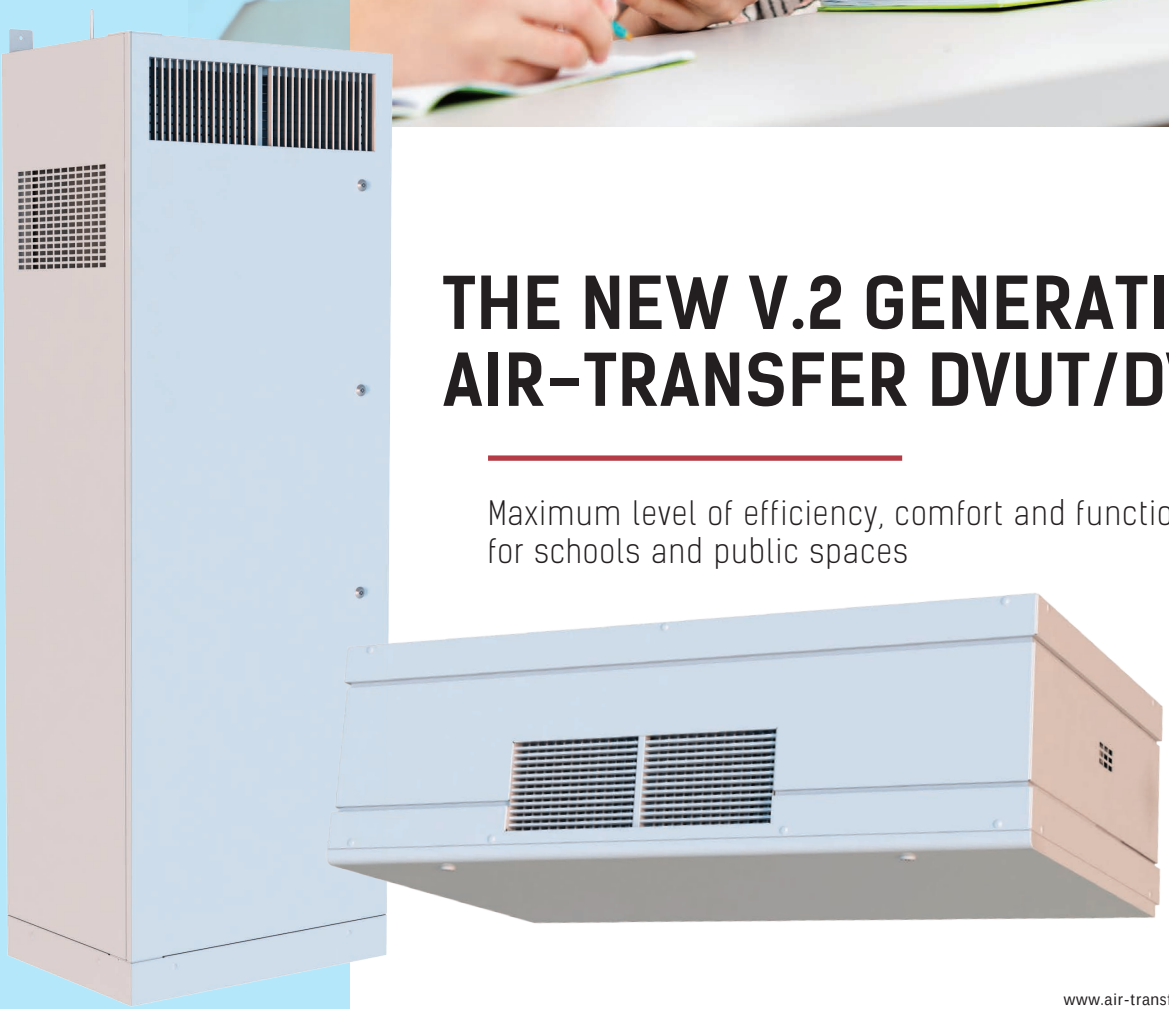
AIR-TRANSFER



THE NEW V.2 GENERATION OF AIR-TRANSFER DVUT/DVUE

Maximum level of efficiency, comfort and functionality for schools and public spaces



www.air-transfer.nl

CONTENTS

Introduction page 4

Design guidelines page 6

DVUT HB EC V.2, DVUE HB EC V.2 – floor-mounted ventilation units page 8

DVUT PB EC V.2 – ventilation units for suspended mounting page 16

PROBLEM №1: POOR AIR QUALITY

Inadequate ventilation of classrooms, offices and conference halls leads to poor air quality – specifically: elevated humidity and CO_2 levels and reduced oxygen content. These effects can cause eye dryness and irritation, poor concentration and fatigue.

It has been scientifically proven that poor air quality reduces work capacity of adults by 5-10 %. Poor air quality can have even more pronounced effect on children and have adverse effects on concentration and potential academic achievement.

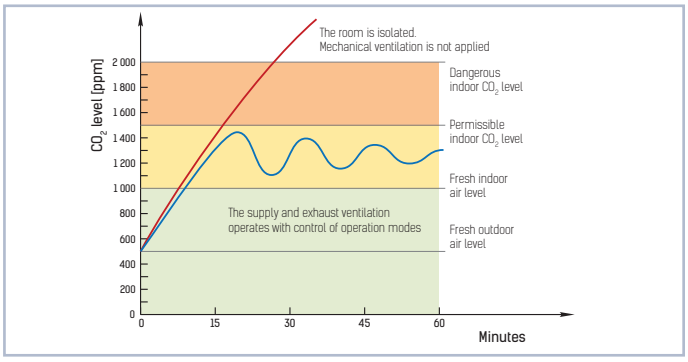
The normal practice of classroom ventilation by opening windows only provides a short-term solution for the problem of poor air quality and it is at the cost of the warm air that is lost in the process. As a result, the CO_2 concentration in spaces that are intermittently ventilated by airing exceeds acceptable levels by several times.
Unlike this conventional approach, single-room ventilation ensures consistently high air quality in classrooms whilst maintaining the air temperature.





PROBLEM №2: HEAT LOSSES

Most retrofit projects of schools and community buildings are focused towards the reduction of heat and energy costs. Fitting modern windows and doors is an essential part of the process as well as removing any airbricks and trickle vents in order to try and create an airtight living environment and prevent any heat losses through gaps. This newly created, airtight environment, however, can create new issues with regards to air quality and the reduction of CO_2 and VOCs which would normally be removed passively by the property's air permeability. Air tight spaces can be ventilated very efficiently and effectively using mechanical ventilation with heat recovery.



PROBLEM №3: LACK OF SPACE FOR VENTILATION FACILITIES IN RETROFITTING PROJECTS

Retrofitting existing structures presents a host of engineering challenges which often require creative solutions. Ensuring efficient ventilation in such projects is no exception. Some buildings completely lack free space for air ducts and ventilation equipment. In such cases central ventilation systems are not a realistic option.

However, such engineering challenges can be met by fitting the treated spaces with single-room ventilation systems which do not require dedicated air ducts.

High levels of humidity promote mould and germs which may trigger asthma and other allergies. Proper ventilation is essential in order to eliminate this problem. Chemical compounds known as VOCs (volatile organic compounds) released by furniture, paint, carpets, cleaning products and a variety of other household items all contribute to indoor air pollution. Carbon dioxide is a natural component of the Earth's atmosphere with outdoor air concentration ranging from 350 ppm in the country to 500 ppm in the city.

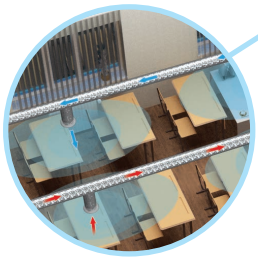
ADVANTAGES OF SINGLE-ROOM VENTILATION SYSTEMS

- Unit air flow and type are selected based on the individual requirements of each particular space.
- Each space is ventilated on demand.
- The speed of DVUT units is set automatically.
- Single-room ventilation systems are much easier to design due to the absence of air ducts.
- Fresh air is supplied through a short wall duct. No energy is wasted pushing air through long air ducts.
- Single-room ventilation improves fire safety due to the absence of
- air ducts between individual spaces.

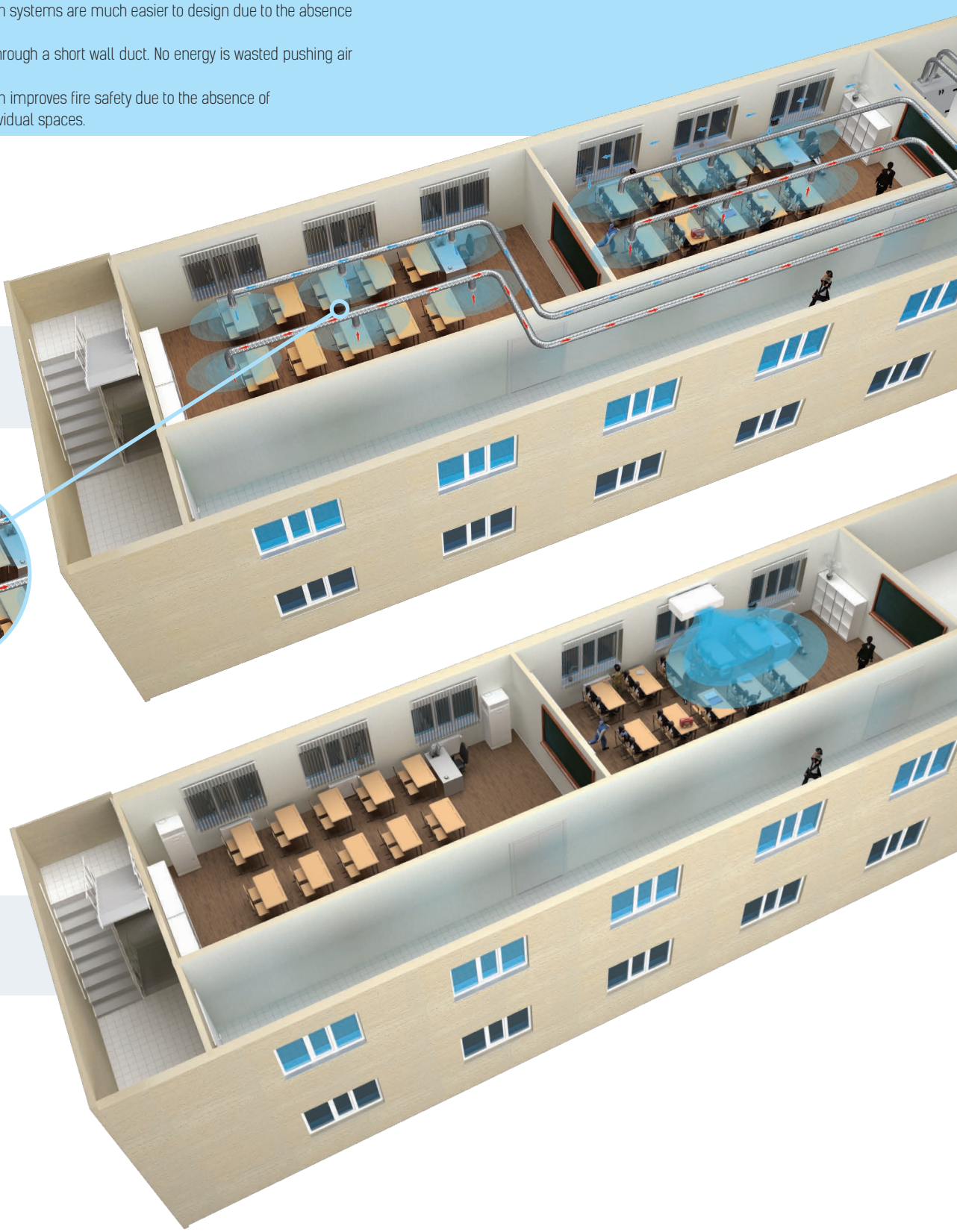
DISADVANTAGES OF CENTRAL VENTILATION SYSTEMS

- Central ventilation units can be large and require a dedicated space for installation.
- As a retrofit solution there can be some difficulties with installing ducting between floors or through existing ceiling voids

Central ventilation system example



Hyperventilation in the empty room



Single-room ventilation system example

DESIGN GUIDELINES

DIN EN 15251 standard specifies indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics.

Category	Description
1	High standard. Recommended for rooms used by sensitive occupants with special needs (e.g. people with disabilities or patients undergoing medical treatment, infants, elderly people etc.).
2	Normal standard. Recommended for newly erected and renovated buildings.
3	Targeted/moderate standard. Can be applied to existing buildings.
4	Parameters beyond the above categories. This category can only be applied during a limited period.

The following table contains recommended ventilation system air flow per person as per DIN EN 13779. The aforementioned airflow is given in consideration of the contaminants released by furniture and construction materials.

Category	Measurement unit		Outdoor airflow							
			Non-smoking space				Smoking space			
			Range		Standard value		Range		Standard value	
1	l/s	m^3/h	> 15	> 54	20	72	> 30	> 108	40	144
2	l/s	m^3/h	10–15	36–54	12,5	45	20–30	72–108	25	90
3	l/s	m^3/h	6–10	21,6–36	8	28,8	12–30	43,2–108	16	57,6
4	l/s	m^3/h	< 6	< 21,6	5	18	< 12	< 43,2	10	36

The minimum ventilation air flow per pupil based on maximum allowable concentration of CO_2 is as follows.

Age group norm			
Approximate age	**Reference value 1200 ppm**	**Reference value 1000 ppm**	**Target audience**
0–6	19 m^3/h	25 m^3/h	Kindergarten
6–10	19 m^3/h	25 m^3/h	Primary school
10–14	23 m^3/h	30 m^3/h	Secondary school
14–19	24 m^3/h	33 m^3/h	Vocational school
Over 19	25 m^3/h	34 m^3/h	University
Teacher	28 m^3/h	37 m^3/h	

Noise level requirements as per DIN EN 15251 and DIN EN 13779:

Building/room type	Sound pressure recommended range, dBA
Open-space office	35–40
Conference hall	30–40
Classroom, kindergarten	35–45
Cafeterias/restaurants	35–50
Retail store	35–50

CALCULATION EXAMPLE

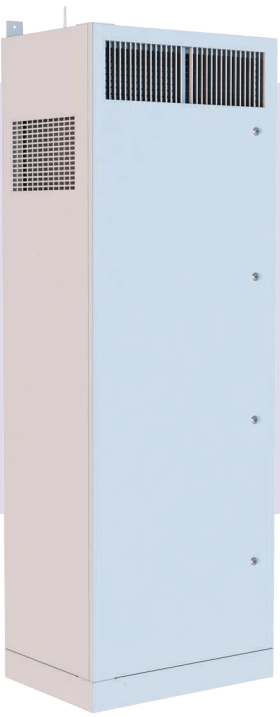
Let us calculate a classroom ventilation system. The classroom is to accommodate 20 children aged 10-14 and one adult teacher. The CO_2 concentration must be maintained at 1000 ppm.

20 PUPILS × 30 M³/H = 600 M³/H

1 TEACHER × 37 M³/H = 37 M³/H

Required fresh airflow rate: **637 m³/h**





DVUT HB EC V.2, DVUE HB EC V.2

Floor-mounted single-room air handling units in a heat- and sound-insulated casing

Air flow:
up to 1240 m³/h

Heat recovery efficiency:
up to 96 %

DESCRIPTION

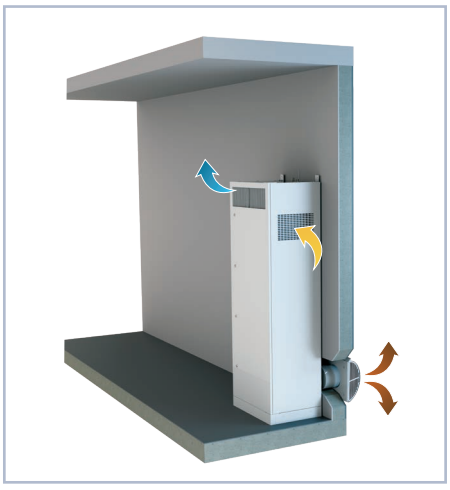
The **DVUT HB EC V.2** and **DVUE HB EC V.2** air handling units are intended for single-room ventilation of schools, offices and other public and commercial spaces.
These air handling units do not require a duct system and provide a simple yet efficient ventilation solution for newly built and renovated spaces.

FEATURES

- Efficient supply and exhaust ventilation of individual spaces.
- Modification with an electric preheater or reheater available.
- Modification with an enthalpy membrane heat exchanger available.
- Low-energy EC fans.
- Low noise operation.
- Simple installation.
- Contemporary design.

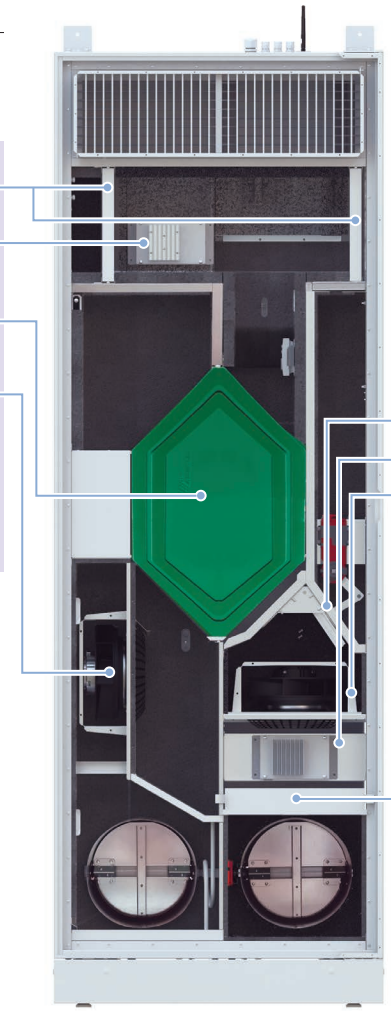
OPERATING PRINCIPLE

Warm, stale indoor air passes through the filter and the heat exchanger and is then extracted outdoors through the wall duct by the centrifugal extract fan. Cold outdoor air passes through the filters and the heat exchanger and then is supplied by means of the centrifugal supply fan.
The heat of extracted air is transferred to supply air by means of the heat exchanger, providing comfortable fresh air temperature and reducing costs for its heating.



DESIGNATION KEY

Unit series	Rated air flow [m³/h]	Installation	Bypass	Electric heaters	Drain pump	Motor type	Modernization	Control
DVUT – unit with plastic heat exchanger **DVUE** – unit with enthalpy heat exchanger	300; 500; 1200	**H** – floor-mounted with horizontal spigots	**B** – bypass damper	**_** – no heater **E** – electric preheater **E2** – electric preheater and reheater	**_** – without drain pump **DN** - in-built drain pump	**EC** – synchronous motor with electronic control	**V.2** – second modernized generation	**A21**



CASING

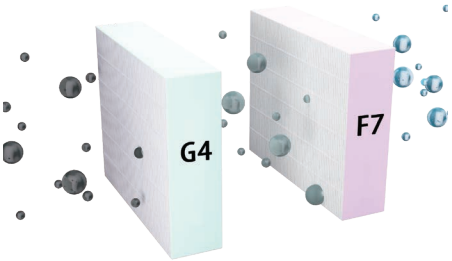
The casing is made from high-quality polymer-coated steel with internal heat and sound insulation made of mineral wool from 40 to 80 mm in thickness.
The contemporary design helps the units blend in nicely with a wide variety of interiors.

AIR DAMPERS

Supply and exhaust dampers are closed automatically while the unit is off to prevent drafts.

AIR FILTRATION

Exhaust cassette filter: ISO Coarse >60% (G4).
Supply cassette filter: ISO ePM1 60% (F7).



FANS

The units feature high-performance, electronically commutated (EC), external rotor motors with forward curved blades. These state-of-the-art units offer excellent energy efficiency. In addition to that, EC motors combine high performance and optimum control over the entire speed range. EC motors have an excellent power efficiency (up to 90 %).

PREHEATING

The DVUT HBE EC V.2 and DVUT HBE2 EC V.2 units are equipped with an electric preheater to prevent heat exchanger freezing.

REHEATING

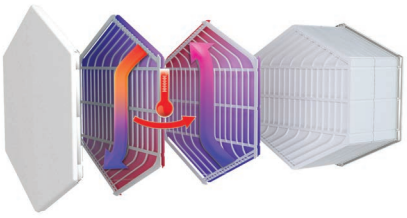
The DVUT HBE2 EC V.2 units are equipped with electric reheaters to raise the supply air temperature.

BYPASS

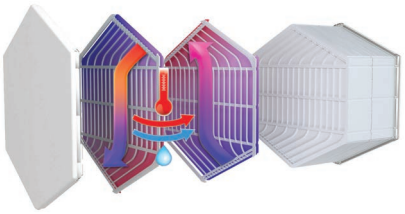
The units are equipped with a bypass for summer ventilation.

HEAT EXCHANGER

The DVUT units feature a counter-flow heat exchanger made of polystyrene. The heat of the extract air is transferred to the supply air via the heat exchanger which greatly helps reduce ventilation heat losses. This can lead to formation of condensate that is collected in a special drain pan and discharged into the sewage system.
In the warm season the outdoor air heat is transferred to extract air. This enables considerable reduction of the supply air temperature which reduces the air conditioning load.



The DVUE units are equipped with a counter-flow enthalpy heat exchanger. In the cold season the extract air heat and moisture are transferred to the supply air stream through the enthalpy membrane. Heat recovery minimises heat losses from ventilation.
In the warm season the outdoor air heat and moisture are transferred to the extract air stream through the enthalpy membrane. This enables considerable reduction of the supply air temperature and humidity, which reduces the air conditioning load.



UNIT CONTROL AND OPERATION

- **Freeze protection**

There are two methods of protecting the heat exchanger against freezing in cold conditions.
In units without an electric preheater the supply fan is shut down automatically, using the feedback from the extract air temperature sensor, to let the warm extract air thaw the heat exchanger. The supply fan then re-activates and the unit reverts to normal operation.
In units with an electric preheater the supply air is warmed up before entering the heat exchanger which prevents freezing. This method ensures a continuous balanced air exchange.

- **Control**

The units **DVUT/DVUE HB EC V.2 A21** are equipped with an in-built control system. An A21 controller allows integrating the unit into the **Smart Home system** or **BMS (Building Management Systems)**. Remote control panel is not included in the delivery set and is available as specially ordered accessory . The unit is controlled by the Home application on the mobile device.
The application is available for download at App Store, Play Market or via the QR code.

Google play

Download on the App Store

Modbus

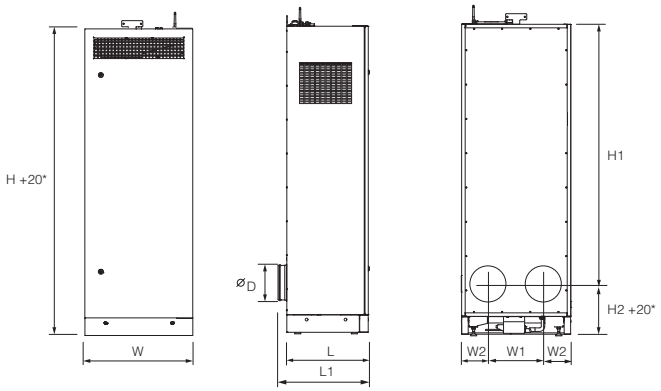
Function	A21
Wired remote control panel	Option (A22) 
Wired remote LCD control panel	Option (A25) 
Wireless remote control panel	Option (A22 Wi-Fi) 
BMS	RS-485 Wi-Fi Ethernet MODBUS (RTU, TCP)
Control by a mobile application via Wi-Fi	+
Freeze protection	+
Bypass control	Auto + manual
Weekly schedule operation	+
Filter maintenance warning	According to filter timer
	According to pressure switch of filter clogging
Alarm indication	+
Speed selection	+
Timer	+
RH% sensor	Option
CO_2 sensor	Option
VOC sensor	Option
PM2.5 sensor	Option
Boost mode	+
Fireplace mode	+
Preheating	Option
Reheating	Option
Cooler connection	Option
Fire alarm sensor connection	Option
Supply air temperature control	+

TECHNICAL SPECIFICATIONS

Model		DVUT 300 HB EC V.2	DVUT 300 HBE EC	DVUT 300 HBE2 EC	DVUE 300 HB EC V.2	DVUE 300 HBE EC	DVUE 300 HBE2 EC	DVUT 500 HB EC V.2	DVUT 500 HBE EC	DVUT 500 HBE2 EC	DVUT 1200 HB EC V.2	DVUT 1200 HBE EC	DVUT 1200 HBE2 EC
Supply voltage [V]/50 (60) Hz		1~230									1~230	3~400	
Maximum power consumption without an electric heater [W]		96						370			345		
Preheater power [W]		-	1050		-	1050		-	1050		-	3150	
Reheater power [W]		-	-	700	-	-	700	-	-	700	-	-	2110
Maximum unit current without an electric heater [A]		0.75						2.5			2.3		
Maximum unit current with an electric heater [A]		0.75	7	11	0.75	7	11	2.5	9.1	13.3	2.3	12	18.7
Maximum air flow [m³/h]		320						580			1240		
Sound pressure level at 1 m [dBA]		47						47			40		
Sound pressure level at 3 m [dBA]		37						38			30		
Transported air temperature [°C]		-25...+40											
Casing material		polymer coated steel											
Insulation		40 mm mineral wool											
Filter	extract	ISO Coarse >60% (G4)x2									ISO Coarse >60% (G4)		
	supply	ISO ePM1 60% (F7)									ISO ePM1 60% (F7)		
Connected air duct diameter [mm]		Ø 200						Ø 250			Ø 400		
Weight [kg]		100	101	103	100	101	103	139	140	142	352	358	364
Heat exchange efficiency [%]		85-94			73-89			75-94			84-96		
Heat exchanger type		counter-flow											
Heat exchanger material		polystyrene			enthalpy			polystyrene			polystyrene		
SEC class		A									-		

OVERALL DIMENSIONS, MM

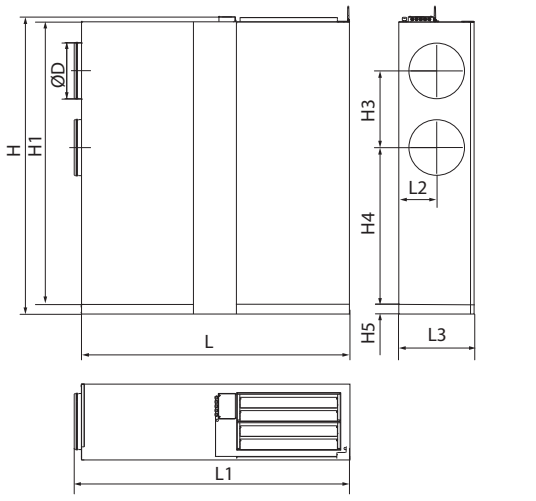
Model	W	W1	W2	L	L1	H	H1	H2	D
DVUT 300 HB EC V.2	620	310	155	470	520	1775	1485	285	200
DVUT 500 HB EC V.2	750	350	200	535	585	2170	1865	305	250



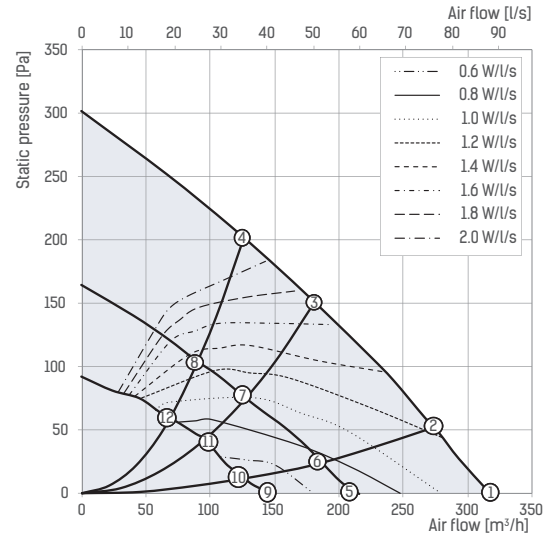
* The unit height may be adjusted by means of levelling feet.

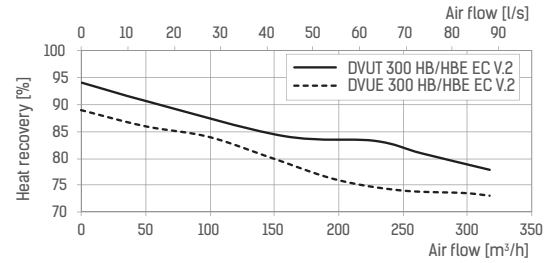
OVERALL DIMENSIONS, MM

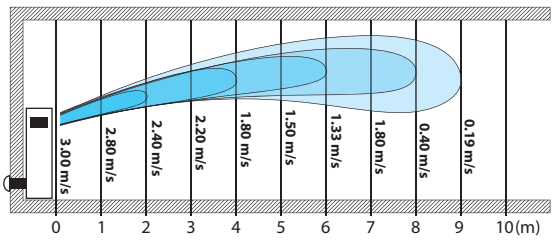
Model	H	H1	D	H3	H4	H5	L	L1	L2	L3
DVUT 1200 HB EC V.2	2106	2000	400	545	1110	70	1900	1951	265	535



DVUT 300 HB/HBE EC V.2



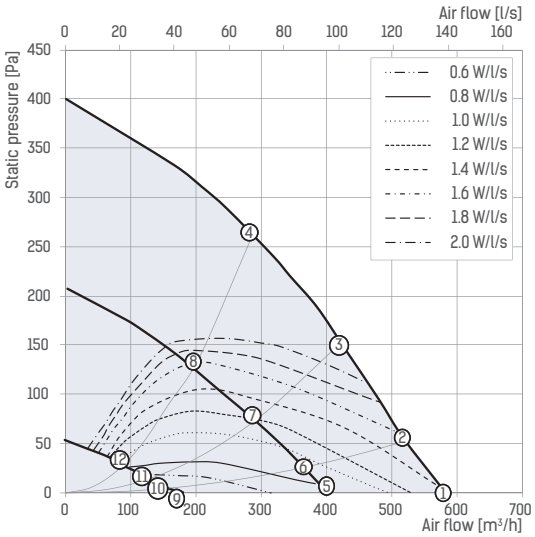


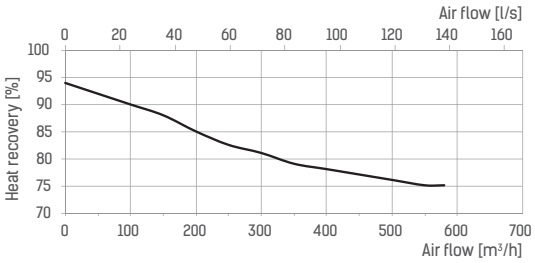


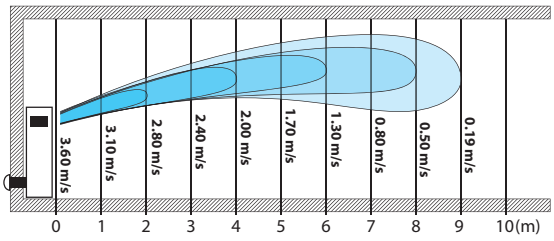
Fresh air stream length produced by DVUT 300 HB EC V.2

Sound power level, A-weighted		Octave frequency bands [Hz]																		LpA, 3 m	LpA, 1 m
	Hz	Tot.	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	dBA	dBA
LwA to environment at point 1	dBA	58	46	50	48	44	49	48	43	46	46	47	48	45	39	32	27	24	26	25	37	47
LwA to environment at point 5	dBA	49	29	39	34	40	41	39	35	38	38	39	39	35	28	22	20	20	23	24	29	38
LwA to environment at point 9	dBA	42	30	33	31	29	36	32	26	31	30	30	30	26	21	19	19	19	23	24	22	31
LwA to environment at point 3	dBA	58	46	50	47	44	49	48	44	46	46	47	47	44	39	33	28	24	25	25	37	47
LwA to environment at point 4	dBA	58	46	50	48	45	50	48	43	46	46	47	48	45	39	32	27	23	25	25	38	47

DVUT 500 HB/HBE EC V.2





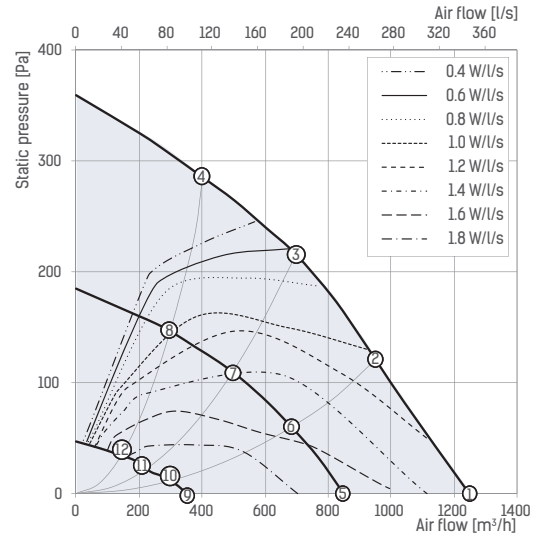


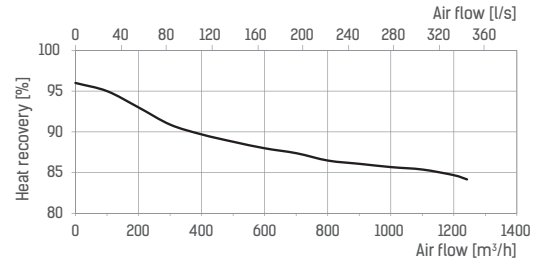
Fresh air stream length produced by DVUT 500 HB EC V.2

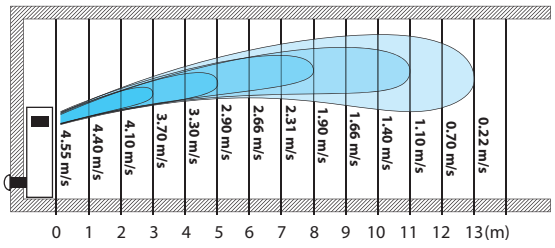
Sound power level, A-weighted		Octave frequency bands [Hz]																		LpA, 3 m	LpA, 1 m
	Hz	Tot.	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	dBA	dBA
LwA to environment at point 1	dBA	57	47	52	51	48	47	44	45	45	44	46	48	45	38	30	27	25	26	27	38	47
LwA to environment at point 5	dBA	49	44	37	36	42	38	38	37	38	37	39	41	37	29	24	23	22	25	26	28	39
LwA to environment at point 9	dBA	37	28	27	26	31	29	28	28	29	27	27	28	25	21	20	21	22	25	27	17	27
LwA to environment at point 3	dBA	55	47	46	42	47	46	43	43	43	43	43	45	42	35	29	27	24	26	27	35	45
LwA to environment at point 4	dBA	47	49	48	49	52	51	50	50	49	48	46	46	44	38	33	30	27	28	28	28	37

Point	Power [W]			Sound pressure level at 3 m (1m) [dBA]		
	DVUT/DVUE 300 HB EC V.2 DVUT/DVUE 300 HBE EC DVUT/DVUE 300 HBE2 EC	DVUT 500 HB EC V.2 DVUT 500 HBE EC DVUT 500 HBE2 EC	DVUT 1200 HB EC V.2 DVUT 1200 HBE EC DVUT 1200 HBE2 EC	DVUT/DVUE 300 HB EC V.2 DVUT/DVUE 300 HBE EC DVUT/DVUE 300 HBE2 EC	DVUT 500 HB EC V.2 DVUT 500 HBE EC DVUT 500 HBE2 EC	DVUT 1200 HB EC V.2 DVUT 1200 HBE EC DVUT 1200 HBE2 EC
1	92	236	315	37(47)	37(47)	30(40)
2	91	236	312	-	-	-
3	85	234	311	37(47)	35(45)	30(40)
4	75	234	308	38(47)	28(37)	26(36)
5	40	80	122	29(38)	28(39)	15(25)
6	38	78	121	-	-	-
7	35	76	120	-	-	-
8	32	75	118	-	-	-
9	19	21	24	22(31)	17(27)	11(21)
10	18	19	23	-	-	-
11	17	20	22	-	-	-

DVUT 1200 HB/HBE EC V.2







Fresh air stream length produced by DVUT 1200 HB EC V.2

Sound power level, A-weighted		Octave frequency bands [Hz]									LpA, 3 m dBA	LpA, 1 m dBA
	Hz	Tot.	63	125	250	500	1000	2000	4000	8000		
LwA to environment at point 1	dBA	50	31	35	40	37	36	36	28	17	30	40
LwA to environment at point 5	dBA	47	27	31	33	29	30	27	22	13	26	36
LwA to environment at point 9	dBA	32	21	27	21	25	17	19	24	16	11	21

ACCESSORIES

Name	Image	DVUT 300 HB EC A21 V.2	DVUT 500 HB EC A21 V.2	DVUT 1200 HB EC A21 V.2
Outer ventilation hood made of white coated stainless steel		NB DVUT 300 HB white	NB DVUT 500 HB white	NB DVUT 1200 HB white
Outer ventilation hood made of brushed stainless steel		NB DVUT 300 HB chrome	NB DVUT 500 HB chrome	NB DVUT 1200 HB chrome
Outer ventilation grille made of aluminium		MVMA 200 bVn Al	MVMA 250 bVn Al	MVMA 400 bVn Al
Extract filter ISO Coarse >60% (G4)		SF 203x308x20 G4 (2 pcs.)	SF 255x448x25 G4 (2 pcs.)	SF 450x395x48 G4
Supply filter ISO ePM1 60% (F7)		SF 384x273x60 F7	SF 449x318x60 F7	SF 540x450x48 F7
VOC sensor (0-10 V)		DPWQ30600		
CO_2 sensor (0-10 V)		DPWQ40200		
CO_2 sensor		CO-1		
CO_2 sensor		CO-2		
CO_2 sensor		CO2-3		
Humidity sensor (0-10 V)		DPWC11200		
Humidity sensor (NO)		HR-S		
Humidity sensor		HV2		
Hydraulic U-trap		SG-32		
Drain pump		DN-2		



DVUT PB EC V.2

Suspension-mounted single-room air handling units in a heat- and sound-insulated casing.

Air flow:
up to 1000 m³/h

Heat recovery efficiency:
up to 96 %.

DESCRIPTION

The DVUT PB EC V.2 air handling units are intended for single-room ventilation of schools, offices and other public and commercial spaces.
The air handling units do not require a duct system and provide a simple yet efficient ventilation solution for newly built and renovated spaces.

FEATURES

- Efficient supply and exhaust ventilation of individual spaces.
- Modification with an electric preheater or reheater available.
- Low-energy EC motors.
- Very quiet operation.
- Supply and extract air purification by means of in-built filters.
- Simple installation.
- Contemporary design.

OPERATING PRINCIPLE

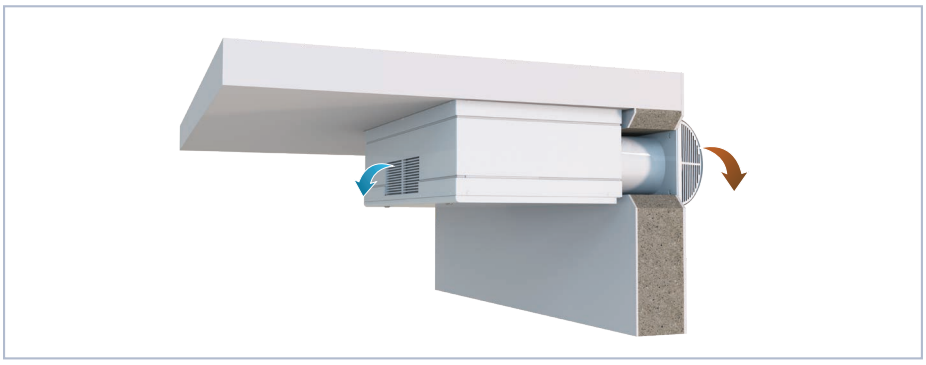
Warm, stale air passes through the filter and the heat exchanger and is then extracted outdoors through the wall duct by the centrifugal extract fan. Cold outdoor air passes through the filters and the heat exchanger and is then supplied by means of the centrifugal supply fan. This air is warmed up in the heat exchanger, providing fresh air supply into a premise and maintaining comfortable temperature.

CASING

The casing is made from high-quality polymer-coated steel with internal heat and sound insulation made of mineral wool 30 mm in thickness. The contemporary design helps the units blend in nicely with a wide variety of interiors.

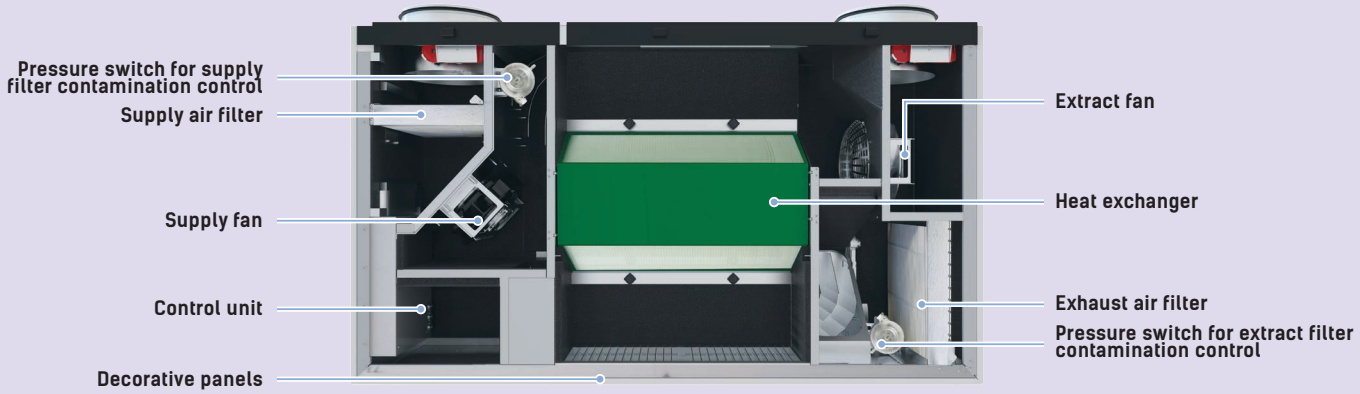
AIR DAMPERS

Supply and exhaust dampers are closed automatically while the unit is off to prevent drafts.



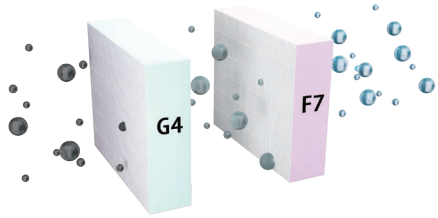
DESIGNATION KEY

Unit series	Rated air flow [m³/h]	Installation	Bypass	Electric heaters	Drain pump	Motor type	Modernization	Control
DVUT – unit with plastic heat exchanger	300 500 1000	**P** – suspended with horizontal spigots **P1** - suspended with vertical spigots	**B** – bypass damper	**_** – no heater **E** – electric preheater **E2** – electric preheater and reheater	**_** – without drain pump **DN** - in-built drain pump	**EC** – synchronous motor with electronic control	**V.2** – second modernized generation	**A21**



AIR FILTRATION

Supply and extract air is purified by means of panel filters. The filtering class depends on standard sizes.



FANS

The units feature high-performance, electronically commutated (EC) external rotor motors with forward curved blades. These state-of-the-art units offer excellent energy efficiency. In addition to that, EC motors combine high performance and optimum control over the entire speed range. EC motors have an excellent power efficiency (up to 90 %).

PREHEATING

The DVUT PBE EC V.2 and DVUT PBE2 EC V.2 units are equipped with an electric preheater to prevent heat exchanger freezing.

REHEATING

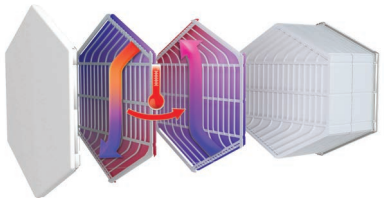
The DVUT PBE2 EC V.2 units are equipped with electric reheaters to raise the supply air temperature.

BYPASS

The units are equipped with a bypass for summer ventilation.

HEAT EXCHANGER

The DVUT unit features a counter-flow heat exchanger made of polystyrene. In the cold season the heat from the extract air is transferred to the supply air via the heat exchanger which greatly helps reduce ventilation heat losses. This can lead to formation of condensate that is collected in a special drain pan and discharged into the sewage system. In the warm season the outdoor air heat is transferred to extract air. This enables considerable reduction of the supply air temperature which reduces the air conditioning load.



UNIT CONTROL AND AUTOMATION

- **Freeze protection**

There are two methods of protecting the heat exchanger against freezing in cold conditions. In units without an electric preheater the supply fan is shut down automatically, using the feedback from the extract air temperature sensor, to let the warm extract air thaw the heat exchanger. The supply fan then re-activates and the unit reverts to normal operation. In units with an electric preheater the supply air is warmed up before entering the heat exchanger which prevents freezing. This method ensures a continuous, balanced air exchange.

- **Control**

The units **DVUT PB EC V.2 A21** are equipped with an in-built control system. An A21 controller allows integrating the unit into the **Smart Home system** or **BMS (Building Management Systems)**. Remote control panel is not included in the delivery set and is available as specially ordered accessory. The unit is controlled via Wi-Fi by means of the Home mobile application that must be downloaded.

Google play Download on the App Store

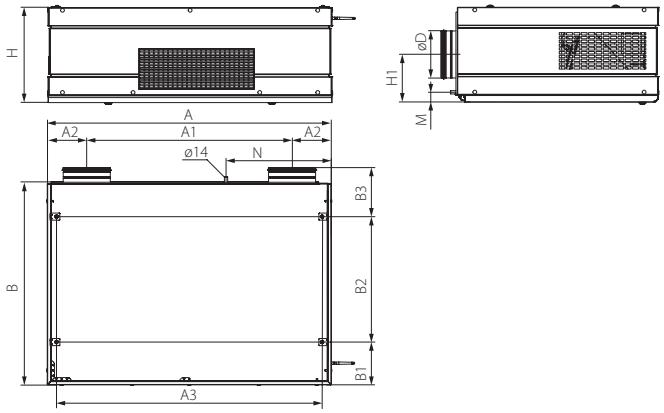
Modbus

Function	A21
Wired remote control panel	Option (A22) 
Wired remote sensor control panel	Option (A25) 
Wireless remote control panel	Option (A22 Wi-Fi) 
BMS	RS-485 Wi-Fi Ethernet MODBUS (RTU, TCP)
Control by a mobile application via Wi-Fi	+
Freeze protection	+
Bypass	Auto + manual
Weekly schedule operation	+
Filter maintenance warning	According to filter timer
	According to pressure switch of filter clogging
Alarm indication	+
Speed selection	+
Timer	+
RH% sensor	Option
CO_2 sensor	Option
VOC sensor	Option
PM2.5 sensor	Option
Boost mode	+
Fireplace mode	+
Preheating	Option
Reheating	Option
Cooler connection	Option
Fire alarm sensor	Option
Supply air temperature control	+

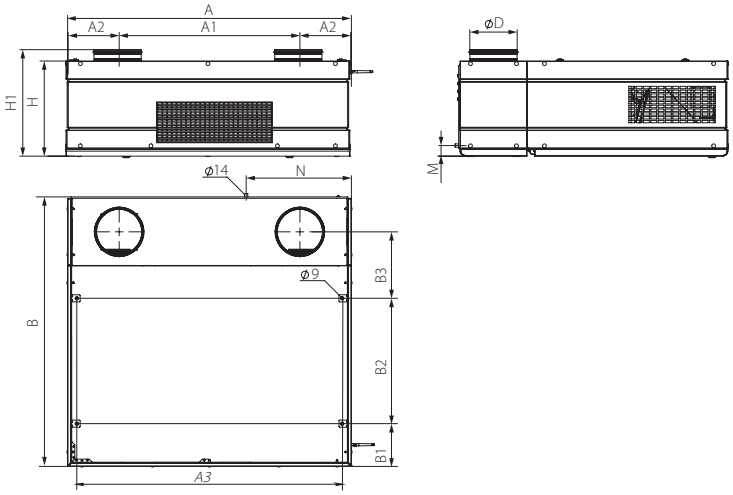
OVERALL DIMENSIONS, MM

Model	D	A	A1	A2	A3	B	B1	B2	B3	H	H1	N	M
DVUT 300 PB EC V.2	200	1200	867	166	1122	850	181	530	207	402	202	445	41
DVUT 300 PBE EC V.2													
DVUT 300 PBE2 EC V.2													
DVUT 300 P1B EC V.2			764	218		1139			281		450		45
DVUT 300 P1BE EC V.2													
DVUT 300 P1BE2 EC V.2													
DVUT 500 PB EC V.2	250	1500	1135	186	1422	850	181	530	207	458	221	504	41
DVUT 500 PBE EC V.2													
DVUT 500 PBE2 EC V.2													
DVUT 500 P1B EC V.2			964	268		1186			304		509		45
DVUT 500 P1BE EC V.2													
DVUT 500 P1BE2 EC V.2													

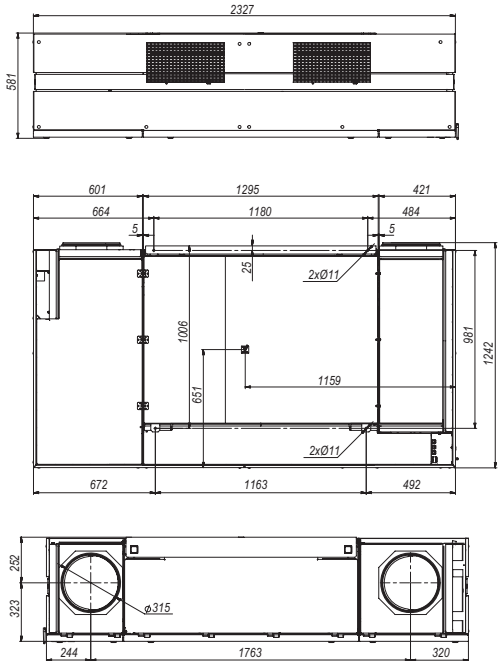
UNIT WITH HORIZONTAL SPIGOTS



UNIT WITH VERTICAL SPIGOTS



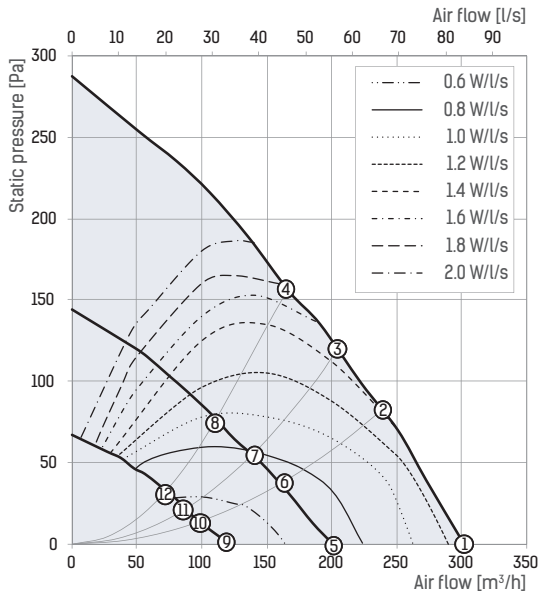
Overall dimensions for DVUT 1000 PB EC V.2, mm

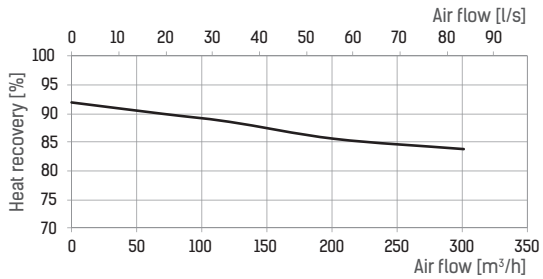


TECHNICAL SPECIFICATIONS

Model		DVUT 300 PB EC V.2	DVUT 300 PBE EC V.2	DVUT 300 PBE2 EC V.2	DVUT 500 PB EC V.2	DVUT 500 PBE EC V.2	DVUT 500 PBE2 EC V.2	DVUT 1000 PB EC V.2	DVUT 1000 PBE EC V.2	DVUT 1000 PBE2 EC V.2
Supply voltage [V]/50 (60) Hz		1~230							3~400	
Maximum power consumption without an electric heater [W]		204			238			267		
Preheater power [W]		-	1050		-	1050		-	3150	
Reheater power [W]		-	-	700	-	-	700	-	-	2100
Maximum unit current [A]		1.5			1.7			1.85		
Maximum unit current with an electric heater [A]		-	7.7	11.7	-	9.3	12.6	-	12	18
Max. air flow rate [m³/h]		300			510			1000		
Sound pressure level at 1 m [dBA]		44			44			34		
Sound pressure level at 3 m [dBA]		34			34			24		
Transported air temperature [°C]		-25...+40						-25...+40		
Casing material		polymer coated steel						polymer coated steel		
Insulation		25 mm, EPDM (polyurethane foam)						45 mm, EPDM (polyurethane foam)		
Filter	extract	ISO Coarse >60% (G4)								
	supply	ISO ePM1 60% (F7)								
Connected air duct diameter [mm]		Ø 200			Ø 250			Ø 315		
Weight [kg]		78	79	80	95	95	96	252	257	268
Heat exchange efficiency [%]		83-92			83-96			83-93		
Heat exchanger type		counter-flow								
Heat exchanger material		polystyrene								
SEC class		A+								

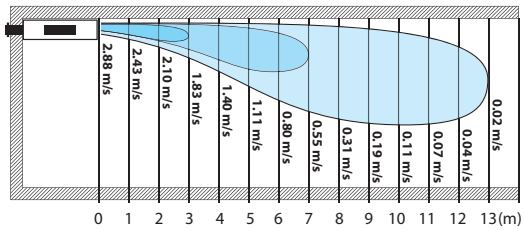
DVUT 300 PB/PBE/PBE2 EC V.2





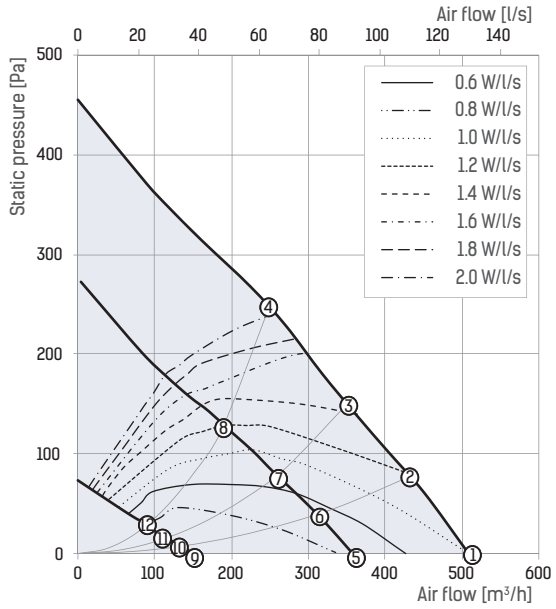
Sound power level, A-weighted		Octave frequency bands [Hz]																		LpA, 3 m	LpA, 1 m
	Hz	Tot.	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	dBA	dBA
LwA to environment at point 1	dBA	54.9	45.3	47.5	47.8	41.0	46.2	42.0	40.1	40.3	40.7	40.8	43.5	42.3	35.2	27.4	23.8	21.6	24.6	24.6	43.9	34.4
LwA to environment at point 5	dBA	48.2	46.3	35.4	33.2	35.5	33.9	31.5	31.1	31.2	32.6	33.1	34.1	30.7	23.4	19.6	19.3	19.7	23.3	24.4	37.3	27.7
LwA to environment at point 9	dBA	37.2	29.3	29.7	26.0	27.4	26.6	24.3	23.2	23.0	22.6	21.3	22.3	20.0	18.2	18.0	18.5	19.3	23.0	24.3	26.2	16.6
LwA to environment at point 3	dBA	55.3	46.5	49.5	49.9	40.5	43.2	39.9	38.2	39.1	40.0	39.9	42.3	41.4	34.6	27.2	24.0	21.7	24.6	24.4	44.4	34.8
LwA to environment at point 4	dBA	55.1	45.2	50.0	48.6	40.7	43.2	40.3	38.6	39.1	40.3	40.1	42.5	41.5	34.8	27.2	24.0	21.7	24.8	24.6	44.1	34.5

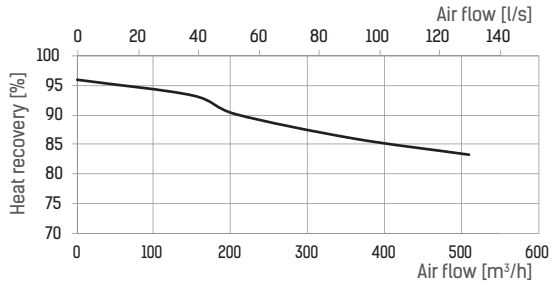
Point	Power [W]	Sound pressure level at 3 m (1m) [dBA]
1	125	34 (44)
2	116	34 (44)
3	104	-
4	86	35 (44)
5	48	28 (38)
6	44	-
7	42	-
8	36	-
9	17	17 (26)
10	17	-
11	16	-
12	16	-



Fresh air stream length produced by DVUT 300 PB/PBE/PBE2 EC V.2

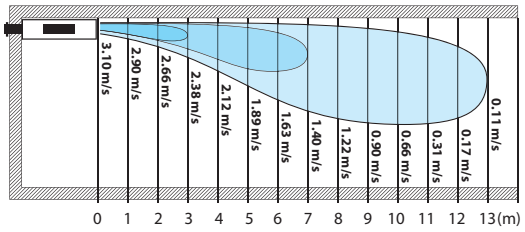
DVUT 500 PB/PBE/PBE2 EC V.2





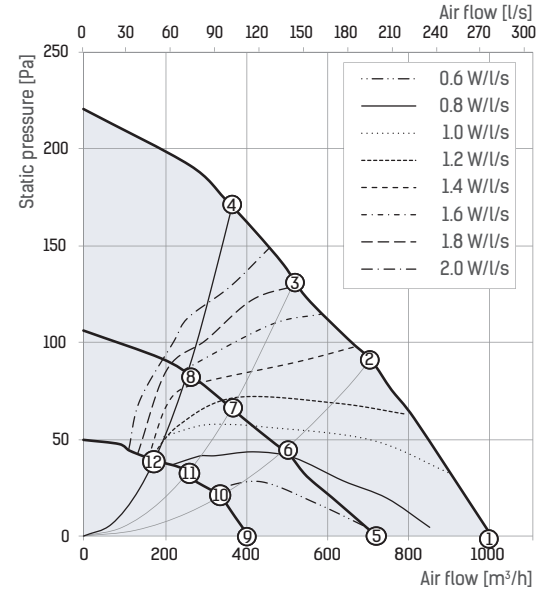
Sound power level, A-weighted		Octave frequency bands [Hz]																		LpA, 3 m	LpA, 1 m
	Hz	Tot.	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	dBA	dBA
LwA to environment at point 1	dBA	54.7	44.7	48.8	46.3	45.7	41.3	38.8	40.9	40.4	40.2	42.8	43.0	40.0	32.8	27.7	25.7	23.6	25.9	25.8	43.7	34.1
LwA to environment at point 5	dBA	48.2	44.7	37.8	37.3	38.6	32.7	31.5	32.8	33.0	32.8	35.3	35.1	31.2	23.8	20.7	20.2	19.8	23.2	24.2	37.2	27.7
LwA to environment at point 9	dBA	33.6	22.9	21.9	27.0	24.3	17.8	17.1	17.6	16.9	16.4	17.2	17.6	17.1	17.5	17.8	18.7	19.5	23.0	24.1	22.6	13.0
LwA to environment at point 3	dBA	61.2	55.0	53.5	53.5	52.1	46.5	45.2	46.1	46.1	45.6	46.8	45.9	43.9	39.1	36.4	47.1	40.1	39.9	35.2	50.2	40.7
LwA to environment at point 4	dBA	55.4	47.7	47.7	47.2	46.4	42.0	39.4	40.7	41.3	41.2	43.8	44.0	41.5	33.8	29.0	26.8	23.9	25.2	24.9	44.4	34.8

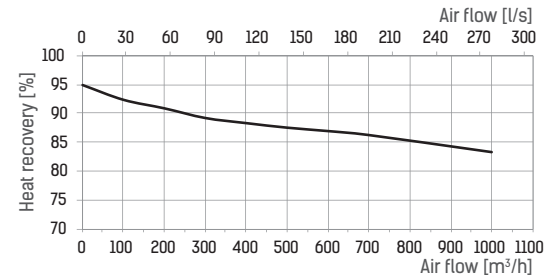
Point	Power [W]	Sound pressure level at 3 m (1m) [dBA]
1	170	34 (44)
2	153	-
3	135	34 (44)
4	116	35 (44)
5	95	28 (37)
6	86	-
7	80	-
8	68	-
9	25	17 (26)
10	24	-
11	24	-
12	22	-



Fresh air stream length produced by DVUT 500 PB/PBE/PBE2 EC V.2

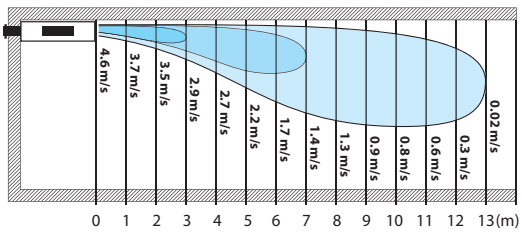
DVUT 1000 PB/PBE/PBE2 EC V.2





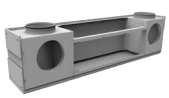
Sound power level		Octave frequency bands [Hz]									LpA, 3 m	LpA, 1 m
	Hz	Tot.	63	125	250	500	1000	2000	4000	8000	dBA	dBA
LwA to environment at point 1	dBA	45	31	37	40	37	36	36	29	18	24	34
LwA to environment at point 5	dBA	37	26	29	32	29	29	29	24	15	17	27
LwA to environment at point 9	dBA	32	21	26	20	25	19	20	25	18	11	21

Point	Power [W]	Sound pressure level at 3 m (1m) [dBA]
1	260	24 (34)
2	251	23 (33)
3	235	23 (33)
4	221	22 (32)
5	136	17 (27)
6	130	17 (27)
7	125	16 (27)
8	120	16 (27)
9	47	11 (21)
10	45	11 (21)
11	44	11 (21)
12	42	11 (21)



Fresh air stream length produced by DVUT 1000 PB/PBE/PBE2 EC V.2

ACCESSORIES

Name	Image	DVUT 300 PB/PBE/PBE2 EC V.2	DVUT 500 PB/PBE/PBE2 EC V.2	DVUT 1000 PB/PBE/PBE2 EC V.2
External grille		MVMA 200 bVn Al	MVMA 250 bVn Al	MVMA 315 bVn Al
Extract filter ISO Coarse >60% (G4)		SF 320x373x48 G4	SF 379x334x48 G4	SF 654x480x48 2 pcs.
Supply filter ISO ePM1 60% (F7)		SF 320x211x48 F7	SF 379x254x48 F7	SF 654x480x48
VOC sensor (0-10 V)		DPWQ30600		
CO_2 sensor (0-10 V)		DPWQ40200		
CO_2 sensor		CO-1		
CO_2 sensor		CO-2		
CO_2 sensor		CO2-3		
Humidity sensor (0-10V)		DPWC11200		
Humidity sensor (NO)		HR-S		
Humidity sensor		HV-2		
Hydraulic U-trap		SG-32		
Drain pump		DN-2		
Vertical duct connection module		MVC DVUT 1000		

SINGLE-ROOM VENTILATION

for schools and public spaces

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2023-03