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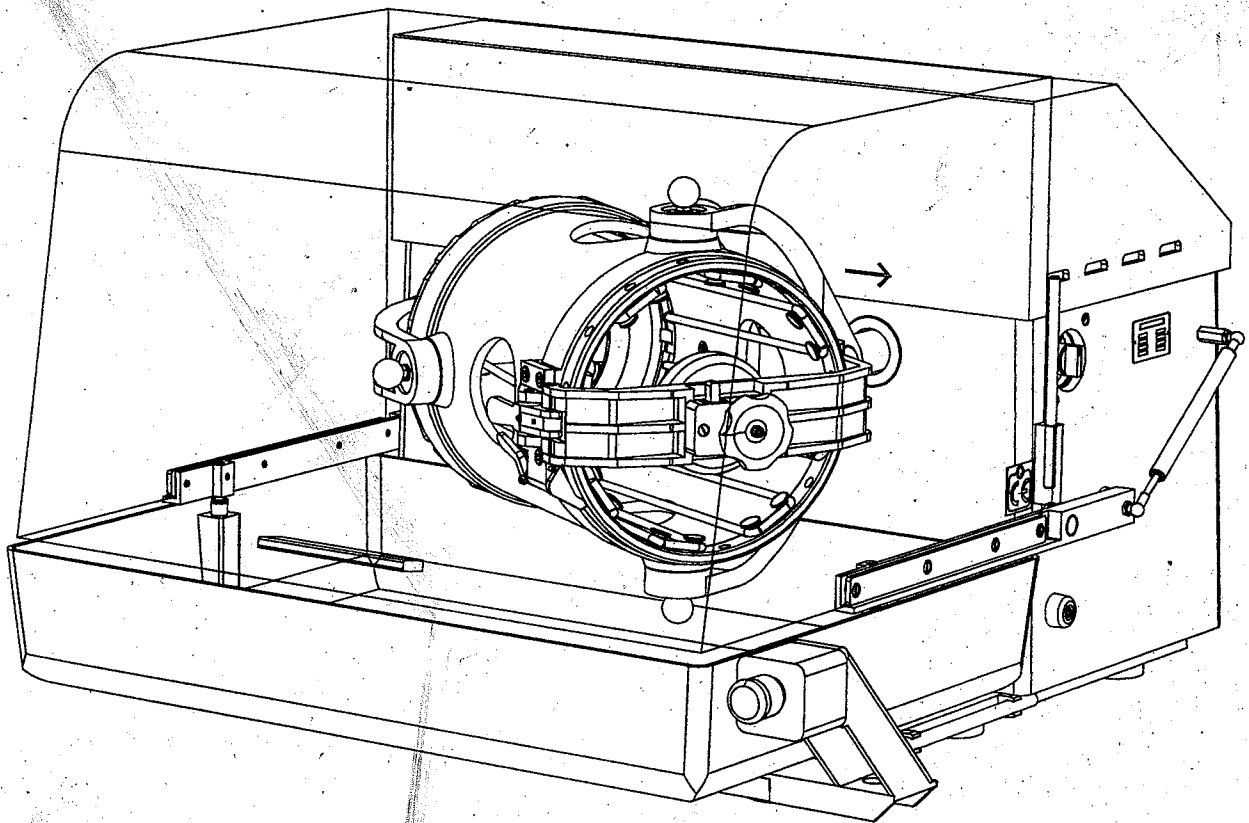
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Operating Instructions

Shaker Mixer

TURBULA ^{®SYSTEM SCHATZ} **Type T10 B**



 **Glen Mills** INC.

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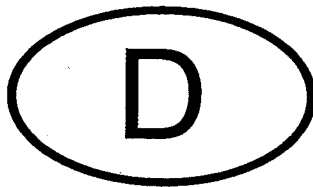
Dear Customer,

Congratulations! Your decision to buy the **TURBULA® shaker mixer Type T10 B** is an investment in the future. We would like to take the opportunity to thank you very much for your wise purchase.

Whenever you need our support just contact one of our local WAB dealers or our headquarters directly. If you have any questions about the operating instructions or would like to give us your comments about them, let us know. We would be pleased to assist you.

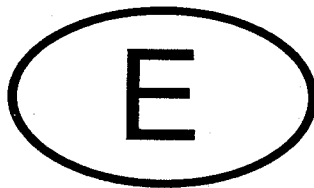
Now we wish you all the best with your new equipment - we are sure you will find your investment worthwhile.

Kind regards,
Your **WAB-Team**.



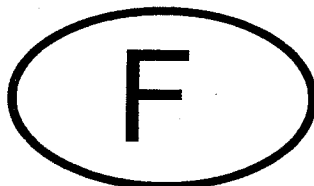
Achtung!

**Nur Originalteile der Firma
Willy A. Bachofen AG
verwenden**



Attention!

**Use only original parts of
Willy A. Bachofen AG**



Attention!

**N'utilisez que des pièces de
rechange d'origine
Willy A. Bachofen AG**

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Appendix:

Fax order
Wiring diagram

2 Specifications

2.1 Mixer Drive

Motor		
Operating voltage	V, Hz	220, 60
Nominal capacity	kW	0.37
Nominal current	A	2.0
Power transmission		
Roundbelt	Type	POLYCORD
Dimension	mm	Ø 8 x 1235 mm 60Hz
Antistatic V-belt (2 pcs.)	Type	LW1180-2xSPA
Roller chain (2 pcs.)	Type	Wippermann DIN 8187
Dimension		60 links incl. chain joint (1/2")
Speed	min ⁻¹	15 23 32 44
		(The effective speed of the cage depends on several influences, and must not correspond to the above mentioned data's.)

2.2 Shaft Bearings

Maintenance	Life-time lubricated, maintenance free
-------------	--

2.3 Mixing Service Container

Net mixing container	Litres	Up to 17
Mixing container dimensions max.	mm	Length 380 / Ø 250
Mixing container filling rate	Percent	40 to 99

2.4 Control Equipment

ON / OFF - switch	Type	DSH3P-E-01/10
Manufacturer		Sprecher & Schuh
Emergency stop	Type	RPV / KC / I
Manufacturer		Klöckner & Möller

2.5 Instruments and Signal Elements

Locking magnet (Incl. micro-switch)	Type	108 410, 0 -250 V, 3A (To stop or interrupt start with opened gear cover)
Limit switch	Type	8064 Ex (To stop or interrupt start with opened safety cover)
Locking magnet	Type	KVM40A/5070 (To prevent opening of the safety cover when the mixer is working)

2.6 Mixer Equipment

Rubber straps	Type	SBR black (normal)
Dimensions	mm	Outside diameter Ø =634 mm Mat. thickness= Ø 8 mm

2.7 Noise Information

(Emission value to DIN 45635)

Idling	dB(A)	<70
Working operation	dB(A)	<70, (depending on the mixing components!)

2.8 Wiring Diagram

Wiring diagram	No.	60261 / 4104
----------------	-----	--------------

2.9 Dimensions

Width	mm	880
Height (safety cover closed)	mm	630
Height (safety cover open)	mm	850
Depth	mm	960

2.10 Weight

Mixer weight	kg	~150
Base weight	kg	~70

3 Description

The performance of the TURBULA® shaker mixers is based on a service proved kinetic principle (reversal kinematics). The fed charge in the service container is subjected to the action of a three-dimensional motion, and therefore mixed.

3.1 Construction Details

Mixing Containers

The choice of a suitable container is free, i.e. containers made of plastic, glass, aluminium, steel, and other materials may be used unless the size limits imposed by the dimensions of the cage - 250 mm in diameter and 380 mm long - are exceeded

Clamping Systems:

For standard containers Ø 250mm, length 380mm the clamping device is used. Hereby the container is secured axially with the barrel centring on the bottom and with the locking bracket on the top of the basket.

Smaller containers up to max. Ø 225mm and length 375mm are fixed with the special device consisting of clamping grip and rubber clamping rings.

4 Application Area and Correct Operation



The "TURBULA® shaker mixer Type T10 B" may only be used for the task specified. The correct application is the batch mixing of several substances (liquid - liquid, liquid - solid or solid - solid) or the mechanical-chemical surface treatment.

Machine Limiting Values:

Max. speed	44 rpm
Max. ambient temp.	room temperature
Max. load weight	the max. load weight incl. service container is 30 kg.

Instructions for Use

- We point out that even within the limits of the machine ratings, the mixing process might produce some excess pressure.
- Before operating the machine please make sure that the product will not react in an undesirable or even uncontrollable way to the mixing process.
- If excess pressure is to be expected, only containers which are made for excess pressure operations may be used. While working and opening these containers, corresponding safety measures must be taken.

Proper use also includes the compliance with the manufacturer's commissioning, operation, and servicing instructions (operating instructions), as well as attention to avoidable inappropriate behaviour. The machine may only be operated and maintained by qualified employees who are familiar with the machine and have been informed about potential dangers.

Any other uses will be considered improper. The manufacturer does not accept liability for any damages resulting from improper use.

The operating instructions are part of the machine delivery and, in the case of resale, must be passed on to the new owner.

4.1 Residual Dangers



In spite of all precautions, some danger may remain. Residual dangers are potential, not very obvious hazards, such as e.g.:

- Fire risk from leakages
- Risks caused by the product such as allergies, skin irritations or burns
- Risk because of malfunctions of the control system
- Risks involved in operating electric controls

5 Safety

5.1 Explanation of Symbols and Notices

5.1.1 Work Safety Symbol



You will see this symbol next to all safety notices concerning danger to life and limb. Follow these instructions and act with caution. At the same time, all prevailing laws and safety and accident prevention regulations must be observed.

5.1.2 Warning-Notice

WARNING marks advices to be particularly observed in order to keep up with the instructions and the accurate procedure, and to avoid damage to the machine.

5.1.3 Note

Note marks places which record application advices or correct working procedures.

5.2 General Safety

The TURBULA® T10 B, hereafter called mixer, is of technically sound construction and operationally reliable. Working procedures are, however, such, that certain places and parts of the mixer cannot be made totally safe without impairing its operation. Therefore, it is of great importance that good personal safety practices are employed to safeguard personnel and mixer.

This mixer can be dangerous if used improperly by untrained personnel or employed for other uses than specified.

- Read and carefully observe the mixer's operating instructions as well as its safety notices before unpacking, installing and starting-up the machine.
- Store the operating instructions in an easily accessible place close to the mixer.
- The mixer may only be set up, operated and maintained by authorised, qualified employees, who are familiar with the machine.

- All local safety and accident prevention regulations apply for the operation of the machine; these should be taken note of and adhered to.
- Observe attached notices and warning signs.
- Always wear close-fitting clothes while working the machine.
- Tie away and cover long hair. Do not wear jewellery, such as necklaces and rings. They might get caught in the machine and cause injury.
- Immediately see a doctor in case of injuries, accidents or skin irritations.

5.3 Operating Safety



While working with the cage, rubber straps or the product, ensure wearing safety glasses.

- Before undertaking any mixer maintenance work, the mixer must be steady disconnected from any electric sources.
- Secure the mixer against an unexpected restart, while doing maintenance work.
- If the mixer has stopped for no apparent reason, do not immediately switch it back on. It may be the case that someone stopped the mixer to carry out some manual adjustments and has forgotten to secure it against being restarted. An unexpected restart could lead to serious injuries to a colleague.
- Check, before starting the mixer, whether any tools/devices have been in the collecting tub. Remove them.
- Immediately replace worn or damaged rubber straps.
- Do not change, dismantle, circumvent or bridge any safety devices.
- The product must not come into contact with mucous membranes or enter eyes, mouth and nose. If this should happen, rinse immediately with tap water, or follow in-house first aid measures.

5.4 Safety During Maintenance

All maintenance and repair work must be carried out by authorised, qualified personnel. The special risks of working on electrical equipment have to be taken into account. Therefore:

- **Only allow experienced, qualified personnel to set up the mixer, and only authorised electricians to carry out any electrical work.**
- Before undertaking any mixer maintenance work or rectifying any malfunctions, disconnect the mixer from the electric sources.
- Replace immediately any notices, warning signs or safety labels that have become damaged or been removed.
- Refit all safety devices that have been taken off for maintenance work.
- Unauthorised alterations and modifications of the mixer impair the safety of its operators and of the mixer itself and must not be undertaken.
- Spare parts must conform to the technical requirements of the machine manufacturer.
- **Only original WAB parts must be used. WAB does not accept any liability for damage resulting from the use of non WAB spare parts, wearing parts or accessories.**

5.5 Suggestions for In-house Operating Guidelines

Operating guidelines are instructions given out by an employer to ensure safe operating processes. They are mandatory instructions imposed by the employer under his right to give directives. The employees are bound by the accident prevention regulations to observe these instructions.

The employer's general obligation to draw up and publicise such operating directives is based on national accident prevention regulations.

These operating instructions are therefore supplemented by national accident prevention regulations and environmental regulations.

Employees must be instructed concerning, respectively be obliged to the following:

- The operator must agree only to run the machine in impeccable condition.
- The risks involved in the handling of the materials, the necessary safety measures, and the rules of conduct, including instructions for emergencies and First Aid.
- Methods and scope of regular inspections concerning the safe working condition of the machine.
- Permitted operational data (e.g. settings for safety and monitoring devices).
- Servicing.
- Rectification of malfunctions.
- Environmental regulations.
- Safe handling of the product.
- The machine owner is responsible for a clean and orderly working environment for the machine, by means of instructions and supervision.
- The operating company must establish unequivocal rules concerning the responsibilities for operation and servicing of the mixer, to be observed by everyone, so that, from a safety point of view, all responsibilities are clearly defined.
- The mixer operator is obliged to inform his superior immediately of any changes to the machine that could impair its safety. All safety instructions must be observed.

6 Requirements at Installation Point

Level floor with a permissible surface pressure of at least 70kp/cm².

Space requirement for operation and maintenance:
Enough clear space around the mixer to access anything at any time.

6.1 Customer Supply

6.1.1 Electricity Supply - General

Fuse according to regulations

7 Transport



Transport must be executed by experienced carriers! Transport should, if at all possible, be done by crane



Only lift the mixer by the two red lifting ring nuts (41). The machine must hang horizontally from the crane. Ensure that all ropes or other lifting gear are fixed tight and cannot slip away.



Transport by fork lift truck is dangerous. There is a risk of tilting, as the mixer's centre of gravity lies away from its centre.

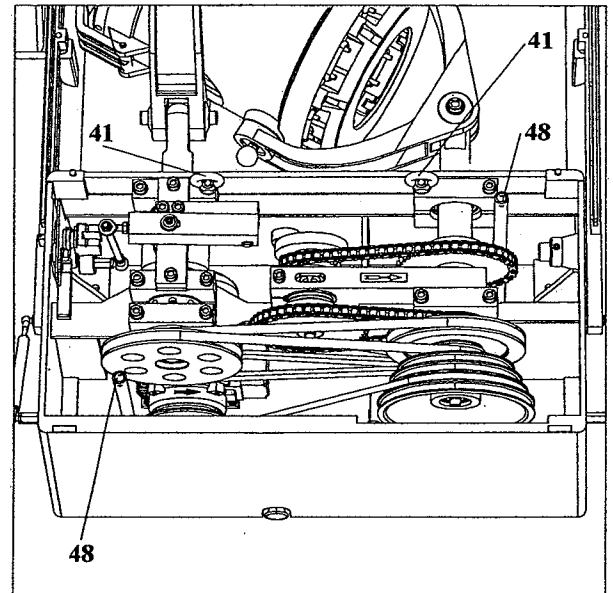
When unloading from a lorry, both the lorry and the fork lift truck must be standing on a level, smooth and firm industrial floor.

- Only lift the mixer a few centimetres from the floor and transport carefully to the point of installation.

7.1 Version without Pedestal

The machine is delivered in a wooden crate, screwed to the bottom of the crate. The safety cover of the mixer lies separately on the bottom of the crate. Machine and safety cover are wrapped together in plastic foil and therefore safe against displacement.

- Remove wrapping of the mixer / safety cover.
- Remove gear cover (14) [Fig. 5].
- Loosen and remove transport fixings (48).
- Lift the machine carefully out of the wooden crate, by means of a crane, on the red lifting ring nuts (41), and place it on a horizontal floor.
- Check the delivery for transport damages and completeness.
- In case of transport damage, keep the packing and inform the shipping agent and the manufacturer immediately!
- Remove enclosed units, e.g. mixing container, before transporting.



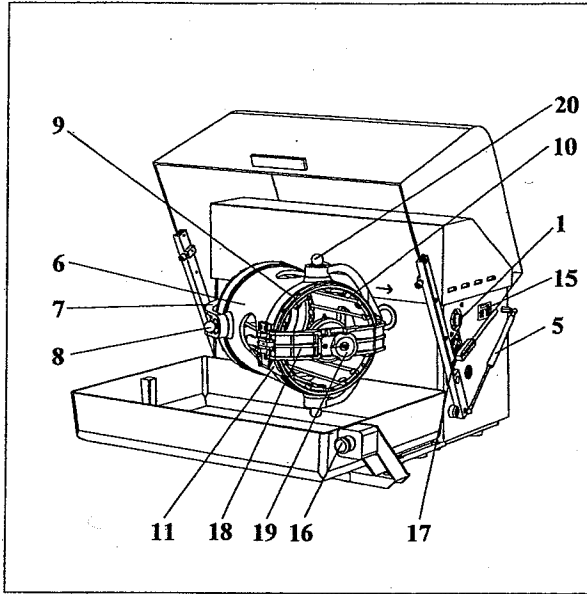
[Fig. 2]

7.2 Version with Pedestal

The machine is delivered in a wooden crate, wrapped in plastic foil and screwed to the bottom of the crate.

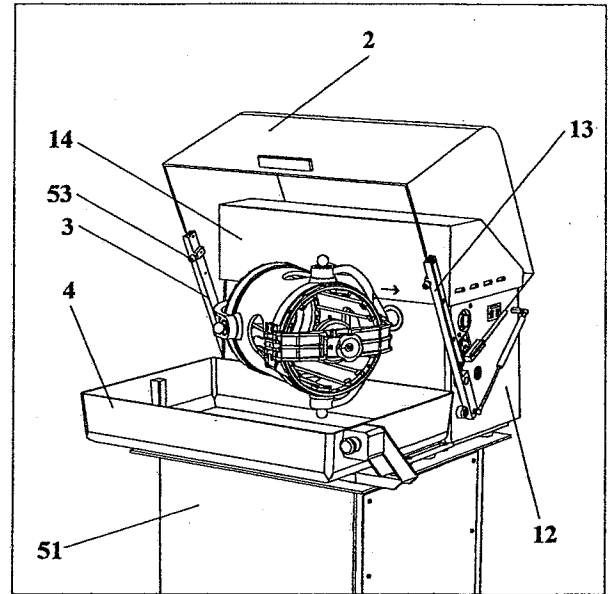
- Remove wrapping. While doing so, secure the safety cover, which is only set on top of the mixer and kept there by the foil, from falling down.
- Detach the machine with pedestal by loosening and removing the four screws from the crate floor.
- Lift machine carefully out of the wooden crate, by means of a crane, on the red lifting ring nuts (41), and place it on a horizontal floor.
- Check delivery for transport damage and completeness.
- In case of transport damage, keep the packaging and immediately inform the shipping agent and the manufacturer.
- Remove enclosed units, e.g. mixing container, before transporting.

8 Components, controls and indicators



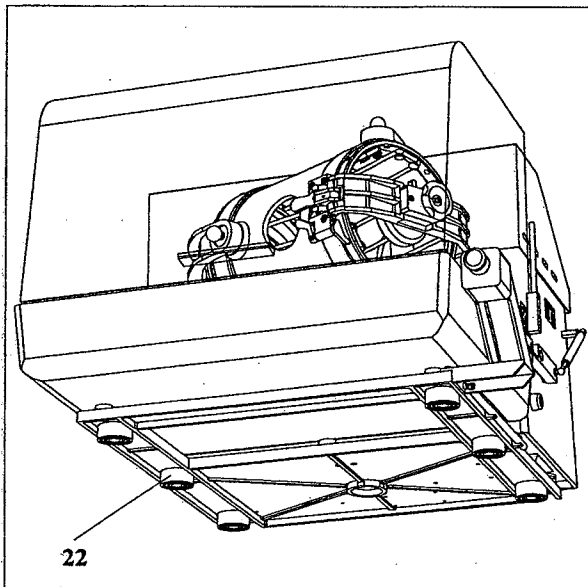
[Fig. 3]

- 1 Rotary switch (ON / OFF)
- 5 Suspender
- 6 Basket
- 7 Articulated bracket
- 8 Black ball handle
- 9 Tension collar
- 10 Rubber straps
- 11 Click and pawl arrangement
- 15 Type plate
- 16 EMERGENCY STOP push button
- 17 CE-sign
- 18 Locking bracket
- 19 Star grip
- 20 Red ball handle



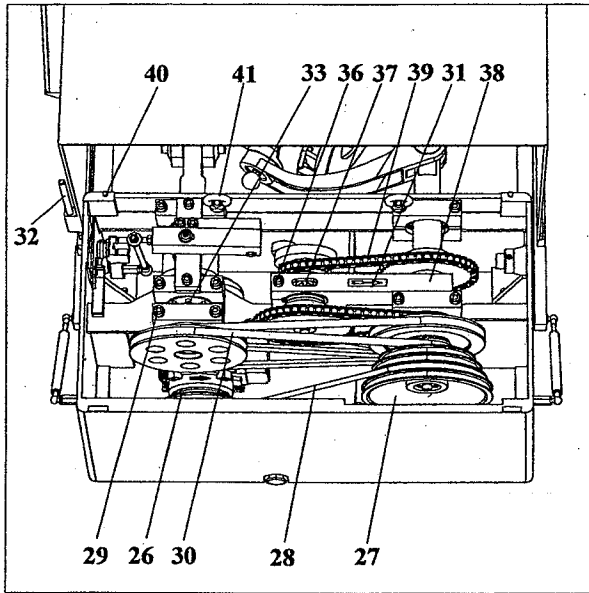
[Fig. 5]

- 2 Safety cover
- 3 Left safety cover bracket
- 4 Collecting tub
- 12 Housing
- 13 Right safety cover bracket
- 14 Gear cover
- 51 Pedestal
- 53 Buffer



[Fig. 4]

- 22 Rubber element



[Fig. 6]

- 26 Motor pulley
- 27 Multi-step driving pulley
- 28 Round belt
- 29 Screws
- 30 V-belt
- 31 Rotation index arrow
- 32 Rotary pin
- 33 Tightener
- 36 Screw
- 37 Eccentric bush
- 38 Pendulum support
- 39 Roller chain
- 40 Centering pin
- 41 Ring nut

9 Steps before Initial Start-up

WARNING

Before the initial start-up the customer must carry out the following measures:

- Installation and alignment of the mixer (chap. 9.1)
- Electric supply (chap. 9.2).

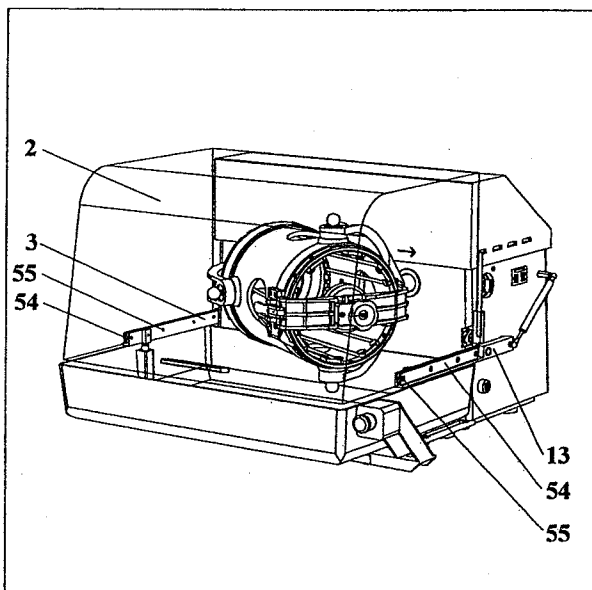
9.1 Installation and Alignment of the Mixer

9.1.1 Version without Pedestal

- Put mixer onto a stable table.
- For the use at high speed, secure the mixer to the table by means of two screws in the holes of the removed transport fixings (48) [Fig. 2].

Install safety cover:

- Loosen the four screws (55) on each of the two safety cover brackets (3/13) and remove them together with the pressure plates (54).
- Set the safety cover (2) onto the safety cover brackets (3/13).
- Fasten pressure plates (54) with the screws (55) to the safety cover brackets (3/13) and the safety cover (2).



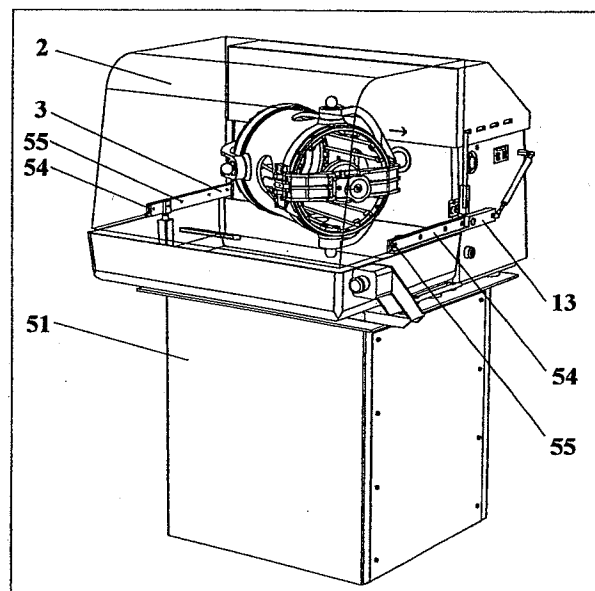
[Fig. 7]

9.1.2 Version with Pedestal

- Set up mixer at the final site.
- Fasten the pedestal (51) of the mixer to the floor by means of the 4 screws, with which the pedestal was screwed to the crate floor.

Install safety cover:

- Loosen the four screws (55) on each of the two safety cover brackets (3/13) and remove them together with the pressure plates (54).
- Set up the safety cover (2).
- Fasten pressure plates (54) with the screws (55) to the safety cover brackets (3/13) and the safety cover (2).



[Fig. 8]

9.2 Electric supply



The initial switching-on of the machine must be carried out by qualified personnel.

The mixer is already delivered with a cable but without a plug. The corresponding plug has to be mounted locally.

The connection of the plug must be carried out by an approved electrician according to the pertaining regulations!

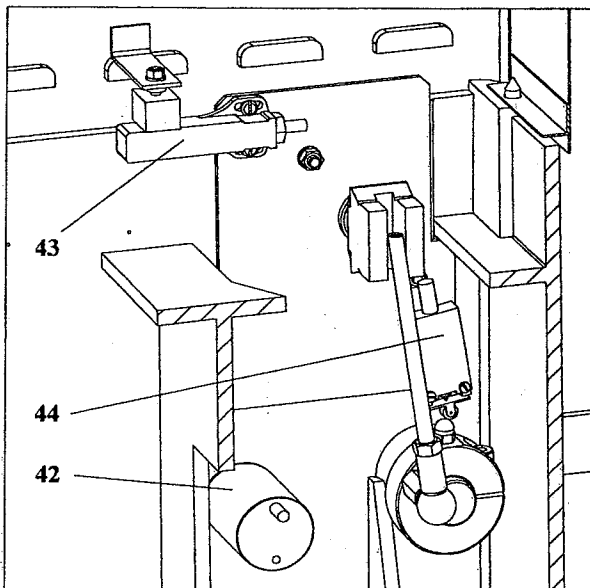
Ensure correct rotation direction of the drive motor.

Ensure, that the local operating voltage, frequency and fuse protection corresponds to the data plate and the specifications (chapter 2). In case of discrepancies the machine must not be connected.

Safety Devices

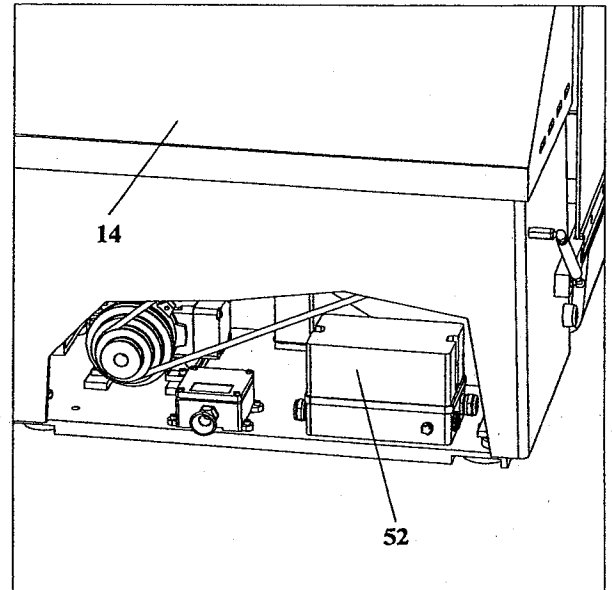
The following safety devices are already installed in the mixer:

- Magnetic circuit breaker (43) to stop or interrupt start when the gear cover (14) is open.
- Limit switch (44) to stop or interrupt start when safety cover (2) is open [Fig. 5].
- Locking magnet (42) to prevent opening of the safety cover (2) while the mixer is working [Fig. 5].



[Fig. 9]

- The wiring of all safety devices has already been carried out by the manufacturer, according to the wiring diagram, on a terminal strip in the electrical box (52).
- Do not change, dismantle, circumvent or bridge any safety devices.



[Fig. 10]

10 Start-up



An improper initial start-up can cause injury and damage!

Only qualified personnel who are familiar with the operating instructions and have been given the necessary guidance by a technician of the manufacturer are permitted to operate the mixer. They must have sufficient experience in process engineering and be informed about accident prevention regulations!

By doing the initial start-up of the version with tension collar and rubber straps there is to check if the rubber straps are duly tensioned.

10.1 Starting the Mixing Process

- Fill the mixer with product. The filling rate, depending on the product is between 40 % - 99 %.



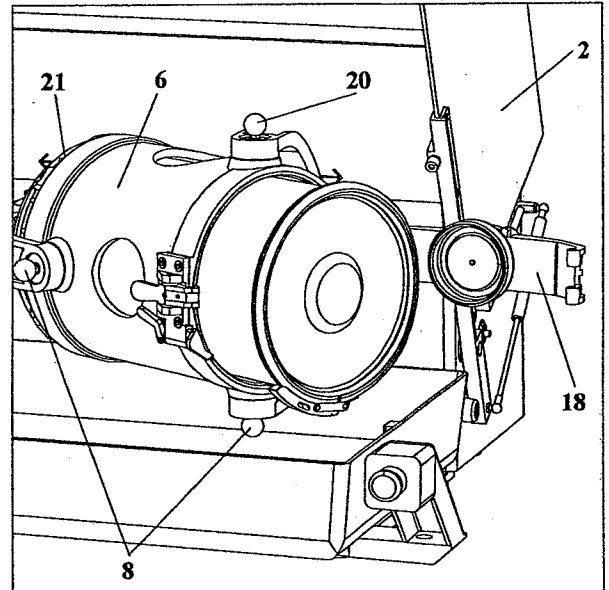
The basket must only be rotated by the red and black ball handles (20/8).

- With safety cover (2) open [Fig. 5], rotate the basket (6) slowly with the red and black ball handles (20/8) until the red ball handle (20) is on top and the locking arrangement snaps in.

10.1.1 Use with Clamping Device

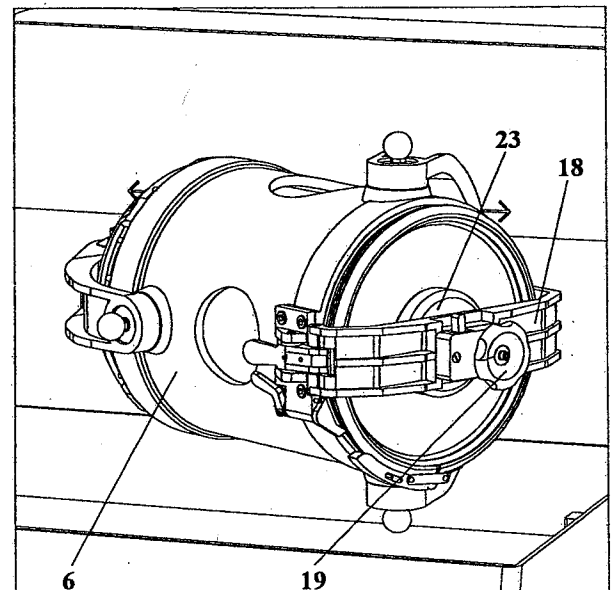
The clamping device is applied when containers of Ø 250x380mm are used.

- Insertion of the container into the basket (6).



[Fig. 11]

- Axial securing of the container by means of barrel centring (21) on the basket bottom and locking bracket (18) on the basket head.
- Clearance free adjustment by contact plate (23) by means of spindle and star grip (19).



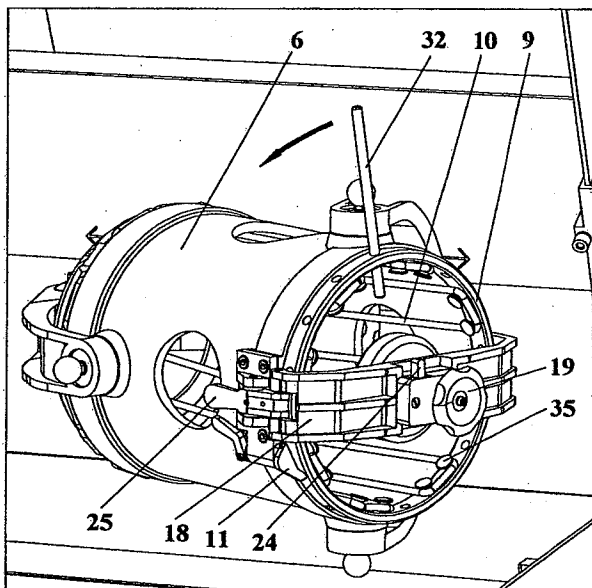
[Fig. 12]

10.1.2 Use with Tension Collar and Rubber Straps

For containers of various shapes and sizes the special construction with tension collar and rubber straps is used.

The rubber straps are tightened inside the basket from one side to the other and attached to so-called fastening mushrooms (35), as described in chap. 11.3.

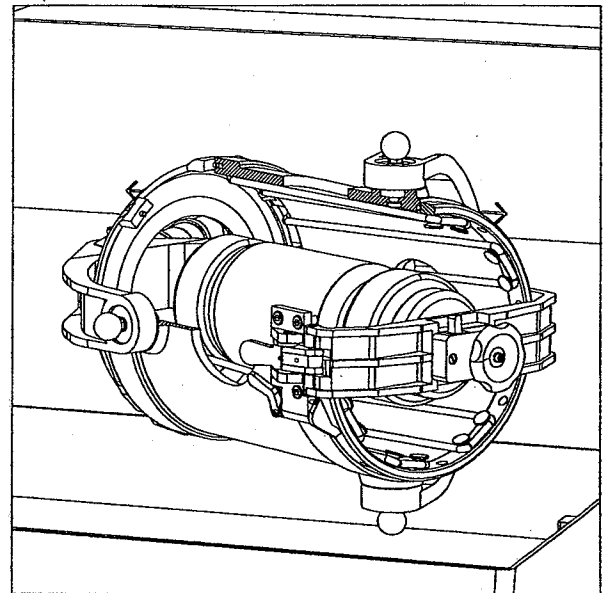
- Insert the mixing container into the basket (6).
- Turn the tension collar (9) to the left with the rotary pin (32), until the container is fixed within the locked rubber straps and held tightly. Hereby, the click and pawl arrangement (11) must lock into place in the tension collar (9).
- Remove rotary pin (32).
- Secure the container by closing the locking bracket (18) and by locking the star grip (19).



[Fig. 13]

WARNING

If the mixing container is shorter than the basket then it is important to add a support / packing piece to fix the container in the basket. The support can be made of plastic, wood, cork, etc.



[Fig. 14]

10.2 Switching-on of Mixer

- Close safety cover (2) [Fig. 5] when the container is well fixed inside the basket (6).
- Switch on the mixer with the rotary switch (1). [Fig. 3]

Note

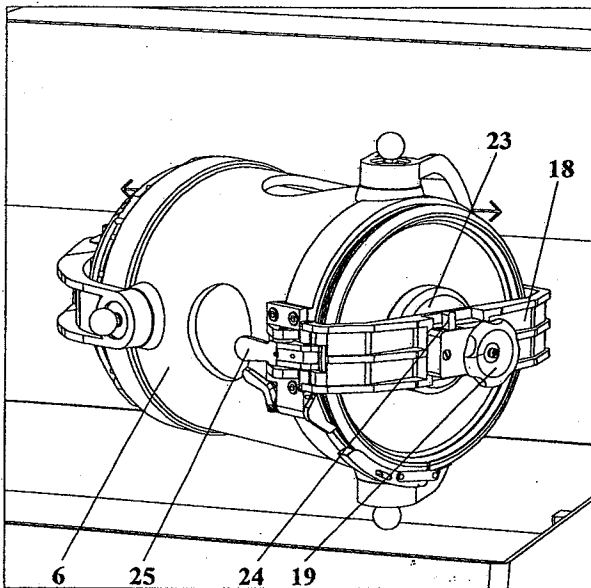
Please watch out after the starting of the mixing process, that the mixing container does not touch the articulated bracket nor the safety cover. [Fig. 3/5]

10.3 Ending of the mixing process

- Switch off the mixer by using the rotary switch (1). [Fig. 3]
- After about 10 seconds (safety dwell time), the safety cover (2) can be opened.
- Rotate the basket (6) slowly with the red and black ball handles (20/8) until the red ball handle (20) is on top and the locking arrangement snap in. [Fig. 11]
- Remove the service container now.

10.3.1 Removing of the Container when using Clamping Device

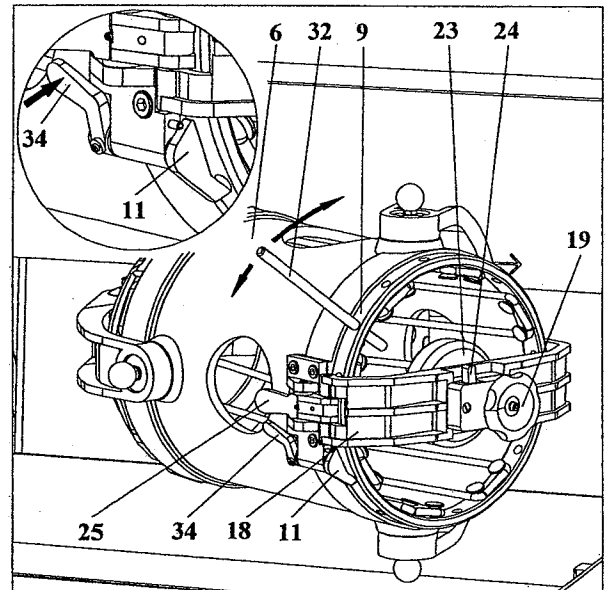
- Push pawl lever (24) to the left side and, at the same time, loosen the pressure plate (23) by turning the star grip (23).
- Push in Pawl (25).
- Open locking bracket (18).



[Fig. 15]

10.3.2 Removing of the Container when using Tension Collar and Rubber Straps

- Push pawl lever (24) to the left side and, at the same time, loosen the pressure plate (23) by turning the star grip (23).
- Push in Pawl (25).
- Open locking bracket (18).



[Fig. 16]

- First turn the tension collar (9) a couple of millimetres to the left side with the rotary pin (32). Release click and pawl arrangement (11) by pushing the lever (34).
- Turn carefully, yielding to the tension, turn the tension collar (9) approx. 90° to the right with the rotary pin (32).
- Release lever (34) and repeat the procedure until the container is fully released.
- Push in pawl (25).
- Remove container.

11 Maintenance

11.1 Care and Maintenance Instructions



Maintenance must only be carried out by trained personnel who are familiar with the current safety regulations. Before carrying out any maintenance work on the Turbula mixer, the machine must be stopped and disconnected from the power supply. The mixer has to be protected against unauthorised connection to the power supply.

11.1.1 Care

Clean the mixer regularly.

11.1.2 Maintenance Instructions

Regular checking of the rubber straps for damage and worn.

The roller chains should be checked, greased and tensioned once a year.

11.1.3 Keep a Report Book

It is recommended to keep a report book is kept for the mixer.

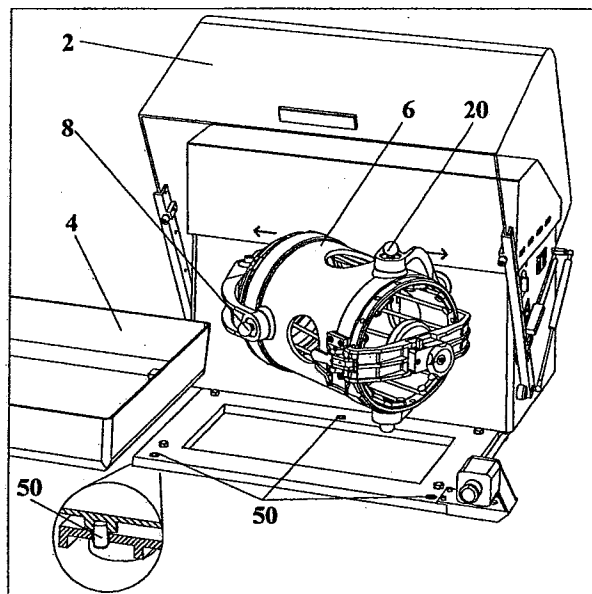
This way you will always know after how many working hours routine maintenance steps were carried out.



Please note that the straps may unintentionally become loose. Should this happen, or should the bands break, then there is danger of damage.

11.2 Cleaning of the Collecting Tub

The collecting tub (4) of the mixer can be removed for the cleaning:



[Fig. 17]

- With safety cover (2) open [Fig. 17], rotate the basket (6) slowly with the red and black ball handles (20/8) until the red ball handle (20) is on top and the locking arrangement snaps in.
- Push collecting tub (4) on the front side down shortly, so that the pin (50) on the opposite side loosens out of the boring.
- Loosen the remaining two pins by lifting the collecting tub with both hands.
- Remove collecting tub (4). For this keep the collecting tub slightly biased, so that it doesn't touch the lower plastic button.
- In order to install the collecting tub (4), the pins (50) have to be set to the borings and pushed to the stop.

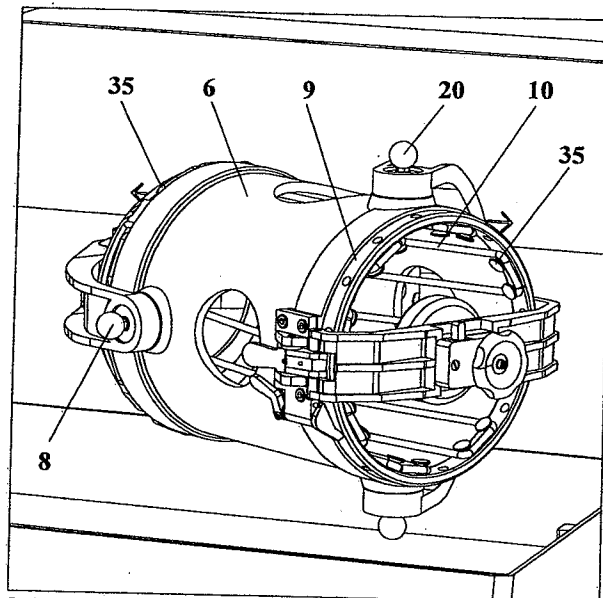
11.3 Changing the Rubber Straps

- With safety cover (2) open [Fig. 17], rotate the basket (6) slowly with the red and black ball handles (20/8) until the red ball handle (20) is on top and the locking arrangement snaps in.
- Release rubber straps (10) from the fastening mushrooms (35) of the tension collar (9).



Please note that the rubber straps (10) are under high tension.

- Release and remove rubber straps (10) from the lower fastening mushrooms (35).
- Attach new rubber strap (10) to the lower fastening mushrooms (35).
- Pull rubber strap to the extent that it can be carefully attached to the fastening mushrooms (35) of the tension collar (9).
- Attach the second rubber strap (10) on the opposite side.
- The remaining rubber straps (10) can now be attached in any sequence.



[Fig. 18]

11.4 Changing the Round Belt

- Remove the gear cover (14) [Fig. 5].
- First remove the round belt (28) of the smaller motor pulley (26) and then of the multi-step driving pulley (27).
- Put the new round belt onto the smaller motor pulley (26).
- Apply round belt (28) to the multi-step driving pulley (27) in a way that, when turning this pulley, it pulls to the desired step by itself.

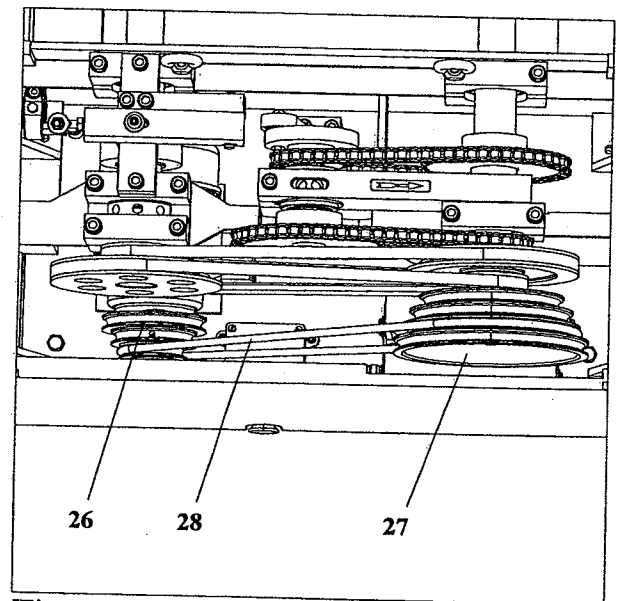


Watch out that you don't get your fingers stuck!

- Duly refit the gear cover (14) [Fig. 5].

WARNING

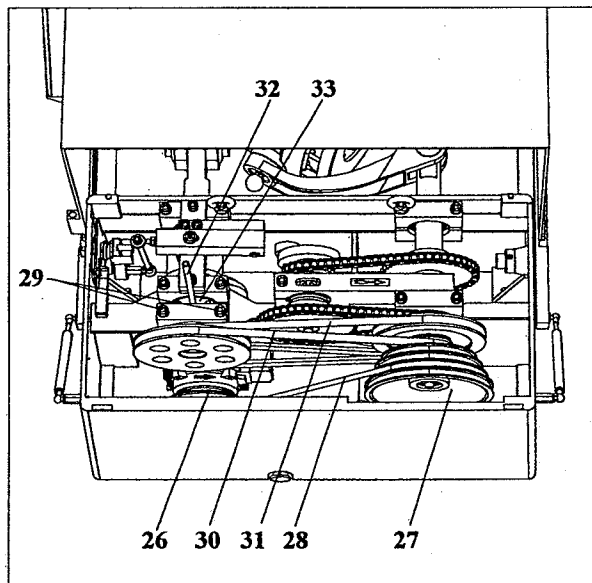
Make sure that the round belt is positioned in the correct groove with the motor pulley (26) and the multi-step driving pulley (27). Incorrect location will lead to premature wear of the belt, and incorrect speed.



[Fig. 19]

11.5 Changing V-belt / Tightening V-belt

- Remove the gear cover (14) [Fig. 5].
- Loosen screws (29).
- Insert rotary pin (32) into hole of the tightener (33).
- Loosen the v-belts (30/31) by pushing the rotary pin to the left.
- Remove v-belts.
- Lay on new v-belts.
- Tighten v-belts by pushing the rotary pin (32) to the right while tightening the screws (29).
- Remove rotary pin (32) and put it back into the mount.
- Duly refit the gear cover (14) [Fig. 5].

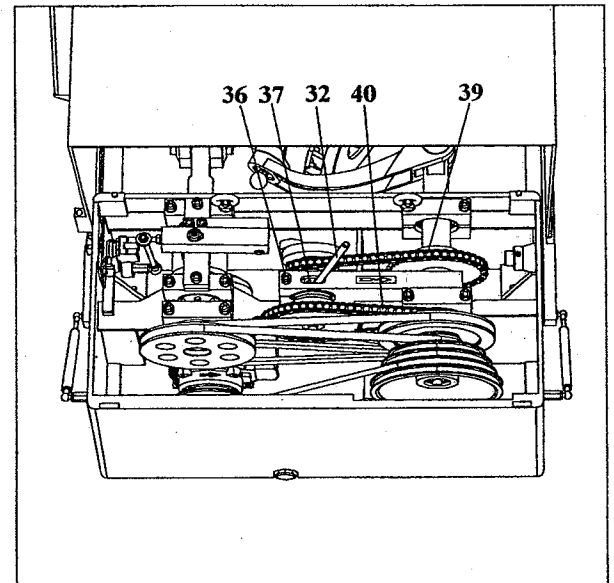


[Fig. 20]

11.6 Changing Roller Chains / Tightening Roller Chains

- Remove the gear cover (14) [Fig. 5].
- Loosen screw (36).
- Insert rotary pin (32) into hole of the eccentric bush (37).
- Loosen the roller chains (39/40) by pushing the rotary pin (32) to the left.
- Open the chain locks and change the roller chains (39/40). Close the chain locks again. The closed side of the chain locks must hereby show into the direction of the arrow, so they can't loosen by themselves.

When laying on the rear roller chain please note that all 4 marking points stand up in vertical line.



[Fig. 21]

- Tighten the chains by pushing the rotary pin to the right while tightening the screw (36).
- Remove rotary pin and put it back into the mount.
- Duly refit the gear cover (14) [Fig. 5].

WARNING

The chain tension must be free of clearance. However, overstraining the roller chains (39/40) can lead to damages on the roller chains or on the sprocked wheel. If a roller chain is not greased, an increased wear of the roller chain is unavoidable.

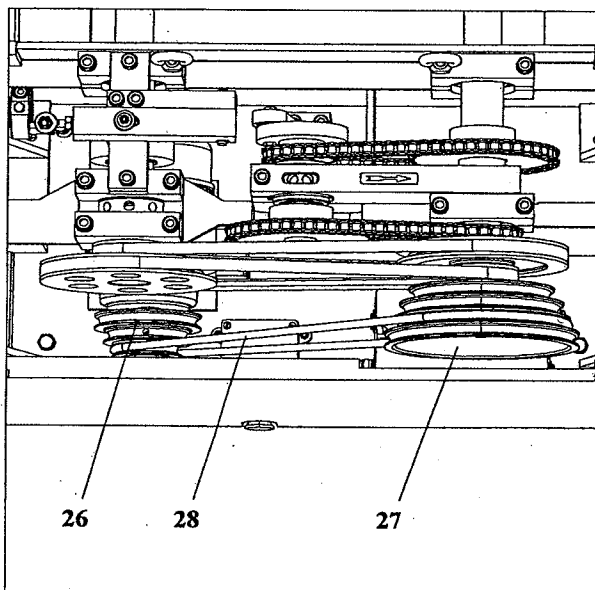
11.7 Speed Adjustment

By changing the position of the elastic round belt on the multi-step driving pulleys (26/27), four speeds can be chosen.

- Remove the gear cover (14) [Fig. 5].
- First remove the round belt (28) of the smaller motor pulley (26) and then of the multi-step driving pulley (27).
- Put the round belt onto the smaller motor pulley (26) into the newly chosen stage.
- Apply belt to the multi-step driving pulley (27) in a way that, when turning this pulley, it pulls to the desired level by itself.
- Duly refit the gear cover (14) [Fig. 5].

WARNING

Make sure that the round belt is positioned in the correct groove with the motor pulley (26) and the multi-step driving pulley (27). Incorrect location will lead to premature wear of the belt, and incorrect speed.



[Fig. 22]

11.8 Repairs

WARNING

For repairs special tools are needed as well as special knowledge and skills (which are not imparted by these operating instructions). Repairs should therefore only be carried out by trained experts.

Only original WAB parts must be used. WAB does not accept any liability for damages resulting from the use of non-WAB-spare parts, wear parts or accessoires.

Call on our customer service when needed.

You will find the address of the manufacturer and the office in chapter 1 "Machine Data".

For general reference the appendix contains a list of wearing parts.

12 Fault / Cause / Remedy

No.	Fault	Cause	Remedy
12.1	Mixer switches off by itself	<ul style="list-style-type: none"> • Power consumption of the motor too high. • Magnetic circuit breaker defect. • Limit switch defect. • Basket is blocked. • Round belt (28) is damaged. • V-belt (30/31) is damaged. • Roller chain (39/40) is damaged. • Power failure • Fine fuse damaged. 	<ul style="list-style-type: none"> • Check and see 12.2 • Check and see 12.3 • Check and spare if needed • Check and see 12.4 • Replace round belt (28) • Replace V-belts (30/31) • Replace roller chains (39/40) • Electrician must check • Check and spare if needed
12.2	Power consumption of the motor too high	<ul style="list-style-type: none"> • Motor protection switch released. 	<ul style="list-style-type: none"> • Check max. load weight. • Possibly the basket is blocked (12.4) • Check power supply voltage and operating voltage
12.3	Magnetic circuit breaker defect	<ul style="list-style-type: none"> • Mechanical or electrical defect of the magnetic circuit breaker 	<ul style="list-style-type: none"> • Electrician must check • Replace by a new magnetic circuit breaker.
12.4	Basket is blocked	<ul style="list-style-type: none"> • Rubber straps defect. • Basket overloaded. • Container slipped out of the basket. 	<ul style="list-style-type: none"> • Replace rubber straps • Check load weight. • Check rubber straps and load weight, if necessary add support pieces.
12.5	Mixer does not start	<ul style="list-style-type: none"> • Emergency stop button pressed. • Safety cover not closed. • Fault as described in 12.1 • Motor protection switch defect. 	<ul style="list-style-type: none"> • Release emergency stop. • Close the safety cover. • Check and see 12.1. • Replace motor protection switch.

13 List of replacement and wearing parts

WARNING !

Real-Positions do not correspond to the figure positions

Order example: machine type + machine number + fig.-pos. + real-pos. + designation + item no..

Fig.-Pos	Real-Pos.	Designation	Item no.
2	102	Safety cover	B.YQ3-21020
24	154	Pawl lever	C.HE1-44226
--	156	Pawl	C.KL3-44231
--	391	Retaining ring	D.17G-0772
--	443	Spring d5,5/0,63x12	D.FE1-55/0,63
10	445	Rubber strap	T.000-0182
--	449	Spring d6/0,8x28	D.FE1-6/0,8/28
20	454	Red ball handle	D.GR1-28/M8R
8	455	Black ball handle	D.GR1-28/M8
1	456	Rotary switch (ON/OFF)	D.SC7-DSH3P
19	457	Star grip	D.GR1-85/9
--	478	Radial bearing d8/10x10	D.LA1-701-810
39	502	Roller chain with lock	D.KE4-60 ^{1/2"}
30	504	V-belt LW 1157	D.KE2-SPA1157
28	507	Round belt 60Hz	D.RI1-8x1235PO
44	521	Limit switch	D.ST8-8064
43	535	Magnetic circuit breaker	D.SC7-108410
42	565	Locking magnet	D.MA2-KMV-1
--	2011	Pawl complete (for star grip)	K.000-00652



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