

## ***Automatic Mixer Ferraris***



MANUALE OPERATIVO  
USER MANUAL  
BETRIEBSHANDBUCH

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### SPECIFICHE TECNICHE

EN 292 Parte 1 e 2: 1991	Sicurezza macchine - Concetti di base, principi generali del disegno
EN 418: 1992	Sicurezza macchine - Equipaggiamento di blocco di emergenza, aspetti funzionali
EN 60204 Parte 1: 1997	Sicurezza macchine - Equipaggiamento elettrico delle macchine - Specifiche per aspetti generali.
EN 954 - 1: 1996	Sicurezza macchine - Sicurezza relativa a parti del sistema di controllo - Parte 1: Principi generali del disegno
EN 1088: 1995	Sicurezza macchine - Dispositivi di collegamento associati alle protezioni.
EN 294: 1992	Sicurezza macchine - Distanze di sicurezza per prevenire danni in zone che sono raggiungibili dagli arti superiori.
EN 953: 1997	Sicurezza macchine - Protezioni - Requisiti del disegno e della costruzione di protezioni fisse e mobili.
PrEN 12757-1	Macchine agitatrici per prodotti di rivestimento

Massimo livello del rumore = 55dB

Velocità di agitazione = 100rpm e 200rpm

Dimensioni macchina: 860mm (Larghezza), 1080mm (Altezza), 780mm (Profondità) 210Kg (Peso)

Dimensioni macchina imballata: 895mm (Larghezza), 1340mm (Altezza), 895mm (Profondità) 235Kg (Peso)

Dimensioni barattoli utilizzabili: Diametro max: 420mm ( $\varnothing$  ingombro), 380mm ( $\varnothing$  base),  
Altezza min 70mm, Altezza max. 495mm, Peso 40Kg max.

Nei limiti indicati, anche barattoli quadrati ed ovali.

- I materiali utilizzati da Fast per costruire la macchina non subiscono corrosioni o deterioramenti (sono compatibili) con le vernici che devono essere miscelate.

Se richiesto verrà fornito l'elenco dei materiali utilizzati per la costruzione della macchina, per assicurare la compatibilità con le vernici che devono essere miscelate.

### TECHNICAL SPECIFICATIONS

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
EN 60204 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 rafter 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 guards.
PrEN 12757-1	Mixing machinery for coating materials

Maximum level of noise = 55dB(A)

Stirring velocity = 100rpm e 200rpm

Machine dimensions: 860mm (W) 1080mm (H) 780mm (D) 210Kg (W)

Packaging machine dimensions: 895mm (W) x 895mm (D) x 1340mm (H) 235Kg (W)

Mixing can dimensions: Max Diameter: 420mm (external  $\varnothing$ ), 380mm (seating  $\varnothing$ )

Min high 70mm; Max high 495mm; Weight 40Kg max

Among indicated limits, it is possible to use square or oval cans

- Materials used by Fast to manufacture the machine doesn't undergo corrosions or deteriorations (They are compatible) with the paints which have to be mixed.

- If requested will be supplied the list of the used materials for the construction of the machine, to assure the compatibility with the paints which have to be mixed.

### TECHNISCHE EIGENSCHAFTEN

EN 292 E Teil 1 und 2: 1991	Sicherheit von Maschinen - Grundbegriffe, allgemeine Gestaltungsleitsätze.
EN 418: 1992	Sicherheit von Maschinen - Not-Aus-Einrichtung, funktionelle Aspekte
EN 60204 Teil 1: 1997	Sicherheit von Maschinen - Elektrische Ausrüstung von Maschinen - Allgemeine Aspekte.
EN 954-1: 1996	Sicherheit von Maschinen - Sicherheitsbezogene Teile von Steuerungen - Teil 1: Allgemeine Gestaltungsleitsätze
EN 1088: 1995	Sicherheit von Maschinen - Verriegelungseinrichtungen in Verbindung mit trennenden Schutzeinrichtungen.
EN 294: 1992	Sicherheit von Maschinen - Sicherheitsabstände gegen das Erreichen von Gefahrenstellen mit den oberen Gliedmaßen.
EN 953: 1997	Sicherheit von Maschinen - Trennende Schutzeinrichtungen - Allgemeine Anforderungen an Gestaltung und Bau von feststehenden und beweglichen Schutzeinrichtungen.
PrEN 12757-1	Mischgeräte für Beschichtungsstoffe

Maximaler Geräuschpegel = 55dB

Schüttelgeschwindigkeit = 100U/min und 200U/min

Maschinenabmessungen: Breite 860mm, Höhe 1080mm, Tiefe 780mm, Gewicht 210kg

Abmessungen der verpackten Maschine: Breite 895mm, Höhe 1340mm, Tiefe 895mm, Gewicht 235kg

Abmessungen der verwendbaren Dosen: Höchstdurchmesser: 420mm ( $\varnothing$  Größe), 380mm ( $\varnothing$  Boden),

Mindesthöhe 70mm, maximale Höhe 495mm, Höchstgewicht 40Kg

In den angegebenen Grenzabmessungen auch quadratische oder ovale Dosen.

- Die von Fast verwendeten Konstruktionsmaterialien der Maschine unterliegen keinen Rost- oder Verschleißschäden, sie sind kompatibel mit den zu mischenden Lacken.

- Falls gewünscht, kann eine Liste der zum Bau der Maschine verwendeten Materialien geliefert werden, um die Kompatibilität mit den zu mischenden Lacken zu garantieren

## CONDIZIONI DI GARANZIA

### **GARANZIA:**

FAST & FLUID MANAGEMENT Srl garantisce ogni unità prodotta priva di vizi in materiale e assemblaggio per un periodo di 12 mesi. Le parti danneggiate devono essere spedite alla FAST & FLUID MANAGEMENT Srl con spese di trasporto a carico dell'utente.

Se il difetto è causato da un uso non corretto o anormale la riparazione verrà addebitata al costo normale.

In questo caso un preventivo potrà essere presentato prima dell'inizio della riparazione, se richiesto.

**SPECIFICARE SEMPRE IL NUMERO DI SERIE DELLA MACCHINA IN OGNI CORRISPONDENZA RIGUARDANTE I RICAMBI.**

Il numero di serie è posizionato sulla parte sinistra posteriore della carrozzeria del Mixer Ferraris.

Questi accordi devono essere interpretati secondo le leggi italiane e per ogni controversia è competente il Foro di Milano (ITALIA)

La garanzia del produttore decade:

- \* 12 mesi dopo la data della fattura
- \* in caso di uso non corretto
- \* in caso di utilizzo di ricambi non originali
- \* in caso di riparazioni / adattamenti del Mixer Ferraris senza approvazione scritta e / o da personale non autorizzato
- \* in caso di non svolgimento completo delle operazioni di manutenzione, o mancato rispetto delle istruzioni contemplate in questo manuale

**Le presenti condizioni trovano applicazione in assenza di altre condizioni espressamente pattuite.**

## TERMS OF WARRANTY

**LIMITED WARRANTY:** FAST & FLUID MANAGEMENT Srl warrants each unit manufactured to be free of defects in material and workmanship for a period of twelve months. 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 work is started, if requested.

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

The serial number is located on the back left side of the equipment housing.

*This agreement shall be interpreted in accordance with laws of Italy and jurisdiction and venue shall lie with the courts of Italy as selected by FAST & FLUID MANAGEMENT Srl.*

**The "user" must keep the Ferraris Mixer in a proper working condition. Parts and accessories must be replaced with original FAST & FLUID MANAGEMENT Srl -parts when they cannot longer guarantee proper operation.**

The manufacturers warranty expires:

- \* twelve months after date of invoicing
- \* in case of inexpert use
- \* in case of non-original spare parts are used
- \* in case of repair / adaptation of the Ferraris Mixer without written approval and/or by unauthorized personnel
- \* in case of non fulfillment of the maintenance-, operation-, or other instructions, like e.g. reflected in this manual

**The above conditions are valid in absence of others which were expressly agreed on.**

## GARANTIEBEDINGUNGEN

### **GARANTIE:**

FAST & FLUID MANAGEMENT Srl gewährt ein 12-monatige Garantie auf Material- und Montagefehler für jede Produkteinheit. Beschädigte Teile müssen an FAST & FLUID MANAGEMENT Srl geschickt werden, Transportkosten werden vom Benutzer übernommen.

Falls der Fehler auf einen nicht korrekten oder anormalen Gebrauch zurückzuführen ist, wird die Reparatur zu normalen Kosten berechnet.

In diesem Fall kann falls gewünscht ein Kostenvoranschlag vor Beginn der Reparaturen erstellt werden.

**GEBEN SIE BEI JEDER KORRESPONDENZ BZGL. DER ERSATZTEILE DIE SERIENNUMMER DER MASCHINE AN.**

Die Seriennummer befindet sich links auf der Gehäuserückseite des Mixers Ferraris.

Diese Vereinbarungen müssen nach italienischem Recht interpretiert werden und für jeden Rechtsstreit ist das Landgericht Mailand (ITALIEN) zuständig.

Die Garantie des Herstellers verfällt:

- \* 12 Monate nach Datum der Rechnung
- \* bei nicht korrektem Gebrauch,
- \* bei Verwendung von Ersatzteilen, die nicht original sind,
- \* bei Reparaturen/Veränderungen des Mixers Ferraris ohne schriftliche Genehmigung und/oder durch nicht zuständiges Personal,
- \* bei unvollständiger Ausführung der Wartungsarbeiten; oder bei Nichtbeachtung der in diesen Betriebsanweisungen enthaltenen Anleitungen

**Diese Bedingungen gelten, wenn nicht ausdrücklich andere Bedingungen vereinbart wurden.**



ENGLISH



## OPENING STATEMENT

*This FAST& FLUID MANAGEMENT Srl Ferraris Mixer represents the very latest in High Speed Paint mixing technology. As a result, your FAST Ferraris Mixer is a rugged and reliable mixer which performance and design exhibits the qualities of a strong and sturdy engineering product.*

To fully appreciate and protect your investment, we suggest that you take the necessary time to read and fully understand this manual.

As, always, FAST & FLUID MANAGEMENT Srl stands behind your unit with a one year limited warranty, and a dedicated service organization.

The few maintenance operations as mentioned in this manual need to be carried out on a regular bases.



**FAST & FLUID MANAGEMENT Srl 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 expressly stated in this manual.**



**Ferraris Mixer must not be switched on if it has not been earthed through one or both of the earth connection points (socket and/or earth/ground bolt).**



## PROPRIETARY NOTICE

The information contained in this manual is property of FAST & FLUID MANAGEMENT Srl . This manual has been prepared expressly for the purpose of assisting in the use and general maintenance of this equipment. Publication of this information does not imply any right to reproduce or use this manual for purposes other than installing, operating, or maintaining this equipment. No part of this manual may be reproduced, translated, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, without the prior written permission of an officer of FAST & FLUID MANAGEMENT Srl.

## GENERAL DESCRIPTION

*The FAST & FLUID MANGEMENT Srl high speed Ferraris Mixer is specially designed for point of sale color mixing applications as well as for semi industrial applications.*

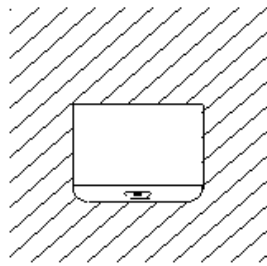
The FAST & FLUID MANAGEMENT Srl high speed Ferraris has been designed to meet the demand of the retail market with a reduced clamping clearance and for the professional market with a maximum clamping clearance of 495 mm.

The unique design enables to reduce maintenance to a minimum and therefore allows color mixing to be performed at a low cost per liter produced.

The equipment features an automatic clamping and mixing cycle. The user of the FAST & FLUID MANAGEMENT Srl high speed paint Ferraris Mixer can select the preferred mixing time on a membrane electronic pad.

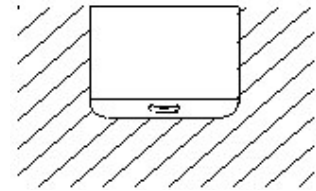
Use two different stirring velocity for cans: 100 turns/min. e 200 turns /min.

## SAFETY SPECIFICATIONS



MAINTENANCE AREA

### WORKING AREA



OPERATOR AREA

### Compliance with security requirements

The machine must be used and serviced by trained personal only ,because it is possible that a wrong use can introduce dangers and cause accidents.

The main areas in which can be present risks are:

- Working area
- Maintenance area

### Power supply

220-240 VOLTAGE: The Ferraris Mixer must be connected to a voltage of 220 - 240 Volt (or otherwise specified following local situations), which has a differential (MINIMUM 30mA), a magnetothermic protection of 16 Amp and a grounded outlet according to local regulations.

115 VOLTAGE: The Ferraris Mixer must be connected to a voltage of 115 Volt (or otherwise specified following local situations), which has a differential (MINIMUM 30mA), a magnetothermic protection of 25 Amp and a grounded outlet according to local regulations.



### Safe use of the machine

The manufacturer has adopted all measures and attentions projecting, drawing manufacturing , checking , installing , starting and defining the procedures for using its products, to guarantee the highest possible level during a rational use of the supplied system. The components are in conformity to the recent security rules. Updated security equipments are installed to assure the maximum security level that it is available today.

When using the FAST & FLUID MANAGEMENT Srl Ferraris Mixer, the following safety regulations need to be observed:

The "user" is expected to follow all local safety regulations. If there is a contradiction in European regulations and local regulations, the demands of the most severe legislation must be met.

**The installation and the maintenance of the Ferraris Mixer have to be performed by a specialized technician**

### Service safety rules

1. To prevent any physical injuries all outside panels should always be in place on the Ferraris Mixer and properly secured.
2. Don't touch protections system as speed control and blocking security closing door/shutter.
3. Prior to any maintenance and inspection of the Ferraris Mixer: disconnect the power cord from the outlet mains. Make sure that the Ferraris Mixer cannot be started unexpectedly.
4. Do not leave any tools inside in the Ferraris Mixer after maintenance.
5. Check that the environment where the machine is installed conforms to local regulations (a permit issued by the fire marshall or by local authority may be necessary) and avoid dangerous concentration of paint cans around the equipment. It's forbidden to stock inflammable materials or other materials inside the machine. It's forbidden to use free flames, incandescent objects or equipments able to create sparks in the local where the machine is installed.
6. It is recommended to install a ventilation system to guarantee that the concentration of dangerous vapours around all electrical components is less than 30%.
7. At the end of the work avoid keeping free cans inside the machine and avoid keeping the machine switched on if it isn't used.
8. If the machine is switched on but it isn't stirring inside it, there isn't residual mechanical energy because the inverter is switched off.
9. In the locations where the Mixer Ferraris is installed the prohibition symbols "no smoking" have to be present placed at 5 meters from the machine.





**The equipment was built for the treatment of not explosive materials. it' is forbidden to use this machine with flammable or explosive vapours.**



**Warning:**

Avoid to operate the Ferraris Mixer without a clamped load.  
Never use a load with a weight over 40 Kg.  
Don't switch-off the machine with the can inside.

Do not place any **damaged packaging** in the Ferraris Mixer.  
Further rupture during mixing may cause damage to the Ferraris Mixer  
Running the Ferraris Mixer with damaged packaging is at "User's" risk.

**Already damaged packaging may cause damage to the your machine.**

During the maintenance respect the security rules and the procedure described in its paragraph.  
The Ferraris Mixer is to be operated only by trained personnel. FAST & FLUID MANAGEMENT shall not be liable for any damage or injury caused by non - compliance with the "user"- and "safety" - regulations presented in this manual, or by not taking the usual and accepted precautions in handling, operation or repair, even if not expressly stated in this manual.

This is also valid for damage and/or accidents as a result of changes made to the machine, that are implemented without prior notice to and approval by FAST & FLUID MANAGEMENT Srl.

## RESIDUAL RISK

### Residual risks list for the operator

Even if all attentions have been paid during the designing of the machine to guarantee a safety use it is possible to find situations rationally foreseeable for which it has been possible only to reduce the risk but not to eliminate it completely.

RISK	DIRECTIVE 392	PRECAUTION
Injuries or crushing during loading and unloading operations	1.6.4 4.1.1	Use security protective gloves and shoes during loading and unloading operations
Abrasions and injuries caused by sharp edges and parts of the cans to use	1.6.4 4.1.1	Use protective gloves during loading and unloading operations
Liquid leakages from the cans		Clean carefully the area where the operator works.

### Residual risks for the maintenance people

RISK	DIRECTIVE 392	PRECAUTION
Danger of electrocution during the setting phases of the inverter	1.5.1 1.5.2	Use security shoes. Position protective screen for the dangerous terminal blocks

### Personal protection for user

If the equipment is used in a correct way , the machine does not present risks or dangers for the operator , which in any case has to wear individual protection devices (security glasses, anti-sliding shoes, protective gloves ) specially during the loading and unloading phases of the cans.

### General danger situations

There aren't any particular danger situations ( E.G.. Fire risk, issue/ dispersion of dangerous products) but in any case it is necessary to have a powder extinguisher for possible fire situations. (electrical equipments).

### Security components and devices


The machine is equipped with the following security devices:

- An emergency push button
- A blocking door/shutter device
- A sensor for improper use of the rotation velocity

#### Emergency push button



**For security reasons, it is recommended that all users know the positions and the modalities to use the red emergency push button.**

The emergency **RED** push button is assembled on the operator panel on the right part of the system. The pressing of this push button permits the immediate cut off of the power supply and the stopping of the motor rotation. The restore of the normal functioning of the equipment is possible rotating the emergency push button in clockwise direction. In case of emergency stopping during the working cycle it is necessary execute the resetting procedures pushing **STOP KEY** .

#### Open door/shutter sensor

The machine is equipped with a security device which doesn't permit the starting of the cycle if the door/shutter is in loading position. During the working cycle the security device doesn't permit the opening of the door/shutter.

#### Speed control sensor

On the machine is positioned a sensor able to notice the presence of a can with a high superior to 200 mm. The control system guarantees rotation regime of 100g/m for cans with high superior to this dimension, it permits, on the contrary, rotation of 100 or 200 rpm for cans with high inferior to this dimension. This situation guarantees a correct dynamic arrangement of the equipment. If the operator set a high velocity with a big can the system gives an error signal and it starts the rotation with a suitable velocity.

## INSTALLATION CONDITIONS

Before installation please make sure of the following:

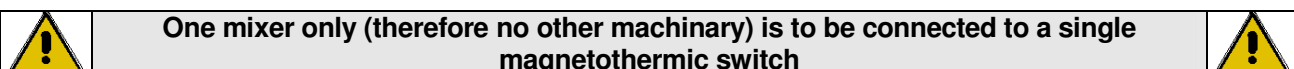
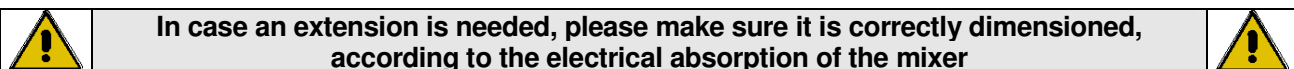
Place the Ferraris Mixer on a firm and leveled floor

- 220-240 VOLTAGE: Provide a grounded power supply of 220 / 240 Volt (or otherwise specified following local situations), which has a differential (MINIMUM 30mA), a magnetothermic protection of 16 Amp.
- 115 VOLTAGE: Provide a grounded power supply of 115 Volt (or otherwise specified following local situations), which has a differential (MINIMUM 30mA), a magnetothermic protection of 25 Amp.

Environmental conditions should be within the following limits:

Ambient air temperature	:	10 to 40 °C
Relative humidity	:	30 to 90 %





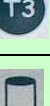
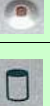




During the installation it is advisable to use protective gloves to avoid hand injuries






### MIXER FERRARIS KEYBOARD



	<b>POWER LIGHT</b>
	<b>"START" BUTTON (With time 1)</b>
	<b>"START" BUTTON (With time 2)</b>
	<b>"START" BUTTON (With time 3)</b>
	<b>LOW SPEED LIGHT (Big can)</b>
	<b>HIGHT SPEED LIGHT (Small can)</b>
	<b>SELECTION SPEED BUTTON</b>
	<b>CLOSING PLATES BUTTON</b>
	<b>"STOP" BUTTON / OPENING BUTTON</b>
	<b>EMERGENCY PUSH BUTTON</b>

## USE OF THE FERRARI MIXER

### SWITCHING MIXER FERRARIS ON




	<p>Photo A</p>	<p>The door/shutter doesn't open when the machine is switched off. To switch the machine on turn in position "1" the main switch (positioned on the back side of the machine). See photo A.. To lock the switch, a locker must be used. Verify that the emergency push button is not pushed</p>
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### OPENING DOOR/SHUTTER







### OPENING SHUTTER

<p>Open the door/shutter pulling the handle to the right (as shown in the figure)</p>		<p>Open the shutter pulling up the handle (as shown in the figure)</p>	
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### LOADING THE CAN IN THE MIXER

 <p style="text-align: right;"><b>B</b></p>	 <p style="text-align: right;"><b>C</b></p>	 <p style="text-align: right;"><b>D</b></p>
<p>Open the door/shutter and press the lever positioned below the inferior plate. See photo B.</p>	<p>Extract the lower plate to facilitate loading of heavier cans. See photo C.</p>	<p>Position the can on the inferior plate and press again the lever to push the plate back inside the machine (Push the inferior plate until it locks inside the machine). See photo D. Now close the door/shutter.</p>

### MIXING PAINT CANS

- 1) Set the desired mixing speed   using the key 
- 2) Start mixing cycle using  or  or  (three preset times)


The two mobile plates move until the can is pressed. After about 2 seconds the mixing cycle begins at slow velocity. After 5 seconds the velocity of the can increases until it reaches the desired mixing velocity.





When the set time is expired the rotation velocity decreases


After the deceleration phase the machine stops.


When the stirring cycle is finished and the can is motionless the two plates open and it is now possible to extract the can.


**N.B.**


It is not possible to perform the mixing cycle at the maximum velocity  with cans which weighs more than 10 Kg.




Pushing the  or  or  keys, the machine indicates an error (E-7) and automatically the machine begins to operate at slow velocity .

3) If the can to be mixed is higher than the opening clearance of the plates, it is necessary to open the distance between the plates pushing  key before opening the door/shutter.

7) To stop the mixer during non-emergency situation, press the STOP key .

Unless necessary, please do not use the emergency push button .

8) If during the functioning of the Mixer Ferraris the emergency push button is pushed down, push the key STOP  before starting a new mixing cycle. Failure to do so will generate an error (E-4) when pressing the

 or  or  keys.


**N.B.** After pushing the emergency button, before activating any operation please wait till the cradle stops completely.

9) When the mixing cycle is finished, remember not to keep the can inside the basket

a) If the power supply is off when the plates block the can, wait for the setting of the line and the cradle will position itself automatically

b) If the power supply is off with the can inside, switch off the main switch and take away the can.


If the door/shutter is closed, turn off the switch, open the door/shutter as indicated in the "EMERGENCY DOOR/SHUTTER OPENING" and take away the can.

7) Avoid to go on pressing and releasing key .

**EMERGENCY DOOR/SHUTTER OPENING**

In case of malfunctioning or absence of power supply the door/shutter is blocked.

To open the door/shutter operate as follows:

	<p>Insert the point of a screw-driver under the sliding door/shutter guide ( as indicated) Push the block-pin and pull the door/shutter to the right.</p>	
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## TROUBLESHOOTING

### ***It is possible to display error using Operator Panel (optional)***

<p>"E-0" ERROR 0 - Emergency push button – pushed down</p>	<ol style="list-style-type: none"><li>1. Turn the emergency push button clockwise</li><li>2. Check the wires connection on the emergency push button</li><li>3. Defective emergency push button wire/cable</li><li>4. Defective Logic Board</li></ol>
<p>"E-1" ERROR 1 - Open door/shutter</p>	<ol style="list-style-type: none"><li>1. Close the door/shutter</li><li>2. Microswitch bracket out of position (assembled on the door/shutter)</li><li>3. Broken microswitch</li><li>4. Defective wire/cable of the microswitch</li><li>5. Defective Logic Board</li></ol>
<p>"E-3" ERROR 3 -a) Distance between can and superior plate not sufficient -b) Loosen/broken belt for closing plates -c) Damaged/broken sensor for closing (on optic sensor board)</p>	<ol style="list-style-type: none"><li>1a. Increase the distance pressing the key STOP before beginning the stirring cycle.</li><li>1b. Regulate the belt or replace it.</li><li>1c. Clean the sensor on the Optic Sensor Board</li><li>2. Defective cable between Logic Board and Optic Sensor Board</li><li>3. Defective Optic Sensor Board</li></ol>
<p>E-4" ERROR 4 - Wrong position of the mixing apparatus</p>	<ol style="list-style-type: none"><li>1. Before starting the mixing cycle push the "STOP" key</li></ol>
<p>"E-5" ERROR 5 - Actuator faulty position</p>	<ol style="list-style-type: none"><li>1. Broken actuator switch</li><li>2. Broken actuator</li><li>3. Defective cable of the micro switch.</li><li>4. Defective Logic Board</li></ol>
<p>"E-6" ERROR 6 - Unable to find loading position</p>	<ol style="list-style-type: none"><li>1. Switch off the machine for 15 minutes. If the error appears again call for assistance in replacing the broken micro switch of the actuator</li><li>2. Clean or replace the sensor of zero position</li><li>3. Defective Optic Sensor Board</li></ol>
<p>"E-8" ERROR 8 - The emergency push button is pressed during the functioning</p>	<ol style="list-style-type: none"><li>1. If during the mixing cycle the emergency push button is pressed, push STOP to restart the machine.</li></ol>
<p>"E-9" ERROR 9 - Anomaly of the inverter</p>	<ol style="list-style-type: none"><li>1. Power supply too low or not stabilized</li><li>2. Extension cord is used.</li><li>3. Switch off the machine for 3-5 seconds and then switch it again. If the problem persist call for assistance.</li></ol>

## MAINTENANCE AND CLEANING

For any maintenance operation or inspection use protective gloves and switch off the mixer Ferraris.  
Only trained personal can execute maintenance operations

### Periodical maintenance list

<u>Maintenance frequency</u> →	7 days	1 month	6 months	1 year	2 years
Operations ↓					
Check of the security elements	YES				
Outside cleaning		YES			
Inside cleaning		YES			
Lubrication vertical guides		YES			
Lubrication screws and shaft		YES			
Cleaning and lubrication of the Crown gear				YES	
Lubrication conical triad					YES
Lubrication blocking screws wheel				YES	
Lubrication unblocking lever and trolley shafts			YES		
Check of the rubber disks			YES		
Check of the belts					YES

### Check of the security elements




#### BLOCKING DOOR/SHUTTER ( with switched off machine and closed door/shutter )

Pulling the handle , the door/shutter hasn't to open.

#### DOOR/SHUTTER (The machine is switched on but it doesn't work; Connected plug and turn the switch on "I")

When the machine is switched on attend some seconds for the release of the door/shutter

Open the door/shutter




Pushing  or  or  , the machine hasn't to work , but it has to indicate an error (E-1).

Pushing the opening and closing keys of the plates  or  , the machine hasn't to work , but it has to indicate an error (E-1).

#### EMERGENCY PUSH BUTTON (Working machine)

Switch on the machine.

Open the door/shutter and insert an empty can as indicated in the specific chapter. Then close the door/shutter.

Push  or  or  to start the machine.



Before the cycle ends, push the red emergency push button.




The rotation has to stop while the machine indicate an error (E-0).

The cradle stops with the closed plates and no key has to work.

Set the emergency push button turning it in clock wise direction.








Push all the keys except from the key STOP. No key should be operational.

Push the key STOP 

and verify that the cradle position to permit to the plates to open.

Verify that the door/shutter is unlocked.

**SPEED CHECK (With working machine).**

- Insert an empty can with a high superior to 230 mm. and close the door/shutter.
- Set the high mixing speed  using the key 
- Push the key start  or  or 
- After the closing of the plates the machine indicates an error (E-7). 
- The machine has automatically to start the cycle with a slow velocity 

**Cleaning**

**Outside parts of the door/shutter**

Use a normal not abrasive product for the cleaning of the washable domestic surfaces.

**Command panel , keyboard**

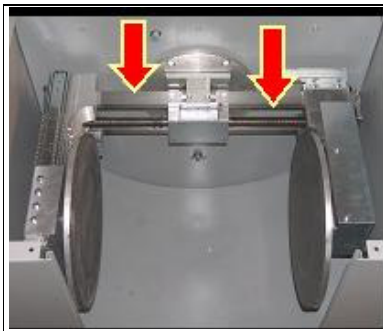
Use a wet cloth with neutral soap and dry without rinsing with a dried cloth or absorbent paper.

**Inside parts (frame).**

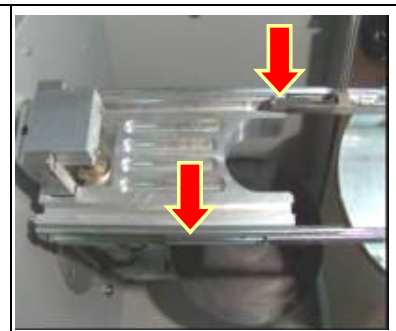
If there are paint leakages, clean immediately !

If necessary take away the dried part using a paddle and then use a normal not abrasive product for the cleaning of washable domestic surfaces.

**Inside parts (turning basket group).**



If there are paint leakages, clean immediately !  
If necessary take away the dried part using a paddle.  
To clean the lubricated parts it will be sufficient to use a cloth able to take away residual paint parts and a little part of lubricant product.  
Lubricate immediately following the procedures below shown .



**Accidental inside and/ or outside paint leakages**



Clean immediately the machine and the floor in the “operator area” to avoid sliding risks.  
Empty the drainage tank unscrewing the cap indicated and picking up the paint in a low container.

**Drainage cap**

**Don' t use water jet or polishing machine with high pressure to clean the mixer Ferraris!**

**Don' t use solvent to clean mixer Ferraris!**

If the use of solvent is necessary , keep the machine switched off with the door/shutter open for 1 hour before using it.

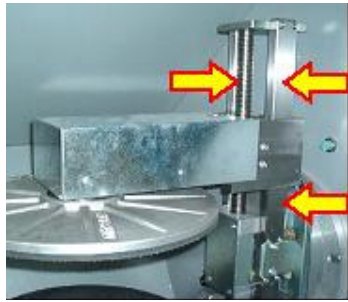


**Lubrication of the vertical guides, screws and shaft.**

**Advised lubricant products**

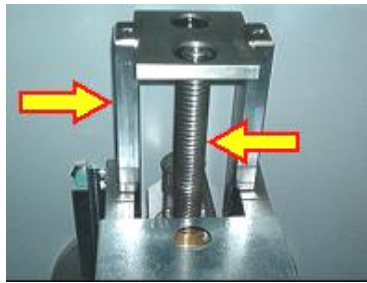
Use a yellow adhesive generic grease for uncovered gears, gradation N.G.L.I. 2.

**Preparation of the machine (first phase)**

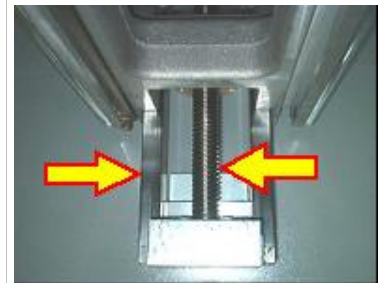


- Switch on the machine with the door/shutter closed.
- Close completely the cradle plates.
- Open the door/shutter and switch off the machine.
- Clean using a cloth the old lubricant and the possible residual paint

**Greasing (first phase)**



- Grease the vertical guides using a brush.
- Grease the plates command screws.
- Grease the shaft



**Preparation of the machine (second phase)**

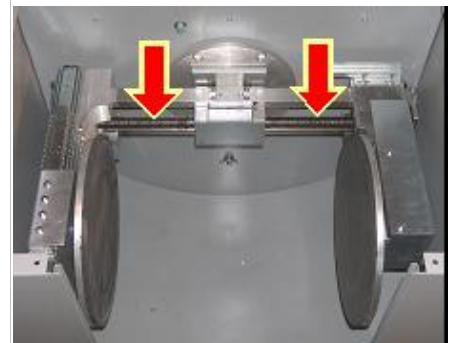


- Close the door/shutter and switch on the machine
- Open completely the cradle plates
- Open the door/shutter and switch off the machine.
- Now it is available the central part of the cradle that previously is covered by the guides.
- Clean using a cloth the old lubricant and the residual paint

**Greasing (second phase)**



Repeat the greasing operation for the part of the guides, screws and shaft that now are discovered.





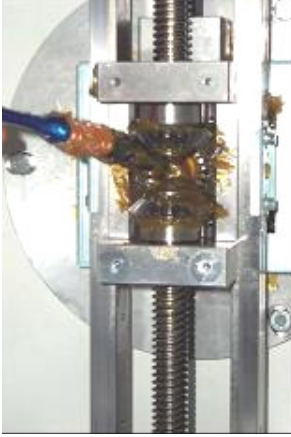
**Alternative operation**

It is possible to use spray grease too, but it has to be thick and adhesive



**Cleaning and lubrication of the crown bevel gear**

<u>Preparation of the machine</u>	<u>Cleaning of the crown gear</u>	<u>Greasing of the crown gear</u>
		
<p>Close the door/shutter and switch on the machine</p> <p>Open completely the cradle plates</p> <p>Open the door/shutter and switch off the machine.</p> <p>Using a key of 8 mm. remove the screws of the two protections of the crown bevel gear.</p>	<p>Remove the old lubricant and the residual paints using a cloth</p>	<p>Put the grease on the crown bevel gear using a brush</p> <p>Turn manually the cradle repeating the greasing on all the crown bevel gear.</p> <p>Verify that the grease cover the space among the teeth .</p> <p>Assemble again the two protections in their position</p>



**Lubrication of the central triple gear group.**

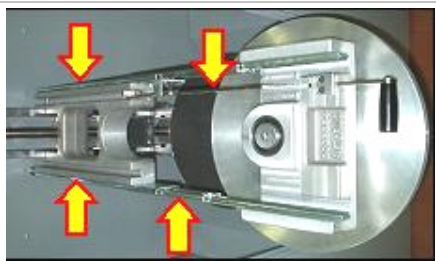
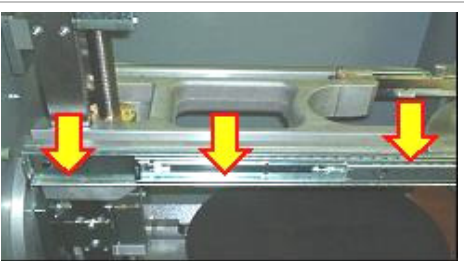
<u>Preparation of the machine</u>	<u>Greasing of the triple gear group</u>
	
<p>Close the door/shutter and switch on the machine</p> <p>Open completely the cradle plates</p> <p>Open the door/shutter and switch off the machine</p>	<p>By using an 8 mm key, remove the screws of the protection of the triple gear group</p> <p>Remove the old grease with a cloth</p>
	<p>Put the grease on the conical gears using a brush</p> <p>Verify that the grease cover the space among the teeth</p> <p>Assemble again the two protections in their position</p>

**Lubrication of the blocking screws wheel.**



<u>Preparation of the machine</u>	<u>Greasing of the blocking wheel</u>
 <p>Close the door/shutter and enter in the machine</p> <p>Close completely the cradle plates</p> <p>Open the door/shutter and switch off the machine</p> <p>Using a key of 8 mm. remove the screws of the toothed wheel</p>	 <p>Remove the old grease by using a cloth</p> <p>Put the grease on the toothed wheel using a brush</p> <p>Verify that the grease cover the space among the teeth</p> <p>Assemble again the protection in its position.</p>

**Lubrication of the unblocking lever and shafts of the trolley.**



<u>Preparation of the machine</u>	
	<p>Close the door/shutter and switch on the machine</p> <p>Close completely the cradle plates</p> <p>Open the door/shutter and switch off the machine</p> <p>Turn manually the cradle of half a turn</p> <p>Push the lever, take out the trolley and block it.</p> 

<u>Blocking lever gear and shafts for taking out the trolley</u>	
 <p>Grease the lever and slots with a brush</p> <p>Grease the shafts of the trolley using a brush</p> <p>Move the trolley and repeat the operation on previously covered part of the shaft</p>	

**Check of the rubber disks**

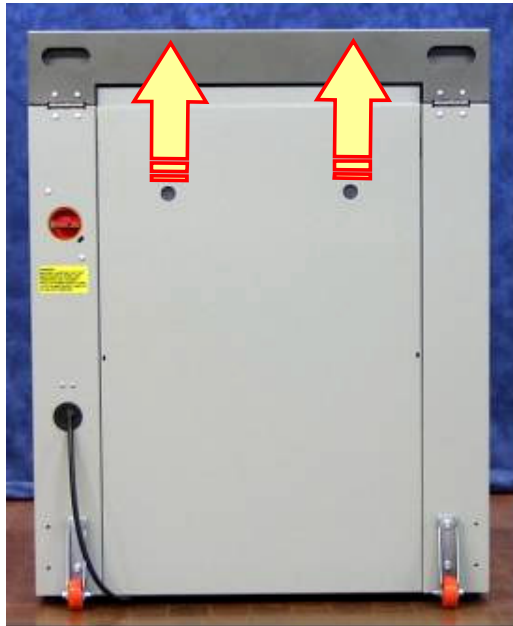
<u>Preparation of the machine</u>	<u>Check of the rubber disks</u>	
<p>Close the door/shutter and switch on the machine</p> <p>Open completely the cradle plates</p> <p>Open the door/shutter</p> <p>Take out the trolley</p> <p>Clean the plates</p>	 <p>Verify that the inferior disk hasn't deep grooves or it is excessively worn</p>	 <p>Verify that the upper plate hasn't deep grooves or it is excessively worn</p>

**Check of the belts**

<u>Preparation of the machine</u>	<u>Check of the transmission belt of the upper plate</u>	
<p>Close the door/shutter and switch on the machine</p> <p>Close completely the plates of the cradle</p> <p>Open the door/shutter and switch off the machine</p>	 <p>Using a key of 8 mm remove the four screws of the protection which cover the timing belt and remove it.</p>	 <p>Check the timing belt. It must not have broken teeth or grindings</p> <p>Assemble the protection in its original position</p>



### Check of the main transmission belt



**ATTENTION:**  
BEFORE REMOVING THE BACK PANEL, UNPLUG THE MACHINE FROM ELECTRIC POWER SUPPLY.  
ONCE UNPLUGGED THE MACHINE, WAIT FOR AT LEAST FIVE MINUTES BEFORE ACCESSING THE ELECTRONIC BOARDS.

Make sure that there isn't any can in the cradle

Turn off mixer Ferraris (rear main switch)

Remove the back panel, lift it up by using the two holes (as shown in the picture) while pulling it towards you

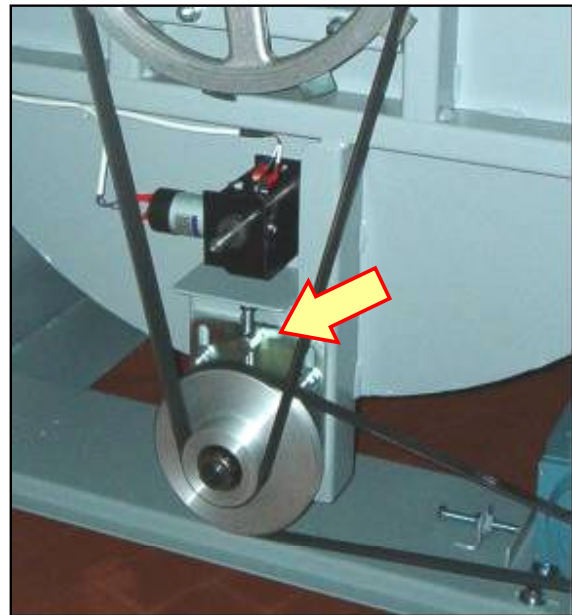
Make sure that the tension of the belt has to have a bending of  $5 \div 10$  mm when the longer free part is pushed by a finger.

If necessary tension the belt by using the bolt (mm 13) indicated

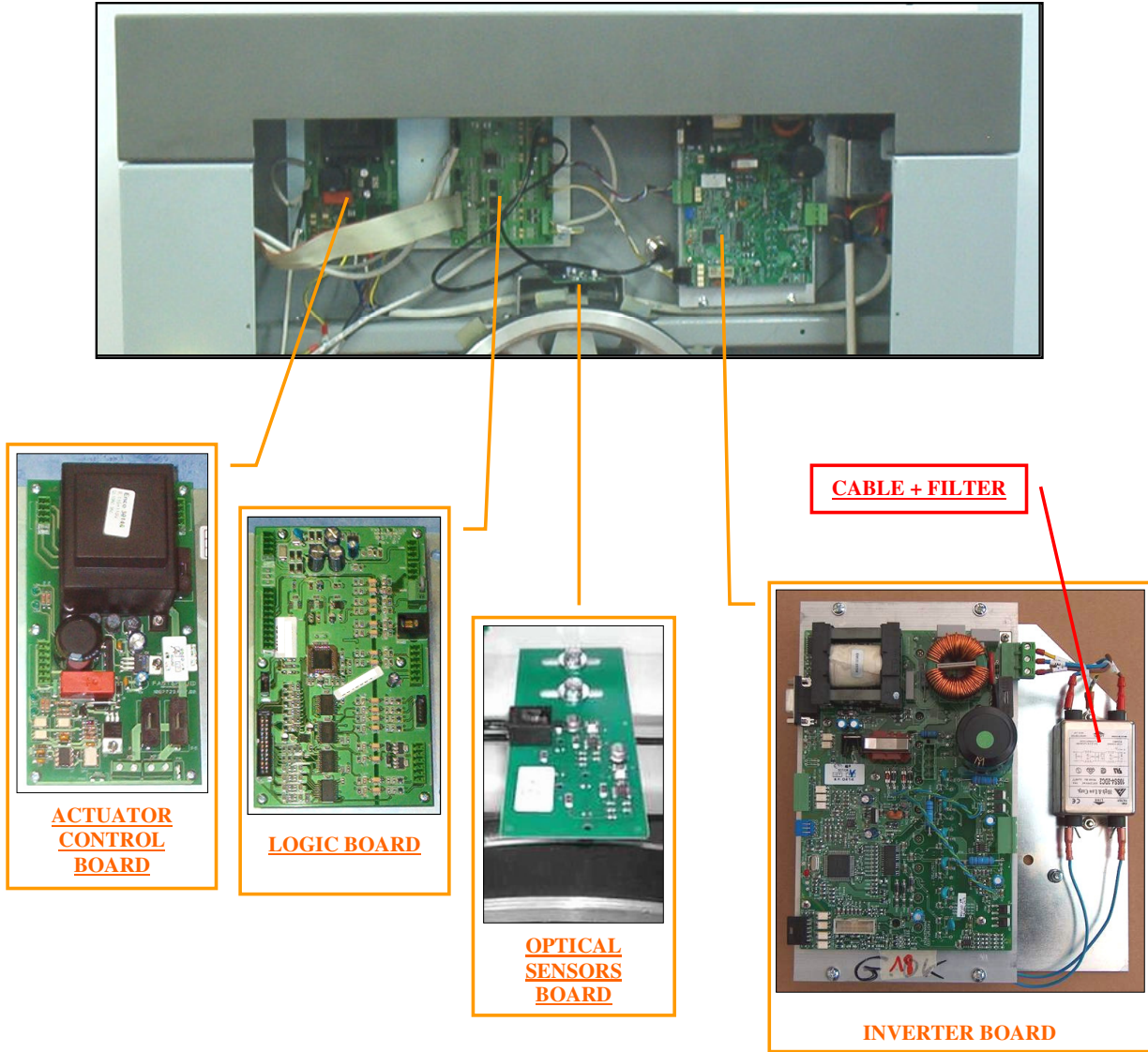
By using a belt tension tester (which operates by measuring sound waves), make sure that frequency of the vertical transmission belt is about 90Hz, and that frequency of horizontal transmission belt is about 125Hz.

Verify that the belt hasn't any grindings while turning manually the central pulley

Assemble the back panel to its original position.



FUNCTIONAL DIAGRAM 115 - 230V





ELECTRICAL DIAGRAM 115 - 230V

