DEX3000

POWERFUL VENTILATION TECHNOLOGY IN EVERY SITUATION

Decentralised equipment for schools, hotels and conference areas

DEX3120: 300 - 1,455 m³/h

DEX3090: 150 - 910 m³/h

DEX3060: 150 - 650 m³/h

www.exhausto.com

EXHAUSTO

SCHOOLS CAN FINALLY BREATHE EASY
The eco-friendly, quiet, powerful trio of machines has arrived

The product range of decentralised ventilation units with heat recovery includes the models **DEX3060, DEX3090 and DEX3120**. This range of machines covers all requirements in schools, daycare centres, conference and convention areas. For new build and refurbishment projects, customised solutions for every room situation can be defined and implemented rapidly and with ease.

The VDI6022-compliant EXHAUSTO units have been specially developed for use in just these areas. Low noise levels ensure that the equipment is hardly heard when being operated. The technical effort and time spent on installing and maintaining the equipment is low.

DEX3000 offers the following air treatment capacities:

DEX3060 (650 m³/h in accordance with Erp 2018)

DEX3090 (910 m³/h in accordance with Erp 2018)

DEX3120 (1,455 m³/h in accordance with Erp 2018)

DEX3000 Series Overview.

EXHAUSTO

DEX3000

...the benefits at a glance

**EASY
INSTALLATION
AND MAINTENANCE**

**LOW
NOISE LEVEL**

**FLEXIBLE
CONNECTION
OPTIONS**

**LOW
CO$_2$ FOOTPRINT**

**BEST
INDOOR AIR QUALITY**

EXHAUSTO

DEX3000
...feel good everywhere!

IN THE CLASSROOM

The pandemic has shown that indoor air quality in classrooms is of the utmost importance for health and performance. Increased air exchange is a fundamental requirement for effectively combating viral load and preventing it from spreading. In the classroom, teaching and learning simply work better with fresh, well-oxygenated air. This is because more concentration leads to a sense of achievement and greater enjoyment of the lessons. The optimum equipment solution can be found within the DEX3000 series range for every classroom, so that children and teachers can feel good.

IN A CONFERENCE SETTING

Requirements are like those in school – a lot of people in a comparatively small space. Often for several hours. A decentralised air-conditioning unit from the DEX3000 series means that the air in the room stays fresh and ensures that listeners' attention remains high. The unit series' range of performance covers all conceivable areas of use, from small meeting rooms to larger conference halls, and the equipment's convenience features also include the fact that they run silently and that means that everyone in the room can speak at a normal volume.

AT THE GYM

Athletic performance, physical exertion and balanced exercise are all good reasons for going to the gym, but if the air inside is polluted by so many people working out at the same time, and the air quality around the ergometer, weights bench and the like is impaired by CO_2, it is hardly worth talking about any potentially beneficial effects of fitness. DEX3000 ventilation units bring in the natural environment from the outside, providing the space with permanently fresh air as required. It's almost like exercising outside. And the best thing of all is that the equipment requires little by way of installation and maintenance. This means that nothing stands in the way of fitness.

AT PRE-SCHOOL

When planning the interior, healthy indoor air is a must where small children play, eat, romp and sleep. With a ventilation unit from the DEX3000 series tailored precisely to the dimensions of the room, municipalities and other children's daycare centres no longer need to worry. Youngsters will enjoy the best environmental conditions all day long in the group rooms, thereby protecting against allergies and promoting healthy naps for the young kids. There is also no sound disturbance as the ventilation technology can hardly be heard at all.

EXHAUSTO

DEX3000

...optimum air distribution thanks to the Coanda effect

HIGHEST LEVELS OF EFFICIENCY

In order to optimally circulate the fresh air in the room, the devices in the DEX3000 series use what is known as the "Coanda effect": By mounting directly under the ceiling, this creates a vacuum between the supply air flow and the ceiling surface. This keeps the supply air under the ceiling. This way, it is mixed with room air throughout the entire process, reducing air speed and achieving fast, effective circulation of fresh air throughout the room. For this principle to work effectively, there can be no major obstacles placed on the ceiling, such as lights.

More factors affecting good ventilation efficiency and room airflow:
- Positioning the unit directly beneath the ceiling to ensure the correct outlet angle and utilisation of the Coanda effect.
- Temperature relationship between the air in the room and supply air
- Energy of supply air jet (air roll)

The following illustrations show the different projection distances with corresponding air volumes. The aim is to permanently achieve an air speed (L_{02}) of < 0.2 m/sec. in the area being occupied, in order to avoid draughts.
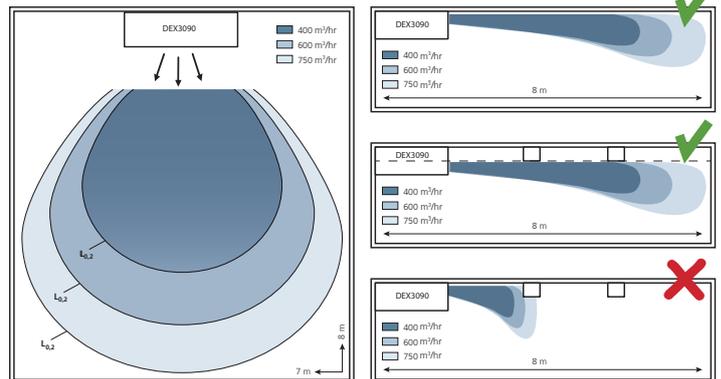
POSITIONING OF THE EQUIPMENT

When optimally positioning the DEX3000 air handling units, it is crucial to consider the room geometry. In rooms with a square floor plan, the unit should be placed as centrally as possible with respect to the side wall desired.

In rectangular rooms, where possible, one of the short side walls should be selected. Where this is not possible, the supply air baffles must be adjusted accordingly when setting up the system.

EXHAUSTO
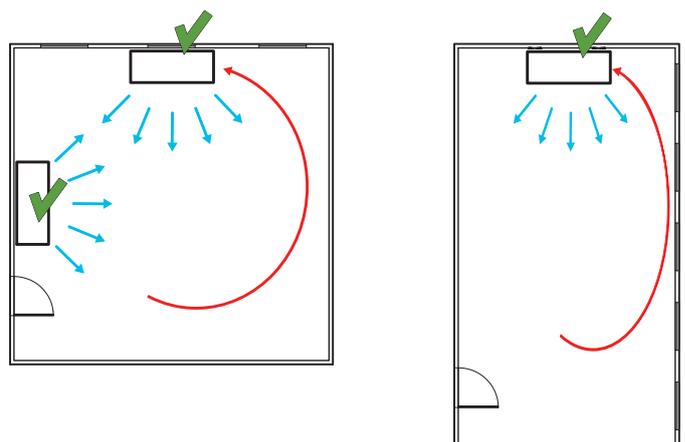
DEX3000 Series
150 m³/h to 1,455 m³/h

There are three models in the "DEX3000" series with different power levels. This trio of models replace the previous single VEX308 model. Decentralised ventilation units are equipped with highly efficient counterflow heat exchangers, which ensure the best possible heat recovery and economic efficiency. Versatile duct connection variants ensure a high degree of flexibility for all areas of demand. The units are supplied with an automatic system integrated for ease of operation. **The design of the equipment complies with the hygiene requirements of VDI 6022-1. The equipment can be easily cleaned and maintained through the three-part, hinged inspection opening.**

3 unit sizes, each in 2 versions*
- **DEX3060**
- **DEX3090**
- **DEX3120**

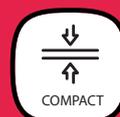*Suspended ceiling and semi-integrated installation

A pre-filter option and a wide range of filters ensure optimum supply air quality.

Compact housing made of Aluzink AZ 185 corrosion class C4 is painted white as standard (RAL9003).

Energy-efficient heat exchanger technology and EC motors ensure optimum cost-effectiveness.
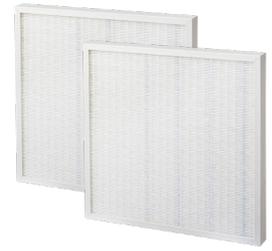

Three hinged doors provide easy access for maintenance, filter change and cleaning.

Low noise levels ensure that the equipment is hardly heard when being operated.

VDI
Certified in accordance with VDI guideline

< 35 dB(A)

ECO ENERGY

COMPACT

EASY INSTALLATION

EXHAUSTO

DEX3000 Series
At a glance

Construction	Heat Exchanger	Fan type	Filters

The compact housing is made of corrosion-resistant sheet steel coated with Aluzinc (AZ 185-C4) and is supplied as standard painted in white (RAL9003). Insulation complies with class A2-s1, d0 in accordance with EN 13501.

The design of the equipment meets the hygiene requirements of VDI 6022-1. The three-part hinged inspection opening provides easy access for cleaning and maintaining the unit.

At an additional charge, the unit can be finished in your preferred colour to perfectly match the visual appearance of the room.

Heat recovery is carried out via an aluminium counterflow heat exchanger with up to 80 % efficiency.

An integrated bypass is used to modulate the heat recovery as required – for example, for temperature control, for bypassing during overnight cooling, as well as in the event of the heat exchanger icing up (a reheating coil is absolutely essential for this).

The outdoor and supply air, as well as the exhaust and extract air, each have the same fan. The housing fans used consist of forward-curved impellers, each driven directly by IE5 class (Super Premium Efficiency) EC motors.

Motor regulation is performed by variable motor control (MC).

The panel filters used as standard in outdoor and exhaust air ensure maximum unit protection against contamination and correct supply air quality. The filters have a maximum filter area with the lowest possible pressure drop, which ensures a long service life.

There are several filter classes to choose from.
The following filters are installed as standard delivery:

	VEX type	Item No.	Filter class in accordance with ISO 16890
Exhaust filter	DEX3060	FPD3060E360	ePM_{10} 60% (M5)
	DEX3090	FPD3090E360	ePM_{10} 60% (M5)
	DEX3120	FPD3120E360	ePM_{10} 60% (M5)
Outdoor air filter*	DEX3060	FPD3060E155	ePM_1 55% (F7)
	DEX3090	FPD3090E155	ePM_1 55% (F7)
	DEX3120	FPD3120E155	ePM_1 55% (F7)

*The external air side can also be equipped with a pre-filter as an option. The following filter classes are available:
ISO Coarse 85% (G4)
ePM_{10} 60% (M5)
ePM_1 55% (F7)
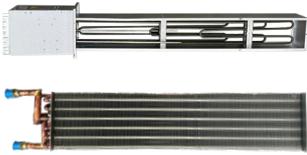
Afterheating/cooling coil

A possible reheating coil ensures that the comfortable supply air temperature desired is maintained and at the same time compensates for the performance of the heat recovery in the event of icing. It is installed within the unit to save space.

The following options are available:
- Water heating coil
- Electric heating coil (2 sizes to choose from)
- Cold water coil
- Change-over coil
- "without" coil

Regulation

The DEX3000 Series comes standard with an integrated EXcon fully automatic system. This individually adjustable control not only enables the unit to be independently operated including demand-dependent ventilation mode, but also the following operating and monitoring options:

WEB server:
The standard WEB server enables monitoring and control from a higher-level control centre. Several devices can also be monitored and operated from this central point.

Manual control unit:
An HMI touch panel is available as an accessory. This is connected to the unit with a corresponding service cable.
This means that the most important settings can be made and information can be retrieved. Multiple units can be configured one after the other with the HMI touch panel.

Electric Junction Box

The electric junction box is always located on the right side of the unit in front of the exhaust air inlet. It is easily accessible and the control unit can be easily pulled down and out when the door is open, for optimal accessibility.
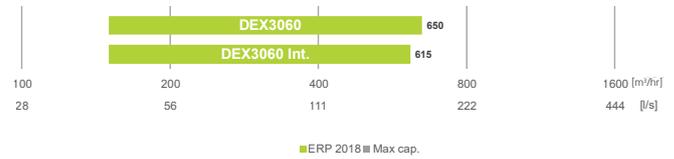
Accessories

To optimise requirements, a wide range of accessory components is available for the DEX3000 series. You will find a detailed overview of these options after the equipment pages which follow.

EXHAUSTO

# ▍DEX3060 – Air output up to 650 m³/h

DEX3060

Capacity diagram

DEX3060			650
DEX3060 Int.			615

100	200	400	800	1600 [m³/hr]
28	56	111	222	444 [l/s]

■ ERP 2018 ■ Max cap.

Ordering code

```
D 3 0 6 0  S V W W 1 1
```

Variants

1	EXcon control system
1, 2	Size Electric heating coil*
Coils	W = water heating coil, E = electric heating coil, O = change over, C = cold water coil
W	Colour: W = white
V	Equipment insulation in accordance with VDI6022
S or I	Variants: S = standard or I = partially integrated
Unit sizes	3060
D	For DEX

*DEX3060: 1=1.5 kW/2=4.5 kW

Temperature efficiency
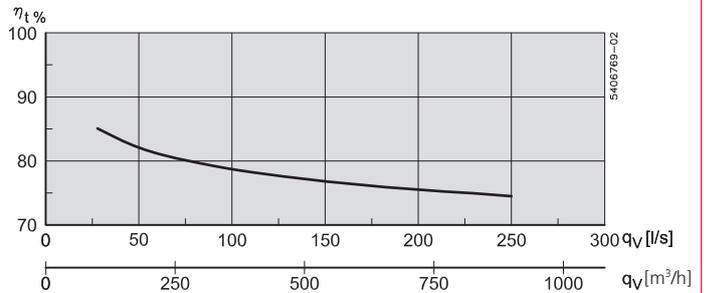
Heat exchanger, counterflow

——— Efficiency without condensation in accordance with EN308
Extract air = 25°C/28RH – Outdoor air = 5°C/50RH
Air balance between supply air/exhaust air = 1.0

$h_t = \dfrac{t_{2,2} - t_{2,1}}{t_{1,1} - t_{2,1}}$ = temperature efficiency

$t_{2,1}$ = outside air temperature
$t_{2,2}$ = supply air temperature
$t_{1,1}$ = Temperature of extract air

Sound data

Sound pressure level Lp in the room (60 m²), measured 1.20 m below the ventilation unit

Air volume at 250 Pa external pressure. ErP2018	300 m³/h	400 m³/h	500 m³/h	600 m³/h
Sound pressure level Lp in db(A)	27	31	35	38

Equipment details

Min. Airflow	150 m³/h
Max. Airflow in accordance with ErP2018	650 m³/h
Power consumption without after-heating coil	0.7 kW
Power supply without after-heating coil	1 x 230 V + N + PE ~ 50/60 Hz
Max. Phase power	3.1 A

Weight

Equipment ready for operation	200 kg
Partially integrated unit, ready to use	220 kg

Motor and motor control (MC)

|	
Motor type	EC motor
Motor class in accordance with IEC 60034-30-2	IE5 (Ultra Premium Efficiency)
Voltage input	1 x 230 V
Overcurrent protection	Built-in
Regulation	Infinitely variable via motor control (MC)
Control signal	With integrated automatic system: 0–10 VDC

Heating/cooling coils (integrated)

|	
Electric heating coil (HE1)	**1.5 kW**
Total power consumption	2.2 kW
Power supply unit	1 x 230 V + N + PE ~ 50 Hz
Max. Phase power	9.7 A
Electric heating coil (HE2)	**4.5 kW**
Total power consumption	5.4 kW
Power supply unit	3 x 400 V + N + PE ~ 50/60 Hz
Max. Phase power	4.5 A
Water heating/cooling coil	
Test pressure:	3000 kPa
Max. Working Pressure	1600 kPa
Number of pipe rows:	3 pcs.
Number of rings :	2 pcs
Incoming flow area (H x W)	325x570 mm
Connection dimensions	DN15 (½")
Fin spacing:	3.4 mm
Weight (without fluid)	5.0 kg
Water content	0.9 l

For further calculations of DEX unit sizes, airflows, energy consumption, ecodesign data, etc., please use our calculation program EXselectPRO at www.exhausto.com.

▌DEX3060 – air flow performance up to 650 m³/h

DEX3060 Dimensional sketches, suspended ceiling installation
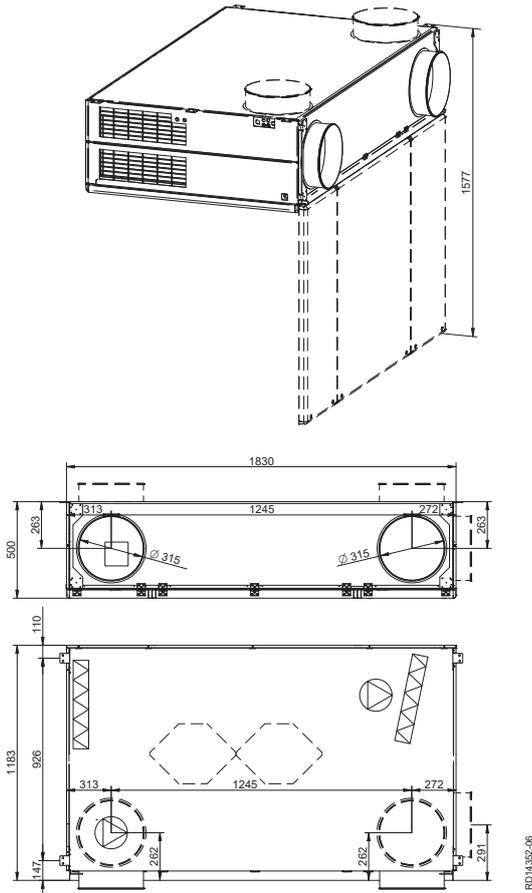
DEX3060 Dimensional sketches, semi-integrated assembly
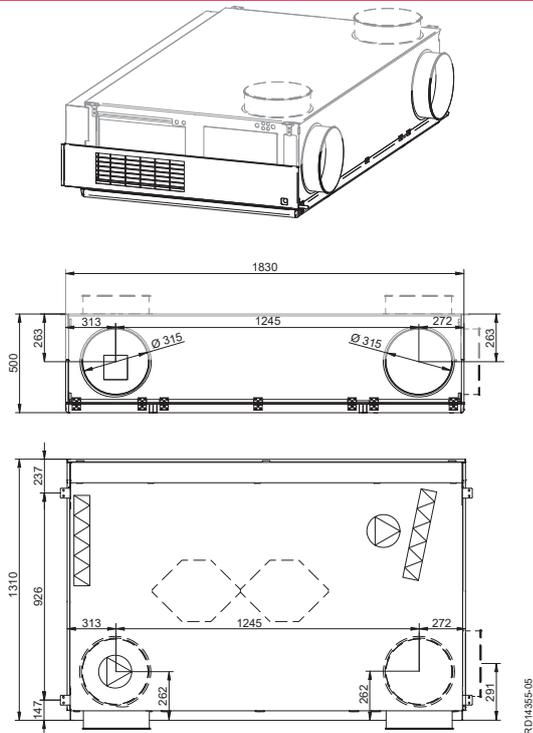
Accessories

Device accessories:	Item No.	Page
Duct connection box	CONBOXD3060M /-V	23
Weather protection grille (Ø315 mm) made of aluminium	YGC315ALU	22
THAV Roof terminal exhaust air outlet (configurable)	THAVxxx	22
THFV Roof terminal outdoor air inlet (configurable)	THFVxxx	22

Closing damper	Item No.	Page
Outdoor air damper with motor with spring return integrated in the unit	#LSRD3060	-
Exhaust air damper Ø315 mm motorised with spring return 24 V	LSR31524	24

| Draining condensate	Item No.	Page
Condensate pump for DEX3000 series	#CONPUMP	24

Fire protection	Item No.	Page
Humidity sensor integrated in the unit	#SDB	25

Air filter for external and exhaust air	Item No.	Page
ePM$_{10}$ 60% (M5)	FPD3060E360	12
ePM$_1$ 55% (F7)	FPD3060E155	12
ePM$_1$ 80% (F9)	FPD3060E180	12

Pre-filter, external air	Item No.	Page
ISO Coarse 85% (G4)	FPPD3060C85	12
ePM$_{10}$ 60% (M5)	FPPD3060E360	12
ePM$_1$ 55% (F7)	FPPD3060E155	12

Control accessories	Item No.	Page
Movement sensor integrated into DEX unit	#PIRB	25
CO$_2$ sensor integrated in DEX unit	#CO2B	25
Manual operation	HMI1TOUCH	25

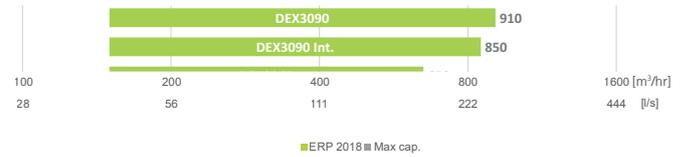## DEX3060 with duct connection box, dimension sketches
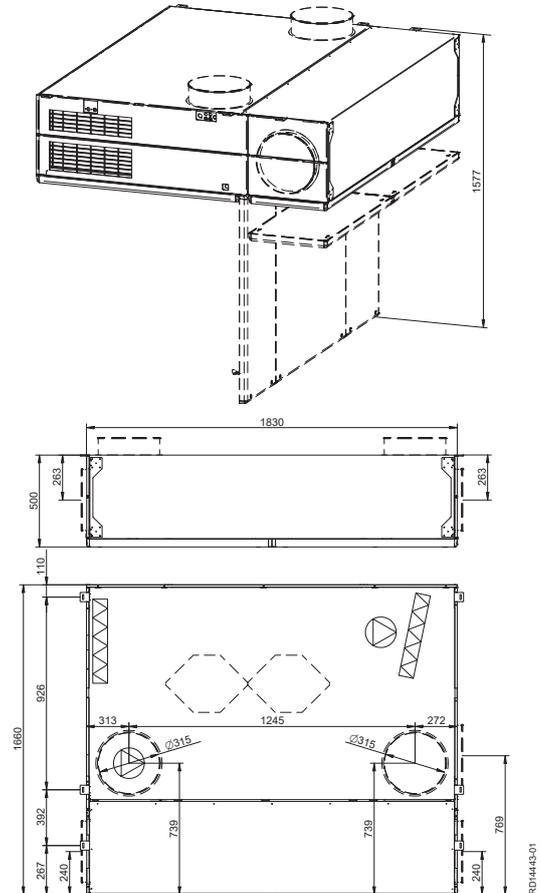
Please state the desired duct position, position A or B, when placing the order.
*) Reserve a maintenance height that corresponds to the depth of the unit before the appliance.
**) Reserve at least 300 mm clearance for maintenance.

EXHAUSTO

▌DEX3090 – air flow rate up to 910 m³/h

DEX3090

Capacity diagram

		DEX3090	910		
		DEX3090 Int.	850		
100	200	400	800	1600 [m³/hr]
28	56	111	222	444 [l/s]

■ ERP 2018 ■ Max cap.

Ordering code

D 3090 S V W W 1 1

Variants

1	EXcon automatic system
1, 2	Size Electric heating coil*
Coils	W = water heating coil, E = electric heating coil, O = change over, C = cold water coil
W	Colour: W = white
V	Equipment insulation in accordance with VDI6022
S or I	Variants: S = standard or I = partially integrated
Unit sizes	3090
D	For DEX

*DEX3090: 1=2.5 kW / 2=6.0 kW

Temperature efficiency
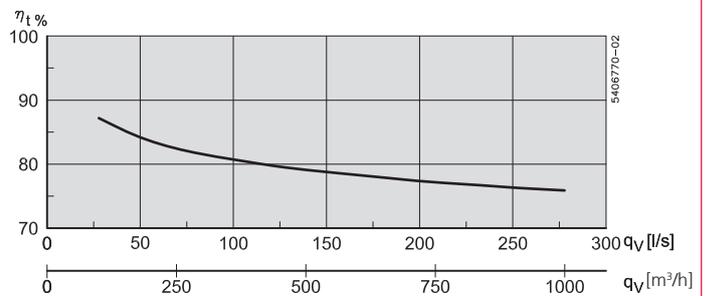
Heat exchanger, counterflow

η_t %

q_V [l/s]

q_V [m³/h]

—— Efficiency without condensation in accordance with EN308
Extract air = 25°C/28RH – Outdoor air = 5°C/50RH
Air balance between supply air/exhaust air = 1.0

$$h_t = \frac{t_{2.2} - t_{2.1}}{t_{1.1} - t_{2.1}} = \text{temperature efficiency}$$

$t_{2.1}$ = outside air temperature
$t_{2.2}$ = supply air temperature
$t_{1.1}$ = Temperature of extract air

Sound data

Sound pressure level Lp in the room (75 m²), measured 1.20 m underneath the ventilation unit

	500 m³/h	600 m³/h	700 m³/h	800 m³/h
Air volume at 250 Pa external pressure. ErP2018				
Sound pressure level Lp in db(A)	28	31	34	37

Equipment details

Min. Airflow	150 m³/h
Max. Airflow in accordance with ErP2018	910 m³/h
Power consumption without after-heating coil	0.7 kW
Power supply without after-heating coil	1 x 230 V + N + PE ~ 50/60 Hz
Max. Phase power	3.1 A

Weight

Equipment ready for operation	220 kg
Partially integrated unit, ready to use	245 kg

Motor and motor control (MC)

|	
Motor type	EC motor
Motor class in accordance with IEC 60034-30-2	IE5 (Ultra Premium Efficiency)
Voltage input	1 x 230 V
Overcurrent protection	Built-in
Regulation	Infinitely variable via motor control (MC)
Control signal	With integrated automatic system: 0-10 VDC

Heating surface (integrated)

|	
Electric heating coil (HE1)	**2.5 kW**
Total power consumption	3.2 kW
Power supply unit	1 x 230 V + N + PE ~ 50 Hz
Max. Phase power	13.7 A
Electric heating coil (HE2)	**6.0 kW**
Total power consumption	6.9 kW
Power supply unit	3 x 400 V + N + PE ~ 50/60 Hz
Max. Phase power	5.8 A
Water heating coil (HW)	
Test pressure:	3000 kPa
Max. Working Pressure	1600 kPa
Number of pipe rows:	3 pcs.
Number of rings :	6 pcs.
Incoming flow area (H x W)	325x570 mm
Connection dimensions	DN15 (½")
Fin spacing:	3.4 mm
Weight (without fluid)	6.2 kg
Water content	1.3 l

EX SELECT PRO

For further calculations of DEX unit sizes, airflows, energy consumption, ecodesign data, etc., please use our calculation program EXselectPRO at www.exhausto.com.

▎DEX3090 – air flow rate up to 910 m³/h

## DEX3090 Dimensional sketches, suspended ceiling installation
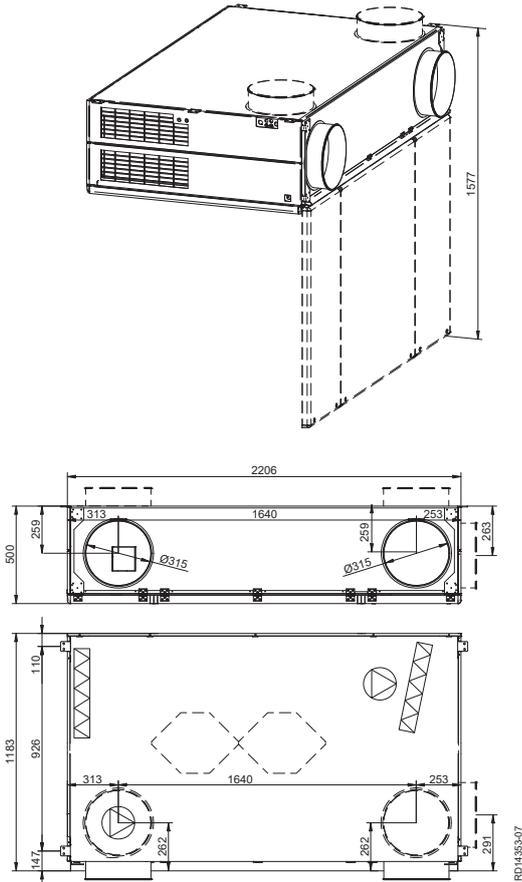
DEX3090 Dimensional sketches, semi-integrated assembly
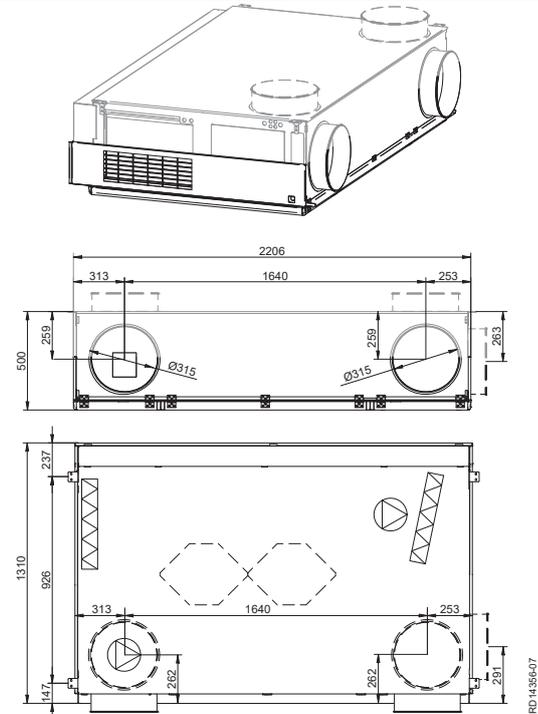
Accessories

Device accessories:	Item No.	Page
Duct connection box	CONBOXD3090M /-V	23
Weather protection grille (Ø315 mm) made of aluminium	YGC315ALU	22
THAV Roof terminal exhaust air outlet (configurable)	THAVxxx	22
THFV Roof terminal outdoor air inlet (configurable)	THFVxxx	22

Closing damper	Item No.	Page
Outdoor air damper with motor with spring return integrated in the unit	#LSRD3090	-
Exhaust air damper Ø315 mm motorised with spring return 24 V	LSR31524	24

Draining condensate	Item No.	Page
Condensate pump for DEX3000 series	#CONPUMP	24

Fire protection	Item No.	Page
Humidity sensor integrated in the unit	#SDB	25

Air filter for external and exhaust air	Item No.	Page
ePM$_{10}$ 60% (M5)	FPD3090E360	12
ePM$_1$ 55% (F7)	FPD3090E155	12
ePM$_1$ 80% (F9)	FPD3090E180	12

Pre-filter, external air	Item No.	Page
ISO Coarse 85% (G4)	FPPD3090C85	12
ePM$_{10}$ 60% (M5)	FPPD3090E360	12
ePM$_1$ 55% (F7)	FPPD3090E155	12

Control accessories	Item No.	Page
Movement sensor integrated into DEX unit	#PIRB	25
CO_2 sensor integrated in DEX unit	#CO2B	25
Manual operation	HMI1TOUCH	25

DEX3090 with duct connection box, dimension sketches
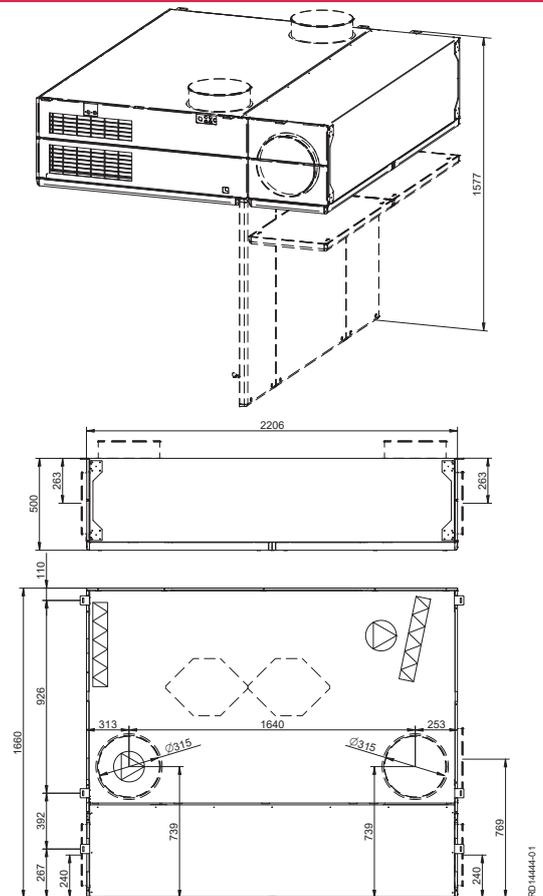
Please state the desired duct position, position A or B, when placing the order.
*) Reserve a maintenance height that corresponds to the depth of the unit before the appliance.
**) Reserve at least 300 mm clearance for maintenance.

EXHAUSTO

# ▋ DEX3120 – air flow rate up to 1,455 m³/h

DEX3120

Capacity diagram

| DEX3120 | 1455 |
| DEX3120 Int. | 1420 |

| 100 | 200 | 400 | 800 | 1600 [m³/hr] |
| 28 | 56 | 111 | 222 | 444 [l/s] |

■ ERP 2018 ■ Max cap.

Ordering code

```
D  3120  S  V  W  W  1  1
```

	Variants
1	EXcon automatic system
1, 2	Size Electric heating coil*
Coils	W = water heating coil, E = electric heating coil, O = change over, C = cold water coil
W	Colour: W = white
V	Equipment insulation in accordance with VDI6022
S or I	Variants: S = standard or I = partially integrated
Unit sizes	3120
D	For DEX

*DEX3120: 1=3.6 kW / 2=9.0 kW
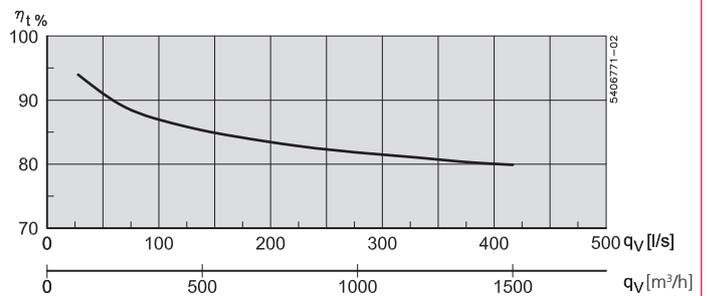
Sound data

Sound pressure level Lp in the room (90 m²), measured 1.20 m beneath the ventilation unit

Air volume at 250 Pa external pressure. ErP2018	800 m³/h	1000 m³/h	1100 m³/h	1200 m³/h
Sound pressure level Lp in db(A)	33	35	38	40

Equipment details

Min. Airflow	300 m³/h
Max. Airflow in accordance with ErP2018	1,455 m³/h
Power consumption without after-heating coil	1.1 kW
Power supply without after-heating coil	1 x 230 V + N + PE ~ 50/60 Hz
Max. Phase power	4.9 A

Weight

Equipment ready for operation	300 kg
Partially integrated unit, ready to use	330 kg

Motor and motor control (MC)

|	
Motor type	EC motor
Motor class in accordance with IEC 60034-30-2	IE5 (Ultra Premium Efficiency)
Voltage input	1 x 230 V
Overcurrent protection	Built-in
Regulation	Infinitely variable via motor control (MC)
Control signal	With integrated automatic system: 0–10 VDC

Temperature efficiency

Heat exchanger, counterflow

—— Efficiency without condensation in accordance with EN308
Extract air = 25°C/28RH – Outdoor air = 5°C/50RH
Air balance between supply air/exhaust air = 1.0

$$h_t = \frac{t_{2.2} - t_{2.1}}{t_{1.1} - t_{2.1}} = \text{temperature efficiency}$$

$t_{2.1}$ = outside air temperature
$t_{2.2}$ = supply air temperature
$t_{1.1}$ = Temperature of extract air

Heating surface (integrated)

|	
Electric heating coil (HE1)	**3.6 kW**
Total power consumption	5.1 kW
Power supply unit	3 x 400 V + N + PE ~ 50/60 Hz
Max. Phase power	4.3 A
Electric heating coil (HE2)	**9.0 kW**
Total power consumption	10.5 kW
Power supply unit	3 x 400 V + N + PE ~ 50/60 Hz
Max. Phase power	8.8 A
Water heating coil (HW)	
Test pressure:	3000 kPa
Max. Working Pressure	1600 kPa
Number of pipe rows:	4 pcs.
Number of rings :	7 pcs.
Incoming flow area (H x W)	957x175 mm
Connection dimensions	DN15 (½")
Fin spacing:	3.4 mm
Weight (without fluid)	8.7 kg
Water content	2,1 l

EX SELECT PRO

For further calculations of DEX unit sizes, airflows, energy consumption, ecodesign data, etc., please use our calculation program EXselectPRO at www.exhausto.com.

▌DEX3120 – air flow rate up to 1,455 m³/h

## DEX3120 Dimensional sketches, suspended ceiling installation
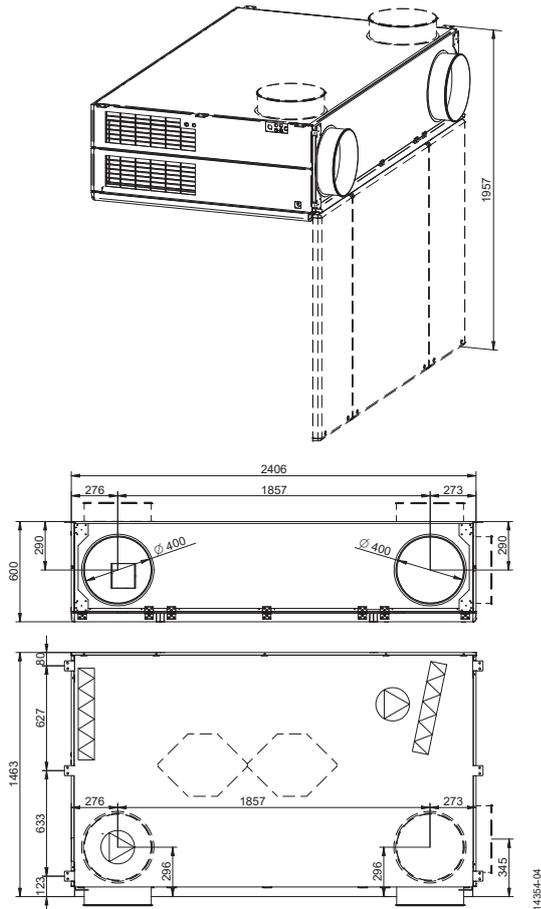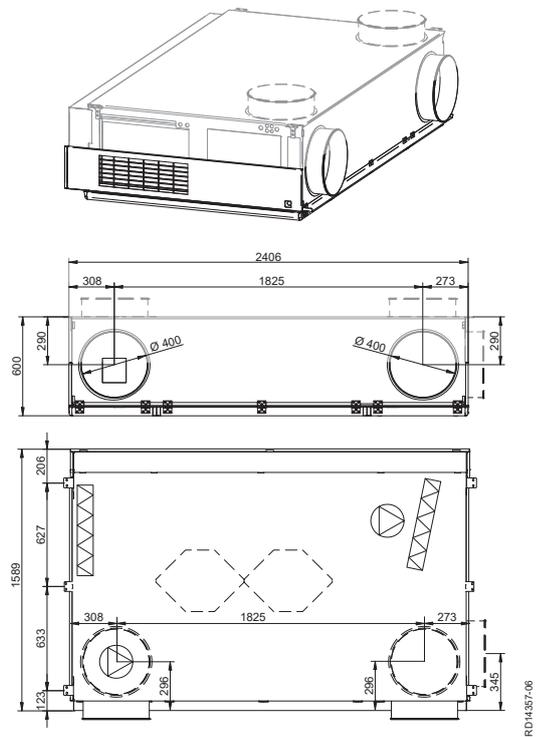
Accessories

Device accessories:	Item No.	Page
Duct connection box	CONBOXD3120M /-V	23
Weather protection grille (Ø400 mm) made of aluminium	YGC400ALU	22
THAV Roof terminal exhaust air outlet (configurable)	THAVxxx	22
THFV Roof terminal outdoor air inlet (configurable)	THFVxxx	22

Closing damper	Item No.	Page
Outdoor air damper with motor with spring return integrated in the unit	#LSRD3120	-
Exhaust air damper Ø315 mm motorised with spring return 24 V	LSR40024	24

Draining condensate	Item No.	Page
Condensate pump for DEX3000 series	#CONPUMP	24

Fire protection	Item No.	Page
Humidity sensor integrated in the unit	#SDB	25

Air filter for external and exhaust air	Item No.	Page
ePM$_{10}$ 60% (M5)	FPD3120E360	12
ePM$_1$ 55% (F7)	FPD3120E155	12
ePM$_1$ 80% (F9)	FPD3120E180	12

Pre-filter, external air	Item No.	Page
ISO Coarse 85% (G4)	FPPD3120C85	12
ePM$_{10}$ 60% (M5)	FPPD3120E360	12
ePM$_1$ 55% (F7)	FPPD3120E155	12

Control accessories	Item No.	Page
Movement sensor integrated into DEX unit	#PIRB	25
CO_2 sensor integrated in DEX unit	#CO2B	25
Manual operation	HMI1TOUCH	25

## DEX3120 Dimensional sketches, semi-integrated assembly

DEX3120 with duct connection box, dimension sketches
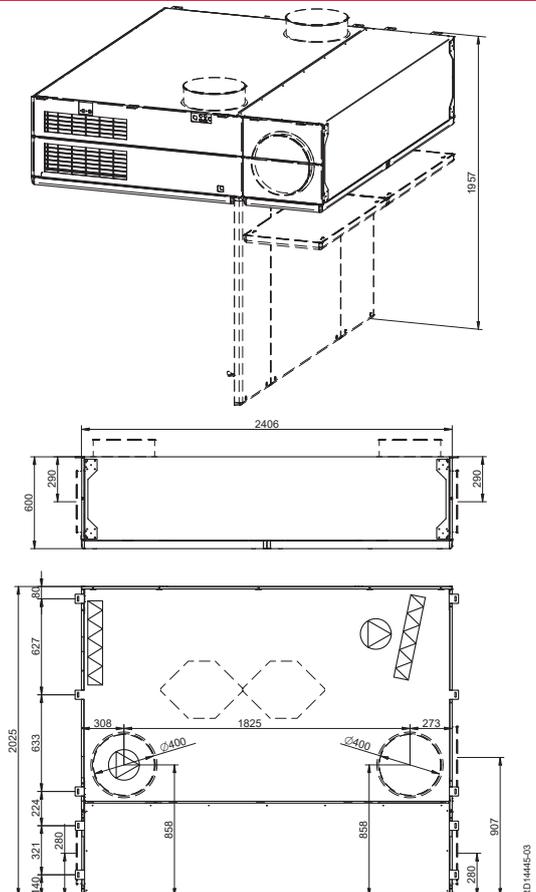
Please state the desired duct position, position A or B, when placing the order.
*) Reserve a maintenance height that corresponds to the depth of the unit before the appliance.
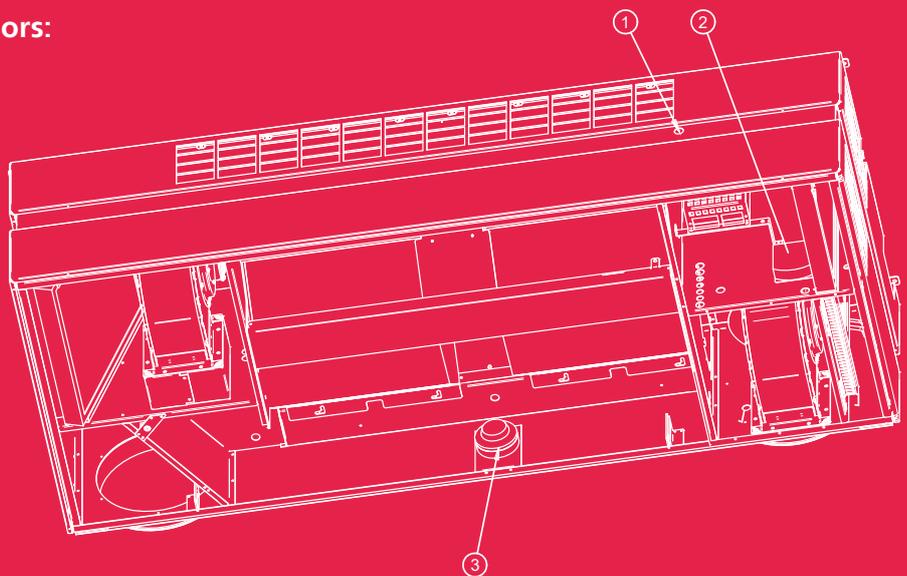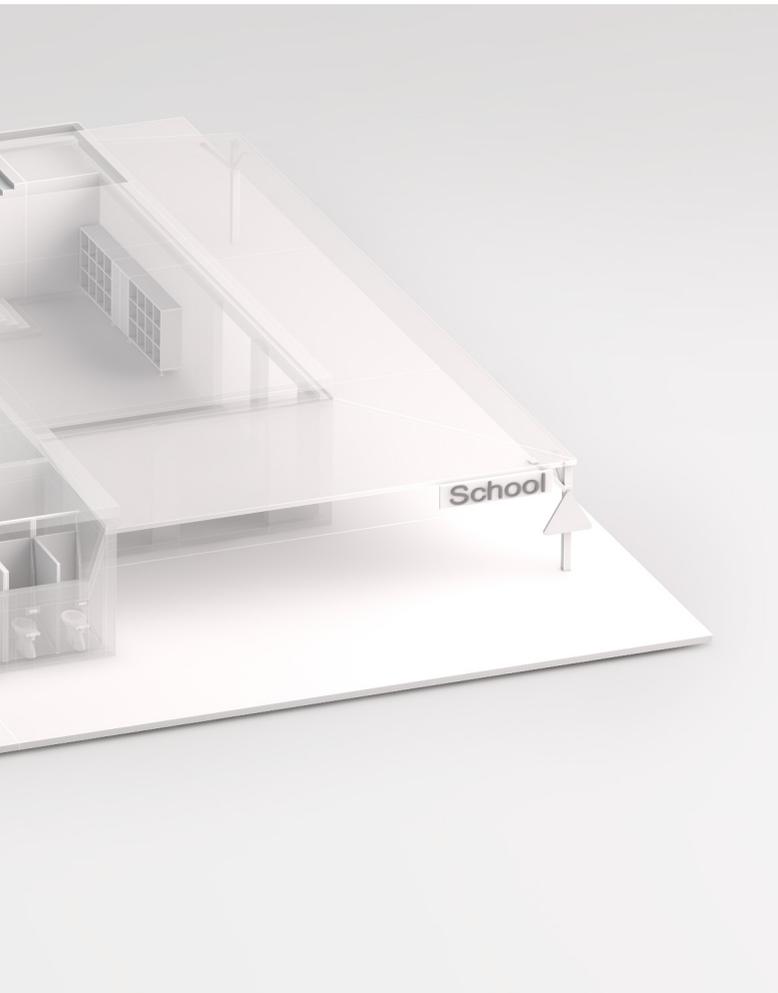**) Reserve at least 300 mm clearance for maintenance.

EXHAUSTO

DEX3000

...the right control option for every requirement
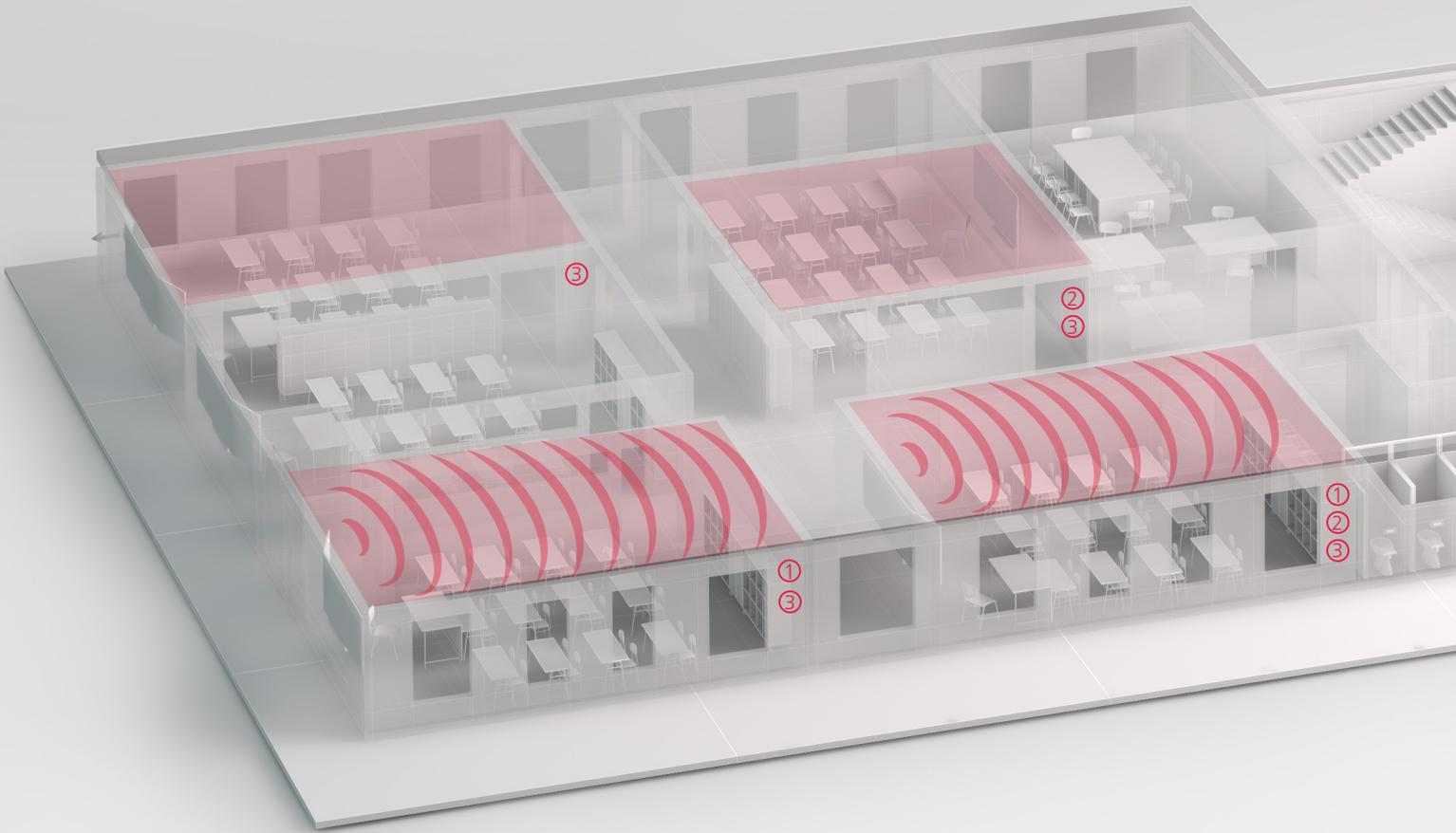
The figure shows the optional sensors:

① **Movement detector**

② **CO_2 sensor**

③ **Smoke detector**

CONTROL OPTIONS

The decentralised DEX3000 series has a built-in fully automatic (EXcon) system, which is flexible enough to meet every requirement. This means that the equipment can be set up in a wide range of operating modes.

This equipment only ventilates and extracts from one room at a time, so the optimum operating situation can be configured for each room depending on how it is used.

STANDARD:

DAY, WEEK AND YEAR CLOCK

The integrated annual clock can be used to set defined times during which the device should be in operation. Here, different output levels can be programmed so that it is also possible to work with a minimum air exchange during idle periods. The year clock also means that any holiday periods can be given sufficient consideration. **Depending on the room conditions, daily use with the same number of people at fixed times can be programmed using the clock.**

FREE COOLING FUNCTION

Programming with the clock ensures that the room can be cooled down overnight to the individually selectable temperature desired when there are low outdoor temperatures in summer.

Intelligent controls activate the system exclusively within the specified temperature-dependent parameters.

OPTIONAL

① MOVEMENT DETECTOR

An additional movement detector can generally switch the system on or into demand mode. This makes it possible to automatically adjust the air volume when the room is used outside of the scheduled times. **In the event of unusual room, a movement detector can be used to ensure that the ventilation system is activated when the room is being used.**

② CO$_2$ SENSOR

An integrated CO$_2$ sensor can be used so that the system can always be operated as required (depending on the number of people in the room). This ensures that the system automatically adjusts the air performance to the desired CO$_2$ levels, thereby optimising energy consumption as required. **This option is particularly useful if usage times and the number of people in the particular room are subject to variation.**

③ SMOKE DETECTOR

The requirement to switch off ventilation systems when smoke is detected in the outside air, means that the DEX3000 units can also be equipped with a smoke detector upon request.

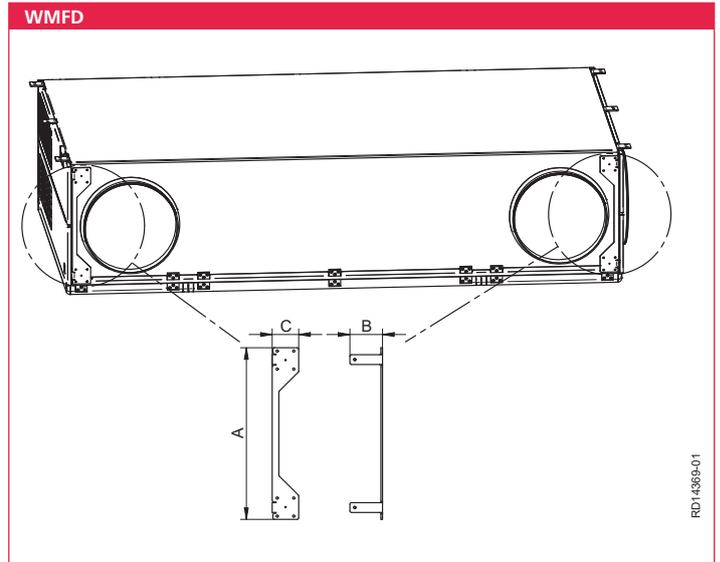**EXHAUSTO**

❚ DEX3000 – Accessories

Wall bracket

The unit is attached to the ceiling structure using the supplied mounting brackets.

For extract and exhaust air, we recommend directing it through the wall at the back useing the two transport brackets for additional fastening.

The construction is made of sheet steel and is supplied as standard.

Ventilation unit included.

Technical data				
DEX size	A [mm]	B [mm]	C [mm]	Weight [kg]
DEX3060	420	98,6	80	1.0
DEX3090	420	98,6	80	1.0
DEX3120	522	98,6	80	1.1

Weather protection grill

Round weather protection grill with fixed slats made of aluminium including a net for extract air intake and exhaust air discharge through the outside wall. Comes with a bird screen as standard. Mesh size 10×10 mm. Screws are required for attachment to an external wall (not included in the delivery).

YGC

Technical data						
Item No.	Ød nom	ØD [mm]	I [mm]	E [mm]	A_f [m²]	Weight [kg]
YGC315ALU	315*	338	21.0	4.0	0.063	1.09
YGC400ALU	400*	440	34.0	6.5	0.079	3.00

*There are 2 × Ø4.2 mm holes on the side of the grid for mounting.
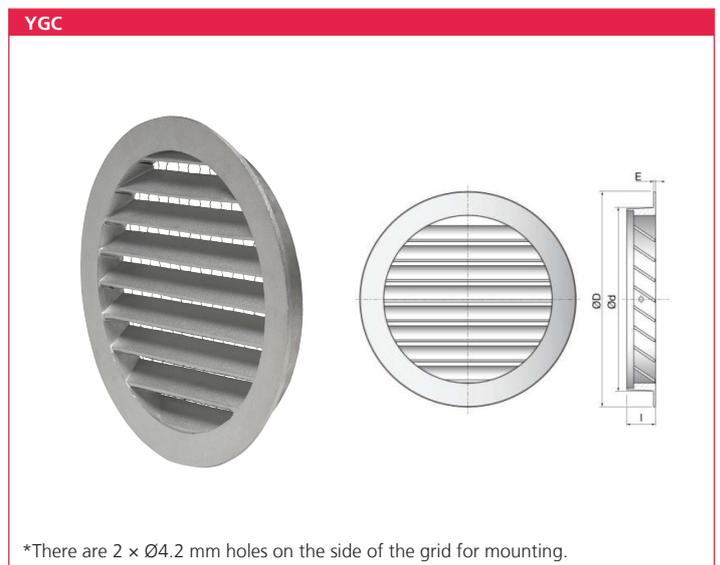
Roof terminals for exhaust air outlet and fresh air inlet

The EXHAUSTO THAV roof terminal including self-acting damper is used for exhaust air and the THFV for fresh air.

The roof covers stand out with their uniform design, providing optimal ventilation sealing of the duct system on the roof and are easy to install, even with varying roof constructions.
Their low noise levels make them particularly suitable for densely populated areas and high environmental requirements.
The vertical air discharge of the THAV roof terminals prevents precipitation of polluted exhaust air into the environment, as well as contamination of the roof surface. The terminals are available with different flange types (perform or zinc flange) for optimum roof integration. The corresponding roof pitch must always be specified in this case.

Due to the wide range of configuration options, we refer you to our order form and design program at www.exhausto.com.

THAV/THFV

❙ DEX3000 – Accessories

Duct connection box

The CONBOX is specifically designed for the lateral duct connection where the DEX unit is mounted on a wall that is not an exterior facade. It is used when the extractl air and exhaust air cannot be directed upwards via the roof or directly backwards through the wall. It directs the extract air either to the right or the exhaust air to the exterior on the left side behind the unit to the facade. The CONBOX forms a visual unit with the equipment and contains a separate, fold-down maintenance door.

The compact housing is made of corrosion-resistant sheet steel coated with Aluzinc (AZ 185-C4) and is supplied as standard painted in white (RAL9003). Insulation complies with class A2-s1, d0 in accordance with EN 13501.

CONBOX

Technical data					
Item No.	A* [mm]	B* [mm]	C* [mm]	D [mm]	Weight [kg]
CONBOXD3060V	1830	495	500	315	55
CONBOXD3090V	2206	495	500	315	65
CONBOXD3120V	2406	495	600	400	75

* = A = Lenght, B = Width. C = Hight
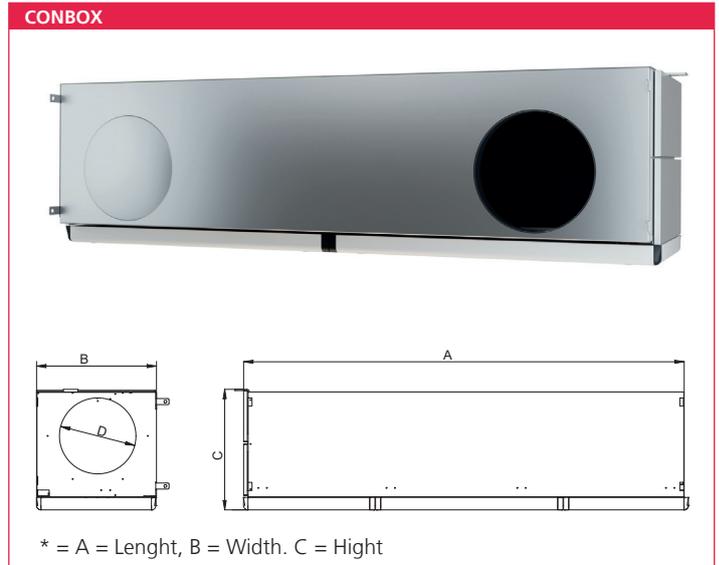
Mounting Options

Since room conditions often dictate where a DEX3000 unit can or should be installed, the series offers numerous channel connection options.

These can be run either straight back through the wall, up through the ceiling or sideways to the outer wall, giving maximum flexibility. Please note that of the total of 9 mounting options, only options B, C, H and I are suitable for partially integrated mounting on suspended ceilings.
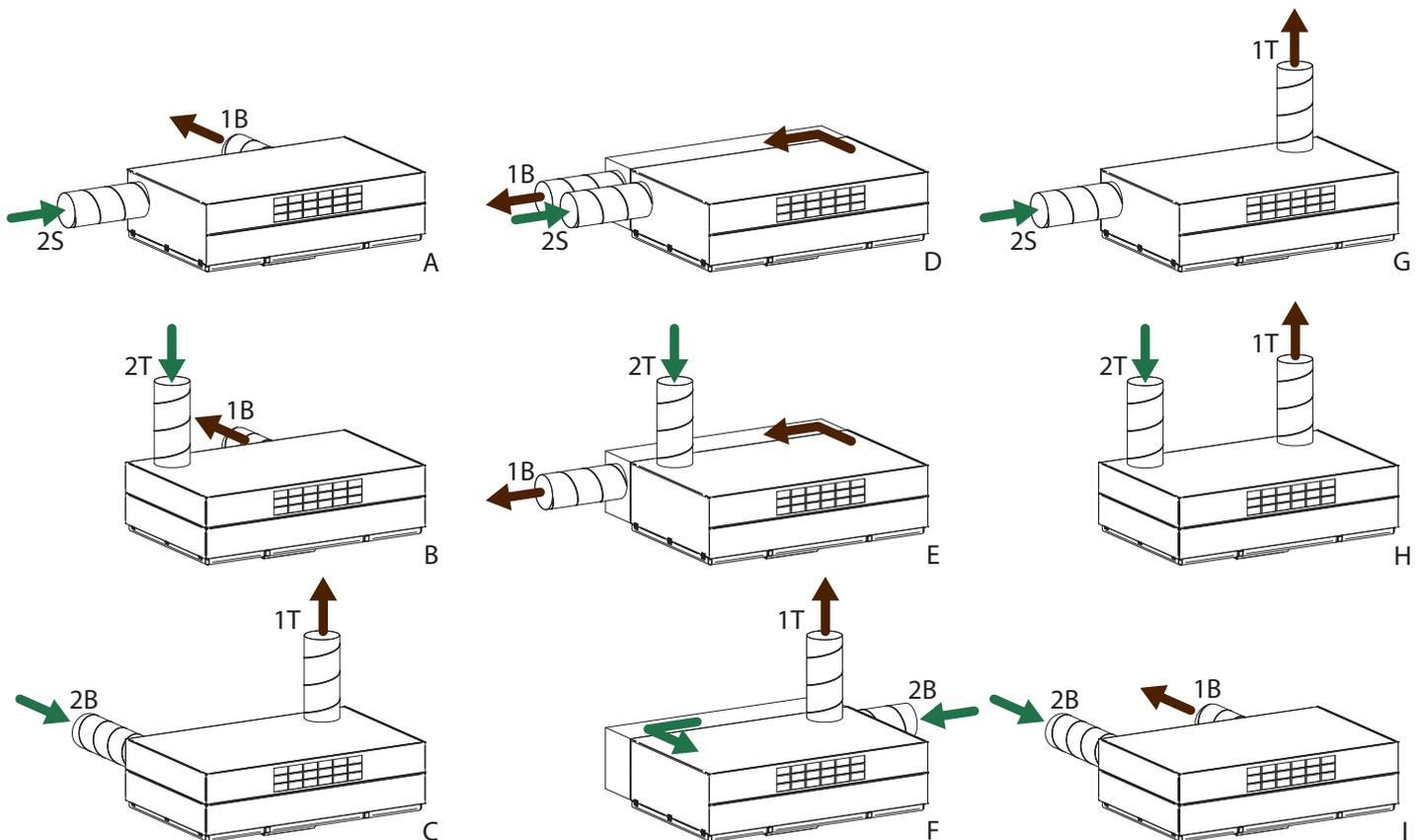
EXHAUSTO

▌DEX3000 – Accessories

Closing damper

The LSR exhaust air damper is a damper for duct installation and is used to shut off the exhaust air duct when the duct is connected upwards.

This prevents cold air from entering the unit via the duct when the unit is switched off. The damper is equipped with a spring return actuator that will close the damper even where there is a power failure.

Technical data

Item No.	Leak tightness class	Performance Data	Level of protection	Weight [kg]	A-dimension [mm]	B-dimension [mm]
LSR31524	4	24 V DC / 5 W	IP54	3.1	100	315
LSR40024	4	24 V DC/5 W	IP54	4.6	100	400
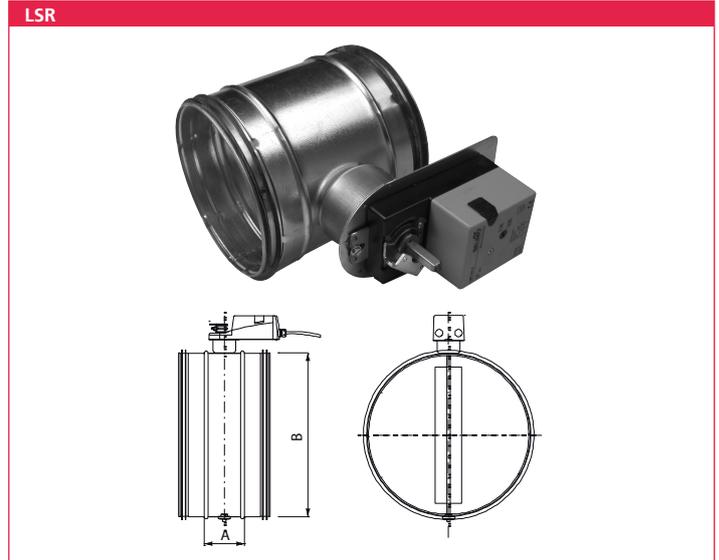
Condensate pump

The DEX unit is supplied with condensate tray and condensate level monitoring as standard. Experience has shown that no condensate forms when ventilating and extracting air from a normal school class. If condensation still accumulates, the monitoring stops the system before the condensate tray can overflow.

However, where the DEX unit is used in rooms with consistently higher levels of humidity (e.g. in rooms that are additionally humidified), the condensate tray can be fitted with a condensate pump that automatically pumps the condensate water to the outside (exhaust air or waste water connection).

The condensate pump can be easily retrofitted.

Technical data

Item No.	Dimensions L/W/H [mm]	Output	Max. Lifting height	Hose dimension
	160x43x34	12 litres/h max	5.0 m	Ø4/Ø8 mm
#CONPUMP	**Supply voltage**	**Power consuption**	**Fuse protection**	**Level of protection**
	230V/50–60Hz	Max. 16 W	1A	IP68

Manual operation

The HMI control unit has a 3.5 inch display with touch function.
The intuitive menu provides access to the functions commonly used.
Technicians can access advanced menus and parameters using a four digit access code.

A connecting cable (2 m long) including RJ12 plug is available as an accessory.

Technical data

Item No.	Dimensions W/H/D [mm]	Performance Data	Level of protection
HMI1TOUCH	80 x 121 x 42	24 V DC/0.6 W	IP21
HMISERVICEC	2000	-	-

❚ DEX3000 – Accessories

Motion sensor

DEX3000 units are available with built-in PIR sensor. This switches on the ventilation as soon as there are people in the room – even outside the operating times defined by the internal programmed timer.

A delay can be set to prevent undesirable starts and stops. Adjustable 10/30/60/120 Min.

Technical data

Item No.	Detection angle/range	Performance Data	Level of protection
#PIRB	100°/5 m	24 V DC/0.5 W	IP20

CO₂ sensor

The DEX unit can be equipped with a CO_2 sensor to avoid exceeding a desired maximum CO_2 level in the room.

Depending on the CO_2 level measured, the unit's air flow rate is adjusted accordingly to ensure energy-efficient operation .

Technical data

Item No.	Measuring range	Performance Data	Level of protection
#CO2B	0-2000 ppm	24 V DC/1 W	IP30

Smoke detector

The DEX unit can be supplied with a built-in smoke detector in the outdoor air, so that the unit switches off when smoke is drawn in from the outside.

The sensor is positioned on the outdoor air side after the filter to minimise levels of contamination.

Technical data

Item No.	Detection	Performance Data	Level of protection
#SDS	Reflection principle	16-30 V DC	IP20

EXHAUSTO

EXSELECTPRO
Layout

FUTURE DESIGN PROGRAMME

EXselectPRO, EXHAUSTO's product design program, means you can easily and quickly configure an air handling unit for your current project. You will receive all the technical data, dimensional drawings, energy calculations and the values required for the EcoDesign Directive.

SIMPLE. FAST. FULLY-DESIGNED.

✓ Project-related equipment configuration

✓ Intuitive user interface

✓ Available online everywhere:
  Desktop, tablet or smartphone

✓ Sharing of projects with our technical consultants

DO YOU HAVE QUESTIONS ABOUT THE PROGRAM?

Our consultants will be happy to assist you in handling the design program upon request.

Addresses for sales companies and business partners

EX*SELECT*PRO

Trine ▾

Home / Project / **Add unit**

Select unit

Supply unit
Airflow	1500	m³/h
External pressure drop in	50	Pa
External pressure drop out	200	Pa

Extract unit
Airflow	1500	m³/h
External pressure drop in	200	Pa
External pressure drop out	50	Pa

Unit construction
Air streams	Two flow (1 Unit) ▾
Unit orientation	● Horizontal ○ Vertical ○ Ceiling ○ Top
Installation	● Indoor ○ Outdoor
Hygiene level	● Standard ○ VDI 6022

Heat exchanger

Rotary | Plate | Twin coil | None

Additional filters

☑ Compact   ☑ Modular
☑ Panel   ☑ Bag
☐ Dampers
☐ Fluid   ☐ Electrical   ☐ Heat pump
☐ Fluid   ☐ DX   ☐ Integrated cooling
☐ Mixing
☐ +1

Arrangements

Size		Airflow range [m³/h]	ErP	SFP [J/m³]	Eta [%]
240		370 2304	-	-	-
240		370 2304	-	-	-
4010		210 3725	-	-	-
5020		1008 4320	-	-	-

Cancel all   Calculate units

PRO 1.1.60.2, © 2022 Exhausto   News Terms of service

Arrangements

Size	Airflow range [m³/h]	ErP	SFP [kJ/m³]	Eta [%]	Total price [EUR]
240	3702304				
4010	2103725				

Cancel all   Calculate units
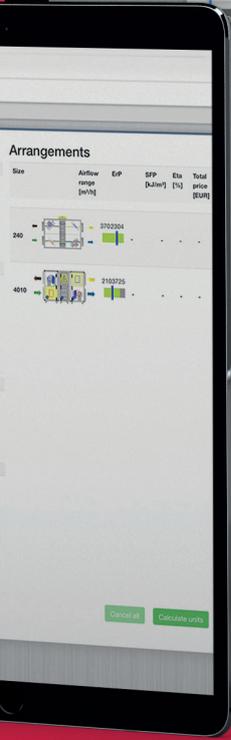
Did you know that healthy air doesn't cost any more than an apple?

Setting up and operating a ventilation system that creates good indoor conditions accounts for less than 1% of the total cost of ownership per student. Conversely, improving indoor conditions increases students' educational success by up to 15% - an easily recognisable gain.

Calculation example DEX3090 with E-heating coil	
We have based the assumption on a classroom with 25 pupils – 5 days per week at 10 hrs with an average of 800 m³/h:	
Investment costs, one-off	€12,340
Installation costs, one-off	approx. €2,000
Maintenance and servicing, per year	€450
Operating costs, per year (electricity price: €0.36)	€150
Total cost expenditure (10-year overview)	**€2,184**
Total per student per year	**€87.36**

Based on 200 school days, this means per day and per student:

€0.43 = The cost of an apple!

€0.43

EXHAUSTO Export
Odensevej 76
DK-5550 Langeskov

Tel. +45 65 66 12 34
export@exhausto.dk
www.exhausto.com

EXHAUSTO