

Mix'n'Shake™

Stop Stirring,
Get Spraying.
Let's Shake.

User Guide

V1.2



Dear Customer

Thank you for the purchase of your Mix'n'Shake Device.

This manual contains all the necessary information for the installation, use and maintenance of the Mix'n'Shake Device.

Be sure to read and understand this manual completely before you start using the Mix'n'Shake Device. If your Mix'n'Shake Device does not work according to the instructions or you have questions about the content, instructions or general safety operations of the Mix'n'Shake Device, do not activate the Mix'n'Shake Device and contact your supplier.

Manufacturer:

EMM International B.V.
Bohemestraat 19
8028 SB Zwolle
The Netherlands

We will continue to be of service to you and advise on safe installation, use and maintenance of the Mix'n'Shake Device.

The supplied technical documentation is also part of Mix'n'Shake Device. Always keep this document in good condition and within easy reach when using the Mix'n'Shake Device.

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1. General

1.1 Copyright

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1.2 Working environment

1.2.1 Hazardous locations

This Mix'n'Shake Device is designed, approved and certified to be operated in areas classified as US Class I Div 2 and ATEX Zone 2 or lower risk classifications. Do not use this device in areas with a higher risk classification.

The Mix'n'Shake device should not be used in areas with a higher risk classification.

1.2.2 Temperatures

Normal operating temperatures for using this Mix'n'Shake Device are between 10 and 35 °C (50 and 95 °F).

1.2.3 Specific conditions of use

- Temperature assessment has been considered based on the following limitation, hence end user must consider the following specific conditions of use.
 - No. of application per day: 60 cycles
 - Delay between each cycle: 20s
 - Cooling time per 60 Cycles: 3 hours
 - Maximum cup content: 1.2kg
- Power cable shall be connected as per relevant requirement of IEC 60079-14 and protected by relevant protection methods as IEC 60079 series of standard.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
- Equipment shall be used in an area where there is a risk of low mechanical danger.
- The paint cup and holder may pose a risk of electrostatic discharge; therefore, appropriate precautions must be taken. To minimize the risk of electrostatic discharge when removing a Mix'n'Shake Cup from its holder, users should wear dissipative clothing and ensure proper grounding through static-dissipative flooring and footwear.

1.3 General safety warnings

⚠ WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this Device

Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

1.3.1 Electrical safety

- a) Keep work area clean and well lit. Cluttered or dark areas may cause accidents.
- b) Keep children and bystanders away while operating the Mix'n'Shake Device. Distractions can cause accidents.

1. General

1.3.2 Personal safety

- a) Power cable shall be connected as per relevant requirement of IEC 60079-14 and protected by relevant protection methods as IEC 60079 series of standard.
- b) Do not expose the Mix'n'Shake Device to rain or wet conditions. Water entering the Mix'n'Shake Device will increase the risk of electric shock.
- c) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the Mix'n'Shake Device. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- d) If operating the Mix'n'Shake Device in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.
- e) NOTE The term “residual current device (RCD)” can be replaced by the term “ground fault circuit interrupter (GFCI)” or “earth leakage circuit breaker (ELCB)”.

1.3.3 Mix'n'Shake Device use and care

- a) Do not use the Mix'n'Shake Device if it does not turn on and off. Any Mix'n'Shake Device that cannot be controlled is dangerous and must be repaired.
- b) Store idle Mix'n'Shake Devices out of the reach of children and do not allow persons unfamiliar with the Mix'n'Shake Device or these instructions to operate. Mix'n'Shake Devices are only allowed to be operated by qualified users and can be dangerous in the hands of untrained users.
- c) Maintain Mix'n'Shake Devices and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the Mix'n'Shake Device's operation. If damaged, contact the supplier.
- d) Use the Mix'n'Shake Device and accessories in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the Mix'n'Shake Device for operations different from those intended could result in a hazardous situation.

1.3.4 Service

Have your Mix'n'Shake Device serviced by a qualified repair person using only original replacement parts. This will ensure that the safety of the Mix'n'Shake Device is maintained.

1.4 Safety

All Mix'n'Shake Devices are designed and manufactured to the highest standards of quality and safety. Nevertheless, operation, installation or maintenance errors can lead to dangerous situations.



Read this manual completely in advance and follow the instructions of the warnings on the labels of this Device and in this manual at all times.

The Mix'n'Shake Device is intended for professional use, in an environment where it is possible that hazardous substances acceptable in Zone 2 or Class 1 division 2 areas might be used, not only within the Mix'n'Shake Device, but also the environment which is therefore associated with safety risks, for which you must take measures.

1. General

The following safety symbols are used in this manual:

⚠ DANGER	Indicates that serious injury with possible death will result or serious damage will occur to the Device if the instruction is not followed properly.
⚠ WARNING	Indicates that serious injury with possible death will result or serious damage will occur to the Device if the instruction is not followed properly.
⚠ BE CAREFUL	Indicates that a slight injury may be sustained or damage to the machine may occur if the instruction is not followed properly.
PLEASE NOTE	Indicates that additional emphasis is on the instruction, but that there is no immediate danger for damage or injury.

In order to safely use the Mix'n'Shake Device, we would like to draw your attention to the following safety instructions that must be followed at all times:

⚠ DANGER	Do not use water as an extinguishing agent if a fire breaks out in the Mix'n'Shake Device.
⚠ WARNING	If the set-up requirements are not fully followed, this can result in a risk of personal damage!
⚠ WARNING	The Mix'n'Shake Device may only be operated by users who have read and understood the Mix'n'Shake Device manual and who are familiar with the risks and work instructions within the company.
⚠ WARNING	If there are doubts about the safe use of your Mix'n'Shake Device, always contact your supplier or EMM International BV and do not operate the Mix'n'Shake Device.
PLEASE NOTE	Never repair the Mix'n'Shake Device yourself, use a approved expert for this. Any opening of the housing is not permitted by the user.
PLEASE NOTE	Please note! If the solutions proposed in the troubleshooting overview do not solve the problem, please contact the service/repair department of your supplier.

1.5 Personal Protective Equipment (PPE)

When using the Mix'n'Shake Device, you must wear protective clothing at all times in accordance with the Health and Safety legislation. You must read and follow the instructions according to the Material Safety Data Sheet (MSDS) of the product that you wish to use.

1.6 Scope

The Mix'n'Shake Device is designed for professional users to mix undercoats, color coats and topcoats and any kind of paint or coating, both solvent and water based.



1. General

1.7 Intended and unintended use

The Mix'n'Shake Device is designed to be solely and exclusively used by professionals, that are aware of the instructions given in this manual and experienced with the paint & coating processes. The Mix'n'Shake Device should only be used in areas with adequate ventilation with Zone 2 or Class 1 division 2 classification or below and only in the purpose of mixing undercoats, color coats and topcoats and any kind of paint or coating, both solvent and water based, in group C/D, AIT T3. You must respect the instructions provided by the manufacturer of these paint products. The mixing process should always be executed in an area not open to the public.

The Mix'n'Shake Device is not intended for use in any other process and must not be used in preparing any food and / or drink.

The Device is not intended to mix powders, either into liquids or powders themselves.

The Device is not intended to mix chemicals other than paint components, that would react with each other causing either a potential temperature rise or causing an expansion with a potential rise in pressure.

1.8 Working principle

The Mix'n'Shake Device contains a Cup Holder designed to hold Mix'n'Shake Cups. After adding the paint mix to the Cup, the Cup shall be thoroughly closed with a Mix'n'Shake Lid and Cap. This Cup with Lid shall be put in the Cup Holder. Mixing of the paint is only possible when the Protective Cover of the Device is closed. On the front User Interface, choose the appropriate mixing program, left for primers, sealers and 2k direct gloss topcoats, middle for basecoats or right for clears coats.

The Device will start mixing the paint. Programs will stop automatically. Open the Protective Cover and take out Cup with Lid containing the paint mix for further processing.

1.9 Limitation of Liability

EMM International BV accepts no liability for damage by:

- Failure to follow this manual.
- Unintended use.
- Maintenance by unqualified personnel.
- Unauthorized modifications.
- Technical changes.
- Improper use or selection of coating, or paint product.

EMM International BV is not responsible for damage to equipment caused by transportation or handling after it has left EMM's warehouse.

1.10 Transportation



The Mix'n'Shake Device weighs approximately 18 kgs. To protect the Device from damage, it is advised to store and transport in the original packaging. The user is responsible for taking care of the device upon receiving.

1. General

1.11 End of life cycle

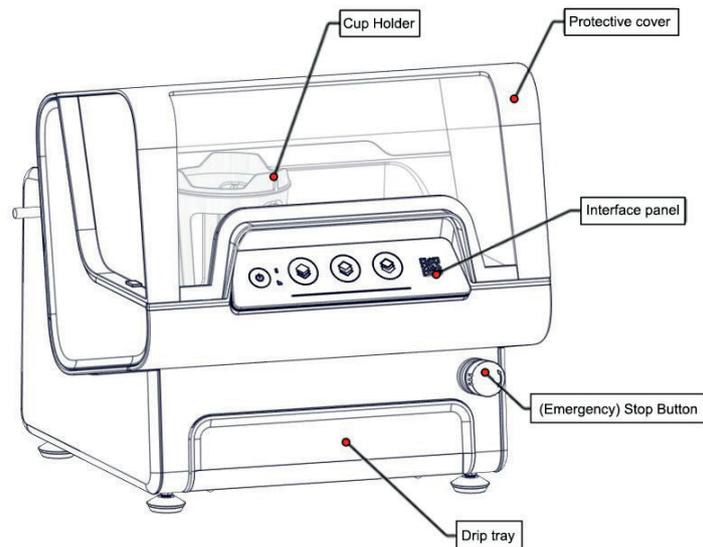
When the Mix'n'Shake Device can no longer be used, it must be processed in accordance with the regional regulations regarding the processing of electrical equipment.

1.12 Product overview

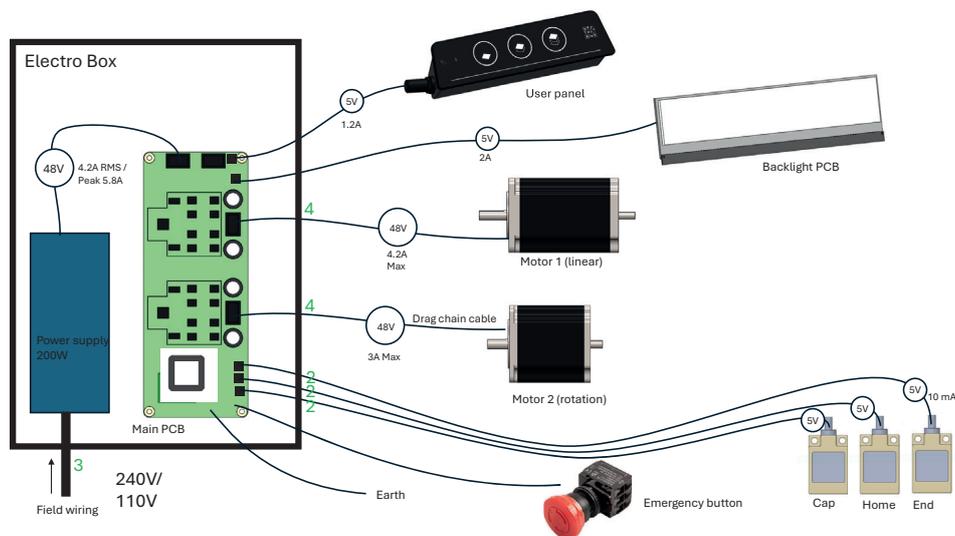
Main components:

- User Interface Panel
- Cup Holder
- (Emergency) Stop Button
- Drip Tray
- Protective Cover

Figure 1. Configuration of the Mix'n'Shake Device.



1.13 Building Blocks of Device



1. General

1.14 Overview of Safety Labels

Following safety labels are applied to the Device:

	<p>CAUTION: High voltage</p>
	<p>CAUTION: Disconnect power before opening enclosure. See Safety paragraph of this User Manual.w</p>
	<p>CAUTION: Be aware of potential electric discharge in case of static charging of the Cup Holder and Mixing Cup</p>

1.15 Available accessories

- Protective Cover
- Rubber Feet
- Branded Drip Tray
- Wall Mount for Mix'n'Shake Device

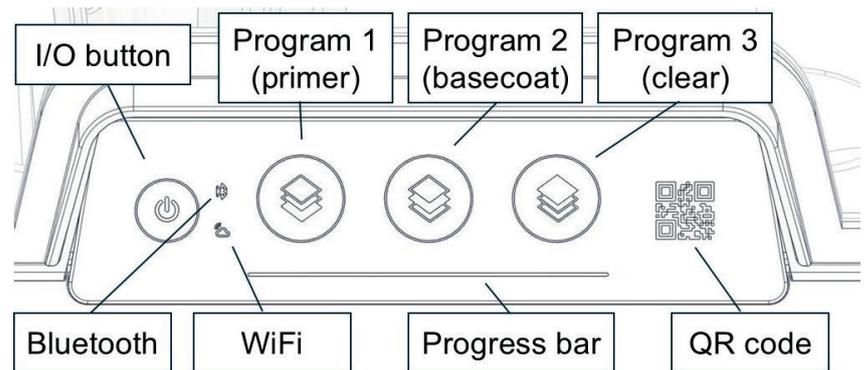
1.16 Overview of the User Interface

In the front the User Interface is placed with touch buttons:

- I/O button for switching on / off
- 1st program button for mixing primer
- 2nd program button for mixing basecoat
- 3rd program button for mixing clear

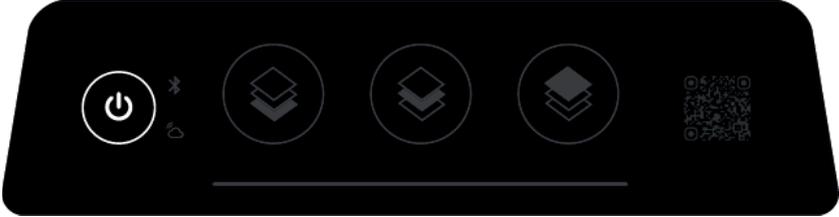
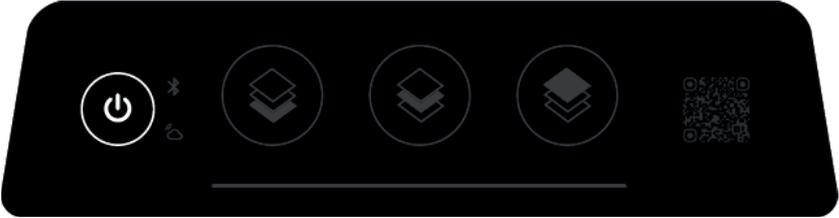
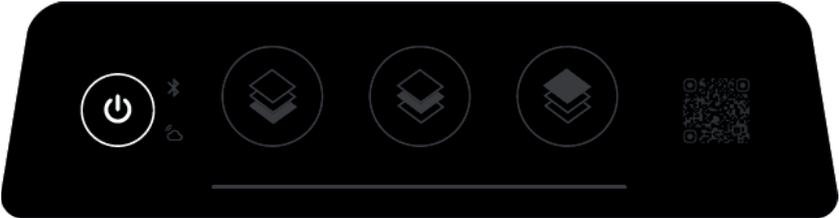
And further:

- The Bluetooth icon to indicate if there is Bluetooth connection available and/or connected
- The Wi-Fi icon to indicate if there is Wi-Fi connection available and/or connected
- The progress bar to indicate cycle progress and error code in case of failure
- The QR code will light up only in case of an error.



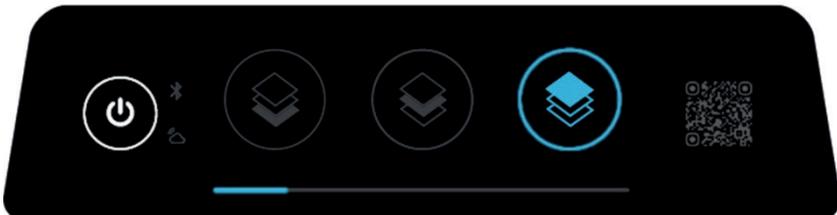
1. General

1.16 Overview of the User Interface

Function	Signal
Device not plugged in, or Device on STANDBY and plugged in	<p>Backlight: OFF</p> <p>Interface: All LEDs turned off</p> 
Device is ON and the on/off button is pressed	<p>Backlight: Pulsing White</p> <p>Interface: No LEDs turned on</p> 
Protective Cover is OPEN	<p>Backlight: White</p> <p>Interface: No LEDs turned on</p> 
Protective Cover is closed	<p>Backlight: Pulsing White</p> <p>Interface: Program buttons turn white</p> 

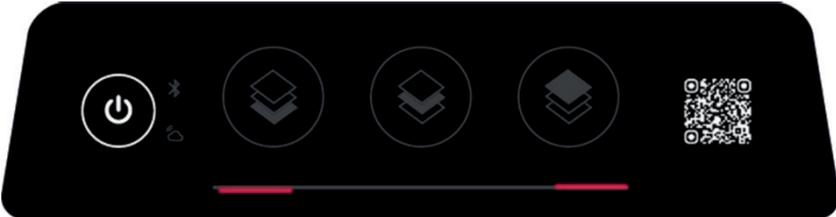
1. General

1.16 Overview of the User Interface

Function	Signal
<p>Program 1 is selected</p>	<p>Backlight: Blue</p> <p>Interface: Selected program button turns blue and progress bar starts to fill up starting on the left.</p> 
<p>Program 2 is selected</p>	<p>Backlight: Blue</p> <p>Interface: Selected program button turns blue and progress bar starts to fill up starting on the left.</p> 
<p>Program 3 is selected</p>	<p>Backlight: Blue</p> <p>Interface: Selected program button turns blue and progress bar starts to fill up starting on the left.</p> 

1. General

1.16 Overview of the User Interface

Function	Signal
<p>Program finished</p>	<p>Backlight: Green</p> <p>Interface: Selected program button turns Green</p> 
<p>Error</p> <p>QR is lit up</p> <p>Progress bar shows an error code</p>	<p>Backlight: Red</p> <p>Interface: QR code lights up and progress bar shows an error code</p> 

1.17 Safety provisions in the Device

The following safety mechanisms are in place:

- The Device will automatically switch off after running one of the programs, to restart the Protective Cover needs to be opened, then closed before the next program can be chosen.;
- In the event of power loss or interruption, the On/Off Switch must be activated again.
- In case of overheating the Device will automatically switch off. An error message will occur on the Progress Bar. Once the Device is cooled down normal operations can resume.

1. General

1.18 Name Plate and Serial Numbers

Identification Plate	Information mentioned
 <p>Mix'n'Shake Device Art. no. MNS93090</p> <p>FC RoHS CE</p> <p>Ex II 3 G Ex db ec h mc nC nR IIC T5 Gc, Ta = 10°C to 35°C DNV 25 ATEX 39591X IECEx DNV 25.0019X Rated voltage: 230 Vac 50Hz FCC ID: 2BR3F-MNS93090 FACTORY ID: 91511500MA6BUTYW94 Max. sequential applications: 60 cycles Minimum delay between cycles: 20 sec Minimum cooling time per 60 cycles: 3 hours Max. cup content: 1,2 kg</p> <p>emm EMM International BV Bohemensstraat 19, 8028 SB Zwolle The Netherlands T: +31 (0)38 4676600 www.emm.com</p> <p>Serial nr. Prod.</p>	<p>Information mentioned:</p> <ul style="list-style-type: none"> Model description Article number CE logo Ex logo with required descriptions Serial number Production date Logo and company details of manufacturer EMM International BV

Figure 5. Machine Identification Plate

1. General

1.19 Radio compliance info

Radio Frequency Information (RED 2014/53/EU)

This product contains a 2.4 GHz radio (Wi-Fi/BLE).

Frequency band: 2,400–2,483.5 MHz

Maximum EIRP:

Wi-Fi: 13.7 dBm

BLE: 3.7 dBm

The radio module complies with the following harmonized standards:

EN 300 328 V2.2.2 (Wi-Fi/BLE)

EN 301 489-1 V2.2.3 (EMC)

EN 301 489-17 V3.3.1 (EMC)

EN IEC 62311:2020 (RF exposure)

EN 62479:2010 (RF exposure, low power)

1.20 Regulatory info

RF Exposure Statement

This equipment complies with FCC RF exposure limits for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

FCC Compliance – Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID: 2BR3F-93090 and 2BR3F-MNS93090

Class B digital device: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

RF Exposure Statement:

This equipment complies with FCC RF exposure limits for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. Installation

2.1 Preparation

- Carefully inspect the packaging material for signs of transportation damage. Damage to the packaging could indicate possible transport damage to the Mix'n'Shake Device.
- Carefully remove the Mix'n'Shake Device from its packaging.
- Immediately check your Mix'n'Shake Device for any damage.
- Report transport damage to the carrier to start claim procedures.
- Check the accessory set you received from the list below:
 - Original Instruction with translations
 - Gun Spanner
- If any of these parts are missing, please contact the supplier where you purchased the Mix'n'Shake Device

2.2 Preparation requirements

	If the preparation requirements are not fully followed, this can result in dangerous situations for the user and their environment!
	The Mix'n'Shake Device is designed to be used in the Mixing Room of car body shops in accordance with Class 1 division 2 classification / ATEX Zone 2

Employees must be acquainted with the safety risks of operating the Mix'n'Shake Device and must have been provided with specific work instructions. If you have any doubts about the risk of working with this mixing technology, always consult an expert for further advice.

If the above-mentioned preparation requirements have not been met, you may not use the Mix'n'Shake Device. In that case, please contact an expert who can follow the set up instructions.

2.3 Set-up

- The Mix'n'Shake Device is delivered without a plug.
- First, a proper wall outlet needs to be installed by an authorized electrician and according to local (Ex) regulations.

If installed in Class I Division 2, this outlet, plug and/or hardwired connection must be UL-certified accordingly.

If installed in ATEX Zone 2, this outlet, plug and/or hardwired connection must be ATEX-certified accordingly.

If power supply is provided from a non-classified zone, a standard outlet (for Ordinary Locations) must be installed.

- Secondly, the matching plug needs to be mounted to the Mix'n'Shake Device by an authorized electrician and according to local regulations.
- The Mix'n'Shake Device should ideally be used in rooms with an ambient temperature between 10°C and 40°C and a relative humidity (non-condensing) between 20 and 80 %.
- Take good care of the cables: they should not be laying over sharp edges, must be rolled out completely and should not show any friction or knots.
- The Mix'n'Shake Device can be placed on a table or mounted to the wall by using the Wall Mount for Mix'n'Shake Device. On horizontal surfaces, adjust the device using the adjustable rubber feet to ensure it is flat and well balanced. When installed on the wall with the Wall Mount for Mix'n'Shake Device ensure the device is installed level.
- The Mix'n'Shake Device shall not be exposed to UV light to avoid any potential material degradation.

2. Installation

2.4 Safe switch-off in a dangerous situation

If the Mix'n'Shake Device is in operation and you notice that the above-mentioned connection instructions have not been complied with and/or you notice that the Device is not working properly:

- As a precaution, stop the Mix'n'Shake Device by opening the Protective Cover. The mixing process will instantly be stopped.
- By pushing the (Emergency) Stop Button, the Device will also stop operating.
- A 3rd option is to push the On/Off Button to stop the mixing process.
- If the Mix'n'Shake Device does not work as expected, do not operate the Mix'n'Shake Device until it has been checked and approved by an expert.
- If you notice damage to the electric cabling, do not operate the Mix'n'Shake Device until it has been checked and approved by an expert.
- If the plug is damaged, switch off the electricity. Have the damaged plug and / or cable repaired by a certified technician before using the Mix'n'Shake Device again.

2.5 Safe handling in the event of fire

If you notice smoke or fire coming out of the Mix'n'Shake Device, make sure to unplug the main cable from the wall outlet or turn off the circuit breaker when directly connected to the main power.

	Do not use water as an extinguishing agent if a fire breaks out in the Mix'n'Shake Device. Safe extinguishing means are powder, carbon dioxide or fire extinguishing blankets.
	In the event of a fire, always keep a safe distance from the Mix'n'Shake Device.

- Let the Mix'n'Shake Device cool down completely once the fire has been extinguished.
- Do not operate the Mix'n'Shake Device again and contact the service center.



3. Use

3.1 Preparation before using the Device

<p>⚠ WARNING</p>	<p>The Mix'n'Shake Device may only be operated by users who have read and understood the Mix'n'Shake Device manual and who are familiar with the risks and work instructions within the company.</p>
<p>⚠ WARNING</p>	<p>If there are doubts about the safe use of your Mix'n'Shake Device, always contact your supplier or EMM International B.V. and do not operate the Mix'n'Shake Device.</p>

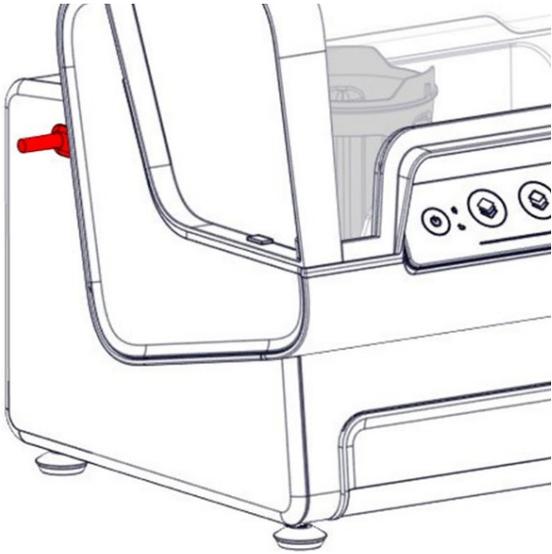
Give everyone who works with the Mix'n'Shake Device clear instructions about working safely with this device in accordance with the Health and Safety legislation and this manual for installation, use and maintenance.

3.2 Operating the Device

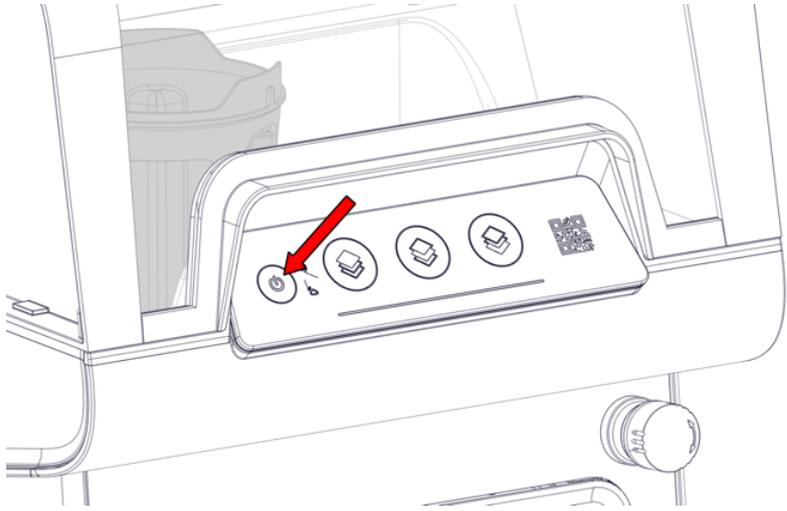
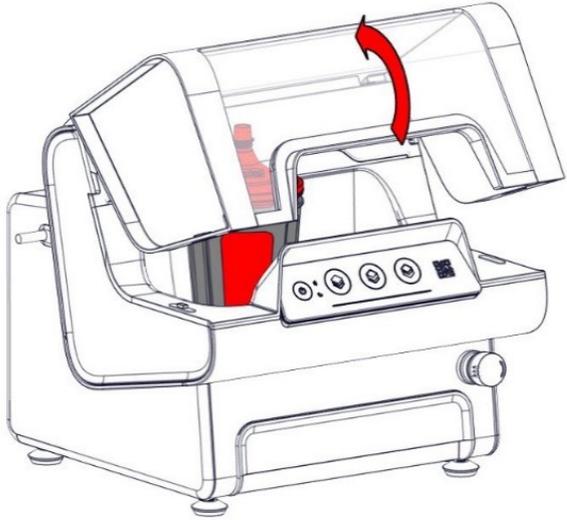
- Before each use, verify that the Protective Cover, Cup Holder and Drip Tray are properly installed and clean.
- Visually inspect the exterior of the device for damage, leaks, or paint residue.
- Check the power cable for wear, kinks, or exposed wires.

Filling of a Mix'n'Shake Cup with a maximum volume of 850 ml is remote from the device in an appropriate risk hazard area.

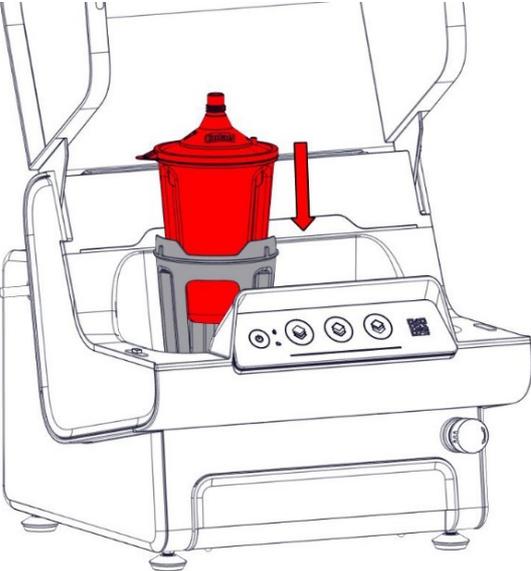
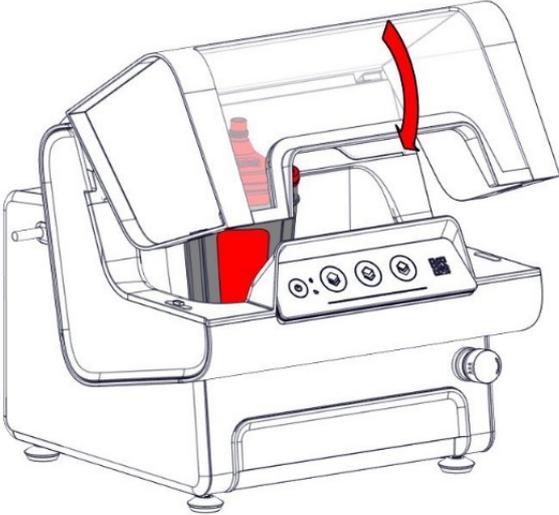
Always ensure the lid are correctly placed on the cup and the cap is correctly placed on the lid before stirring!

Instruction	Diagram
<p>Connect the plug on the AC-cable to the matching wall outlet.</p> <p>Both plug and outlet must be adequate as per ATEX or NEC/OSHA regulations, to the area classification where placed.</p>	

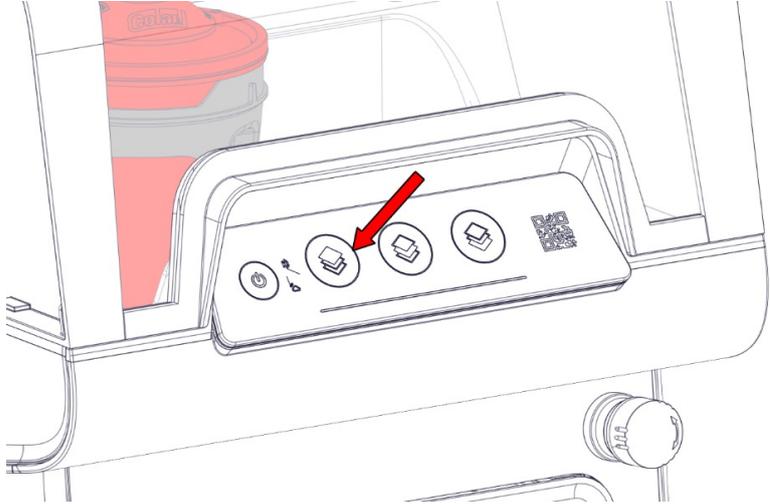
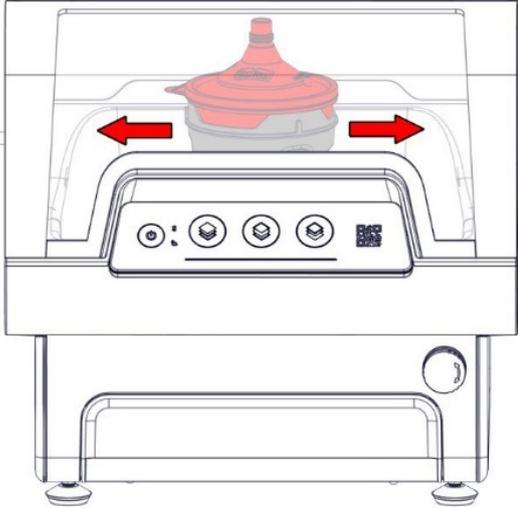
3. Use

Instruction	Diagram
<p>Check if (Emergency) Stop Button is released.</p> <p>If not, release first by turning the Button.</p> <p>Press the ON/OFF button to turn on the Device.</p>	 A line drawing of the control panel of the Mix'n'Shake machine. The panel is mounted on a wall and features several buttons: a large emergency stop button on the left, followed by three smaller buttons with icons, and a QR code on the right. A red arrow points to the emergency stop button. The machine's body is visible in the background.
<p>Open the Protective Cover.</p>	 A line drawing of the Mix'n'Shake machine with its protective cover open. The cover is hinged and is shown in an upward position. A red arrow indicates the direction of movement. The machine's control panel and internal components are visible through the opening.

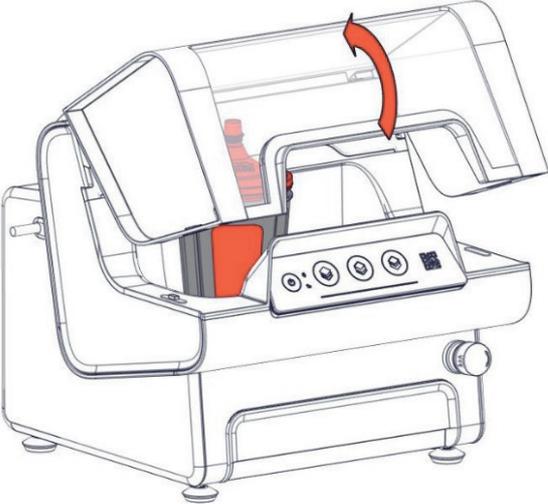
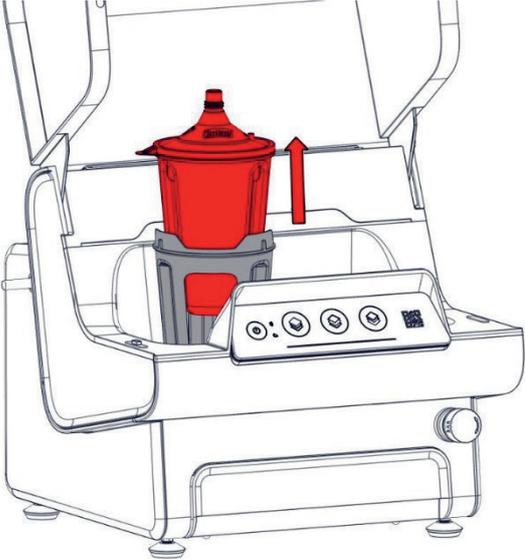
3. Use

Instruction	Diagram
<p>Insert a Mix'n'Shake Cup ensuring full closure with a Mix'n'Shake Lid. Use a red cap while using solventborne products, the mixing cup should be fully closed before transporting to the Mix'n'Shake device.</p>	 A line drawing of the Mix'n'Shake device with its protective cover open. A red cup is being placed into the central mixing chamber. A red arrow points downwards from the top of the cup, indicating the direction of insertion. The device has a control panel on the front with several buttons and a small display.
<p>Close the Protective Cover. Be sure the Protective Cover is closed properly!</p>	 A line drawing of the Mix'n'Shake device with the protective cover closed. A red arrow on the right side of the cover indicates it is being pushed down to close. The red cup is visible inside the mixing chamber through the transparent cover.

3. Use

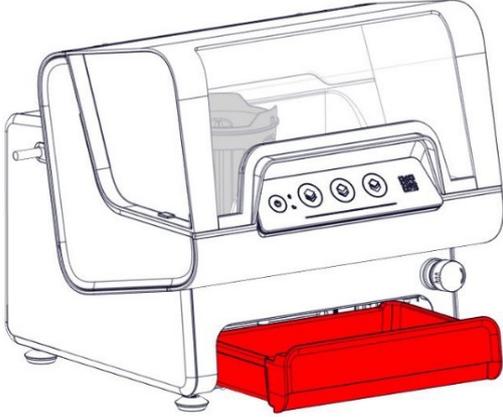
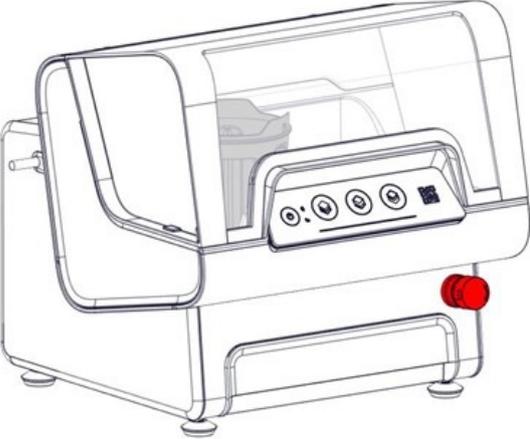
Instruction	Diagram
<p>Select one of the three mixing programs.</p>	 <p>A close-up line drawing of the control panel on the front of the device. It features a power button, three circular buttons with icons representing different mixing programs, and a QR code. A red arrow points to the first program button. In the background, a red water bottle is visible inside the device's compartment.</p>
<p>The Device will now start the mixing process. The Progress Bar on the User Interface will give an indication of time left.</p>	 <p>A front-view line drawing of the device. A red water bottle is placed inside the mixing chamber. Two red arrows point outwards from the bottle, indicating the mixing action. The control panel is visible at the bottom of the device.</p>

3. Use

Instruction	Diagram
<p>A green light will illuminate when the mixing is complete – you can then open the Protective Cover</p>	
<p>Remove the Mix'n'Shake Cup from the Device.</p>	

3. Use

Secondary Functions

Instruction	Diagram
<p>The Device is equipped with a Drip Tray. In case of a leak, the paint will flow into the Drip Tray. The Drip Tray can be removed for easy cleaning.</p>	
<p>(Emergency) Stop Button</p> <p>If something happens that is abnormal, pushing the (Emergency) Stop Button kills all power to the device.</p> <p>Abnormal events are e.g. Cup Lid not closed correctly - paint leaking, Cup damaged - paint leaking, obstruction in movement path, Device not operating - error with motors, pressed in error - not ready for use, Device unstable, Cup Holder damaged, Cup Holder breaking of the Holder Plate, noisiness.</p>	

4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

Error Code	Meaning and solution
 BLINKING and showing progress	Firmware updating over the air Progress bar is showing update process

4.1 Use case with PPG LINQ, connection with the MagicBox™

In this case the firmware upgrade will happen automatically and it will be initiated by the MagicBox.

4.2 Use case without PPG LINQ, only Bluetooth connection with the Mix'n'Shake App

To perform this update procedure follow the instructions in the Mix'n'Shake App.

4.3 Requisites

- Mix'n'Shake device with firmware 1.0.10 (or later).
- PPG MagicBox with firmware 1.6.2 (or later) online and working.
- PPG LINQ Color account with:
- The PPG MagicBox registered.
- Subscription basic or higher.

4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

Steps for Mix'n'Shake device connection to PPG LINQ Color:

- 1) Power on the Mix'n'Shake device in an area covered by the PPG MagicBox Wi-Fi range.
Ideally within 15/20 meters from the location where MagicBox is installed and free of barriers for Wi-Fi signal.
- 2) The Mix'n'Shake device will then connect automatically to the PPG MagicBox Wi-Fi and will start transmitting data to PPG LINQ Color.

To check that the connection has been established:

- 1) Check that the “cloud” icon on the device front panel stops blinking and becomes solid.
- 2) Check the Settings page in PPG LINQ Color: the device should now be present in the list.

The screenshot displays the PPG LINQ Color web interface. At the top, there is a navigation bar with the PPG LINQ Color logo, a 'Select Locale' dropdown, and user information for 'Global Digital Team (Admin)'. Below the navigation bar, the main content area is titled 'Device Management: MnS MagicBox 37005577'. The device status is 'Online', and it is identified as a 'Mix'n'Shake™ Device'. A summary indicates '6 shakes were performed and there were 2 errors'. A 'HIDE DEVICE INFO' button is visible. Below this, there is a 'FILTER BY' section with date range (From 11/14/2024 to 11/21/2024), Layer Type (All), and Status (All) filters. A table lists the shake events:

Date/Time	Layer Type	Status
11/19/24, 12:29 PM	Color	Success
11/19/24, 12:40 PM	Clear	Success
11/19/24, 12:46 PM	Under	Success
11/20/24, 5:58 PM	Under	Fail - Undefined Error
11/20/24, 5:58 PM	Under	Fail - Undefined Error
11/20/24, 5:59 PM	Clear	Success

To the right of the table is a 'DEVICE INFORMATION' panel with the following details:

- Name: MnS MagicBox 37005577
- Manufacturer: PPG
- Model: MnS
- Shakes: 6
- Driver Version: 1.0.3



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

PPG LINQ Color features available when Mix'n'Shake is connected:

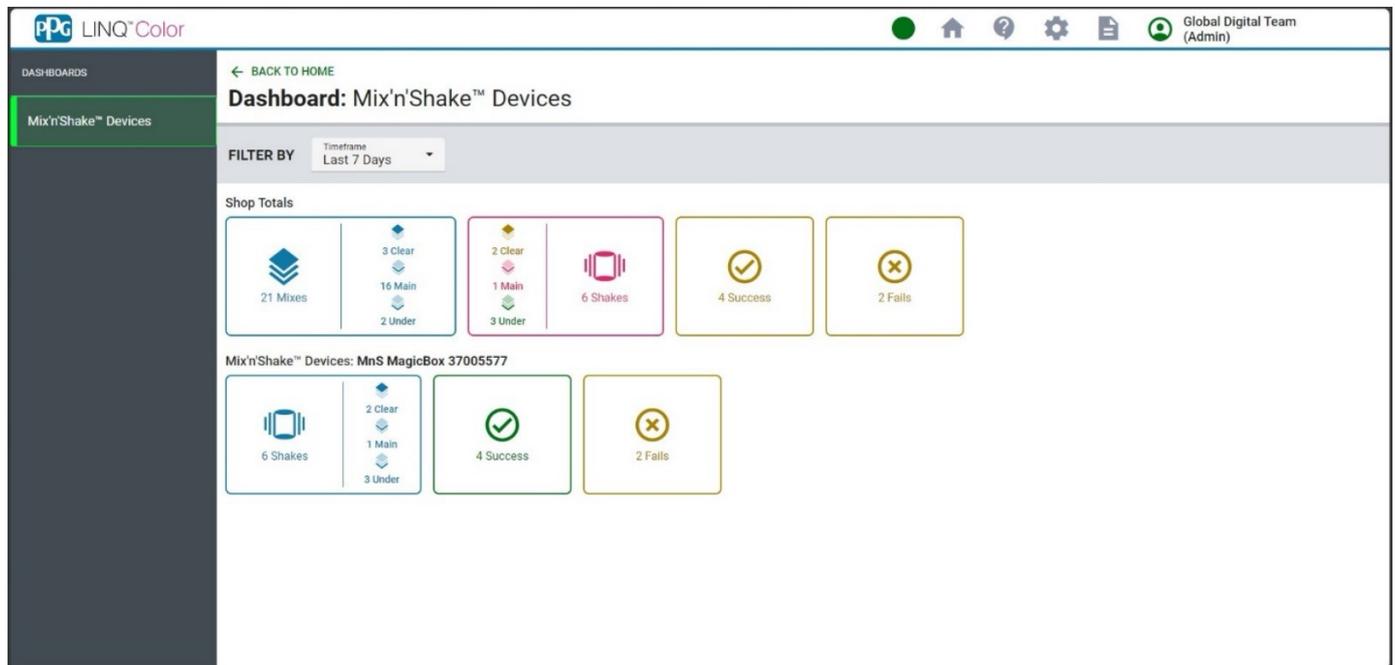
- 1) In the device settings page, when the Mix'n'Shake device is selected, it shows:
 - a. The device name and the total of cycles.
 - b. The device status: online or offline.
 - c. The list of all the cycles used by the device, including the failed ones.
 - d. Firmware version information.
- 2) In the Mix'n'Shake settings page, is it possible to manage:
 - a. Mix'n'Shake cup sizes available in the shop.
 - b. Default Mix'n'Shake cup to be used.
 - c. Default dilution % to be maintained in case of Split Mix without it.

The screenshot shows the 'Settings: Mix'n'Shake™ Automated Stirring Technology' page in the PPG LINQ Color app. The page has a top navigation bar with the PPG LINQ Color logo, a home icon, a help icon, a settings icon, a document icon, and a user profile icon for 'Global Digital Team (Admin)'. Below the navigation bar is a 'BACK TO SETTINGS' link. The main content area contains three sections: 1) 'What size Mix'n'Shake™ Spray Cups are available in your shop?' with three radio button options: 400 mL, 650 mL, and 850 mL. 2) 'Which size Mix'n'Shake™ Spray Cup will be your default selection?' with a dropdown menu currently set to 'Default Mix'n'Shake™ Spray Cup Size 650 mL'. 3) 'What default percentage volume will be reserved for adding reduction at a later stage?' with a dropdown menu currently set to 'Reservation for Reduction 15%'. At the bottom right of the page are 'CANCEL' and 'SAVE' buttons.

4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

PPG LINQ Color features available when Mix'n'Shake is connected:

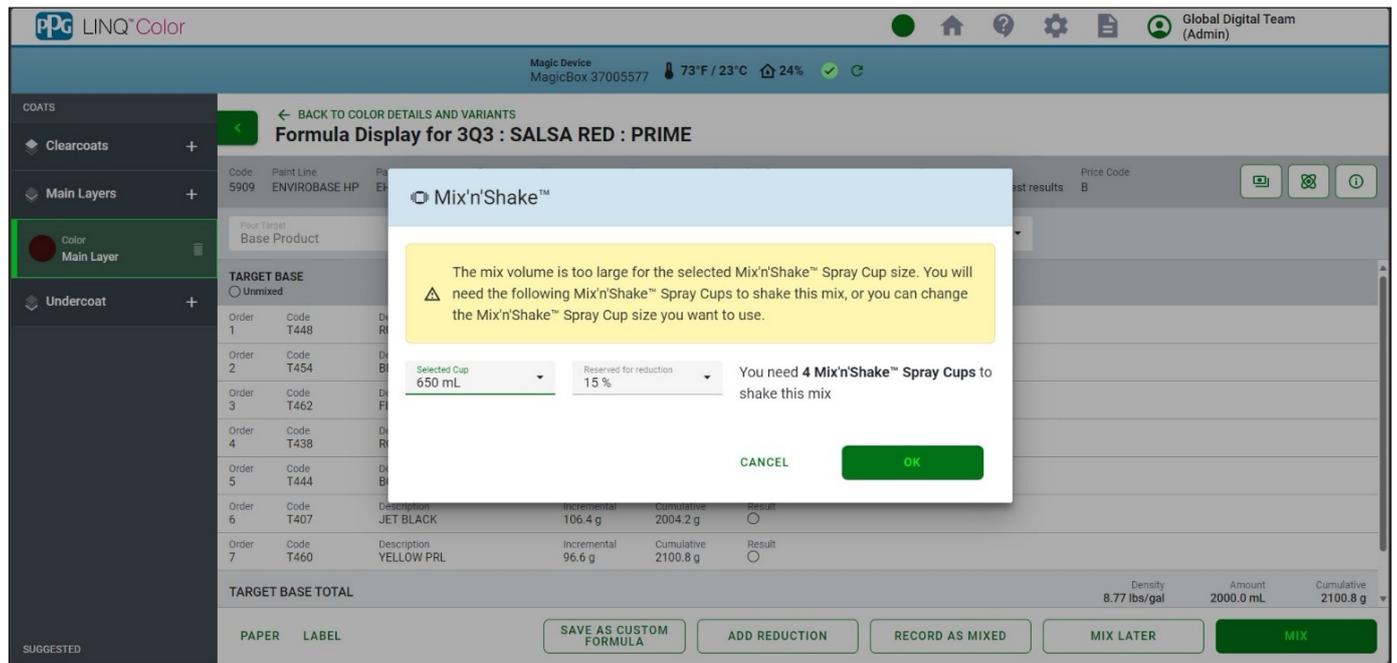
- 3) The Mix'n'Shake Dashboard becomes available in the Dashboard page:
 - a. The PPG Mix'n'Shake Dashboard shows the comparison between number of mixes done using PPG LINQ Color, divided by Clear, Color/Main and Primer type, and the number of cycles done using Mix'n'Shake device also divided by Clear, Color/Main and Primer program.
 - b. The Dashboard shows different colors based on the number comparison:
 - i. Green if the number of cycles \geq Number of mixes.
 - ii. Yellow if the number of cycles is 1 or 2 less than the number of mixes.
 - iii. Red if the number of cycles is 3 or more less than the number of mixes.
 - c. The dashboard gives the possibility to filter by a timeframe period:
"Today", "Last 7 Days", "Last 30 Days", "Year to Date", "All Time".
 - d. The Dashboard has the possibility to show multiple PPG Mix'n'Shake devices information.
 - e. It shows also information on number of failed Mix'n'Shake cycles.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

PPG LINQ Color features available when Mix'n'Shake is connected:

- 4) The Split Mix functionality become available in the Formula screen:
 - a. If the desired amount to be poured exceed the selected Mix'n'Shake cup size, the Split Mix functionality gives the user the possibility to split the mix into multiple cups.
 - b. If not selected, it allows to reserve a % of space to dilute the mix later.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

PPG LINQ Color features available when Mix'n'Shake is connected:

- 5) Mix'n'Shake Firmware Update
 - a. The PPG Mix'n'Shake device updates its firmware via PPG MagicBox.
 - b. The download and application of the firmware are invisible to the user.

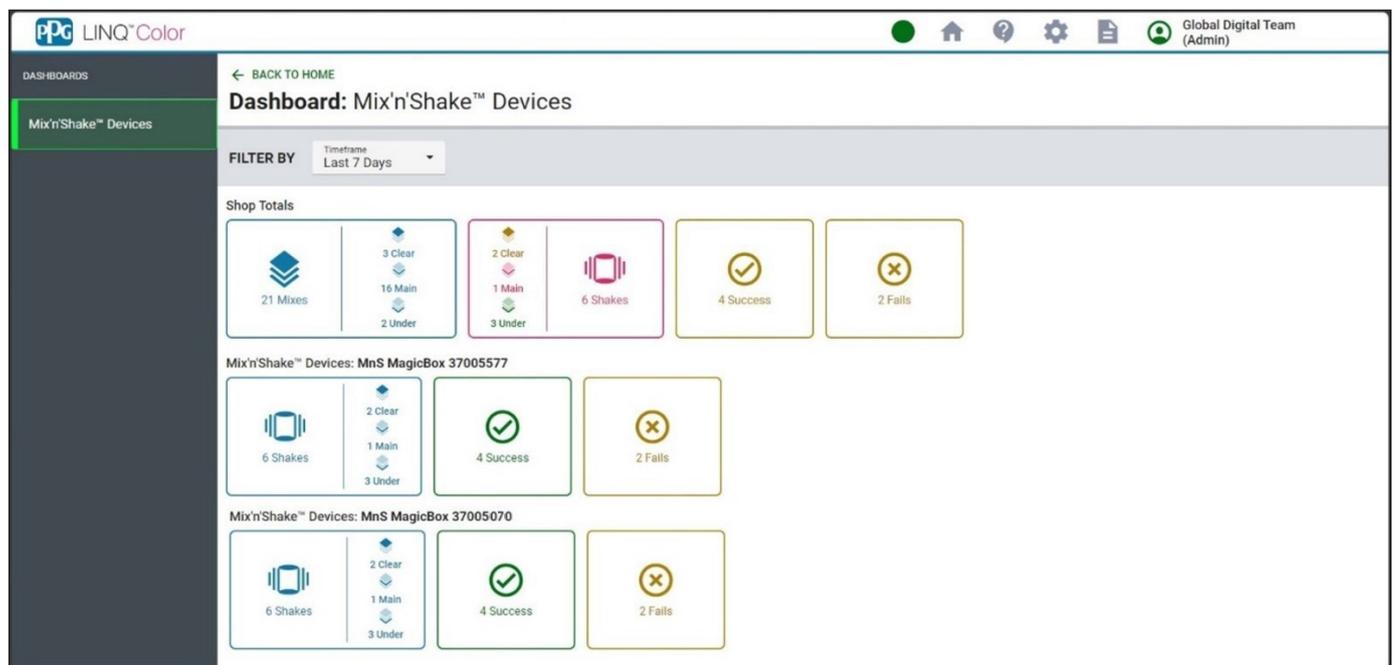
Multiple Mix'n'Shake in a Bodyshop

PPG Magicbox can connect to and link to PPG LINQ Color only one Mix'n'Shake.

If a user requires multiple Mix'n'Shake in his shop, one PPG MagicBox is required for each Mix'n'Shake.

The PPG MagicBox have to be connected to the same PPG LINQ Color account.

In case of multiple Mix'n'Shake connected to the same PPG LINQ account, the Dashboard will show the information for the specific device and the total of the shop.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

Mix'n'Shake and PaintManager XI

Requisites:

- Mix'n'Shake device with firmware 1.0.10 (or later).
- PPG MagicBox with firmware 1.6.2 (or later) online and working.
- PPG LINQ Color account with:
 - The PPG MagicBox registered.
 - Subscription LookUp. (Other subscription types will not allow the connection).
- PaintManager XI version 3.22 (or later) installed on a computer with internet connection.

Note: to get the Mix'n'Shake connection to PaintManager XI, the LINQ Color account and the PaintManager XI account should be in the same CTS account:

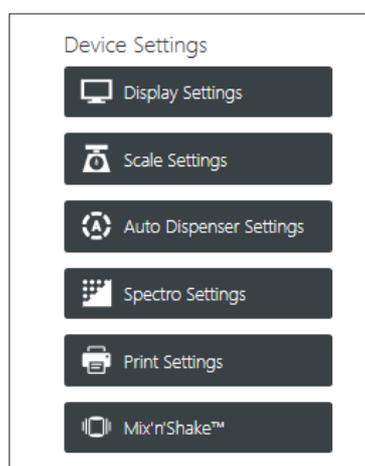
	Color Software	PaintManager XI Internet Update VisualizID
	PPG LINQ	PPG LINQ Color Lookup

Steps for Mix'n'Shake device connection to PaintManager XI:

- 1) Power on the Mix'n'Shake device in an area covered by the PPG MagicBox Wi-Fi range.
Ideally within 15/20 meters from the location where MagicBox is installed and free of barriers for Wi-Fi signal.
- 2) The Mix'n'Shake device will then connect automatically to the PPG MagicBox Wi-Fi and will start transmitting data to PPG LINQ Color.

To check that the connection has been established:

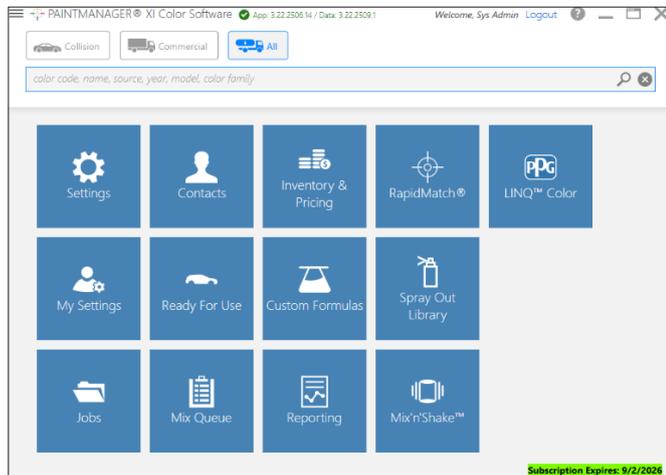
- a. Check that the “cloud” icon on the device front panel stops blinking and becomes solid.
 - b. Check the Settings page in PPG LINQ Color: the device should now be present in the list.
- 3) Open PaintManager XI on the computer and check the settings: the Mix'n'Shake button is now available.
Click on that button and then click on “Enable”.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

4) Once “Enable Mix'n'Shake” button is clicked the Dashboard tile will appear in the main menu and the settings will become available.

Note: the button in the settings will open the PPG LINQ Color setting page.



FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Note 1: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- Consult the dealer for help. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.
- This device complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Note 2: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

PaintManager XI features available when Mix'n'Shake is connected:

- 1) The Mix'n'Shake Dashboard becomes available in the main page:
 - a. The PPG Mix'n'Shake Dashboard shows the comparison between number of mixes done using PaintManager XI, divided by Clear, Color/Main and Primer type, and the number of cycles done using Mix'n'Shake device also divided by Clear, Color/Main and Primer program.
 - b. The Dashboard shows different colors based on the number comparison:
 - i. Green if the number of cycles \geq Number of mixes.
 - ii. Yellow if the number of cycles is 1 or 2 less than the number of mixes.
 - iii. Red if the number of cycles is 3 or more less than the number of mixes.
 - c. The dashboard gives the possibility to filter by a timeframe period: "Today", "Last 7 Days", "Last 30 Days", "Year to Date", "All Time".
 - d. The Dashboard has the possibility to show multiple PPG Mix'n'Shake devices information.
 - e. It shows also information on number of failed Mix'n'Shake cycles.

The screenshot displays the PaintManager XI Color Software interface. At the top, it shows the software name, version (App: 3.22.2506.14 / Data: 3.22.2509.1), and user information (Welcome, Sys Admin Logout). The main heading is "Mix'n'Shake™". Below this is a "TIMEFRAME FILTER" dropdown set to "All Time".

Shop Totals

Mixes	Cycles	Success	Fails
6 Mixes (0 Clear, 6 Main, 0 Under)	3 Cycles (1 Clear, 1 Main, 1 Under)	2 Success	1 Fails

Mix'n'Shake™: Mix'N'Shake MagicBox 37005982

Cycles	Success	Fails
3 Cycles (1 Clear, 1 Main, 1 Under)	2 Success	1 Fails

4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

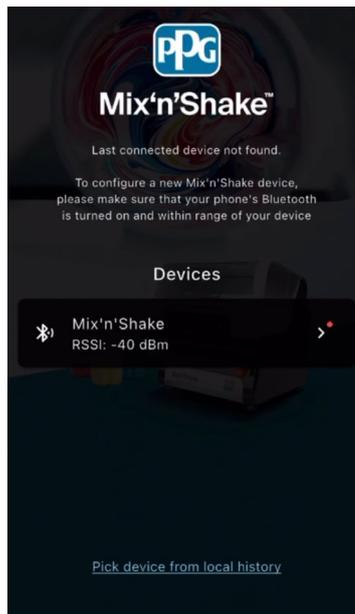
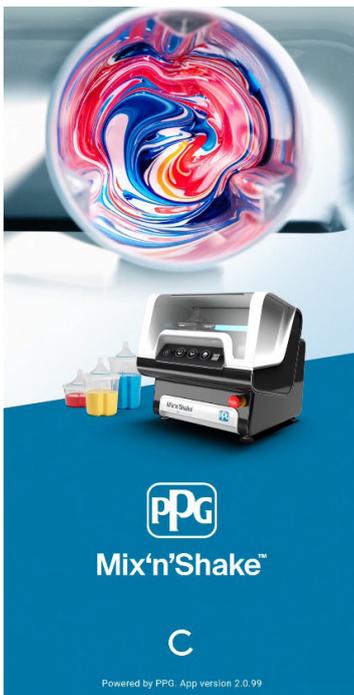
Mix'n'Shake PPG/SEM Bluetooth App (Version 2.0.0)

Requisites:

- Mix'n'Shake device with firmware 1.0.10 (or later).
- Android or iOS smartphone with the Mix'n'Shake app version 2.0.0 (or later) installed.
 - If requested, allow the application to access Bluetooth connectivity.

Steps for PPG Mix'n'Shake device connection to the Bluetooth App:

- 1) Power on the PPG Mix'n'Shake device
- 2) While you are in the Bluetooth area of the PPG Mix'n'Shake device:
 - a. Open the application on your phone and click on the button: search device.
 - b. Select the device from the list.
 - c. When the connection is established, the application Dashboard appears automatically.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

If the device is not near, you can select the last one collected from the “Pick device from local history” button.

Dashboard:

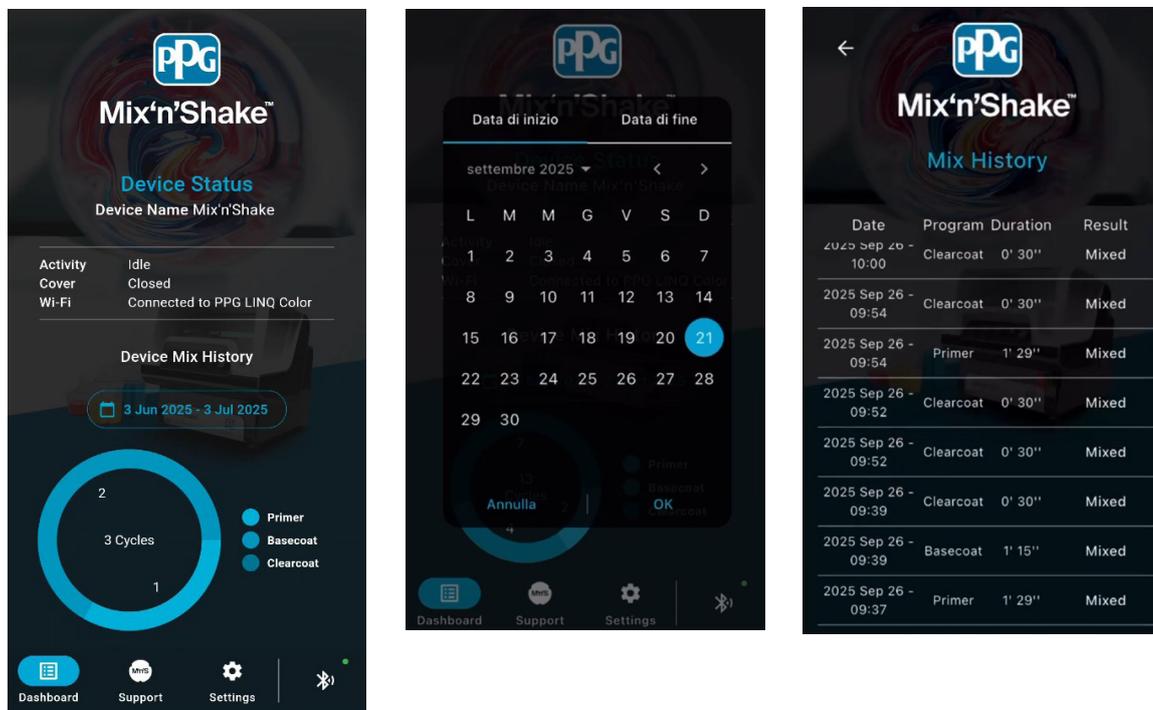
The Mix'n'Shake Dashboard includes informations about the device status as well has the device mix history. The status are:

- Activity: Idle, Mixing, Error
- Cover: Open, Closed
- Wi-Fi: Connected to PPG LINQ Color

If Wi-Fi is not connected, this topic is hidden.

It is possible to adjust the date of the history clicking on the dates and selecting the desired time period.

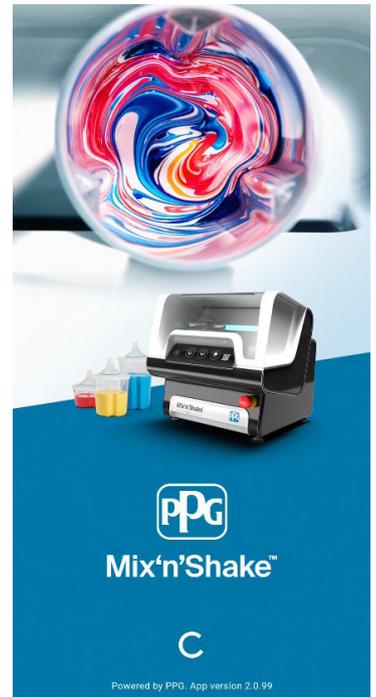
Clicking on the “round graph” the total history of mixing is showed in a dedicated list/sheet.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

Support:

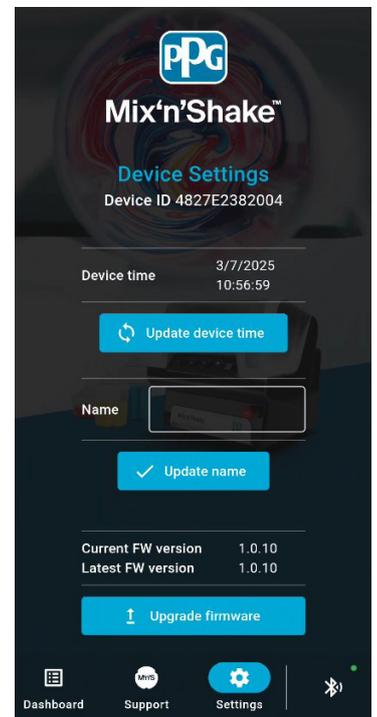
The support page is the Mix'n'Shake list is opening the M'n'S webpage with link to all the information, support etc about the cups and the device.



Settings:

From the homepage, click on the settings button to open the settings page. In this page, it is possible to:

- 1) Synchronize the date and time on the Mix'n'Shake device.
- 2) Update the firmware
 - The app will automatically check if new firmware is available and it will download and apply it.
 - During the update it is mandatory to remain in the device Bluetooth area.
- 3) Rename the device
- 4) Save to your phone the Mixes or Diagnostic Log.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

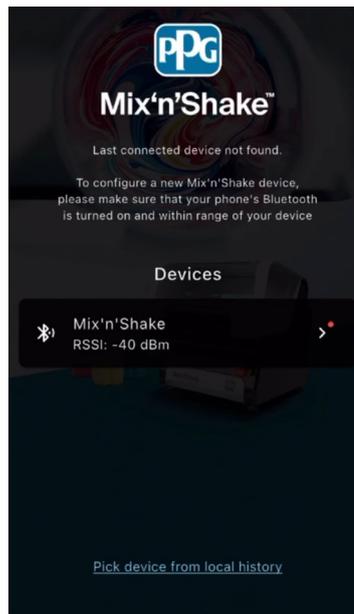
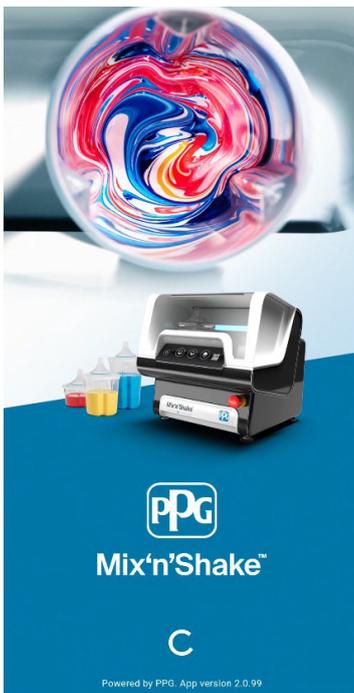
Mix'n'Shake PPG/SEM Bluetooth App (Version 1.0.0) -- OLD

Requisites:

- Mix'n'Shake device with firmware 1.0.3 (or later).
- Android or iOS phone with the Mix'n'Shake app version 0.9.0 (or later) installed.
 - If requested, allow the application to access Bluetooth.

Steps for PPG Mix'n'Shake device connection to the Bluetooth App:

- 1) Power on the PPG Mix'n'Shake device
- 2) While you are in the Bluetooth area of the PPG Mix'n'Shake device:
 - a. Open the application on your phone and click on the button: search device.
 - b. Select the device from the list.
 - c. When the connection is established, the application homepage appears automatically.



4. Firmware Update, Mix'n'Shake App and PPG LINQ Color

4.4 Mix'n'Shake Digital Troubleshooting

Micro-Stop while stirring:

Issue verified with Mix'n'Shake firmware 1.0.10.

Issue verified with MagicBox firmware 1.4.7 or older and firmware 1.6.1.

In cases where MagicBox is running an older firmware version (or version 1.6.1), M'n'S attempts to connect to the MagicBox Wi-Fi but is rejected as it is not recognized as a trusted device.

This leads to a repeated connection attempt cycle: M'n'S connects, gets disconnected, and tries again – approximately every 20 to 30 seconds.

This behavior results in a brief motor micro-stop each time M'n'S is disconnected from the MagicBox Wi-Fi.

Those micro-stops last for few milliseconds but can be noticed by human eyes.

It has not been proved that those are affecting the final mix results.

In order to resolve the issue, update the MagicBox firmware and the M'n'S firmware to the latest available.

4.5 Security

Only manufacturer-approved firmware can be installed, exclusively via secure OTA updates. There is no possibility for the user to install or store third-party software. The hardware and software are designed so that only original firmware can be used.

5. Maintenance

5.1 Daily Checks

Verify that the Protective Cover, Cup Holder, and Drip Tray are properly installed and clean.
Inspect the device for visible damage, paint residue, or leaks.
Check the power cable for wear, kinks, or exposed wires.

5.2 Cleaning Procedure

Clean the device only when powered off and cooled down.
Use a non-aggressive cleaner and a soft cloth to clean the housing.
Remove and clean the Drip Tray in case of spillage using appropriate cleaning agents.
Always wear personal protective equipment (PPE).

5.3 Preventive Maintenance

Periodically inspect:

- Rubber feet
- Housing seals
- Mechanical components

Test the functionality of:

- (Emergency) Stop Button
- I/O Button
- Protective Cover interlock

Document any malfunctions and refer to the troubleshooting section.

5.4 Firmware and Logging

Ensure firmware updates are performed according to manufacturer instructions.
Maintain logs of:

- Mixing cycles
- Error messages
- Temperature readings
- Firmware versions

5.5 Service and Replacement

Maintenance and repairs must be performed only by qualified personnel.
Use only original replacement parts as specified by EMM International.

6. Troubleshooting and Fault Codes

Error codes will be visualized on the Progress Bar.

Combinations of lighted LEDs, highlighting different layouts to indicate different error types, will be shown as:

Error Code	Meaning and solution
	<p>Protective Cover opened during cycle. Close the Protective Cover in order to restart the cycle. Protective cover should not be opened during normal operation.</p>
	<p>End detection sensor and home detection sensor activated simultaneously, system error, contact service.</p>
	<p>Emergency button pressed. Turn the Red button to unlock/release to operate.</p>
	<p>Overheating (Temperature sensor above 50°C). Give the Mix'n'Shake Device time to cool down. Switch the Device on after being cooled enough.</p>
	<p>Linear motor not moving Turn off the Device, check for obstruction, turn back on and try again. If the problem persists, contact service.</p>
	<p>Rotating motor not moving Turn off the Device, check for obstruction, turn back on and try again. If the problem persists, contact service.</p>
	<p>Motor driver error. System error, contact service.</p>
	<p>End or home sensor activated while mixing Turn off the device, check for obstruction, turn back on and try again. If the problem persists, contact service.</p>
 <p>BLINKING</p>	<p>Input power supply error. System error, contact service.</p>

6. Troubleshooting and Fault Codes

Error Code	Meaning and solution
 BLINKING	Firmware Over The Air (FOTA) failed. System error, contact service.
 BLINKING	Rollback failed. System error, contact service.
	N/A
	N/A
	N/A
	N/A
	N/A
	N/A
	N/A
	N/A

6.1 Repair or service

Contact your PPG representative and please visit ppglinq.com for support and contact information.



7. Technical properties

Property	Description
Weight	17.5Kg
Placement	On level table & wall mountable
Dimensions	Width 380mm x Depth 383mm x Height 371mm (excl. Rubber Feet)
Stability	Stable when operating
Power rate (Input)	Single Phase 220-240 V 50Hz for EU and 110V 60Hz for USCA
Fuses	Industrial standard global
Safety	No access to moving parts. Non-functional when switched off, when Protective Cover is open or when (Emergency) Stop Button was used.
Noise level	The maximum of 87 dB is not exceeded, compliant to EU & US regulations covered without ear-protection
Vibration	The device has been designed to produce low level of vibrations when installed according to set-up instructions
Compatibility	Only with the Mix'n'Shake™ cups
Homogeneous mix	Fully homogeneous mix at defined programs
Splashes	No splashes during the stirring process when Cup, Lid and closing Cap are properly applied.
Leakages	No leakages during the stirring process when properly closed with Lid and Cap.
Mixing time	max. 90 sec. For WBBC, SBBC, DG, Clears & Primers (longer mixing time can be acceptable if product rheology differs from std)
Material	Silicon-free; Solvent resistant (all parts); Easy to clean
Operator activity	Press one button to operate
Warranty	5 years
Product lifetime	Ideally 25,000 mixes

7. Technical properties

Property	Description
Screen/Control panel	Capacitive buttons for main programs Digital display showing programs buttons, progress & working status (blue working / green finish / red error – as Moonwalk™), ON/OFF button, Bluetooth and Wi-Fi icons QR for troubleshooting
Connectivity	Wi-Fi/Bluetooth. Full connectivity with MagicBox and Mix'n'Shake™ app
Upgradable software/firmware	Yes
Logged data	The following information will be logged in the Mix'n'Shake Device: Header: Device serial number Body with register per Mix(!): <ul style="list-style-type: none"> • Mix number sorted by date and time • Version of the Firmware (FW) • Chosen program • If the program was interrupted • Mixing time • Current measurement, threshold • Temperature inside, before the mix, during the mix and after the mix. • Over temperature pre warning • Wi-Fi connection quality • Error-log number of lost connections • Interconnection failures on the PCB • Hard fault logs, with program counters etcetera. A separate error log for when errors occur Maintenance will be stored in a separate database
Traceability	Device and essential parts by serial number



7. Technical properties

Property	Description
Certification and classification	
<p>EU</p>	<p>ATEX Directive 2014/34/EU EMC Directive 2014/30/EU Machinery Directive 2006/42/EC RED 2014/53/EU Hazardous Location Classification: Zone 2 Temperature Class: T3 (max. 135 °C)</p>
<p>US</p>	<p>Certifications: UL Listing (File No. E545205) Factory Automation Equipment for Hazardous Locations (E545188) FCC Hazardous Location Classification: Class I, Division 2 Groups C and D AIT Group T4 Temperature Range: +10 °C to +40 °C</p>
Applicable standards and directives	
<p>EU</p>	<p>EN ISO 12100:2010 EN 60204-1:2018 EN 12757-1:2005+A1:2010 EN IEC 60079-0:2018 EN IEC 60079-1:2014 EN IEC 60079-7:2015/A1:2018, EN IEC 60079-10-1 EN IEC 60079-15:2019, EN IEC 60079-18:2015/A1:2017, EN IEC 61000-6-2 EN IEC 61000-6-4, EN IEC 62311:2020 EN 62479:2010 EN 300328 EN 301489-1 V2.2.3 EN 301 489-17 V3.3.1 (2024-09) EN ISO 80079-36:2016, EN ISO 80079-37:2016</p>



7. Technical properties

Property	Description
Applicable standards and directives	
US	UL 60079-0: Explosive Atmospheres – Equipment General Requirements UL 60079-10-1: Hazardous Locations – Area Classification NFPA 497: Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors ANSI/ISA 12.12.01: Nonincendive Electrical Equipment for Hazardous Locations FCC part 15C
Area classification	For classification details, refer to the Statement of Area Classification document



8. Declaration of Conformity



EU-Declaration of conformity

We;

EMM International B.V.
Bohemenstraat 19
8028 SB Zwolle
The Netherlands

declare under our sole responsibility that the products:

Product description Mix'n'Shake Device (art. Code(s) 93090, MNS93090) to be applied for mixing paint for professional use e.g. by car painters in car repair shops in ATEX Zone 2 environments.

is in accordance with the following Union harmonisation legislation:

Machine directive (MD)	2006/42/EC
Low voltage directive (LVD)	2014/35/EU
Electromagnetic compatibility directive (EMC)	2014/30/EU
Directive for equipment for potentially explosive atmospheres (ATEX)	2014/34/EU

EN ISO 12100:2010,
EN 12757-1:2005+A1:2010
ETSI EN 300 328 V2.2.2 (2019-07)
ETSI EN 301 489-1 Ver. 2.2.3 (2019-11)
ETSI EN 301 489-17 V3.3.1 (2024-09)
EN 50663:2017
EN IEC 60079-0:2018,
EN 60079-1:2014,
EN IEC 60079-7:2015/A1:2018,
EN IEC 60079-15:2019,
EN 60079-18:2015/A1:2017,
EN 60204-1:2018,
EN IEC 61000-6-4:2019
EN IEC 62311:2020
EN 62479:2010
EN ISO 80079-36:2016,
EN ISO 80079-37:2016

Applied standards:

EN ISO 12100:2010	Safety of machinery – General principals of design – risk assessment and risk reduction
EN 60204-1:2018	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
EN 55015:2013+A1:2015	Limits and methods of measurement of radio disturbance

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