



# Series 65 – Tri-Clamp Mixer Operation Manual

# OPERATION MANUAL



## MIXQUIP SERIES 65 TRI-COVER MOUNT AGITATOR

WWW.MIXQUIP.COM  
National Call **1300 20 70 20**  
TIOM – 65  
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# Series 65 – Tri-Clamp Mixer Operation Manual

## Table of Contents

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

1. Safety Instructions:
  - 1.1. Important Information
  - 1.2. Warning Symbols
  - 1.3. General Safety Instructions
  - 1.4. Operation Manual
  
2. Receipt & Storage of Mixer:
  - 2.1. On Receipt
  - 2.2. Storage
  
3. Identification, Description and Use:
  - 3.1. Identification
  - 3.2. Description
  - 3.3. Use
  - 3.4. Field of Application
  
4. Installation & Assembly:
  - 4.1. Unpacking
  - 4.2. Installation
  
5. Starting Up & Operation:
  - 5.1. Before Operation
  - 5.2. Special Note
  - 5.3. Operation
  - 5.4. Special Precaution
  
6. Maintenance & Storage:
  - 6.1. Maintenance
  - 6.2. Spare Parts
  - 6.3. Storage
  
7. Troubleshooting:
  - 7.1. Fault, Cause and Remedy Table
  
8. Disassembly & Assembly:
  - 8.1. Compressed Air Safety
  - 8.2. Disassembly
  - 8.3. Assembly



# Series 65 – Tri-Clamp Mixer Operation Manual

## Table of Contents

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

### 9. Technical Specifications.

- 9.1. Technical Data
- 9.2. Dimensions

### 10. Appendix – Motor Special Instructions

- 10.1. Motor Product Manuals



# Series 65 – Tri-Clamp Mixer Operation Manual

## 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.



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



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.



# Series 65 – Tri-Clamp Mixer Operation Manual

## 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.*

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### 1.3. General Safety Instructions:

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

Mixers 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.

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### 1.4. Operation Manual:

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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.



# Series 65 – Tri-Clamp Mixer Operation Manual

## 2. Receipt & Storage

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

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### 2.1. On Receipt:

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When you receive the agitator, check the packing and contents to ensure that it agrees with the delivery note. TERALBA INDUSTRIES package 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.

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### 2.2. Storage:

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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.

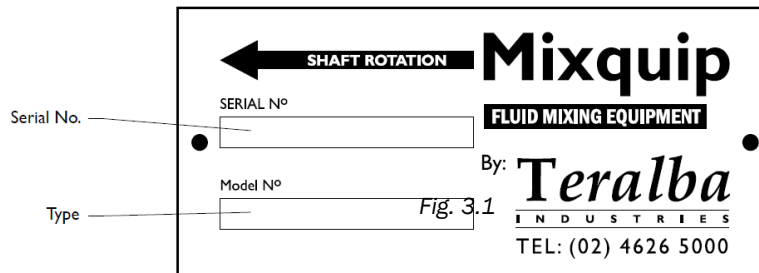
# Series 65 – Tri-Clamp Mixer Operation Manual

## 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 Geared Motor. This plate shows the type of agitator and its serial number. See figure 3.1



### 3.2. Description:

Mixquip Series 65 Clamp on Agitator is designed to mix liquids with axial impellers to generate axial fluid currents distributing liquids throughout resulting in even turn-over of the tank contents.

### 3.3. Use:

The Mixquip Series 65 Mixer is a custom designed unit to suit applications specified by end user and is intended for this use only when supplied.

### 3.4. Field of Application:



Mixquip Series 65 Mixer can be used for hygienic mixing processes, solvent blending, water based product mixing and many other applications. The product can be mixed and sediment can be brought into suspension.



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.





# Series 65 – Tri-Clamp Mixer Operation Manual

## 4. Installation and Assembly:

*Correct installation of Series 65 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.

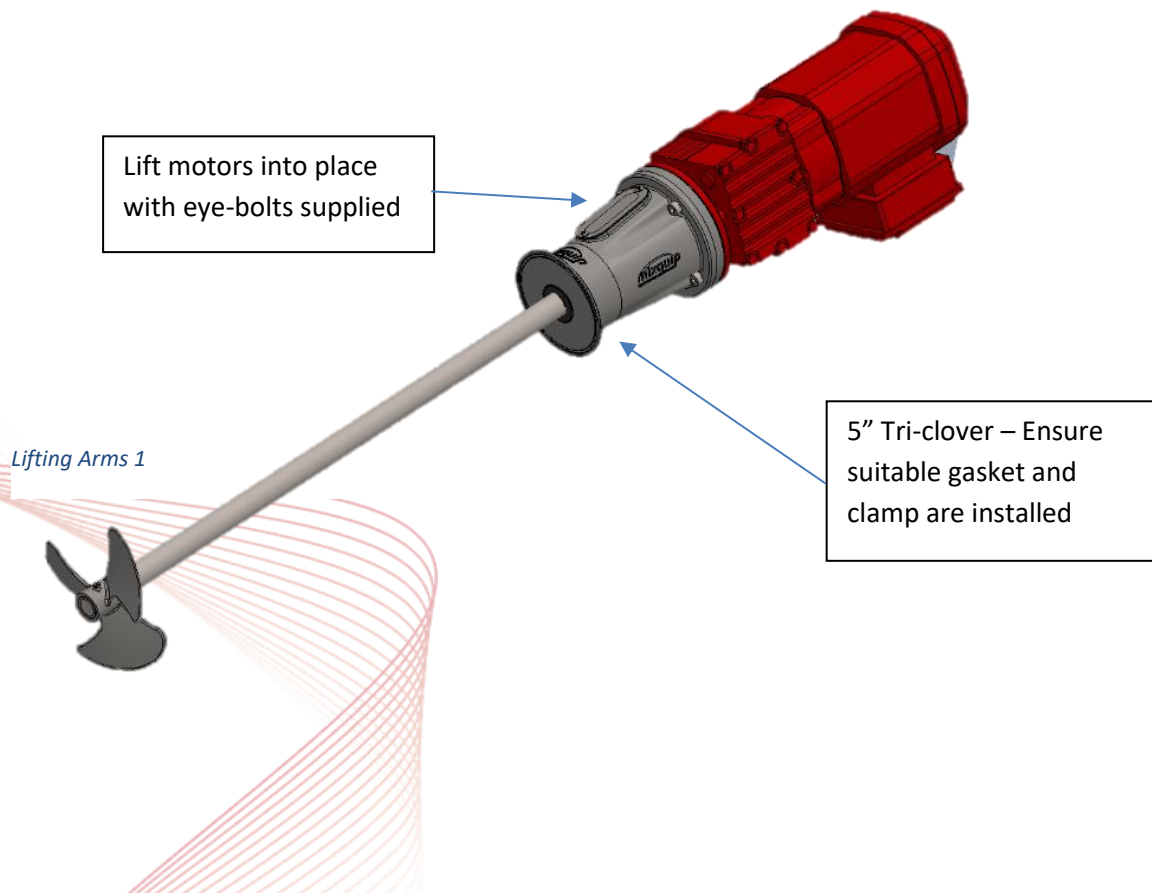
When the mixer is removed from its carton ensure no load is placed onto the shaft, this could cause misalignment and balance issues.

### 4.2. Installation:

After having received and unpacked the mixer:

- Recommended to use lifting aids when lifting agitator
- Carefully lower the Mixquip Series 65 Mixer onto Suitable 5" tri-clover /
- Check that any tank/vessel to which mixquip 65 mixer is to be fitted is suitably reinforced to withstand the weight and agitator force of the mixer.

**Note:** Mixquip does not accept responsibility for the structural integrity of supplier platform/vessel





## Series 65 – Tri-Clamp Mixer Operation Manual

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### 4.3. Electrical installation:

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All electric work should be as per Australian Standard AS/NZS 3000 or other relevant country Standards/Codes. Before connecting the electric motor to the power supply, check local regulations and the corresponding codes and standards on electrical safety. This is especially important with regard to the mixer's control device. Consult the manufacturer's instructions before connecting it to the power supply.

Electrical connection of the motors must be carried out by qualified personnel. The motor must be protected against overloads and short circuits by protective devices. The mixer cannot be used in fire or explosion hazard zones, unless this has been specified in the order.

Unless otherwise specified in the order, the Mixquip mixer will be ready to operate with a 400V 50Hz power supply.



# Series 65 – Tri-Clamp Mixer

## Operation Manual

### 5. Starting-up and Operation:

*The Series 65 Mixer should only be operated when mounted and secured in designated platform  
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.
- Lubrication.
- Consult 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:



Once motors are wired up by a licenced electrician, unit will rotate at speeds per geared ratio supplied. It is recommended to start gate mixer first and secondly starting internal mixer. Slow start is recommended using a Variable speed drive.



Vary the motor speed so that adequate mixing is attained, by the use of a variable speed drive. It is not recommended for continuous operation of less than 1/5<sup>th</sup> the speed of output with out the addition of a powered fan on motor to avoid burning out.



# Series 65 – Tri-Clamp Mixer Operation Manual

## 5. Starting-up and Operation:

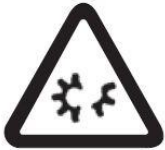
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### 5.4. Special Precaution:

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Do not operate agitator unless fitted & secured.



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



# Series 65 – Tri-Clamp Mixer

## Operation Manual

### 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 motors are disconnected from power supply.

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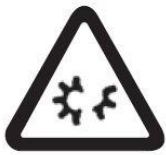
#### 6.1. Maintenance:

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In general, the Mixquip Series 65 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.



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#### 6.2. Spare Parts:

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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.



# Series 65 – Tri-Clamp 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.

## 7. Troubleshooting:

*If a fault occurs, please begin by reviewing this operation manual from the beginning to ensure something 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:

<b>Fault</b>	<b>Possible Cause</b>	<b>Remedy</b>
<b>Motor Not operating</b>	Faulty Connection	Have certified electrician inspect connection.
<b>Motor Over drawing</b>	A. Viscous/Different Product. B. Fouled Impellor.	A. Refer to design parameters. B. Electrically Isolate Unit. Remove debris – observe confined entry precautions.
<b>Unit Vibrating Excessively</b>	A. Bolts & Fasteners not Tight. B. Damaged shaft/impellor. C. Damaged Bearing	A. Tighten Bolts/Fasteners. B. Remove unit fom Tank. Asses shaft alignment – contact Teralba Industries for service/parts. C. Inspect foot bearing for damage



# Series 65 – Tri-Clamp Mixer Operation Manual

## 8. Disassembly & Assembly:

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

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### 8.1. Electrical Safety:

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All electric work should be as per Australian Standard AS/NZS 3000 or other relevant country Standards/Codes. Before connecting the electric motor to the power supply, check local regulations and the corresponding codes and standards on electrical safety. This is especially important with regard to the mixer's control device. Consult the manufacturer's instructions before connecting it to the power supply.

Electrical connection of the motors must be carried out by qualified personnel. The motor must be protected against overloads and short circuits by protective devices. The mixer cannot be used in fire or explosion hazard zones, unless this has been specified in the order.

Unless otherwise specified in the order, the Mixquip mixer will be ready to operate with a 415V 50Hz power supply.

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### 8.2. Lip seal Replacement:

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- Remove propeller by loosening grub screw.
- Existing seals will then slide off and be removed.
- Slide new lip seal into place, the fit should be tight.
- Reverse steps to re-install propellers

# Series 65 – Tri-Clamp Mixer

## Operation Manual

### 8. Technical Specifications:

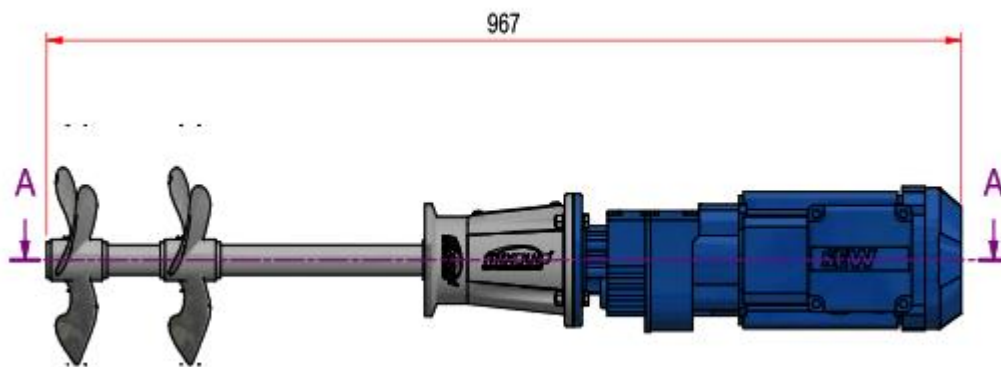
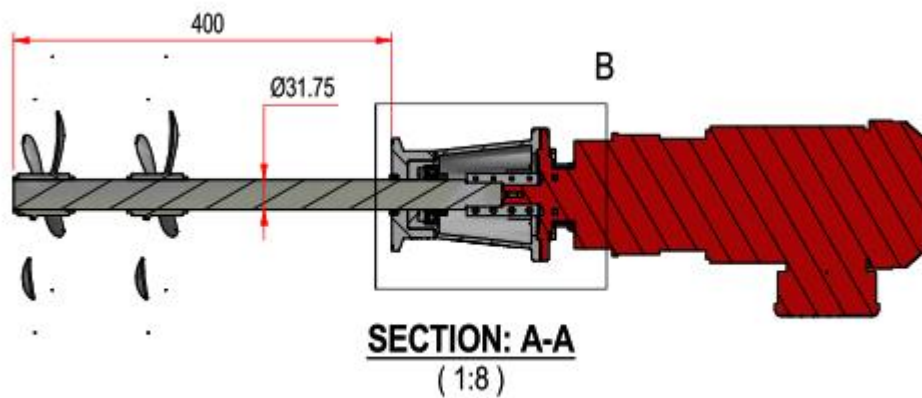
*Teralba Industries Mixers are both Specialised and Practical Industrial Products, Technical Specifications provide additional information on our Products.*

#### 9.1. Technical Data:

Mixquip Series 65 on range is made to specifications please contact Teralba Industries for product specific technical Data

#### 9.2. Dimensions:

Mixquip Series 65 Tri-Clamp range is made to specifications please see details below:



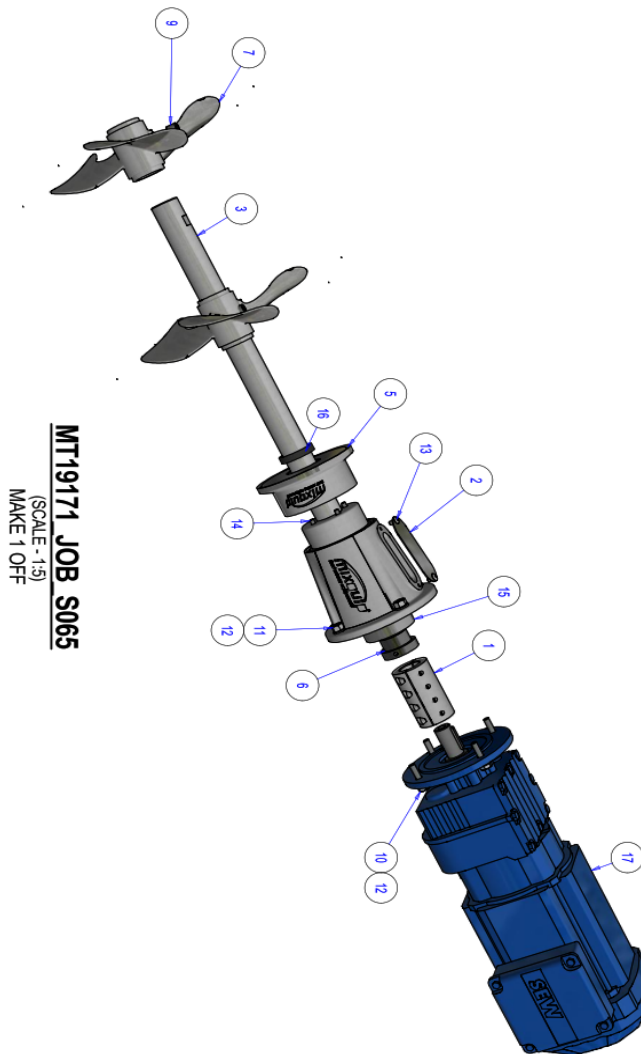


# Series 65 – Tri-Clamp Mixer Operation Manual

## 9.1. Spare Parts

It is Recommended for spare parts to please contact teralba industries with part number as per below:

ITEM	QTY	DRAWING	TITLE	DESCRIPTION	MATERIAL	MASS	ITEM	QTY	DRAWING	TITLE	DESCRIPTION	MATERIAL	MASS
10	4	CONSUMABLE	HEX HEAD BOLT	M8 x 30	SS-304	0.0 kg	1	1	AP227C3	COUPLING / 304	COUPLING 044.4 / MOTOR 020 / SHAFT 025.4	SS-304 (2B)	0.7 kg
11	4	CONSUMABLE	PLAIN NUT	M8	SS-304	0.0 kg	2	1	AP217	INSPECTION HOLE COVER	92 x 39 x 1PL	SS-316	0.0 kg
12	8	CONSUMABLE	PLAIN WASHER	M8	SS-304	0.0 kg	3	1	MT19171-4	AGITATOR SHAFT	Ø31.75 x 517 LING	SS-316	3.2 kg
13	2	CONSUMABLE	SOCKET BUTTON HEAD CAP SCREW	M5 x 8	SS-304	0.0 kg	4	1	MT19171-5	CLAMP ON HOUSING	CAST AND MACHINED	SS-304	2.5 kg
14	4	CONSUMABLE	SOCKET HEAD CAP SCREW	M6 x 12	SS-304	0.0 kg	5	1	MT19171-5	SERIES 65 TRI-CLAMP MOUNT	MACHINED CAST MODEL	SS-304	1.7 kg
15	1	PURCHASE ITEM	ROLLER BEARINGS	SKF 607/2RS1 / OD=62 / ID=35 / W=14	AS 307-350	0.1 kg	6	1	MT19171-6	BEARING BUSH	Ø35 X Ø19.05	SS-304	0.1 kg
16	1	PURCHASE ITEM	SHAFT SEAL	1.58 x 1.14 x 516	RUBBER	0.0 kg	7	2	MT19171-6	SUPERLO (CAST)	PROPELLER 020	SS-316	0.7 kg
17	1	TH0500	MOTOR - RFT19R08M	230 RPM / 0.75W / IP55 / SF 2	ALUMINIUM	18.8 kg	8	2	CONSUMABLE	GRUB SCREW	M6 x 8 LING	SS-316	0.0 kg
							9	2	CONSUMABLE	GRUB SCREW	Ø10 x 12 LING	SS-316	0.0 kg





# Series 65 – Tri-Clamp Mixer Operation Manual

## 10. Appendix:

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*See attached documents for reference to OEM components.*