped has not been damaged in any way.
- The floor on which the MELANGE 5L is to be located is firm and level
- An electrical receptacle on a properly grounded, dedicated, 5 A, 115 or 230 V circuit is available in the immediate vicinity. The circuit shall be installed in accordance with local codes. The receptacle shall be of a configuration appropriate for the voltage and current rating of the circuit.

### INSTALLATION:

It is recommended that, during the installation of the mixer, protective gloves be worn in order to prevent hand injuries.

- Unpack the MELANGE 5L Mixer.
- Ensure the machine has not been damaged in any way
- Position the mixer in the desired location. When it's a small size mixer, can be position on Table also
- Using the four leveling feet, level the machine, ensuring that all four feet are properly supporting the machine.

## 7. CONTROLS

### LEFT HAND CONTROL PANEL



Emergency Stop  
Button

ON/OFF Button

### RIGHT HAND CONTROL PANEL



Mechanical Timer - sets mixing time

**MECHANICAL DOOR LOCK**



Turn the knob  
clockwise to open shutter

## 8. OPERATIONS

### TURN ON MACHINE (Connect to power):

- Ensure the Emergency Stop button is engaged – push to engage if necessary
- Plug the mixer into the appropriate electrical receptacle. Ensure the RED indicating button on the left hand side control panel, is ON.

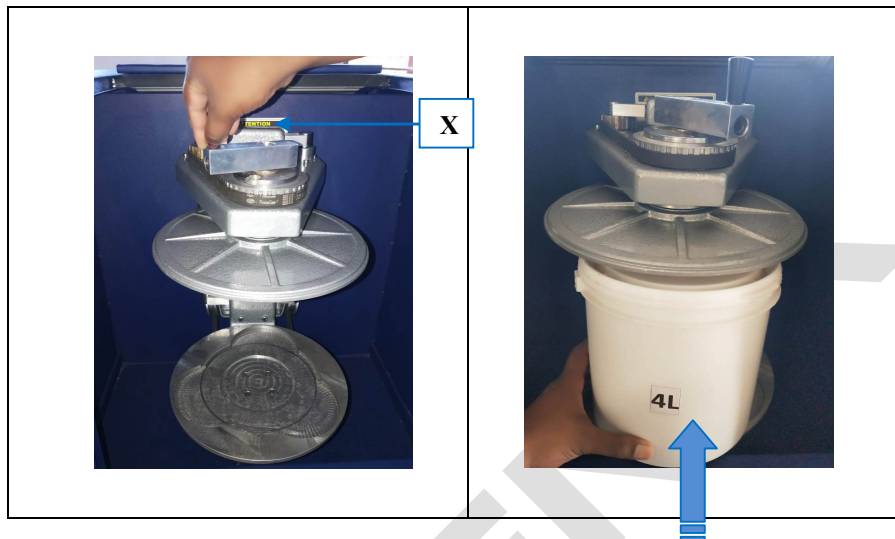
**Mechanical Timer:** After completing the cycle, Timer will run down to ZERO and machine will be OFF

### CAN LOADING:

- Open the MELANGE 5L Mixer door to its fully open position by turning Black Knob **Y** to clockwise direction



1. Ensure the Can Holder Assembly is in the vertical, top dead center (TDC) position, with the Clamp Mechanical Mechanism at the top. If it is not rotate the can holder assembly to take it to TDC position.
2. Open the Can Clamping Plates by turning revolving handle **X** to Clockwise direction till its full open



- Position the can on the bottom Disc. Using the concentric rings on the bottom Disc as a guide, ensure the can is properly centered.





- Rotate the black handle **X** in clockwise direction to securely clamp the can between the plates.
- Once the can is clamped, Clamping bar will lock inside automatically and give filling on lock
- Close the door to the fully closed position.
- Note: Do not force the door. If the can is not clamped

**MIXING:**

**Mechanical Timer:**

- Set the desired mix time by turning the knob on the mechanical timer to the appropriate position.
- Gyro will spin for the set time to mix the paint.

Once the set time has expired, the Can Holder Assembly will come to a stop.

To STOP the mixer during an emergency situation, push the Emergency Stop button. Once the machine has stopped, release the Emergency Stop button by turning it clockwise.

**USE THE EMERGENCY STOP BUTTON IN AN EMERGENCY SITUATION ONLY**

**Note:** Always remove the can from the mixer after the mix cycle has been completed. Follow the UNLOADING instructions. Below.

## UNLOADING THE CAN:

1. Open the MELANGE 5L Mixer door to its fully open position by turning black knob **Y** in clockwise direction
2. Slowly rotate the Assembly to the vertical, top dead center (TDC) position.
3. Rotate Revolving knob Anti – Clockwise to open the clamp plate and remove can from can holder assembly.



## 9. MAINTENANCE & TROUBLESHOOTING

### Monthly Maintenance:

- 1) Apply grease on Screw shaft and Guide shaft of EP 90 Lithium base
- 2) Accidental spillage of the paint must be cleaned then and there to avoid difficulties after it gets dried-up
- 3) Always ensure proper tension of Belts to reduce mixing time

### Troubleshooting:

PROBLEM	TROUBLE SHOOTING
Machine is not turning on	<ul style="list-style-type: none"> <li>• Check the Mains supply.</li> <li>• Check MCB Position, it should be ON.</li> <li>• Check the Power supply</li> <li>• Check plug or lose wire.</li> <li>• Check motor belts.</li> </ul>
Main Motor not running / working	<ul style="list-style-type: none"> <li>• Check Emergency switch</li> <li>• Check Motor mechanism and Motor capacitor.</li> <li>• Check supply on On/Off switch</li> </ul>
Machine vibrates during operation	<ul style="list-style-type: none"> <li>• Check the floor flatness. If the floor surface is not plain, then shift the Machine on a plain / flat surface.</li> </ul>
Machine makes a loud noise after every revolution	<ul style="list-style-type: none"> <li>• Check the foundation of the Motor.</li> <li>• Check the fitting of gear box</li> </ul>
Container clamped does not rotate along its axis even though the machine is rotating.	<ul style="list-style-type: none"> <li>• Check the "V" belt for proper tension.</li> <li>• If the belt is found loose then replace the same with a new one.</li> </ul>
Clamped container becomes loose	<ul style="list-style-type: none"> <li>• Tight clamping bar properly.</li> <li>• Ensure lock is engaged in clamping bar</li> </ul>
Aluminum Plates does not slide smoothly.	<ul style="list-style-type: none"> <li>• Clean the screw Shafts and apply the</li> <li>• general-purpose grease</li> </ul>
Machine is giving shock while in operation	<ul style="list-style-type: none"> <li>• Check for proper grounding. If the</li> <li>• earthing is not proper consult an Electrician.</li> </ul>

**Note:** Shutter will not open when the Power is OFF

THANK YOU

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