

MANUAL FOR USE AND MAINTENANCE

UNIVERSAL MIXER



ENOITALIA s.r.l.

costruzione macchine enologiche

Via Prov. Pisana, 162

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EC Declaration of Machinery Conformity

Manufacturer and seller of the machine

ENOITALIA s.r.l.

Via Prov. Pisana, 162 Cerreto Guidi (Fi)

MODEL

UNIVERSAL MIXER

Year of manufacture: **2017**

The undersigned company hereby DECLARES at its own responsibility that the machine which this declaration refers to complies with the provisions of :

- Directive 2006/42/EC (machinery directive) and subsequent modifications and national dispositions of enactment.
- Directive 2006/95/EC (low voltage directive) and national dispositions of enactment.
- Directive 2004/108/EC (electromagnetic compatibility directive) and national dispositions of enactment.

The machine also complies with the Harmonised Standards

UNI EN : 349; 954/1; 1050; 547-1-2-3 ; 894-1-2-3 ; 953; 981; 1005-1-2-3-4-5; 1037.

UNI EN ISO: 3744; 7000; 12100-1-2; 11202; 11205 ; 11688-1-2; 14121-1; 13857;

UNI EN ISO 1186.

Technical standards and specifications CEI EN 60204/1.

National technical standards and specifications: UNI ISO 1819; UNI ISO 7149;

UNI 7544; 45020; 60447; 60447.

Cerreto Guidi, 20/04/2018

The Manufacturing Chief

Stefano Menichetti



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SECURITY

1.1. MANUAL

This manual contains information on the reception, installation, operation, assembly, disassembly and maintenance of the Enoitalia universal mixer.

Enoitalia reserves the right to modify this manual without notice.

1.2. INSTRUCTIONS FOR STARTER

This manual contains useful information for the use and management of your mixer.

Read the instructions carefully and follow the instructions provided before starting the mixer.

It is very important to keep these instructions in a specially dedicated place.

1.3. SECURITY

1.3.1. Danger signals



General danger for people



Danger of injury caused by moving parts



Electric danger



Danger of corrosive substances



Danger! Hanging loads

1.4 GENERAL INSTRUCTION FOR SECURITY

Please read the instruction manual before installing the agitator and start it.

If in doubt, contact ENOITALIA.

1.4.1 INSTALLATION

Check the technical specifications in chapter 8.

Make sure that the mixer is fixed to the tank correctly and perfectly aligned. Otherwise mechanical damage to the agitator and to the tank could be caused.

- Verify that the engine specifications are correct.
- Check that there is no risk of explosion in working conditions.



During installation all electrical works must be carried out by authorized staff.

1.4.2 During operation

Check the technical specifications in chapter 8.

Never exceed the indicated limit values.

The mixer can not work without liquid. UNIVERSAL mixers are not designed to operate during the filling or emptying of the tanks.

DON'T touch the mixer during the operation.

In case the mixer is used in a tank with hot liquids, use protective gloves for high temperatures.

The mixer contains moving parts.

Do not insert limbs or touch the mixer during operation.

Remove the mixer shaft before closing the valve.

DO NOT WASH the electric motor directly with water. Protection of the standard motor is IP-55: Protection against splashes of water and dust.

1.4.3 During maintenance

Check the technical specifications in chapter 8.

Verify that the mixer motor is not hot.

Disassemble the mixer only when its temperature has decreased. Always use protective gloves during maintenance.

Do not leave sprinkled parts on the floor.



ALWAYS remove the mixer fuelling before starting maintenance.

All electrical works must be carried out by authorized staff.

1.4.4 In accordance with the instructions

Not to follow instructions could cause a risk to workers, the environment and the machine. This could result in the loss of the right to compensation.

Risks can be the following:

- Failure of important functions of the machine / system.
- Electrical, mechanical and chemical threat.
- Danger to the environment due to any substances released.

2. Guarantee

The guarantee covers the machinery for the first twelve months from its activation. Should the machine not be used immediately insurance coverage is guaranteed for up to eighteen months from the date of delivery and expires thereafter.

The guarantee does not cover machine transportation for which the buyer is responsible. The guarantee is not applicable in case the machine is not used in accordance with the instructions contained in the manual.

And repair work is understood as being ex our factory in Cerreto Guidi, (FI); transportation is at the buyer's expense.

Any guarantee will be void, and also the right to compensation for any liability claim if:

- 1) Assistance and maintenance works have not carried out by following the instructions;
- 2) Changes have been made without prior written permission;
- 3) The used parts or lubricants are not original ENOITALIA parts;
- 4) The mixer has been used improperly, due to negligence of the operator;

- 5) The mixer parts can be damaged if exposed to high pressure in the absence of a safety valve.

No modification of the machine can be carried out without prior written authorization from ENOITALIA.

For your safety, use original spare parts and accessories.

The use of other parts exonerates the manufacturer from any responsibility.

Modification of warranty conditions can only be done with the prior written consent of ENOITALIA.

For further information about the guarantee, look at the last page of our price list.

3. GENERAL INFORMATION

3.1. DESCRIPTION

The Universal mixer is used as a bottom side mixer.

The mixer has been designed to be installed and removed with a full tank of product, through a ball valve, so as to ensure that during its removal there is no loss of pressure and product from the inside of the tank.

This operation can be carried out by the authorized operator without the use of special tools or equipment.

In order to guarantee these characteristics, its structure has been realized on the sliding axis, and its propeller has been realized in such a way that it opens automatically at the moment of the start.

The pressure and product endurance is guaranteed by a mechanical seal.

All the parts that come into contact with the product are in stainless steel AISI-304.

The mixing element is the folding propeller.

ENOITALIA has designed this mixer mainly for the food industry.

3.2. FIELD OF APPLICATION

The fields of applications of the Enoitalia Universal mixer are in particular the wine industry in general and the food industry.

Thanks to its application it allows to keep:

- 1) Solids in suspension

- 2) gasification (SO₂ and CO₂)
- 3) homogenization of temperature
- 4) products dosage

The field of application for the type of mixer is limited.

The mixer has been made for the specific application indicated at the time of the order made to ENOITALIA.

Incomplete (type of liquid, viscosity, etc) ENOITALIA is not responsible for any damage that may result.

4. INSTALLATION

4.1. MIXER DELIVERY

ENOITALIA can not be held responsible for any deterioration of the equipment during transport or unpacking. Visually check that the packaging has not been damaged on delivery.

Together with the mixer, the following documents will be delivered:

- Transport documents
- Use and maintenance manual

Packaging removal:

- 1) Remove the packaging material
- 2) Check that the mixer and the motor are not damaged
- 3) Check that all the components are present
- 4) In case there are damages or missing parts, immediately advise Enoitalia srl, or the retailer from whom the product was purchased.



4.1.1. UNIVERSAL MIXER IDENTIFICATION

	ENOITALIA s.r.l. COSTRUZIONI MECCANICHE Via Prov. Pisana, 162 50050 CERRETO GUIDI (FI) - ITALIA Tel. 0571.588031 - Fax 0571.588080	
ENO <input type="checkbox"/>	BETA <input type="checkbox"/>	MODELLO/TYPE <input type="text"/>
ARNO <input type="checkbox"/>	EURO <input type="checkbox"/>	N. SERIE/SERIAL <input type="text"/>
JOLLY <input type="checkbox"/>	GAMMA <input type="checkbox"/>	ANNO/YEAR <input type="text"/>
www.enoitalia.net		info@enoitalia.net

IDENTIFICATION PLATE

4.2. TRANSPORT AND STORAGE

The Enoitalia universal mixer is provided with a special handle for its moving, and installation on trolley cod.876.

Do not manipulate the mixer from the shaft because it can deform.

4.3. INSTALLATION

Before handling the agitator, ensure the absence of power to the motor:

- The red emergency button must be pressed
- The power cable must be disconnected from the mains .

It is very important to place the mixer in an area where it can properly get cool.

If the mixer is installed outdoors, it must be adequately covered by atmospheric agents.
Its position should allow easy access for routine inspection and maintenance operations.

Do not apply loads of any kind on the mixer shaft, because it can easily undergone permanent deformations.



To avoid deformations to the tank and to the mixer itself, it is necessary that the mixer is always supported by the special trolley supplied by ENOITALIA.

Once the mixer position has been defined, fix it to the tank through the connection at the end of the outlet tube. The connection could be garolla din type, triclover or others on demand.

Pay attention when assembling the mixer, that its insertion is free and that it occurs without various impediments, in order to avoid bending or deforming the shaft.

Also check that the passage inside the valve is larger than 36 mm.

To connect the mixer to the tank (see the drawing 8.4):

- 1) Pull the cover (15) upwards using the handle (16)
- 2) Turn the cover to allow access to the interior
- 3) Remove the two screws (18)
- 4) Grasp the flange (9) and pull the mixer shaft outward
- 5) Slide the stirrer shaft until the propeller (13) disappears into the connecting tube (12)
- 6) Connect the mixer to the tank valve
- 7) Open the tank valve
- 8) Insert the mixer shaft by pushing it from the flange (9) so that the plug 23 is inserted into the grafting bush (8)
- 9) Fix the flange (9) to the grafting bush (8) using the two screws (18) previously removed
- 10) Return the cover to the closed position
- 11) Make sure that the microswitch is activated by the cover in the closed position (15)
- 12) Remove any possible air by opening the valve (19).

4.4. THREE-PHASE ELECTRICAL CONNECTION

The mixer is supplied in the three-phase version with a power cable without an electrical outlet.

The electrical connection must always be done by qualified staff.

Take appropriate measures to prevent faults in connections and wiring.



Pay particular attention to the electrical equipment and the components of the power supply system that can carry power even after disconnecting them.

Contact may endanger operator safety or cause irreparable damage to the material.

When starting the mixer, check the correct direction of rotation, as indicated by the signal (14).

Should it be necessary, the poles of the power socket must be reversed.

Enoitalia Srl has installed a safety system that prevents the exit of the shaft if the rotation direction is not correct. This can be done by inserting the screws (18) into the slotted flange (9).

Once the correct direction of rotation is established, the screws can be removed (18).

4.1. SINGLE-PHASE ELECTRICAL CONNECTION

The mixer is supplied in the single-phase version with SCHUKO CE power cable.

The electrical connection must always be done by qualified staff.

Take appropriate measures to prevent faults in connections and wiring.



Pay particular attention to the electrical equipment and the components of the power supply system that can carry power even after disconnecting them.

Contact may endanger operator safety or cause irreparable damage to the material.

When starting the mixer, check the correct direction of rotation, as indicated by the signal (14).

If the direction of rotation is not as indicated, contact Enoitalia Srl or the retailer from whom you purchased the product.

5. COMMISSIONING

Before starting the mixer, carefully read the instructions in chapter 4.

5.1 COMMISSIONING

Connect the power cable to the power outlet, press the white button on the motor terminal board. Carefully read Technical Specifications in Chapter 8. ENOITALIA can not be held responsible for improper use of the equipment.

NEVER touch the mixer if you are working with a high temperature liquid.

5.1.1. CHECKS BEFORE ACTIVATING THE MIXER

NEVER activate the mixer if it is not correctly installed on the tank.

- 1) Check the correct supply voltage of the electric line with the motor plate.
- 2) Check that the motor direction of rotation is correct
- 3) Check the correct alignment of the mixer shaft.
- 4) Check that the rod easily slides through the hollow shaft of the motor.
- 5) Check the fluid level in the tank.
- 6) Check that the valve of the tank to which the mixer is fixed is open.
- 7) Check that the mixer shaft is inside the tank.
- 8) Remove any air in the area of the mechanical seal by opening the drain cock until no liquid comes out.

Be very careful not to allow the dry agitator to work, otherwise serious damage to the mechanical seal may result.

5.1.2. CHECKS TO BE CARRIED OUT AT THE MIXER STARTING

- 1) When starting the engine, check that there are no leaks in the mechanical seal areas and in the connection fitting to the tank.
- 2) Check that it does not emit vibrations and strange noises.

Check that there are no inorganic and organic solid objects inside the tank.

The mixer is specially designed to work in the food industry in general, in applications where there are no solid parts.

The presence of the latter can cause the break of the mixing element or of other mechanical parts.

Check the motor consumption to avoid electrical overload.

The operator must be sure that the engine cuff is properly secured on the rear bonnet, because there are parts of the agitator that could cause serious damage while turning.

5.1.3. TURNING OFF:

Before closing the valve, extract the mixer shaft up to the stop, to prevent it from being inside the valve during the closure, with the risk of damaging both the shaft and the valve.

6. Operating problems

In the table below you can find solutions to problems that may arise during the mixer use. It is assumed that the mixer is correctly installed and has been correctly selected for the application.

Contact ENOITALIA if you need technical assistance.

<u>OPERATING PROBLEMS</u>	<u>POSSIBLE CAUSE</u>
ENGINE OVERLOAD	1, 2.
INSUFFICIENT AGITATION	1, 4.
VIBRATION AND NOISES	5, 6, 7, 8, 9,
MECHANICAL SEAL	5, 9

<u>POS</u>	<u>POSSIBLE CAUSE</u>	<u>SOLUTION</u>
1	HIGH VISCOSITY OF THE LIQUID TO AGITATE	REDUCE THE LIQUID VISCOSITY, INCREASE THE LIQUID TEMPERATURE
2	HIGH DENSITY	REDUCE THE PROPELLER DIAMETER
3	WRONG DIRECTION OF ROTATION	INVERT THE DIRECTION OF ROTATION
4	INSUFFICIENT OR ABSENT FLUID LEVEL	CHECK THE FLUID LEVEL INSIDE THE TANK
5	FOLDED SHAFT	SHAFT REPLACE
6	DAMAGED SHAFT	SHAFT REPLACE
7	USURATED BEARINGS	BEARINGS REPLACE

8	USURATED OR DAMAGED MECHANICAL SEAL	MECHANICAL SEAL REPLACE
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In case that after having consulted the operating problems and implemented the above interventions the problem should persist, stop the mixer immediately.

Contact ENOITALIA if you need technical assistance.

7. MAINTENANCE

7.1 GENERAL INDICATION

This mixer, like any other machine, needs maintenance.

The instructions in this manual are for the identification and replacement of spare parts.

The instructions have been created for maintenance staff and for those responsible for supplying spare parts.

Carefully read the Technical Specifications in Chapter 8.

All the replaced material must be properly eliminated / recycled according to the directives in force in each area.



ALWAYS disconnect the mixer from the electric line before starting maintenance works.

CHECK THE MECHANICAL SEAL

Periodically check if there are leaks in the area in front of the engine.

If there are leaks, replace the mechanical seal by following the instructions in the assembly and disassembly section.

7.1. STORAGE

Before storing the agitator, check that there is no stagnant liquid inside.

Be sure to clean carefully the moving parts and their seals before prolonged stops.

Avoid depositing the mixer in particularly humid and uncovered areas.

The non-fulfilment of these instructions will immediately void the guarantee.

7.1. CLEANING



The use of aggressive detergents such as caustic soda and nitric acid can cause burns to the skin.

During the cleaning operation with aggressive products, the use of special rubber gloves is indicated.

If the mixer is installed in a system with a CIP process, its disassembly is not necessary for routine cleaning.

If the automatic cleaning process has not been programmed, disassemble the mixer as indicated in the assembly and disassembly section.

For cleaning use hot water pressure or neutral detergents, suitable for contact with food. Here are some indications:

Use only clean water (chlorides) to mix with detergents:

a) Alkaline solution: 1% by weight of caustic soda (NaOH) at 70°C (150°F)

1 Kg of NaOH + 100 l. water = solution for cleaning

b) Acid solution: 0.5% by weight of nitric acid (HNO₃) at 70°C (150°F)

0,7 lt HNO₃ at 53% + 100 l. water = solution for cleaning

Check the concentration of cleaning solutions. Excessive concentration may cause deterioration of the seals.

At the end of the cleaning treatment, ALWAYS carry out an abundant rinsing with clean water to prevent the aggressive substances used from damaging the seals and moving parts of the mixer during the pause period.

7.4. MIXER REMOVAL AND INSTALLATION

DISASSEMBLY

Open the cover of the cuff engine (15).

Remove the two Allen screws (18), if present on the flange (9).

Remove the mixer shaft (3), pulling it outwards through the slotted flange (7), sliding it behind the motor (01), until the end of the drive shaft (11) goes against the sealing bush (07).

Close the valve on the tank pipe (12), to avoid the liquid escaping from inside the tank.

Unscrew / remove the connection between the valve on the pipe and the mixer attachment (12).

8. TECHNICAL SPECIFICATIONS

8.1 TECHNICAL SPECIFICATIONS

MAXIMUM VISCOSITY.....100 mPa.s.

MAXIMUM PRESSURE.....2 bar

MAXIMUM TEMPERATURE.....+80°C +176 °F

SOUND LEVEL.....60-80 dB(A)

CONNECTION TYPEDIN 11851/GAROLLA/MACON/TRICLOVER

DIMENSION INSIDE THE VALVE.....BIGGER THAN 36mm

In CASE that, for particular applications, the sound level of the mixer during the use is higher than 85 Db (A), use special headphones or earphones.

MATERIAL

PARTS IN CONTACT WITH THE PRODUCT AISI 304

GASKETS IN CONTACT WITH THE PRODUCT.....VITON

MIXER WEIGHT ABOUT 30 KG

8.2 ENGINE SPECIFICATIONS

ENGINE POWER1,1 Kw

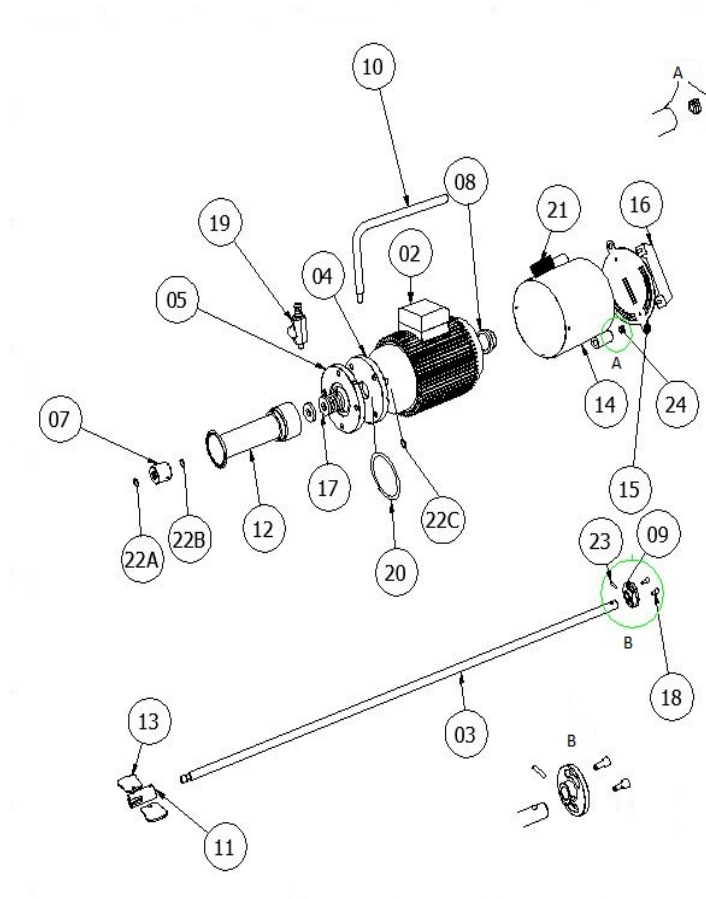
POWER SUPPLY400 Volt/ 220 Volt

FREQUENCY 50 Hz/ 60 Hz

8.3 OVERALL DIMENSIONS

TOTAL LENGHT PROPELLERS IN AXIS.....	1070 MM
WIDTH INCLUDING TERMINAL BLOCK	270 MM
HEIGHT EXCLUDING LIFTING HANDLE	350 MM
LENGTH OF SHAFT BLADES IN AXIS	510 MM
LENGTH OF SHAFT OPEN BLADES	450 MM

8.4 EXPLODED VIEW OF UNIVERSAL MIXER



8.5 PARTICULARS LIST

ELENCO PARTI		
ELEMENTO	QTÀ	DESCRIZIONE
01	1	MOTORE ELETTRICO
02	1	MORSETTIERA MOTORE
03	1	ASTA AGITATORE
04	1	FLANGIA MOTORE
05	1	FLANGIA CONNESSIONE
07	1	BOCCOLA DI TENUTA AGITATORE
08	1	BOCCOLA D'INNESTO
09	1	FLANGIA ASOLATA
10	1	MANICO MOTORE
11	1	ESTREMITA' ASTA
12	1	CONNESSIONE CON SERBATOIO
13	2	PALE_AGITATORE
14	1	CUFFIA MOTORE
15	1	COPERCHIO_CUFFIA_MOTORE
16	1	MANIGLIA
17	1	TENUTA MECCANICA
18	2	VITE_BRUGOLA
19	1	RUBINETTO 1/4"
20	1	OR
21	1	MICRO SWITCH
22A	1	OR
22B	1	OR
22C	1	OR
23	1	SPINA
24	1	MOLLA

9.0 ACCESSORIES

9.1 ELECTRONIC SPEED VARIATOR

If the machine has been requested with a speed variator, it will be presented as shown in the picture below.



The machine is provided complete with inox trolley, where the control panel is installed with the following buttons:

- General power switch
- Red stop button
- Green start button
- Button for emergency stop
- Speed regulator



On the upper part of the electrical panel there are 2 connectors 4 and 5-pole: one for connection to the electric motor, the other for connection to the safety sensor.

In addition to the provisions of paragraph 4, to activate the machine equipped with an electronic speed variator it is necessary to:

- Connect the two connectors on the electrical panel
- Connect the control panel to the mains with the appropriate sockets

- Press the main switch, press the green start button and check the direction of rotation (on models powered by three-phase current)
- Press the red stop button to stop the machine.

Through the potentiometer it is possible to vary the rotation speed and find the optimal value for the application used.

In addition to what is indicated in paragraph 6 (problems and solutions), the following situation may arise:

<u>OPERATING PROBLEMS</u>	<u>SOLUTIONS</u>
THE MIXER DOES NOT START	CHECK THE CORRECT CONNECTION OF THE 2 CONNECTORS.
	CHECK THE CORRECT FUNCTIONING OF THE TWO FUSES WITHIN THE CONTROL PANEL, AND MAY BE REPLACE THEM.

9.2 SUPPORT TROLLEY OF MIXER ECO TYPE



The eco-type support trolley has been designed by Enoitalia specifically for the Universal mixer.

Its structure has been made entirely in stainless steel.

On the central tubular element (19) a bush for handle fixing (20) has been welded, where the mixer is fixed.

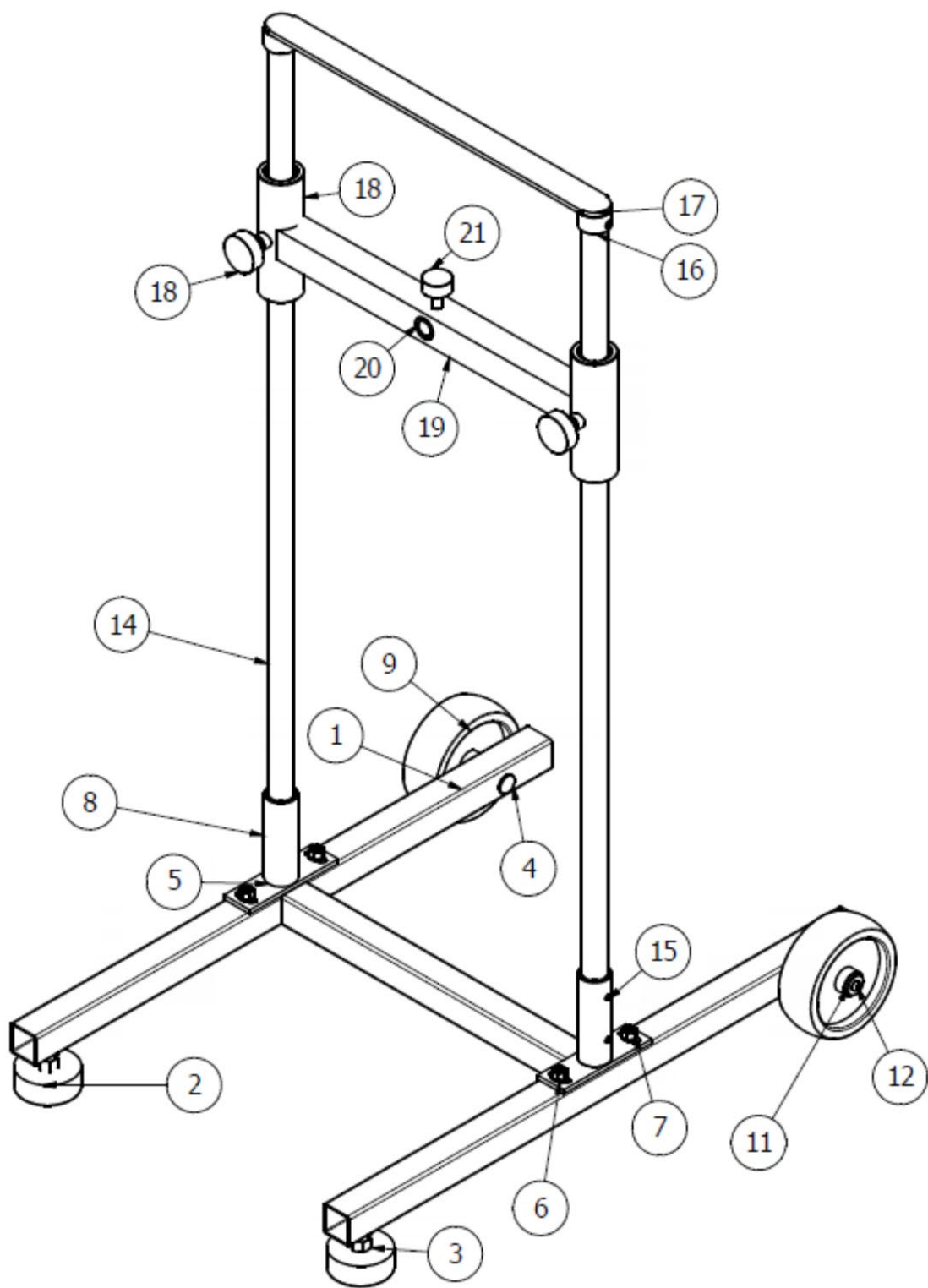
The height of the mixer can be adjusted through the sliding bush (18), which slides on the two lateral drawn sections (14).



Do not loosen the tightening knobs without having previously gripped both lifting handles firmly. Risk of crushing the feet. Weight of the mixer 30kg

The frame at its base is supported by two anti-vibration supports (2), and by two wheels (9) to facilitate movement.

9.3 EXPLODED VIEW OF TROLLEY ECO TYPE



9.4 PARTICULARS LIST TROLLEY ECO TYPE

ELENCO PARTI			
ELEMENTO	QTÀ	NUMERO PARTE	DESCRIZIONE
1	1	TELAIO BASE	
2	2	ANTIVIBRANTE	
3	4	JIS B 1181 - C M 12	Dado esagonale
4	2	PERNI RUOTE	
5	2	PIATTO BASE SOSTEGNO	
6	4	JIS B 1256 - 8x15,5	Rondella piatta
7	4	JIS B 1181 - A M 8	Dado esagonale - Stile 2
8	2	BOCCOLA SOSTEGNO BARRA	
9	2	RUOTA ARANCIONE 125	
10	3	JIS B 1256 - 16x28	Rondella piatta
11	2	JIS B 1256 - 10x21	Rondella piatta
12	1	JIS B 1174 - M6 x 10	Vite con testa a bottone ed esagono incassato
13	1	JIS B 1174 - M10 x 16	Vite con testa a bottone ed esagono incassato
14	2	TRAFILATO DI 25	
15	6	JIS B 1177 punta piana - M6 x 8	Vite con esagono incassato
16	2	BOCCOLA TAPPO	
17	1	PIATTO SUPERIORE	
18	2	ASS-BOCCOLA SCORRIM	
19	1	TUBOLARE CENTRALE	
20	1	BOCCOLA MANIGLIA	
21	1	POMELLO CENTRALE	