

Comfortable climate for apartments and single-family homes



From the exhaust air solution
to heat recovery

Intelligent German-made
ventilation systems



ECA 100 ipro –

the variable and intelligent small room fan



ECA 100^{ipro}



MAICO highlights

- Controller variants and air volumes to suit a huge range of different applications
- ECA 100 ipro H with fully automatic 2-level humidity control
- Attractive, quiet ventilation units
- With 2 operating levels as standard
- With adjustable operating programme (apart from standard model)
- Minimal energy consumption
- With electric internal shutter as an option

MODE OF OPERATION

Exhaust air

- Single air extraction unit in the bathroom, WC, utility room, etc.
Outgoing air flow directly via the external wall and/or via ducting to the external wall

Supply air

- Fresh air supply via overflow opening in the door

VENTILATION COMPONENTS FOR A BATHROOM OR WC (example)

- 1 x ECA 100 ipro VZC
- 1 x AP 100 shutter or SG 100 external grille
- 1 x MLK door ventilation grille
- 1 x WH 100 wall sleeve



Now with wireless control too!

- ① AP 100 shutter for air extraction
- ② WH 100 wall sleeve
- ③ ECA 100 ipro VZC small room fan
- ④ MLK 45 door ventilation grille



AKE 100 –

fully automatic cellar dehumidification



Air extraction system for cellars, utility rooms, drying rooms, laundry rooms, etc.



MAICO highlights

- Powerful exhaust fan with integrated, intelligent dew point control as well as external and internal sensors
- Ensures a dry climate in cellar rooms which protects the building substance
- Optional ECA 11 E supply air fan or other exhaust fan can be controlled
- Manual switch-on via button
- Simple installation, core drill hole 105 mm/120 mm when installing with WH 100 wall sleeve

MODE OF OPERATION

Exhaust air

- Constant comparison of the absolute humidity in the indoor area with the absolute humidity of the outdoor area
- Automatic dehumidification operation if the absolute humidity indoors is greater than the absolute humidity outdoors

Supply air

- Fresh air supply via overflow openings, for example in the door

Frost protection function

- Switch off the system at temperatures below 3 °C



- ① Fan with sensor
- ② External shutter and sensors
- ③ Overflow opening, e.g. in the door

ER fans

for decentralised air extraction in accordance with DIN 18017-3 / DIN 1946-6



Exhaust air system with single air extraction units for construction of new multiple-family homes, homes, hotels. Without heat recovery.

MAICO highlights

- Attractive, quiet air extraction units with very high pressure levels
- Elegant, very sound-insulated outside air openings
- Suitable ventilation solutions, from light control through humidity control to radio switches

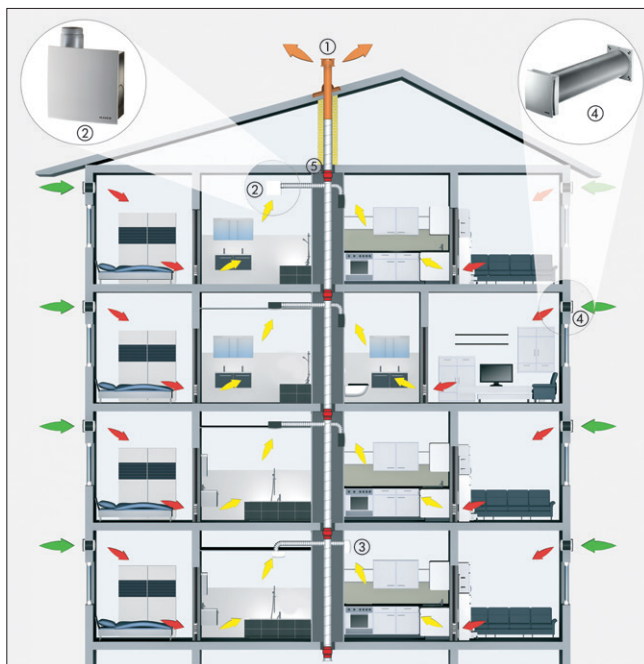
MODE OF OPERATION

Exhaust air

- Single air extraction units (surface-mounted or recess-mounted) in bathrooms, WCs, kitchens
- Outgoing air flow via shared outgoing air duct for several apartments
- Fire protection in the outgoing air duct thanks to fire protection barriers in the floor ceilings

Supply air

- Fresh air supply of outside air via outside air openings into the day rooms (living rooms)



VENTILATION COMPONENTS PER LIVING UNIT (example)

- 2 x ER 60 GVZ single air extraction units
- 3 x ER-UP/G recess-mounted housing
- 4 x ALD 160 outside air openings

Now with wireless control too!

- ① DP roofing tile + roof outlet with DF hood
- ② ER single air extraction unit in ER-UP/G recess-mounted housing
- ③ ER single air extraction unit in surface-mounted model
- ④ ALD outside air opening
- ⑤ TS 18 ceiling barrier



CENTRO –

ventilation system for central air extraction in accordance with DIN 18017-3 / DIN 1946-6



Energy-saving, comfortable centralised air extraction system with central roof fan.

Suitable for use in the construction of new multiple-family homes, homes, hotels. Without heat recovery.

MAICO highlights

- Energy-saving EC roof fan with integrated control for basic/ demand-based ventilation
- Attractive exhaust air elements, can be switched from basic to demand-based ventilation
- Attractive, very sound-insulated outside air openings



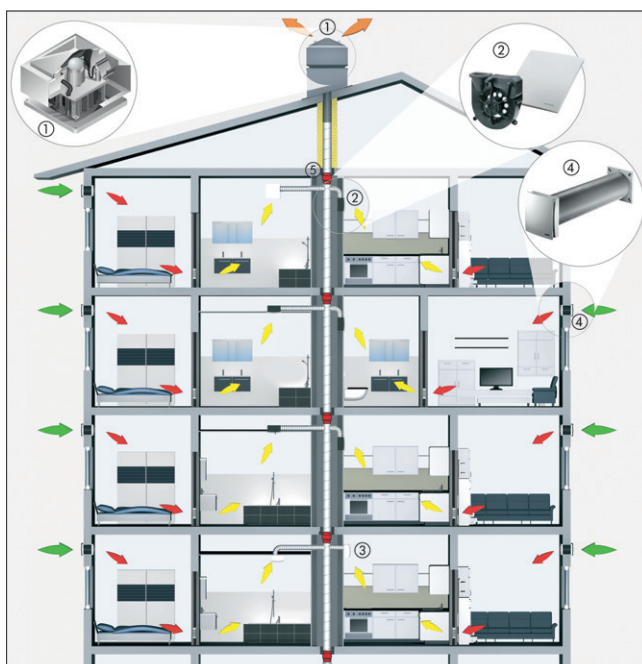
MODE OF OPERATION

Exhaust air

- Shared roof fan, shared outgoing air duct for several residential units
- Fire protection with K90-18017 fire protection barriers in outgoing air duct in floor ceiling area
- Exhaust air elements (surface-mounted or recess-mounted) in bathrooms, WCs and kitchens, can be switched from basic to demand-based ventilation per apartment

Supply air

- Fresh air supply of outside air via outside air openings into the day rooms (living rooms)



VENTILATION COMPONENTS PER LIVING UNIT (example)

Per living unit

- 1 – 3 x Centro E exhaust air elements
- 3 – 4 x ALD 160 outside air openings

Shared by several residential units

- 1 x GRD roof fan

Now with humidity control too!

- ① GRD centrifugal roof fan with EC motor and integrated control
- ② Centro exhaust air element in ER-UP/G recess-mounted housing
- ③ Centro exhaust air element in surface-mounted model
- ④ ALD outside air opening
- ⑤ TS 18 ceiling barrier

MAICOsmart

Wireless ventilation system in accordance with DIN 1946-6



MAICO
smart



Wibutler **enocean**

Low-cost, wireless exhaust air system in accordance with DIN 1946-6 for redevelopment or construction of new single-family homes or apartments, without heat recovery.

MAICO highlights

- Wireless control of ventilation system using room air control unit in 3-4 ventilation levels in accordance with DIN 1946-6 (humidity, reduced, nominal and intensive ventilation)
- Room-based additional step switching of fans possible using additional radio switches
- Single air extraction units can be integrated in accordance with DIN 18017-3

MODE OF OPERATION

Exhaust air

- ECA or ER in the bathroom, WC, kitchen

Supply air

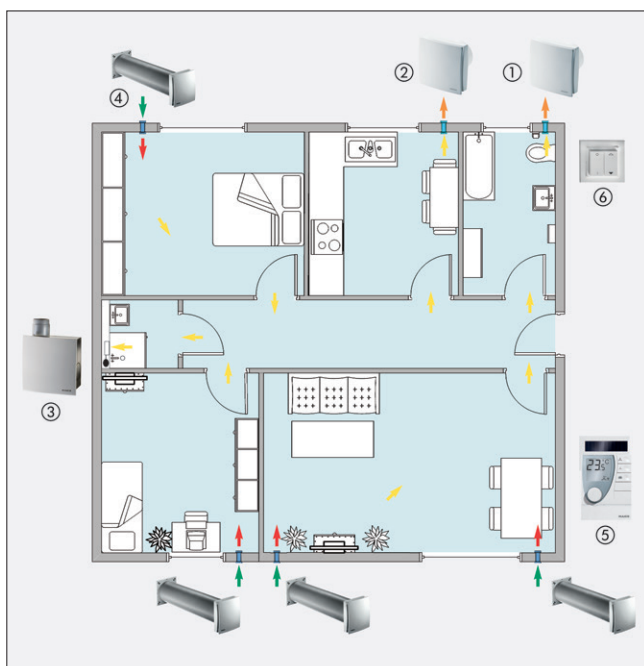
- Fresh air supply of outside air via outside air openings into the living rooms

VENTILATION COMPONENTS PER LIVING UNIT (example)

2 – 3 x ECA or ER exhaust fans with radio receiver

1 room air control unit with radio transmitter

4 – 7 x ALD 160 outside air openings



Wibutler | Smart home-compatible ventilation

- ① ECA 100 ipro RCH exhaust fan with radio receiver and humidity control
- ② ECA 100 ipro RC exhaust fan with radio receiver
- ③ ER 100 RC single duct air extraction unit with radio receiver for systems in accordance with DIN 18017-3
- ④ ALD outside air opening
- ⑤ RLS RC wireless control shared by all exhaust fans in the apartment
- ⑥ Optional additional DS RC radio switch for individual exhaust fans

- Supply air
- Exhaust air
- Outside air
- Outgoing air

Complete system

for single-family homes or apartments

MATERIAL PER LIVING UNIT (example)

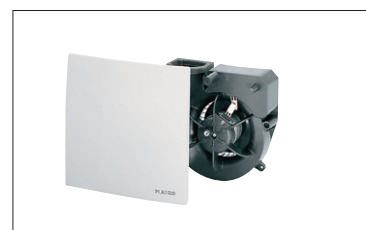
ECA 100 ipro RCH exhaust fan
with radio receiver and humidity control

Article no. 0084.0211



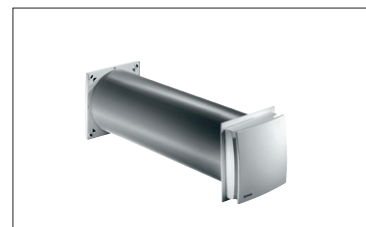
ECA 100 ipro RC exhaust fan
with radio receiver

Article no. 0084.0210



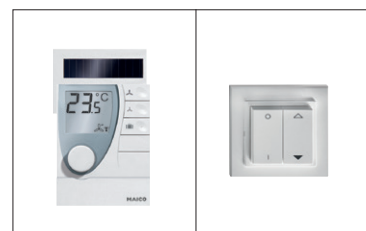
ER 100 RC single duct air extraction unit
with radio receiver,
for systems in accordance with DIN 18017-3

Article no. 0084.0129



ALD 160 outside air opening

Article no. 0052.0069

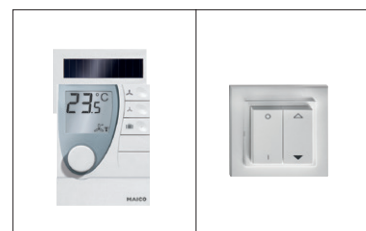


RLS RC wireless control shared by all
exhaust fans

Article no. 0157.0849

Optional additional
DS RC radio switch
for individual exhaust fans

Article no. 0057.0832



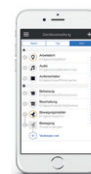
Smart Home with wibutler

As an option, the radio-controlled ventilation system can be intelligently integrated into a smart network using the digital „wibutler“ servant and controlled using an app.



The key benefits at a glance:

- Linking of a huge range of products via the central smart server
- Control, monitoring and evaluation of several units using one app
- Three different user accounts available for occupant, administrator and external manager
- Ventilation systems can therefore be checked, adjusted and maintained in a practical manner to suit the target group
- No programming effort for tradesmen



PushPull 45

Single-room ventilation unit with heat recovery



PushPull 45
MAICO



Wall sleeve just Ø 160 mm



Decentralised supply and exhaust air units for wall installation with heat recovery for single-family homes or apartments

MAICO highlights

- Balanced wall climate thanks to alternating supply air and exhaust air mode, even with odd number of units
- Available as object variant, comfort variant and wireless variant
- The only ventilation unit with an electric and/or manual shutter
- Unique comfort thanks to intermittent ventilation, sleep function and auto mode
- Cross-ventilation or humidity-controlled cross-ventilation as an option
- Very quiet ventilation operation, supply air and exhaust air filter in each unit
- More than 82 % heat recovery thanks to ceramic heat exchanger
- ErP-compliant, A+ efficiency class

MODE OF OPERATION

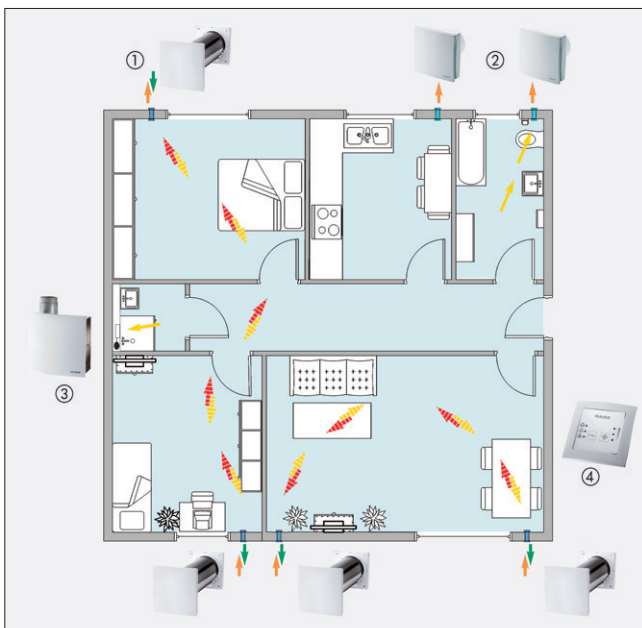
PushPull units alternate between exhaust air and supply air mode, spending 70 seconds in each mode. In exhaust air mode, more than 82% of the heat is stored in a heat exchanger. In the subsequent supply air mode, this heat is transferred back to the supply air. To achieve aeration and air extraction at the same time in the residential unit, pairs of units are always used, spread around the living rooms. A pair of PushPull units or exhaust fans (ECA, ER) are used in damp rooms.

MATERIAL PER LIVING UNIT (example)

2 x, 4 x or 6 x PP45 PushPull units

1 x RLS PP control unit

1 – 2 x ECA 100 ipro VZC or ER 60 VZ exhaust fans for damp rooms



- ① PushPull 45 ventilation unit in continuous operation with heat recovery
- ② ECA 100 ipro VZC exhaust fan with demand-driven switching
- ③ ER 60 VZ single duct air extraction unit with demand-driven switching
- ④ RLS PP control unit for PushPull 45

- Supply and exhaust air with change of direction
- Outside and outgoing air with change of direction
- Outgoing air flow via ventilation shaft and/or external wall

Complete system

for single-family homes or apartments

MATERIAL PER LIVING UNIT (example)

Complete PushPull 45 kit comprising:

500 mm shell sleeve, Ø 160 mm
PP 45 RHK

Article no. 0059.0081

800 mm shell sleeve, Ø 160 mm
PP 45 RHL

Article no. 0059.0082

External cover, plastic white
PP 45 AK

Article no. 0093.0176

Final assembly kit

PP 45 O object variant, with manual internal shutter
PP 45 K comfort variant, with electric internal shutter
PP 45 RC radio variant, with electric internal shutter,
no control cable needed

Article no. 0095.0240

Article no. 0095.0241

Article no. 0095.0242

Room air control/control unit for up to 6 ventilation units

RLS 45 O object variant

Article no. 0157.0359

RLS 45 K comfort variant

Article no. 0157.0360

RLS DS 45 RC radio variant

Article no. 0157.0363



ER 60 VZ exhaust fan for damp rooms, installation e. g. in non-fireproof shaft with ceiling barrier fire protection system

Recessed-mounted housing

ER-UP/G

Article no. 0093.0995

- Small installation depth
- Air outlet to top, right or left

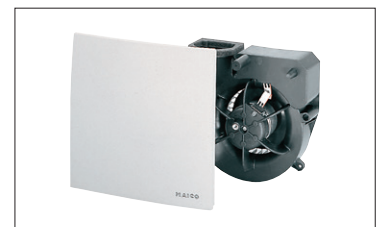


ER fan insert

ER 60 VZ

Article no. 0084.0101

- Quiet operation



ECA 100 ipro exhaust fan for damp rooms,
installation directly on external wall

ECA 100 ipro VZC

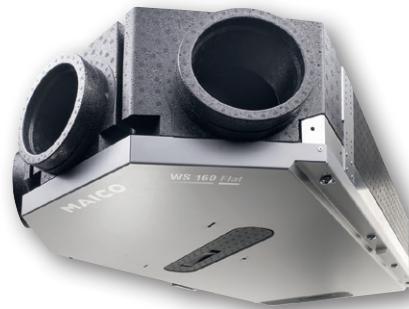
Article no. 0084.0201

- Quiet operation



WS 160 Flat

Comfort domestic ventilation with heat recovery



Includes RLS 1 WR control unit



Option:
RLS 1 T1 WS with touchscreen



Central ventilation unit with heat recovery for apartments and single-family homes with living space of up to 120 m²

MAICO highlights

- Ventilation unit with energy efficiency class A certified by the Passivhausinstitut, degree of energy provision in excess of 76 %
- Compact design with a height of just 23 cm
- **Thanks to enthalpy heat exchanger can be fitted in any position (horizontal or vertical), no condensate connection needed**
- **2 supply air connections, one on the right and one on the left of the exhaust air connection, make it easier to fit ducts without crossing one another and simplify unit use as both left and right versions**
- **WS 160 KBZET unit variant with patented zone ventilation permits needs-based control of various rooms such as living/working/sleeping areas**
- Frost protection heating and/or bypass integrated depending on equipment variant
- Includes web server, mobile control via MAICO app air@home, Modbus interface



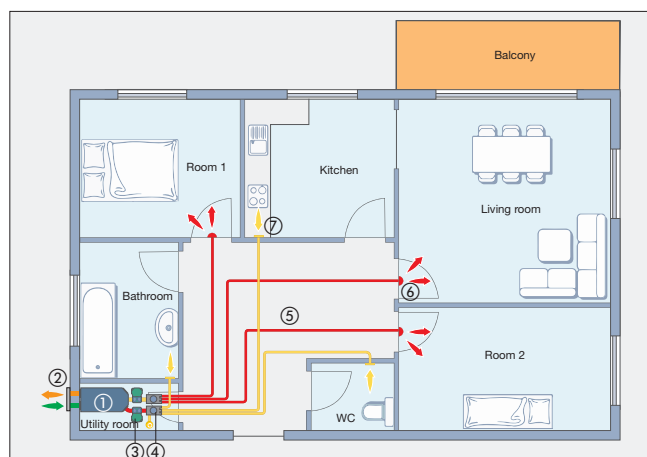
Supply air Exhaust air Supply air

MODE OF OPERATION

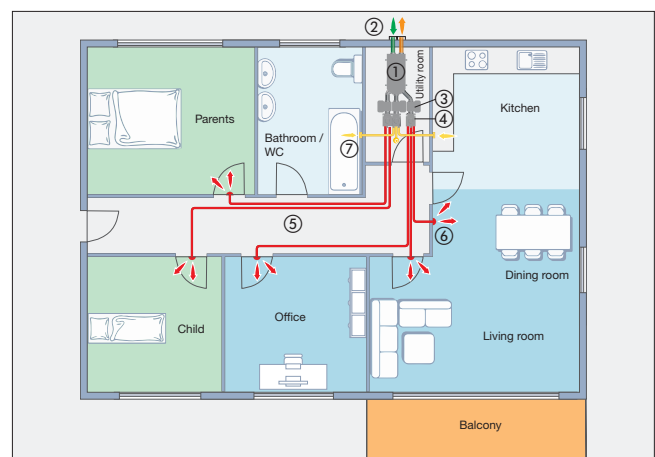
- Unit positioned in a utility room or in suspended ceiling in the hallway
- Distribution of supply and exhaust air (via air distributor and flexible ventilation ducts in the suspended corridor ceiling), exhaust air valves in the exhaust air rooms (kitchen, bathroom, WC, utility room), supply air valves in the supply air rooms (office, living room, bedroom, children's room)
- Outside and outgoing air flow via insulated Maico Therm ducts, KWH combination wall connection on the external wall

- ① WS 160 Flat ventilation unit
- ② KWH combination wall connection with MT-R Therm duct for outside and outgoing air
- ③ SB sound absorber box
- ④ MF-VK 90-7 air distributor for supply and exhaust air
- ⑤ MF-F 90 flexible duct
- ⑥ ZWQ 10 supply air valve
- ⑦ TK 10 exhaust air valve

- Supply air
- Exhaust air
- Outside air
- Outgoing air



Standard air flow



Air flow with patented zone control for supply air / Zone 1 ■ Zone 2 ■

Complete kit

for apartments of up to 120 m²

MATERIAL PER LIVING UNIT (example)

Complete kit comprising:

**VENTILATION UNIT WITH HEAT RECOVERY 160 m³/h
WS 160 FLAT ET BASIC UNIT WITH BASIC EQUIPMENT**

ART. NO. 0095.0090

- Ultra flat unit, height 23 cm, L 1260 x W 582 x H 230 mm
- Very energy-efficient (EC motors, crossflow heat exchanger)
- Quiet
- With enthalpy heat exchanger so no condensation connection needed
- Includes control unit



**INDIVIDUAL COMPONENTS FOR THE
OUTSIDE AND OUTGOING AIR FLOW
WITH INSULATED DN 125 DUCT**

ART. NO.

CONTENT/
QUANTITY

Ventilation duct, insulated, MT-R 125

0059.0981

2 metres

Elbow, insulated, MT-B 125 90/45

0059.0983

1

Connector, MT-V 125

0059.0985

7



MAICOTherm –
installation
solution suited to
tight situations

**INDIVIDUAL COMPONENTS FOR SUPPLY
AND EXHAUST AIR
DN 90 FLEXIBLE DUCT**

ART. NO.

CONTENT/
QUANTITY

MF-F 90 flexible duct

0055.0095

50 metres

MF-VK 90-7 air distributor 1 x 125 / 7 x DN 90

0059.0994

2

MF-FSM 90 connector

0059.0975

1

MF-FDR 90 gaskets

0175.0263

10

MF-A 90 valve adapter

0059.0963

6



The MAICOFlex
duct system –
the optimum
installation
solution in terms
of speed

INDIVIDUAL COMPONENTS

ART. NO.

CONTENT/
QUANTITY

SB 12/16 sound absorber box

0059.0995

2

ZWQ 10 supply air valve

0152.0064

3

TK 10 exhaust air valve

0151.0192

3

Combination wall connection for outside/outgoing
air, right-hand version, KWH 16 R

0152.0060

1



The MAICO
accessories –
appropriate
individual
components

WS 170

Comfort domestic ventilation with heat recovery



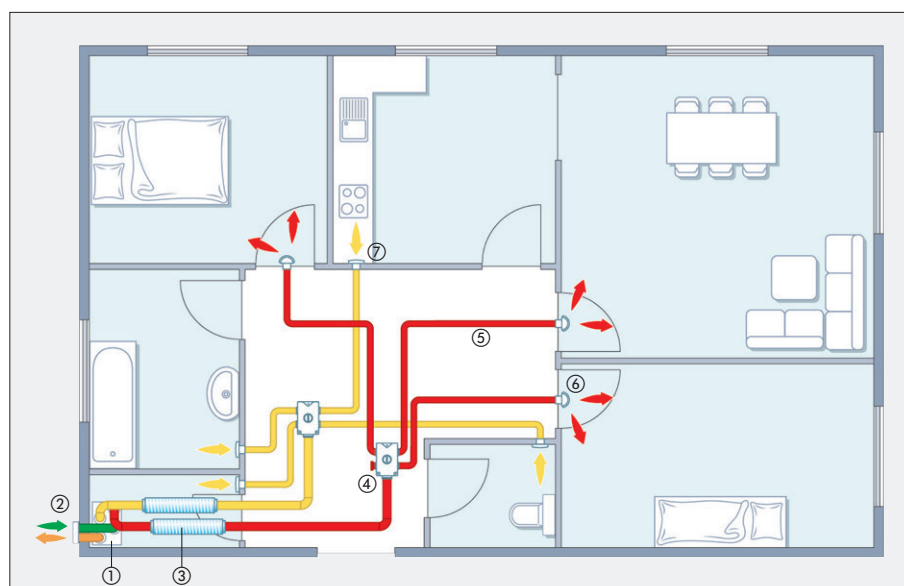
Central ventilation unit with heat recovery for apartments and single-family homes with living space of up to 120 m².

MAICO highlights

- Very energy-efficient unit, certified by the Passivhausinstitut, 90 % heat recovery, energy-saving EC motors
- Very quiet unit
- Constant volumetric flow for high heat recovery and simple adjustment
- Optional frost protection heating, bypass, enthalpy heat exchanger
- Left-/right-hand version
- Includes 4-step switch, optional digital control unit, web server, Modbus, KNX, radio control

MODE OF OPERATION

- Unit positioned in a utility room, in a segment of the kitchenette or in a closet in the hall
- Distribution of supply and exhaust air via air distributor and flexible ventilation ducts in the suspended corridor ceiling (20 cm), disk valves in the exhaust air rooms (kitchen, bathroom, WC, utility room), blower nozzles in the supply air rooms (office, bedroom, children's room)
- Outside and outgoing air flow via insulated Maico Therm ducts, KWH combination wall connection on the external wall



- ① WS 170 R ventilation unit
- ② KWH 16 L with connected Therm duct MT-R for outside and outgoing air
- ③ RSR 12 tubular sound absorber
- ④ MF-V 90 air distributors for supply and exhaust air
- ⑤ MF-F 90 flexible duct
- ⑥ ZWVQ 10 supply air valve
- ⑦ TK 10 exhaust air valve

- Supply air
- Exhaust air
- Outside air
- Outgoing air

Complete kit with saving

for apartments of up to 120 m²

MATERIAL PER RESIDENTIAL UNIT (example)

Complete kit comprising:

**VENTILATION UNIT WITH HEAT RECOVERY OF 40–160 m³/h
WS 170 R SUPPLY AND EXHAUST AIR CONNECTION ON RIGHT
(STANDARD MODEL) ART. NO. 0095.0081**
OR
**WS 170 I SUPPLY AND EXHAUST AIR CONNECTION
ON LEFT ART. NO. 0095.0082**

- Requires little space, W 595 x H 820 x D 375 mm
- Very energy-efficient (EC motors, crossflow heat exchanger)
- Quiet
- Very easy to maintain
- Includes control unit



**DUCT PACKAGE FOR THE OUTSIDE AND OUTGOING AIR FLOW
WITH INSULATED DN 125 DUCT
TYPE: FAP 1 FAS/125 ART. NR. 5999.0100**

	CONTENT/ QUANTITY
Ventilation duct, insulated, MT-R 125	8 metres
Elbow, insulated, MT-B 125 90/45	6
Connector, MT-V 125	10
SVR 125 plug connector	2



MAICOTherm –
installation
solution suited to
tight situations

**LP 3.0 DUCT PACKAGE FOR SUPPLY AND EXHAUST AIR
DN 90 FLEXIBLE DUCT ART. NO. 5999.0032**

	CONTENT/ QUANTITY
MF-F 90 flexible duct	50 metres
MF-V90 air distributor 1 x 125 / 4 x DN 90	2
MF-FSM 90 connector	2
MF-FDR 90 gaskets	10
MF-A 90 valve adapter	8



The MAICOFlex
duct system –
the optimum
installation
solution in terms
of speed

MORE INDIVIDUAL COMPONENTS	ART. NO.	CONTENT/ QUANTITY
RSR 12 tubular sound absorber	0092.0312	2
ZWQ 10 supply air valve	0152.0064	3
TK 10 exhaust air valve	0151.0192	4
Combination wall connection for outside/outgoing air left-hand version, KWH 16 L	0152.0061	1
SVR 125 plug connector	0055.0183	2



The MAICO
accessories –
appropriate
individual
components

WS 320 KB

Room air system with heat recovery



Includes RLS 1 WR control unit



Optional RLS T1 WS with touchscreen



Modbus®



Central ventilation unit with heat recovery for single-family homes with living space of up to 250 m².

MAICO highlights

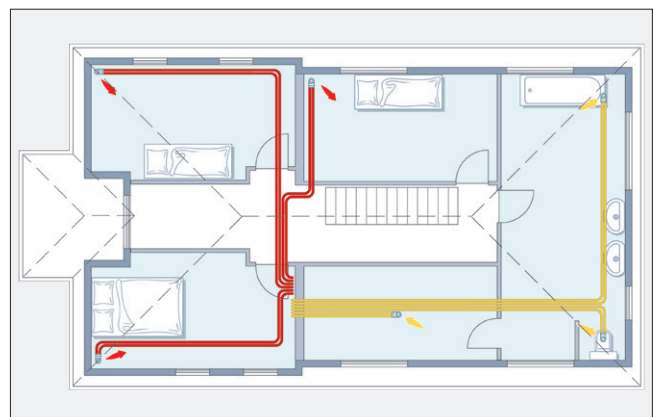
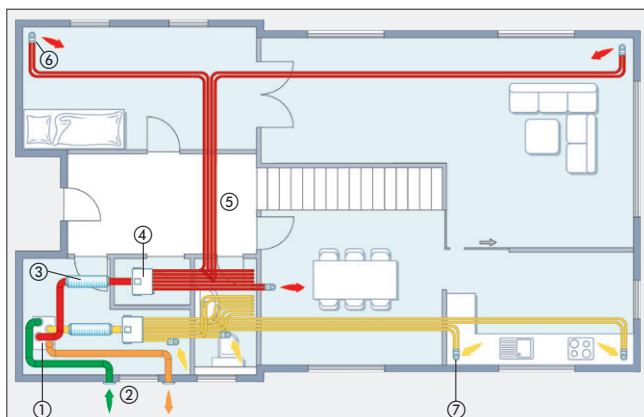
- Suitable for house sizes of up to 250 m² A+ energy efficiency class, very quiet operation
- Degree of energy provision up to 96 %
- Includes summer bypass, frost protection heating, humidity control, F7 filter
- Includes web server, mobile control via MAICO app air@home, Modbus interface
- Optional control modules for KNX, EnOcean wireless
- Optional additional circuit boards, e.g. for pressure consistency control, zone control

MODE OF OPERATION

- Unit positioned in a utility room, cellar or on the insulated loft floor
- Distribution of supply and exhaust air via air distributor and flexible ventilation ducts in concrete, in suspended ceiling, on insulated loft floor or with flat duct on the unfinished floor, disk valves in the supply and exhaust air rooms
- Outside and outgoing air flow via insulated Maico Therm ducts, KW outside air wall connection or roof cowls

- | | |
|--|---|
| ① WS 320 ventilation unit | ④ MF-BV63-160-14 air distributor for supply and exhaust air |
| ② KW-AL, KW-FL outside and outgoing air socket with MT-R Therm duct for outside and outgoing air | ⑤ MF-F63 flexible duct |
| ③ RSR 16/50 tubular sound absorber | ⑥ ZWVQ 10 supply air valve |
| | ⑦ TK 10 exhaust air valve |

- █ Supply air
- █ Exhaust air
- █ Outside air
- █ Outgoing air



Complete kit with saving

for single-family homes of up to 250 m²

MATERIAL PER LIVING UNIT (example)

Complete kit comprising:

**VENTILATION UNIT WITH HEAT RECOVERY OF 80–320 m³/h
WS 320 KB** ART. NO. 0095.0223

- Space needed W 841 x H 857 x D 598 mm
- Wall/standalone mounting (optional)
- Supply and exhaust air connection on left
- Includes summer bypass, frost protection heating and humidity control
- G4/F7 filter
- Very easy to maintain
- Includes standard control unit



**DUCT PACKAGE FOR THE OUTSIDE AND OUTGOING AIR FLOW
WITH INSULATED DN 160 DUCT
TYPE: FAP 2 FAS/10** ART. NO. 5999.0110

	CONTENT/ QUANTITY
MT-R160 duct	8 metres
MT-B125 90/45 bracket	6
MT-V160 connector	10
MT-Ü160/150 coupling	2



MAICO Therm – installation solution suited to tight situations

**DUCT PACKAGE FOR SUPPLY AND EXHAUST AIR
LP 6 200/63** ART. NO. 5999.0060

	CONTENT/ QUANTITY
MF-BV63-160-14 plate distributor	2
MF-F63 flexible duct	250 metres
MF-FDR63 sealing rings	40
MF-WL 125 80/125 bracket including MF-WE63 slide-in adaptor	13
MF-FSM63 insertion sleeves	7



The MAICO Flex duct system – the optimum installation solution in terms of speed

MORE INDIVIDUAL COMPONENTS	ART. NO.	CONTENT/ QUANTITY
RSR 16/50 tubular sound absorber	0092.0324	2
ZWVQ 10 supply air valve	0152.0064	6
TK 12 exhaust air valve	0151.0198	13
KW-AL 20 E outside air wall connection	0152.0081	1
KW-FL 20 E outgoing air wall socket	0152.0038	1
SVR 160 plug connector	0055.0185	4



The MAICO accessories – appropriate individual components

Central systems for large buildings



Reco-Boxx ZXR, ZXA, CRB and Flat

HIGHLIGHTS OF CENTRAL VENTILATION SYSTEMS

- High-efficiency heat recovery
- Energy-efficient and high-pressure EC fans
- ErP-compliant 2018
- Can be controlled based on demand
- Individual equipment options
- Can be networked (WiFi/Ethernet/Modbus/KNX)
- Ready to plug in

APPLICATIONS FOR ENERGY-RELATED REDEVELOPMENTS OR NEW BUILDS

- Residential buildings
- Schools, kindergartens, nurseries
- Nursing homes
- Offices and medical premises



Maico Elektroapparate-Fabrik GmbH
Steinbeisstraße 20 · 78056 Villingen-Schwenningen
Tel.: 0 77 20 / 694-0 · sales@maico.de
www.maico-fans.com

You will find further information and the contact details of our service team staff at www.maico-fans.com

