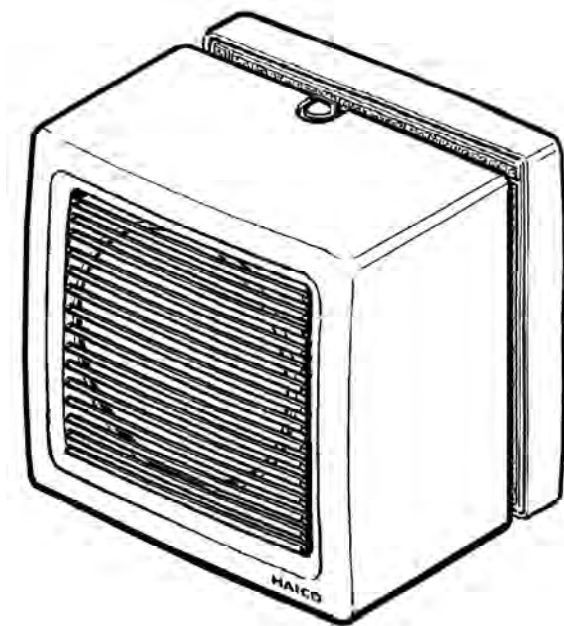


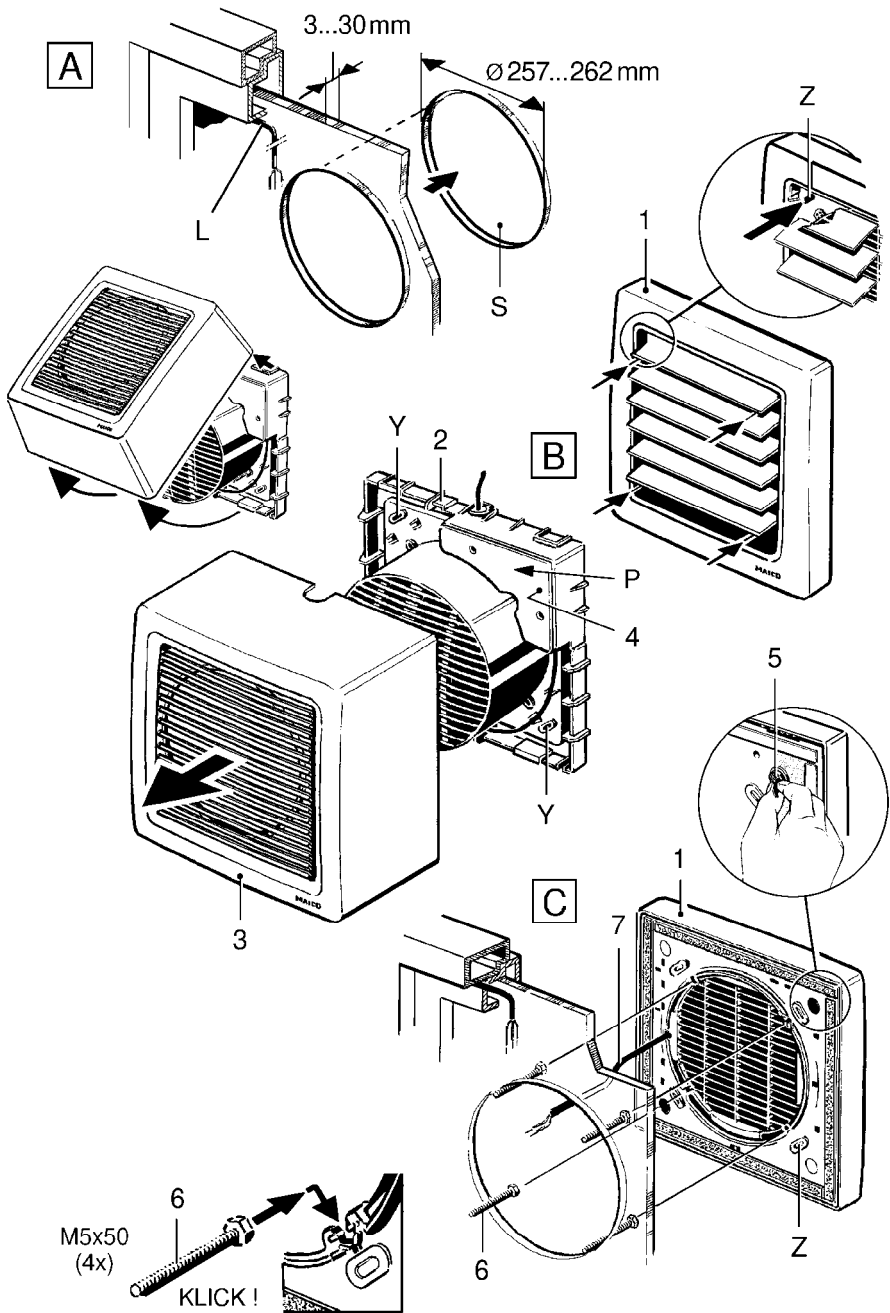
Fensterventilatoren
Window fans
Ventilateurs de fenêtre

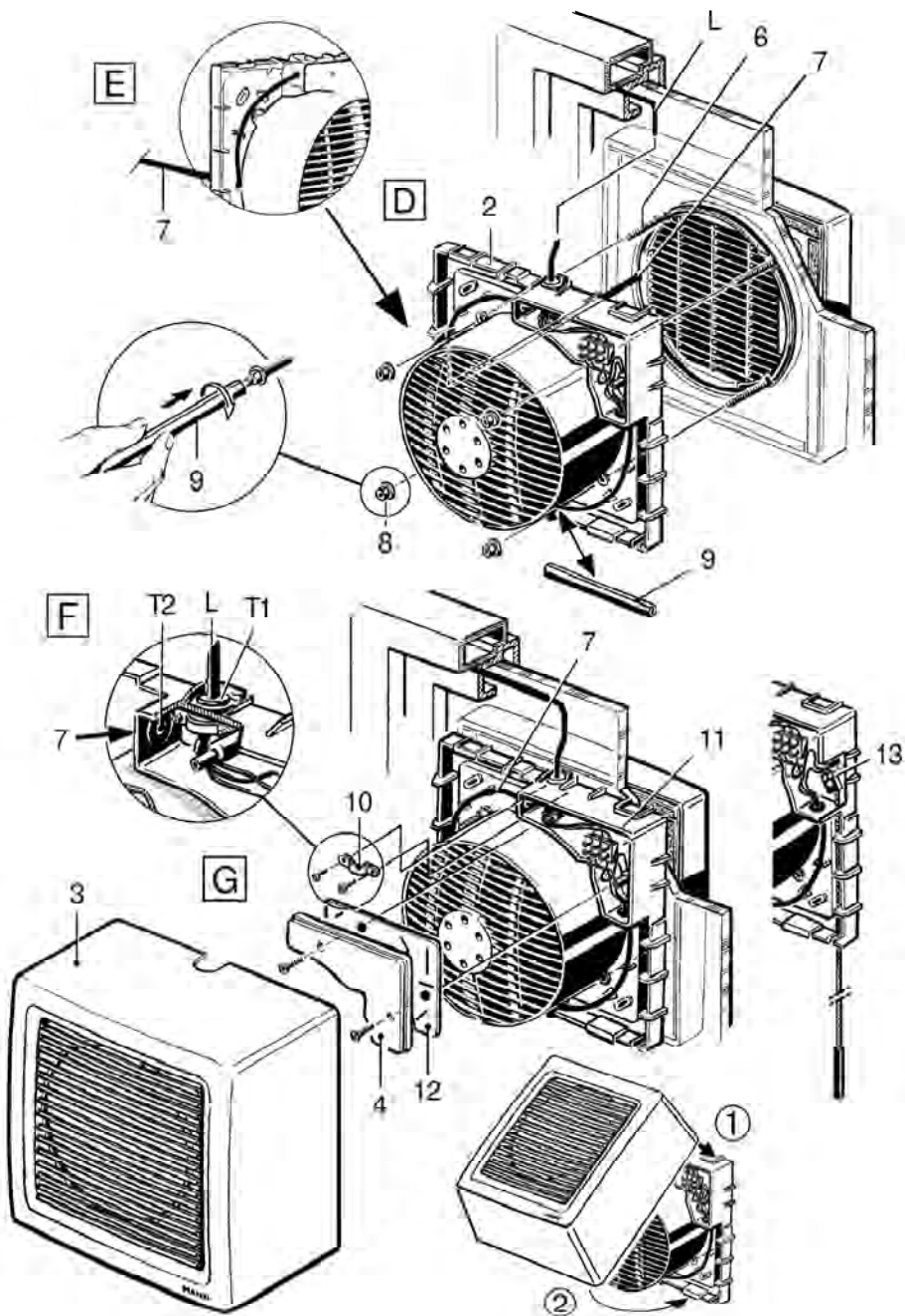


EVN 22
EVN 22 R
EVN 22 P

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







EVN 22, EVN 22 R, EVN 22 P

1. Scope of delivery

Connecting flange, complete (incl. socket spanner), internal housing, complete, external shutter, bag of accessories (4 screws, 4 lock nuts, tension relief, cable grommet), mounting and operating instructions.

2. Symbols used

2.1 Warning symbols



Danger to life
Non-observance can lead to death or serious bodily injuries.



Danger of injury Property damage. Non-observance can lead to minor or more serious bodily injuries.

NOTICE Property damage.
Non-observance can lead to damage to property.

2.2 Other symbols



INFO symbol: Text passages marked with this symbol contain important information and tips.



List symbol:
List with important information about the corresponding subject.



Action symbol:
List of work to be carried out. Follow the instructions given in the order stated.

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3. Product information

3.1 Equipment overview, Fig. A...G

- 1 External shutter with lamella, compl.
- 2 Connecting flange, complete
- 2.1 Motor
- 2.2 Impeller
- 3 Internal housing, complete
- 4 Terminal box cover
- 5 Gluing point
- 6 Screw M5 x 50
- 7 Connecting cable EVN 22 R external shutter
- 8 Lock nut
- 9 Socket spanner, width across flats 8, red
- 10 Tension relief
- 11 Terminal block, 3-pin or 7-pin
- 12 Sealing EVN 22 and EVN 22 R
- 13 Pull-cord switch EVN 22 P
- Tx Cable grommet T1 or T2

3.2 Product description

	EVN 22	EVN 22 R	EVN 22 P
Airstream operated external shutter	X		X
Electric external shutter		X	
Air extraction	X	X	X
Ventilation		X	
Speed controllable	X	X	
On/Off with light switch or separate switch (both supplied by the customer).	X*	X**	
Ventilation or air extraction with separate switch (supplied by the customer)		X**	
Pull-cord switch with pull-cord (1 m)			X

* Alternatively, also speed controller or step switch, see wiring diagrams.

** Alternatively, also speed controller, step switch or reversing switch, see wiring diagrams.

4. Technical data

See rating plate.

- Permissible maximum airstream temperature + 40 °C.

5. Essential safety instructions

5.1 General safety instructions

- Read the safety instructions through carefully before commissioning.
- **The device must not be used as a toy.**
- Keep the instructions.
- **Installation is only permitted when carried out by trained specialists.**
- **Electrical connections and repairs are only permitted when carried out by trained specialists.**
- The degree of protection stated on the rating plate is only guaranteed – if installation is undertaken correctly and – if the cables are correctly guided into the cable grommets.
- **Permanent electrical supply cable.** Only connect the fan to a permanent electrical installation (0.75...1.5 mm²). This must be equipped with a mains isolation device with contact openings of at least 3 mm at each pole.
- The unit may only be operated using the voltage and frequency shown on the rating plate.
- **Never operate unit without internal housing [3].**
- **For operation with air-ventilated fireplace:** ensure a sufficient supply air intake. The maximum permissible pressure difference per apartment is 4 Pa.
- Modifications and alterations to the unit are not permitted and release Maico from any guarantee obligations and liability.

5.2 Intended use

- EVN 22 units for air extraction from restaurants, lecture rooms, showrooms, offices, business and commercial premises, doctors' practices, air extraction in machine rooms etc.
- EVN 22 R units also for ventilating rooms.
- For installation in flat glass windows or thin walls (wall plates or wooden plates).
- Permissible pane or wall thickness 3 ... 30 mm.
- Only install unit vertically.
- Only operate unit if there is sufficient space from the window frame, wall or ceiling.
- Only install external shutter in combination with EVN 22 connecting flange.
- Only operate unit when completely installed, with external shutter and internal housing in place.

5.3 Predictable misuses

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

- in hinged double-glazed windows
 - on ceilings, sloping roofs or sloping walls.
 - close to flammable materials, liquids or gases.
 - for the conveying of chemicals, aggressive gases or vapours.
 - in potentially explosive atmospheres
- Never dismantle the external shutter [1].

5.4 Safe and correct practices during operation

- **Danger of injury.** Do not poke objects into the air channel or unit.
- **Danger from rotating impeller.** Do not get too close to the unit, to avoid hair, clothing or jewellery being drawn into the unit.

6. Installation preparations

6.1 Window



DANGER

Danger of injury Cuts caused by glass breakage! Pane must not be under stress during installation.

- To avoid material stress, remove the pane if necessary and putty it back into place without stress.

NOTICE

Shutter function of external shutter not guaranteed if installation is carried out incorrectly.

- Only install external shutter on an even surface.
- Maintain the minimum distances specified according to **Figure "A"**.
- Get an expert to make the window cut-out [S].
- Lay power cable [L].
- Thoroughly clean pane before attaching external shutter.

6.2 Wall

NOTICE

Shutter function of external shutter not guaranteed if installation is carried out incorrectly.

- Only install external shutter on an even surface.
- Maintain the minimum distances specified according to **Figure "A"**.
- Drill cut-out [S].
- Lay power cable [L].

6.3 Preparations for operating with speed controller

Only for EVN 22 and EVN 22 R.

Not permitted for EVN 22 P units.

- Use speed controller from Maico range of accessories.



The technology in the phase angle controller may cause a humming noise.

NOTICE

The fan will stop and suffer functional problems if the output voltage on the speed controller is too low.

- Note information in speed controller operating instructions.
- Always set the minimum speed on the speed controller such that the motor starts up again after power failure.

7. Installation

7.1 Window

Disassemble inner section, comprising connecting flange [2] and internal housing [3], according to Figure "B".

- Hold internal housing [3] on the side.
- Pull connecting flange [2] on motor out of internal housing.
- Remove the terminal box cover [4].

Fit external shutter [1] to outside of pane according to Figure "C".

- Insert the 4 screws [6] into the eyes of the external shutter until they snap into place.
- Remove the protective foil from the gluing points [5].
- For EVN 22 R, guide connecting cable [7] through window cut-out.
- Align external shutter in window cut-out and press onto pane.

Fit inner section to inside of pane according to Figures "D" and "E".

- For EVN 22 R, guide connecting cable [7] into connecting flange [2].

- Locate the connecting flange [2] onto the bolts [6], line it up and press it gently against the glass.



Danger of injury Schnittverletzungen bei Glasbruch!

- Take care when tightening lock nuts [8].

NOTICE

Functional problems and damage to unit caused by grazing impeller if installation is carried out incorrectly!

- Do not fit connecting flange [2] so it is twisted or crushed!

- Use socket spanner [9] to tighten lock nuts [8] by hand.

7.2 Wall

Carry out installation as described in chapter 7.1 for window installation. Also observe the following mounting instructions.

If necessary, screw external shutter [1] and connecting flange [2] to the wall according to Figure "B".

- Open the lamella of the external shutter [1] and drill through at the 4 hole positions [Z].
- Drill connecting flange [2] through at the two hole positions [Y].
- Use suitable mounting material to fit external shutter [1] to outside of wall.
- Use suitable mounting material to fit connecting flange [2] to inside of wall.

7.3 Electrical connection



When installing electrics and fitting units, observe the applicable regulations, particularly DIN VDE 0100 in Germany, and the appropriate parts of this.



Danger to life from electric shock

- Switch the mains fuse off.



Unit damage in the case of short-circuits

- Insulate any unnecessary cable cores.



Danger of short-circuits and damage to units caused by penetration of condensation if connecting cable(s) inserted incorrectly.

- Use a grommet pin to pierce a round hole in the cable grommets [T1] / [T2] required.
- Guide power cable correctly into terminal box through cable grommets. Ensure that the cable grommets tightly surround the connecting cables.

Undertake electrical connection according to Figures "F" and "G".

- Pierce cable grommet [T1].
- Guide power cable [L] into terminal box.
- Fit tension relief [10].
- For EVN 22 R, pierce cable grommet [T2] and guide connecting cable [7] into terminal box.
- Connect cables according to wiring diagram (see page 18 and 19 of the instructions).
- For EVN 22 P, insert pull-cord of pull-cord switch [13] correctly into the two guides.
- Put the terminal block cover [4] on and screw it into place. Ensure the sealing [12] is fitted correctly.

Position internal housing [3] according to Figure "G".

- Fit internal housing [3] on top of connecting flange [2] (pos. ①).
- Snap internal housing [3] into place in the latches below (pos. ②). Do not twist it.

7.4 Start-up

- Switch the mains fuse on.
- Carry out a function test.

i For EVN 22 R, the external shutter [1] opens and closes with a delay. After approx. 1...2 minutes, the lamella are completely opened or closed.

8. Maintenance

The unit is maintenance-free.

9. Cleaning



Danger to life from electric shock

- Switch the mains fuse off.

Remove internal housing [3] according to Figure "B".

NOTICE **Damage to unit if dismantled incorrectly!**

- Under no circumstances pull off the internal housing on the internal grille or the top of the unit.

NOTICE **Damage to unit if incorrect cleaning agents used!**

- Do not use aggressive, harmful or easily flammable cleaning agents for cleaning work.
- Do not clean the internal housing in a dishwasher.



- Hold internal housing at bottom on left and right and pull evenly forwards.
- Clean the whole inner section with a dry cloth. Use a vacuum cleaner if necessary.
- Swing the lamella upwards to clean the external shutter.
- Position internal housing [3] according to Figure "G".

10. Fault rectification

- Call on the services of a trained electrician any time there is a fault.
- Repairs should only be carried out by a trained electrician.



Danger to life from electric shock

- Switch the mains fuse off.

Fault	Countermeasure
Unit doesn't run	Check whether the mains fuse is switched on.
Motor's thermal overload protection switches unit off and back on again after cooling.	Put the on/off switch to the "off" position. Before recommissioning, switch the fan off long enough for the motor and temperature limiter to cool. The cooling period can last up to 30 minutes. Then switch the unit back on. If the fault still continues, call on the services of a trained electrician

11. Spare parts

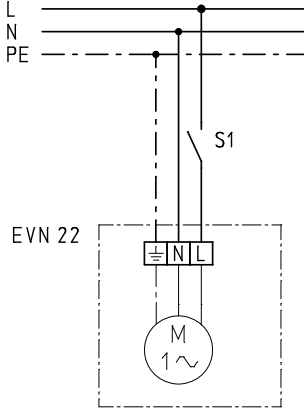
i **Ordering spare parts:** Provide the production date [P] (stamp in housing, see Figure "B") as a general rule. **Spare parts are listed in bold in chapter 3.1.**

12. Disposal

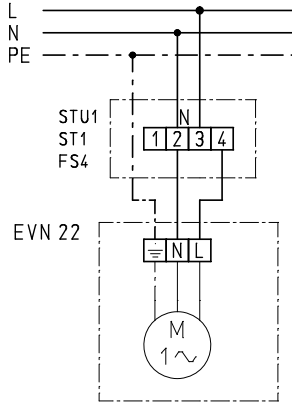
- i** **Do not dispose of in domestic waste!** The unit contains in part material that can be recycled and in part substances that should not end up as domestic waste.
- Dispose of the unit once it has reached the end of its working life according to the regulations valid where you are.

Schaltbilder
Wiring diagrams
Schémas de connexions

EVN 22

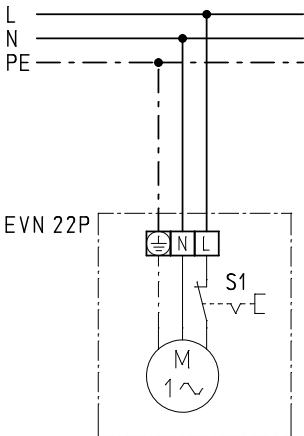


S1 Ein / Aus
 On / Off
 Marche / Arrêt



ST/STU1 Drehzahlsteller, max 1 A
 Speed controller, max 1 A
 Régulateur de vitesse, max 1 A
 FS4 Stufenschalter (2 Drehzahlen)
 Step switch (2-speed)
 Graduateur à plots
 (2 vitesses de rotation)

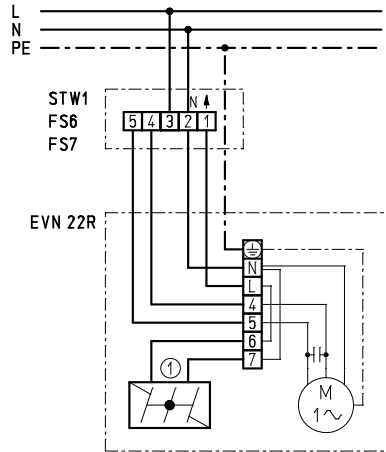
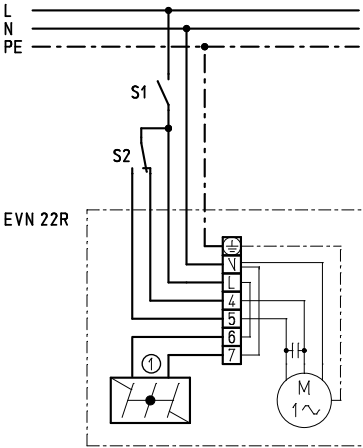
EVN 22 P



S1 Ein / Aus
 On / Off
 Marche / Arrêt

Schaltbilder Wiring diagrams Schémas de connexions

EVN 22 R



① Elektrische Verschlussklappe (außen)
Electrical shutter (external)
Volet de fermeture électrique (extérieur)

S1 Ein / Aus
On / Off
Marche / Arrêt

S2 Umschaltung Ent- oder Belüftung
Klemme 4 = Belüftung
Klemme 5 = Entlüftung
Switching between air extraction and
ventilation

Terminal 4 = Ventilation
Terminal 5 = Air extraction

Commutation extraction d'air ou aération
Borne 4 = aération
Borne 5 = extraction d'air

① Elektrische Verschlussklappe (außen)
Electrical shutter (external)
Volet de fermeture électrique (extérieur)

STW1 Drehzahlsteller mit Wendeschalter
Speed controller with reversing switch
Régulateur de vitesse avec inverseur

FS6 Stufenschalter (2 Drehzahlen,
Ent- oder Belüftung)
Step switch (2-speed, air extraction
or ventilation)

Graduateur à plots (2 vitesses de
rotation, extraction ou aération)

FS7 Wendeschalter (Ent- oder Belüftung)
Reversing switch (air extraction or
ventilation)
Inverseur (extraction d'air ou aération)