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# OPERATING INSTRUCTIONS

## AR100 VL-1L



112016 ORDER NO.: 00343-VL-1L GB Translation of the original user manual

### A/S Wodschow & Co.

Kirkebjerg Søpark 6  
DK-2605 Brøndby

Phone: +45 43 44 22 88  
info@wodschow.dk  
www.bearvarimixer.dk

Denmark

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### **OBS:**

The mixer is to be connected to power via a plug.  
The plug must be dimensioned for min. 16 A,  
230/400V~, IP44

### **When connecting;**

- 1 phase with 0 + earth, use 3 pole plug
- 2 phases + earth, use 3 pole plug
- 3 phases + earth, use 4 pole plug
- 3 phases with 0 + earth, use 5 pole plug

## GENERAL:

In case of complaints, please contact your supplier.

The guarantee does not cover faults resulting from faulty operation, overloading and lacking observance of directions of maintenance.

It should be checked that all loose parts are delivered with the mixer such as bowl, tools, grease gun and rubber feet

## SAFETY:

The constant noise level of the workplace of the operator is lower than 70 dB (A)



*The mixer is designed for manufacture of products which do not during processing cause reactions or emit substances which may be detrimental to the user.*



*Putting your fingers in the bowl while the mixer is running may cause injuries.*

## INSTALLATION OF NEW MIXER:



*Never lift the mixer by the handle for speed adjustment.*

### **Installation and securing:**

The mixer must be mounted with rubber feet, which neutralize both shaking and rusting. Spacers can be inserted under the mixer's feet, if the floor is not completely even.

The mixer is placed directly on the floor. Foundation bolts in the floor are only necessary under special conditions, e.g. on ships.

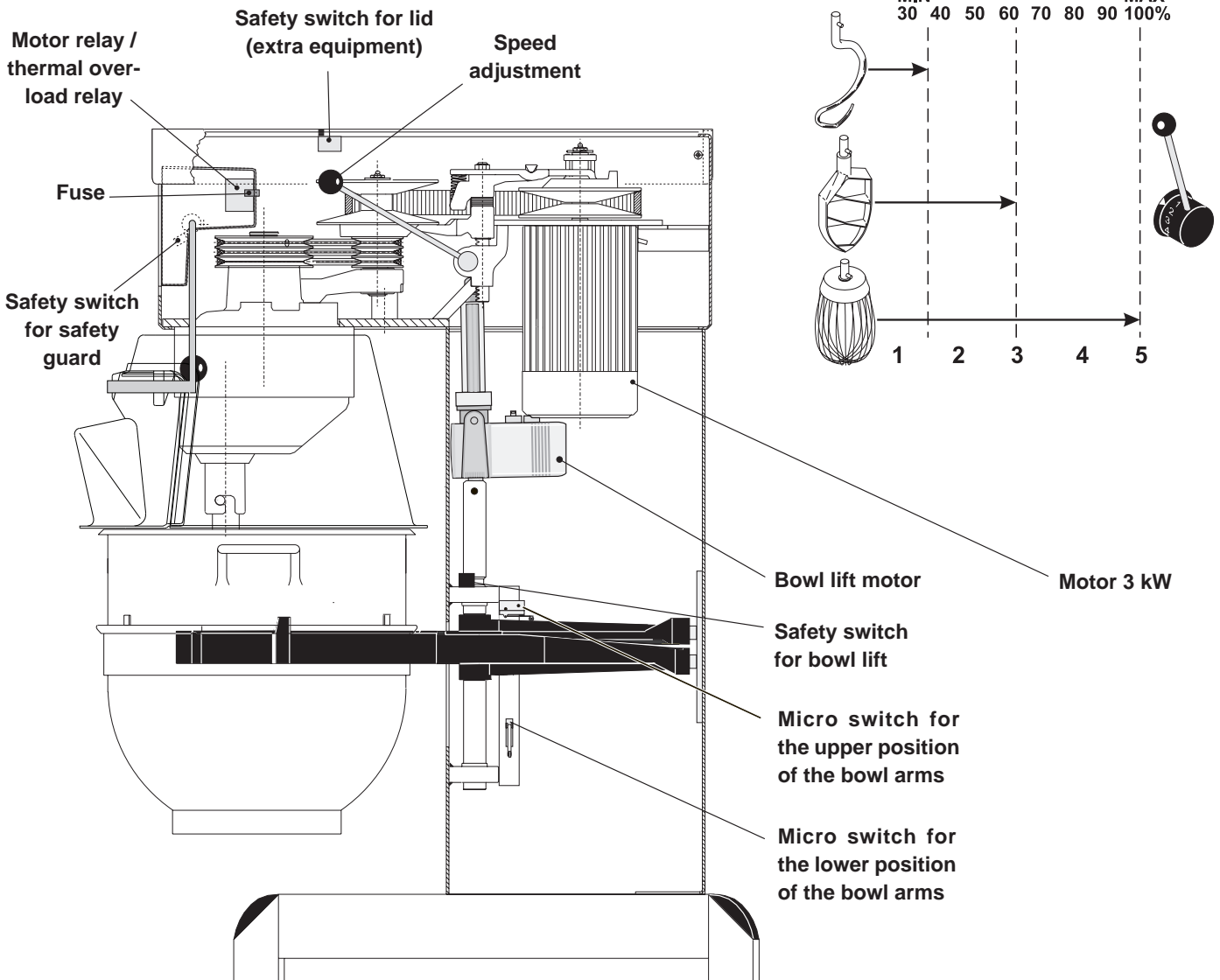
### **Connection to power:**

Before the mixer is connected to power, it should be checked that the voltage and frequency printed on the machine label is correct in relation to the place of installation. The machine label is placed at the top right side of the mixer.

### **Checking of the direction of rotation of the planetary head:**



*Lift up the bowl arms to normal working position and start the mixer without bowl and tools. Check the direction of rotation of the planetary head: the planetary head must rotate in the direction as stated by the arrow above the planetary head. If the direction of rotation is wrong, 2 of the phase wires of the connecting cable must be inverted.*

**CONSTRUCTION OF THE MIXER:****THE MAXIMUM CAPACITY OF THE MIXER:**

Capacities per mix	Tool	AR100
Egg white	Whip	15 L
Whipped cream	Whip	45L
Mayonnaise *	Whip	80 L
Herb butter	Beater	75 kg
Mashed potatoes *	Beater / Whip	65 kg
Bread dough (50%AR) **	Hook	58 kg
Bread dough (60%AR)	Hook	70 kg
Ciabatta dough * (70%AR)	Hook	75 kg
Muffins *	Beater	60 kg
Layer cake base	Whip	25 kg
Meatball mix *	Beater	75 kg
icing	Beater	70 kg
Doughnut (50%AR)	Hook	60 kg

**AR = Absorption Ratio (%AR)**  
(Liquid in % of solids)

Example: A basic recipe contains 1 kg of solids and 0,6 kg of liquid:

$$\text{This gives AR} = \frac{0,6 \text{ kgs} \times 100}{1 \text{ kgs}} = 40\%$$

If for instance it is required to use the maximum capacity of the mixer, the calculated AR = 60% is used for determining the amount of solids and liquid in the dough:

If a 100 L mixer is used, and a dough with AR = 60% is to be kneaded, the maximum capacity is = 70 kg. Now the weight of solids in this dough is calculated:

$$\text{Solids} = \frac{\text{Max. capacity} \times 100}{\text{AR} + 100} = \frac{70 \text{ kg} \times 100}{60 + 100} = 43,75 \text{ kg}$$

$$\text{Weight of liquid} = 70 \text{ kg} - 43,75 \text{ kg} = 26,25 \text{ kg}$$

\* Scraper recommended

\*\* Low speed operation is recommended

Local variations in the characteristics of the ingredients can influence water absorption, volume and baking characteristics, etc.

## OPERATION OF THE MIXER:

- A) Place the tool in the bowl. Open the safety guard
- B) **Note: the bowl arms must be in the lowest position.** Place the bowl in the bowl arms. Check that the bowl is pushed right back into the arms and that the “centre ear” of the bowl arms is facing the mixer (**fig. 3**). Place the mixer tool in the bayonet shaft. The tap of the tool must be turned right into the bayonet hole. Close the safety guard.
- C) Press **↑** to lift the bowl (**fig. 1**). The bowl will automatically stop in the top position.
- D) The mixing time can be set on the timer using the **☼** and **☼** buttons. The mixer stops automatically when the mixing time has run out. (If the mixer stops at high speed when the mixing time runs out, follow the instructions “**Start-up after stop at high speed**” before starting the mixer again). You can also start the mixer without setting a time. If you do not set a time, the display will function as a clock that counts up. See also “**Timer function**” on page 5
- E) Start the mixer by pressing **⏻** (**fig.1**)
- F) Turn the speed selector lever (**fig. 2**) to the rear until the required speed has been obtained, (notice the recommended maximum speeds on page 3).

**The speed must be changed only when the mixer is running.**



**The mixer must not be started in high speed when loaded.**

**Always change to low speed before using **⏻** or otherwise stopping the mixer**

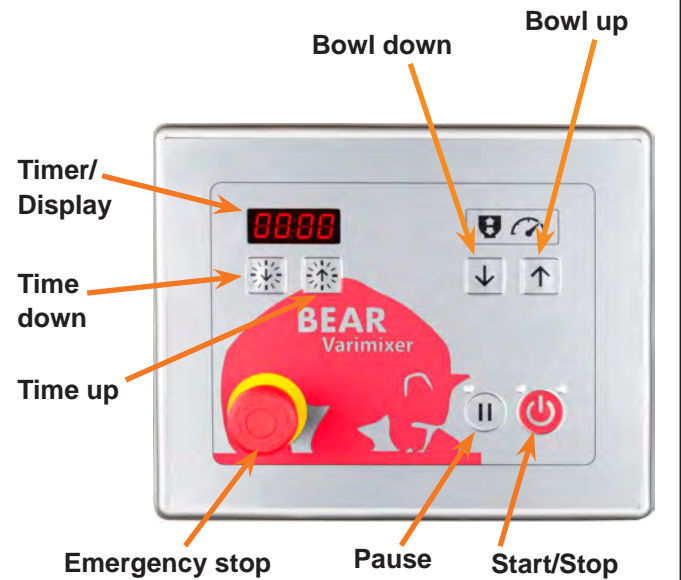
- G) During the mixing process the mixer can be paused by pressing **⏸** (**first change to low speed**). You can now lower the bowl or open the safety guard. If you start the mixer again using **⏸** the timer settings will be unchanged. If you start the mixer using **⏻** the settings will be reset. See also “**Pause function**”
- H) Before the mixer is stopped, the speed selector lever must be moved back to lowest speed (**fig.2**). Stop the mixer by pressing **⏻** (**fig.1**).
- J) When the tool has stopped rotating the bowl can be lowered by pressing **↓**.

## PAUSE FUNCTION:

The mixer has a pause button **⏸**, which should be used to stop and start the mixer in a process where the timer is used.

- Change to low speed
- Stop the mixer using **⏸**. The timer will continue to count downwards when you start the mixer again by pressing **⏸**.
- When you stop the mixer pressing **⏸** you can lower the bowl and open the safety guard. When you press **⏸** again, the timer continues to count downwards.

Fig. 1 Operation panel.



**Before the mixer is stopped, the speed selector lever must be moved back to lowest speed**

Fig. 2

Mixer with open safety guard, lowered bowl and mounted tool.

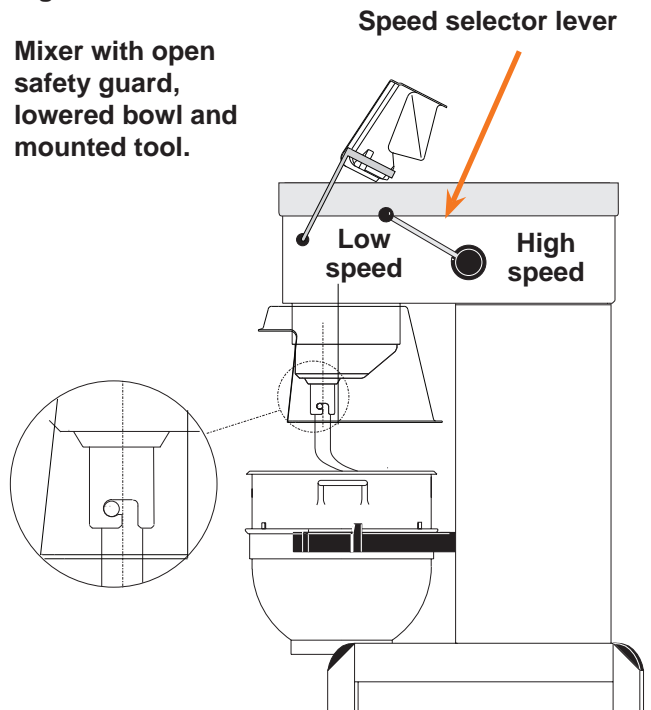
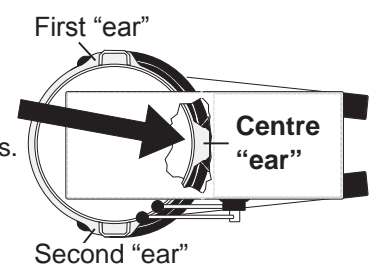





Fig. 3

Mixer seen from above, the bowl has been pushed all the way into the bowl arms. **Notice: the centre “ear” of the bowl is facing the mixer**







## AUTOMATIC LOWERING OF THE BOWL:

If the timer is in use, the bowl can automatically be lowered when the time runs out and the mixer stops.



- While the mixer is running, briefly press . The green LED by  will flash until the mixer stops.
- When automatic lowering of the bowl is selected it is important that you use  (**first change to low speed**) to stop and start the mixer, otherwise the selection will be reset.

## TIMER FUNCTION:

The mixer has an optional timer function. If no time is set on the timer, the display will instead show the time the mixer has run for.

- The timer can be set to a maximum of 60 minutes.
-  and  can be used to set the time before starting the mixer or while the mixer is running. The time can be changed after it has been set.
- When the timer is in use it is important to use  (**first change to low speed**) to stop and start the mixer if you do not want the timer to be reset.
- **When the time runs out the mixer will stop in the selected speed.**
- You can select automatic bowl lowering when the timer is in use. Briefly press .

## START-UP AFTER STOP AT HIGH SPEED:

This procedure is used in all cases where the mixer has been interrupted at high speed, either because the mixer has been stopped using  or , the mixing time has run out, the emergency stop is activated or the safety guard is opened:


- 1) Lower the bowl and remove the tool from the bayonet.
- 2) Raise the bowl arms, either empty or with the bowl.
- 3) Close the safety guard, start the mixer and move the speed selector lever back to lowest speed.
- 4) Switch off the mixer. Now the mixer can be started as usual.

## OVERLOAD:



*Do not overload the mixer. Sticky and heavy doughs can overload the mixer. Overloading is further exacerbated if the speed of the mixing tool is increased beyond the recommended values or if a wrong mixing tool is used. Large lumps of fat or cooled ingredients must be cut into small parts before they are placed in the bowl.*



*Longer time overload will interrupt the mixer.  will be written in the mixer's display. After a short while the display will change back to normal mode and you can start the mixer again as described in "**Start-up after stop at high speed**".*



## CORRECT USE OF TOOLS:



Whips should not be struck against hard objects as e.g. the edge of the bowl. This will make the life of the tool shorter due to increasing deformity.

### Recommended applications for tools:

Whip	Beater	Hook
Cream	Cake dough	Bread dough
Egg whites	Butter cream	Dark bread
Mayonnaise and the like	Waffle dough	and the like
	Minced meat and the like	



For production of mashed potatoes the special wing whip or the whip with thicker wires should be used, alternatively use the beater and the whip.

It is not recommended to use timer in the dough kneading process, as this might damage the driving system of the mixer.

## CLEANING:

The mixer should be cleaned daily or after use. The mixer should be cleaned with a soft cloth and clean water. Sulphonated soaps should be used with caution as they destroy the mixer's lubricants.



Never use high pressure cleaning for the mixer.

Parts made of aluminum should not be used to strongly acidic, highly alkaline or highly salty foodstuffs, which may attack aluminum without coating.

Tools of aluminium must not be washed with strong alkaline detergents (**pH between 5 and 8**).

The soap suppliers can recommend the correct type of soap.



Please note that the plastic safety guard can be damaged if exposed to high temperatures for a considerable period. (**Max. temperature 65°C**)

## MAINTENANCE AND LUBRICATION:

The infinitely variable gear must be lubricated regularly, i.e. a lubrication interval of approx. 60 hours of operation.

### Lubrication of infinitely variable gear:

**OBS.** Special grease !!(Use the grease gun delivered together with the mixer). Start the mixer and increase the speed to approx. 50%. Stop the mixer (use the emergency stop) and open the lid on the top of the mixer. On the top of each of the two pulley set shafts is a grease nipple (**fig. 4 point 1**). Press grease through the grease nipples until the grease gun feels hard to press or until grease comes out between the shaft and the pulleys.



The mixer must not be started until the screws which hold the lid are inserted.

Start the mixer, and set the speed back to low speed.

Stop the mixer and fill the grease gun with new grease so that it is ready for next time.

### Lubrication of other movable parts:

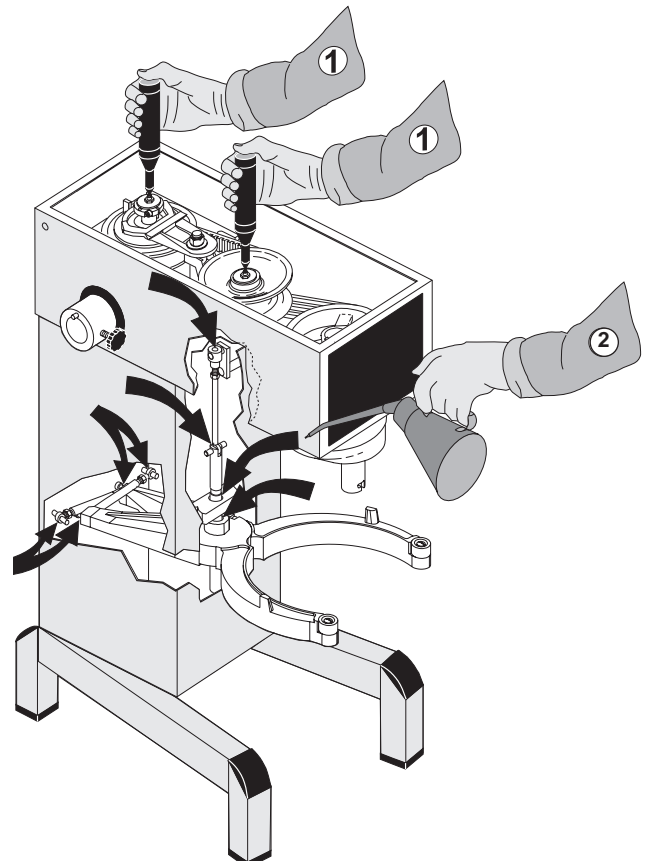
The movable parts of the bowl arms, the shaft and the lifting rod must also be lubricated with oil. Remove the rear covering and lubricate the marked points with an oil can. (**fig.4 pkt.2**)

## GREASE TYPES:

Grease for the pulley set shafts: **Castrol LMX**.

On repair of the planetary head: Grease the toothed wheel and the toothed rim with **Molub Alloy 936SF Heavy** or **Castrol Grippa 355**, the needle bearings in the planetary head must not be lubricated with this type of grease. Do not use any another type of grease than the one stated here.

**fig.4 Greasing of infinitely variable gear and other movable parts:**



**LIST OF ERRORS:** In case of other errors, contact the supplier. **POSSIBLE SOLUTION:**

*A rattling sound from the closed part of the mixer.*

**Adjustment of special v-belt**

*The mixer starts "striking" when kneading dough which normally causes no problems.*

**Adjustment of special v-belt**

*The mixer changes its speed by itself.*

**Adjustment of special v-belt**

*The minimum and the maximum speeds are changing.*

**Adjustment of speed.**

*The bowl is too tight or too loose.*

**Adjustment of bowl fixing**

*The tool hits the sides of the bowl.*

**Adjustment of bowl centering**

*The tool hits the bottom of the bowl.*

**Adjustment of bowl height**



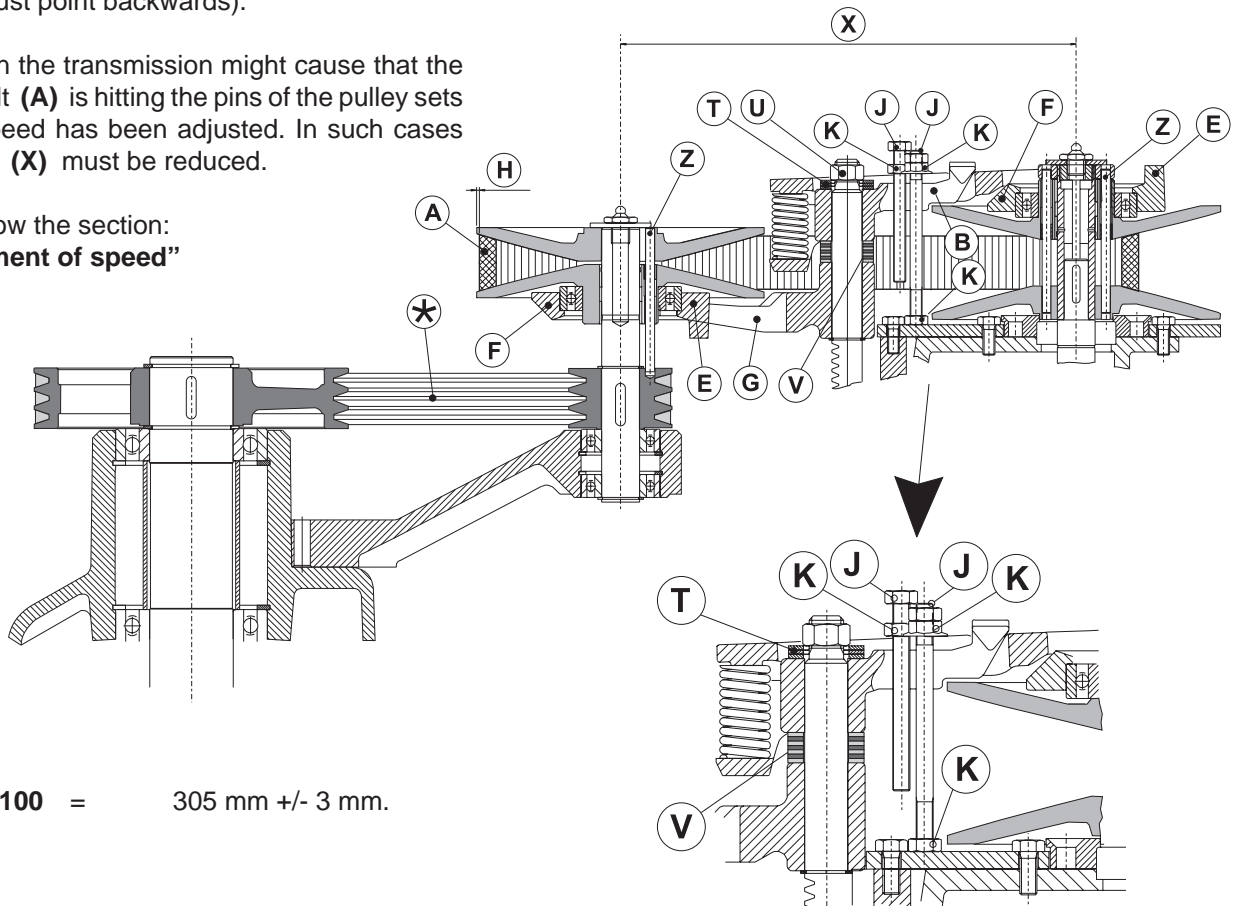
**Prior to a possible repair or adjustment, switch off the mixer by disconnecting the power cable.**

**ADJUSTMENT OF SPECIAL V-BELT:**

The distance (X) is only indicative as it depends on the tolerance of the special V-belt.

1. Start by tightening the v-belts (\*).
2. Tighten the special V-belt (A) by moving one or two washers from (V) to (T).
3. Start the mixer and leave it running while the nut (U) is tightened. Do not tighten it too much.
4. On the front pulley set the stud (E) on the varispeed collar (F) must be placed inside the lower fork (G) and on the rear pulley set outside the fork for belt tightener (B), (both must point backwards).
5. Tolerances in the transmission might cause that the special V-belt (A) is hitting the pins of the pulley sets when the speed has been adjusted. In such cases the distance (X) must be reduced.

6. Then follow the section:  
"Adjustment of speed"



(X) AR100 = 305 mm +/- 3 mm.

**ADJUSTMENT OF SPEED:**

1. The stop screws (J) on the speed lever should be adjusted so that the measurement (H) is 1-2 mm on the front and the rear pulley, at low and high speed, respectively. Tighten the counter nuts (K) when the speed is correctly adjusted.
2. Tolerances in the transmission might cause that the special V-belt (A) is hitting the pins of the pulley sets (Z) when the speed has been adjusted. In such cases the distance (X) must be reduced, see "Adjustment of special v-belt", and the speed must be readjusted.

## ADJUSTMENT OF BOWL CENTERING:

First find the present bowl centering: mount the beater and the bowl, then raise the bowl arms up to normal working position. With your hand turn the beater, and then measure the distance between beater and bowl edge. By removing the rear covering, the bowl arm guide plate is now accessible (E). Loosen the screws (D) and move the bowl arm guide plate in the required direction. Again turn the beater and measure the distance between beater and bowl. When the bowl has been centred, fasten the bowl arm guide plate in the new position and screw on the rear covering.

## ADJUSTMENT OF BOWL FIXING:

The bowl arms must be raised to normal working position. The adjusting diameter (Y) shall be measured inside between the bowl arms (fig.6a):

**Adjusting diameter (Y) :** AR100 = 554 mm.

In case the bowl fastening is too loose, remove the lock ring (B) and draw the bearing (A) from the shaft (C). The bearing should be turned 180° and be mounted on the shaft again. It might be necessary to turn both bearings. At last check the bowl centering and if necessary, adjust.

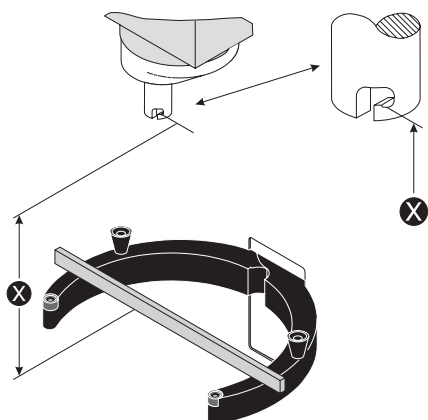
## ADJUSTMENT OF BOWL HEIGHT:

The distance (X) is measured from the bottom side of the bayonet hole to the surface on the bowl arms on which the bowl rests (fig.7a). The bowl arms must be lifted to normal working position.

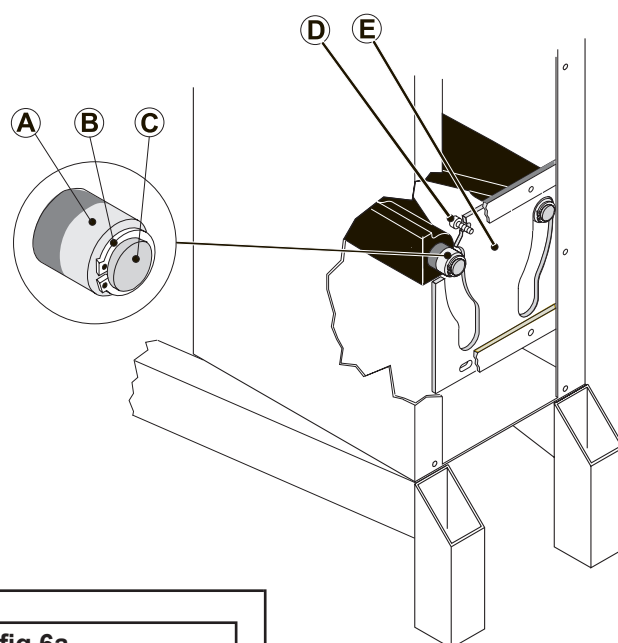
**Bowl height (X):** AR100 = 297 mm.

The upper and lower position of the bowl is determined by micro switch (1) and (2), (fig. 7b). The two mechanical stops consisting of the bolts (3) and (4) are adjusted so that they will be hit approx. 1 mm after the micro switch, in case the micro switch should fail. The upper position of the bowl arms is adjusted by bending the spring arm of the micro switch (2) either forwards or backwards; it is of utmost importance that the stop screw (3) is re-adjusted afterwards. In the same way the lower position is adjusted by bending the spring arm of the micro switch (2). **NB:** The spring arm must not be bent so far backwards that the bowl arms do not hit it. Thereafter the mechanical stop (4) is adjusted..

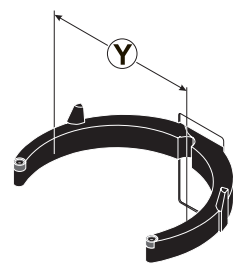
**fig.7a** Measuring of bowl height:



**fig.6** Adjustment of bowl fixing and bowl centering

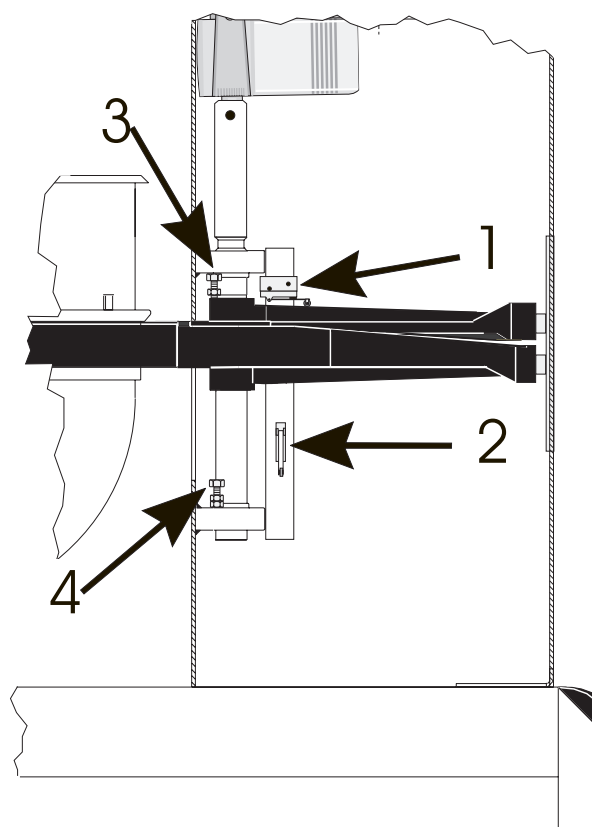


**fig.6a**



The bearing (A) has two diameters. As standard the mixer is delivered with the bearings mounted so that the smallest diameter points away from the bowl arms, which means the loosest bowl clamping.

**fig.7b** Adjustment of bowl height:





**ERROR CODES:**

If the mixer is overloaded, the motor will stop and  will be shown for 'overheat' in the display.

- Allow the mixer to cool down.
- After a short time, the display will change to normal mode.
- The mixer can be started again. See also the section “**Start-up after stop at high speed**” on page 4.

<b>Indhold af Overensstemmelseserklæring,</b> (Maskindirektivet, 2006/42/EC, Bilag II, del A)	<b>DK</b>
<b>Contents of the Declaration of conformity for machinery,</b> (Machinery Directive 2006/42/EC, Annex II., sub. A)	<b>GB</b>
<b>Inhalt der Konformitätserklärung für Maschinen,</b> (Richtlinie 2006/42/EG, Anhang II, sub A)	<b>DE</b>
<b>Contenu de la Déclaration de conformité d'une machine,</b> (Directive Machine 2006/42/CE, Annexe II.A)	<b>FR</b>
<b>Inhoud van de verklaring van overeenstemming voor machines,</b> (Richtlijn 2006/42/EC, Bijlage II, onder A)	<b>NL</b>
<b>Contenido de la declaración de conformidad sobre máquinas,</b> (Directiva 2006/42/EC, Anexo II, sub A)	<b>ES</b>

Fabrikant; Manufacturer; Hersteller; Fabricant; Fabrikant; Fabricante: A/S Wodschow & Co.  
 Adresse; Address; Adresse; Adresse; Adres; Dirección: Kirkebjerg Søpark 6, DK-2605 Brøndby, Denmark

Navn og adresse på den person, som er bemyndiget til at udarbejde teknisk dossier  
 Name and address of the person authorised to compile the technical file  
 Name und Anschrift der Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen  
 Nom et adresse de la personne autorisée à constituer le dossier technique  
 naam en adres van degene die gemachtigd is het technisch dossier samen te stellen  
 nombre y dirección de la persona facultada para elaborar el expediente técnico

Navn; Name; Name; Nom; Naam; Nombre: Kim Jensen  
 Adresse; Address; Adresse; Adresse; Adres; Dirección: Kirkebjerg Søpark 6, DK-2605 Brøndby, Denmark  
 Sted, dato; Place, date; Ort, Datum; Lieu, date ; Plaats, datum ; Place, Fecha: Brøndby, 28-09-2016

Erklærer hermed at denne røremaskine  
 Herewith we declare that this planetary mixer  
 Erklärt hiermit, dass diese Rührmaschine  
 Déclare que le batteur-mélangeur ci-dessous  
 Verklaart hiermede dat Menger  
 Declaramos que el producto batidora

- er i overensstemmelse med relevante bestemmelser i Maskindirektivet (Direktiv 2006/42/EC)  
 is in conformity with the relevant provisions of the Machinery Directive (2006/42/EC)  
 konform ist mit den Bestimmungen der EG-Maschinenrichtlinie (Direktiv 2006/42/EG)  
 Satisfait à l'ensemble des dispositions pertinentes de la Directive Machines (2006/42/CE)  
 voldoet aan de bepalingen van de Machinerichtlijn (Richtlijn 2006/42/EC)  
 corresponde a las exigencias básicas de la Directiva sobre Máquinas (Directiva 2006/42/EC)
- er i overensstemmelse med følgende andre CE-direktiver  
 is in conformity with the provisions of the following other EC-Directives  
 konform ist mit den Bestimmungen folgender weiterer EG-Richtlinien  
 Est conforme aux dispositions des Directives Européennes suivantes  
 voldoet aan de bepalingen van de volgende andere EG-richtlijnen  
 está en conformidad con las exigencias de las siguientes directivas de la CE

2014/30/EU ; 1935/2004 ; 10/2011

Endvidere erklæres det  
 And furthermore, we declare that  
 Und dass  
 Et déclare par ailleurs que  
 En dat  
 Además declaramos que

- at de følgende (dele af) harmoniserede standarder, er blevet anvendt  
 the following (parts/clauses of) European harmonised standards have been used  
 folgende harmonisierte Normen (oder Teile/Klauseln hieraus) zur Anwendung gelangten  
 Les (parties/articles des) normes européennes harmonisées suivantes ont été utilisées  
 de volgende (onderdelen/bepalingen van) geharmoniseerde normen/nationale normen zijn toegepast  
 las siguientes normas armonizadas y normas nacionales (o partes de ellas) fueron aplicadas

EN454:2014 ; EN60204-1:2006; EN12100-2011

EN61000-6-1:2007; EN61000-6-3:2007

DS/EN 1672-2 + A1:2009

**Innehåll i örsäkran om maskinens överensstämmelse**, (Maskindirektivet 2006/42/EG, bilaga 2, A)  
**Contenuto della dichiarazione di conformità per macchine**, (Direttiva 2006/42/CE, Allegato II, parte A)  
**Sisukord masina vastavusdeklaratsioon**, (Masinadirektiiv 2006/42/EÜ, lisa II, punkt A)  
**Treść Deklaracja zgodności dla maszyn** (Dyrektywa maszynowa 2006/42/WE, Załącznik II, pkt A)  
**Sisältö vaatimustenmukaisuusvakuutus koneesta** (Konedirektiivi 2006/42/EY, Liite II A)

SE  
IT  
EE  
PL  
FI

Tillverkare; Fabbricante; Tootja; Producent; Valmistaja:

A/S Wodschow & Co.

Adress; Indirizzo; Aadress; Adres; Osoite:

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Imię i nazwisko oraz adres osoby upoważnionej do przygotowania dokumentacji technicznej

Henkilön nimi ja osoite, joka on valtuutettu kokoamaan teknisen tiedoston

Namn; Nome e cognome; Nimi; Imię i nazwisko; Nimi:

Kim Jensen

Adress; Indirizzo; Aadress; Adres; Osoite:

Kirkebjerg Søpark 6, DK-2605 Brøndby, Denmark

Ort och datum; Luogo e data; Koht, kuupäev; Miejscość, data; Paikka, aika:

Brøndby, 28-09-2016

Försäkrar härmed att denna blandningsmaskin

Con la presente si dichiara che questo mixer planetaria

Deklareerime käesolevaga, et Planetaarmikseri

Niniejszym oświadczamy, że mikser planetarny

vakuuttaa, että tämä mikseri tyyppi

- överensstämmer med tillämpliga bestämmelser i maskindirektivet (2006/42/EG)  
is è conforme alle disposizioni della Direttiva Macchine (Direttiva 2006/42/CE)  
vastab kehtivatele masinadirektiivi (2006/42/EÜ) nõuetele  
spełnia wymagania odpowiednich przepisów dyrektywy maszynowej (2006/42/WE)  
on konedirektiivin (2006/42/EY) asiaankuuluvien säännösten mukainen
- överensstämmer med bestämmelser i följande andra EG-direktiv  
è conforme alle disposizioni delle seguenti altre direttive CE  
vastab järgmiste EÜ direktiivide nõuetele  
spełnia wymagania przepisów innych dyrektyw WE  
on seuraavien muiden EY-direktiivien säännösten mukainen

2014/30/EU; 1935/2004 ; 10/2011

Vi försäkrar dessutom att

e che

Lisaks ülaltoodule deklareerime, et

Ponadto oświadczamy, że

ja lisäksi vakuuttaa, että

- följande (delar/paragrafer av) europeiska harmoniserade standarder har använts  
sono state applicate le seguenti (parti/clausole di) norme armonizzate  
kasutatud on järgmisi Euroopa harmoniseeritud standardeid (või nende osi/nõudeid)  
zastosowano następujące części/klauzule zharmonizowanych norm europejskich  
seuraavia eurooppalaisia yhdenmukaistettuja standardeja (tai niiden osia/kohtia) on sovellettu

EN454:2014 ; EN60204-1:2006; EN12100-2011

EN61000-6-1:2007; EN61000-6-3:2007

DS/EN 1672-2 + A1:2009

## **A/S WODSCHOW & CO.**

Kirkebjerg Søpark 6  
DK-2605 Brøndby  
Denmark

Phone: 43 44 22 88  
info@wodschow.dk  
www.bearvarimixer.com