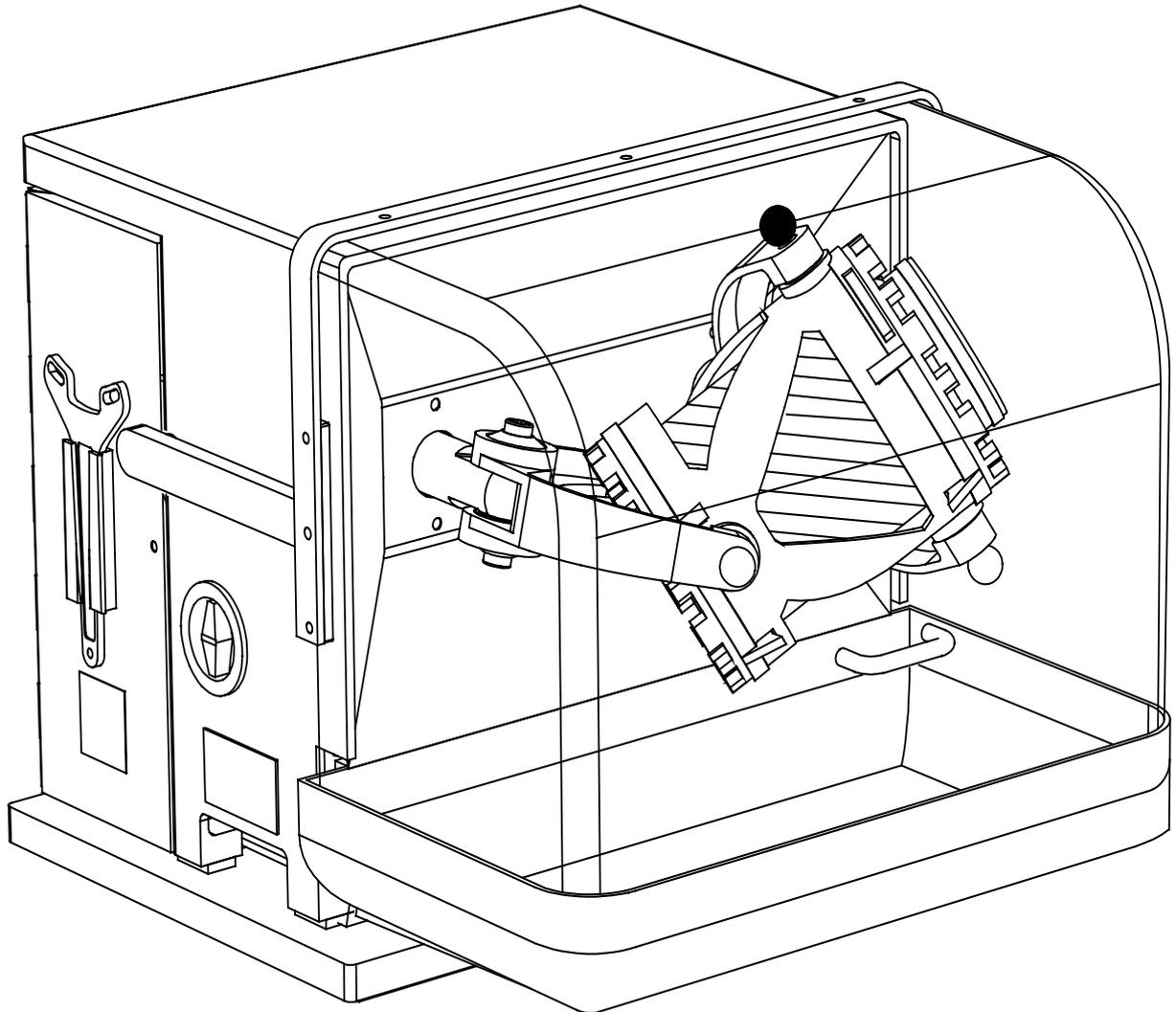


Operating Instructions

Shaker Mixer

TURBULA ^{®SYSTEM SCHATZ} **Type T2 C**



Willy A. Bachofen AG • Maschinenfabrik • Utengasse 15/17 • CH-4005 Basel
Telephone +41 (0) 61 6867 100
Telefax +41 (0) 61 6867 110
Internet www.wab.ch
E-mail wab@wab.ch

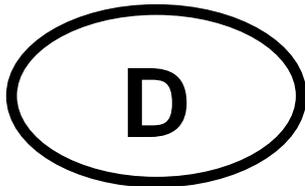
Dear Customer,

we would like to take the chance to congratulate you. Your decision, to buy the " **Shaker Mixer TURBULA® Type T2 C** ", will be an investment into the future. Now we take the opportunity and thank you very much for your wisely Buy.

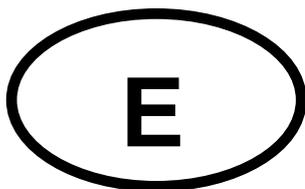
Whenever you need our Support, don't worry! Just contact one of our WAB-Dealers or directly our Headquarters. If you have any requests about the Operating Instructions, or you'd like to give us a comment about it, just tell us. It is our pleasure to help and satisfy you.

And now we wish you all the best with your new investment, and we're sure it is it worth.

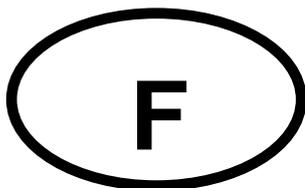
Kind regards,
your **WAB-Team**.



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!

Table of Contents

Chapter		Page
1	Machine Data	4
2	Specifications	5
2.1	Mixer drive	5
2.2	Shaft bearings	5
2.3	Mixing service container	5
2.4	Control equipment	5
2.5	Instruments and signal elements	5
2.6	Mixer equipment.....	5
2.7	Noise information	5
2.8	Wiring diagram	6
2.9	Dimensions	6
2.10	Weight.....	6
3	Description	6
3.1	Construction details	6
4	Application area and correct operation	7
4.1	Residual Dangers	7
5	Safety	8
5.1	Explanation of Symbols and Notices	8
5.1.1	Work - Safety - Symbol.....	8
5.1.2	Warning-Notice	8
5.1.3	Note.....	8
5.2	General Safety.....	8
5.3	Operating Safety	8
5.4	Safety during maintenance.....	9
5.5	Suggestions for in-house operating guidelines	9
6	Requirements at installation point	10
6.1	Customer supply	10
6.1.1	Electricity supply	10
7	Transport and installation	10
7.1	Transport.....	10
7.2	Transport by crane, fork lift truck etc.	10
8	Components, controls and indicators	11
9	Steps before initial start-up	12
9.1	Installation and alignment of the machine	12
9.2	Connection to the electricity supply	12
10	Start-up	13
10.1	Starting the mixing process.....	13
10.2	Break in production	14

Chapter	Page
11 Maintenance	15
11.1 Care and maintenance instructions	15
11.1.1 Care	15
11.1.2 Maintenance instructions	15
11.1.3 Keep a report book	15
11.2 Changing the rubber straps	15
11.3 Changing the Roundbelt	15
11.4 Changing the Flatbelt	15
11.5 Changing the chain	16
11.6 Tightening the chain	16
11.7 Changing the speed	17
11.8 Repairs	17
12 Fault / Cause / Remedy	18
13 List of replacement and wearing parts	19
13.1 Replacement and wearing parts	19

Appendix:

Conformity declaration
Fax order

Catchword-Index:

A		M		R	
Access side door	18	Machine Name	4	Real positions	19
Accident prevention	8; 9	Machine No.	4	Rectification	9
C		Machine Type	4	Report book	15
Copyright	4	Maintenance	5; 8; 9; 15; 3	Residual dangers	7
Correct application	7	Manufacturer's Address	4	S	
Country of Origin	4	Max. ambient temp	7	Safety prevention	8
Customer service	17	Max. gross weight	6; 13	Safety cover	18
Customer Service Address	4	Max. load weight	7	Safety devices	12
D		Max. Rpm	7	Safety notices	8
Date of Manufacture	4	Mixer does not start	18	Service container	18
E		Mixing service containers	6	Space requirement	10
Electrical supply	12	O		T	
Emission value	5	On / Off - Switch	5	Tension collar	18
F		Order example:	19	Transport	10; 2
Fax-order	4	Ordering spare parts	4	Type plate	4
I		P		W	
Initial start up	13	Power consumption	18	WAB parts	4; 9; 17
Initial start-up	12	Proper use	7	WARNING	13
Instructions for Use	7	Protective motor switch	18	Wear	8; 17
		Q		Wiring diagram	6
		Questionnaire	20	Y	
				Your specific comments	20

1 Machine Data

Customer's Name

Customer's Address

Machine Name: **TURBULA®**
Machine Type: **T2 C**
Machine No.: **958813**
Date of Manufacture: **1995**

Manufacturer's address: Willy A. Bachofen AG
Maschinenfabrik
Utengasse 15/17
CH-4005 Basel
Tel.: (+41) 061-681 51 51
Fax: (+41) 061-681 50 58
Internet: <http://www.wab.ch>
E-mail: wab@wab.ch

Customer Service Address:

Tel:
Fax:

Country of Origin: Switzerland

Copyright

© Willy A. Bachofen AG Maschinenfabrik 1995
(ISO 9001 certified)

When ordering spare parts please quote:

Machine Type

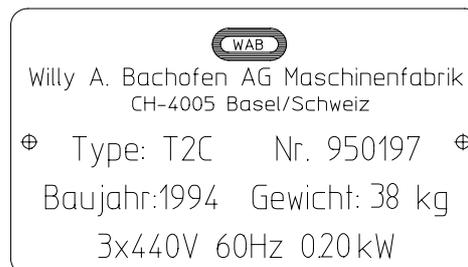
Machine No.

Drawing no. + Real pos.

Description + Item no.

Required quantity

(Please use also the fax-order in the appendix !)



[Fig. 1]

(Figure is symbolic!)

The type plate is situated on the left side of the machine, underneath the On / Off - switch.

Note

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.

2 Specifications

2.1 Mixer drive

Motor

Operating voltage		V, Hz	220, 50
Nominal capacity	kW		0.18
Nominal current		A	1,1

Power transmission			
Antistatic Roundbelt	Type		POLYCORD
Dimension	mm		Ø 5 x 660 mm
Endless Flatbelt	Type		KST
Dimension	mm		20 / 1.3 x 624 mm
Chain	Type		½“ N-Sp. NR.332/3
Dimension			48 pieces incl. chain joint
Speed	min ⁻¹		22 32 46 67 96

(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

Self-lubricating, maintenance free

2.3 Mixing service container

Net Mixing service container	Litres	Up to 2 Litres
Mixing service container-Dimensions max.	mm	Length 215 mm Ø 130 mm
Mixing service container-filling rate	Percent	40 to 99 %

2.4 Control equipment

On / Off - Switch	Type	QTP10
Make		CMC

2.5 Instruments and signal elements

Magnetic circuit breaker	Type	108 410, 0 - 250 V, 3 A
--------------------------	------	-------------------------

(To stop or interrupt start with opened access door)

2.6 Mixer equipment

Rubber straps	Type	SBR Black (Normal) or Fatex red (Special)
Dimensions	mm	Outside diam. Ø=89 mm; Outside diam. Ø=410 mm Mat. thickness Ø=4 mm; Mat. thickness Ø=3 mm

2.7 Noise information

(Emission value to DIN 45635)

Idling	dB(A)	<70
Working operation	dB(A)	<70, (Depending on Operation)

2.8 Wiring diagram

Wiring diagram	No.	XXXXX
----------------	-----	-------

2.9 Dimensions

Width	mm	470
Height (Safety cover retracted)	mm	410
Height (Safety cover extended)	mm	670
Depth	mm	575

2.10 Weight

Weight	kg	~38
--------	----	-----

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 service containers

The choice of a suitable service container is free, i.e. service containers made of plastics, glass, aluminium, steel, and other materials may be used unless the size limits imposed by the dimensions of the cage - 130 mm in diameter and 215 mm long - are exceeded

WARNING

The max. gross weight is 3 kg when using the black rubber straps (normal) or 5 kg by using the red rubber straps (special). (Data's refer to max. speed!)

Cage

By using flexible rubber straps, the container is able to be fixed tight in the cage. Place the free-choice container in the cage, tension the tension collar by using the tension wrench and the rubber straps will hold the container tight in the right position.

(See chap. 10.1, page 13)

4 Application area and correct operation



The "Shaker Mixer TURBULA® Type T2 C" 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 mechanical-chemical surface treatment.

Machine limiting values: Max. Rpm

Max. ambient temp
Max. load weight

96 min⁻¹

Room temperature

The max. gross weight of the container is 3 kg when using the black rubber straps and 5 kg by using the red rubber straps.

(Above Data's refer to max. Speed!)

When working lower speeds, it is possible to work the machine with a max. gross weight of 10 kg.

Instructions for Use

We advise that even within the limits of the machine ratings, the mixing process might produce some excess pressure.

Ensure before operating the machine that the product will not react in an undesirable or even uncontrollable way to the mixing process.

If you have to expect excess pressure, than you have to use only container which are made for excess pressure operations. While working and open them, ensure to take attention on the several instructions.

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 constitute 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 electronic 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 places where special care should be taken, so that instructions and accurate procedures are followed and damage to the machine avoided.

5.1.3 Note

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

5.2 General Safety

The high performance "Shaker mixer TURBULA® T2 C", 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 be employed to safeguard personnel and mixer.

This mixer can be dangerous if used improperly by untrained personnel or employed for other uses than the one 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, 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 left lying near the mixer. Remove them.

Immediately replace worn or damaged rubber straps.

Do not change, dismantle, circumvent or bridge any safety devices.

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 do rectificate any malfunctions, disconnect the mixer from the electrical 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 should 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 agree to and/or be instructed concerning the following:

The operator must agree only to run the machine in impeccable condition.

The risks involved in the Handling of the materials, and the necessary safety measures and 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 the safety and monitoring devices).

Servicing.

Rectification of malfunctions.

Environmental regulations.

Safe Handling of the product.

The operating company is responsible for ensuring, by way of instructions and supervision, a clean and orderly working environment for the machine.

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.

Observe attached notices and warning signs.

The machine operator has joint responsibility for ensuring that no unauthorised persons interfere with the machine.

6 Requirements at installation point

Level floor with a permissible surface pressure of at least 40 kg.

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

Fuse according to regulations

7 Transport and installation



Transport must be executed by experienced carriers!

The machine is delivered in a case, and fastened by using tension robes on a wooden pallet.

Take care when removing the tension robes and lift the machine carefully out of the case by using the hand grips. [Fig. 2], Pos. 32.

Check delivery for transport damage and completeness.

In case of transport damage, keep the packaging and immediately inform the carrier and the manufacturer.

7.1 Transport

The mixer can be lifted by using the hand grips (32) provided in the machine base. [Fig. 2]

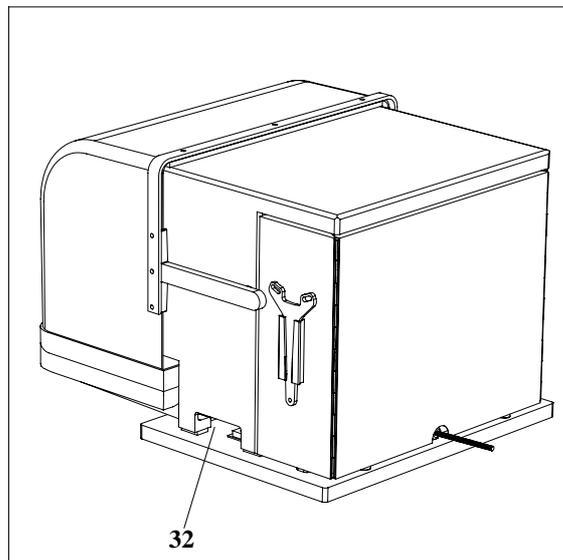


Take care to observe good practice for lifting weights!

7.2 Transport by crane, fork lift truck etc.

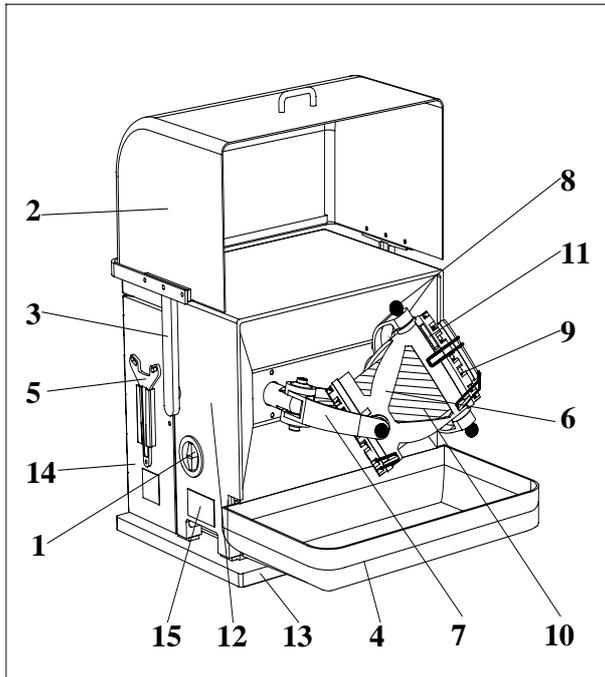


Transport by crane, fork lift truck etc. is dangerous.

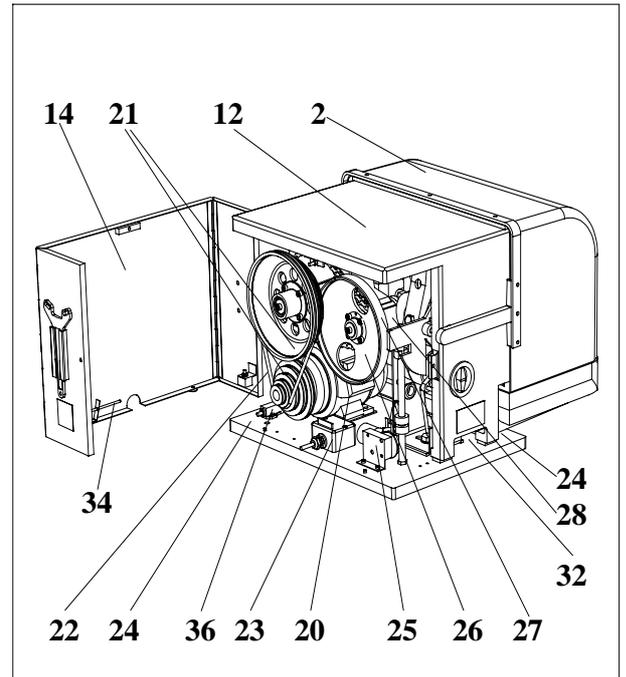


[Fig. 2]

8 Components, controls and indicators

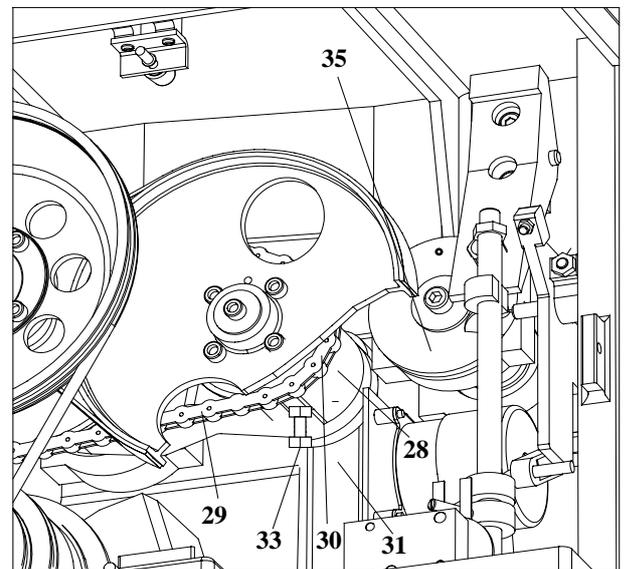


[Fig. 3]



[Fig. 4]

- 1 On / Off Switch (Protective motor switch)
- 2 Safety cover
- 3 Safety cover bracket
- 4 Tub
- 5 Tension wrench
- 6 Cage
- 7 Articulated bracket
- 8 Red plastic button
- 9 Tension collar
- 10 Rubber straps
- 11 Click and pawl arrangement incl. spring
- 12 Housing
- 13 Base plate
- 14 Access door
- 15 Type plate
- 20 Motor
- 21 Pulleys
- 22 Round belt
- 23 Junction box
- 24 Mounting holes
- 25 Timer
- 26 Flat belt wheel with indicating arrow
- 27 Flat belt
- 28 Eccentric bush
- 29 Chain
- 30 Chain wheel
- 31 Pendulum
- 32 Hand grips
- 33 Tension screw
- 34 Locating pin
- 35 Cage locating disc
- 36 Magnetic circuit breaker



[Fig. 5]

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 machine (Chap. 9.1).
- Connection to the electrical supply (Chap. 9.2).

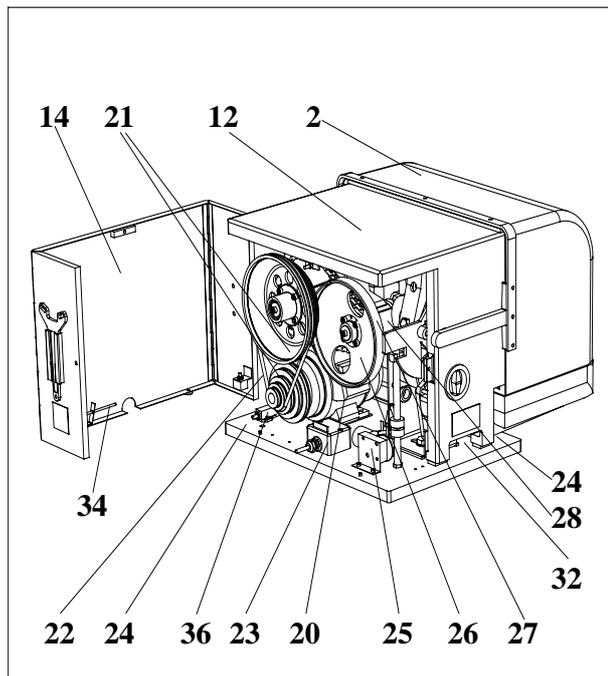
9.1 Installation and alignment of the machine

Place the machine on a solid ground and mount it tight by using min. two of the four mounting holes (24) crosswise. [Fig. 4]

(Open the access door, see chap. 11.5, page 16)



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



[Fig. 4]

9.2 Connection to the electricity supply



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

The Mixer is already connected and delivered with a cable but without a plug. The corresponding plug has to be mounted local.

The connection of the plug must be carried out by an approved electrician according to the wiring diagram and the pertaining regulations.

Ensure that the local operating voltage, frequency and fuse protection corresponds to the data on the data plate and the specifications (Chapter 4). 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 (36) to interrupt the mixer while access door (14) is open. [Fig. 4]

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 junction box (23) [Fig. 4].

Do not change, dismantle, circumvent or bridge any safety devices.

10 Start-up

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 there is to check:
Are the rubber straps (10) compl. mounted?

10.1 Starting the mixing process

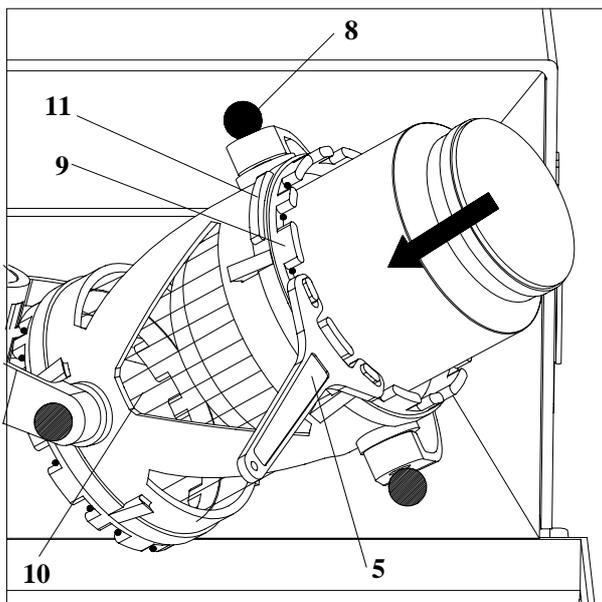
Fill up the mixer with product. The filling rate range, depending on the product) between 40% - 99%.



The mixing container cage should only be rotated by the red and black plastic buttons (8).

With safety cover (2) extended, the cage (6) is possible to rotate around by hand. Hold the red plastic button (8) and rotate the cage till the locking arrangement snap in.

If there is a container in the cage, release the rubber straps (10), and then the tension collar (9) has to be light tensioned by using the tension wrench (5). Followed by simultaneity loosen the click and powl arrangement (11). [Fig. 6]



[Fig. 6]



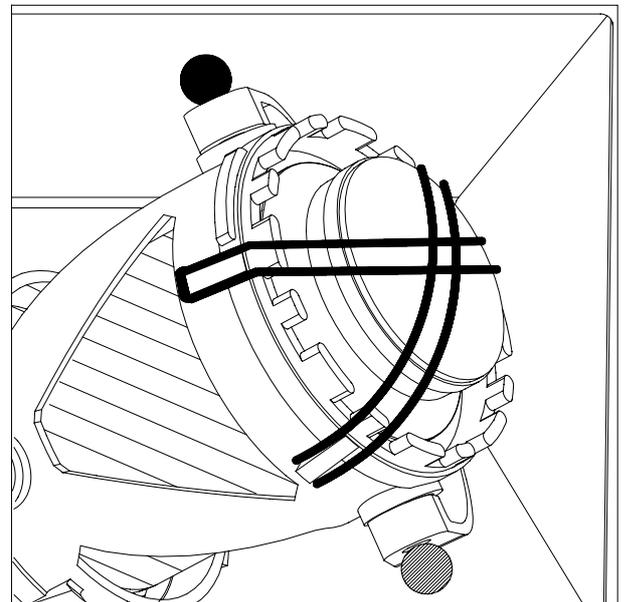
The rubber straps may only be loosened or tightened when the mixing container cage is in the locked position

Place the service container in the cage and tight it by using the tension wrench (5) and rotating the tension collar (9) counterclockwise till the rubber straps (10) hold the container safe. [Fig. 6]

The service container is hold tight axial, by using and fixing two crossed rubber straps. [Fig. 7]

WARNING

The max. gross weight is 3 kg when using the black rubber straps (normal) or 5 kg by using the red rubber straps (special). (Data's refer to max. speed!)



[Fig. 7]

Changing the speed (Check 11.7)

Retract the safety cover [Fig. 3]

Switching on the mixer by rotating the On / Off switch [Fig. 3]

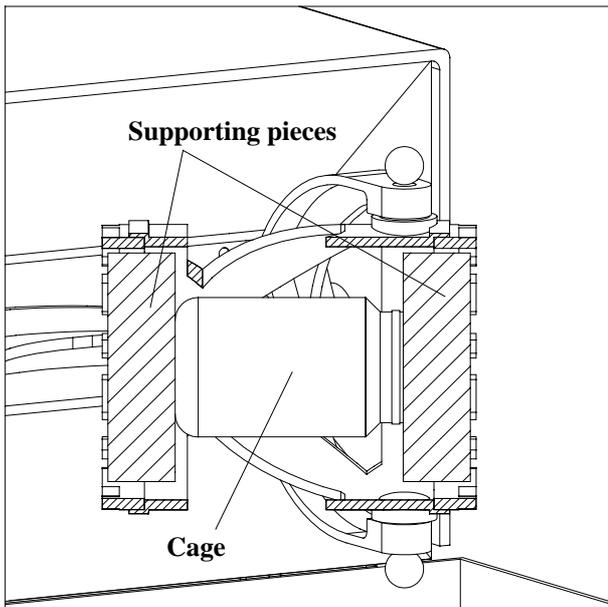
WARNING

If the mixing container is shorter than the mixing container cage then it is important to add a support / packing piece of the same diameter as the mixing container, to bring the combined length of the container and packing piece equal to the cage. The Support can be made from plastic, wood, cork, etc. [Fig. 8] Page 14.

Note

After starting the mixing operation it is important to check that the rubber bands are tight and that the mixing container does not rub inside the cage. If it does, stop the process and re-tighten the bands.

(Stopping the mixing process, see back of this sheet!)



[Fig. 8]

10.2 Break in production

Switch off the mixer by rotating the On / Off switch (1). [Fig. 3]

After appx. 15 sec., (Safety dwell time), the safety cover (2) is able to extend.

With safety cover (2) extended, the cage (6) is possible to rotate around by hand. Hold the red plastic button and rotate the cage till the locking arrangement snap in.

Carefully remove the crossed rubber straps. [Fig. 7]

To release the rubber straps, the tension collar has to be light tensioned by using the tension wrench (5). Followed by simultaneity loosen the click and pawl arrangement (11). [Fig. 6]

Remove the service container now.

11 Maintenance

11.1 Care and maintenance instructions



Maintenance should only be carried out by trained personnel who are familiar with current safety regulations.

Maintenance on the Turbula Mixer should only be carried out with the machine stopped and disconnected from the power supply. The mixer should be protected against unauthorised connection to the power supply

11.1.1 Care

Clean the mixer regularly.

11.1.2 Maintenance instructions

Regular checking the rubber straps of damage and worn. The chain tension should be checked two times during each year. During inspection of the chain, both sides should be lubricated with grease.

11.1.3 Keep a report book

It is recommended that a report book is kept for the mixer. In this way you will always know after how many working hours routine maintenance steps were carried out.



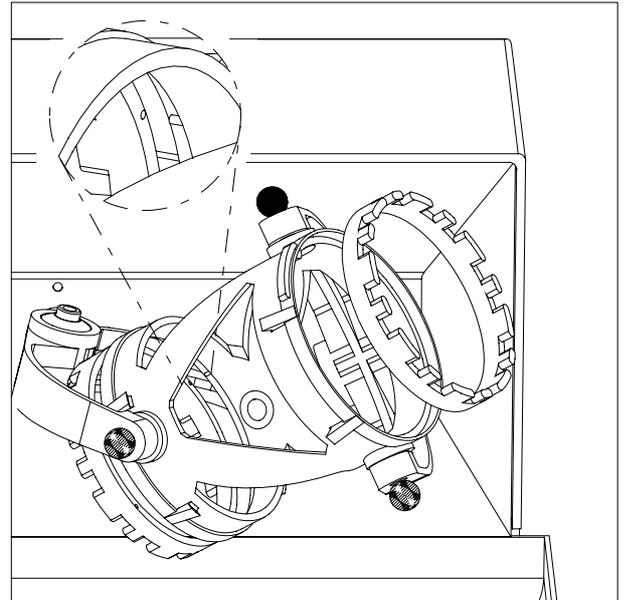
It is important to note that the straps may unintentionally become loose. Should this happen, or the bands break, then there is a danger of damage to eyes. Safety glasses or goggles should be worn!

11.2 Changing the rubber straps

Release the cage and remove the lower axial rubber straps (see [Fig. 9]). Rotate the cage back in the locked position, and if necessary remove the higher axial straps. Then remove all longitudinal straps (10) except one from the tension collars (9). Now fix back two new longitudinal straps and after that remove the old strap as well. After doing the above mentioned instructions, the whole rest of new straps can be replaced by following these instructions reverse.

NOTE

The longitudinal tension straps (10) must be fastened in the lower tension collar ring first. Then they have to be fixed in the higher tension collar ring (9). The lower tension collar ring must be located by the two small pins set into the mixing container cage and fastened by stretching two rubber straps diametrically across the tension collar and looped over the appropriate fixing lugs which are part of the cage. [Fig. 6 and Fig. 9]



[Fig. 9]

11.3 Changing the Roundbelt

Extend the safety cover and open the right access door (14)*. First remove the belt (22) of the smaller pulley and then of the larger pulley. To fit the new belt, follow these instructions in reverse order. [Fig. 4]

*=(Open the access door, see chap. 11.5, page 16)

11.4 Changing the Flatbelt

Extend the safety cover (2) and remove the access door (14) completely*. Then slip the flatbelt step by step of the pulley. Take out the flatbelt (27) by holding it over the pulley. To fit the new belt, follow these instructions in reverse order. [Fig. 4]

*=(Open the access door, see chap. 11.5, page 16)

11.5 Changing the chain

Extend the safety cover (2). To change the chain (29), the access door (14) has to be removed by loosening and removing the screw, see detail "A" [Fig. 11]. Before the chain is possible to move out, the chain has to be untensioned. The tension screw (33) must be loose and the flatbelt pulley (26) must be connected with the eccentric bush (28) through the Ø 4 mm bore by using the dowel pin (34). Rotate the flatbelt pulley (26) counter clock wise appx. 90 degree. Open the chain joint (29) and remove the chain. To become the chain joint in a suitable position, the dowel pin (34) has to be removed. Rotate the flatbelt pulley till the chain joint is accessible.

To replace a new chain, it is necessary that the pendulum is in the vertical position and the little bore of the cage locating disc (35) has to be positioned upwards. Push the dowel pin (34) through the little bore of the locating disc (35) into the machine housing till the disc is fixed. Replace the chain now and lock the chain joint (29) well. Remove the dowel pin of the cage locating disc and fix the flatbelt pulley with the dowel pin. Now the flatbelt pulley has to be rotate appx. 90 degree clock wise respectively the chain hang through 3 - 4 mm, measured out in the middle of the chain. Lock the tension screw (33) tight and remove the dowel pin.

It is very important that the chain is **adequate lubricated**. Check out the transmission on unusual noises and vibrations.

WARNING

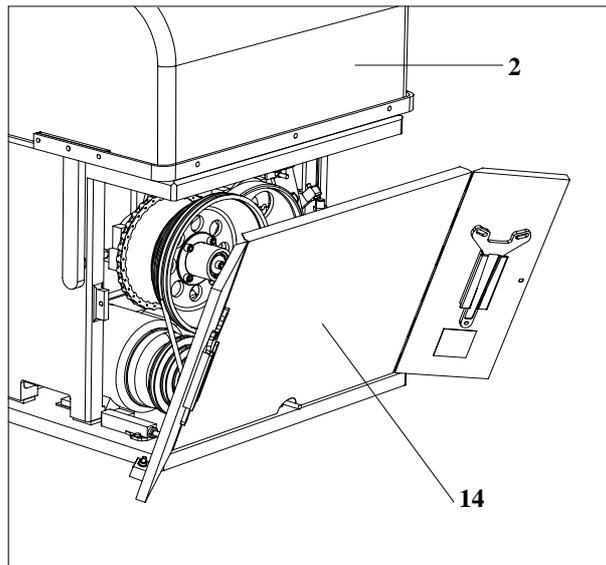
Overtensioning of the chain can cause permanent damage to the chain or to the toothed chain wheels. The chain and chainwheels will become permanently damaged without adequate lubrication.

11.6 Tightening the chain

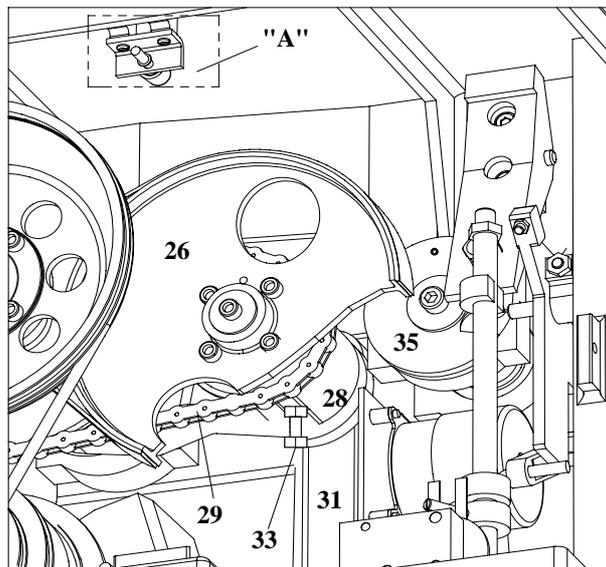
The chain tension should be checked two times during each year. During inspection of the chain, both sides should be lubricated.

To tension the chain the safety cover (2) has to be extended. Remove the access door (14)* and loosen the tension screw (33). Connect the flatbelt pulley (26) with the eccentric bush through the Ø 4 mm bore, by using the dowel pin (34). Rotate the flatbelt pulley clock wise, till the chain hang through 3 - 4 mm, measured out in the middle of the chain. Don't forget to tight back the tension screw!

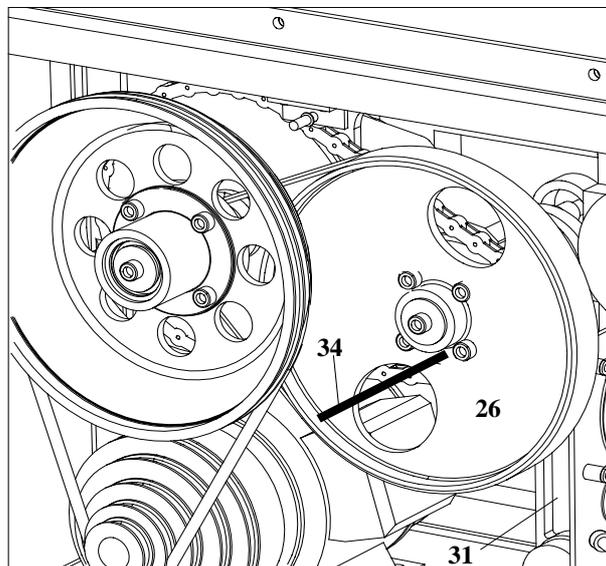
*=(Open the access door, see chap. 11.5, page 16)



[Fig. 10]



[Fig. 11]



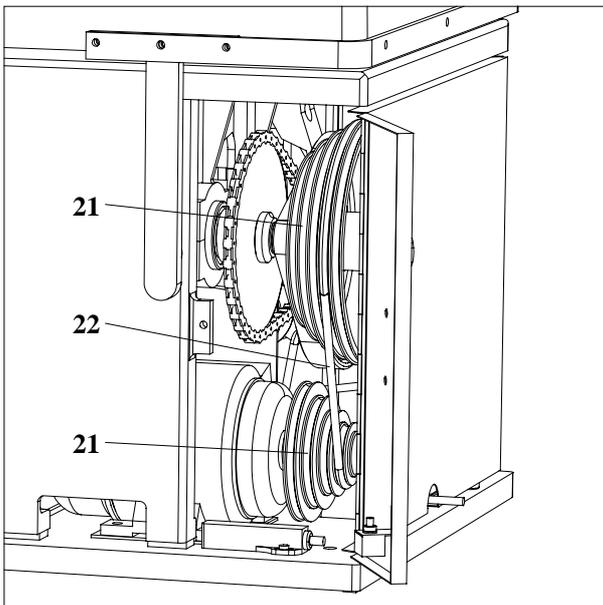
[Fig. 12]

11.7 Changing the speed

Extend the safety cover (2). Open the right access door (14), and by changing the groove (21) for the roundbelt (22) the speed is variable. The speed depends on the working conditions.

WARNING

It is important to note that the drive belt between motor pulley and shaft pulley should be positioned in the correct groove. Incorrect location of the drive belt in the pulley grooves will lead to premature wear of the belt.



[Fig. 13]

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, wearing parts or accessories.

Call on our customer service when needed.

You will find the address of the manufacturer and the office in chapter 1 "Machine Data". Page 4.

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	Power consumption motor to high Magnetic circuit breaker defect Access side door (14) opened Service container (6) is blocked Roundbelt (22) is damaged Flatbelt (27) is damaged Chain (29) is damaged Safety cover (2) extended Power failure	Check and see 12.2 Check and see 12.3 Check and see 12.4 Check and see 12.5 Check Check Check Check Electrician to check
12.2	Power consumption motor to high	Protective motor switch released	Check max. load weight Possibly the service container is blocked (12.5)
12.3	Protective motor switch defect	Mechanical or electrically defect of the protective motor switch Relay is defective	Electrician to check Replace a new switch
12.4	Access side door open	While retracting safety cover the access side door was still open	Extend safety cover and close access side door, retract safety cover then
12.5	Service container is blocked	Rubber straps defect Service container is overload Service container slipped out of the cage	Replace rubber straps Check load weight Check rubber straps and load weight, eventually add the container with support pieces to bring it to the combined length
12.6	Mixer does not start	Access side door still open Safety cover not retracted Fault like prescribed in 12.1 Protective motor switch defect	Close access side door Retract safety cover Check like in 12.1 Replace the switch
12.7	Safety cover is blocked	Timer is out of order	Replace Timer
12.8	Tension collar is defective	Coach spring defect	Replace Coach spring

13 List of replacement and wearing parts

WARNING !

Real positions do not correspond to figure positions

13.1 Replacement and wearing parts

Order example: machine type + machine number + real position + drawing no. + item no.

Real-Pos.	Drawing No.	Description	Item No.
148	00302 / 4	Chain incl. chain joint	D.KE4-48/1/2"
150	00302 / 4	Flat belt endless 20 / 1.3 x 624	D.RI1-20x624
151	00302 / 4	Round belt Ø 5 x 660	D.RI1-5x660P
152	00302 / 4	Antistatic Round belt Ø 5 x 660	D.RI1-5x660F
206	00302 / 4	Lock with screw	C.KL3-40514
207	00302 / 4	Tension collar Ø 150 / 138 x 22	B.HO8-20121
208	00302 / 4	Coach spring	C.FE1-40515
211	00302 / 4	Rubber straps normal (black), 1 Set = 12 pcs.	T.000-0183
212	00302 / 4	Rubber straps special (red), 1 Set = 12 pcs.	T.000-0187
224	00302 / 4	Plastic button black	D.GR1-22/M6S
225	00302 / 4	Plastic button red	D.GR1-22/M6R
303	00302 / 4	Lock bolt incl. hexagon nut SW 17 x 26	C.BO1-43557
447	00302 / 4	Timer 5 sec.	D.SC7-5SEC
468	00302 / 4	Hand grip for safety cover	D.GR1-3389
469	00302 / 4	Raised cheese head screw for hand grip	D.15H-0010
473	00302 / 4	Safety cover	B.YO3-34008
479	00302 / 4	Magnetic circuit breaker incl. cable	D.SC7-108410
480	00302 / 4	Control magnet	D.SC7-MG51
505	00302 / 4	Motor safety switch incl. driving pin	D.MO2-50
505 / 1	00302 / 4	Driving pin for motor safety switch only	----
506	----	Condenser for 1 x 220 V motor	D.KO2-240/12
513	----	Condenser for 1 x 110 V motor	D.KO2-110/50
520	00302 / 4	Electric motor 3 x 220 - 450 V, 50 / 60 Hz, IP 54	D.MO1-0.18/4/1
521	00302 / 4	Electric motor 1 x 100 - 225 V, 50 / 60 Hz, IP 54	D.MO1-0.18/4/7
555	00302 / 4	Access door complete	L.WA2-21308
561	00302 / 4	Knurled screw	B.HO8-43712
601	00302 / 4	Tension wrench	C.SC8-30230
602	00302 / 4	Dowel pin	C.ST3-43565
625	00302 / 4	Service container plastic spec., threaded, 2 l volume	D.BE1-2L-WH
626	00302 / 4	Service container plastic spec., threaded, 1.5 l volume	D.BE1-1.5L-WH
627	00302 / 4	Service container plastic spec., threaded, 1 l volume	D.BE1-1L-WH
628	00302 / 4	Service container plastic spec., threaded, 0.5 l volume	D.BE1-0.5L-WH
2001	----	Glass container with cover, 2 l volume	K.000-20333.01
2002	----	Glass container with cover, 1 l volume	K.000-31761.01
2003	----	Plastic container with cover and food sealing, 2l volume	K.000-20333.10
2004	----	Plastic container with cover and food sealing, 1l volume	K.000-31761.10
2005	----	Aluminium container anodised, 2 l volume	K.000-30289.01
2006	----	Stainless steel container, 2 l volume	K.000-31161.01
2010	----	Cage incl. brackets, painted and mounted	K.000-20851.01
2011	----	Locking pin compl. mounted	K.000-00302.06

How would you rate these operating instructions?

WAB is striving to give the user operating instructions that are as meaningful and user friendly as possible.

Please help us in this endeavour

WAB would like to hear about your opinions and experiences with these operating instructions. Do you think they are

- on the whole well thought out? yes / no
- satisfactory, but with room for improvement? yes / no
- very much in need of improvement? yes / no

Are the operating instructions

- clearly laid out? yes / no
- easy enough to understand? yes / no
- too detailed? yes / no
- too difficult? yes / no

How would you rate these operating instructions in comparison with other instructions? Are they

- better? yes / no
- of similar quality? yes / no
- worse? yes / no

As you have practical experience with the machine we would particularly appreciate your specific comments and tips.

- What do you think is missing in these operating instructions?
- What would you personally improve?

Please fill in the questionnaire, add your own comments and return it to us.

Thank you very much for your time and co-operation.

Fax-order:

Note
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.

To secure efficient maintenance and routine works on your WAB Products, please use this blank form. Trust us recognised experts, and also trust the **DIN 9001** qualified Services and Products of the **Willy A. Bachofen AG**. Please fill in all needed facts and use the following sheets for your order. The following instructions, and also the example, must be **noticed** very well.

Real-positions do not correspond to figure-positions! (Figure-positions in the sketches of the instructions do **not** correspond to the real-positions on the item-list!)

Always order like this following example:
Order example: machine type + machine number + fig.pos.+ real position + drawing no. + item no.

Example:

Mach. Type:	Machine No.:	Drawing No.:	Fig./ Real-Pos.:	Description:	Item. No.:	Pieces:
T2C	960044	22559	13 / 211	Rubber straps	T.000.0183	12

Order:

(To find out the Manufacturer's address or the Customer Service address please check out chapter 1!)

To:		From:	
Firm:		Firm:	
Street:		Street:	
Town:		Town:	
Country:		Country:	
Fax. No.:		Fax. No.:	
Tel. No.:		Tel. No.:	
Attention: <small>(Addressee)</small>		Name: <small>(Sender)</small>	
		Division:	
		Ring back to you?	<input type="checkbox"/> Yes <input type="checkbox"/> No
		Subject:	<input type="checkbox"/> Offer No.:
			<input type="checkbox"/> Letter from:
			<input type="checkbox"/> Conversation from:
		<small>(Free space, e.g. for your own internal code)</small>	

To guarantee you an outstanding service and delivery, please ensure this blank form is completely filled out. Also take care that all pages are correct and complete transmitted. Thank you very much for your order and we wish you a continue progress with your WAB Products.

Kind regards, your WAB Team.

