

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

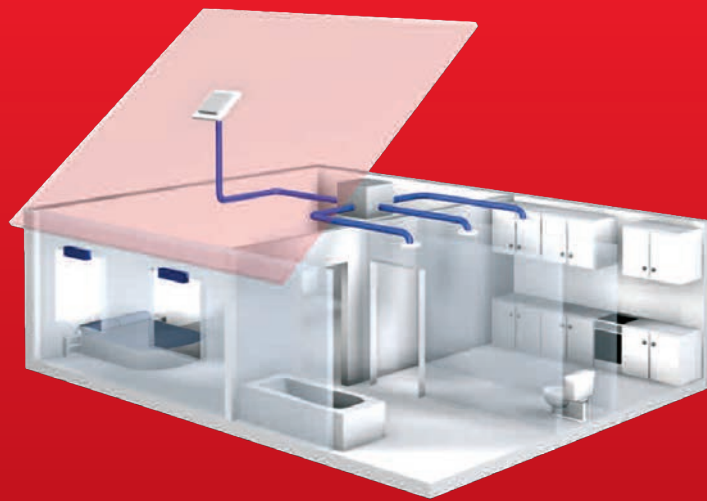
**ZEB EC.**

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

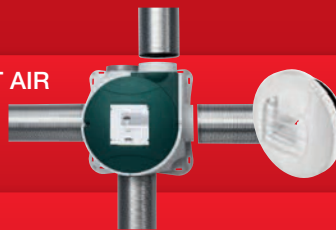
Passive and low energy houses set the standard with regard to the insulation and impermeability of building envelopes. The compliance with provisions must be proven by a special test upon a building inspection. In order to comply with the Energy Savings Ordinance (EnEV), ventilation units with highest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

# 72

### OUTSIDE AIR EXHAUST AIR

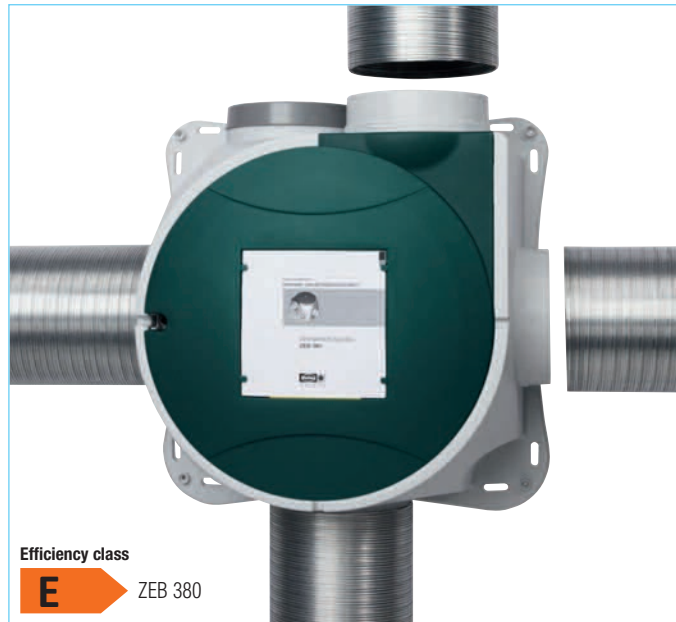


The outside air gradually flows in via differential pressure controlled intake air elements, which are to be installed in the walls or windows of living rooms or bedrooms.

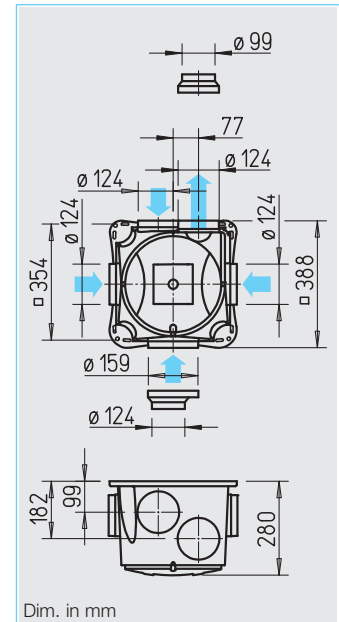
Overflow elements ensure air circulation within the room unit.

The exhaust air is discharged outside via a roof or wall outlet.

# 74



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 mm<sup>2</sup> required.

■ **Speed control**

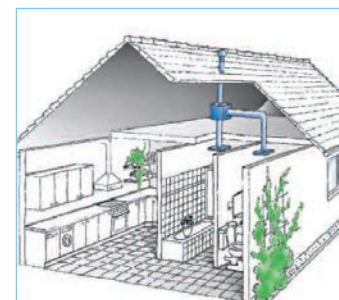
- Variable power adjustment through 3 speeds by means of operating switch (accessories).

■ **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.

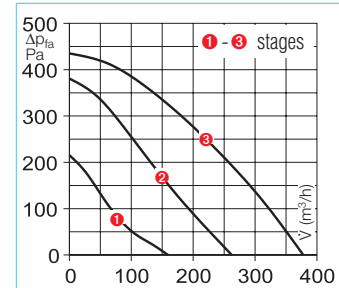


■ **Accessories** Page

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 <sup>3</sup> /h*	380/260/160
R.P.M. min <sup>-1</sup> 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 <sub>WA</sub> intake dB(A)*	62/57/45
L <sub>WA</sub> 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**

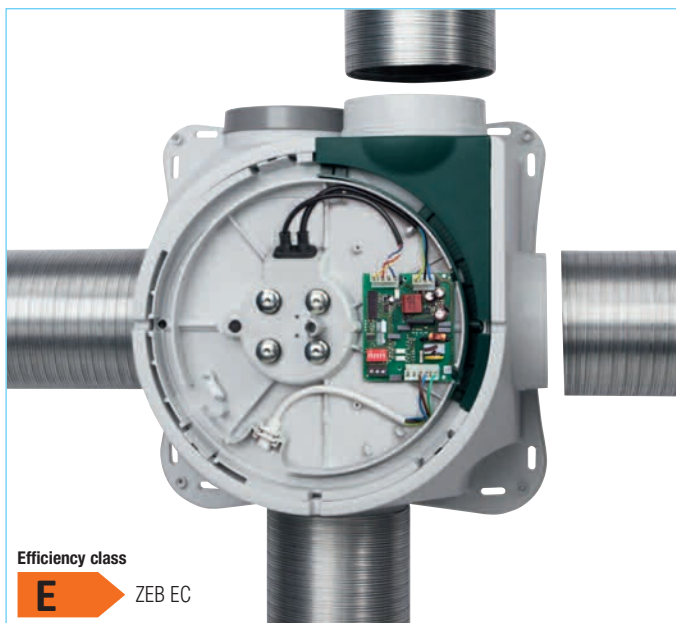
- For controlled residential ventilation according to DIN 18017-3 and DIN 1946-6.
- Ideal in low energy houses.
- For ventilation with a common main duct in houses, apartments and multi-storey buildings.

■ **Casing**

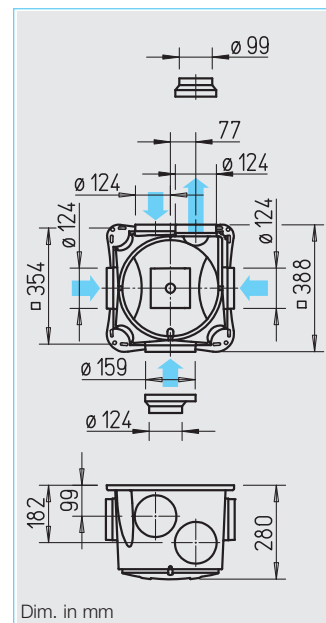
- Robust casing made from impact-resistant polymer, light-grey.
- The three intake spigots and the one discharge spigot are designed for ducting size 100 and 125 mm. One intake spigot is designed for ducting size 100, 125 and 160 mm.

■ **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 5x1.5 mm<sup>2</sup> 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**

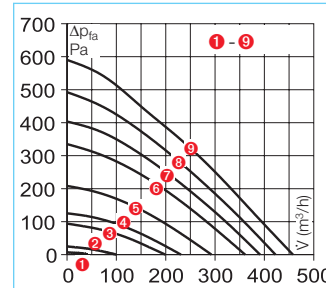
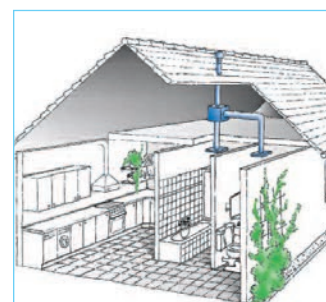
For stepless control or regulation of single and three phase EC fans. Dim. mm (WxHxD) 223 x 200 x 131

**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**



Type	ZEB EC
Ref. no.	1457
Air flow volume m <sup>3</sup> /h*	460/430/400/360/300/230/200/100/40
R.P.M. min <sup>-1</sup> 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 <sub>WA</sub> intake dB(A)*	65/63/62/61/57/53/47/37/34
L <sub>WA</sub> 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).

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)

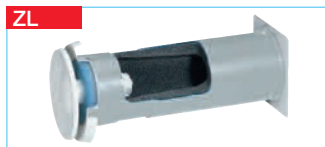


**VKH**  
**Automatic air flow volume stabiliser** to be inserted into ducting and duct components. For constant air flow with a differential pressure range of approx. 50–250 Pa.



**SVE** **LG**  
**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.

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.
<b>Extract air element</b> with self-regulating air flow volume stabilisation * Air flow volume in m³/h					
<b>AE 45*</b>	2031	<b>AE 30*</b>	2030	<b>AE 75*</b>	2033
<b>As above</b> , but with two air flow volumes (demand-based and standard ventilation)					
<b>AE GB 20/75*</b>	2036	<b>AE GB 15/30*</b>	2035	<b>AE GB 45/120*</b>	2038
<b>As AE GB</b> , with additional electr. timer (without air flow volume stabilisation)					
<b>AE GBE 30/60*</b>	2047	<b>AE GBE 15/30*</b>	2044	<b>AE GBE 45/120*</b>	2048
<b>As AE GBE</b> , but with motion sensor					
		<b>AE B 15/30*</b>	2055		
<b>Humidity controlled extract air unit</b> with variable, limited air flow volume					
<b>AE Hygro 10/45*</b>	2049				
<b>As AE Hygro</b> , with additional electrically controlled demand-based ventilation stage					
<b>AE Hygro GBE 5/40/75*</b>	2053			<b>AE Hygro GBE 10/45/120*</b>	2054
<b>Extract air element AE FV</b> , with filter and air volume control					
<b>AE FV 125</b>	9478			<b>AE FV 125</b>	9478
<b>Adapter filter element VFE</b>					
– to AE / AE GBE, AE Hygro, prevents contamination of the air extract element and ducting system					
				<b>VFE 70/VFE 90</b>	2552/2553

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

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

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

V	Ø 80		Ø 100		Ø 160	
	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
<b>Intake air inlet element for installation in window frames</b> – with air volume control and limiter						
30	<b>ALEF 30</b>	2100			<b>ALEFS 30</b>	2102
45	<b>ALEF 45</b>	2101			<b>ALEFS 45</b>	2103
<b>Intake air inlet element for installation in window frames</b> – humidity control, with air volume control and limiter						
6/45	<b>ALEF Hygro 6/45</b>	2056			<b>ALEFS Hygro 6/45</b>	2057

### Ducts, duct components

### Ducts, duct components



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

### Reduction

### RZ



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

### Attenuator, backdraught shutter

### FSD RVE



### Wall and roof openings

### DH, UDP, FDP



Ø 80		Ø 100		Ø 125	
<b>Wall mounting kit</b> – to put air intakes and outlets through walls					
		TMK 100	0844	TMK 125/150	0845
<b>Universal roof outlet* DDF</b> – adaptable to all kind of roof tiles, for pitched roofs and flat roofs.					
				DDF 125	1964
<b>Roof outlet, plates for ridged roof/flat roofs and connector</b> (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.

### Overflow

### LTG



#### 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