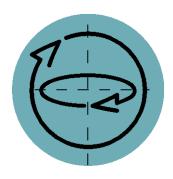
Operating Instructions



Biaxialmixer BIAX 44P

GB - Englisch

Collomix

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1. Layout drawings

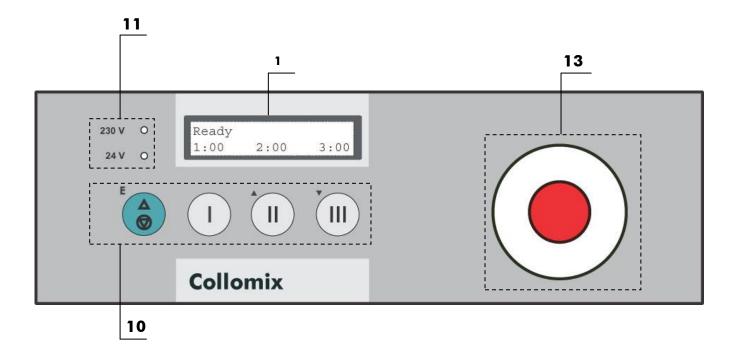
1.1. Machine components



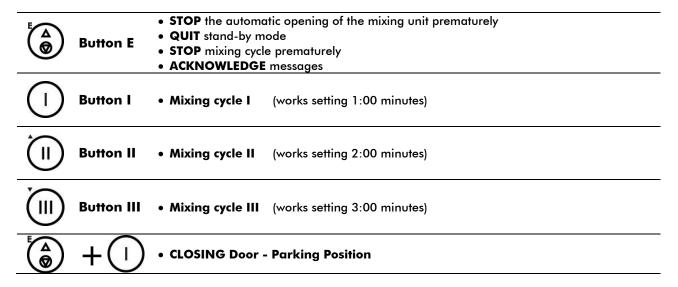
Machine components

1. Lower clamping table	5. Emergency Stop	
2. Top clamping table	6. Automatic sliding door	
3. Main switch		
4. Control panel		

1.2. Control and display components



10. Control buttons



- 11. Display for 230V mains voltage and 24V control voltage
- **12.** LCD Display
- 13. EMERGENCY STOP button

2. General information

The BIAX is a stationary mixer for closed, tightly closing, round, rectangular and oval containers made of metal or plastic. It can be used to mix paints, master batches, house paints, industrial paints and plasters as well as other low-viscosity materials.

Practical applications are to be found in the wholesale and retail paint trade, in the paint, lacquer and chemical industries, and many other related sectors. This shaker is particularly ideal as a component in paint dosing systems.

The clamped container rotates simultaneously about its longitudinal and transverse axis at 2 different speeds, which are adapted to the material in question.

The required mixing time and the suitability of the container are to be determined before attempting to use the shaker.

This manual is intended for persons who operate the machine.

3. For your safety

Although the machine has been developed, manufactured and tested in accordance with fundamental safety requirements, an element of risk is still present!

- Therefore, read this manual before you work with the machine
- Keep this manual within immediate reach of the machine

3.1 Pictograms and symbols used in this manual



The "caution" symbol is used to indicate a situation in which persons are at risk of suffering physical injury. The warning must be heeded at all costs.



The "stop" symbol is used to indicate a situation in which the machine is at risk of being damaged.



The "hazardous electric voltage" symbol is used to indicate live components that may pose a risk to life and limb.

Those parts of the manual that are important for the correct and safe operation of the machine are printed in bold type.

3.2 Proper use

The machine must not be operated in any way other than described in this manual. The term 'improper use' applies in particular to the following:

- Operation with defective or missing parts.
- The bridging or deactivation of any safety devices.
- Operation of the machine in areas with a potentially explosive atmosphere.
- The use and installation of non-original replacement parts.
- Running the machine for too long, which can potentially lead to the mixing container bursting.



The consequences of improper use can be personal injury to the user or third party, as well as material damages to the appliance or mixing material.







3.3 General safety instructions

Observe the electrical regulations in force as well as the additional instructions listed in this manual when you install the machine. Installation and use of the machine for the first time must be carried out by a trained specialist.

The machine is to be used only by persons who are acquainted with the working principles of the machine and also with the safety and accident prevention regulations in force in your country.



Check that the machine is in the proper condition and that all parts are in good working order before beginning with your work. Do not operate the machine with any defective or missing parts.

Any maintenance work or repairs must only be carried out by qualified personnel. Before performing any maintenance work or repairs be sure to disconnect the machine from the power supply by pulling out the power plug. Use only original replacement parts.

Close the machine when not in use and turn off at the main switch. Projecting parts may injure you and others.



Closed housing

The housing is a stationary safeguard and partition that can only be opened with the use of tools.

Machine door with interlock

The door is an interlocking safeguard and partition. It is impossible to start the machine when the door is open. The door is not unlocked until after the mixing cycle is ended and the mixing container released.

Latching magnet for the mixing unit

The mixing unit is locked in vertical position by a magnetically actuated latching pin. When the magnet is deactivated, the latching pin is pushed back by spring force and releases the mixing unit.

Clamping table switch

A microswitch on the upper clamping table monitors whether a container is clamped in the mixing unit. It is impossible to start the mixing cycle when no container is clamped in place. For the switch to trigger a switching pulse it has to be pressed up by the spring-mounted upper clamping table.

Emergency Stop function:

With the Emergency Stop function you can

- reliably interrupt the control voltage supply so that the machine is unable to move.
- bring the machine to a halt when it is running.





4. Using the machine for the first time

4.1. Installing the machine – Transport notes

Your biaxial mixer is delivered in reusable cardboard packaging on a wooden pallet. Please immediately check the packaging when received, as well as the appliance during unpacking, for any visible signs of external damage. Keep all parts of the original packaging for any necessary return transport.

Use a suitable hoist to lift the machine off the pallet.

Place the machine on firm, level ground. Slight unevenness can be compensated with the height-adjustable machine feet (SW17+19).



4.2. Moving the machine

The mixer has two transport rollers on the bottom of the housing. These transport rollers can be made to protrude out of the mixing compartment by turning two screws in the base plate of the mixing compartment.

- Use a cordless screwdriver (counter-clockwise rotation) or some other suitable tool size SW 17 to turn out the transport rollers on both sides of the machine.
- Carefully tilt the mixer and move it.
- When you are finished moving the machine, turn the transport rollers back in and compensate any unevenness with the height-adjustable feet.







Screw →

Turning out the rollers →

Moving the machine



It is necessary to open the door in order to be able to firmly grip the machine during transport.

4.3. Activating the PERMA lubrication system

The machine comes with a PERMA® long-time lubricator which is to be installed before you use the machine for the first time. Proceed as follows:

For an easier installation, first open the mixing unit completely.. The lubrication nipple on the hub is on the right side.

Activate the PERMA cartridge by turning the grey activation screw into the cartridge until the holding clip is torn off completely. Remove also the black cap at the top of the cartridge.

Screw the cartridge into the adapter which was fitted to the hub at the factory...

Write the date of installation on the cartridge. The lubrication is guaranteed for approx. 1 year.

Please read the accompanying original PERMA documentation.

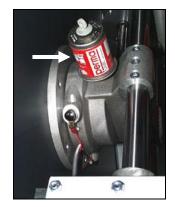
4.4. Trial run

It is best to carry out a trial run with an empty mixing container when you are starting up the machine for the first time or after carrying out maintenance work or repairs.

Remove all tools and any other loose items from the inside of the machine.

If the machine wobbles while it is working, adjust the machine feet to compensate the differences in height.

It is prohibited to operate the machine on its shipment pallet.



PERMA® Iubrication



Operation 5.

Switching on the machine

The machine is switched on with the main switch (3).

After initialisation has been completed, the door can be opened by pressing button "E".

The machine is now in its starting position ready for mixing.

Collomix BIAX init... Version X.XX

Collomix BIAX init... d 80 / c 25 / v 144

Collomix BIAX init...

000011 cycles

Collomix BIAX init... > Press "E" to quit

\ **Ø**

Collomix BIAX init... > opening door

Ready 1:00 2:00 3:00

5.2. Closing door - parking position

When the machine is not used or before switching off the machine after work, the door can be closed by pressing buttons E and I simultaneously. The door is closing in and the machine is now in parking position.

Ready 1:00 2:00 3:00 A 1 + Parkposition closing door

Parkposition press E for Ready

Opening door - starting position

The door can be opened by pressing button E.The display indicates READY, the machine is now in starting position and ready for mixing.

Parkposition press E for Ready



Parkposition opening door

Ready 1:00 2:00 3:00

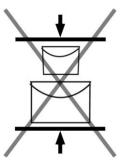
5.4. Loading the container

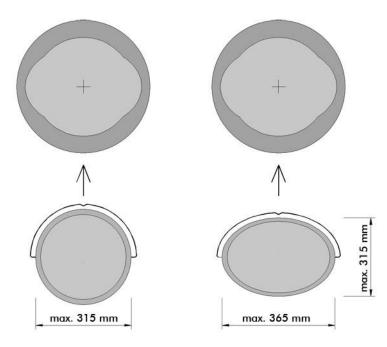
Simply push the mixing container with container handle into the mixer such that it is positioned in the centre of the lower clamping table. The container handle must point into the direction of the Handle Stop.

For containers with diameters of less than 270 mm the handle must be secured with the help of elastic band or adhesive tape.

Do not use damaged containers or place containers on top of each other!





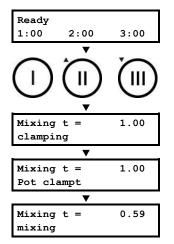


5.5. Starting the mixing cycle

Start the mixing cycle by pressing one of the timer buttons I, II or III. The corresponding mixing time is indicated in the LCD display above the buttons.

The doors are closing automatically and. The mixing container is clamped in place and the mixing cycle is started automatically.

The remaining mixing time is indicated in the LCD display as the mixing cycle progresses.



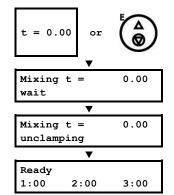
5.6. Ending the mixing cycle

The mixing unit is automatically moved to the 12 o'clock position and the clamping pressure released **when the mixing time is over**.

You can end the mixing cycle prematurely **before the mixing time is over** by pressing **button E**. The mixing cycle is immediately ended, the mixing unit positioned, the clamping pressure released, and the door unlocked.

After the mixing cycle has been finished, the doors will open automatically.

You can stop the automatic opening of the mixing unit prematurely by pressing button E



5.7. Stand-by

If approximately 60 minutes pass without the user actuating any function, the biaxial mixer will automatically switch to stand-by mode. All unnecessary consumers are switched off and the door can no longer be opened.

To quit stand-by mode, press BUTTON E.



5.8. Triggering the EMEGENCY STOP function

You can press the **Emergency Stop button** to switch off the machine if ever the container develops a leak or its handle becomes loose or some other potentially dangerous situation for man or machine arises while the mixing cycle is in progress.

After the EMERGENCY STOP button is pressed, the mixing unit will coast to a standstill and remain in this position. The mixing unit is not moved automatically to the 12 o'clock position!

Unlock the EMERGENCY STOP button by hand and press button E to cancel the error message.

After the door has been opened, **rotate the mixing unit by hand** until it is locked in the 12 o'clock position.

The machine is in base position; mixing can be continued.



The EMERGENCY STOP button does not disconnect the machine from the mains power supply! Therefore, before performing any maintenance work or repairs always be sure to disconnect the machine from the mains by pulling out the power plug!



E020 emergency stop > unlock switch

NOT-AUS Entriegeln

E020 emergency stop > press "E" to quit



E020 emergency stop wait

E020 emergency stop > press "E" to quit



E020 emergency stop > opening door

please disclamp
> press "E" to quit

Mischeinheit per Hand positionieren



disclamping

Ready 1:00 2:00 3:00

6. Trouble-shooting

Using the trouble-shooting tables listed in this chapter, you can check whether you are able to correct the errors yourself or whether you need to call the customer service department.



Before calling the customer service department, please make a note of the machine's serial number, the error code being shown in the display and also the status of the LEDs on the control panel. The machine's serial number can be found on the machine's rating plate (9).

6.1. Initialization

Initialization is performed each time the mixer is switched on. The following error messages may appear as a result. Please note that all maintenance and servicing jobs must be left strictly to authorized and suitably trained personnel.

LEDs	Display	Items to remedy / actions to take
230 V 🔾 24 V 🔾	empty	 Check the power supply Check the SI 3 fuse Check the connector / cable of the control pcb
230 V • 24 V •	empty	 Check the connector / cable of the display pcb The display is defective The control pcb is defective
230 V • 24 V •	E020 emergency stop > press "E" to quit	 EMERGENCY STOP actuated Check the connector / cable of the EMERGENCY STOP EMERGENCY STOP switching element is defective
230 V • 24 V •	E060 not disclamped > press "E" to quit	 Container already clamped, unclamp by hand The mixing unit is not in the 12 o'clock position Check the clamping table proximity switch Check the connector / cable of the clamping table proximity switch
230 V 24 V	E080 MU unlocked > press "E" to quit	 Latching pin blocked Check the connector / cable of the mixing unit magnet The mixing unit magnet is defective The mixing unit is not in the 12 o'clock position



All maintenance and servicing jobs must be left strictly to authorized and suitably trained personnel. This applies in particular to work performed with the housing open.



6.2. Error messages

The following table provides an overview of possible errors and their remedies. Please note that all maintenance and servicing jobs must be left strictly to authorized and suitably trained personnel. This applies in particular to those jobs printed on a **gray** background which have to be performed with the housing open.

Fault	Machine status	Items to remedy / actions to take
E000 Stand-by	60 minutes have passed without the user actuating any function; the machine is in stand-by mode	Press button E to cancel stand-by mode
E010 door not open	The door has been opened	Check the "Door open" proximity switchCheck the extension board
	The door is closed	Check the door motorCheck the extension board
E020 Emergency stop	EMERGENCY STOP actuated	Release the EMERGENCY STOP
	EMERGENCY STOP not actuated	 Check the EMERGENCY STOP switching element Check the lead/connector to the EMERGENCY STOP
E025 door not closed	The door has been closed	Check the "Door closed" proximity switch Check the extension board
	The door is open	Check the door motorCheck the extension board
E030 Pot not found	There is no container in the mixing unit	Load a container
	A container is loaded in the mixing unit	The container is too small
		Check the clamping table switchCheck the programmable cam
	The threaded spindles are dirty	Clean and lubricate the threaded spindles
E040 Max open	The mixing unit is fully open	Note that the maximum container height is 400mm
	The mixing unit is not fully open	Clean and lubricate the threaded spindles Clean and lubricate the guide columns
E050 Pot defective	The container is defective	Press button "P" to reinitialize the machine
		Correct the clamping pressure
	The container is not defective	 Check whether the clamping table / clamping table switch moves smoothly Check the lead/connector to the "clamping" proximity switch The "clamping" proximity switch/programmable cam/ clamping table microswitch or control pcb is defective

Fault	Machine status	Items to remedy / actions to take
E060 not disclamped	The container is clamped	check clamping motor, brushes and control pcb
	The container is not clamped	 The mixing unit is not at 12 o'clock position, move by hand Check whether the clamping table / clamping table switch moves smoothly Check the lead/connector to the "clamping" proximity switch
E070 MU locked	Latching pin blocked	The latching pin is blocked – clean and lubricate, replace if necessary
	Latching pin released	 Check the lead/connector to the switch of the mixing unit magnet The switch of the mixing unit magnet is defective
E080 MU unlocked	Latching pin blocked	The mixing unit is not 12 at o'clock position, move by hand
		 Check the lead/connector to the switch of the mixing unit magnet The switch of the mixing unit magnet is defective
	Latching pin released	 The latching pin is blocked – clean and lubricate, replace if necessary Check the lead/connector to the mixing unit magnet The mixing unit magnet is defective
E120 Speed too low	The mixing unit rotates	 Check the lead/connector to the "position" proximity switch The "position" proximity switch is defective
	The mixing unit does not rotate	 Check the fuse for SI 2 motor Check the lead/connector to the motor The motor / rectifier or control pcb is defective
E130 Speed too high		Decrease the motor speed

The actions printed on a **gray** background have to be performed by authorized and suitably trained personnel.

7. Maintenance and cleaning

Regular maintenance is necessary to ensure that the machine remains in good working condition at all times. If the machine is in constant use, it is important to lubricate the most important parts in accordance with the schedule described below.

How often you repeat the maintenance depends on how long the machine is operated.

Always pull out the power plug before carrying out any maintenance work.

7.1. Inspections

Check all safety-relevant parts of the machine before beginning with your work. Arrange for authorized personnel to replace defective or damaged parts before you work again with the machine.

7.2. Cleaning

If any material escapes from the mixing container when it is inside the machine, remove it immediately. Use a rag or a spatula. Take care not to damage any connecting leads or sensors.

Dirty threaded spindles can be cleaned with a rag or a wire brush. When you have finished cleaning the threaded spindles, lubricate them again with **Molycote BR 2 Plus**.

Important! Never clean the machine with a **high-pressure cleaner** or the like. This could wash the lubricating grease out of the ball bearings, leaving them to run dry. This will result in serious damage. Ball bearings which have run dry **must be replaced immediately!**

7.3. Maintenance

Every week:

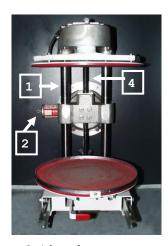
- Remove any dirt from the machine.
- Apply a thin coat of lubricating oil at the two guide columns of the mixing unit.

Every 6 months:

- Check the PERMA lubricating cartridge (2) and replace it when necessary
- Lubricate the threaded spindle (4) and the spindle shaft (behind the threaded spindle) with Molykote BR 2 plus.
- Check that the lock pin at the mixing unit magnet moves smoothly.
- Check that all ball bearings move smoothly. Ball bearings are to be found on the two clamping jaws, on the drive shaft at the transmission gear and on the clamping tables.





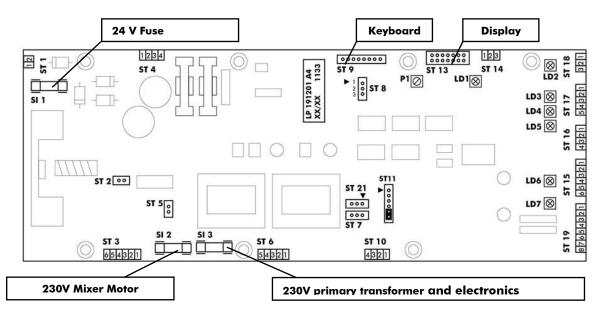


1 Guide columns2 PERMA cartridge4 threaded spindle

7.4. Maintenance checklist

Machine number	Counter total:	Date of maintenance:		
Location of the machine				
Maintenance technician				
Cleaning the machine				
Clean the inside and the o	utside of the machine			
Remove paint residues from	n the spindle and the spindle shaft	with a steel brush		
Remove paint residues from	n between the upper clamping tabl	e and the clamping table carrier.		
Inspections				
Check the drive belt for we	ar and tension.			
	on the mixing unit magnet moves	smoothly.		
Check all ball bearings to s		are ball bearings on the two clam	ping	
Check the state of wear of approximately 9 mm.	the carbon brushes. They should h	ave a minimum length of		
Lubricating the machine				
	A lubricant; if necessary, replace th	ne cartridge.		
Lubricate the threaded spir	Lubricate the threaded spindles and the spine shaft with MOLIKOTE BR2+.			
Brush a little lubricating oil	Brush a little lubricating oil on the guide columns of the mixing unit.			
Brush a little lubricating oil	Brush a little lubricating oil on the latching pin.			
Miscellaneous				
Replace the fuses on the pcb: \$1, \$2 = 6.3 AT 250V; \$3 = 4.0 AT 250V (use only sand-filled, flow fuses)				
Add more spare fuses as required				
Carry out a function test with a large and a small container.				
Comments				
Date:		aintenance technician:		

7.5. Layout of the main board



Fuses:

No.	Value	Function	
SI1	6.3A T	24 V fuse	
SI2	6.3A T	230V mixer motor	
SI3	4.0A T	230V primary transformer / electronics	

Connector assignment:

ST 1	Lead	Function
1	violett	24V AC from transformer
2	violett	

ST 4	Lead	Function
1	blue	Clamp motor
4	red	

ST 6	Lead	Function	
1	brown	230V AC to transformer	
2	brown	230V AC to transformer	
3	Schwarz	L1	
4	Blau	N Mains	
5	Grün/gelb	PE	

ST 10	Lead	Function
1	white	Emergency stop extension
2	white	board
3	white	Emergency ston
4	white	Emergency stop

ST 14	Lead	Function
1	brown	
2	black	"Clamp" proximity switch
3	blue	
3		Clump proximity switch

ST 15	Lead	Function
3	brown	manimit, avitale de en eleced
4	black	proximity switch door closed

ST 16	Lead	Function
1	green	Adiving unit magnet
2	green	Mixing unit magnet
3	gray	Adiving unit pagengt switch
4	gray	Mixing unit magnet switch

ST 17	Lead	Function
1	braun	provincity switch door open
2	schwarz	proximity switch door open
5	blau	GND proximity switches door

ST 18	Lead	Function
1	brown	
2	black	"Position" proximity switch
3	blue	

ST 19	Lead	Function
3	ws	Turn right FU
4	ws	Tom right FO
7	rt+	Speed Ell
8	bl -	Speed FU

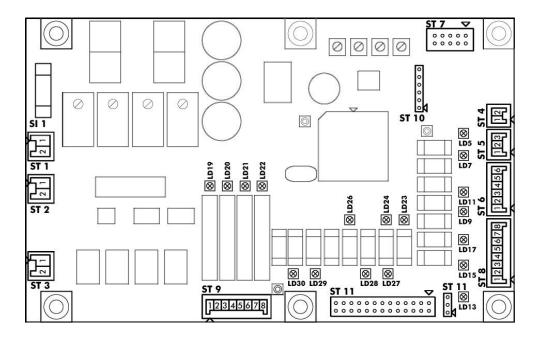
Jumper assignment:

ST2	closed
ST5	open
ST 7	1-2 BIAX 44P
ST 8	1-2 Service / 2-3 Operation
ST 21	1-2 BIAX 44P

LED signals:

Display	Meaning
LD 1	"Clamp" proximity switch
LD 2	"Position" proximity switch
LD 3	Mixing unit magnet switch
LD 4	door closed
LD 6	Mixing unit magnet
LD 9	door open

7.6. Layout of the extension board



Fuses:

No.	Value	Function
SI1	6,3A T	24 V Fuse

Connector assignment:

ST 1	Lead	Function
1	violet	24V AC from transformer
2	violet	24V AC Irom Iransformer

ST 3	Lead	Function
1	blue	Door motor
2	brown	Door motor

ST 4	Lead	Function
1	white	Farancia ha and
2	white	Emergency stop main board

LED signals:

Display	Meaning
LD 9	Proximity switch "slide"

Jumper assignment:

ST 10	5-6 operation		

8. Annex

8.1. Technical data

Type of machine:	BIAX 44 SX
Supply voltage:	3~,N, PE; 400 Volt / 50 Hz
Rated power:	2,2 kW
Fuse:	16 A
Speed/mixing unit:	140 UpM
Max. container weight:	- 40 kg
container height:	115–440 mm
Max. container base area:	round 315 mm / oval 365 mm
Machine weight:	235 kg
Dimensions (w x d x h):	830 x 857 x 1112 mm

8.2. Warranty

The manufacturer undertakes to provide, as part of the general terms of supply and delivery, a twelve-month warranty. This warranty applies to single-shift operation and is counted from the date of initial start-up. It covers all defects arising from faulty material or workmanship. Please note that all warranty claims must be accompanied by the original delivery note or initial start-up report.

All essential warranty repair work must only be carried out by adequately trained service engineers or by third parties with express prior authorization from Collomix. The carrying out of unauthorized repairs may render the warranty null and void.

Please return any defective parts or machines carriage-paid to our factory. Collomix reserves the right to decide on whether cost-free parts replacement is applicable. Parts and labor covered by the warranty will be supplied free of charge. The warranty does not cover travel costs, expenses or possible overnight accommodation resulting from warranty repairs carried out off our premises.

Any further responsibility, with particular reference to damage claims, including foregone profit or other material losses on the part of the customer, is expressly excluded.

Warranty and liability claims for personal or material damages are excluded if attributable to one or more of the following causes:

- Incorrect operation of the machine, as defined in the operating instructions
- Failure to observe the instructions in the operating manual with respect to set-up, initial start-up, operation and maintenance of the machine
- Faults or damage caused by excessive accumulations of dirt and/or incorrect cleaning schedules, with particular reference to leaks and damaged containers
- Operation of the machine with defective safety and/or protection devices
- Unauthorized structural modifications to the machine
- Incorrect monitoring of parts subject to wear and consumables
- Unauthorized repairs and/or the fitting of non-original spare parts
- Damage caused by the impact of foreign bodies or force majeure
- We reserve the right to make amendments as a result of ongoing advances in the technical field.

8.3. Recycling and disposal

The transport packaging consists of recyclable material. Please dispose of it accordingly. At the end of the machine's working life, the materials used in its construction must be properly recycled. If you have any questions concerning the disposal of any materials, please contact the manufacturer.

8.4. Declaration of CE conformity

We hereby declare that the product is in compliance with the following standards or normative documents:

DIN EN ISO 12100-1	DIN EN 61000-6-2
DIN EN ISO EN 12100-2	DIN EN 61000-4-2
DIN EN ISO 954-1	DIN EN 61000-4-3
DIN EN ISO 14121-1	DIN EN 61000-4-4
DIN EN 55011	DIN EN 61000-4-5

in accordance with the requirements of the guidelines: 2006/95/EEC, 2004/108/EC, 2006/42 EC

Please request technical information from: Collomix Rühr- und Mischgeräte GmbH, Abt. Technische Entwicklung, Daimlerstr. 9, 85080 Gaimersheim, Deutschland

Gaimersheim, 21/01/2011

Alexander Essing Managing Director



This declaration of conformity will lose its validity if any changes or modifications are made to the machine without the manufacturer's approval.



ROTA	20
= BIAX	1 22
=	2

Collomix Rühr- und Mischgeräte GmbH D-85080 Gaimersheim

Collomix Rühr- und Mischgeräte GmbH

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