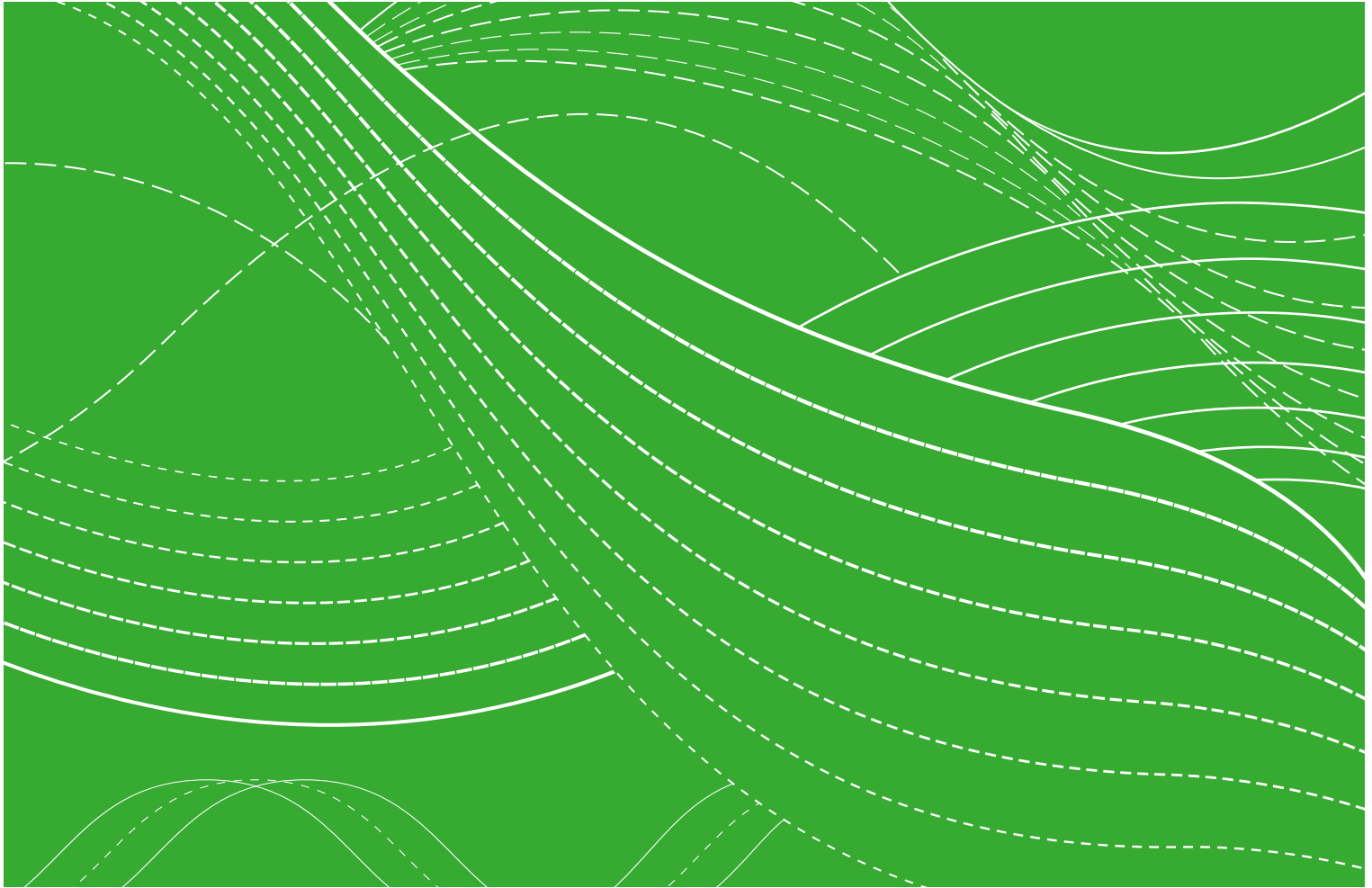


OVERVIEW

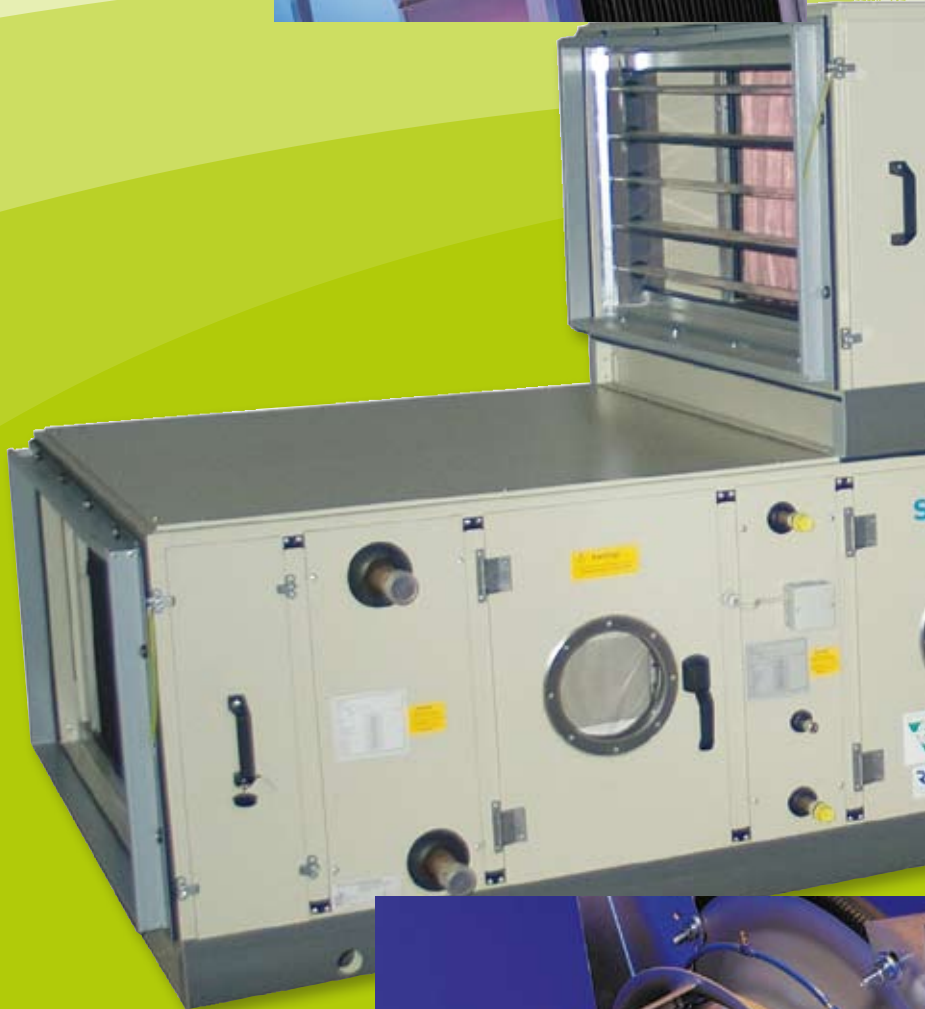
# Swegon **AT4**<sup>TM</sup>



Energy efficient  
modular air  
handling unit

# Swegon AT4 – The convincing air handling system

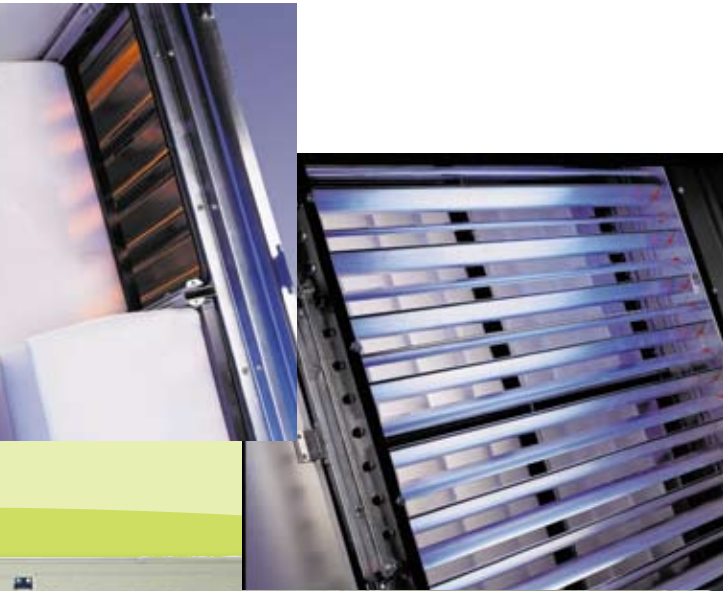
- Variable and optimized adjustment for all system-specific applications.
- High product quality using the very latest production technology.
- Unit design optimized for lowest possible energy consumption.
- Designing and calculating supported by KlimaSoft®, the professional design tool for planers and customers.



## Efficiency and economy

- Reduced energy consumption and minimized internal pressure losses by optimized air flow through the air handling components.
- Selection of fans adapted to the operating point.
- Use of all conventional heat recovery systems; layout to the actual application.
- Certified by Eurovent.





## Design with experience construction features

- Maximum corrosion protection by galvanized and additional powder-coated casing panels.
- High heat and noise insulation due to 47 mm panel thickness.
- Noise and heat insulation material made of mineral wool; building material class A1; non-flammable pursuant to DIN 4102.
- Patented thermal isolation between the panel shells.
- Minimized thermal transmittance due to optimized casing covers.
- Unit construction can be dismantled.
- Optimal adjustment to building situation due to a variable pitch dimension of 76.5 mm.



Internal walls  
hygienically smooth

Patented thermal insulation

## Top quality for all applications

- Suitable for interior and exterior installation.
- Various material versions.
- Various heat recovery options.
- Integrated cooling units.
- Large and special units designed to be dismantled.



## Description of AHU and function sections



### General

#### Frame construction

The housing frame construction consists of 38 mm sendzimir galvanised square profiles with a wall thickness of 1.5 mm, which are connected by unit corners: Plastic corners for a unit size of 08 x 08 – 16 x 16, die-cast aluminium corners for a size of 20 x 16 – 49 x 32. This construction method guarantees the ability to disassemble the unit completely, as it omits the need for welded connections.

#### Housing

The covering panels, 47 mm thick and double-layered, are lined with heat and sound insulation on the inside with a nonflammable mineral wool in accordance with DIN 4102 construction material class A1, specific gravity 55 kg/m<sup>3</sup>.

The covering panels can be removed from the unit.

The inspection doors have hand lever door closures.

After manufacturing, the panel is completely powder-coated at a coating thickness of 60 µm, RAL 7032. Therefore, no exposed cutting edges remain. This also precludes the risk of corrosion.

A patented thermal decoupling between the panel layers prevents cold and heat bridges.

The mechanical stability conforms to EN 1886. The grid construction provides a flexible unit design, giving you the advantage of being able to adapt it to various installation situations.

The base frame is galvanised and powder-coated.

#### Housing characteristics

• Mechanical stability	Class 1A/D2
• Housing leakage	Class 1B/L2
• Thermal insulation	Class T3
• Heat bridge factor	Class TB3
• Mean sound insulation	41 dB

#### Insertion loss in accordance with EN 1886

125	250	500	1000	2000	4000	8000	Hz
15,8	24,4	30,2	35,1	35,4	35,8	36,5	dB

#### Components

Generally, moisture-contact components are constructed of corrosion-resistant material – exclusively stainless steel – and are equipped with a drain pan which ensures continuous and complete drainage of condensation.

All filter, ventilator, and humidifier parts with a unit height of 1.3 m or more are illuminated and have inspection glasses. This provides the ability to check the parts at any time without the need to open the entire unit.

#### Hygiene

The interior housing surfaces close flush with the frame. The interior surfaces are completely smooth and have no cutting edges. All joints and grooves in the unit are resistant to disinfectants, sealed with an anti-microbial internal sealing material and can be cleaned with no residue.

In compliance with the highest applicable standards of hygiene, all components are factory-cleaned and packaged in foil for transport.

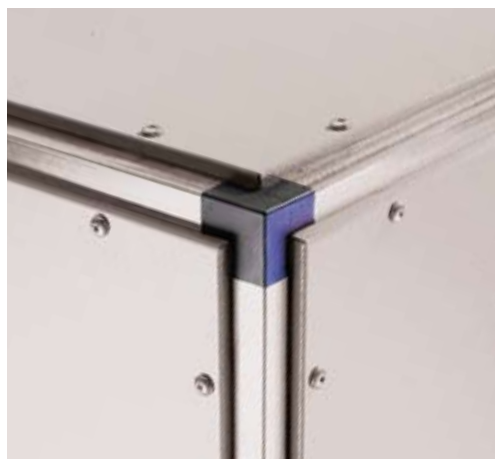
The functional sections are easily accessible on both sides for cleaning. Therefore, all heat exchangers can be cleaned to their core with only a minimum of time and technical effort.

#### Standards and certification

The manufacturing conforms to EN 1886 (technical quality), VDI 6022 (hygiene) and ISO 9001 (quality process system).

The unit is certified by Eurovent, AHU 99.03.004.

## Description of AHU and function sections



### Outer shell

- Steel/galvanised frame construction can be disassembled.
- Galvanised unit panels with powder coating RAL 7032 (NCS S3005-G80Y).
- Plastic corners for units up to and including size 16 x 16.
- Die-cast aluminium corners for units sizes of 20 x 16 and larger.
- Unit panels and interjacent gaskets and washers screwed on from outside allowing them to be disassembled.

### Option

- Frame profile construction, galvanised and powder-coated in a colour to match the rest of the unit.
- Frame profile construction in stainless steel.



### Inner shell

- Unit interiors completely smooth, without cutting edges or welding seams
- Interior of unit panels galvanised with powder coating.

### Option

- Hygiene model with unit frame and panels sealed for each functional section.



### Unit connection

- Easy-to-assemble unit connection using solid gusset plates attached to the interior frame of the unit.
- Assembly angle extra for unit sizes of 16 x 12 and larger.



### Inspection doors

- Door construction similar to housing panels.
- Hinged with clamping closure.
- With hand lever closure, locking on request.
- Overpressure area comes standard with door catch.

### Available accessory

- Inspection glass.

## Description of AHU and function sections



### Filter quick-catch device, general

- Filter quick-catch device
- For unit heights up to 1836 mm (clearance)
- Complete filter cartridge for long-lasting tight seal in special installation frame with quick-catch device mounted in the housing.
- Filter cartridge can be pulled out from the side.

### Accessories

- Powder-coated frame details.

### Bag filter

Filter cartridge in Euro installation frame. Nylon spacers between the bag filters.

#### Filter class/model, filter cartridge

- Coarse filter G3-G4. Filter cartridges made of synthetic fibre material.
- Fine filter F5-F9. Filter cartridges made of mineral fibre material.

### HEPA filter

Neoprene seal fastened around circumference of unit; textile thread as spacer.

#### Filter class/model, filter cartridge

- Filter class R – (H11) and S – (H13). Filter medium made of high-quality, waterproof fibreglass paper. Recommendation: Use upstream F9 filter.

### Fine dust cartridge filter

- V-cell filter with a module length of 360 mm.
- Consists of folded filter material.

#### Filter class

- F5-F9

### Plane filter/panel filter

- Panel filter with a thickness of 94 mm for shortened filter units (module length 250 mm).
- In "Euro" installation frame up to a unit size of 16 x 16, can be removed from the side.

#### Filter class

- G4, F5 and F7

### Activated carbon filter

- Leakproof fastening of both cylinders with bayonet catch on special base plate.

#### Filter type/cylinder models

- Filter type A20 and A26. Cylinders consisting of an external and internal perforated plate cylinder with interjacent activated carbon. Recommendation: Use upstream F7 filter.

#### Options

- Activated carbon cylinders with quick-catch device.

### Grease-catching filter

Filter cartridge fastened in separate receptacle frame.

#### Filter class/model

- G3 – Metal filter can be regenerated, galvanised wire netting.

#### Accessories

- Differential pressure measuring instruments or hood filter for oil and paint vapours.

## Description of AHU and function sections



### Air heater

- Can be pulled out of the unit sideways.
- Seamless copper pipes with mechanically pressed-on aluminium layers.
- Framed in galvanised steel sheet frames.
- Steel and copper collectors, drainage and venting performed by customer.

### Accessories

- Removable sensor frame, anti-freezing thermostat, flange and counterflange, electric heating register on request.

### Option

- Galvanised steel/stainless steel heater.



### Air cooler

- Can be pulled out of the unit sideways.
- Seamless copper pipes with mechanically pressed-on aluminium layers.
- Framed in galvanised steel plate frames.
- Copper collectors.
- Grommet insulated against diffusion with Armaflex insulation, drainage and venting performed by customer.

### Various models

- Cooler, steel/galvanised, on request.
- Cooler, cu/cu, on request.
- Cooler, cu/al – plates epoxy coated, on request.
- Stainless steel frame.

### Accessories

- Flange and counterflange, water trap.

### Drip eliminator and drain pan

- Drip eliminator made of temperature-resistant polypropylene plastic profiles, removable, stainless steel frame.
- Stainless steel condensation drain pan 1.4301.
- PVC drain pipe, Ø 40 – fed sideways out of the installation frame.



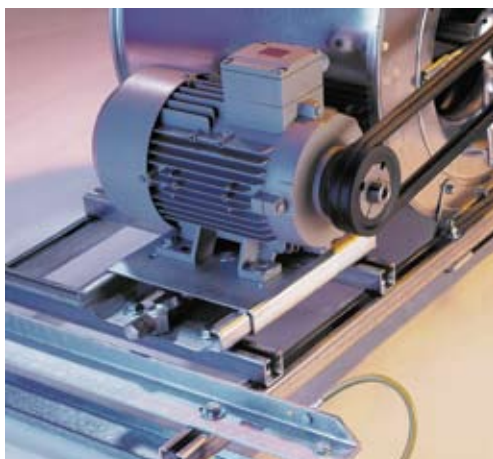
### Sound attenuator

- Upright baffles made of sound-absorbent mineral fibre plates.
- Fibreglass surface, abrasion-proof to a maximum air flow speed of 20 m/s.
- Baffles mounted on the housing with rails.
- Aerodynamic design of baffles in order to avoid pressure losses.

### Option

- Baffles can be pulled out sideways.

## Description of AHU and function sections



### Dubbelflow centrifugal fan

- Fan and three-phase motor are installed on the same anti vibration isolated base frame.
- Motor slide for easy belt tension.
- Belt drive, V-belt pulleys with taper lock bushing system.
- Flexible connection between fan outlet and unit chamber using airtight flexible collar.
- Grounding between fan motor unit and unit housing.
- Entire fan unit supported by compressed spring-type vibration absorbers.
- Safety fixing for transport.
- Performance data of the fan documented by TÜV-certified characteristic performance curve max. deviation +5 %.

#### Various models

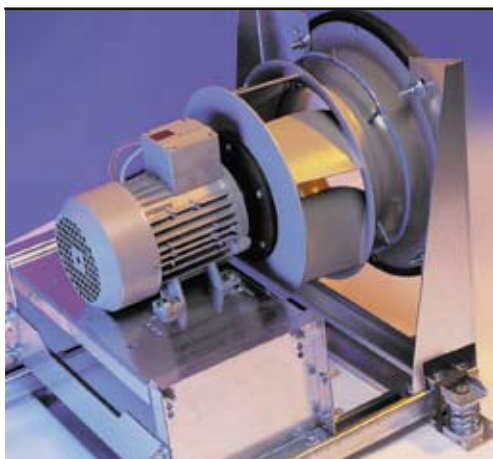
- Fan with forward-curved blades.
- Fan with backward-curved blades and reinforced housing and bearings

#### Options

- Flat belt drive.
- Diagonal cross beam with motor slide.
- Fan unit can be removed from the side

#### Accessories

- Grille, nozzle pressure tube, pressure-measuring transducer, needle manometer, frequency converter, repair switch including cables



### Axial-centrifugal fan

- Single-entry air intake radial fan with backward-curved blades, powder-coated.
- Wheel attached directly to the motor shaft (taper lock bushing).
- Three-phase motor type B – full motor protection by PTC resistor.
- Entire fan unit supported by compressed spring-type vibration absorbers.
- Fan unit can be removed from the side.
- Safety fixing for transport.
- Performance data of the fan documented by TÜV-certified characteristic performance curve max. deviation +5 %.

#### Options

- Fan unit can be removed from the side

#### Accessories

- Grille, nozzle pressure tube, needle manometer, frequency converter, pressure-measuring transducer, repair switch including cables.



### Frequency converter

- Mounted on the device

#### Option

- Motor with integrated frequency converter.



## Description of AHU and function sections



### Plate heat exchanger

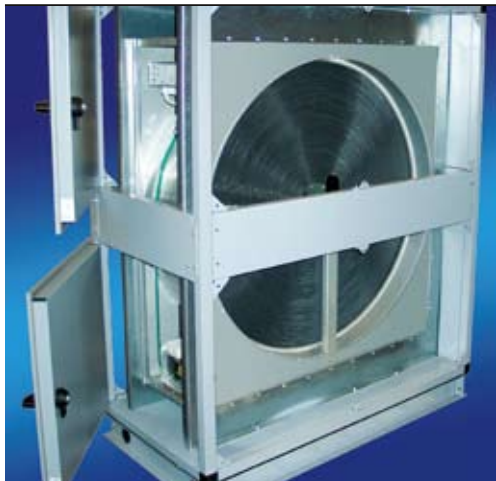
- Plate exchanger made of corrosion-resistant aluminium.
- Stainless steel condensation drain pan 1.4301.
- PVC drain pipe fitting, Ø 40 – fed sideways out of the installation frame.
- Bypass dampers for summer bypass or protection against freezing.
- Drip eliminator made of temperature-resistant polypropylene plastic profiles, removable.

#### Options

- Stainless steel frame 1.4301.
- Epoxy resin coated plate exchanger.

#### Accessories

- Water trap.



### Rotary heat exchanger

- Available with or without humidity transfer.
- Special housing made out of salt-water resistant aluminium.
- Rotor material made of alternating smooth and ridged aluminium foil.
- Removable cover lid.
- Seal between housing and rotor with adjustable gasket.
- Units sizes of 24 x 24 and larger – divided housing.

#### Options

- Dehumidification/absorption rotor.
- Epoxy resin coated rotor.
- Rotor integrated into unit housing.
- Rotor control.
- Rotation speed control with load monitoring built into the housing and internally wired.



### Circulating coil system

- Consisting of an "air heater" coil in supply air and an "air cooler" coil in extract air, connected with pipework. For heater and cooler, see page 7.

#### Accessories

- Pipework package for connection of the coils. Heat exchanger completely integrated into all functional parts of the unit or attached to exterior.

## Description of AHU and function sections



### Contact humidifier as recirculating (RWS) and fresh water system (FWS)

- Contact humidifier as closed component.
- Inspection doors throughout entire height of the unit (for FWS, beginning with 20 x 20).
- Evaporative cooling pad which can be removed from the side or in the direction of air flow, made of impregnated, inorganic fibreglass material, framed in stainless steel.
- Desalination pipe with control valve, flows directly into the drain pipe.
- Stainless steel drain pan with three-sided gradient on the operator side, with integrated safety overflow directly into the drain pipe (RWS).
- Electronic water level control (RWS).
- Built-in solenoid valve for flow into fresh water pipe (RWS).
- Built-in solenoid valve in drain pipe with manual operation option (RWS).
- Submerged pump in plastic/stainless steel model, insulation class F (RWS).
- Pump water distributor made of stainless steel; short, vertically running plastic distributor hoses to the individual evaporative cooling pad cartridges (RWS).

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### Cold vapour humidifier

- Housing with inspection doors and double-paned inspection glass and illumination.
- Floor with continuous drain pan and two drain pipes with chrome steel screw thread.
- Built-in humidifier, consisting of turbuliser, nozzle distributor device with impact nozzles, high-pressure connection and aerosol dispenser.
- Pump unit with frequency converter and separate high-pressure hose.  
Water quality: Water de-ionised by reverse osmosis.

#### Options

- High-pressure pump unit mounted on unit.
- Accessories corresponding to make of humidifier.

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### High-pressure/hybrid humidifier

- Housing with inspection doors and double-paned inspection glass and illumination.
- Floor with continuous drain pan and two drain pipes with chrome steel screw thread.
- Installed humidifier, consisting of nozzle gate, nozzle holder with molecular spraying nozzles and spray lines, ceramic re-evaporation unit framed and demountable sideways.
- Central unit mounted on monoblock unit including connecting lines to the humidifier.  
Water quality: De-ionised water < 10 µs/cm.

#### Options

- Measuring and pressure booster unit 4 – 8 bar.
- Sterilisation via silver ionisation.
- Integrated water preparation system.
- Separate central unit for external installation by customer.

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### Steam humidifier

- Housing with inspection doors and double-paned inspection glass and illumination.
- Floor under steam distributor with condensation pan and drain pipe with chrome steel screw thread.

#### Options

- Built-in, ready-to-connect steam distributor.
- Compact steam generator complete with control unit and steam connection hose.
- Air washer: on request.

## Weatherproofing devices



### Intake section

- Interior dampers with adjusting lever.
- Stainless steel floor trough 1.4301 – centre drain, PVC drain pipe Ø DN 40.
- Drip-catch edge.



### Intake hood

- Powder coated air intake hood–integrated bird screen-grid.
- Surface of unit covered with special plastic film.
- Drip-catch edge around circumferences of top and bottom of units.
- Galvanised and powder-coated base frame with opening for crane transport.

#### Option

- Optional coated weatherproof grille instead of intake hood.

## Accessories and special details



### Duct connection

#### Damper

- With opposing, torsion-proof hollow section aluminium plates, sealed using special sealing lips. Inner plastic gears, galvanised sheet steel frame, depth 125 mm for units of sizes up to 20 x 16. Outer plastic gears, galvanised sheet steel frame, depth 190 mm for units of size 20 x 20 and larger.
- Outdoor air and exhaust air dampers and flexible connection pieces in insulated models.

#### Accessories

- Damper actuator, hand actuator.
- Inside or outside mounted.
- Enamelled coated damper (Hygienic model).
- Flap made of stainless steel 1.4301.

#### Flexible connection

- Made of polyester weave; especially resistant to tearing.
- Circumferential duct connecting flange with airtight connection.
- Grounding.

## Accessories and special details



### Noise decoupled unit connection

(Standard for Hygiene and Hygiene RAL model)

- Connection profile with interjacent foam rubber.
- Fastened to frame with screw connection.
- Grounding.



### Repair switch

- Mounted to the fan section.
- As power/load switch with 2 auxiliary contacts, protection class IP 65.
- Control switch 15 kW and up only with integrated PTC resistor connection.

#### Options

- Wiring to motor, including PTC resistor.
- UV protection on the cables for weatherproof model.



### Installation frame for crane transport

Galvanised, powder-coated installation frame with opening for crane transport for units up to size 32 x 32.

#### Accessories

- Transport pipe.
- Pedestal frame as assembly frame with shock-absorbing elements, adjustable in height.

#### Option

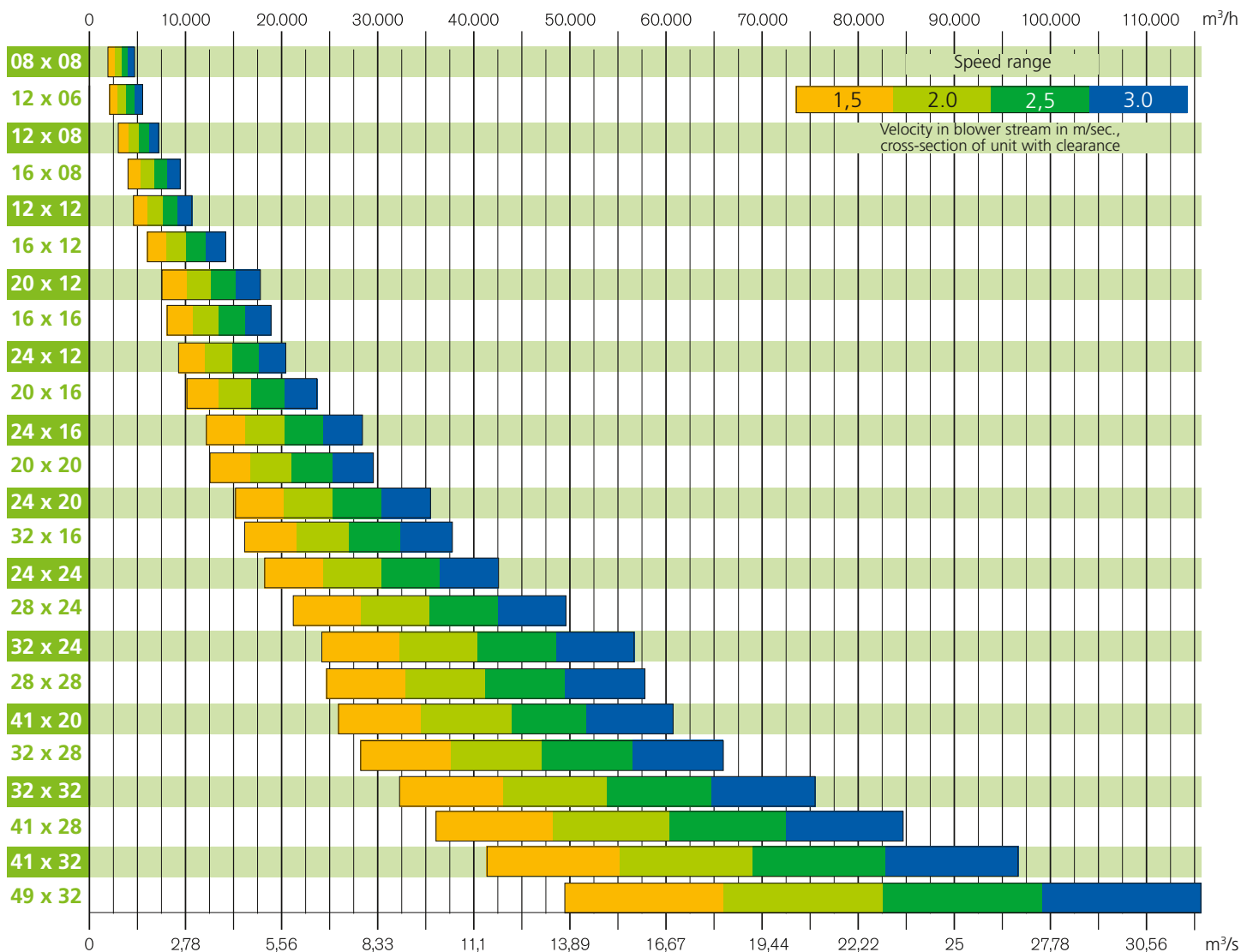
- Crane loop (only together with aluminium corners).



### Integrated cooling

- Integrated cooling circuit with load control for optimum cooling and dehumidification.
- Highest operational safety of the cooling circuit with factory pipework and wiring.
- Environmentally friendly refrigeration with the use of R 407C.  
*More information upon request.*

# Overview air flows and dimensions



Size	Air volume		Width mm	Height* mm
	m³/s	m³/h		
08 x 08	0,55–1,30	2.000–4.700	689	689
12 x 06	0,60–1,50	2.200–5.300	995	536
12 x 08	0,80–2,00	3.000–7.100	995	689
16 x 08	1,10–2,60	4.000–9.400	1301	689
12 x 12	1,25–2,95	4.500–10.600	995	995
16 x 12	1,80–3,95	6.500–14.200	1301	995
20 x 12	2,10–4,90	7.500–17.700	1607	995
16 x 16	2,20–5,25	8.100–18.900	1301	1301
24 x 12	2,50–5,90	9.100–21.200	1913	995
20 x 16	2,75–6,55	10.100–23.600	1607	1301
24 x 16	3,35–7,85	12.100–28.300	1913	1301
20 x 20	3,50–8,20	12.600–29.500	1607	1607

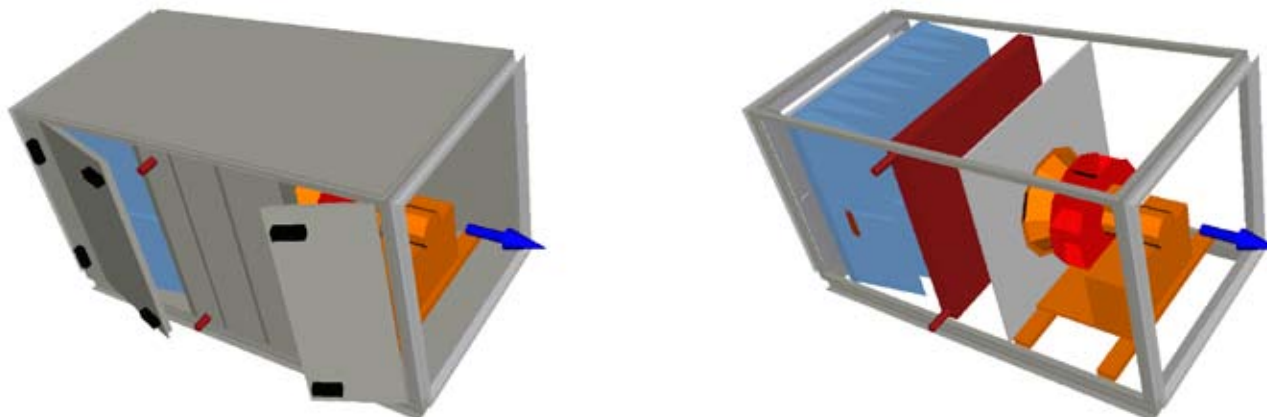
Size	Air volume		Width mm	Height* mm
	m³/s	m³/h		
24 x 20	4,15–9,85	15.200–35.400	1913	1607
32 x 16	4,60–10,50	16.500–37.800	2525	1301
24 x 24	5,00–11,80	18.200–42.500	1913	1913
28 x 24	5,95–13,75	21.200–49.600	2219	1913
32 x 24	6,65–15,70	24.300–56.600	2525	1913
28 x 28	6,80–16,05	24.800–57.800	2219	2219
41 x 20	7,20–16,80	25.900–60.500	3213	1607
32 x 28	7,75–18,35	28.300–66.100	2525	2219
32 x 32	8,90–20,95	32.400–75.500	2525	2525
41 x 28	10,00–23,50	36.300–84.600	3213	2219
41 x 32	11,65–26,85	41.500–96.700	3213	2525
49 x 32	13,60–32,10	49.500–115.600	3825	2525

\*) Height without installation frame, installation frame 08-32 = +110 mm, 41-49 = +210 mm.

The length of function sections can be enlarged with raster = 76,5 mm.								
Raster	1	2	3	4	5	6	7	... etc.
mm	76,5	153	229,5	306	382,5	459	535,5	

# Installation example 1

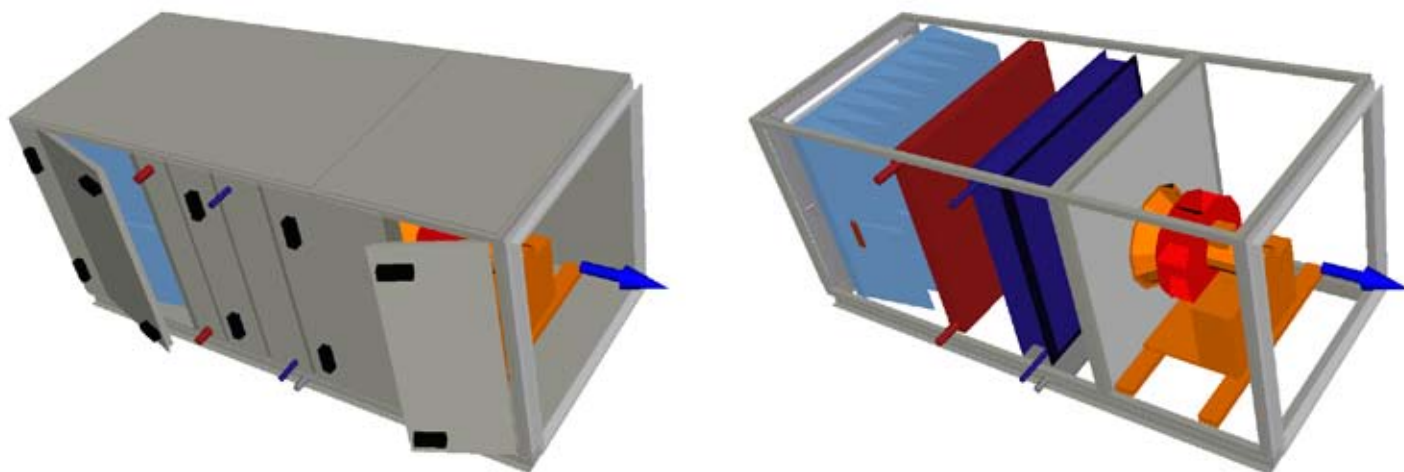
## Supply air unit with air heater



							Supply air										
Size	Air volume		External pressure	Weight	Total length	Total width	Total height	Connection frame	Damper	Filter		Air heater	Inspection space			Fan	
	m <sup>3</sup> /s	m <sup>3</sup> /h								Pa	kg		mm	mm	mm	Length mm	Length mm
08x08	0,9	3300	300	313	2348	689	799	50	230	765	F7	230	230	765	355	Direct driven	
12x06	1,0	3700	300	347	2348	995	646	50	230	765	F7	230	-	995	200	Belt driven	
12x08	1,4	5000	300	382	2348	995	799	50	230	765	F7	230	230	765	400	Direct driven	
16x08	1,8	6600	300	461	2348	1301	799	50	230	765	F7	230	230	765	400	Direct driven	
12x12	2,0	7300	300	499	2425	995	1105	50	230	765	F7	230	230	842	500	Direct driven	
16x12	2,8	10000	300	609	2578	1301	1105	50	230	765	F7	306	230	918	560	Direct driven	
20x12	3,5	12500	300	750	2654	1607	1105	50	230	765	F7	306	306	918	560	Direct driven	
16x16	3,7	13300	300	703	2578	1301	1411	50	230	765	F7	230	306	918	630	Direct driven	
24x12	4,2	15000	300	847	2731	1913	1105	50	230	765	F7	306	306	918	630	Direct driven	
20x16	4,6	16500	300	862	2808	1606	1411	50	230	765	F7	306	306	995	710	Direct driven	
24x16	5,5	20000	300	983	2808	1913	1411	50	230	765	F7	306	306	995	710	Direct driven	
20x20	5,8	21000	300	971	2808	1607	1717	50	230	765	F7	306	306	995	710	Direct driven	
24x20	6,9	25000	300	1155	3037	1913	1717	50	230	765	F7	306	383	1148	800	Direct driven	
32x16	7,5	27000	300	1262	3037	2525	1411	50	230	765	F7	306	383	1148	800	Direct driven	
24x24	8,3	30000	300	1255	3037	1913	2023	50	230	765	F7	306	383	1148	800	Direct driven	
28x24	9,7	35000	300	1394	3037	2219	2023	50	230	765	F7	306	383	1148	800	Direct driven	
32x24	11,1	40000	300	1638	3190	2525	2023	50	230	765	F7	306	383	1301	900	Direct driven	
28x28	11,4	41000	300	1745	3267	2219	2329	50	230	765	F7	306	459	1301	1000	Direct driven	
41x20	11,9	43000	300	1843	3267	3212	1817	50	230	765	F7	306	459	1301	1000	Direct driven	
32x28	13,0	47000	300	1913	3267	2525	2329	50	230	765	F7	306	459	1301	1000	Direct driven	
32x32	13,0	47000	300	1972	3267	2525	2635	50	230	765	F7	306	459	1301	1000	Direct driven	
41x28	15,8	57000	300	2321	3343	3212	2429	50	230	765	F7	306	459	1377	1000	Direct driven	
41x32	18,0	65000	300	2650	3496	3212	2735	50	230	765	F7	306	383	1607	900	Direct driven	
49x32	22,2	80000	300	3175	3802	3825	2735	50	230	765	F7	383	459	1760	1000	Direct driven	

## Installation example 2

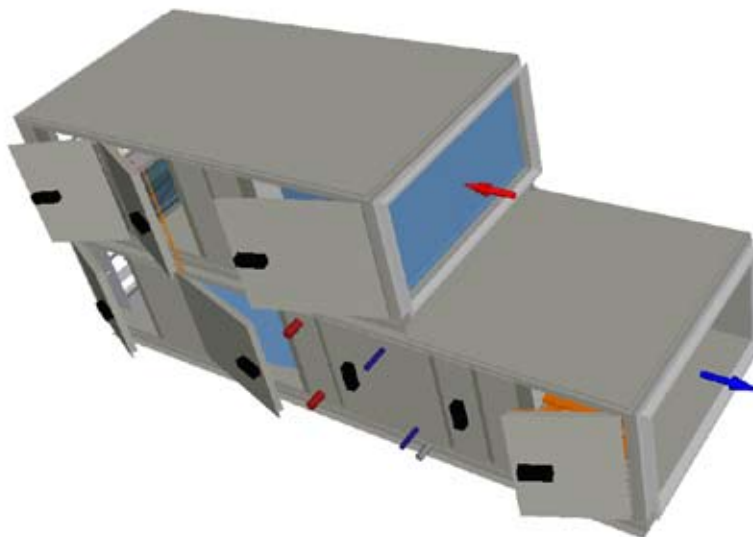
### Supply air unit with air heater and air cooler



							Supply air													
Size	Air volume		External pressure Pa	Weight kg	Total length mm	Total width mm	Total height mm	Connection frame		Damper	Filter		Air heater	Inspection space		Air cooler	Inspection space		Fan	
	m <sup>3</sup> /s	m <sup>3</sup> /h						Length mm	Length mm		Length mm	Class		Length mm	Length mm		Length mm	Length mm	Length mm	Fan size
08x08	0,9	3350	300	400	3037	689	799	50	230	765	F7	230	306	383	230	765	355	Direct driven		
12x06	1,0	3750	300	448	3037	995	646	50	230	765	F7	230	306	383	-	995	200	Belt driven		
12x08	1,4	5050	300	490	3037	995	799	50	230	765	F7	230	306	383	230	765	355	Direct driven		
16x08	1,9	6700	300	586	3037	1301	799	50	230	765	F7	230	306	383	230	765	400	Direct driven		
12x12	2,1	7550	300	614	3114	995	1105	50	230	765	F7	230	306	383	230	842	400	Direct driven		
16x12	2,9	10350	300	710	3114	1301	1105	50	230	765	F7	230	306	383	230	842	450	Direct driven		
20x12	3,5	12600	300	877	3114	1607	1105	50	230	765	F7	230	306	383	230	842	500	Direct driven		
16x16	2,8	10000	300	842	3190	1301	1411	50	230	765	F7	230	306	383	230	1224	560	Direct driven		
24x12	4,2	15150	300	998	3343	1913	1105	50	230	765	F7	230	306	383	306	918	630	Direct driven		
20x16	4,7	16850	300	1034	3343	1606	1411	50	230	765	F7	230	306	383	306	918	630	Direct driven		
24x16	5,6	20200	300	1207	3420	1913	1411	50	230	765	F7	383	306	383	306	995	630	Direct driven		
20x20	5,8	21050	300	1205	3496	1607	1717	50	230	765	F7	306	306	383	306	995	630	Direct driven		
24x20	7,0	25300	300	1425	3726	1913	1717	50	230	765	F7	306	306	383	383	1148	800	Direct driven		
32x16	7,5	27000	300	1540	3726	2525	1411	50	230	765	F7	306	306	383	383	1148	800	Direct driven		
24x24	8,4	30350	300	1667	3879	1913	2023	50	230	765	F7	306	306	383	459	1224	1000	Direct driven		
28x24	9,8	35400	300	1886	3955	2219	2023	50	230	765	F7	306	306	383	459	1301	1000	Direct driven		
32x24	11,2	40450	300	2047	3955	2525	2023	50	230	765	F7	306	306	383	459	1301	1000	Direct driven		
28x28	11,5	41300	300	2127	3955	2219	2329	50	230	765	F7	306	306	383	459	1301	1000	Direct driven		
41x20	12,0	43200	300	2325	3955	3212	1817	50	230	765	F7	306	306	383	459	1301	1000	Direct driven		
32x28	13,1	47200	300	2288	3955	2525	2329	50	230	765	F7	306	306	383	459	1301	1000	Direct driven		
32x32	15,0	53950	300	2511	4032	2525	2635	50	230	765	F7	306	306	383	459	1377	1000	Direct driven		
41x28	16,8	60450	300	3092	4185	3212	2429	50	230	765	F7	306	306	383	383	1607	900	Direct driven		
41x32	19,2	69100	300	3350	4185	3212	2735	50	230	765	F7	306	306	383	383	1607	900	Direct driven		
49x32	22,9	82550	300	4000	4567	3825	2735	50	230	765	F7	383	306	459	459	1760	1000	Direct driven		

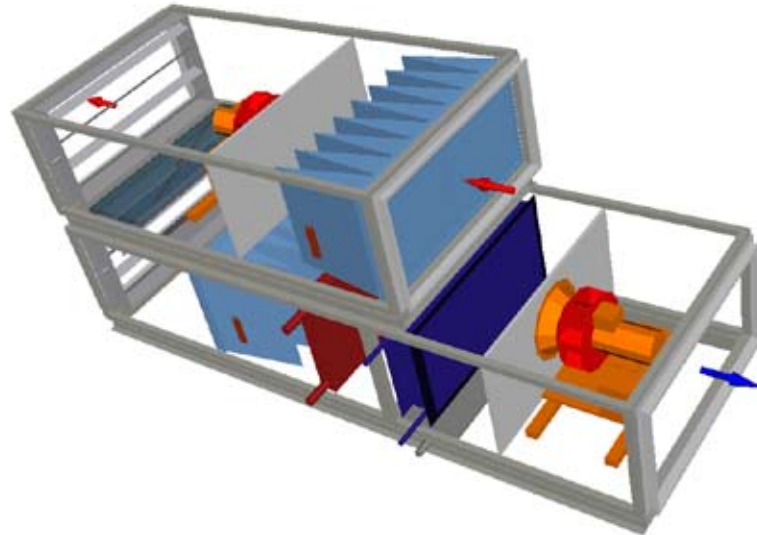
## Installation example 3

### Supply and extract air unit with air recirculation, air heater and air cooler



Size	Air volume		External pressure	Weight	Total length	Total width	Total height	Supply air										
								Damper	Recirculation damper	Inspection space	Filter		Air heater		Inspection space		Air cooler	
								Length mm	Length mm	Length mm	Length mm	Class	Length mm	Pipe rows	Length mm	Length mm	Pipe rows	
08x08	0,9	3350	300	682	3573	689	1608	536	-	230	765	F7	306	4	306	383	6	
12x06	1,0	3750	300	745	3573	995	1302	536	-	230	765	F7	230	4	306	383	6	
12x08	1,4	5050	300	811	3649	995	1608	612	-	230	765	F7	230	4	306	383	6	
16x08	1,9	6700	300	1009	3726	1301	1608	689	-	230	765	F7	230	3	306	383	6	
12x12	2,1	7550	300	1160	3955	995	2220	765	-	230	765	F7	230	4	306	383	6	
16x12	2,9	10350	300	1391	2956	1301	2220	689	-	230	765	F7	230	3	306	383	6	
20x12	3,5	12600	300	1606	4109	1607	2220	842	-	230	765	F7	230	3	306	383	6	
16x16	2,8	10000	300	1561	4032	1301	2832	842	-	230	765	F7	230	3	306	383	6	
24x12	4,2	15150	300	1809	4108	1913	2219	842	-	230	765	F7	230	3	306	383	6	
20x16	4,7	16850	300	1954	4338	1607	2832	995	-	230	765	F7	230	3	306	383	6	
24x16	5,6	20200	300	2213	4338	1913	2831	995	-	230	765	F7	230	3	306	383	6	
20x20	5,8	21050	300	2361	4721	1607	3444	1071	-	230	765	F7	306	3	306	383	6	
24x20	7,0	25300	300	2640	4721	1913	3444	1071	-	230	765	F7	306	3	306	383	6	
32x16	7,5	27000	300	2845	4567	2525	2832	842	-	230	765	F7	306	3	306	383	6	
24x24	8,4	30350	300	3020	4874	1913	4056	1224	-	230	765	F7	306	3	306	383	6	
28x24	9,8	35400	300	3283	4874	2219	4056	1224	-	230	765	F7	306	3	306	383	6	
32x24	11,2	40450	300	3799	5103	2525	4056	1224	-	230	765	F7	306	3	306	383	6	
41x20	12,0	43200	300	4408	5256	3213	3544	1377	-	230	765	F7	306	3	306	383	6	

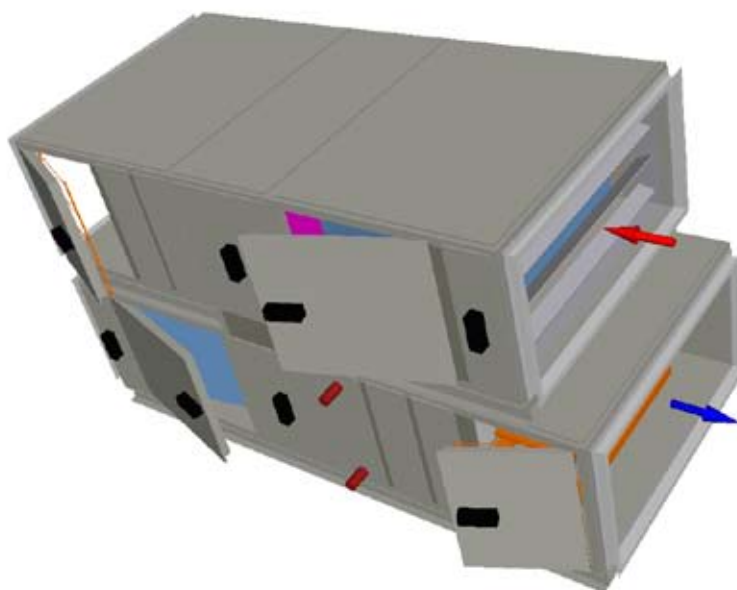




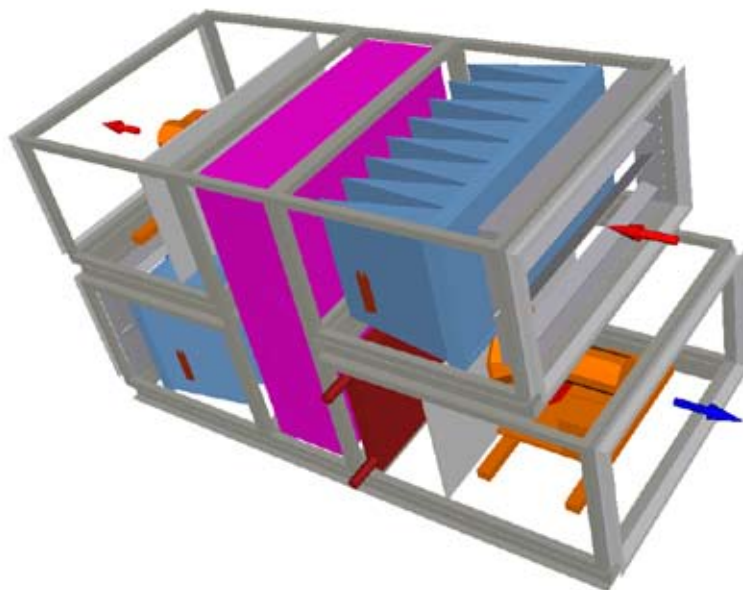
					Extract air						
Inspection space		Fan			Filter		Inspection space		Fan		Damper
Length mm	Length mm	Fan size	Fan type	Length mm	Class	Length mm	Length mm	Fan size	Fan type	Length mm	
230	765	315	Direct driven	765	F7	230	765	400	Direct driven	536	
-	918	200	Belt driven	765	F7	0	995	200	Belt driven	536	
230	765	400	Direct driven	765	F7	230	765	400	Direct driven	612	
230	765	400	Direct driven	765	F7	230	765	400	Direct driven	689	
230	918	560	Direct driven	765	F7	230	918	560	Direct driven	765	
306	918	630	Direct driven	765	F7	306	918	630	Direct driven	689	
306	918	630	Direct driven	765	F7	306	918	630	Direct driven	842	
306	918	560	Direct driven	765	F7	306	918	630	Direct driven	842	
306	918	630	Direct driven	765	F7	306	918	630	Direct driven	842	
306	995	710	Direct driven	765	F7	306	995	710	Direct driven	995	
306	995	710	Direct driven	765	F7	306	995	710	Direct driven	995	
383	1148	800	Direct driven	765	F7	383	995	800	Direct driven	1071	
383	1148	800	Direct driven	765	F7	383	1148	800	Direct driven	1071	
383	1148	800	Direct driven	765	F7	383	1148	800	Direct driven	842	
383	1148	900	Direct driven	765	F7	383	1148	900	Direct driven	1224	
383	1148	900	Direct driven	765	F7	383	1148	900	Direct driven	1224	
459	1301	1000	Direct driven	765	F7	459	1301	1000	Direct driven	1224	
459	1301	1000	Direct driven	765	F7	459	1301	1000	Direct driven	1377	

## Installation example 4

### Heat recovery unit with rotary heat exchanger and air heater



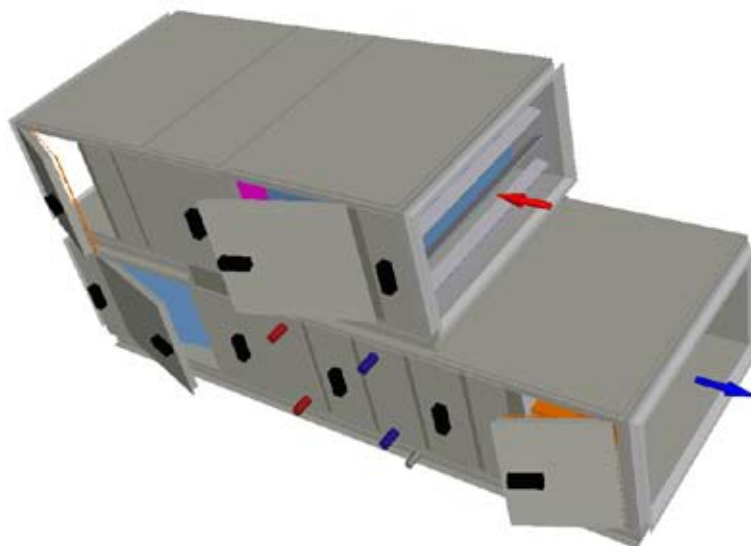
Size	Supply air																	
	Air volume		External pressure	Weight	Total length	Total width	Total width Heat exchanger	Total height	Connection frame	Damper	Filter	Air heater		Inspection space	Fan			
	m <sup>3</sup> /s	m <sup>3</sup> /h	Pa	kg	mm	mm	mm	mm	Length mm	Length mm	Length mm	Class	Length mm	Pipe rows	Length mm	Length mm	Fan size	Fan type
08x08	0,9	3350	300	831	3038	688	1148	1606	50	230	765	F7	230	3	230	765	355	Direct driven
12x06	1,0	3750	300	772	2884	995	995	1301	50	230	765	F7	230	3	-	995	200	Belt driven
12x08	1,4	5050	300	917	2960	995	1148	1606	50	306	765	F7	230	2	230	765	355	Direct driven
16x08	1,9	6700	300	1078	2884	1301	1301	1606	50	230	765	F7	230	2	230	765	400	Direct driven
12x12	2,1	7550	300	1347	3344	995	1606	2218	50	306	765	F7	230	2	230	842	450	Direct driven
16x12	2,9	10350	300	1443	3113	1301	1606	2218	50	306	765	F7	230	2	230	918	560	Direct driven
20x12	3,5	12600	300	1634	3190	1606	1606	2218	50	383	765	F7	230	2	230	918	560	Direct driven
16x16	2,8	10000	300	2147	3955	1301	2218	2830	50	383	765	F7	230	2	230	918	630	Direct driven
24x12	4,2	15150	300	1985	3343	1912	1913	2218	50	383	765	F7	230	2	306	918	630	Direct driven
20x16	4,7	16850	300	2296	3725	1606	2218	2830	50	459	765	F7	230	2	306	995	710	Direct driven
24x16	5,6	20200	300	2412	3496	1912	2218	2830	50	612	765	F7	230	2	306	995	710	Direct driven
20x20	5,8	21050	300	2694	3955	1606	2218	3442	50	612	765	F7	230	2	306	1071	710	Direct driven
24x20	7,0	25300	300	2792	3649	1912	2218	3442	50	612	765	F7	230	2	306	1071	710	Direct driven
32x16	7,5	27000	300	2875	3649	2524	2524	2830	50	612	765	F7	230	2	306	1071	710	Direct driven
24x24	8,4	30350	300	3747	4284	1912	2830	4055	50	765	765	F7	230	2	383	1148	900	Direct driven
28x24	9,8	35400	300	3764	4108	2218	2830	4055	50	765	765	F7	230	2	383	1148	800	Direct driven
32x24	11,2	40450	300	4092	4567	2524	2830	4055	50	918	765	F7	230	2	383	1301	900	Direct driven
41x20	12,0	43200	300	4716	5026	3213	3213	3543	50	1071	765	F7	536	4	459	1377	1000	Direct driven



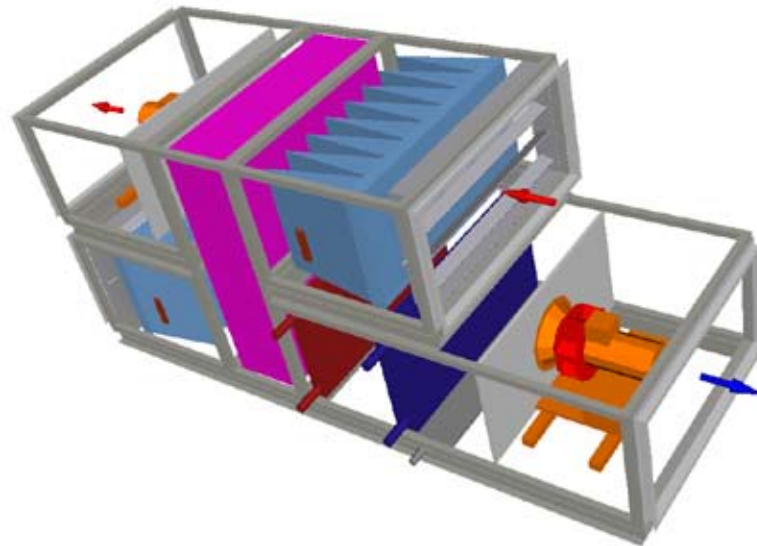
		Combi		Extract air						
	Connection frame	Heat exchanger	Connection frame	Damper	Filter		Inspection space	Fan		
	Length mm	Length mm	Length mm	Length mm	Length mm	Class	Length mm	Length mm	Fan size	Fan type
	50	230	765	F7	230	765	315	765	400	Direct driven
	50	230	765	F7	230	995	200	995	200	Belt driven
	50	230	765	F7	306	765	400	765	400	Direct driven
	50	230	765	F7	230	765	355	765	400	Direct driven
	50	230	765	F7	230	842	500	918	560	Direct driven
	50	230	765	F7	230	842	500	918	630	Direct driven
	50	230	765	F7	230	918	560	918	630	Direct driven
	50	230	765	F7	230	918	630	918	630	Direct driven
	50	230	765	F7	306	918	630	918	630	Direct driven
	50	230	765	F7	306	995	710	995	710	Direct driven
	50	230	765	F7	306	995	710	995	710	Direct driven
	50	230	765	F7	306	1071	710	995	800	Direct driven
	50	230	765	F7	306	1071	710	1148	800	Direct driven
	50	230	765	F7	306	1071	710	1148	800	Direct driven
	50	230	765	F7	383	1148	900	1148	900	Direct driven
	50	230	765	F7	383	1148	800	1148	900	Direct driven
	50	230	765	F7	383	1301	900	1301	1000	Direct driven
	50	230	765	F7	536	1301	1000	1301	1000	Direct driven

## Installation example 5

Heat recovery unit with rotary heat exchanger,  
air heater and air cooler



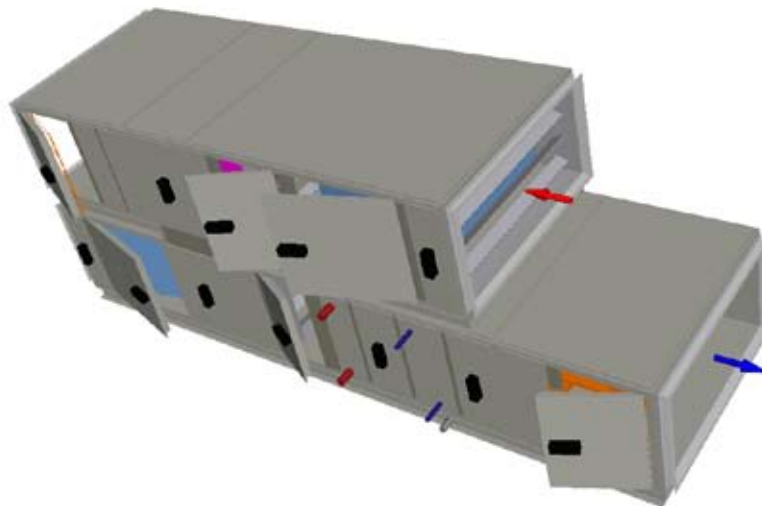
Size	Air volume		External pressure	Weight	Total length	Total width	Total width Heat exchanger	Total height	Supply air											
									Connection frame		Damper		Filter		Air heater		Inspection section		Air cooler	
									Length mm	Length mm	Length mm	Class	Length mm	Pipe rows	Length mm	Length mm	Pipe rows			
08x08	0,9	3350	300	913	3802	688	1148	1607	306	765	F7	230	306	383	6	230	765			
12x06	1,0	3750	300	888	3802	995	995	1300	230	765	F7	230	306	383	6	-	995			
12x08	1,4	5050	300	999	3573	995	1148	1607	230	765	F7	230	306	383	6	230	765			
16x08	1,9	6700	300	1190	3573	1300	1300	1607	230	765	F7	230	306	383	4	230	765			
12x12	2,1	7550	300	1447	3955	995	1606	2218	230	765	F7	230	306	383	6	230	842			
16x12	2,9	10350	300	1560	3726	1300	1606	2218	306	765	F7	230	306	383	6	230	842			
20x12	3,5	12600	300	1818	3879	1606	1606	2218	383	765	F7	230	306	383	6	230	918			
16x16	2,8	10000	300	2236	4414	1300	2218	2830	306	765	F7	230	306	383	6	230	918			
24x12	4,2	15150	300	2273	4567	1913	1913	2218	459	765	F7	459	306	383	6	306	918			
20x16	4,7	16850	300	2478	4414	1606	2218	2830	459	765	F7	230	306	383	6	306	995			
24x16	5,6	20200	300	2808	4797	1912	2218	2830	536	765	F7	459	306	383	6	306	1071			
20x20	5,8	21050	300	2908	4643	1606	2218	3443	612	765	F7	230	306	383	6	306	1071			
24x20	7,0	25300	300	3284	5179	1912	2218	3443	765	765	F7	459	306	383	6	383	1148			
32x16	7,5	27000	300	3305	4873	2524	2524	2830	612	765	F7	459	306	383	6	306	1071			
24x24	8,4	30350	300	4983	5561	1912	3443	4055	689	765	F7	230	306	383	6	383	1148			
28x24	9,8	35400	300	4414	5485	2218	2830	4055	765	765	F7	459	306	383	6	383	1301			
32x24	11,2	40450	300	4524	5179	2524	2830	4055	918	765	F7	459	306	383	6	383	1301			
41x20	12,0	43200	300	5097	5562	3213	3213	3543	1301	765	F7	459	306	383	6	383	1377			



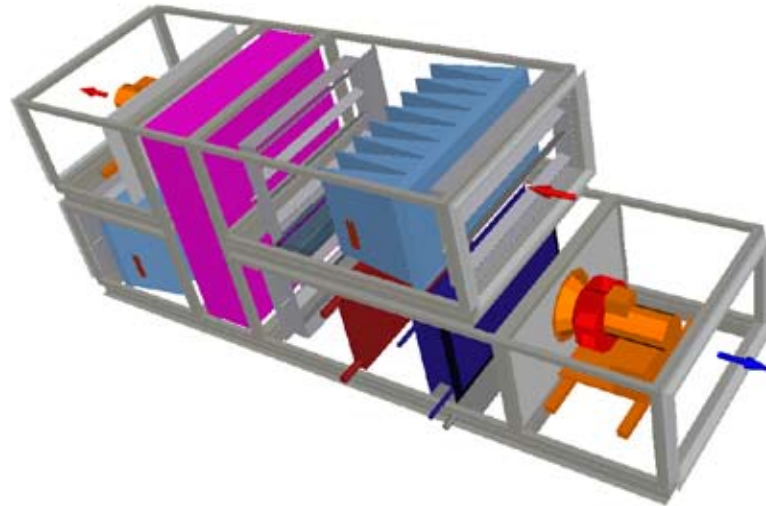
					Combi	Extract air									
Inspection space		Fan			Connection frame	Heat exchanger	Connection frame	Damper	Filter		Inspection space	Fan			
Length mm	Length mm	Fan size	Fan type	Length mm	Length mm	Length mm	Length mm	Length mm	Class	Length mm	Length mm	Fan size	Fan type		
355	765	355	Direct driven	50	689	50	230	765	F7	230	765	355	Direct driven		
200	995	200	Belt driven	50	536	50	230	765	F7	-	995	200	Belt driven		
315	765	355	Direct driven	50	536	50	230	765	F7	230	765	315	Direct driven		
355	765	400	Direct driven	50	536	50	230	765	F7	230	765	315	Direct driven		
400	842	450	Direct driven	50	842	50	230	765	F7	230	765	400	Direct driven		
500	918	560	Direct driven	50	536	50	230	765	F7	230	842	450	Direct driven		
560	918	560	Direct driven	50	536	50	230	765	F7	230	918	560	Direct driven		
560	918	630	Direct driven	50	1148	50	230	765	F7	230	842	500	Direct driven		
630	918	630	Direct driven	50	536	50	230	765	F7	306	918	630	Direct driven		
710	995	710	Direct driven	50	842	50	230	765	F7	306	918	630	Direct driven		
710	995	710	Direct driven	50	536	50	230	765	F7	306	995	630	Direct driven		
710	1071	710	Direct driven	50	842	50	230	765	F7	306	1071	710	Direct driven		
800	1071	710	Direct driven	50	536	50	230	765	F7	383	1148	800	Direct driven		
710	1071	710	Direct driven	50	536	50	230	765	F7	306	1071	710	Direct driven		
900	1148	900	Direct driven	50	1530	50	230	765	F7	306	1148	900	Direct driven		
900	1148	800	Direct driven	50	689	50	230	765	F7	383	1148	900	Direct driven		
900	1301	900	Direct driven	50	536	50	230	765	F7	383	1301	900	Direct driven		
1000	1377	1000	Direct driven	50	612	50	230	765	F7	459	1301	1000	Direct driven		

## Installation example 6

Heat recovery unit with rotary heat exchanger,  
air heater, air cooler and mixing section



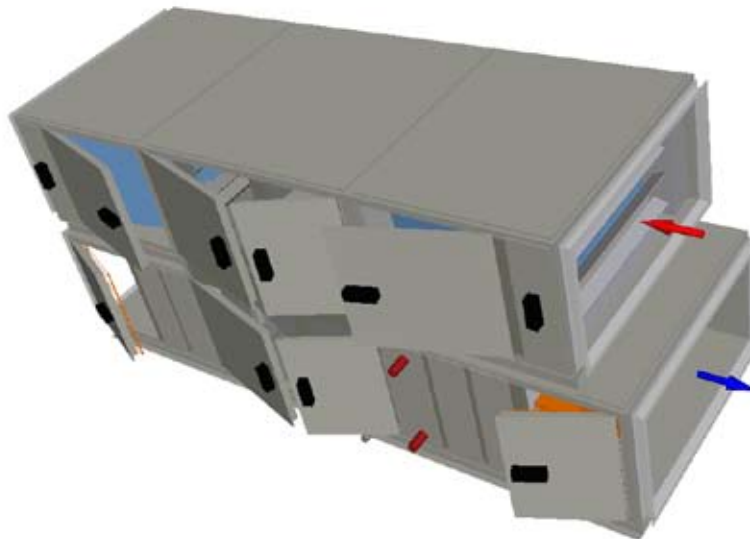
Size	Air volume		External pressure	Weight	Total length	Total width	Total width Heat exchanger	Total height	Supply air								
									Connection frame	Damper	Filter		Air heater		Inspection section	Air cooler	
											Length mm	Length mm	Length mm	Class		Length mm	Pipe rows
m <sup>3</sup> /s	m <sup>3</sup> /h	Pa	kg	mm	mm	mm	mm	Length mm	Length mm	Length mm	Class	Length mm	Pipe rows	Length mm	Length mm	Pipe rows	
08x08	0,9	3350	300	1011	4185	688	1148	1607	230	765	F7	230	2	306	383	6	230
12x06	1,0	3750	300	1066	4337	995	995	1300	230	765	F7	230	2	306	383	6	-
12x08	1,4	5050	300	1181	4261	995	1148	1607	230	765	F7	230	2	306	383	6	230
16x08	1,9	6700	300	1408	4338	1300	1300	1607	230	765	F7	230	2	306	383	6	230
12x12	2,1	7550	300	1672	4720	995	1606	2218	383	765	F7	230	2	306	383	6	230
16x12	2,9	10350	300	1815	4643	1300	1606	2218	306	765	F7	230	2	306	383	6	230
20x12	3,5	12600	300	2177	4949	1606	1606	2218	459	765	F7	230	2	306	383	6	230
16x16	2,8	10000	300	2534	5256	1300	2218	2830	383	765	F7	230	2	306	383	6	230
24x12	4,2	15150	300	2616	5026	1913	1913	2218	459	765	F7	230	2	306	383	6	306
20x16	4,7	16850	300	2860	5408	1606	2218	2830	459	765	F7	230	2	306	383	6	306
24x16	5,6	20200	300	3233	5408	1912	2218	2830	536	765	F7	230	2	306	383	6	306
20x20	5,8	21050	300	3496	5944	1606	2218	3443	612	765	F7	230	2	306	383	6	306
24x20	7,0	25300	300	3814	5944	1912	2218	3443	765	765	F7	230	2	306	383	6	383
32x16	7,5	27000	300	3786	5485	2524	2524	2830	612	765	F7	230	2	306	383	6	306
24x24	8,4	30350	300	5460	6939	1912	3443	4055	918	765	F7	230	2	306	383	6	383
28x24	9,8	35400	300	5106	6403	2218	2830	4055	765	765	F7	230	2	306	383	6	383
32x24	11,2	40450	300	5343	6403	2524	2830	4055	918	765	F7	230	2	306	383	6	383
41x20	12,0	43200	300	6124	7015	3213	3213	3543	1071	765	F7	230	2	306	383	6	459



					Combi	Extract air								
Inspection space		Fan			Heat exchanger	Mixing section	Damper	Filter		Inspection space	Fan			
Length mm	Length mm	Fan size	Fan type	Length mm	Length mm	Length mm	Length mm	Class	Length mm	Length mm	Fan size	Fan type		
765	400	355	Direct driven	689	459	230	765	F7	230	765	355	Direct driven		
995	200	200	Belt driven	536	765	230	765	F7	-	995	200	Belt driven		
765	355	315	Direct driven	536	689	230	765	F7	230	765	400	Direct driven		
542	400	400	Direct driven	536	689	230	765	F7	230	765	400	Direct driven		
842	500	500	Direct driven	842	612	230	765	F7	306	842	500	Direct driven		
842	450	500	Direct driven	536	842	230	765	F7	306	842	450	Direct driven		
918	560	560	Direct driven	536	918	230	765	F7	306	918	560	Direct driven		
918	560	560	Direct driven	1148	765	230	765	F7	306	842	500	Direct driven		
918	630	630	Direct driven	536	995	230	765	F7	306	918	630	Direct driven		
995	710	630	Direct driven	842	918	230	765	F7	306	918	630	Direct driven		
1071	710	630	Direct driven	536	1148	230	765	F7	306	995	630	Direct driven		
1071	710	710	Direct driven	842	1301	230	765	F7	306	1071	710	Direct driven		
1148	800	800	Direct driven	536	1301	230	765	F7	383	1148	800	Direct driven		
1071	710	710	Direct driven	536	1148	230	765	F7	383	1071	710	Direct driven		
1148	800	800	Direct driven	1530	1224	230	765	F7	459	1148	800	Direct driven		
1301	900	900	Direct driven	689	1454	230	765	F7	459	1148	900	Direct driven		
1301	900	900	Direct driven	536	1454	230	765	F7	382	1301	900	Direct driven		
1377	1000	1000	Direct driven	612	1301	230	765	F7	536	1301	1000	Direct driven		

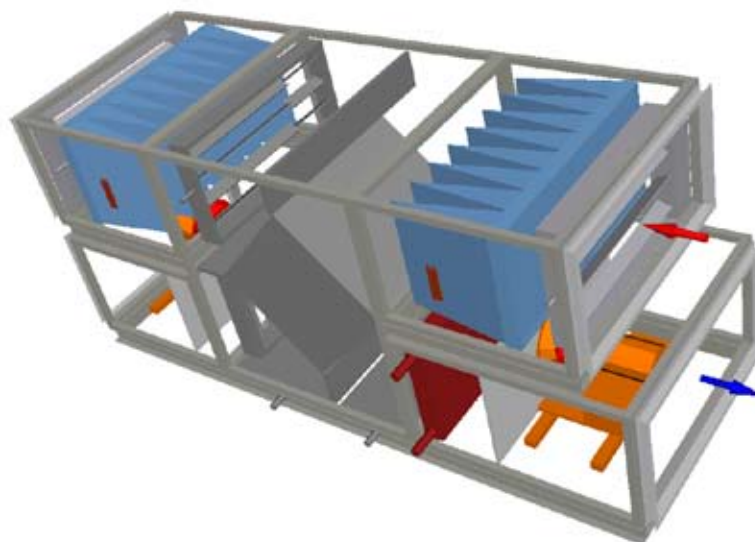
## Installation example 7

### Heat recovery unit with plate heat exchanger and air heater



								Supply air									
Size	Air volume		External pressure	Weight	Total length	Total width	Total height	Connection frame		Damper	Filter		Air heater		Inspection space	Fan	
	m <sup>3</sup> /s	m <sup>3</sup> /h						Pa	kg		mm	mm	mm	Length mm		Length mm	Length mm
08x08	0,9	3350	300	830	3649	688	1607	50	230	765	F7	230	4	230	765	355	Direct driven
12x06	1,0	3750	300	871	3649	995	1301	50	230	765	F7	230	3	-	995	200	Belt driven
12x08	1,4	5050	300	1012	3649	995	1607	50	230	765	F7	230	4	230	765	355	Direct driven
16x08	1,9	6700	300	1217	3649	1301	1607	50	230	765	F7	230	4	230	765	355	Direct driven
12x12	2,1	7550	300	1245	3802	995	2218	50	230	765	F7	230	4	230	842	450	Direct driven
16x12	2,9	10350	300	1480	3802	1301	2218	50	306	765	F7	230	4	230	842	500	Direct driven
20x12	3,5	12600	300	1979	4337	1606	2218	50	230	765	F7	230	3	230	918	560	Direct driven
16x16	2,8	10000	300	1926	4490	1301	2830	50	230	765	F7	230	3	306	918	630	Direct driven
24x12	4,2	15150	300	2191	4873	1912	2218	50	230	765	F7	230	3	306	918	630	Direct driven
20x16	4,7	16850	300	2319	4643	1606	2830	50	230	765	F7	230	3	306	995	630	Direct driven
24x16	5,6	20200	300	2663	4796	1912	2830	50	230	765	F7	230	3	306	1071	710	Direct driven
20x20	5,8	21050	300	2771	5102	1606	3443	50	230	765	F7	230	3	306	1071	710	Direct driven
24x20	7,0	25300	300	3071	5102	1912	3442	50	230	765	F7	230	3	306	1071	710	Direct driven
32x16	7,5	27000	300	3598	5485	2524	2830	50	230	765	F7	306	3	306	1071	710	Direct driven
24x24	8,4	30350	300	3679	5791	1912	4055	50	230	765	F7	306	3	383	1301	900	Direct driven
28x24	9,8	35400	300	5050	7704	2218	4055	50	230	765	F7	306	3	459	1301	1000	Direct driven
32x24	11,2	40450	300	5194	7474	2524	4055	50	230	765	F7	306	3	382	1301	900	Direct driven
41x20	12,0	43200	300	5320	7168	3213	3543	50	230	765	F7	306	3	383	1607	800	Direct driven

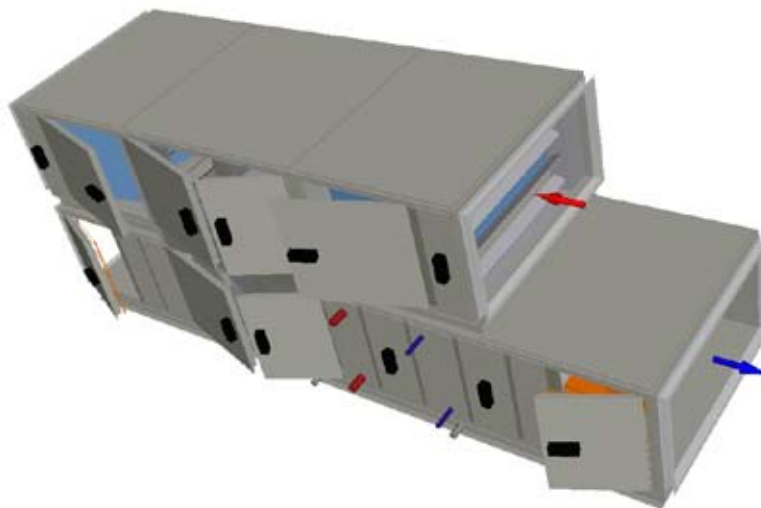




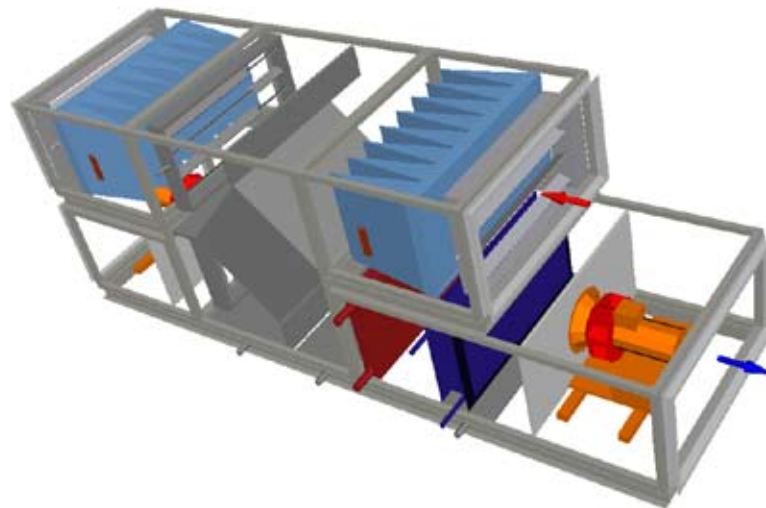
Combi	Extract air							
Heat exchanger	Damper	Filter		Inspection space	Fan			
Length mm	Length mm	Length mm	Class	Length mm	Length mm	Fan size	Fan type	
1301	230	765	F7	230	765	355	Direct driven	
1301	230	765	F7	230	995	200	Belt driven	
1301	230	765	F7	230	765	355	Direct driven	
1301	230	765	F7	230	765	400	Direct driven	
1301	230	765	F7	230	842	400	Direct driven	
1301	230	765	F7	230	842	500	Direct driven	
1683	230	765	F7	230	918	560	Direct driven	
1683	230	765	F7	306	918	630	Direct driven	
2066	230	765	F7	306	918	630	Direct driven	
1683	230	765	F7	306	995	630	Direct driven	
1683	230	765	F7	306	1071	710	Direct driven	
1989	230	765	F7	306	1071	710	Direct driven	
1989	230	765	F7	306	1071	710	Direct driven	
2295	230	765	F7	306	1071	710	Direct driven	
1989	230	765	F7	383	1301	900	Direct driven	
3749	230	765	F7	459	1301	1000	Direct driven	
3672	230	765	F7	383	1301	900	Direct driven	
2754	230	765	F7	383	1607	800	Direct driven	

## Installation example 8

### Heat recovery unit with plate heat exchanger, air heater and air cooler



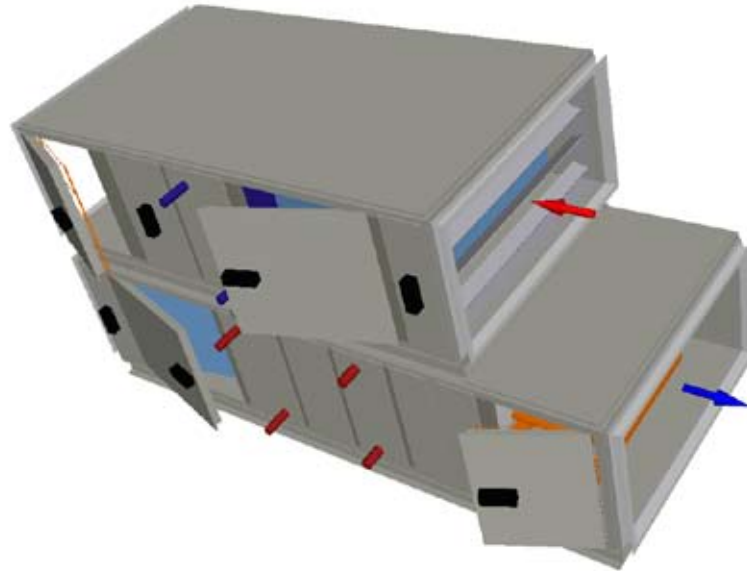
Size	Air volume		External pressure Pa	Weight kg	Total length mm	Total width mm	Total height mm	Supply air								
	m <sup>3</sup> /s	m <sup>3</sup> /h						Damper Length mm	Filter		Air heater		Inspection section Length mm	Air cooler		Inspection space Length mm
									Length mm	Class	Length mm	Pipe rows		Length mm	Pipe rows	
08x08	0,9	3350	300	908	4337	688	1607	230	765	F7	230	4	306	383	6	306
12x06	1,0	3750	300	946	4261	995	1301	230	765	F7	230	4	306	306	6	-
12x08	1,4	5050	300	1109	4338	995	1607	230	765	F7	230	4	306	383	6	230
16x08	1,9	6700	300	1327	4337	1301	1607	230	765	F7	230	4	306	383	6	230
12x12	2,1	7550	300	1382	4491	995	2218	230	765	F7	230	4	306	383	6	230
16x12	2,9	10350	300	1627	4567	1301	2218	306	765	F7	230	4	383	383	6	230
20x12	3,5	12600	300	2169	5179	1606	2218	230	765	F7	306	4	383	383	6	230
16x16	2,8	10000	300	2129	5409	1301	2830	230	765	F7	306	4	383	383	6	306
24x12	4,2	15150	300	2379	5562	1912	2218	230	765	F7	230	3	383	306	6	306
20x16	4,7	16850	300	2621	5638	1606	2830	230	765	F7	306	4	459	383	6	306
24x16	5,6	20200	300	2978	5715	1912	2830	230	765	F7	306	4	459	383	6	306
20x20	5,8	21050	300	3045	5944	1606	3443	230	765	F7	306	4	459	383	6	306
24x20	7,0	25300	300	3423	6020	1912	3442	230	765	F7	306	4	459	383	6	306
32x16	7,5	27000	300	3967	6327	2524	2830	230	765	F7	306	4	459	383	6	306
24x24	8,4	30350	300	4109	6633	1912	4055	230	765	F7	306	4	459	383	6	383
28x24	9,8	35400	300	5421	8545	2218	4055	230	765	F7	306	3	459	383	4	459
32x24	11,2	40450	300	5640	8315	2524	4055	230	765	F7	306	3	459	383	6	383
41x20	12,0	43200	300	5807	8009	3213	3543	230	765	F7	306	3	459	383	4	383



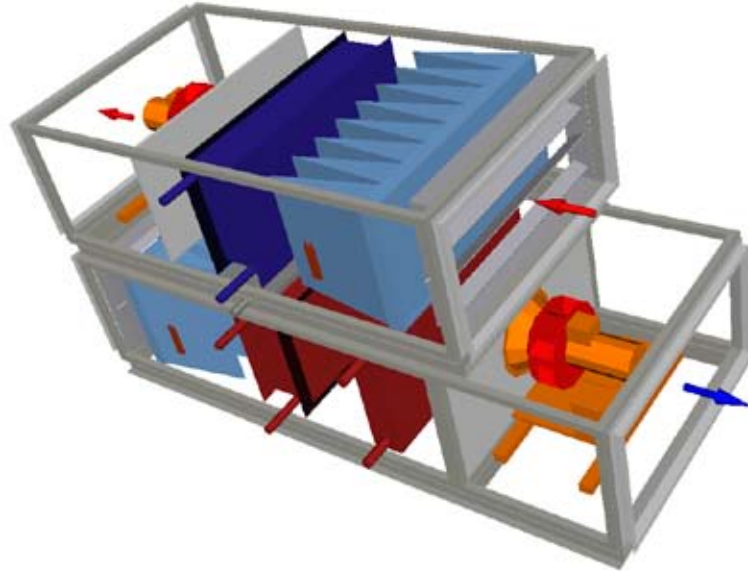
				Combi	Extract air								
Fan				Heat exchanger	Connection frame	Damper	Filter		Inspection space	Fan			
Length mm	Fan size	Fan type		Length mm	Length mm	Length mm	Length mm	Class	Length mm	Length mm	Fan size	Fan type	
765	355	Direct driven		1301	50	230	765	F7	230	765	355	Direct driven	
995	200	Belt driven		1301	50	230	765	F7	230	995	200	Belt driven	
765	355	Direct driven		1301	50	230	765	F7	230	765	355	Direct driven	
765	355	Direct driven		1301	50	230	765	F7	230	765	400	Direct driven	
842	450	Direct driven		1301	50	230	765	F7	230	842	400	Direct driven	
842	500	Direct driven		1301	50	230	765	F7	230	842	500	Direct driven	
918	560	Direct driven		1683	50	230	765	F7	230	918	560	Direct driven	
918	630	Direct driven		1683	50	230	765	F7	306	918	630	Direct driven	
918	630	Direct driven		2066	50	230	765	F7	306	918	630	Direct driven	
995	630	Direct driven		1683	50	230	765	F7	306	995	630	Direct driven	
1071	710	Direct driven		1683	50	230	765	F7	306	1071	710	Direct driven	
1071	710	Direct driven		1989	50	230	765	F7	306	1071	710	Direct driven	
1071	710	Direct driven		1989	50	230	765	F7	306	1071	710	Direct driven	
1071	710	Direct driven		2295	50	230	765	F7	306	1071	710	Direct driven	
1301	900	Direct driven		1989	50	230	765	F7	383	1301	900	Direct driven	
1301	1000	Direct driven		3749	50	230	765	F7	459	1301	1000	Direct driven	
1301	900	Direct driven		3672	50	230	765	F7	383	1301	900	Direct driven	
1607	800	Direct driven		2754	50	230	765	F7	383	1607	800	Direct driven	

## Installation example 9

### Heat recovery unit with coil heat exchanger and air heater



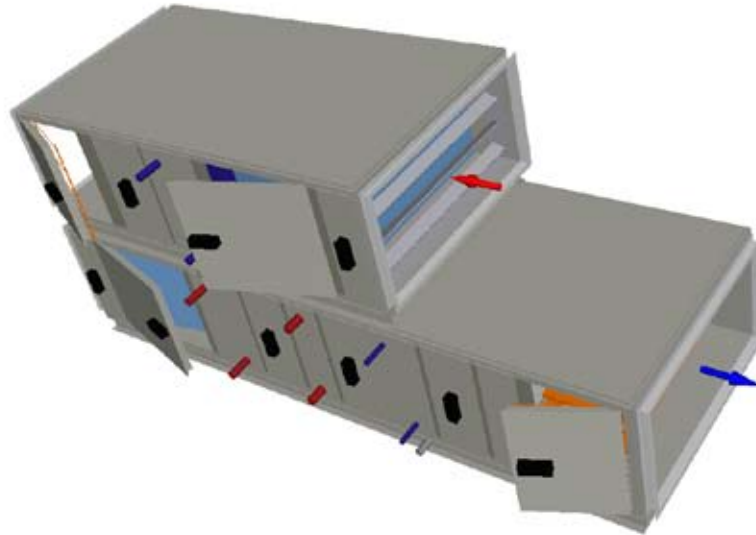
Size	Air volume		External pressure	Weight	Total length	Total width	Total height	Supply air									
								Anslutningsgram	Damper	Filter		Heat exchanger		Inspection section	Air heater		Inspection space
m <sup>3</sup> /s	m <sup>3</sup> /h	Pa	kg	mm	mm	mm	Length mm	Length mm	Length mm	Class	Length mm	Pipe rows	Length mm	Length mm	Pipe rows	Length mm	
08x08	0,9	3350	300	1130	3190	688	1607	50	230	765	F7	383	10	230	230	6	230
12x06	1,0	3750	300	770	3037	995	1301	50	230	765	F7	383	10	306	230	4	-
12x08	1,4	5050	300	873	3114	995	1607	50	230	765	F7	383	10	306	306	6	230
16x08	1,9	6700	300	1079	3114	1301	1607	50	230	765	F7	383	10	306	306	6	230
12x12	2,1	7550	300	1130	3190	995	2218	50	230	765	F7	383	10	306	306	6	230
16x12	2,9	10350	300	1346	3267	1301	2218	50	230	765	F7	383	10	306	306	6	230
20x12	3,5	12600	300	1715	3343	1606	2218	50	230	765	F7	383	10	306	306	6	306
16x16	2,8	10000	300	1706	3420	1301	2830	50	230	765	F7	383	10	383	383	6	383
24x12	4,2	15150	300	1941	3420	1912	2218	50	230	765	F7	383	8	306	306	4	306
20x16	4,7	16850	300	1929	3343	1606	2830	50	230	765	F7	383	6	306	306	4	306
24x16	5,6	20200	300	2342	3726	1912	2830	50	230	765	F7	459	10	306	306	4	306
20x20	5,8	21050	300	2438	3726	1606	3443	50	230	765	F7	383	10	306	306	4	383
24x20	7,0	25300	300	2751	3802	1912	3442	50	230	765	F7	459	10	306	306	4	383
32x16	7,5	27000	300	2983	3955	2524	2830	50	230	765	F7	459	8	459	306	4	383
24x24	8,4	30350	300	3169	3955	1912	4055	50	230	765	F7	459	10	459	306	4	383
28x24	9,8	35400	300	3396	3878	2218	4055	50	230	765	F7	383	6	459	306	4	383
32x24	11,2	40450	300	3832	4108	2524	4005	50	230	765	F7	383	6	459	306	4	459
41x20	12,0	43200	300	4388	4338	3213	3642	50	230	765	F7	383	6	459	306	4	383



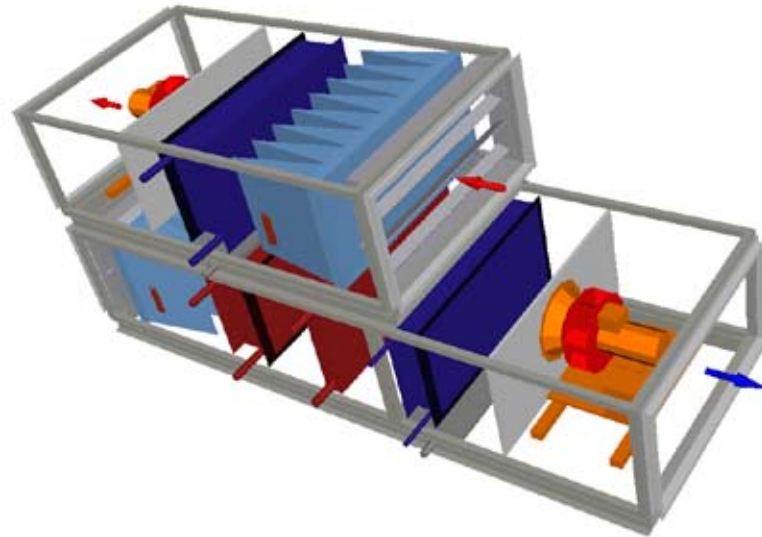
Extract air													
Fan			Damper	Filter			Heat exchanger		Inspection space	Fan			Connection frame
Length mm	Fan size	Fan type	Length mm	Length mm	Class	Length mm	Pipe rows	Length mm	Length mm	Fan size	Fan type	Length mm	
842	500	Direct driven	230	765	F7	383	10	230	842	355	Direct driven	50	
995	200	Belt driven	230	765	F7	383	10	-	995	200	Belt driven	50	
765	355	Direct driven	230	765	F7	383	10	230	765	355	Direct driven	50	
765	400	Direct driven	230	765	F7	383	10	230	765	400	Direct driven	50	
842	500	Direct driven	230	765	F7	383	10	230	842	500	Direct driven	50	
918	560	Direct driven	230	765	F7	383	10	230	842	500	Direct driven	50	
918	630	Direct driven	230	765	F7	383	10	230	918	560	Direct driven	50	
995	710	Direct driven	230	765	F7	383	10	383	995	710	Direct driven	50	
918	630	Direct driven	230	765	F7	383	10	306	918	630	Direct driven	50	
918	630	Direct driven	230	765	F7	383	10	306	918	630	Direct driven	50	
995	630	Direct driven	230	765	F7	459	10	306	995	710	Direct driven	50	
1148	800	Direct driven	230	765	F7	383	10	383	1148	800	Direct driven	50	
1148	800	Direct driven	230	765	F7	459	10	383	1148	800	Direct driven	50	
1148	800	Direct driven	230	765	F7	459	8	383	1148	800	Direct driven	50	
1148	900	Direct driven	230	765	F7	459	10	383	1148	900	Direct driven	50	
1148	900	Direct driven	230	765	F7	459	8	383	1148	900	Direct driven	50	
1301	1000	Direct driven	230	765	F7	383	6	459	1301	1000	Direct driven	50	
1607	800	Direct driven	230	765	F7	383	4	383	1454	800	Direct driven	50	

# Installation example 10

Heat recovery unit with coil heat exchanger,  
air heater and air cooler



							Supply air												
Size	Air volume		External pressure Pa	Weight kg	Total length mm	Total width mm	Total height mm	Connection frame		Damper	Filter		Heat exchanger		Inspection section	Air heater		Inspection section	Air cooler
	m <sup>3</sup> /s	m <sup>3</sup> /h						Length mm	Length mm		Length mm	Class	Length mm	Pipe rows		Length mm	Length mm		
08x08	0,9	3350	300	769	3649	688	1607	50	230	765	F7	383	10	306	230	4	306	306	
12x06	1,0	3750	300	851	3649	995	1301	50	230	765	F7	383	10	306	230	4	306	306	
12x08	1,4	5050	300	955	3726	995	1607	50	230	765	F7	383	10	306	230	4	306	383	
16x08	1,9	6700	300	1171	3726	1301	1607	50	230	765	F7	383	10	306	230	4	306	383	
12x12	2,1	7550	300	1237	3802	995	2218	50	230	765	F7	383	10	306	230	4	306	383	
16x12	2,9	10350	300	1436	3802	1301	2218	50	230	765	F7	383	10	306	230	4	306	383	
20x12	3,5	12600	300	1865	3955	1606	2218	50	230	765	F7	383	10	306	230	3	306	383	
16x16	2,8	10000	300	1772	3879	1301	2830	50	230	765	F7	383	10	306	230	3	306	383	
24x12	4,2	15150	300	2126	4032	1912	2218	50	230	765	F7	383	10	306	230	3	306	383	
20x16	4,7	16850	300	2189	4108	1606	2830	50	230	765	F7	383	10	306	230	3	306	383	
24x16	5,6	20200	300	2570	4261	1912	2830	50	230	765	F7	459	10	306	230	3	306	383	
20x20	5,8	21050	300	2600	4185	1606	3443	50	230	765	F7	383	10	306	230	3	306	383	
24x20	7,0	25300	300	2913	4261	1912	3442	50	230	765	F7	459	10	306	230	3	306	383	
32x16	7,5	27000	300	3261	4414	2524	2830	50	230	765	F7	459	8	230	459	8	306	383	
24x24	8,4	30350	300	3413	4490	1912	4055	50	230	765	F7	459	10	306	306	3	306	383	
28x24	9,8	35400	300	3995	4720	2218	4055	50	230	765	F7	459	8	230	459	8	306	383	
32x24	11,2	40450	300	4164	4720	2524	4005	50	230	765	F7	459	8	306	306	3	306	383	
41x20	12,0	43200	300	5335	5026	3213	3642	50	230	765	F7	459	6	383	306	3	383	383	



														Extract air			
Inspection space		Fan			Damper	Filter		Heat exchanger		Inspection space		Fan					
Length mm	Length mm	Fan size	Fan type	Length mm	Length mm	Class	Length mm	Pipe rows	Length mm	Length mm	Fan size	Fan type					
230	765	355	Direct driven	230	765	F7	383	10	230	765	355	Direct driven					
-	995	200	Belt driven	230	765	F7	383	10	-	995	200	Belt driven					
230	765	355	Direct driven	230	765	F7	383	10	230	765	355	Direct driven					
230	765	400	Direct driven	230	765	F7	383	10	230	765	400	Direct driven					
230	842	500	Direct driven	230	765	F7	383	10	230	842	500	Direct driven					
230	842	500	Direct driven	230	765	F7	383	10	230	842	450	Direct driven					
306	918	630	Direct driven	230	765	F7	383	10	306	918	630	Direct driven					
230	918	560	Direct driven	230	765	F7	383	10	306	918	630	Direct driven					
306	918	630	Direct driven	230	765	F7	383	10	230	918	560	Direct driven					
306	995	710	Direct driven	230	765	F7	383	10	306	995	710	Direct driven					
306	1071	710	Direct driven	230	765	F7	459	10	306	995	630	Direct driven					
306	1071	710	Direct driven	230	765	F7	383	10	383	1148	800	Direct driven					
306	1071	710	Direct driven	230	765	F7	459	10	306	1071	710	Direct driven					
306	1071	710	Direct driven	230	765	F7	459	8	306	1071	710	Direct driven					
383	1148	900	Direct driven	230	765	F7	459	10	383	1148	900	Direct driven					
383	1301	900	Direct driven	230	765	F7	459	8	383	1301	900	Direct driven					
459	1301	1000	Direct driven	230	765	F7	459	8	383	1301	900	Direct driven					
383	1607	900	Direct driven	230	765	F7	383	6	383	1607	900	Direct driven					

