

# INSTRUCTION MANUAL FOR SINMAG PLANETARY MIXER SM-402.



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# **General Information.**

**This manual is to be considered as an integral part of the machine and must be conserved with the machine throughout its working life.**

*Before carrying out any operation, it is important to read this instruction manual thoroughly, particularly the section concerning risk's*

This manual should be kept so that it is available for consultation at any time and kept so that it is not damaged (ie. Protected from chemicals, humidity, dust, sunray's, etc.)

The manufacturer has the right to modernise production of the instruction manual without any obligation of modernising previous production of this manual.

The manufacturer is not responsible for any malfunctioning of the machine caused by:

- Irrational, improper and erroneous use of the machine
- Contrary use (contrary to the operation as stated in this manual)
- Incorrect installation
- Faulty power supply to the machine
- Lack of maintenance as prescribed by the manufacturer
- Modifications or unauthorized interferences
- Use of spare parts which are not original or specified for this model
- Non-adherence of the instructions contained in this manual

On delivery of the machine and after removing the packaging you should make sure that all the components have been packed. A complete list of items is included in this manual. In case of any doubt you should contact the qualified personnel or the supplier.

## Movement and Transportation:

When lifting the machine a lifting device should always be used. Always lean and move the machine in a vertical position. The machine should never be inclined at an angle greater than 45 degree's. The machine should be completely empty before transporting.



# Components of Mixer:



## Standard components supplied are:

### Main item:

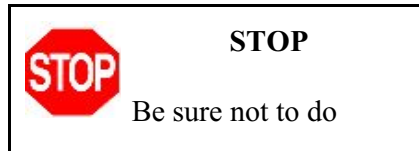
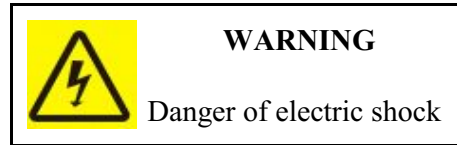
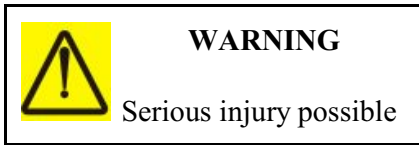
- 1 x SINMAG SM-402 mixer
- 1 x 40lt Stainless steel mixing bowl

### Attachments:

- 1 x Whisk
- 1 x Beater
- 1 x Dough hook

# Safety Precautions:

Before using the Sinmag SM-402 Planetary mixer, read the safety precautions carefully so that you can use the machine properly. These symbols will appear in the manual where precautions are necessary in order to avoid injury.



## Before you start the Mixer:

Before starting, undertake a General Safety check:

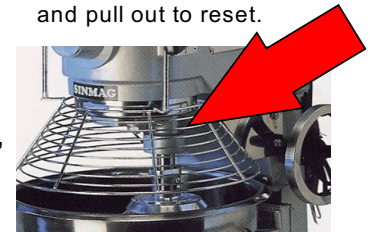
- Ensure the mixer is dry and place in a dry area.
- Ensure if machine is mounted on a raised platform that the platform is of sufficient strength and the mixer is securely fastened to the platform.
- Ensure that the power supply matches rating on the machine.
- Work area should be clean and free from obstructions, e.g. nothing placed on or around the machine, such as scrapers, knives etc.
- Worker not wearing loose fitting clothing and so on.

The machine has the following key safety features:

1. Emergency stop button in the form of a red mushroom safety switch on the side of the machine. See picture 1.
2. The mixer is fitted with a lift up safety guard ( picture 2. )which permits safe operation of the machine. Under no circumstances should this safety system be modified or removed. While the safety guard has been designed to be as safe as possible for the operator to use, **extreme care** should be taken not to place fingers anywhere near the planetary or mixing attachment on the machine while it is in use.
3. The machine also has a safety switch fitted to the handle of the mixer. The handle and bowl has to be raised to engage the electrics of the machine. Picture 3.



Picture 1. Emergency stop button. A red mushroom safety switch. Push in to stop the machine. Twist and pull out to reset.



Picture 2. Safety Guard lifts up over the top of the mixer. Once the guard is in the upright position the mixer will stop.



Picture 3. The handle and bowl of the machine must be raised to engage the electrics of the mixer.

# Hazard Risk Analysis:

Machine in use:

Set up the machine on a flat even surface.



1. All three safety aspects of the machine should be checked for correct operation, including red mushroom switch, slide guard and handle. Picture 1, 2 and 3.



2. Do not place hand into mixing bowl when on the machine. Picture 2.



3. Do not place hand into guarded area when machine is in operation. Picture 2.

DANGER:



4. Do not over-ride the microswitch during cleaning.



5. If machine is placed on a raised platform ie. Table the machine must be secured to the raised platform / table.

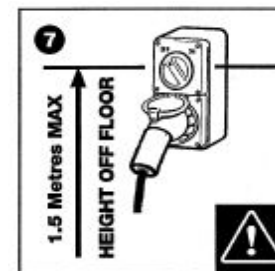
**Microswitch on the guard or the guard itself must never be removed or tampered with in any way.**



6. Cleaning of the machine should only be carried out with a damp cloth. Buckets of water or a hose should not be used.



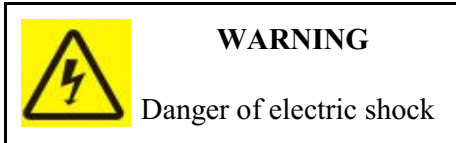
7. Electrical isolation switch should be fully accessible to the operator. 1.5 metres above the floor is a recommended height.



8. Care should be taken when moving the machine over uneven floors, as the machine is top heavy. Use a trolley to move the machine as it is not on wheels, and follow safe lifting procedures when lifting the machine. Move slowly and carefully.

# Safe Operating Procedure:

1. Check that the machine is clear of all objects and that the switches are **off**.



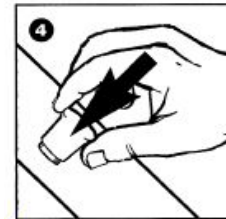
The operator should never tamper with or make repairs to this machine. All maintenance other than approved cleaning operations to be carried out by trained technicians **only**. Contact W & P Reedy to confirm authorised technicians.

2. Check and place the electrical cord in the appropriate power socket and ensure that the power rating and machine detail are the same before turning the power **on**.

3. Push the green start button to operate the mixer.

4. Test red safety cut-out operation by pushing the mushroom button in. ( See picture )

The mixer must **stop** operating immediately. If not, do not use the machine; call supervisor and advise W & P Reedy.



5. Test the slide safety guard by sliding the guard open and then closing and pushing the green start button again. The mixer must **stop** operating immediately, when the guard is opened. If not, do not use the machine; call supervisor and advise W & P Reedy.

6. Test the handle switch by lowering the bowl and then raising the bowl, then push the green start button again. The mixer must **stop** operating immediately, when the bowl is lowered. If not, do not use the machine; call supervisor and advise W & P Reedy.

7. During normal operation **do not** place any instruments or hands inside the mixing area or around the planetary.




8. Never by-pass micro switches and run the machine while the guards are off.

9. Fully isolate machine from electric power source before cleaning.

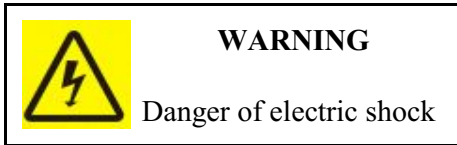




# Standard Operations Checklist:

✓	OPERATION	INSTRUCTIONS
<input type="checkbox"/> ↓	Choose desired speed with gear selector	
<input type="checkbox"/> ↓	Push green start button next to gear selector to start mixer	
<input type="checkbox"/> ↓	Follow recommended work-place procedures for the desired product	
<input type="checkbox"/>	Push the red mushroom stop button next to gear selector to start mixer	

## Daily Cleaning Procedure:



Electrically isolate mixer.



### WARNING

When moving the mixer always use lifting trolley and appropriate procedures.

1. Brush off all external surfaces. Use a soft brush working from top to bottom.
2. Wipe down the entire machine with a damp cloth, starting from the top to the bottom.
3. Cleaning of stainless steel bowl and attachments are to be cleaned with regular hot water and detergent. Do not use abrasives as this can damage the bowls and attachments.

## Maximum Product Guide:

Weight of Product (kg)	SM-402	Attachment	Remark
Egg White	5	Whisk	
Fresh Cream	10	Whisk	
Sponge Cake	17.5	Whisk	
Salad Sauce	25	Whisk	
Heavy Cream Cake	25	Beater	
Cookies	17.5	Beater	
Mash Potato	37.5	Beater	
Puff	30	Beater	
Sweet Bun	15	Hook	Slow Speed
Pizza	11	Hook	Slow Speed

These are recommended maximum amounts for the SM-402. For long life and reduced breakdowns of your machine ensure these amounts are not exceeded.

# Guide Sheets: For Staff Training

Pages in the following section of this manual should be copied and used when training to operate the **SM-402 mixer**.

W & P Reedy suggest that competency assessment checks be completed signed and a copy kept in the personnel files for future reference.

## SUPERVISORS TO ENSURE

- competency check lists are copied and completed as part of the training of staff
- correct training of staff to the required competency expectations
- sign off the verification section of the competency check list
- place a copy of the completed and signed competency check list in personnel records as evidence of operator competence

**SINMAG SM-402 Mixer**

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**Operations Competency Checklist**

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**Element**      Implement safe work procedures.

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Assessment Criteria

**“ Can the operator”**

Identify the purpose and use of:

- Equipment guards
- Warning signs
- Safety features

Related to this machine?

Identify:

- Machine related health and safety risks of this equipment?
- Emergency procedures to be used with this equipment?

Operate this equipment correctly in normal and emergency situations?

Identify:

- OH&S reporting procedures related to hazard reporting for this machine?

Comments

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To gain competency in the use of the SINMAG SM-402 mixer, the assessor must be satisfied that the operator has consistently applied the knowledge and skills in all of the above elements.

This form should be signed off only when the assessor is satisfied that the employee/trainee is competent to carry out all of the tasks described above.

Applicant's signature \_\_\_\_\_ Date / /

Assessor's signature \_\_\_\_\_ Date / /

**SINMAG SM-402 Mixer**

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**Cleaning Competency Checklist**

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**Element** Implement essential hygiene and sanitation procedures.

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Assessment Criteria

**“ Can the operator”**

- Maintain sound personal hygiene at all times when working with the SINMAG SM-402 mixer?
- Use appropriate protective and work clothing while working with the SINMAG SM-402 mixer?
- Identify:
  - Product handling requirements during production process?
  - Critical points in the process where contamination can be introduced?
  - Why is it important to monitor hygiene and sanitation performance?
  - The effect of poorly maintained equipment on the control of contamination and spoilage?
  - Company policies and procedures regarding hygiene and sanitation?
  - Actual and potential contamination and spoilage hazards?
  - Solutions to rectify contamination and spoilage problems?
- Use work practices and methods that reduce the risk of product contamination?
- Remove contamination where appropriate in accordance with:
  - Workplace hygiene and sanitation procedures?
  - Procedures specific to the SINMAG SM-402 mixer?

Comments

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To gain competency in the use of the SINMAG SM-402 mixer, the assessor must be satisfied that the operator has consistently applied the knowledge and skills in all of the above elements.

This form should be signed off only when the assessor is satisfied that the employee/trainee is competent to carry out all of the tasks described above.

Applicant's signature \_\_\_\_\_ Date / /  
Assessor's signature \_\_\_\_\_ Date / /

## **Trouble Shooting:**

Problem	Possible Cause	Remedy
The SINMAG SM-402 mixer does not start	<ul style="list-style-type: none"> <li>• Not plugged in</li> <li>• The main switch is off</li> <li>• Fuse overload at the power board</li> <li>• The mixer overload has been activated</li> <li>• Stop button still locked down</li> <li>• Safety guard open</li> <li>• Bowl and handle not raised</li> <li>• Start button not depressed</li> </ul>	<ul style="list-style-type: none"> <li>• Plug in and switch on</li> <li>• Turn on</li> <li>• Contact supervisor</li> <li>• Resets automatically (10 mins)</li> <li>• Release by rotating and pulling</li> <li>• Close guard</li> <li>• Pull handle and bowl up</li> <li>• Press start button</li> </ul>
The SINMAG SM-402 starts then stops	<ul style="list-style-type: none"> <li>• The mixers overload has been activated</li> <li>• Fuse overload at the power board</li> </ul>	<ul style="list-style-type: none"> <li>• Resets automatically (10mins). If overload occurs repeatedly contact supervisor or W &amp; P Reedy</li> <li>• Contact supervisor or W &amp; P Reedy</li> </ul>
The SINMAG SM-402 labours under load	<ul style="list-style-type: none"> <li>• Mix too stiff / tight</li> <li>• Mechanical malfunction</li> <li>• Loose belts or drive belts</li> </ul>	<ul style="list-style-type: none"> <li>• Review and adjust recipes</li> <li>• Advise supervisor</li> <li>• Contact W &amp; P Reedy service agent.</li> </ul>
Electric motor functions but planetary does not turn	<ul style="list-style-type: none"> <li>• Electrical / Mechanical malfunction</li> </ul>	<ul style="list-style-type: none"> <li>• Switch off power at main switch. Isolate moulder by removing wall plug. Attach danger tag to machine. Contact W &amp; P Reedy</li> </ul>
The SINMAG SM-402 does not stop	<ul style="list-style-type: none"> <li>• Electrical / Mechanical malfunction</li> </ul>	<ul style="list-style-type: none"> <li>• Switch off power at main switch. Isolate mixer by removing wall plug. Attach danger tag to machine. Contact W &amp; P Reedy</li> </ul>

## **Risk Assessment:**

The following risk assessment covers the reasonably foreseeable hazards to health and safety arising from the SINMAG SM-402 mixer and from systems of work associated with this machine.

Hazard identified	Existing controls	Consequences	Likelihood	Risk rating
		Fatality Major Injuries Minor Injuries Negligible Injuries	Very Likely Likely Unlikely Highly Unlikely	High Medium Low
Cleaning of the machine with buckets of water or hoses is extremely dangerous and may lead to electrocution. The machine must only be cleaned with a damp cloth.	Clear warning guide lines on machine. Safe work practices including in training manual.	Fatality	Highly Unlikely	Medium
Micro switch on guard should never be removed or tampered with otherwise machine could continue working with body parts near moving parts.	Safe work guidelines reinforce non authorised tampering with the machine. Access to micro switches service item only.	Major Injuries	Likely	High
Electrical isolation switch should be fully accessible to the operator. Recommended no more than 1.5 metres above the floor.	Dependent on store electrical policy.	Major Injuries	Unlikely	Medium
Safety guard should not be removed.	Microswitch interlocked with the machine will not operate.	Major Injuries	Likely	Medium

## SINMAG SM-402 Mixer

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Service panels should not be removed whilst machine is in operation. The machine must not be operated with any service panel removed.	Designed to be accessed by authorised service technicians only. Warning signs clearly evident.	Major Injuries	Highly Unlikely	Medium
Cleaning of the machine should not take place while machine is in operation.	Correct cleaning procedure detailed in training procedure.	Minor Injuries	Unlikely	Low
The machine should never be connected to alternate power source other than which has been designed for that machine by the store designer.	External plug designed to Australian Standards for the appropriate power supply.	Major Injuries	Highly Unlikely	Medium
Deliberately overriding microswitch and activating machine whilst cleaning machine.	Safe work guidelines reinforce non- authorised tampering with the machine.	Major Injuries	Unlikely	Medium
Machine is top heavy and may unbalance if trying to be moved.	Safe working guidelines reinforce correct storage and moving procedures.	Major Injuries	Unlikely	Medium
Machine is on raised platform or bench.	Ensure raised platform or bench is of appropriate strength and mixer is fixed to the platform/bench.	Major Injuries	Unlikely	Medium



## Useful Information:

**Name of supplier:** W & P Reedy Pty Ltd.  
**Address:** 31 Stanley Street, Peakhurst  
Sydney, NSW 2210  
**Day time phone No.** 02 9533 9522  
**After hours phone No.** 0408 298291  
**Name of manufacturer:** Sinmag  
**Type of machine:** Planetary mixer SM402

### Contact's at W & P Reedy P/L:

**Machine Sales:** Adam Mining.  
**Machine Use:** William Knott.  
**Maintenance:** Paul Swinkels.  
**Spare parts:** Paul Swinkels.

### Final test results & checks before shipping:

**Serial number of unit:** \_\_\_\_\_

**Checked by:** \_\_\_\_\_

**Date:** \_\_\_\_\_

## Useful Information.(Cont.)

### Lubrication.

\_\_\_\_\_ The motor has grease packed ball bearings so will require little attention. The transmission gearing is packed with special grease that will last for several years. Oil only attachments when an attachment is in place and never use more than a drop or two. Lubricate the bowl cradle sides occasionally by applying a small amount of oil or grease with the tip of the finger. Only food grade synthetic oils are suitable for this type of lubrication.

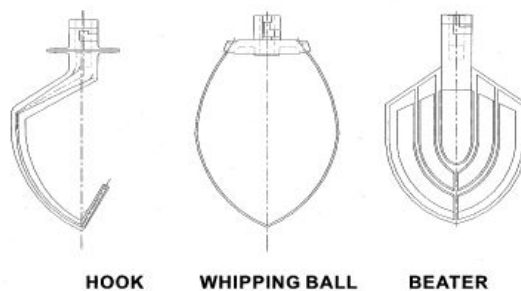
The polished drip cup is a safe guard to prevent any lubricant that might work out of the planetary gearing from dropping into the bowl. Remove the drip cup (by pulling straight down) once a month and wipe it clean. ( This should only be done by a trained service technician )

### Attachments.

\_\_\_\_\_ When fitting an attachment the bowl must be in the down position. Slip the attachment up on the shaft and turn it until the driving pin in the shaft reaches the L-shaped slot in the beater shaft. Attachments of various styles are available, each suited to a particular job.

The beater is commonly used for thin batters, cakes, mashing potatoes, short pastry and mixing of sausage meats, beater to be used in 1<sup>st</sup> and 2<sup>nd</sup> speeds only. The whipping ball is best for whipping cream and beating eggs, whisk to be used in 2<sup>nd</sup> and 3<sup>rd</sup> speeds only.. The dough hook is used for pastry, soft doughs, brioches and biscuits doughs, the dough hook to be used **only** in 1<sup>st</sup> speed. See below.

***Always stop the motor before changing the speed of an attachment.***

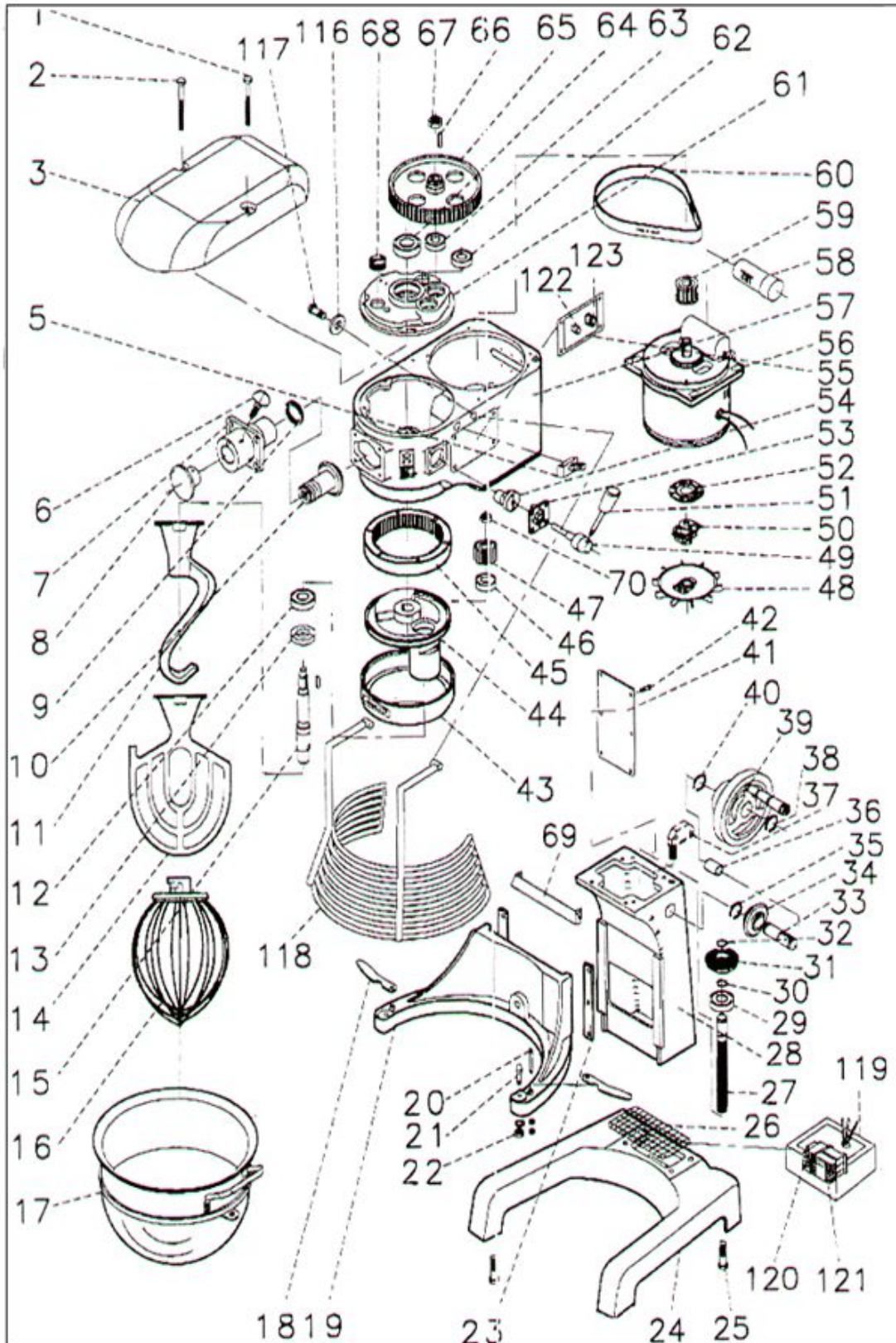


## Technical Data:

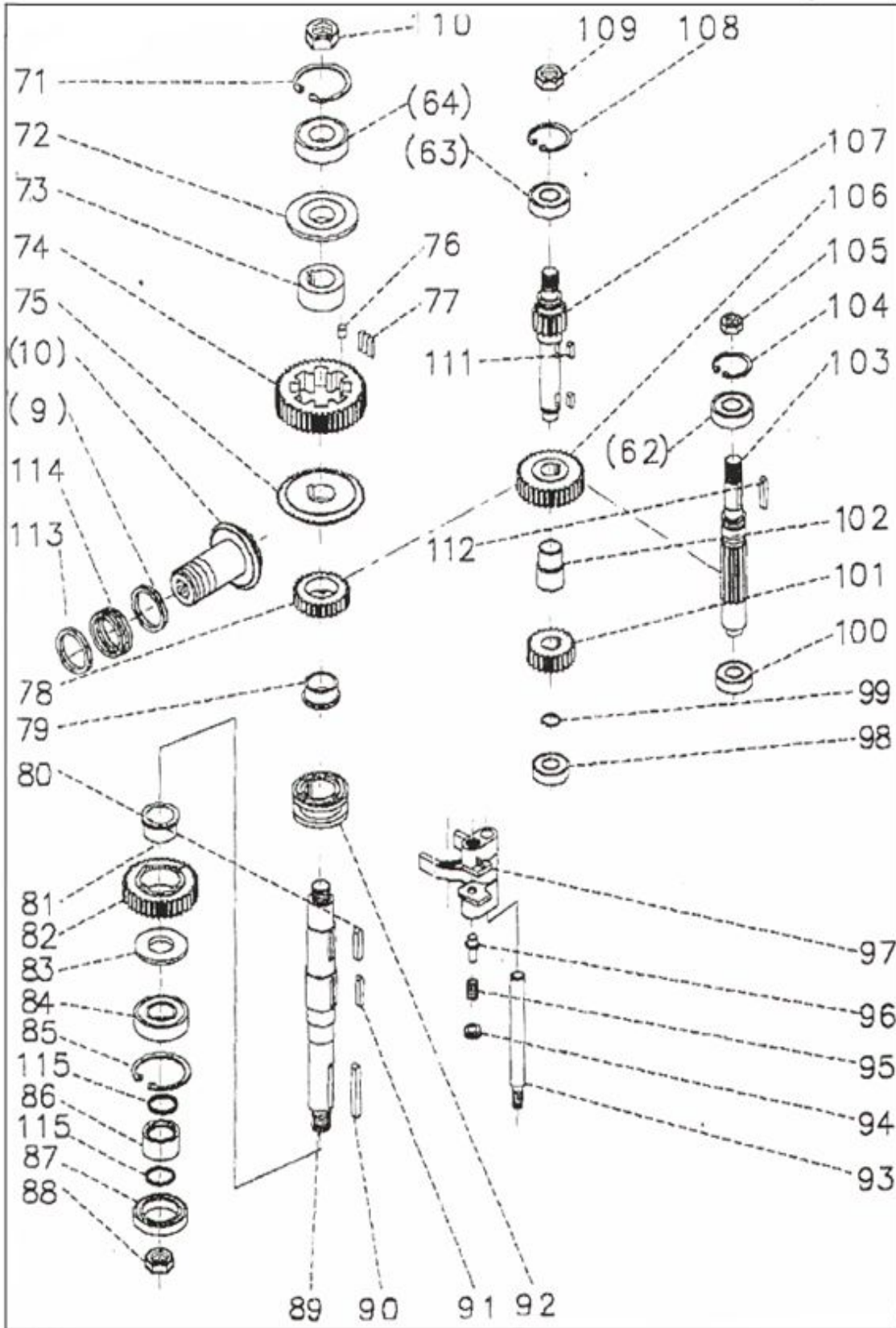


<b>Motor</b>	<b>½ (hp) 375kw</b>
<b>Weight</b>	<b>90kg</b>
<b>Dimensions Approx. (LxWxH)</b>	<b>530x430x830 mm</b>
<b>Capacity</b>	<b>20 Litre</b>
<b>Speed (RPM) 1st</b>	<b>125</b>
<b>2nd</b>	<b>283</b>
<b>3rd</b>	<b>525</b>

# Mixer Components:



**SINMAG SM-402 Mixer**



## SINMAG SM-402 Mixer

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Number	Article	Description	Number	Article	Description
1	SSM402001	screws	63	SSM402063	ball bearing 6204z
2	SSM402002	screws	64	SSM402064	ball bearing 6206z
3	SSM402003	cover transmission	65	SSM402065	belt transmission pully
5	SSM402005	microswitch	66	SSM402066	level key
6	SSM402006	thumb screw	67	SSM402067	nut stop
7	SSM402007	hub-attachment	68	SSM402068	oil plug
8	SSM402008	plug-attachment hole	69	SSM402069	front guard slab
9	SSM402009	washer-thrust	70	SSM402070	screws
10	SSM402010	level drive gearrear 35t	71	SSM402071	c-ring
11	SSM402011	kneader	72	SSM402072	lead-in oil pad
12	SSM402012	ball bearing 6206z	73	SSM402073	to guard against busk
13	SSM402013	seal oil TC-62*35*10	74	SSM402074	gear slow speed 52t
14	SSM402014	paddle (leae-tyae) 35t	75	SSM402075	gear bevel 52t
15	SSM402015	shaft planetary	76	SSM402076	roll pillar
16	SSM402016	whisk	77	SSM402077	spring slice
17	SSM402017	bowl	78	SSM402078	gear clutch
18	SSM402018	steady hook	79	SSM402079	busk clutch
19	SSM402019	cradle	80	SSM402080	level key
20	SSM402020	screws	81	SSM402081	busk clutch
21	SSM402021	dowle screw	82	SSM402082	gear clutch 45t
22	SSM402022	nut stop	83	SSM402083	ball bearing
23	SSM402023	escort plank	84	SSM402084	ball bearing 6207z
24	SSM402024	base	85	SSM402085	c-ring
25	SSM402025	screws	86	SSM402086	guard oil busk
26	SSM402026	net	87	SSM402087	seal oil TC72*45*12
27	SSM402027	screw shaft	88	SSM402088	nut stop
28	SSM402028	pillar middle	89	SSM402089	shaft driven
29	SSM402029	ball bearing 6005zz	90	SSM402090	level key
30	SSM402030	c-ring	91	SSM402091	level key
31	SSM402031	oblique gear 30t	92	SSM402092	sleeve clutch
32	SSM402032	c-ring	93	SSM402093	rod-shifter guide
33	SSM402033	shaft	94	SSM402094	retainer spring
34	SSM402034	oblique gear 30t	95	SSM402095	spring-shifter yoke
35	SSM402035	c-ring	96	SSM402096	plunger-shifter yoke
36	SSM402036	oilless bearing	97	SSM402097	yoke-shifter
37	SSM402037	microswitch	98	SSM402098	ball bearing 5204
38	SSM402038	c-ring	99	SSM402099	c-ring
39	SSM402039	hand wheel	100	SSM402100	ball bearing 6204
40	SSM402040	c-ring	101	SSM402101	gear 20t
41	SSM402041	behied plate	102	SSM402102	spacer busk
42	SSM402042	screws	103	SSM402103	shaft master 14t
43	SSM402043	stainless ring	104	SSM402104	c-ring
44	SSM402044	planetary hole	105	SSM402105	nut stop
45	SSM402045	planetary int. gear 67t	106	SSM402106	gear 30t
46	SSM402046	ball bearing 6204z	107	SSM402107	shaft transmission 13t
47	SSM402047	pinion beater 21t	108	SSM402108	c-ring
48	SSM402048	fan cooling	109	SSM402109	nut stop
49	SSM402049	shaft wrench	110	SSM402110	nut stop
50	SSM402050	clutch	111	SSM402111	level
51	SSM402051	arm wrench	112	SSM402112	level key
52	SSM402052	platinum switch	113	SSM402113	ball bearing TA 45*35
53	SSM402053	cover	114	SSM402114	seal oil TC 45*35*8
54	SSM402054	shaft blas	115	SSM402115	oil RWG 36*30*3

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55	SSM402055 operate plate	116	SSM402116 washer
56	SSM402056 motor	117	SSM402117 support washer
57	SSM402057 case transmission	118	SSM402118 safety guard
58	SSM402058 capacitor	119	SSM402119 electric box
59	SSM402059 wheel belt 18t	120	SSM402120 overload relay
60	SSM402060 belt	121	SSM402121 contactor
61	SSM402061 above cover	122	SSM402122 start button
62	SSM402062 ball bearing 6204z	123	SSM402123 stop button

# Electrical diagram.

