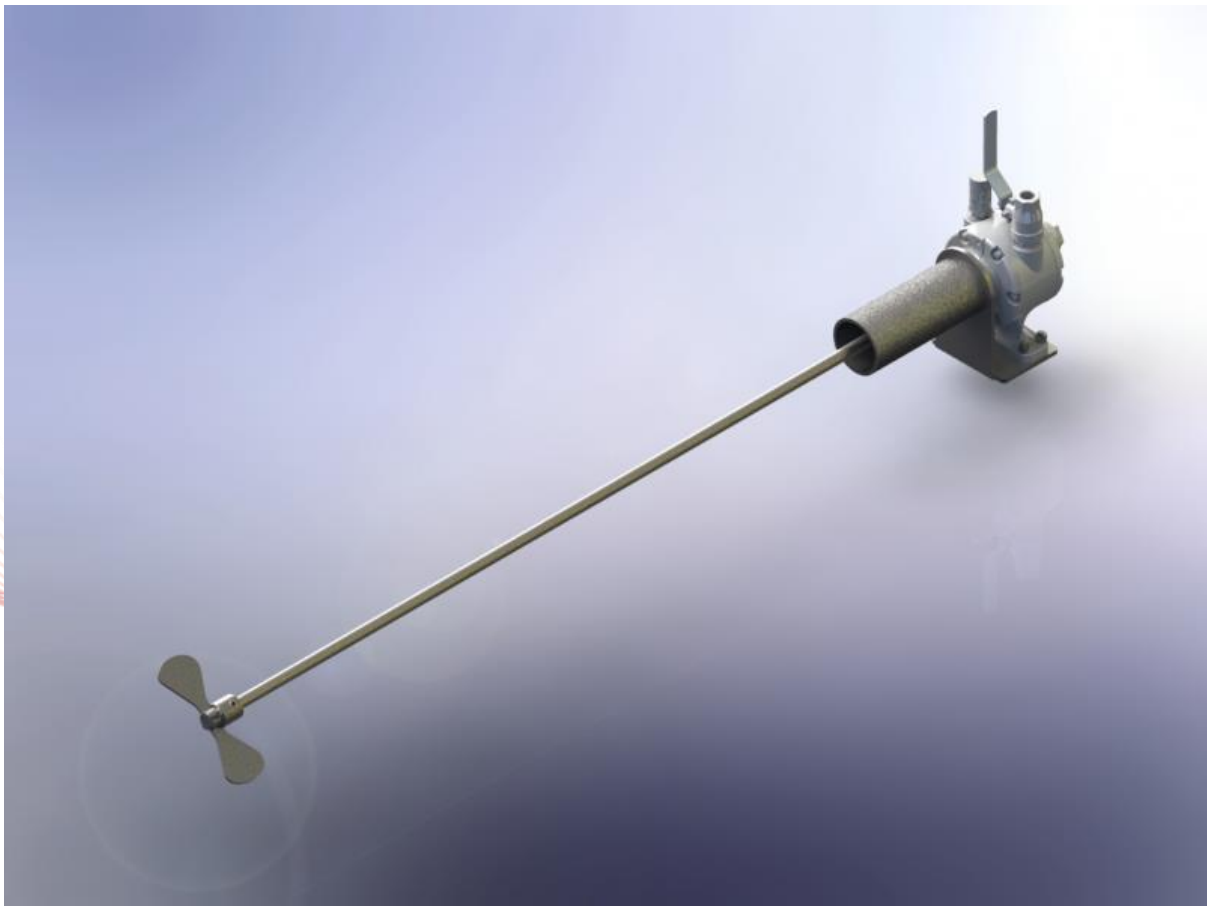




Rummager Series 210 1000L IBC BSP Mount Air Mixer Operation Manual

OPERATION MANUAL



SERIES 210 RUMMAGER IBC BSP MOUNT AIR MIXER

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Rummager Series 210 1000L IBC BSP Mount Air Mixer

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The information herein is correct at the time of issue but may be subject to change without prior notice.

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1. Safety

All warnings in the manual are summarized in this section.

Pay special attention to the instructions below so that severe personal injury and/or damage to the mixer are avoided.

1.1. Important Information:

Warning

Indicates that special procedures must be followed to avoid serious personal injury.

Caution

Indicates that special procedures must be followed to avoid damage to the mixer.

Note

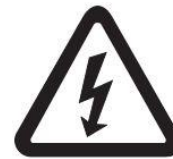
Indicates important information to simplify or clarify procedures.

1.2. Warning Symbols:

Hazard to people in general.



Electrical Hazard.



Risk of Injury Caused by the Agitator.



Danger from Suspended Loads.



Risk to the Agitator and its Operation.



General Obligation.





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Operation Manual

1. Safety

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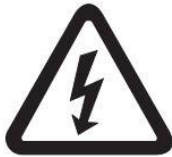
1.3. General Safety Instructions



Read the instructions in this manual before installing the agitator and putting it into service.

Installation and use of the agitator must always comply with applicable occupational health and safety legislation.

Before starting the agitator, check that it is properly anchored and the shaft in perfect alignment. Poor alignment and/or excessive stress on the coupling may result in serious mechanical problems to the agitator.



Any electrical work must be carried out by qualified personnel and conform to relevant standards.

Control the characteristics of the motor and its control panel, especially in fire-risk or explosion risk zones. The user company's safety manager should define risk zones (zone 1-2-3).

During cleaning, do not wet the motor directly.

Do not dismantle the agitator without first isolating the electric control panel or air supply.

Remove fuses and disconnect the motor's power supply cable.

Tag off the unit in accordance with O.H.& S. requirements.

Unit may generate static electricity. Use grounding/earthing strap to eliminate sparking.



The agitator has rotating parts. Do not put your hands or fingers into a working Agitator or rotating shaft ends.

Do not touch the parts of the agitator in contact with the liquid while it is working.

If the agitator is working with hot products (temperature over 50°C), there is a risk of burns. In this case, in order of priority, use collective protection measures (distancing, protective screen, heat-proofing) or, if this is not possible, individual protection (gloves) should be provided.



Use slings/lifting gear for repetitive installation to avoid strain injury.



Remove all tools used in the installation before starting the agitator.

The agitator cannot work without liquid. Standard agitators are not designed to work during tank filling or emptying.



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1. Safety

All warnings in the manual are summarized in this section.

Pay special attention to the instructions below so that severe personal injury and/or damage to the mixer are avoided.

1.3. General Safety Instructions:



Compressed air is dangerous. Do not use compressed air for any other purpose than to drive the air motor.

Do not exceed the agitators operating limits. Do not change the operating parameters for which the agitator has been designed without the prior written authorization of TERALBA INDUSTRIES.

Agitators and their installations may cause a noise level of more than 85 dB (A) in unfavourable working conditions. In this case, operators should wear noise protection devices.

1.4. Instruction Manual:

The information published in the operation manual is based on up-to-date information. We reserve the right to alter the design and/or manufacturing process for our products as we think fit, without this implying any obligation to adapt any previously supplied product. The technical and technological information provided in this operation manual, together with the graphics and technical specifications we provide, remain our property and must not be used (except in order to put this installation into service), copied, photocopied, delivered or communicated to third parties without our prior written authorization. TERALBA INDUSTRIES reserves the right to modify this operation manual without prior notification and such modifications as issued will be having application from date of issue.



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2. Receipt & Storage

The operation manual is part of receiving the mixer, always read instructions before use.

2.1. On Receipt:

When you receive the agitator, check the packing and contents to ensure that it agrees with the delivery note. TERALBA INDUSTRIES packages its agitators fully assembled. Make sure the agitator has not suffered any damage; if it is not in good condition or any parts are missing, the recipient should submit a report as soon as possible.

2.2. Storage:

If the agitator is not installed immediately, it must be stored in a suitable place away from extremes in temperature or moisture. Teralba Industries does not accept responsibility for condition of motor bearings if storage time is excessive (more than 12 months). The shaft must not bear any weight at all as this can damage/alter balance & alignment. Please see the storage section further discussed in this manual.



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3. Identification, Description and Use:

Identification shows proof of authenticity, serial number, mixer model, and company information.

3.1. Identification:

The agitator has an identification plate fastened to the RHS of the Air Motor. This plate shows the type of agitator and its serial number. See figure 3.1



Fig. 3.1

3.2. Description:

Rummager Series 210 Mixer is a device designed to mix liquids in pallet tank containers (IBC). The folding 'Superflo'® impellor generates axial fluid currents directing liquids to the base of the container and resulting in an even turn-over of the tank contents.

3.3. Use:

The Mixquip Rummager Series 210 Mixer can be used with any water based or water-like liquids. Viscosity of up 1000cps can be mixed and sediment can be resuspended.

3.4. Field of Application:



Mixquip Rummager Series 210 Mixer can be used for waste-water processing, fertilizer mixing, solvent blending, water based product mixing and many other applications.



Using the agitator in a system or environment other than that for which it was designed, may represent a hazard to the operator and material. In case of doubt, consult TERALBA INDUSTRIES before use.



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4. Installation and Assembly:

Correct installation of Rummager Series 210 Mixer is crucial to both user safety and Mixer operation.

4.1. Unpacking:

TERALBA INDUSTRIES packages its agitators fully assembled. Make sure the agitator has not suffered any damage; if it is not in good condition or any parts are missing, the recipient should submit a report as soon as possible.

When the mixer is removed from its carton ensure no load is placed onto the shaft, this could cause misalignment and balance issues.

4.2. Installation:

After having received and unpacked the mixer:

- Make sure to have the IBC with the main lid installed firmly.
- Make sure the BSP bung is removed from the main cap.
- Carefully lower the Mixquip Rummager Series 210 Mixer into the $\varnothing 50$ hole, supporting the shaft until the Stainless Steel mounting tube touches the hole in the main cap.
- Screw the Mixquip Rummager Series 210 Mixer into the main cap ensuring at least 12 13mm (1/2") thread engagement for adequate mixing action support.



Note: Mixquip does not accept responsibility for the structural adequacy of pallet tanks to be fitted with PT Rummagers.

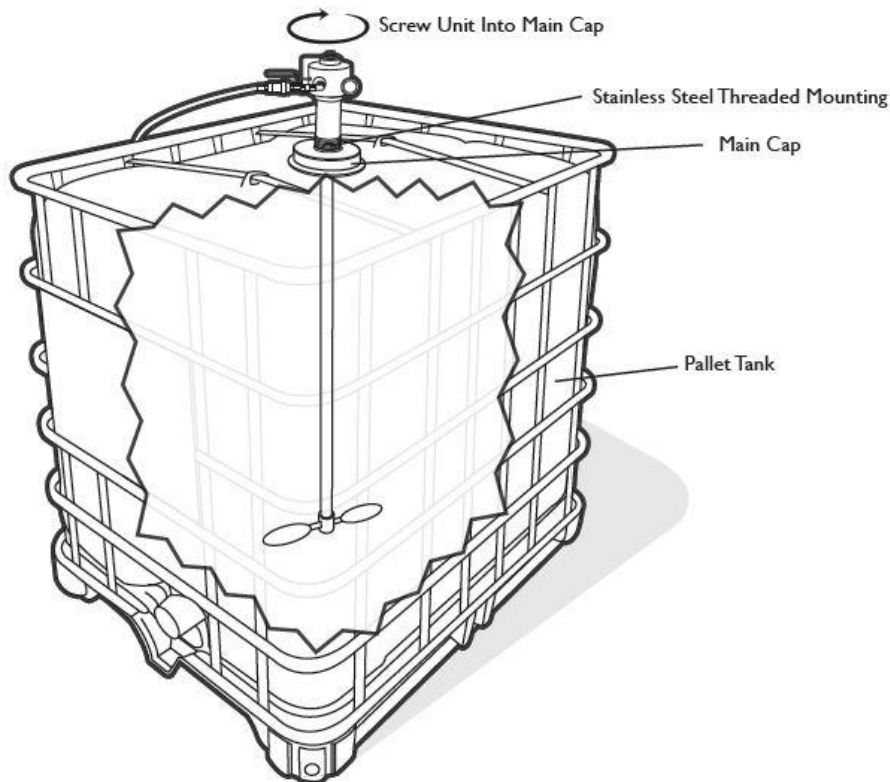


Fig. 4.2



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5. Starting-up and Operation:

*The Rummager Series 210 Mixer should only be operated when mounted in a tank.
Never place objects or tools inside the tank when operating the mixer.*

5.1. Before Operation:

Check that all fitting/bolts are tight and, if applicable, the electricity supply (voltage and direction of rotation) agrees with the specifications on the motor's identification plate.

Liquid:

- Check the level of liquid in the tank.
- Do not operate if liquid level is at or below impellor.

Air Supply check:

- Pressure.
- Lubrication.
- Consult air motor special instruction booklet.

5.2. Special Note:



Mixing flammable liquids may generate static electricity in some circumstances. As with any air operated equipment, ensure that earthing straps are utilised to prevent static electricity accumulating to a point where it may generate a spark. If in doubt, obtain specific advice for your application from a specialist.

5.3. Operation:



Connect air supply hose and turn air supply valve on. Unit will rotate at speeds according to air supplied.



Vary the motor speed so that adequate mixing is attained. **DO NOT** operate at excessive speed.



Rummager Series 210 1000L IBC BSP Mount Air Mixer Operation Manual

5. Starting-up and Operation:

*The Rummager Series 210 Mixer should only be operated when mounted in a tank.
Never place objects or tools inside the tank when operating the mixer.*

5.4. Special Precaution:



Do not operate agitator unless fitted to a pallet tank container.



Failure to comply to this requirement may cause serious bodily harm to user or bystanders due to accidental contact with rotating impellor blades.



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6. Maintenance & Storage:

It is critical that the drive unit is correctly isolated and dismantled before performing any maintenance.



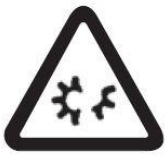
Maintenance work can only be carried out by qualified, trained personnel, equipped with the necessary means to carry out such work.
Before beginning maintenance work, make sure the air motor is disconnected from air supply.

6.1. Maintenance:

In general, the Rummager Series 210 Agitator requires minimal maintenance, but the following points must be taken into account:

- Check fasteners including mounting bolts regularly.
- Inspect the agitator regularly.
- Keep the agitator clean.
- Check the condition of the motor.
- Check for any excessive vibration which may indicate mechanical problems.
- **Do not operate units which vibrate excessively as this vibration may lead to other consequential damage.**
- Keep records of maintenance activity.

Maintenance of the motor should be carried out following the manufacturer's instructions included with these important instructions.



6.2. Spare Parts:

To order spare parts, you need to specify the type and serial number given on the agitator's identification plate, as well as the position and description of the part given in the Nomenclature in Chapter 9 - Technical Specifications.



Rummager Series 210 1000L IBC BSP Mount Air Mixer Operation Manual

6. Maintenance & Storage:

It is critical that the drive unit is correctly isolated and dismantled before performing any maintenance.

6.3. Storage:

If the agitator needs to be taken out of service for a long time, clean and treat its parts with mineral water. When stored, the agitator must be upright, supported in such a way to avoid damage to shaft/impellor.

We recommend use of Mixquip RUMMAGER STORAGE TUBE.



Fig. 4.2



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7. Troubleshooting:

If a fault occurs, please begin by reviewing this operation manual from the beginning to ensure something simple has not been missed. If a fault remains, do not hesitate to contact Teralba Industries for further support.

7.1. Fault, Cause and Remedy Table:

Fault	Possible Cause	Remedy
Air Motor Not Operating	Low Air Supply.	Check Air Supply with Flow & Pressure Gauges.
Air Motor Running Slow	A. Viscous/Different Product. B. Fouled Impellor.	A. Refer to design parameters. B. Electrically Isolate Unit. Remove debris – observe confined entry precautions.
Unit Vibrating Excessively	A. Bolts & Fasteners not Tight. B. Damaged shaft/impellor.	A. Tighten Bolts/Fasteners. B. Remove unit fom Tank. Asses shaft alignment – contact Teralba Industries for service/parts.



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8. Disassembly & Assembly:

Both assembly and disassembly of agitators must be carried out by qualified personnel, using only suitable tools and adequate working methods.

8.1. Compressed Air Safety:



Make sure the ball valve is in the closed position and the Air Line is disconnected. Tag/Lock-out Air Supply to ensure the unit remains isolated.

8.2. Disassembly:

When the air supply has been disconnected, work to dismantle the agitator can begin:

- Remove 'Superflo' folding impellor.
- Remove stainless steel support bracket.
- Loosen bolts on shaft coupling.
- Remove shaft.
- Motor servicing - refer to air motor special instructions.

8.3. Assembly:

Ensure the air supply has been disconnected, work to assemble the agitator can begin:

- Fit shaft - tighten coupling bolts evenly.
- Check shaft is free running and straight.
- Fit stainless steel support housing.
- Fit 'Superflo' folding impellor.
- Refit unit to pallet tank.
- Check for excessive vibration in operation.



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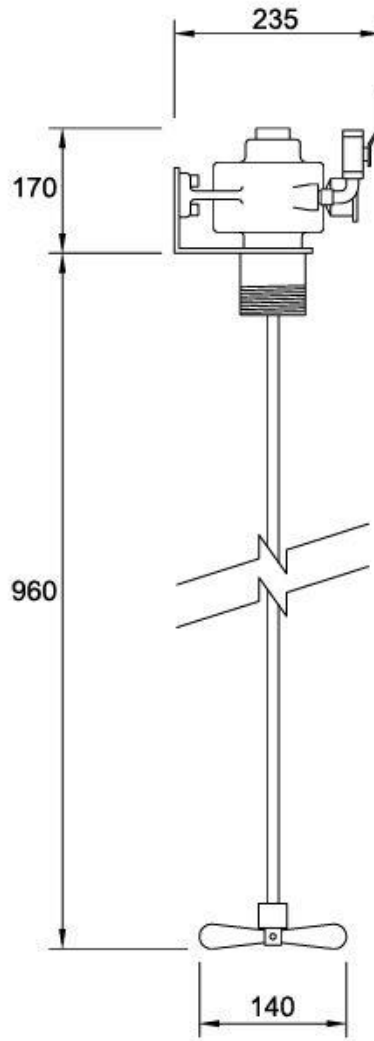
9. Technical Specifications:

Teralba Industries Mixers are both Specialised and Practical Industrial Products, Technical Specifications provide additional information on our Products.

9.1. Technical Data:

Weight:	6.5kg
RPM:	300-3000
Power:	0.2-1.4kW
Air Consumption:	10-35L/sec
Air Pressure:	140-770kPa
Sound Level:	87 dB(A) Max.

9.2. Dimensions:





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10. Appendix:

See attached documents for reference to OEM components.