

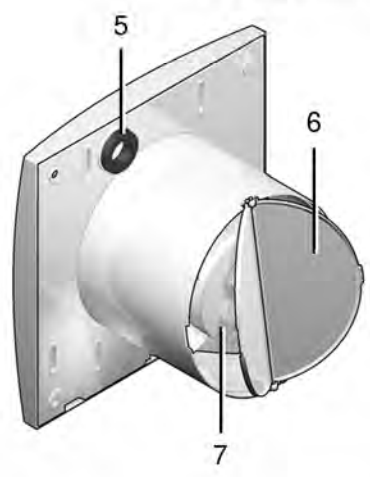
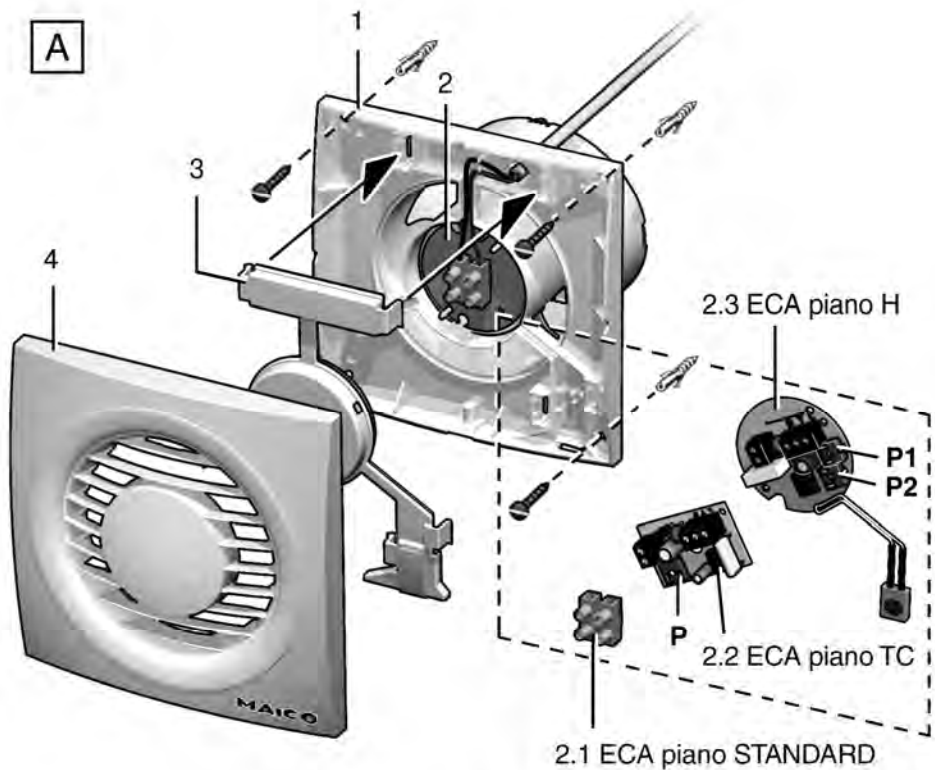
Kleinraumventilator  
Small Room Fan  
Aérateur pour petits locaux



ECA piano STANDARD  
ECA piano TC  
ECA piano H

Montage- und Betriebsanleitung  
Mounting and Operating instructions  
Instructions de montage et Mode d'emploi





# ECA piano

## 1. Scope of delivery

ECA small room fan, seal ring, operating instructions. Foam strip with ECA piano H.

## 2. Warning symbols used in this manual



**Danger of life!**  
If ignored, this may lead to death or severe personal injury.



**Danger of injury! Material damage!** If ignored, this may lead to minor or more serious personal injury or material damage.

## 3. Product information

### Device overview, Fig. A

- 1 Housing with motor
- 2 Board carrier
- 2.1 Terminal block – ECA piano STANDARD
- 2.2 Timer board – ECA piano TC
- 2.3 Humidity board – ECA piano H
- 3 Motor cover
- 4 Cover
- 5 Sealing ring
- 6 Shutter
- 7 Impeller with annular spring

### Product description

- **ECA piano STANDARD**, speed controllable. On/off with light switch or separate switch (both to be supplied by the customer). Fan switches on/off immediately when the switch is operated.
- **ECA piano TC with adjustable overrun time**, not speed controllable. On/off with light switch or separate switch (both to be supplied by the customer). Fan switches off immediately when the overrun time expires after the switch has been operated. Overrun time: approx. 3 ... 25 min, – factory setting: approx. 6 min.

- **ECA piano H, with humidity control and adjustable overrun time**, not speed controllable. Different functions depending on the connection version.

**Version 1:** The fan switches on automatically when the relative ambient humidity in the area of the fan exceeds the pre-defined switching point. The fan is switched off when the humidity level drops below the switching point threshold and once the defined overrun time has expired. The fan can also be deactivated with the optional “S1” switch.

**Version 2:** The fan is switched on automatically, controlled by the humidity level (as version 1) or manually by the light switch. If the relative humidity level remains above the switching point threshold, the fan cannot be switched off, even with the light switch. The fan switches off when the humidity level drops below the switching point threshold and once the defined overrun time has expired.

#### Valid for both versions:

1. Ambient humidity:  
approx. 50 ... 90 % relative humidity  
Factory setting:  
approx. 70% relative humidity
2. Overrun time: approx. 0.5 ... 18 min,  
Factory setting: approx. 12 min

## 4. Technical Data

- See rating plate.

#### Acknowledgements

© Maico Elektroapparate-Fabrik GmbH. This instruction is a translation of the German original operating instructions. We cannot be held responsible for mistakes or printing errors and retain the right to make technical modifications without giving prior notice.

## 5. Environmental conditions and operational limits

- Maximum permitted airstream temperature: +40 °C
- If the fans are being **used with air-ventilated fireplaces**, you must ensure that there is sufficient flow of supply air. The maximum permitted pressure difference per domestic unit is 4 Pa.
- Resistance to interference complies with EN 55014-2, depending on the pulse shape and energy factor 1000 to 4000 V. If operating with **fluorescent tube lighting**, additional interference suppression measures (L, C components or RC modules, protection diodes, varistors) are needed, as these values can be exceeded.

## 6. Basic safety instructions

### General notes regarding safety

- Read the following safety instructions carefully before starting to work with the unit.
- Please keep these instructions somewhere safe.
- The device must not be used as a toy.
- Assembly should only be carried out by expert personnel.
- Electrical connections and repairs should only be carried out by trained electricians.
- Only connect to a fixed electrical installation with type NYM-O or NYM-J cables, 2 x 1.5 mm<sup>2</sup> or 3 x 1.5 mm<sup>2</sup>. A mains isolation device that has contact openings of at least 3 mm at each pole is required.
- The fan should only be operated using the rated voltage and power frequency indicated on the rating plate.
- Do not carry out any modifications to the device.
- Never operate the device without the cover [4] in place.

### Intended use

- Extracting air from bathrooms, toilets, storage rooms or larders, offices, etc.
- Surface installation on walls, ceilings, shafts or ducting.

### Predictable misuses

Maico is not liable for damages caused by use contrary to the intended purpose. **The unit should not be used:**

- in the vicinity of combustible materials, fluids or gases.
- for the transport of chemicals, gases or vapours.
- in explosive atmospheres
- in single air extraction systems in accordance with DIN 18017.

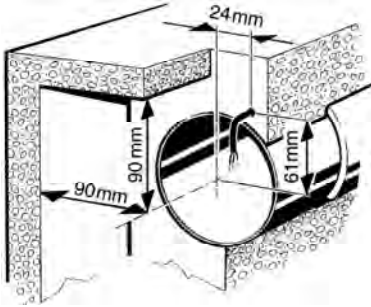
### Safe and correct practices during operation

- **Danger of injury** Do not insert any objects in the unit.
- **Danger from self-turning impeller** Do not get too close to the unit to avoid hair, clothing or jewellery being drawn into the unit.
- The unit is not intended to be used by people whose physical, sensory or mental capabilities are not sufficient for them to understand and put into practice the safety information provided in these instructions. This restriction also applies to children.  
The unit may however be safely used by such persons if they are supervised by someone responsible for their safety or if they are instructed in a suitable way.

## 7. Installation preparation

### Wall

- Maintain the minimum spacings according to the picture.



- Make sure there is a flat surface to mount the housing on.
- Prepare the wall breakthrough. Minimum diameter is 105 mm.
- Use a ZM11 mounting plate, with rectangular wall breakthroughs.
- Lay the cables.



CAUTION

**If the surface is uneven, there is a danger of short circuits and damage to the device if water can penetrate the housing!**

- Make sure there is a flat surface in the area of the sealing ring [5].
- If necessary, provide additional sealing measures.

### Ceiling

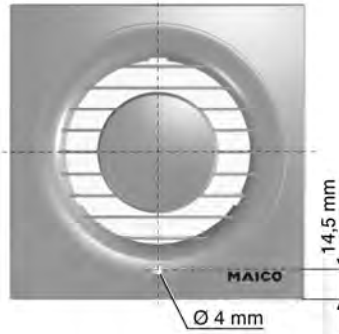


CAUTION

**Damage to unit caused by short circuit through build-up of condensation in the fan housing.**

- Make sure thermal insulation of ventilation ducts is installed correctly.
- Prepare for assembly as described above (see wall).

- Prepare cover [4].  
Remove cover from housing before drilling. Drill through cover using an appropriate drill bit, in order to prevent damp and the build up of germs in the fan housing.

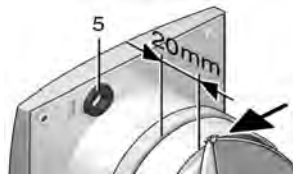


### Duct

- Deburr the inside edges of the duct.

### Housing [1]

- Check that the sealing ring [5] is present at the rear of the housing and that it is seated correctly.



- ECA piano STANDARD, ECA piano TC:  
If necessary, supply additional material (e.g. foam strip), to fix the unit to the wall or duct. Make sure there is a minimum distance of 20 mm to the end of the connector. Don't apply any adhesive to the shutter bearing [6], see arrow.

### ECA piano H:

Install foam strip as described before.

**This is important to prevent the unit from drawing any air in from outside.**

## Preparation for operation with speed controller

Only with ECA piano STANDARD.  
Not permitted for TC or H models.

- Remove shutters [6].
- Use an STU 1, ST 1 or STS 2,5 from the Maico range of accessories.



**The fan will not operate and cause malfunctions if the output voltage from the speed controller is too low!**

- Take note of the advice given in the speed controller operating instructions.
- Always set the minimum speed at the speed controller, such that the motor starts up again after a power failure.

**i** There can be vibration noises caused by the phase control technology.

## 8. Assembly

### Installation



**If fitted incorrectly, the impeller [7] will scrape causing malfunctions and damage the device!**

- Do not twist or distort the housing [1] during installation.
- Make sure there is a flat surface.
- Check that housing [1] is aligned horizontally.
- Fix the housing [1] in place with screws (not supplied).

## Electrical connection



**Danger to life from electric shock!**

- Switch power off.



**Device damaged by short circuit!**

- Cut off the PE conductor and any unused individual cores and insulate them.
- Strip the cable.
- Only insert single cores in the device.



- Connect the power cable as shown in the wiring diagram on Page 13.
- Adjust the potentiometer for TC and H models. See also position "P" in Figure A.

### ➤ ECA piano TC potentiometer "P":

Factory set overrun time:  
approx. 6 minutes (9 o'clock)



### ECA piano H potentiometer "P1":

Factory set overrun time:  
approx. 12 minutes (12 o'clock)



### ECA piano H potentiometer "P2":

Humidity switching point

- setting to the far left: approx. 50% r.h.
- 12 o'clock (see figure): approx. 70% r.h. (factory setting)
- setting to the far right: approx. 90% r.h.



- Press the motor cover [3] evenly and securely into place on the device (see Fig. A). All 5 locking hooks must clip into place.
- Press the cover [4] evenly over the housing [1] until it clicks into place. Do not bend or distort it.

## Commissioning

- Check that the shutter [6] operates easily and that it is undamaged.
- Activate mains fuse.
- Carry out a function test.

## Dismantling

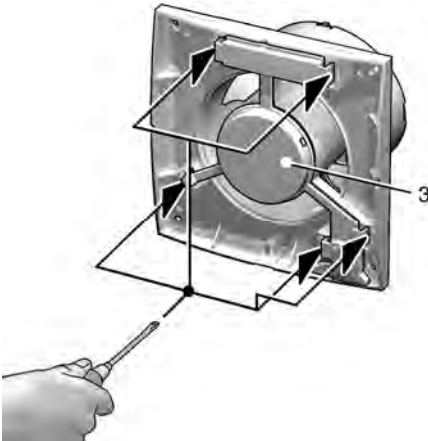


**DANGER**

**Danger to life from electric shock!**

- Switch power off.

- First pull off the lower third of the cover [4] and then remove it.
- Release all 5 locking hooks (see arrow) on the motor cover [3] from their positions using a screwdriver.



- Remove motor cover [3].

## 9. Maintenance

The device is maintenance-free.

## 10. Cleaning



**DANGER**

**Danger to life, the device is live!**

- Switch power off.
- Don't apply water to the device.
- Clean the device with a moist cloth.

## 11. Fault rectification

- Always call on the services of a qualified electrician in the case of faults.
- Repairs should only be carried out by trained electricians.



**DANGER**

**Danger to life, the device is live!**

- Switch power off.

Fault	Measure
<ul style="list-style-type: none"> <li>– Device doesn't run</li> <li>– Thermal overload motor protection switches the device off and back on again after it cools down.</li> </ul>	Identify the cause of the fault and rectify it.

Tab. 1: Fault rectification

## 12. Disposal



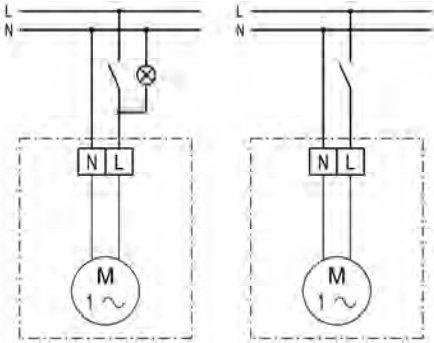
**Not in domestic waste.**

The unit contains in part material that can be recycled and in part substances that should not end up as domestic waste.

- Dispose of the unit once it has reached the end of its working life according to the regulations valid where you are.

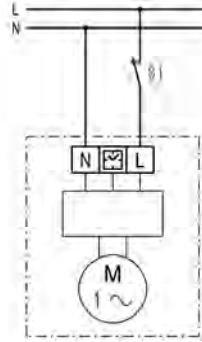
### 13. Wiring diagram

#### ECA piano STANDARD

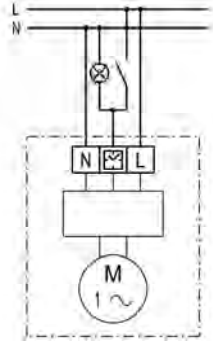


#### ECA piano H

##### Version 1



##### Version 2



#### ECA piano TC

