

# ***STARING*** SM 340

## **Instruction manual**



>> Before you use the Mixer, please read the Instruction manual



Dear STARING Customer,

STARING SM 340, is a pan mixer of the most advanced design in the market and easily meeting all site requirements of today. The maximum performance and the simple, easy operation of the STARING SM 340 are results of our recent development work within the mixer technology field.

In order to achieve safe handling of the STARING SM 340, we ask you to read the following instruction manual carefully.

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## >> 1. Technical Data

Mixer Type .....	SM 340
Mixer Weight .....	425 kg
Gross Volume .....	SM 340 l
Net Volume .....	approx 180L
Pan Diameter .....	1000 mm
RPM .....	35 (r/min)
No. of Mixer Arms .....	3
Discharge Height .....	.800 mm
Electric Moter Output .....	5,5 or 7,5 kW
Protection .....	IP 54
Voltage .....	3x380V
Power Consumption .....	12 or 16A
Frequency .....	50 Hz
Noise Level at the Working Place (Mixing) .....	78 dB(A)
Noise Level at the Working Place (Idling) .....	58 dB(A)
Mixer Noise Level (Mixing) .....	<68 dB(A)
Mixer Noise Level (Idling) .....	<66 dB(A)

### **Identification:**

The Manufacturer's type sign states the mixer type. No. in the first field. The second field consists of seven figures of which the first three figures state the machine No., the next two figures the building year and the last two figures the month of the building year. The third field states the net weight in kg of the mixer.



## >> 2. Safety and Prevention of Accidents

### **Instruction Manual**

All persons dealing with the use, installation, operation, maintenance and repair must have read and understood the Instruction Manual.

### **Persons Responsible**

The operator of the mixer is responsible for the fact that only persons who are qualified and have been instructed in the operation of the machine operate, maintain or repair the mixer.

### **Purposeful Use**

Mixers are machines for production of concrete, mortar and for processing of refractory materials. The mixer can handle solid materials without adding water or aggregates.

The mixer may only be used in accordance with the intended purpose and may not be used for mixing of inflammable or explosive materials. The mixer is not suitable for mixing of foodstuffs.

### **Power Supply**

The mixer may not be connected to wall sockets. The connection requires being wired into the supply provided. Cabling with a cross section of 5 x 1,5 mm<sup>2</sup> and 2,5 mm<sup>2</sup> for 7,5 kW electric motor and approved socket outlet and plug must be used.

If the cables are defective the mixer may not be operated. Defective cables can be a danger to life. Use only cables and plugs which are fault free.

### **Danger to Persons an Equipment**

If the mixer is operated incorrectly and not in accordance with the intended purpose, damage to persons or equipment may result. **Therefor any incorrect use of the mixer is not allowed!**

## >> 2. Safety and Prevention of Accidents

### **Safety Equipment**

The mixer should only be operated using the safety equipment which is recommended. The mixer should only be operated with complete and undamaged safety equipment.

### **Maintenance and Repair Work**

All work at power equipment should only be carried out by specialists observing the relevant safety requirements.

The machine should be checked daily by the operator for correct operation.

This is especially important for:

**movable parts**

**screw joints**

**safety equipment**

**protection equipment**

**cables, plugs and switches**

**excessive soiling**

In connection with maintenance and repair work the power supply must be disconnected and arrangement made so that it is not possible to engage the mixer again.

### **Declaration of Conformity**

The mixer is in conformity with the provisions in the Council Directive of 14. June 1989 on mutual approximation of the laws of the Member States on the safety of machines (89/392/EEC as amended by Directives 91/368/EEC, 93/44/EEC and 93/68/EEC) with special reference to Annex 1 of the Directive on essential safety and health requirements in relation to the construction and manufacture of machines.

## >> 3. Special Safety Equipment

The mixer will be delivered with either a securely fastened or electrical secured safety cover and with safety screen under the discharge port.

Furthermore, we have for safety reasons installed a thermal relay. The thermal relay protects the electric motor when overheating occurs. The mixer is protected against automatic restarting and the thermal relay needs to be reset before the mixer can be used again.

The rated power is stated on the electric motor machine sign. In accordance with EN 60204-1 the machine is equipped with a main switch.

## >> 4. Transport

When the mixer is transported by means of secured hoists it must only be lifted by the three lifting points.

### **Note**

Pay attention that there is enough lifting capacity in the hoist being used.

### **Risk**

Incorrect lifting of loads as well as damaged chains and ropes may cause serious accidents.

The mixer can be transported by means of forklift trucks. Then the forks must be level (horizontally arranged) under the mixer pan in order to avoid any damage and that the mixer tips over.

Never lift the mixer from the discharge side with forklift truck.

## >> 5. Starting Procedure

Before the mixer is started the following instructions should be followed:

1. Check that the power cable is not damaged, if so, replace it.
2. Check the mixer and remove all major foreign matters.
3. Check that the mixer blades are correctly fastened in order to avoid damage to the mixer.
4. Place the mixer on a surface which is as level as possible.



## >> 6. Using the Mixer

The mixer is started on the switch as follows:

Green pushbutton = Start

Red pushbutton = Stop

After the engagement the direction of rotation should always be checked.

The mixer blades must rotate clockwise.

Fig. 2.

Where wrong rotation occurs this requires adjustment of two of the three phases. This work must be carried out by a qualified electrician.

If the machine is equipped with a directional plug the direction of rotation can be changed by turning the terminals with a screwdriver.

Fig. 3.

Whenever the mixer has been moved to another place, the direction of rotation should be checked.

Filling and discharge of the mixer should only take place when the mixer is running so, hat damage to the mixer is avoided.

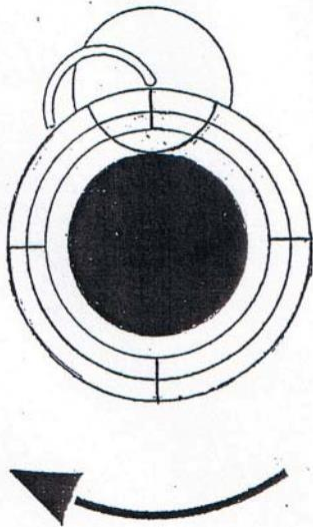


Fig. 2

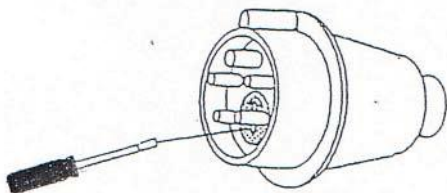


Fig. 3

## >> 7. Optimum Mixing

The optimum mixing (mixing time) is achieved by filling water directly through the centre cover of the mixer.

In this way the water will be equally distributed in the mixer pan during the mixing.

## >> 8. Adjustment of Mixer Blades

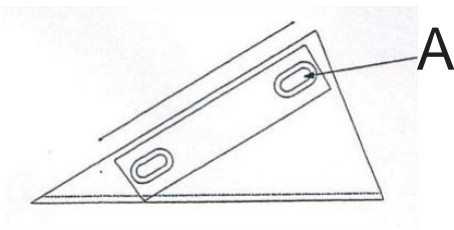


Fig. 4a

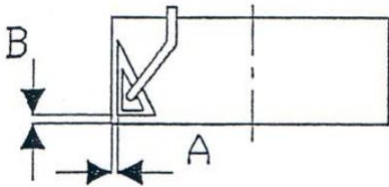


Fig. 4b

For an optimum adjustment of the mixer blades please follow the instructions below:

1. Disconnect the mixer from the power supply and ensure that it is not possible to engage it again.

2. Lift the safety cover or remove the cover.

3. Loosen the four screws in the clamping device. Fig. 4a.

4. Set the blades as below:

Dimension A = 0 – 2 mm and

Dimension B = 2 – 5 mm

and tighten the screws. Fig. 4b

5. Place the safety cover in right position again

6. Restart the mixer.

## >> 9. Cleaning and Maintenance of the Mixer

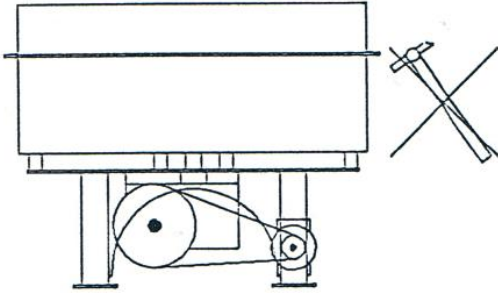


Fig. 6

For the cleaning and maintenance of the mixer please follow the instructions and recommendations below:

### **Cleaning Recommendation;**

1. Adding of gravel will improve the cleaning effect.
2. Let the mixture run for a few minutes.
3. Empty the mixer.

Disconnect the mixer from the power supply and ensure that it is not possible to engage it again.

4. Clean with water.

Never direct the jet of water directly at the plug or control panel.

The gearbox of the mixer requires no maintenance.

If the mixer pan is damaged it will be difficult to clean it.

Fig. 6

## >> 10. Spare Parts

Only approved STARING spare parts should be used for the mixer. The warranty will be void if spurious spare parts are used.

## >> 11. Spare Part List

<b>No.</b>	<b>Name</b>	<b>Spare Part No.</b>	<b>Quantity</b>
1	Cover	0335 2010	1
2	Transport whels	0290 7000	2
3	Mixer Head complete	0290 1000	1
4	Mixer Head whitout arms	0290 1010	1
5	Reblser Sleeve	9860	1
6	Mixer Arm outer	0290 1310	1
7	Centre Mixer Arm	0290 1320	1
8	Internal Mixer Arm	0290 1320	1
9	Mixer Paddle, centre/internal	0290 1520	2
10	Mixer Paddle, outer	0290 1510	1
11	Mixer Pan. complete	0335 5000	1
12	Gear – Renold	0290 3011	1
13	Motor Protection, 5,5 kW – 3x380 V	0310 4010	
14	Motor Protection, 7,5 kW – 3x380 V	0310 4020	
15	Electric Motor, 5,5 kW – 3x380 V	9033	
16	Electric Motor, 7,5 kW – 3x380 V	9046	
17	V-Belt drive gear	0290 3200	1
18	V-Belt drive motor	0290 4200	1
19	Lock for mixer arm complete	0290 1120	
20	V-Belt 5,5 Kw	0290 9250	3
21	V-Belt 7,5 Kw	0290 9262	3
22	Tranmission shaft with brunh	0340 9030	1
23	Magnet switch cover	9116	1

## >> 13. Guarantee

1. There will be a guarantee of 12 months from date of delivery.
2. The guarantee cover all operational failures due to material or fabrication defects.
3. The manufacturer can choose freely to remedy the damage by compensation, replacement or repair.
4. The costs of dispatch are on the account of the buyer.
5. Replaced parts belong to Staring Maskinfabrik A/S.
6. The manufacturer will undertake no responsibility with regard to consequential damages and possible loss of production.
7. In order for the guarantee to be complied with the defect must be reported immediately after it has occurred.

### **THE GUARANTEE DOES NOT COVER**

1. Damages due to incorrect connection.
2. Repair executed by others.
3. Damage as a result of wrong operation, negligent treatment or transportation damages.
4. Natural wear and tear.
5. Only use approved Staring spare parts.

Where a complaint is forthcoming Staring Maskinfabrik A/S should be informed in writing together with all relevant information regarding the machine. Additionally, an, defective symptoms or cause must be informed.

## >> 14. EC Declaration of Conformity

### EC Declaration of Conformity

**Manufacturer:**

Company Name: Staring Maskinfabrik A/S  
Address: Starengvej 9-11  
9700 Brønderslev  
Danmark  
  
Tel.: +45 98821622

**hereby declare that  
Machine:**

Name: **STARING MASKINFABRIK A/S**  
Type: **SM 340**  
Serial no.: **3611119 – 3631119 – 3601119**

- is in conformity with:

the COUNCIL DIRECTIVE of 17 Mai 2006 on mutual approximation of the laws of the Member States on the safety of machines (2006/42/CEEE as amended by directives EN 292-1, EN 292-2, EN 294, EN 418, EN 954-1, EN 1037, EN 10151, EN 60204-1) with special reference to Annex 1 of the Directive on essential safety and health requirements in relation to the construction and manufacture of machines.

Company: STARING MASKINFABRIK A/S  
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