



Please refer to the numbered drawings which correspond to the paragraph numbers of the instruction manual.

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The reference language for these instructions is French.

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Introduction

The User Manual contains useful information for the user on how to work correctly and in complete safety, and is designed to make it easier to use the machine (called «machine» or «appliance» below).

What follows is in no case intended to be a long list of warnings and constraints, but rather a series of instructions meant to improve the service provided by the machine in every respect, and particularly to avoid a series of injuries or damage to equipment that might result from inappropriate procedures for use and management.

It is essential that all the people responsible for transporting, installing, commissioning, using, maintaining, repairing or dismantling the machine should consult this manual and read it carefully before proceeding with the various operations, in order to avoid any incorrect or inappropriate handling that might be result in damage to the machine or put people's safety at risk.

It is just as important that the Manual should always be available to the operator and it should be kept carefully where the machine is used ready for easy and immediate consultation in case of any doubt, or in any case, whenever the need arises.

If after reading the Manual, there are still any doubts concerning how to use the machine, please do not hesitate to contact the Manufacturer or approved After Sales Service provider, who is constantly available to ensure quick and careful service for improved machine operation and optimum efficiency.

Note that the safety, hygiene and environmental protection standards currently applicable in the country where the machine is installed must always be applied during all phases of machine operation. Consequently it is the user's responsibility to ensure that the machine is operated and used solely under the optimum safety conditions laid down for people, animals and property.

Introduction

1.1 DESCRIPTION

• This turbo liquidiser is used to mix, liquidise, reduce and emulsify vegetable and fish soups, fruit and vegetable purées, liquid pastries and sauces, etc. directly in cooking containers. It is mainly used in large catering and central kitchens and the food preparation industries. Please ask for details on other applications.



- A Trolley
- B Handle
- C Motor housing with handles
- D Body
- E Hinge sleeve
- F Body locking pin
- G Rotating body locking knob
- H Immersion tube
- I Height adjustment handle
- J Liquidising head
- K Protection ring
- L Stand
- M Castors

Installation



ATTENTION!!

Machine storage: -25°C to +50°C
 Ambient temperature during operation: +4°C to +40°C
 This machine is for professional use and must be used by staff trained to use, clean and maintain it, in terms of reliability and safety.
 Use the machine in adequately lit premises (See applicable technical standard for the country of use. In Europe, refer to standard EN 12464-1)
 When handling the machine, always check that the parts taken hold of are not mobile elements: risk of dropping and injury to the lower limbs.
 The machine is not designed for use in explosive atmospheres.

2.1 DIMENSIONS - WEIGHT (for information only) 2.1

- Gross weight when packaged : 220 kg
- Net weight equipped : 170 kg
- Dimensions of packaging L x l x H : 1780 x 840 x 1400 mm
- Machine dimensions: 1852 x 663 x 1475 mm

Handling – Transport

- The Turbo-Liquidizer is delivered on a wooden pallet.
- Use a forklift truck to remove it from the pallet, slipping the forks beneath the trolley.



If unloaded manually, take all necessary precautions to ensure the appliance does not tip at all

2.2 ELECTRICAL CONNECTION



ATTENTION!!

Connection to the electrical power supply must be done according to proper professional practice by a qualified and authorised person (see current standards and legislation in the country of installation).


If an adapter is used on the socket, a check must be made that the electrical characteristics of this adapter are not lower than those of the machine.

Do not use multiple plugs

The AC power supply to the machine must comply with the following conditions;

- Maximum voltage variation: $\pm 5\%$
- Maximum frequency variation: $\pm 1\%$ on a continuous basis, $\pm 2\%$ over short periods

ATTENTION: the electrical installation must comply (for design, creation and maintenance) with the legal and standard requirements in the country where used.

- Check that the electric mains voltage, the value shown on the specification plate.
- The machine's electrical power supply must be protected against voltage surges (short-circuits and excess voltages) by using fuses or thermal relays of the appropriate gauge relative to the place of installation and machine specifications – see the specifications shown in column H of figure 2.2a 

ATTENTION: Concerning protection against indirect contact (depending on the type of power supply provided and connection of the exposed conductive parts to the equipotential protection circuit), refer to point 6.3.3 of EN 60204-1 (IEC 60204-1) with the use of protection devices for automatic shut-off of power in the event of an insulation fault with a TN or TT, system, or for the IT system, with the use of a permanent insulation or differentials controller for automatic shut-off. The requirements of IEC 60364-4-41, 413.1 must apply for this protection.

For example: in a TT system, a differential circuit breaker must be installed upline of the power supply, with a suitable power cut-off (e.g.: 30 mA) on the earthing installation for the place where it is planned to install the machine.

ATTENTION: Failure to comply with these instructions means the customer runs the risk of machine failure and/or accidents due to direct or indirect contacts.

- Check that the voltage of the electrical system is the same as that marked on the rating plate and the label on the power cable.

- The machine must be protected by a differential circuit breaker and a fuse per phase of the rating shown in column **H** of the characteristics.

- **Electrical characteristics:**



- B** Number of phases (3 three phase)
- C** Nominal voltage in Volts (value, range or commutation)
- D** Frequency (Hertz)
- E** Motor speed (rpm)
- F** Nominal power (Watts)
- G** Nominal current (Amperes) depending on the voltage
- H** Rating of fuse protecting electrical line (Amperes)
- I** Approximate electrical consumption (Kwh)


- **Types of motor:**

a) *230/400 V three phase motor - single speed:*

- Provide a single phase wall socket with 3 phases + earth, rating 20A and a matching watertight plug fitted on the power supply cable.



The machine must be earthed with a green / yellow wire.

- **Check the direction of rotation of the rotor:** by means of the arrow marked on the top of the liquidising head (anticlockwise direction )

- If the direction of rotation is reversed, change over the two phase wires on the plug.

b) *Three phase motor - single voltage - 400 V or 230 V - 2 speed:*

- Cannot be switched over.



The machine must be earthed with a green / yellow wire.

To PAT test the Electrolux Range of Food Preparation Equipment, the PCB board needs to be disconnected before any test is done. This is due to the fact that the boards are fitted with a grounding diode that can give incorrect result during such a test. Also on a standard appliance a flash test of 25 amps and up to 3000v is used but, as you would expect, to use this on equipment, which has a printed circuit, board would be quite destructive to that board. We would recommend the use of a PAT tester approved for computer systems which use a lower rate of amps.

The appliance is perfectly safe and is CE certificated. There are two ways to get overcome this problem.

- Disconnect the board as instructed and test using test for PC's,
- Or install the mixer on a fused spur (no plug) as this takes it away from being a portable appliance and the PAT test is then not needed.



ATTENTION!!

Clean the machine properly prior to its first use

Never put a hand in the ejection area while the machine is in operation; risk of injury. It is strictly forbidden to put the safety systems out of action or modify them: Risk of permanent injury!!!!

Check that the safety devices operate correctly each time before using (see paragraph on «safety system adjustments»). Never put a hand, a hard or frozen object in the appliance

For health and safety reasons, always use a washable or disposable strong head covering that covers the hair completely.




Any other use than that described in this manual will not be considered normal by the manufacturer.

3.1 OPERATION, SAFETY

- The safety of the user is ensured by:
 - The motor stopping and jog operation when the body is angled.
 - The motor is stopped and started in pulse mode when the body is slanted. The working area lies between 300mm and 900mm relative to the floor.
 - The START button needing to be pressed after stoppage ("no voltage" release).
 - The motor being protected against voltage surges by means of a thermal relay.
 - Respecting the instructions of this manual for the use, cleaning and maintenance of the machine.

• Electrical control housing, depending on models:

- 1) Single speed  3.1a
- 2) Two speed  3.1b

- A** START push button (black)
- B** STOP push button (red)
- C** Lifting handles
- D** Mains switch
- E** Low speed V1 push button
- F** High speed V2 push button

- The turbo-liquidiser operates continuously if the body is horizontal, held by the pin and the mains switch **D** is in the START position.

a) Continuous operation:

- Press the black button **A**, then the low speed **E** or high speed **F** buttons (two speed model).

b) Jog operation (body angled):

- Simultaneously press the black button **A** and either the **E** or the **F** button (two speed model).



Note: The turbo-liquidiser only operates continuously if the user presses the START A, E and F buttons at the same time (two speed model).



c) Stopping:

- Press the red button **B**.

3.2 DIFFERENT POSITIONS 3.2a-b-c

• **This turbo-liquidiser has two stable positions (attached by the pin F), as the intermediate positions are unstable:**

a) Stable position, body horizontal, continuous OPERATION:


- Adjustable height (1), approximately 175 mm, to adapt to different types of recipients. The protective ring on the liquidising head must operate at a distance of between 50 mm and 150 mm from the bottom. Turn the handle **I** in a clockwise direction  to raise it and in an anti-clockwise direction  to lower it.
- Horizontal movement (2), lock in position using the knob **G**.

b) Stable position, body angled for storage:

- Remove the pin **F**.
- Pull the body towards the handles.

- Raise the body and insert the pin **F** through the body to position 3.

c) Unstable positions, body angled, without the pin F, jog OPERATION.


- Operator moves the liquidising head in a sweeping movement in the recipient in order to obtain a consistent mixture.
- Setting the intermediate position (see  § 3.2 a).

Remarks:

- In the work position, immobilise the turbo liquidiser by locking the two rear castors.
- Use a container which is suitable for the product and quantity to be processed so that the head is completely immersed.

3.3 MICRO LIQUIDISER OPTION

- Two micro liquidisers are used at the end of the preparation cycle and are attached separately to the liquidising head.

1) The "kitchen" micro liquidiser for fine liquidising of stringy products (see  §3.4.2).

2) The special "fish soup" micro liquidiser (see  §3.4.3).

• Fitting: 3.3

- Stop and place the turbo-liquidiser in a stable position (see § 3.2b).
- Unplug the machine.


- Unscrew the captive wing nut **A** as far as possible.
- Place the drive hub **B** on the hexagonal shaft of the machine rotor then turn it until the 3 lugs **C** are seated in the cavities in the liquidising head.
- Tighten the wing nut **A** firmly.




- Do not operate the micro liquidiser if its head is not immersed.
- Only use the micro liquidiser at low speed (2 speed model).
- The micro liquidiser must be removed after use.

3.4 SOME APPLICATIONS

1) Without the micro liquidiser:

- *Soups and liquid doughs and pastries (pancakes):*
 - Always start and stop the turbo liquidiser with its head immersed so as to avoid splashes.
 - As soon as the machine is running, the head is drawn to the bottom of the container and creates a whirlpool.
 - Position the head close to the side wall of the container to break up the whirlpool and lock in position with the lever (see  §3.2.a-c).

• *Puréed potatoes:*

- Liquidise the potatoes as soon as they are cooked. Do not leave them to stand in the water they cooked in.
- Add butter, boiling milk and salt to taste.
- Start at the bottom then "sweep around" the entire container, especially close to the sides, until a fine, consistent purée is obtained (see  §3.2.c).



Note: With a 2 speed turbo liquidiser, start in low speed and finish in high speed, to obtain the consistency desired.

2) With the kitchen micro liquidiser:



Use the micro liquidiser at the end of the preparation to make a finer mixture.


• *Vegetable soups with leeks:*

• *Cream of spinach:*

- Drain off the water used for cooking.
- Add the Bechamel sauce until the desired consistency is obtained.

• *Fruit compotes and preparing sorbets and jams:*

• *Granulated purées and mashes:*

- Add the granules progressively into the whirlpool and mix without the turbo liquidiser.
- When mixing is complete, fit the micro liquidiser to make the purée "fluffy" (see  §3.3).

3) With the special "fish soup" micro liquidiser:

- Used for making fish soups (liquidising), sauce stocks and fumet sauces for the food industry.

4) Other preparations: ASK US FOR DETAILS.

Cleaning, hygiene and storage



ATTENTION!!

Before dismantling any part, disconnect the appliance from the power supply.

Before using any cleaning product, be sure to read the instruction and safety instructions accompanying the product and use appropriate protective equipment.

Do not clean the machine with a pressure cleaner.

4.1 IN BETWEEN USE

- Immerse the head in a container filled with water and run it for a few seconds.
- If necessary, finish off the cleaning using a sponge or a brush, after unplugging the machine.

4.2 AFTER USE

- Immerse the head in a container filled with water and detergent - disinfectant, run for a few seconds then rinse.
- Unplug the machine to finish off the cleaning using a sponge or a brush.
- If necessary, clean the outside of the machine with a damp sponge and detergent - disinfectant, rinse and dry.
- Remove the micro liquidisers and clean them separately under running water or in a dishwasher.



Note:

- *Do not use abrasive detergents, which could scratch the surfaces.*
- *Avoid aiming the jet of water at the ventilation holes of the electrical housing and the trolley.*




Do not clean the machine with a pressure cleaner.

• **Periodically:** (at least once a month).

- Remove dust from the ventilation holes and the base of the electrical housing if necessary.

4.3 STORAGE 3.2c

- Unplug the machine.
- Place the body in a stable position, body angled and lock it with the pin (see  § 3.2b).
- Wind the electrical cable around the handle.

Fault finding

5.1 THE MACHINE WILL NOT START

- Check that:
 - The machine is plugged in.
 - The electrical power supply to the socket is correct.

• If the machine stops during a cycle:



- The thermal overload has been triggered. Wait for a few moments before restarting the machine.



If the problem persists, contact the service department of your local dealer.

5.2 ABNORMAL NOISE OR OPERATION

• Noise

- Foreign body in the product. stop the machine.
- Condition of the machine (see  §6.1) or micro liquidiser incorrectly attached.
- Slipping of the belt causing it to wear quickly (grating noise, see  §6.2 for instructions on tensioning and/or changing it).

• Lack of power

- Motor operating on two phases (see electrical wiring diagram).
- Incorrect supply voltage causing overheating of motor.
- Too great of a load, intensive use.



If the problem persists, contact the service department of your local dealer.

Maintenance



ATTENTION!!

Unplug the machine before carrying out any operation.


Maintenance may only be carried out by a qualified, trained and authorised person.

6.1 MECHANISM

- It is recommended that the following be checked at least once a year:
 - The tension and condition of the belt.
 - The play in the rotor shaft, which indicates the condition of the bearings.

- The conditions of the seals at the base of the immersion tube.
- The cleanliness inside the body and housing, if necessary, remove any dust with a vacuum cleaner.
- The condition of the electrical connections (risk of rusting).
- The wear of the friction washer of the micro liquidiser. Tighten the nuts to reduce the play or change the washer.

6.2 CHANGING - TENSIONING THE BELT 6.2

- The turbo-liquidiser must be in a horizontal position, at the correct height in order to have access to the inside of the body, with the trolley stand brake on (see  § 3.2).
 - Remove the attachment screws from the top cover.
 - Check the tension and condition of the belt.
- **If the belt needs tensioning or changing:**
 - Unscrew (by 1 turn) the 4 motor attachment screws **A** so that it may be slid (13 mm Allen key).
 - If the belt is worn, fit a new one and check that it is correctly

seated in the pulley grooves.

- Tension the belt with a lever, using the drive pulley and the motor passage hole as leverage points. The motor is moved approximately 4 mm.
- Tighten the four attachment screws **A** in position.
- Check that the tension is correct by pressing the belt between thumb and index finger.
- Remove any belt debris from inside the body.
- Fit the top cover.

6.3 CHECKING AND ADJUSTMENT OF THE SAFETY DEVICE

- A regular check must be made that the safety device is working correctly.
 - The motor should stop if the pin holding the body in the horizontal position is removed.

- If this function does not operate correctly:
 - Do not use the machine.
 - Have it adjusted by the maintenance department of your dealer.

6.4 ELECTRICAL COMPONENTS



- Check the condition of the cable and electrical components regularly.

• Identification of the colours of the wires:

- Phases : **L1 /L2 / L3**
- Earth : **B/C** green and yellow
- Power circuit : black
- Control circuit : red
- **A**:red - **B**:green - **C**:yellow - **D**:white - **E**:blue - **F**:black
- **G**:orange - **H**:violet - **I**:grey - **J**:brown - **K**:pink.

• Identification of the components:

- M3** : Three phase motor
- KM1/KM2/KM3** : Contactor

CA : Additional contact

RT1/RT2 :Thermal relay (current range marked on motor plate)

Q : Mains switch

O : Stop button

I : Start button

V1 : Low speed push button

V2 : High speed push button

F : Quick blow fuse 5 x 20-315 mA

B : Terminal block

S1 : Body safety device

6.5 ADDRESS FOR SERVICE REQUIREMENTS

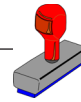
We advise you to contact the dealer who sold you the machine.



For any information or orders for spare parts, specify the type of machine, its serial number and the electrical characteristics.

The manufacturer reserves the right to modify and make improvements to the products without giving prior warning.

Dealer's stamp




Date of purchase

Conformity with regulations

The machine has been designed and manufactured in conformity with:

- Machine directive 2006/42 EEC,
- The CEM directive 2014 / 30 EU
- 2011/65/EU Directive on the restriction of the use of certain hazardous substances

2002/96/CEE « WEEE »

The symbol «  » on the product indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact the sales agent or dealer for your product, your after-sales service, or the appropriate waste disposal service.

2006/12/CEE "Waste"

The machine is designed so that it does not contribute, or as little as possible, to increasing the quantity or harmfulness of the waste and the risks of pollution.

Make sure to observe the recycling conditions.

94/62/CEE "Packaging and packaging waste"

The packaging for the machine is designed so that it does not contribute, or as little as possible to increasing the quantity or harmfulness of the waste and the risks of pollution.

Make sure to eliminate the various parts of the packaging in appropriate recycling centres.

European standards:

- EN 1672-2 standard: machines for use with foodstuffs. Hygiene related directives.
- EN 12854-2010 - Motorised vertical sieves and liquidisers-mounted on trolleys.

This conformity is certified by:

- The CE conformity mark, attached to the machine
- The corresponding CE declaration of conformity, associated with the warranty.
- This instruction manual, which must be given to the operator.

Acoustic characteristics:

- The level of acoustic pressure measured as per the EN ISO 3744 and EN ISO 11201 test code is 77 dBA under the conditions specified in standard EN 12854:2010 (tool immersed in approximately 100 litres water). Protection indices as per the EN 60529-2000 standard:

- IP55 electrical controls
- IP34 overall machine

• Integrated safety devices

- The machine has been designed and manufactured in compliance with the relevant standards and regulations, mentioned above.
- Before using the machine, the operator must be trained to use the machine and informed of any possible residual risks (personnel work station training obligation).

Food hygiene:

The machine is made from materials that conform to the following regulations and standards:

- Directive 1935/2004/EEC: materials and objects in contact with foodstuffs,

The surfaces of the food area are smooth and easy to clean. Use detergents that are approved for food hygiene and respect the instructions for their use.

Vibration

The maximum level of vibration measured on the handle during use is: <2.5 m/s².