

Compact central ventilation systems for energy-saving application in residential and commercial buildings.

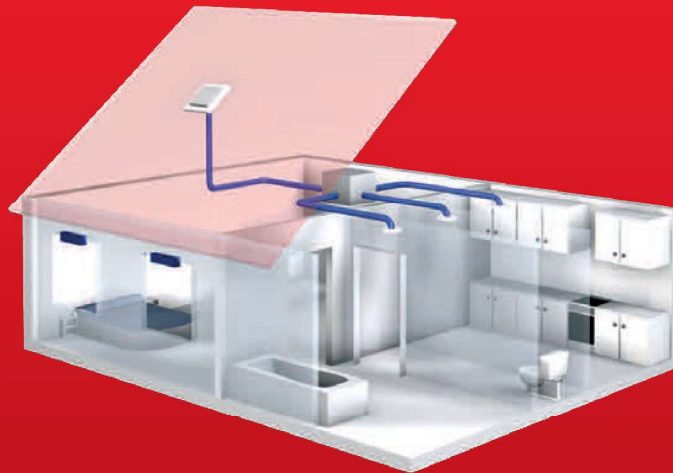


ZEB EC.
The powerful energy-saving box – ideal in low energy houses or in multi-storey buildings.

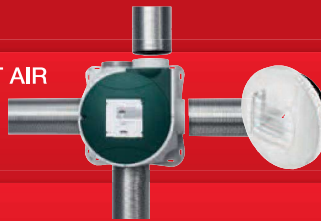
Passive and low energy houses set the standard with regard to the insulation and impermeability of building envelopes. The compliance with provisions must be proven by a special test upon a building inspection. In order to comply with the Energy Savings Ordinance (EnEV), ventilation units with highest efficiency levels must be used in full load and controlled operation.

A prerequisite for a pleasant room climate and maintaining structurally-sound buildings is extraction of humidity, odorous and pollutant substances, as well as the draught-free, controlled introduction of fresh outside air.

The ZEB system fulfils this task perfectly. Whether in a single family house, the floor-by-floor extraction of residential units through a common central shaft (DIN 18017-3) or in commercial applications.



EXTRACT AIR



ZEB as an extract air box positioned under the roof or in an adjoining room. Manual or automatic operation, i.e. time-dependent on basic, normal or peak demand.

The extract air is extracted from used rooms, such as kitchens, bathrooms and toilets. Innovative extract air elements allow a constant or demand-driven air flow volume, tuned to individual user requirements or space requirements. The ducting system is created with commercial spiral ducting.

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OUTSIDE AIR EXHAUST AIR

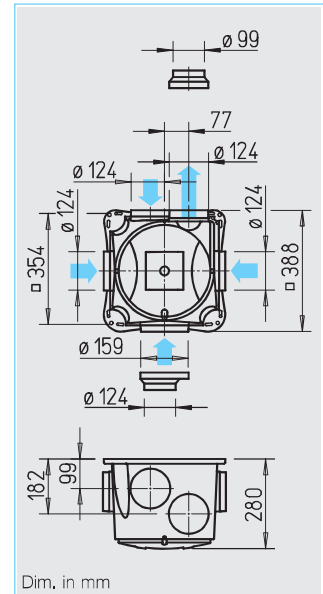


The outside air gradually flows in via differential pressure controlled intake air elements, which are to be installed in the walls or windows of living rooms or bedrooms. Overflow elements ensure air circulation within the room unit. The exhaust air is discharged outside via a roof or wall outlet.

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Efficiency class
E ZEB 380



■ **Compact ventilation box with four spigots for connecting extract air ducting. For various private, commercial and industrial applications.**

■ **Operation**

- As central extraction unit for several rooms or areas.
- For apartment ventilation according to DIN 18017. Extraction in e.g. kitchens, bathrooms, toilets in multiple apartments with central main duct in multi-storey construction. Extraction in multiple rooms (e.g. living room, kitchen, bathroom, toilet) in one apartment. Easy installation (in any position) in storerooms or below the roof.
- For commercial and industrial applications to ventilate humid rooms, toilet facilities, extraction of vapour in workplace, etc.

■ **Casing**

- Robust casing made from impact-resistant polymer, light-grey.
- The three intake spigots and the one discharge spigot are designed for ducting size 100 and 125 mm. One intake spigot is designed for ducting size 100, 125 and 160 mm.

■ **Impeller**

- Low-noise centrifugal impeller made from steel in aerodynamically optimised spiral. Inlet via bell mouth.

■ **Motor**

- Totally enclosed, ball bearing mounted external rotor motor protected to IP 44, with humidity protection, insulation class B, for permanent operation, maintenance-free and interference-free.
- Motor/impeller unit removable for cleaning and service with one grip.

■ **Motor protection**

- Motor protection through built-in thermal contacts, wired in series with the windings, automatic switch off and reset after cooling.

■ **Electrical connection**

- Service and installation friendly. Delivered ready to operate with cable pre-wired terminal box.
- For 3 speed operation NYM-J 5 x 1.5 mm² required.

■ **Speed control**

- Variable power adjustment through 3 speeds by means of operating switch (accessories).

■ **Installation**

Without restriction in any position. To reduce noise levels in ventilated rooms install unit as remotely as possible.

■ **Ducting**

The ducting used may be rigid spiral ducting, flexible aluminium or even polymer ducting. When crossing fire sections, fire protection regulations must be considered.



■ **Accessories** Page

Overview 74

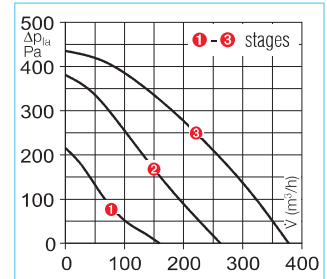
■ **Accessory details** Page

Flexible ducting, roof ducts, shutters and grilles	487 on
Extract air elements	500 on
Intake air elements	512 on
Fire protection elements for use in multi-stor. con.	516 on
Controllers	525 on

■ **Accessories**

Three speed operation and operating switch with 0 position.

Convenient flush mounted speed controller. Room light not switchable in parallel. Installation in flush switch box. Dim. mm (WxHxD) 80 x 80 x 23
Type DSEL 3 Ref. no. 1611



■ **Week timer**

Digital timer with LCD display for autom. control of operation, all weekdays are programmable. For flush and surface mounting. Dim. mm (WxHxD) 85 x 85 x 52
Type WSUP Ref. no. 9990

For switch cabinet installation (2 space units required). Dim. mm (WxHxD) 36 x 90 x 69
Type WSUP-S Ref. no. 9577



Type	ZEB 380
Ref. no.	1456
Air flow volume m ³ /h*	380/260/160
R.P.M. min ⁻¹ approx.	max. 2730
Voltage/Frequency	230 V-, 50 Hz
Power consumption max. W*	67/38/20
Nominal current max. A*	0.28/0.23/0.17
Sound pressure level, case breakout at 4 m*	33/26/19
L _{WA} intake dB(A)*	62/57/45
L _{WA} exhaust dB(A)*	69/63/52
Wiring diagram no.	908
Max. permissible temperature °C	+40
Weight approx. kg	5.9

* Values refer to the three performance stages (see performance curve).

ZEB with EC technology – because of the DC motors, the EC version of the ZEB has become the “energy-saving ventilation box”, which is ideally designed for operation in a low energy house. Brushless DC motors operate with extremely low losses and thus with higher efficiency than conventional motors, even on controlled operation. This results in convincing advantages:

- **Short pay back period** due to high energy savings.
- **Simple and convenient speed control** in nine possible performance stages.

Operation

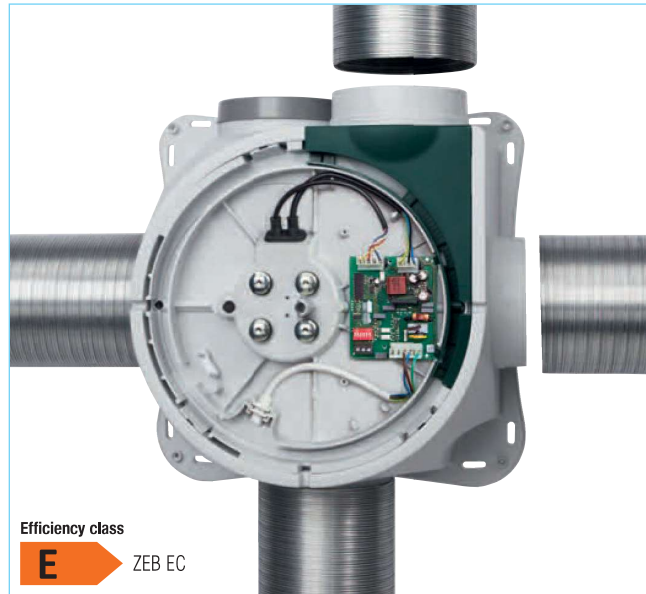
- For controlled residential ventilation according to DIN 18017-3 and DIN 1946-6.
- Ideal in low energy houses.
- For ventilation with a common main duct in houses, apartments and multi-storey buildings.

Casing

- Robust casing made from impact-resistant polymer, light-grey.
- The three intake spigots and the one discharge spigot are designed for ducting size 100 and 125 mm. One intake spigot is designed for ducting size 100, 125 and 160 mm.

Impeller

- Low-noise centrifugal impeller made from steel in aerodynamically optimised spiral. Inlet via bell mouth.



Efficiency class **E** ZEB EC

Motor

- DC motor, electronically commutated, with high efficiency even during controlled operation. Ball bearing mounted external rotor motor protected to IP 44 for permanent operation, maintenance-free and interference-free.
- Motor/impeller unit removable for cleaning and service with one grip.

Motor protection

- An integrated thermal element monitors the temperature of the windings in conjunction with the built-in electronic circuit.

Electrical connection

- Service and installation friendly. Delivered ready to operate with terminal box.
- Connection directly to 230 V supply.
- For 3 speed operation NYM-J 5 x 1.5 mm² required.

Speed control

- Fan operation in three stages by means of operating switch (accessories). For individual performance adjustment, 9 speeds can be

selected with Dip-switches in the electronic unit.

Installation

- Without restriction in any position. To reduce noise levels in ventilated rooms install unit as remotely as possible.

Ducting

The ducting used may be rigid spiral ducting, flexible aluminium or even polymer ducting. When crossing fire sections, fire protection regulations must be considered.

Accessories

Three speed operation and operating switch with 0 position.

Convenient flush mounted speed controller. Room light not switchable in parallel. Installation in flush switch box. (min. depth 55 mm). Dim. mm (WxHxD) 80 x 80 x 23
Type DSZ Ref. no. 1598

Week timer

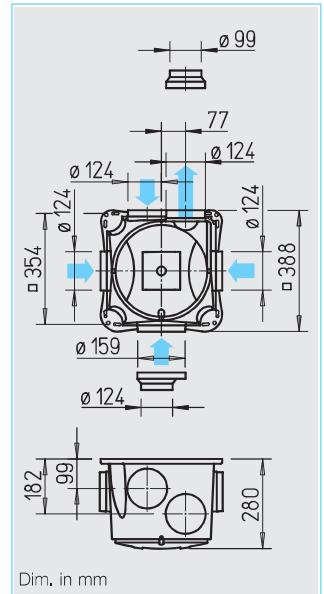
Digital timer with LCD display for autom. control of operation, all weekdays are programmable. For flush and surface mounting. Dim. mm (WxHxD) 85 x 85 x 52
Type WSUP Ref. no. 9990
 For switch cabinet installation (2 space units required). Dim. mm (WxHxD) 36 x 90 x 69
Type WSUP-S Ref. no. 9577

Electronic control system

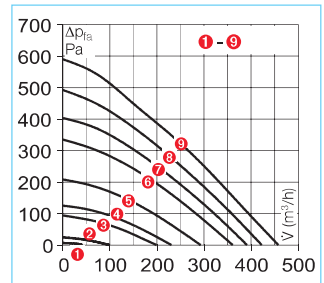
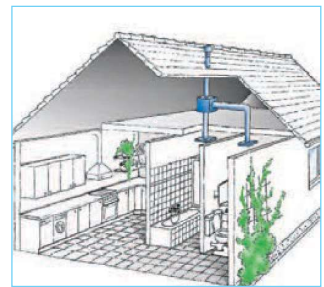
For stepless control or regulation of single and three phase EC fans. Dim. mm (WxHxD) 223 x 200 x 131
Type EUR EC Ref. no. 1347

Three-step switch 10 V / 0-10 V

For the three-step control of EC fans or frequency inverters, with a 0-10 V DC control input. For flush and surface mounting. Dim. mm (WxH) 80 x 80
SU-3 10/SA-3 10 No. 4266/4267



Dim. in mm



Type	ZEB EC
Ref. no.	1457
Air flow volume m ³ /h*	460/430/400/360/300/230/200/100/40
R.P.M. min ⁻¹ approx.	max. 3200
Voltage/Frequency	230 V~, 50 Hz
Power consumption max. W*	69/55/44/34/19/11/8/3/2
Nominal current max. A*	0,58/0,47/0,38/0,30/0,18/0,10/0,08/0,04/0,04
Sound pressure level, case breakout at 4m*	37/36/34/32/27/21/<20/<20/<20
L _{WA} intake dB(A)*	65/63/62/61/57/53/47/37/34
L _{WA} exhaust dB(A)*	74/72/70/68/62/57/54/39/26
Wiring diagram no.	1115
Max. permissible temperature °C	+40
Weight approx. kg	5,9

* Values refer to the nine performance stages (see performance curve).



Fig. WSUP

Extract air

AE



Ready-to-install extract air element with polymer mounting ring.

To be inserted into ducting with diam. 125 mm. With demand-based and standard ventilation stages, electrical, humidity, motion and time controlled for use pursuant to the following table. Types AE and AE GB with self-regulating air flow volume stabilisation. Humidity controlled types AE Hygro or type AE FV with filter and air flow volume control are preferable for kitchens and bathrooms. **Adapter filter element VFE** For installation in front of AE, if room air is polluted and greasy. See product page for details.

Extract air (alternative to AE)

VKH



Automatic air flow volume stabiliser to be inserted into ducting and duct components. For constant air flow with a differential pressure range of approx. 50–250 Pa.

SVE



Noise reduction element inserted into ducting for simple sound insulation and volume control. Also for pressure regulation. **Ventilation grilles and valves** elegant, especially for living spaces.

LG



Intake air elements

– Installation in wall openings

ZL



Universal supply air unit and thermostatic valve for controlled air intake regulation. See intake air element product pages for detailed descriptions.

– Installation in window frames

ALEF



Intake air element with air flow volume control and limiter. See intake air element product pages for detailed descriptions. Ideally suitable for retrofitting and new construction.

Bathroom		Toilet		Kitchen	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Extract air element with self-regulating air flow volume stabilisation * Air flow volume in m³/h					
AE 45*	2031	AE 30*	2030	AE 75*	2033
As above, but with two air flow volumes (demand-based and standard ventilation)					
AE GB 20/75*	2036	AE GB 15/30*	2035	AE GB 45/120*	2038
As AE GB, with additional electr. timer (without air flow volume stabilisation)					
AE GBE 30/60*	2047	AE GBE 15/30*	2044	AE GBE 45/120*	2048
As AE GBE, but with motion sensor					
		AE B 15/30*	2055		
Humidity controlled extract air unit with variable, limited air flow volume					
AE Hygro 10/45*	2049				
As AE Hygro, with additional electrically controlled demand-based ventilation stage					
AE Hygro GBE 5/40/75*	2053			AE Hygro GBE 10/45/120*	2054
Extract air element AE FV , with filter and air volume control					
AE FV 125	9478			AE FV 125	9478
Adapter filter element VFE					
– to AE / AE GBE, AE Hygro, prevents contamination of the air extract element and ducting system					
				VFE 70/VFE 90	2552/2553

V	Ø 80		Ø 100		Ø 125	
m³/h	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
15-50	VKH 80/15-50	0001	VKH 100/15-50	0002	VKH 125/15-50	0004
50-100			VKH 100/50-100	0003	VKH 125/50-100	0005
100-180					VKH 125/100-180	0006

	Ø 80		Ø 100		Ø 125	
	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Noise reduction element						
	SVE 80	8309	SVE 100	8310	SVE 125	8311
Ventilation grille (to put before/cover types VKH and SVE)						
	LGK 80	0259	LGM 100	0254	LGM 125	0258
Polymer valve for extraction						
	KTVA 75/80	0940	KTVA 100	0941	KTVA 125	0942

	Ø 80		Ø 100		Ø 160	
	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Supply air unit – Automatic temperature control incl. thermostatic valve, acoustic lining and external grille						
	ZLA 80	0214	ZLA 100	0215	ZLA 160	0216
Supply air element – Manual control in four stages incl. valve plate with pull cord, sound insulation and external grille						
			ZLE 100	0079		
Thermostatic valve – For installation in existing ventilation openings						
	ZTV 80	0078	ZTV 100	0073	ZTV 160	0074

V				
m³/h	Type	Ref. no.	Type	Ref. no.
Intake air inlet element for installation in window frames – with air volume control and limiter				
30	ALEF 30	2100		ALEFS 30 As ALEF, but with additional sound insulation
45	ALEF 45	2101		ALEFS 45 As ALEF, but with additional sound insulation
Intake air inlet element for installation in window frames – humidity control, with air volume control and limiter				
6/45	ALEF Hygro 6/45	2056		ALEFS Hygro 6/45 As ALEF Hygro, but with additional sound insulation

Ducts, duct components

Ducts, duct components



Reduction

RZ



Attenuator, backdraught shutter

FSD



RVE



Wall and roof openings

DH, UDP, FDP



Overflow

LTG



Ø 80		Ø 100		Ø 125	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Fully flexible ducting					
ALF 80	5711	ALF 100	5712	ALF 125	5713
Duct connector – made from galvanised sheet steel					
RVB 80	5993	RVB 100	5994	RVB 125	5995
Worm drive clips – metal band with a snap on tension lock, contents = 10 pcs.					
SCH 80	5722	SCH 100	5722	SCH 125	5723
T-pieces – made from galvanised sheet steel					
		TS 100	1479	TS 125	5720

Ø 80		Ø 100		Ø 125	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Duct reducers – made from polymer					
		RZ 100/80	5223	RZ 125/100	5222
Flexible attenuator – from flexible aluminium duct					
		FSD 100	0676	FSD 125	0677
Backdraught shutter – automatic, made from polymer					
		RSKK 100	5106	RSKK 125	5107
Backdraught shutter – airtight, for duct insertion					
RVE 80	2584	RVE 100	2587	RVE 125	2588

Ø 80		Ø 100		Ø 125	
Wall mounting kit – to put air intakes and outlets through walls					
		TMK 100	0844	TMK 125/150	0845
Universal roof outlet* DDF – adaptable to all kind of roof tiles, for pitched roofs and flat roofs.					
				DDF 125	1964
Roof outlet, plates for ridged roof/flat roofs and connector (see Figure on left)					
– Roof outlet*		DH 100 S	2015	DH 125 S	2017
– Pitched roof universal pan tile*		UDP 100 S	2021	UDP 125 S	2021
– Flat roof pan tile		FDP 100	2024	FDP 125	2013
– Connector		STV 100	2026	STV 125	2027

* See product page for other colours.

Door grilles

Discreet, screened ventilation grille made from impact-resistant polymer for door installation. See ventilation grilles product page for detailed descriptions.

Type LTGW Ref. no. 0246
Made from white polymer.

Type LTGB Ref. no. 0247
Made from brown polymer.

Information	Page
Dimensions, more detailed technical data and other parameters:	
Grilles,	
ducting, moulded parts,	
Roof outlets	487 on
Extract air elements	500 on
Intake air elements	512 on
Fire protection elements	
for use in multi-stor. con.	516 on
Controllers	525 on