Multiple family unit air extraction
System selection

This is how you find a suitable exhaust system

Fire prevention protection has an important place in planning building technology. In order to make it easier for you to select the necessary system, the planning documents have been structured according to fire protection.

**MAICO offers 5 exhaust air systems:**
- aeroduct Fire protection system
- PAM-GLOBAL L cast ventilation system
- Ceiling barrier system
- System with fire-proof shaft
- Air extraction system without fire protection

First answer the question as to whether fire protection is necessary or has been stipulated.

In order to clarify this question you need:
- Copy of the building regulations
- Local building regulations from the respective authority with implementing ordinances.
- Special building regulations for special types and utilisation of buildings.
- Technical specifications, e.g. DIN, VDI, VDE, VDS.
- Fire protection specification requirements regarding ventilation systems.

If the answer is no, then you have already found a suitable system: the system without fire protection.

If fire protection is necessary, please answer this question: Does the installation shaft have any fire resistance e.g. unfinished wall installation with plaster boards?

If your answer to this question is no, the shaft is fire-proof. The system with fire-proof shaft is the right one.

If the shaft is not fire-proof, please answer the next question:
Do you require a space-saving, easy-to-install system with a good price-performance ratio?

If your answer to this question is no, the ceiling barrier system is the right system for you.

If your answer is yes, the next question will be:
Do you require a system with folded spiral seams ducts?
If your answer to this question is no, you can use the PAM-GLOBAL L cast ventilation system.
If your answer is yes, the aeroduct fire protection system is the right one for you.

The following flow chart will quickly guide you to a suitable system that meets your requirements.

Once you have decided on a system, select the required fan.
To do this, proceed as follows:
- Determine the required volumetric flow of the exhaust air. Guide values and layout examples can be found in the “Planning instructions”.
- Select the fan size that matches this volumetric flow. MAICO offers fans with a volumetric flow of 60 m³/h or 100 m³/h.
- Select the type of fan installation according to the building requirements: Surface-mounted or recessed.
- Select one of the possible models for the fan.
Multiple family unit air extraction

System selection

aeroduct fire protection system

Application areas
- Domestic kitchens, bathrooms and WCs

Constructional requirements:
- Non-fire-proof installation shaft
- Shaft wall made of plaster board, 12.5 mm thick
- Ceiling compound 100 mm
- Maximum floor height 3.5 m

Approval:
- General official approval
- Approval number Z-41.6-573 (approval only in conjunction with MAICO fans)
- Fire resistance class K90-18017 S

Functional description

The aeroduct fire protection system in case of fire
- The shut-off devices for MAICO fans close automatically in the event of a fire.
- The heat expands the main duct towards the ceiling and this moves the fire protection compensation element upwards.
- Consequently the roof does not come under stress, and cracks are avoided in the ceiling.
- The fire-proof insulation screens the combustible material in the installation shaft from the heat. A separating bridge is unnecessary here.

The main system components

Fire protection compensation element
BA

Fire protection insulation
BI

Recessed housing
ER-UPD

Fan insert
ER

Surface-mounted fan
ER-APB

Steel flex duct
SFR

1. BI fire protection insulation
2. BA fire protection compensation element
3. SFR flexible steel duct
4. Recessed-mounted housing ER-UPD with ER fan insert
5. ER-APB surface-mounted fan
Multiple family unit air extraction
System selection

PAM-GLOBAL L cast ventilation system

Application areas:
- Domestic kitchens, bathrooms and WCs

Constructional requirements:
- Non-fire-proof installation shaft
- Shaft wall made of plaster board, 12.5 mm thick
- Ceiling compound 150 mm

Approval:
- General official approval
- Approval number Z-41.6-603 (approval only in conjunction with MAICO fans)
- Fire resistance class K90-18017 S

Functional description

The PAM-GLOBAL cast ventilation system in case of fire:
- The shut-off devices for MAICO fans close automatically in the event of a fire.
- The cast ventilation system is able to withstand fire.
- The Rockwool Conlit 150 P insulation shields the combustible materials in the installation shaft. A separating bridge is therefore not needed.
- The BI fire protection insulation from MAICO cannot be used.

Contact address

For further information on PAM-GLOBAL L pipes and shaped elements, please visit www.saint-gobain-hes.de or contact:
Saint-Gobain HES GmbH - Ettore-Bugatti-Strasse 35 - 51149 Köln/Porz-Gremberghoven - Germany - Phone: +49 2203 / 97 84-0 - Fax: 02203 / 97 84-200

The main system components

Duct
PAM-GLOBAL L

Rockwool Conlit

Recessed housing
ER-UPD

Fan insert
ER

Surface-mounted fan
ER-APB

Steel flex duct
SFR

1 PAM-GLOBAL L cast duct
2 Rockwool Conlit
3 SFR flexible steel duct
4 Recessed-mounted housing ER-UPD with ER fan insert
5 ER-APB surface-mounted fan
Ceiling barrier system

Application areas
- Domestic kitchens, bathrooms and WCs

Constructional requirements:
- Non-fire-proof installation shaft
- Ceiling compound 100 mm

Approval:
- General official approval
- Approval number Z-41.6-556
- Fire resistance class K90-18017

Functional description

The ceiling barrier system in the case of fire
- The TS 18 fire protection ceiling barrier consists of a housing in which several lamella with pressure springs can close off the cross section. A synthetic insert alongside the housing wall prevents the lamella from closing. The housing wall is covered with temperature dependent expanding foam material.
- The synthetic insert becomes soft in the case of fire.
- The springs press the lamella together and this mechanically closes the main duct.
- The temperature dependent expanding foam material expands and closes the main duct.
- Fire protection devices on the fans are unnecessary here.

The main system components

- Surface-mounted fan ER-AP
- Fire protection ceiling barrier TS 18
- Recessed housing ER-UP/G
- Fan insert ER

① TS 18 fire protection ceiling barrier
② Recessed-mounted housing ER-UP/G with ER fan insert
③ ER-AP surface-mounted fan
Multiple family unit air extraction
System selection

System with fire-proof shaft
Application areas
- Domestic kitchens, bathrooms and WCs

Constructional requirements:
- Fire-proof installation shaft
- Ceiling compound 100 mm

Functional description
System with fire-proof shaft in the case of fire
- The shut-off devices for MAICO fans close automatically in the event of a fire.
- The fire-proof housings are mounted in the wall of the fire-proof installation shaft. This prevents fire and smoke from spreading.

The main system components

1. Recessed-mounted housing ER-UPB with ER fan insert
2. Recessed-mounted housing ER-UPD with ER fan insert
3. ER-APB surface-mounted fan

- Surface-mounted fan ER-APB
- Recessed housing ER-UPB
- Recessed housing ER-UPD
- Fan insert ER
Air extraction system without fire protection

Application areas:
- Domestic kitchens, bathrooms and WCs

Constructional requirements:
- No fire protection requirements
- Ceiling compound recommended

The main system components:
- Surface-mounted fan ER-AP
- Recessed housing ER-UP/G
- Fan insert ER

1. Recessed-mounted housing ER-UP/G with ER fan insert
2. ER-AP surface-mounted fan
### Short description

- Fan insert for recessed-mounted housing.
- Smooth-surfaced, white cover with exhaust air filter.
- The housing has easy to install snap-in fan fittings and electrical plug connections.
- High pressure characteristic curves.
- Very quiet.
- IP X 5, approved for installation in area 1.
- Many controller models. Please refer to "Models".

### Application examples

- Bathroom
- Kitchen
- Multiple family unit
- Day room
- Dining room
- Flat occupying the whole of one floor
- Low energy house
- Room without window

### Details

- Characteristic curve: p. 37
- Accessory: p. 50
- Wiring diagram: p. 237

### Model with time delay switch

- Start delay approx. 50 seconds.
- Overrun time approx. 6 minutes.
- Single speed only.

### Model with adjustable time delay switch

- Start delay can be set in steps from 0 to approx. 150 seconds.
- The overrun time can be adjusted from approx. 1.5 min to 24 min.
- Single speed only.

### Model with light control

- The light control switches on the fan when the minimum light intensity in the room is exceeded, e.g. when a light is switched on.
- Switch-on intensity (at fan) min. 30 Lux.
- Switch-off intensity (at fan) min. 0.3 Lux.
- No additional installation between switch and unit is required.
- Start delay approx. 50 seconds.
- Overrun time approx. 6 minutes.
- Single speed only.
- Switching variation: The fan can be switched off independently of the room lighting by an additional switch (see the wiring diagrams).

### Model with base load circuit

- The unit runs in continuous operation at 35 m³/h.
- Can be switched over to full load, e.g. when normally unused rooms are used for a long period.
- Single speed only.
- Switching variation: The base load can be switched on or off by an additional switch (see the wiring diagrams).

### Model with base load circuit and time delay switch

- The unit runs in continuous operation at 35 m³/h.
- Switching to full load with start delay of approx. 50 seconds.
- Full load overrun time approx. 6 minutes.
- Single speed only.
- Switching variation: The base load can be switched on or off by an additional switch (see the wiring diagrams).

### Model with humidity control and base load circuit

- Switch-on point: 60 %, 70 %, 80 % or 90 % relative humidity can be set with jumper.
- Switch-off point: approx. 10 % below the switch-on point
- Full load ON: relative humidity above the switch-on point
- Base load ON: when the relative humidity lies below the switch-on point or falls below the switch-off point.
- Can be operated manually via a switch, e.g. switching full load on using a light switch.
- Additional circuits, e.g. for operation without basic ventilation, see the wiring diagrams.
- Single speed only.
- Not suitable for second room ventilation.
- Standard switching:
  - fan runs in base load mode, humidity control is active,
  - full load mode, when the switch-on point is exceeded
  - base load mode when humidity falls below switch-off point

### Model with interval control

- The interval control ventilates rooms that are not regularly used.
- Time interval adjustable from 0 to approx. 15 hours.
- Approx. 10 minutes operating time per interval.
- When operated manually (e.g. by light switch) there is a start delay of approx. 50 seconds and an overrun time of approx. 10 minutes.
- Interval control can be switched off.
- Single speed only.

### Model with three-speed switch

- The air volume can be set in combination with a three-step switch:
  - Step 1: 35 m³/h
  - Step 2: 60 m³/h
  - Step 3: 100 m³/h
- Can be used when combined with supply air elements for controlled domestic ventilation.
- Use is particularly recommended when reconstruction measures are taken.
- Single speed only.
Multiple family unit air extraction

ER 60 / ER 100 Fan Insert

1) Details in accordance with DIN 18017-3 (1990) with an equivalent absorption area $A_L = 10 \text{ m}^2$.

<table>
<thead>
<tr>
<th>Article</th>
<th>Art. No.</th>
<th>Model</th>
<th>$U_{\text{nom}}$ V</th>
<th>Rotating speed $n$ [1/min]</th>
<th>Air flow volume $Q$ [m$^3$/h]</th>
<th>Power consumption $P$ [W]</th>
<th>$t_{\text{Max}}$ [°C]</th>
<th>$l_{\text{Max}}$ [dB(A)]</th>
<th>Sound pressure level $L_{\text{W}27}$ [dB(A)]</th>
<th>Sound pressure level $L_{\text{W}27}$ [dB(A)]</th>
<th>Filter class</th>
<th>Degree of protection (IP)</th>
<th>Mains cable [mm$^2$]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER 60</td>
<td>0084.0100</td>
<td>Standard model</td>
<td>230</td>
<td>1,250</td>
<td>62</td>
<td>21</td>
<td>0.16</td>
<td>40</td>
<td>36</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 60 VZ</td>
<td>0084.0101</td>
<td>Time delay switch</td>
<td>230</td>
<td>1,250</td>
<td>62</td>
<td>21</td>
<td>0.16</td>
<td>40</td>
<td>36</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 60 VZC</td>
<td>0084.0106</td>
<td>Adjustable time delay switch</td>
<td>230</td>
<td>1,250</td>
<td>62</td>
<td>21</td>
<td>0.16</td>
<td>40</td>
<td>36</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 60 F</td>
<td>0084.0102</td>
<td>Light control</td>
<td>230</td>
<td>1,250</td>
<td>62</td>
<td>21</td>
<td>0.16</td>
<td>40</td>
<td>36</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 60 G</td>
<td>0084.0103</td>
<td>Base load circuit</td>
<td>230</td>
<td>1,250/850</td>
<td>62</td>
<td>21/10</td>
<td>0.16/0.12</td>
<td>40</td>
<td>36/26</td>
<td>40/30</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 60 GVZ</td>
<td>0084.0107</td>
<td>Base load and delay time circuit</td>
<td>230</td>
<td>1,250/850</td>
<td>62</td>
<td>21/10</td>
<td>0.16/0.12</td>
<td>40</td>
<td>36/26</td>
<td>40/30</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 60 H</td>
<td>0084.0104</td>
<td>Humidity control</td>
<td>230</td>
<td>1,250/850</td>
<td>62</td>
<td>21/10</td>
<td>0.16/0.12</td>
<td>40</td>
<td>36</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 60 I</td>
<td>0084.0105</td>
<td>Interval control</td>
<td>230</td>
<td>1,250</td>
<td>62</td>
<td>21</td>
<td>0.16</td>
<td>40</td>
<td>36</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100</td>
<td>0084.0130</td>
<td>Standard model</td>
<td>230</td>
<td>1,900</td>
<td>101</td>
<td>31</td>
<td>0.14</td>
<td>40</td>
<td>45</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 VZ</td>
<td>0084.0131</td>
<td>Time delay switch</td>
<td>230</td>
<td>1,900</td>
<td>101</td>
<td>31</td>
<td>0.14</td>
<td>40</td>
<td>45</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 VZC</td>
<td>0084.0136</td>
<td>Adjustable time delay switch</td>
<td>230</td>
<td>1,900</td>
<td>101</td>
<td>31</td>
<td>0.14</td>
<td>40</td>
<td>45</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 F</td>
<td>0084.0132</td>
<td>Light control</td>
<td>230</td>
<td>1,900</td>
<td>101</td>
<td>31</td>
<td>0.14</td>
<td>40</td>
<td>45</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 G</td>
<td>0084.0133</td>
<td>Base load circuit</td>
<td>230</td>
<td>1,900/850</td>
<td>101</td>
<td>31/9</td>
<td>0.14/0.09</td>
<td>40</td>
<td>45</td>
<td>45</td>
<td>G2</td>
<td>X5</td>
<td>5 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 GVZ</td>
<td>0084.0139</td>
<td>Base load and delay time circuit</td>
<td>230</td>
<td>1,900/850</td>
<td>101</td>
<td>31/9</td>
<td>0.14/0.09</td>
<td>40</td>
<td>45</td>
<td>45</td>
<td>G2</td>
<td>X5</td>
<td>5 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 H</td>
<td>0084.0134</td>
<td>Humidity control</td>
<td>230</td>
<td>1,900/850</td>
<td>101</td>
<td>31/9</td>
<td>0.14/0.09</td>
<td>40</td>
<td>45</td>
<td>45</td>
<td>G2</td>
<td>X5</td>
<td>5 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 I</td>
<td>0084.0135</td>
<td>Interval control</td>
<td>230</td>
<td>1,900</td>
<td>101</td>
<td>31</td>
<td>0.14</td>
<td>40</td>
<td>45</td>
<td>40</td>
<td>G2</td>
<td>X5</td>
<td>5 $\times$ 1.5</td>
</tr>
<tr>
<td>ER 100 D</td>
<td>0084.0137</td>
<td>Model with three-speed switch</td>
<td>230</td>
<td>1,900/1,250/850</td>
<td>100</td>
<td>31/21/10</td>
<td>0.14/0.12/0.1</td>
<td>40</td>
<td>45</td>
<td>40/30</td>
<td>G2</td>
<td>X5</td>
<td>3 $\times$ 1.5</td>
</tr>
</tbody>
</table>

**Features**

- Fan with cover and filter for installation in recessed housings.
- For single or second room air extraction using a single fan.
- Electrical plug connection for quick fan installation in the housing.
- Trouble-free filter exchange without using tools.
- It is possible to rotate the cover by $\pm 5^\circ$, to compensate for housings which have been fitted at an angle.

- The housing has easy to install snap-in fan fittings.
- All MAICO ER devices can be used in area 1 in accordance with DIN VDE 0100-701, even with water jets. For details, please refer to the planning instructions.
- Protection class II.
- Mark of conformity: VDE-GS.
- The extremely steep characteristic curve shows the high pressure capacity of the ER fans.
- Robust energy saving capacitor motor.
- Maintenance-free, with enclosed ball bearings on both sides.
- Available static pressure, 258 Pa.
- Volumetric flow characteristic curve and air leakage rate checked by TÜV Bayern e.V (German Technical Inspection Agency). Air leakage rate $\leq 0.01$ m$^3$/h.
- Shaft level difference according to DIN 4109, tested by IAB Oberursel (The Institute for Acoustics and Building Physics in Germany).

www.maico.de
Multiple family unit air extraction

ER 60 / ER 100 Fan Insert

Recommended accessories

<table>
<thead>
<tr>
<th>ER 60</th>
<th>ER 60 VZ</th>
<th>ER 60 VZC</th>
<th>ER 60 F</th>
<th>ER 60 G</th>
<th>ER 60 GVZ</th>
<th>ER 60 H</th>
<th>ER 60 I</th>
<th>see</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door ventilation grilles</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
</tr>
<tr>
<td>Supply air elements</td>
<td>ZE 45 F white</td>
<td>ZE 10 T</td>
<td>ZE 10 IB</td>
<td>ZE 45 F white</td>
<td>ZE 10 T</td>
<td>ZE 10 IB</td>
<td>ZE 45 F white</td>
<td>ZE 10 T</td>
</tr>
<tr>
<td>Radio switches</td>
<td>XS1</td>
<td>XSI</td>
<td>XSI</td>
<td>XS1</td>
<td>XSI</td>
<td>XSI</td>
<td>XS1</td>
<td>XSI</td>
</tr>
<tr>
<td>Masking frames</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
</tr>
<tr>
<td>Radio receivers</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td></td>
</tr>
<tr>
<td>Air filters, replacement</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
</tr>
<tr>
<td>Flexible steel ducts</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
</tr>
<tr>
<td>Flexible aluminium ducts</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
</tr>
<tr>
<td>Roof outlets</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
</tr>
<tr>
<td>Roofing tiles</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
</tr>
<tr>
<td>Mounting clamps</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
</tr>
<tr>
<td>Rain protection grilles</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
</tr>
<tr>
<td>Supply air elements, replacement filter</td>
<td>ZEF 10 T</td>
<td>ZEF 10 IB</td>
<td>ZEF 45 F</td>
<td>ZEF 10 T</td>
<td>ZEF 10 IB</td>
<td>ZEF 45 F</td>
<td>ZEF 10 T</td>
<td>ZEF 10 IB</td>
</tr>
<tr>
<td>Supply air channels</td>
<td>ZEK 45 F</td>
<td>ZEK 45 F</td>
<td>ZEK 45 F</td>
<td>ZEK 45 F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spacing frames</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
</tr>
<tr>
<td>Time delay switches</td>
<td>VZ 6, VZ 12</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Interval switches</td>
<td>VZI 10</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Automatic timers</td>
<td>ZA 4</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Hygrostats</td>
<td>HY 5, HY 5 I</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Door contact switches</td>
<td>TS 8</td>
<td>TS 8</td>
<td>–</td>
<td>–</td>
<td>TS 8</td>
<td>TS 8</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Timers</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Recommended accessories

<table>
<thead>
<tr>
<th>ER 100</th>
<th>ER 100 VZ</th>
<th>ER 100 VZC</th>
<th>ER 100 F</th>
<th>ER 100 G</th>
<th>ER 100 GVZ</th>
<th>ER 100 H</th>
<th>ER 100 I</th>
<th>ER 100 D</th>
<th>see</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door ventilation grilles</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td></td>
</tr>
<tr>
<td>Supply air elements</td>
<td>ZE 45 F white</td>
<td>ZE 10 T</td>
<td>ZE 10 IB</td>
<td>ZE 45 F white</td>
<td>ZE 10 T</td>
<td>ZE 10 IB</td>
<td>ZE 45 F white</td>
<td>ZE 10 T</td>
<td>ZE 10 IB</td>
</tr>
<tr>
<td>Radio switches</td>
<td>XSI</td>
<td>XSI</td>
<td>XSI</td>
<td>XSI</td>
<td>XSI</td>
<td>XSI</td>
<td>XSI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masking frames</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td>ER-AP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio receivers</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td>XE1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air filters, replacement filter</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td>ZF 60/100 bulk container</td>
<td></td>
</tr>
<tr>
<td>Flexible steel ducts</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td>SFP 80</td>
<td></td>
</tr>
<tr>
<td>Flexible aluminium ducts</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td>AFR</td>
<td></td>
</tr>
<tr>
<td>Roof outlets</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td>DF</td>
<td></td>
</tr>
<tr>
<td>Roofing tiles</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td>DP</td>
<td></td>
</tr>
<tr>
<td>Mounting clamps</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td>BS</td>
<td></td>
</tr>
<tr>
<td>Rain protection grilles</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td></td>
</tr>
<tr>
<td>Supply air elements, replacement filter</td>
<td>ZEF 10 T</td>
<td>ZEF 10 IB</td>
<td>ZEF 45 F</td>
<td>ZEF 10 T</td>
<td>ZEF 10 IB</td>
<td>ZEF 45 F</td>
<td>ZEF 10 T</td>
<td>ZEF 10 IB</td>
<td></td>
</tr>
<tr>
<td>Supply air channels</td>
<td>ZEK 45 F</td>
<td>ZEK 45 F</td>
<td>ZEK 45 F</td>
<td>ZEK 45 F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spacing frames</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td>DR 60/100</td>
<td></td>
</tr>
<tr>
<td>Interval switches</td>
<td>VZI 10</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Automatic timers</td>
<td>ZA 4</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Hygrostats</td>
<td>HY 5, HY 5 I</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Door contact switches</td>
<td>TS 8</td>
<td>TS 8</td>
<td>–</td>
<td>–</td>
<td>TS 8</td>
<td>TS 8</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Timers</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Rain protection grilles</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td>RG</td>
<td></td>
</tr>
</tbody>
</table>

www.maico.de
Multiple family unit air extraction

**ER-UP/G Recessed-Mounted Housing**

**Single room ventilation**
- For installation in domestic kitchens, bathrooms and WCs.
- Synthetic material exhaust socket with airflow operated synthetic backflow preventer.
- Installation inside and outside the wall and roof shafts is possible.
- Reduced overall depth of the recessed housing and the cover.
- Approved for upward, right-hand or left-hand exhaust air directions.
- DN 75/80 connection diameter.
- Synthetic material parts are normally inflammable in accordance with class B 2 (building material classification).
- With plaster protective cover.

- General official approval, Approval no.: Z-51.1-7.
- Certificates of approval on request or on our home page - www.maico.de.

**Second room ventilation system**
- ER-ZR second room connection kit for second room ventilation.
- Predetermined breaking points for the additional couplings on the right, left and lower side have been fitted in the ER-UP/G housing.
- Fan types that can be used for second room ventilation: ER 100, ER 100 VZ, ER 100 VZC, ER 100 G, ER 100 I or ER 100 D.
- Main room: 60 m³/h
- Second room: 40 m³/h

**Dimensions [mm]**

**Exhaust air system**

<table>
<thead>
<tr>
<th>Installable</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>–</td>
</tr>
</tbody>
</table>

- aeroduct fire protection system
- PAM-GLOBAL L cast ventilation system
- Ceiling barrier system: Yes
- System with fire-proof shaft: No
- Air extraction system without fire protection: Yes

**Dimensions [mm]**

- within and outside the shaft, connecting duct with flexible aluminium duct.
- second room connection with flexible aluminium duct.

**Article**

<table>
<thead>
<tr>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-UP/G</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0993.0995</td>
</tr>
</tbody>
</table>

**Recommended accessories**

- Door ventilation grilles: MLK
- Masking frames: ER-AP
- Air filters, replacement: ZF 60/100 bulk container, ZF 60/100
- Flexible aluminium ducts: AFR 80
- Roof outlets: DF
- Roofing tiles: DP
- Mounting clamps: BS
- Rain protection grilles: RG
- Mounting supports: UPM 60/100
- Spacing frames: DR 60/100
- Wall frames: ER-MR
- Second room extraction systems: ER-ZR
- Air extraction sockets: ER-AS
- Sponge rubber sets: ER-MO

www.maico.de
Multiple family unit air extraction

**ER-UPD Recessed-Mounted Housing**

### Short description
- Housing with maintenance-free K 90-18017 fire protection shutter, for combination with Maico-Aeroduct-System or Saint-Gobain cast duct PAM-GLOBAL L.
- Connection kit for direct extraction at the WC.

### Single room ventilation
- Recessed housings for fitting a ER 60 or ER 100 fan
- With K 90-18017 maintenance-free fire protection shut-off device against spread of fire.
- DN 80 metal exhaust socket with airstream operated metal backflow preventer.
- For installation in domestic kitchens, bathrooms and WCs.
- Installation inside and outside the wall and roof shafts is possible.
- Reduced overall depth of the recessed housing and the cover.
- Approved for upward, right-hand or left-hand exhaust air directions.
- Connected to the main duct using a flexible steel duct.
- Simple to remove backflow preventer, which ensures easy and quick cleaning.

### Second room ventilation system
- ER-ZR second room connection kit for second room ventilation.
- Predetermined breaking points for the additional couplings on the right, left and lower side have been fitted in the ER-UPD housing.
- Fan types that can be used for second room ventilation: ER 100, ER 100 VZ, ER 100 VZC, ER 100 G, ER 100 I or ER 100 D.
- Main room: 60 m$^3$/h
- Second room: 40 m$^3$/h

### Exhaust air system

<table>
<thead>
<tr>
<th>Exhaust air system</th>
<th>Installable</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>aeroduct fire protection system</td>
<td>Yes</td>
<td>within and outside the shaft, connecting duct with flexible steel duct, second room connection with flexible aluminium duct</td>
</tr>
<tr>
<td>PAM-GLOBAL L cast ventilation system</td>
<td>Yes</td>
<td>within and outside the shaft, connecting duct with flexible steel duct, second room connection with flexible aluminium duct</td>
</tr>
<tr>
<td>Ceiling barrier system</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>System with fire-proof shaft</td>
<td>Yes</td>
<td>within and outside the shaft, connecting duct with flexible steel duct, second room connection with flexible aluminium duct</td>
</tr>
<tr>
<td>Air extraction system without fire protection</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### Dimensions [mm]

#### ER-UPD

#### ER-UPD with second room connection

### Recommended accessories

<table>
<thead>
<tr>
<th>Article</th>
<th>Art. No.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door ventilation grilles</td>
<td>MLK</td>
<td>p. 54</td>
</tr>
<tr>
<td>Masking frames</td>
<td>ER-AP</td>
<td>p. 54</td>
</tr>
<tr>
<td>Air filters, replacement</td>
<td>ZF 60/100</td>
<td>p. 56</td>
</tr>
<tr>
<td>Flexible steel ducts</td>
<td>SFR 80</td>
<td>p. 52</td>
</tr>
<tr>
<td>Roof cowls</td>
<td>DF, DP, BS, RG</td>
<td>p. 53</td>
</tr>
<tr>
<td>Mounting supports</td>
<td>UPM 60/100</td>
<td>p. 54</td>
</tr>
<tr>
<td>Spacing frames</td>
<td>DR 60/100</td>
<td>p. 55</td>
</tr>
<tr>
<td>Wall frames</td>
<td>ER-MR</td>
<td>p. 55</td>
</tr>
<tr>
<td>Second room extraction systems</td>
<td>ER-ZR</td>
<td>p. 53</td>
</tr>
<tr>
<td>Air extraction sockets</td>
<td>ER-AS</td>
<td>p. 55</td>
</tr>
<tr>
<td>Sponge rubber sets</td>
<td>ER-MO</td>
<td>p. 56</td>
</tr>
</tbody>
</table>

**Details**

Accessories | p. 50
Wiring diagram | p. 237
**Single room ventilation**
- Fire-proof housings for fitting an ER 60 or ER 100 fan
- With K 90-18017 maintenance-free fire protection shut-off device against spread of fire.
- ON 75/80 metal exhaust socket with air-stream operated metal backflow preventer.
- For installation in domestic kitchens, bathrooms and WCs.
- Simple to remove backflow preventer, which ensures easy and quick cleaning.
- Reduced overall depth of the recessed housing and the cover.
- With plaster protective cover.
- General official approval, Approval no.: Z-51.1-46.

**Certificates of approval on request or on our home page - www.maico.de.**

**Approved for wall installation with upward, right-hand or left-hand exhaust air directions.**

**Second room ventilation system**
- ER-UPB housings including second room connection kit can be supplied for second room ventilation:
  - UPB/R : right.
  - UPB/L : left.
  - UPB/U : below.
- Fan types that can be used for second room ventilation: ER 100, ER 100 VZ, ER 100 VZC, ER 100 G, ER 100 I or ER 100 D.
- Main room: 60 m³/h
- Second room: 40 m³/h

---

### Short description
- Housing with maintenance-free K 90-18017 fire protection shutter and fire-protection cover, for use in fire-proof extraction shafts.

---

### Exhaust air system

<table>
<thead>
<tr>
<th>Exhaust air system</th>
<th>installable</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>aer duct fire protection system</td>
<td>No</td>
<td>–</td>
</tr>
<tr>
<td>PAM-GLOBAL L cast ventilation system</td>
<td>Yes</td>
<td>within the shaft, connecting duct with flexible aluminium duct, second room connection with flexible steel duct</td>
</tr>
<tr>
<td>Ceiling barrier system</td>
<td>No</td>
<td>–</td>
</tr>
<tr>
<td>System with fire-proof shaft</td>
<td>Yes</td>
<td>within the shaft, connecting duct with flexible aluminium duct, second room connection with flexible steel duct</td>
</tr>
<tr>
<td>Air extraction system without fire protection</td>
<td>No</td>
<td>–</td>
</tr>
</tbody>
</table>

### Dimensions [mm]

**ER-UPB**

**ER-UPB with second room connection**

### Article

<table>
<thead>
<tr>
<th>Article</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-UPB</td>
<td>0093.0968</td>
</tr>
<tr>
<td>ER-UPB/R</td>
<td>0093.0969</td>
</tr>
<tr>
<td>ER-UPB/L</td>
<td>0093.0970</td>
</tr>
<tr>
<td>ER-UPB/U</td>
<td>0093.0971</td>
</tr>
</tbody>
</table>

### Recommended accessories

<table>
<thead>
<tr>
<th>Door ventilation grilles</th>
<th>ER-UPB</th>
<th>ER-UPB/R</th>
<th>ER-UPB/L</th>
<th>ER-UPB/U</th>
<th>see</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masking frames</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>MLK</td>
<td>p. 54</td>
</tr>
<tr>
<td>Air filters, replacement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexible aluminium ducts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof cowls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting supports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spacing frames</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wall frames</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second room extraction systems</td>
<td>ER-ZR</td>
<td>ER-ZR</td>
<td>ER-ZR</td>
<td>ER-ZR</td>
<td>p. 53</td>
</tr>
</tbody>
</table>

---

© 2010/11 maico GmbH & Co. KG, Oldenburg, Germany
Multiple family unit air extraction

ER-AP Surface-Mounted Fan

Short description
- Surface-mounted design, fan insert integrated in the housing.
- With exhaust air filter and backflow preventer.
- Without fire protection. may be combined with ceiling barrier, if required.
- Many controller models. Please refer to “Models”.

Application examples
- Bathroom
- Kitchen
- Multiple family unit
- Day room
- Dining room
- Flat occupying the whole of one floor
- Low energy house
- Room without window

Features
- Surface-mounted fan for air extraction from domestic kitchens, bathrooms or WCs.
- Trouble-free filter exchange without using tools.
- Housing can be turned, so the exhaust socket can be connected on the upper left or right main duct side.
- DN 75/80 exhaust socket with airstream operated metal backflow preventer.
- The extremely steep characteristic curve shows the high pressure capacity of the ER fans.
- Available static pressure for ER-AP 60: 204 Pa.
- All MAICO ER devices can be used in area 1 in accordance with DIN VDE 0100-701, even with water jets. For details, please refer to the planning instructions.

<table>
<thead>
<tr>
<th>Exhaust air system</th>
<th>can be used</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>aeroduct Fire protection system</td>
<td>No</td>
<td>–</td>
</tr>
<tr>
<td>PAM-GLOBAL L cast ventilation system</td>
<td>No</td>
<td>–</td>
</tr>
<tr>
<td>Ceiling barrier system</td>
<td>Yes</td>
<td>within and outside the shaft, connecting duct with flexible aluminium duct, second room connection with flexible aluminium duct</td>
</tr>
<tr>
<td>System with fire-proof shaft</td>
<td>No</td>
<td>–</td>
</tr>
<tr>
<td>Air extraction system without fire protection</td>
<td>Yes</td>
<td>within and outside the shaft, connecting duct with flexible aluminium duct, second room connection with flexible aluminium duct</td>
</tr>
</tbody>
</table>

Dimensions [mm]

Characteristic curve

Details
- Characteristic curve: p. 42
- Accessory: p. 50
- Wiring diagram: p. 237
### ER-AP Surface-Mounted Fan

#### Recommended accessories

<table>
<thead>
<tr>
<th>Article</th>
<th>Art. No.</th>
<th>Model</th>
<th>U_{nom}</th>
<th>f_{nom}</th>
<th>Rotating speed</th>
<th>Air flow volume</th>
<th>Power consumption</th>
<th>I_{Max}</th>
<th>I_{Max}$A$</th>
<th>Sound pressure level $L_{PA}$</th>
<th>Sound pressure level $L_{PAA}$</th>
<th>Mains cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-AP 60</td>
<td>0084.0150</td>
<td>Standard model</td>
<td>230</td>
<td>50</td>
<td>1,250</td>
<td>61</td>
<td>21</td>
<td>0.17</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td>3 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 VZ</td>
<td>0084.0151</td>
<td>Time delay switch</td>
<td>230</td>
<td>50</td>
<td>1,250</td>
<td>61</td>
<td>21</td>
<td>0.17</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td>5 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 F</td>
<td>0084.0152</td>
<td>Light control</td>
<td>230</td>
<td>50</td>
<td>1,250/900</td>
<td>61</td>
<td>21/11</td>
<td>0.17/0.13</td>
<td>40</td>
<td>40/33</td>
<td>43/37</td>
<td>5 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 G</td>
<td>0084.0153</td>
<td>Base load circuit</td>
<td>230</td>
<td>50</td>
<td>1,250/900</td>
<td>61</td>
<td>21/11</td>
<td>0.17/0.13</td>
<td>40</td>
<td>40/33</td>
<td>43/37</td>
<td>5 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 H</td>
<td>0084.0154</td>
<td>Humidity control</td>
<td>230</td>
<td>50</td>
<td>1,850/900</td>
<td>100</td>
<td>31</td>
<td>0.15</td>
<td>40</td>
<td>49</td>
<td>53</td>
<td>3 × 1.5</td>
</tr>
</tbody>
</table>

### Door ventilation grilles

<table>
<thead>
<tr>
<th>Article</th>
<th>Art. No.</th>
<th>Model</th>
<th>U_{nom}</th>
<th>f_{nom}</th>
<th>Rotating speed</th>
<th>Air flow volume</th>
<th>Power consumption</th>
<th>I_{Max}</th>
<th>I_{Max}$A$</th>
<th>Sound pressure level $L_{PA}$</th>
<th>Sound pressure level $L_{PAA}$</th>
<th>Mains cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-AP 60</td>
<td>0084.0150</td>
<td>Standard model</td>
<td>230</td>
<td>50</td>
<td>1,250</td>
<td>61</td>
<td>21</td>
<td>0.17</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td>3 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 VZ</td>
<td>0084.0151</td>
<td>Time delay switch</td>
<td>230</td>
<td>50</td>
<td>1,250</td>
<td>61</td>
<td>21</td>
<td>0.17</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td>5 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 F</td>
<td>0084.0152</td>
<td>Light control</td>
<td>230</td>
<td>50</td>
<td>1,250/900</td>
<td>61</td>
<td>21/11</td>
<td>0.17/0.13</td>
<td>40</td>
<td>40/33</td>
<td>43/37</td>
<td>5 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 G</td>
<td>0084.0153</td>
<td>Base load circuit</td>
<td>230</td>
<td>50</td>
<td>1,250/900</td>
<td>61</td>
<td>21/11</td>
<td>0.17/0.13</td>
<td>40</td>
<td>40/33</td>
<td>43/37</td>
<td>5 × 1.5</td>
</tr>
<tr>
<td>ER-AP 60 H</td>
<td>0084.0154</td>
<td>Humidity control</td>
<td>230</td>
<td>50</td>
<td>1,850/900</td>
<td>100</td>
<td>31</td>
<td>0.15</td>
<td>40</td>
<td>49</td>
<td>53</td>
<td>3 × 1.5</td>
</tr>
</tbody>
</table>

### Flexibility and Safety

- **ER-AP 60**: Standard model with 100% duty cycle.
- **ER-AP 60 VZ**: Time delay switch for variable speed control.
- **ER-AP 60 F**: Light control for automatic switching.
- **ER-AP 60 G**: Base load circuit for constant power consumption.
- **ER-AP 60 H**: Humidity control for precise humidity management.

**Note:** Details in accordance with DIN 18017-3 (1990) with an equivalent absorption area $A_{eq} = 10 \text{ m}^2$. Updated as of April 2023.

---

**www.maico.de**
Multiple family unit air extraction
ER-APB Surface-Mounted Fan

Short description
- Surface-mounted design, fan insert integrated in the housing.
- Housing with maintenance-free K 90-18017 fire protection shutter, for combination with Maico-Aeroduct System, Saint-Gobain cast duct PAM-GLOBAL L or fire-proof shaft.
- Many controller models. Please refer to "Models".

Application examples
- Bathroom
- Kitchen
- Multiple family unit
- Day room
- Dining room
- Flat occupying the whole of one floor
- Low energy house
- Room without window

Features
- Surface-mounted fan for air extraction from domestic kitchens, bathrooms or WCs.
- With K 90-18017 maintenance-free fire protection shut-off device against spread of fire.
- Housing can be turned, so the exhaust socket can be connected on the upper left or right main duct side.
- Trouble-free filter exchange without using tools.
- DN 80 exhaust socket with airstream operated metal backflow preventer.
- The extremely steep characteristic curve shows the high pressure capacity of the ER fans.
- Available static pressure for ER-APB 60: 204 Pa.
- Robust energy saving capacitor motor.
- Maintenance-free, with enclosed ball bearings on both sides.

Electrical plug connection for quick fan installation in the housing.
Mark of conformity: VDE-GS.
All MAICO ER devices can be used in area 1 in accordance with DIN VDE 0100-701, even with water jets. For details, please refer to the planning instructions.
Protection class II.
General official approval, Approval no.: Z-51.1-45.
Certificates of approval on request or on our home page - www.maico.de.
Volumetric flow characteristic curve and air leakage rate checked by TÜV Bayern e.V (German Technical Inspection Agency). Air leakage rate ≤ 0.01 m³/h.
Shaft level difference according to DIN 4109, tested by IAB Oberursel (The Institute for Acoustics and Building Physics in Germany).

Exhaust air system | can be used | Note
---|---|---
Aeroduct fire protection system | Yes | on and outside the shaft, Connecting duct with flexible steel duct
PAM-GLOBAL L cast ventilation system | Yes | on and outside the shaft, Connecting duct with flexible steel duct
Ceiling barrier system | No | –
System with fire-proof shaft | Yes | on and outside the shaft: Connecting duct with flexible aluminium duct outside the shaft: Connecting duct with flexible steel duct
Air extraction system without fire protection | No | –

Dimensions [mm]

Characteristic curve

Details
- Characteristic curve p. 44
- Accessory p. 50
- Wiring diagram p. 237

www.maico.de
<table>
<thead>
<tr>
<th>Article</th>
<th>Art. No.</th>
<th>Model</th>
<th>U_{nom} (V)</th>
<th>I_{nom} (A)</th>
<th>Rotating speed (1/min)</th>
<th>Air flow volume (m³/h)</th>
<th>Power consumption (W)</th>
<th>T_{Max} (°C)</th>
<th>Sound pressure level S_{MA} (dB(A))</th>
<th>Sound pressure level S_{WA} (dB(A))</th>
<th>Mains cable (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-APB 60</td>
<td>0084.0156</td>
<td>Standard model</td>
<td>230</td>
<td>50</td>
<td>1,250</td>
<td>61</td>
<td>21</td>
<td>0.17</td>
<td>43</td>
<td>1)</td>
<td>46</td>
</tr>
<tr>
<td>ER-APB 60 VZ</td>
<td>0084.0157</td>
<td>Time delay switch</td>
<td>230</td>
<td>50</td>
<td>1,250</td>
<td>61</td>
<td>21</td>
<td>0.17</td>
<td>43</td>
<td>1)</td>
<td>46</td>
</tr>
<tr>
<td>ER-APB 60 F</td>
<td>0084.0158</td>
<td>Light control</td>
<td>230</td>
<td>50</td>
<td>1,250</td>
<td>61</td>
<td>21</td>
<td>0.17</td>
<td>43</td>
<td>1)</td>
<td>46</td>
</tr>
<tr>
<td>ER-APB 60 G</td>
<td>0084.0159</td>
<td>Base load circuit</td>
<td>230</td>
<td>50</td>
<td>1,250/900</td>
<td>61</td>
<td>21/11</td>
<td>0.17/0.13</td>
<td>43/33</td>
<td>1)</td>
<td>46/37</td>
</tr>
<tr>
<td>ER-APB 60 H</td>
<td>0084.0160</td>
<td>Humidity control</td>
<td>230</td>
<td>50</td>
<td>1,250/900</td>
<td>61</td>
<td>21/11</td>
<td>0.17/0.13</td>
<td>43/33</td>
<td>1)</td>
<td>46/37</td>
</tr>
<tr>
<td>ER-APB 100</td>
<td>0084.0176</td>
<td>Standard model</td>
<td>230</td>
<td>50</td>
<td>1,850</td>
<td>100</td>
<td>31</td>
<td>0.15</td>
<td>49</td>
<td>1)</td>
<td>53</td>
</tr>
<tr>
<td>ER-APB 100 VZ</td>
<td>0084.0177</td>
<td>Time delay switch</td>
<td>230</td>
<td>50</td>
<td>1,850</td>
<td>100</td>
<td>31</td>
<td>0.15</td>
<td>49</td>
<td>1)</td>
<td>53</td>
</tr>
<tr>
<td>ER-APB 100 F</td>
<td>0084.0178</td>
<td>Light control</td>
<td>230</td>
<td>50</td>
<td>1,850</td>
<td>100</td>
<td>31</td>
<td>0.15</td>
<td>49</td>
<td>1)</td>
<td>53</td>
</tr>
<tr>
<td>ER-APB 100 G</td>
<td>0084.0179</td>
<td>Base load circuit</td>
<td>230</td>
<td>50</td>
<td>1,850/900</td>
<td>100</td>
<td>31/10</td>
<td>0.15/0.09</td>
<td>49/33</td>
<td>1)</td>
<td>53/37</td>
</tr>
<tr>
<td>ER-APB 100 H</td>
<td>0084.0180</td>
<td>Humidity control</td>
<td>230</td>
<td>50</td>
<td>1,850/900</td>
<td>100</td>
<td>31/10</td>
<td>0.15/0.09</td>
<td>49/33</td>
<td>1)</td>
<td>53/37</td>
</tr>
</tbody>
</table>

1) Details in accordance with DIN 18017-3 (1990) with an equivalent absorption area A_{eq} = 10 m².

### Recommended accessories

#### ER-APB 60
- Door ventilation grilles: MLK
- Supply air elements: ZE 45 F white, ZE 10 T, ZE 10 IB, ZE 45 F, ZE 10 T, ZE 10 IB
- Radio switches: X51
- Radio receivers: XE1
- Air filters, replacement: ZF 60/100 bulk container, ZF 60/100 bulk container, ZF 60/100 bulk container, ZF 60/100 bulk container
- Flexible steel ducts: SFR 80
- Flexible aluminium ducts: AFR
- Roof cowls: DF, DP, BS, RG
- Supply air elements, replacement filter: ZEF 10 T, ZEF 10 IB, ZEF 45 F, ZEF 10 T, ZEF 10 IB, ZEF 45 F
- Supply air channels: ZEF 45 F, ZEF 10 T, ZEF 10 IB, ZEF 45 F
- Time delay switches: VZ 6, VZ 12, VZ 24 C
- Interval switches: VZI 10
- Automatic timers: ZA 4
- Hygrostats: HY 5, HY 5 I
- Door contact switches: TS 8
- Timers: ZS 3

#### ER-APB 100
- Door ventilation grilles: MLK
- Supply air elements: ZE 45 F white, ZE 10 T, ZE 10 IB, ZE 45 F, ZE 10 T, ZE 10 IB
- Radio switches: X51
- Radio receivers: XE1
- Air filters, replacement: ZF 60/100 bulk container, ZF 60/100 bulk container, ZF 60/100 bulk container, ZF 60/100 bulk container
- Flexible steel ducts: SFR 80
- Flexible aluminium ducts: AFR
- Roof cowls: DF, DP, BS, RG
- Supply air elements, replacement filter: ZEF 10 T, ZEF 10 IB, ZEF 45 F, ZEF 10 T, ZEF 10 IB, ZEF 45 F
- Supply air channels: ZEF 45 F, ZEF 10 T, ZEF 10 IB, ZEF 45 F
- Interval switches: VZI 10
- Automatic timers: ZA 4
- Hygrostats: HY 5, HY 5 I
- Door contact switches: TS 8
- Timers: ZS 3

www.maico.de