DAIKIN

Ventilation

Product catalogue 2019 for professionals

INTERACTIVE

pdf

Pre-selected AHU combinations for easy selection

Fresh air for the residential and commercial sector
Heat reclaim ventilation and air handling applications

Advantages

With this interactive PDF we want to ensure you quickly find back the information you are looking for. Within this catalogue or via direct links to our business portal. Focus on your business, we are here to help you.

We need your feedback

Fill out 5 simple questions to help us improve this catalogue. We 've put these questions on an online link, so we can easily process all surveys continuously.

TAKE THE ONLINE SURVEY »

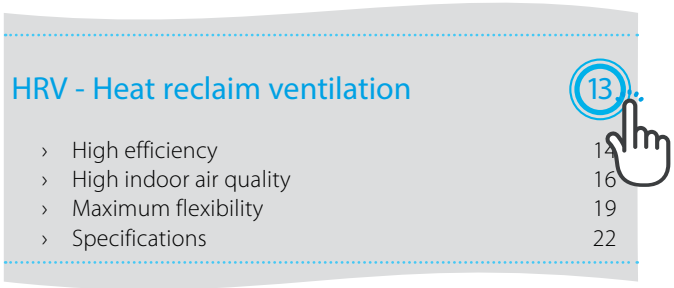
Navigation

Sidebar links

The different chapters in the catalogue are shown at the side. You will be taken directly to the index page of the with a single click.

All page numbers clickable

Click any page number you see and you will go directly to the page.



Links to technical documentation

On the pages with technical drawings you can click the button above to get access to all technical drawings available for the product

VIEW ALL TECHNICAL DRAWINGS ON MY.DAIKIN.EU

Click to go back

MODULAR L (SMART)

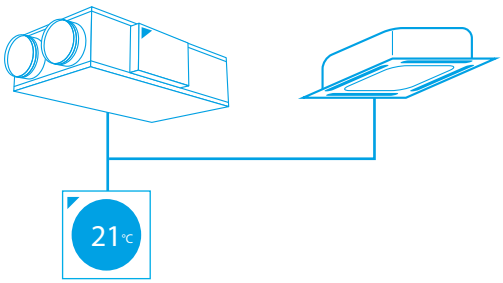
DAIKIN AIR HANDLING UNIT AND ERQ/VRV PLUG & PLAY CONNECTION

Table of contents

5 reasons why Daikin's ventilation range is unique in the market

1 Market leading controls & connectivity

- Interlock of ventilation and air conditioning system
  - Control ERV/HRV and air conditioning from the same controller
  - Aligns the operation mode between the systems to save energy
- Easy integration in the total solution
  - Online control and monitoring via the Daikin Cloud Service
  - Full portfolio integration in the intelligent Touch Manager, Daikins cost-effective mini BMS
- User-friendly controller with premium design
  - Intuitive touch button control



Madoka

DESIGN AWARD 2018

reddot award 2018
winner

2 Unique installation benefits

- Integrates seamlessly in the Daikin total solution, ensuring a single point of contact
- Total fresh air solution with Daikin supplying both the VAM/Modular L Smart and the electrical heater
- Daikin AHU and condensing unit connect Plug & Play thanks to same pipe diameters, factory mounted controls, expansion valves, etc.

3 High energy efficiency

- Energy recovery of up to 92%, reducing running costs
- Free nighttime cooling using fresh outside air
- Inverter driven centrifugal fans
- ErP compliant

Up to 92% heat recovery

4 Best comfort

- Wide range of units to control fresh air and humidity
- Wide range of optional filters to suit the application available up to ePM_1 80% (F9)
- Special paper heat exchanger recovers heat and moisture from outgoing air to warm up and humidify incoming air to comfortable levels (VAM, VKM)

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

5 Top reliability

- Most extensive testing before new units leave the factory
- Widest support network and after sales service
- All spare parts available in Europe

ErP COMPLIANT

Did you know?

CO_2 levels and ventilation rates all have significant, independent impacts on cognitive function:

COGNITIVE FUNCTION SCORES …

+ 61%
IN GREEN BUILDING CONDITIONS

+ 101%
IN ENHANCED GREEN BUILDING CONDITIONS

Widest range of DX integrated ventilation on the market

Daikin offers a variety of solutions from small heat recovery ventilation to large-scale air handling units for the provision of fresh air ventilation to homes, or commercial premises.

Ventilation solutions

Daikin offers state-of-the-art ventilation solutions that can easily be integrated into any project:

› **Unique portfolio** within DX manufacturers
› High-quality solutions complying with the **highest Daikin quality standards**
› **Seamless integration** of all products to provide the best indoor climate
› All Daikin products connected to a single controller for **complete control** of the HVAC system.

Heat Reclaim Ventilation - Ventilation with heat recovery as standard

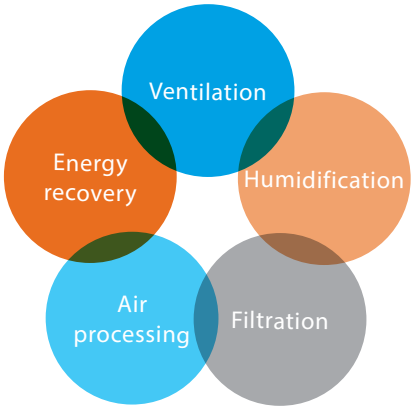
Our heat recovery units **recover sensible heat** (Modular L / Modular L Smart) and **latent heat** (VAM/VKM), substantially reducing the load on the air conditioning system up to 40%.

Ventilation with DX connection - Control over fresh air temperature

Daikin offers a range of inverter condensing units to be used in combination with Daikin AHUs for ultimate control over the fresh air. There are 4 control possibilities when **combining AHU and Daikin outdoor units** hence offering all the required flexibility for any installation. Indoor units can be combined to the same outdoor unit to reduce the installation costs. For **false-ceiling installations** where space is a constraint, the VKM can fit perfectly to deliver fresh air at a comfortable temperature and it has an optional humidification element.

Five components of indoor air quality

- **Ventilation:** Ensures the provision of fresh air
- **Energy recovery:** Delivers energy savings by transferring heat and moisture between airflows
- **Air processing:** Delivers the right supply temperature to decrease the indoor unit load
- **Humidification:** Ensures relative indoor humidity levels are respected
- **Filtration:** Separates pollen, dust and pollution odours that are harmful to individuals' health



Fresh air portfolio

150 | 500 | 1.000 | 2.000 | 2.500 | 3.000 | 3.500 | 15.000 | 25.000 | 140.000 [m³/h]

Decentralised systems

NEW

D-AHU MODULAR L (SMART)

- High efficiency counterflow heat exchanger
- Free-cooling operation
- EC centrifugal fan
- Wide range of options
- Smart version connects Plug & Play to Sky Air / VRV systems

- Compact size
- High energy efficient paper recovering sensible and latent heat
- EC fan motors
- Filter clogging alarm based on pressure

VAM-FC / VAM-J

- With DX coil for temperature control
- Increased comfort
- Humidifier option

VKM-GB(M)

Centralised systems

- High efficiency aluminium plate heat exchanger
- Pre-configured sizes
- Plug & Play pre-configured controls
- With DX or water coil option

D-AHU MODULAR P

- Rotary heat exchanger (sorption and sensible technology)
- Pre-configured sizes
- Plug & Play pre-configured controls
- With DX or water coil option

D-AHU MODULAR R

- Fully customizable
- Plug & play
- 4 types of control
- With DX or water coil option

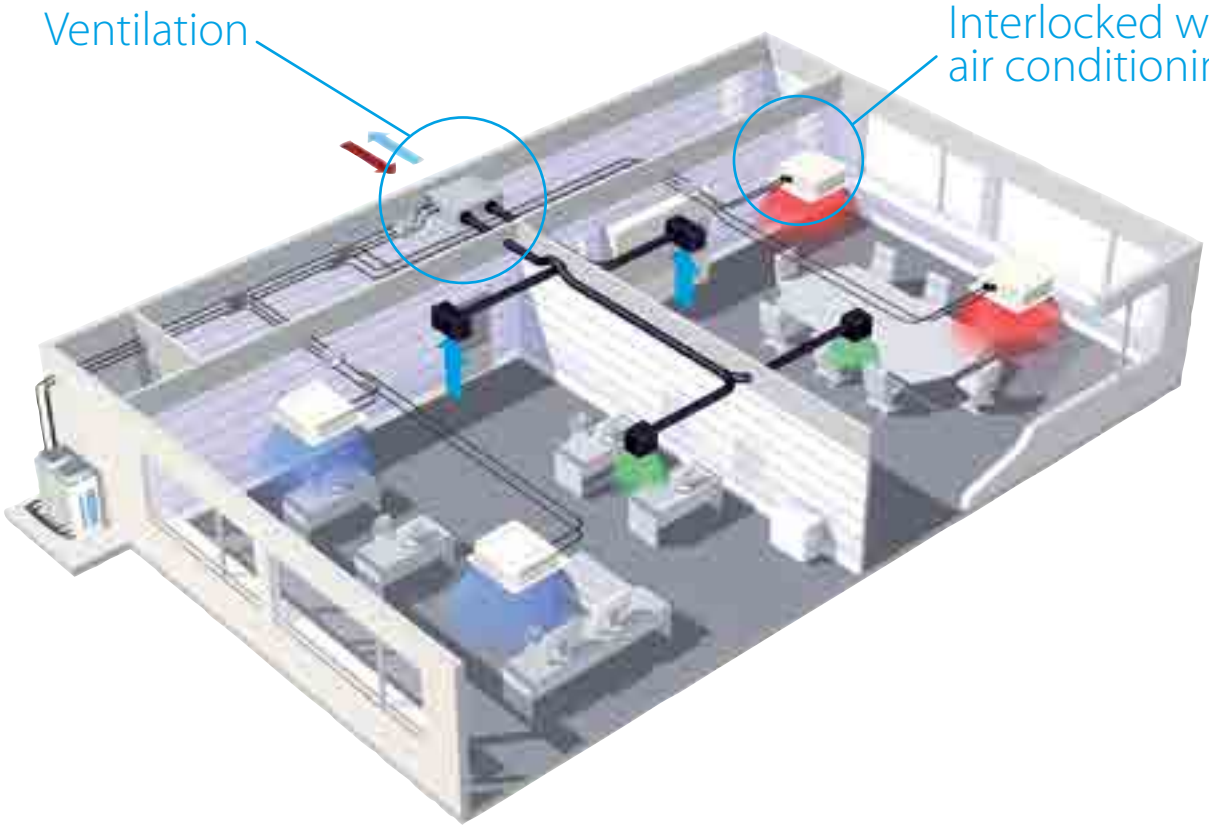
D-AHU Professional

Direct integration into the Sky Air or VRV control solution

- Saves up to 40% in running costs
- Unified control point for the complete air conditioning and ventilation installation

Wide range of decentralised ERV/HRV units to suit the building needs

Energy / Heat Reclaim Ventilation



NEW

Premium efficiency heat recovery unit Modular L (Smart) (ALB-(RBS/LBS))

54

- Heat recovery unit
- Counter flow plate heat exchanger
- ESP up to 600 Pa
- Operates as stand-alone or combined with Sky Air or VRV systems

Heat reclaim ventilation (VAM-FC/J)

21

- Heat and moisture recovery
- Achieve free cooling with fresh outdoor air
- Operates as stand-alone or combined with Sky Air or VRV systems

Heat reclaim ventilation with humidification and air processing (VKM-GB(M))

30

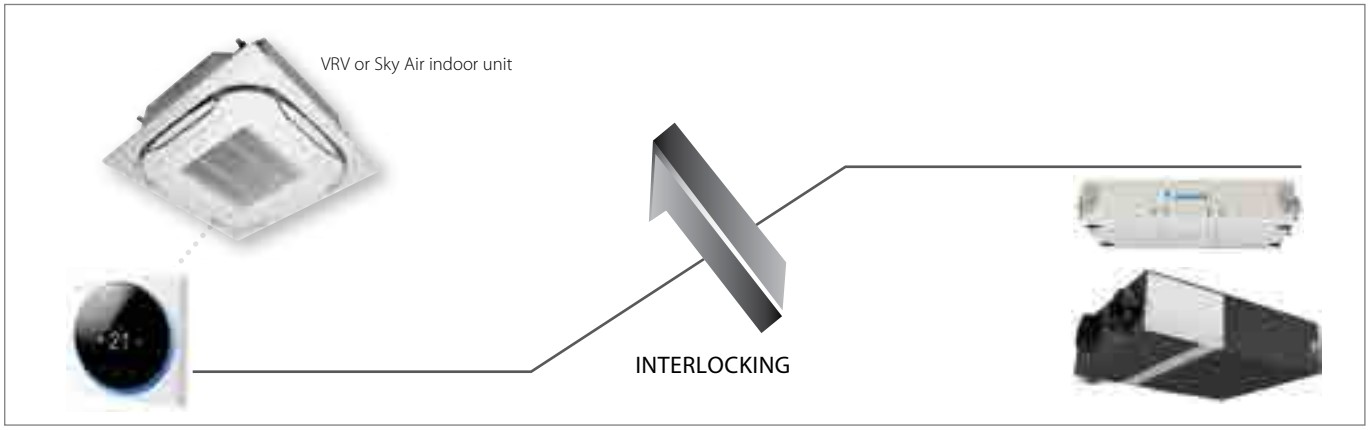
- Heat and moisture recovery
- Humidification and air processing (preconditioning) of fresh air
- Achieve free cooling with fresh outdoor air
- Plug & Play piping and wiring connection with Daikin VRV unit(s)

Benefits of Daikin ERV/HRV systems

1 Market leading controls & connectivity

Interlock of the ventilation operation with the air conditioner operation

Interlock of the ventilation operation with the air conditioner operation greatly simplifies overall system control. The same remote controller centralises air conditioning and ventilation functions. By incorporating a variety of centralised control equipments, the user can build a large, high grade centralised control system.



Madoka

User-friendly wired remote contoller with premium design


White


Silver


Black

BRC1H519W/S/K

- Sleek and elegant design
- Intuitive touch button control
- 3 color versions
- Advanced settings and monitoring can be easily done via your smartphone
- Flat back for easy wall installation
- Compact to fit standard size socket boxes

reddot award 2018 winner

DESIGN AWARD 2018


Advanced user settings


Field settings

Plug & Play - integrated ventilation

- One-stop shop for all system components, which results in streamlined design and business solutions.
- Efficient project follow-up, installation and subsequent commissioning and maintenance.
- Ventilation easily interlocked to air conditioner operation thanks to simplified system control.

2 Easy and flexible installation

High Static Pressure

External static pressure (ESP) up to 600 Pa (ALB) facilitates the use with flexible ducts of varying lengths.

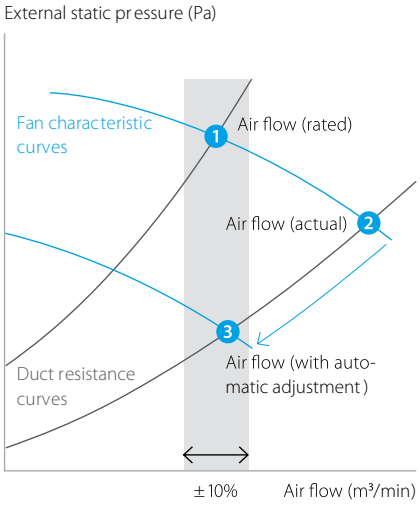
Automatic Airflow Adjustment function

Automatically selects the most appropriate fan curve to achieve the units' nominal air flow within ±10%

Why?

After installation the real ducting will frequently differ from the initially calculated air flow resistance → the real air flow may be much lower or higher than designed.

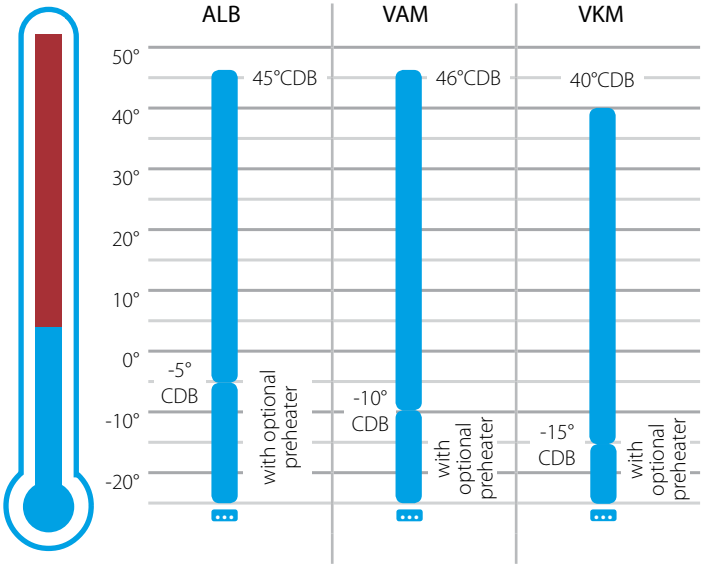
Automatic Airflow Adjustment function will adapt the unit's fan speed to any ducting automatically (45 fan curves are available on every model (ALB/VAM)), making installation much faster.



Wide operation range

The ERV/HRV unit can be installed practically anywhere.
The standard operation range (outdoor temperature) is from -15°C to 40°CDB for VKM units, from -10°C (+5°C in case of upside-down installation) to 46°CDB for VAM units, and can be extended down if a Daikin preheater is installed.

[1] Contact your local dealer for more information and restrictions



Optional pre-heater for VAM

Optional pre-heater for Modular L Smart

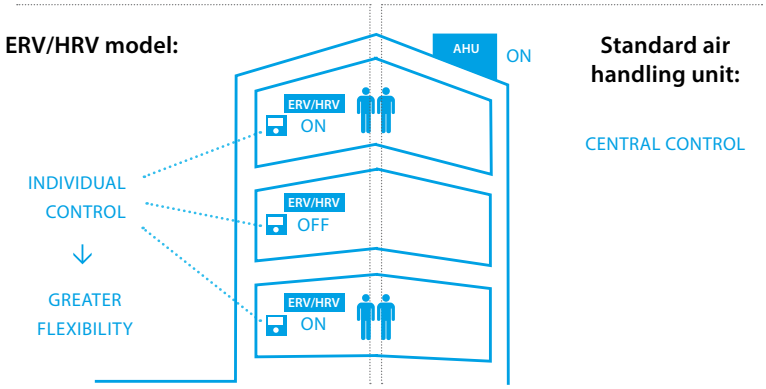
Flexible installation

Slim Design

At just 280 mm high, the slim design of the HRV unit enables it to be mounted in narrow ceiling cavities and irregularly shaped spaces

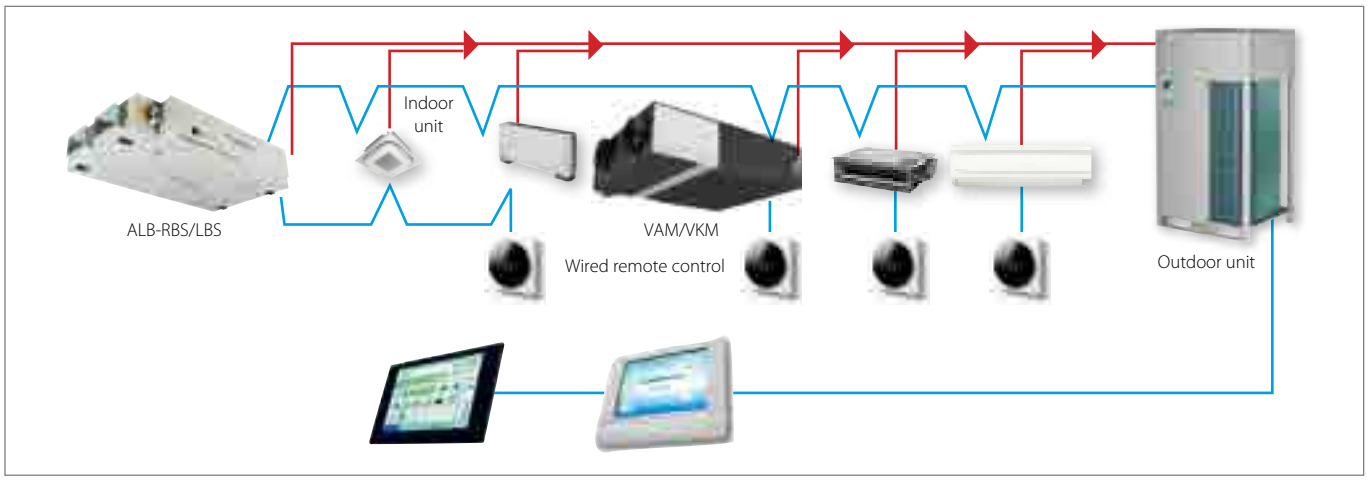
Flexible

Compared to a standard air handling unit, the HRV models provide much greater flexibility to match the actual building use, in case of a multi-tenant installation. Additionally, the renovation of a building can be carried out in phases.



"Super Wiring" System

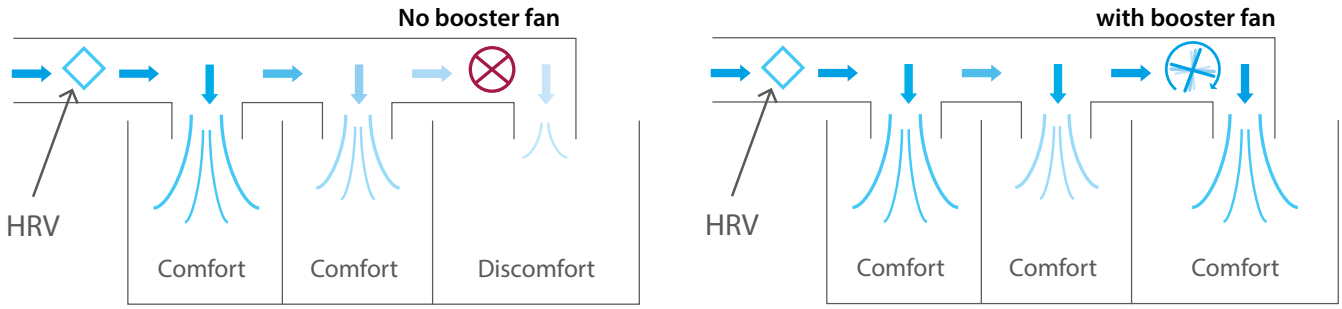
A Super Wiring system is used to enable the shared use of wiring between indoor units, outdoor units and the centralised remote control. This system makes it easy for the user to retrofit the existing system with a centralised remote control, simply by connecting it to the outdoor units. Thanks to a non polarity wiring system, incorrect connections become impossible and installation time is reduced.



Connection to field-supplied booster fan increases flexibility even more

› Longer ducting or use of central duct possible
› Overcomes actual field situation when ducting is different from calculation
› Lower cost by using the booster fan instead of replacing with a larger unit when the ESP is not matched

Example when HRV ESP is not high enough or field situation differs from calculation



3 High efficiency

Energy saving ventilation via heat recovery of both heat and humidity

Recovers up to **92%** of wasted heat

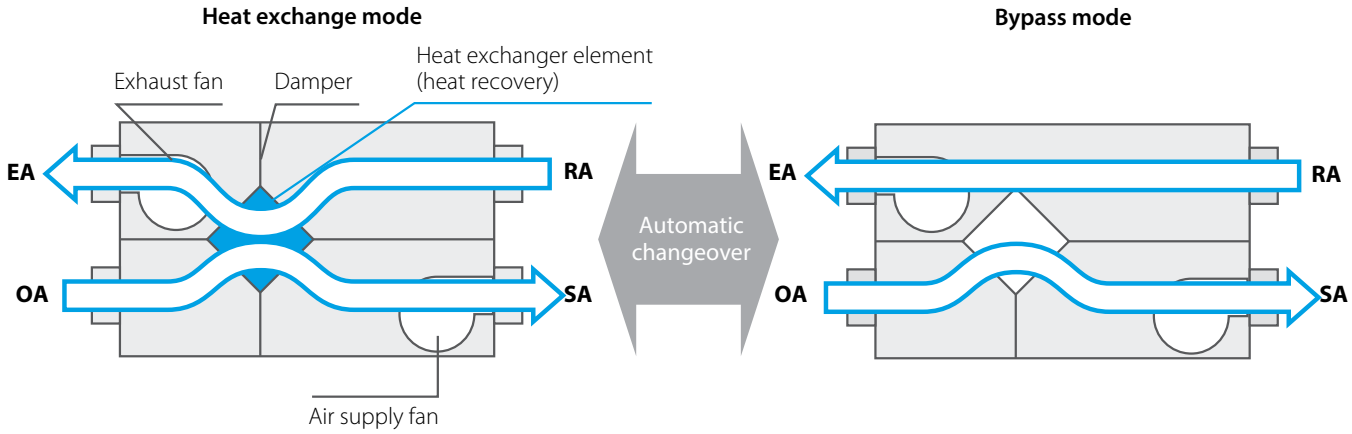
Daikin's ERV/HRV solutions prevent energy being wasted by recovering up to 92% waste heat from the outgoing air instead of simply expelling the heat, offering high energy efficiency.

ALB-RBS/LBS

Reduce the load on the air conditioning system by up to 40%

- 24% by using heat recovery ventilation (in comparison with normal ventilation fans)
- 6% by switching over to auto-ventilation mode
- 2% by using the pre-cool, pre-heat control (reduces air conditioning load by running the HRV unit after the air conditioning is switched on)
- 5% by enabling the free cooling operation overnight
- 3% by preventing over-ventilation with the optional CO_2 sensor

Different operation modes of ERV/HRV units

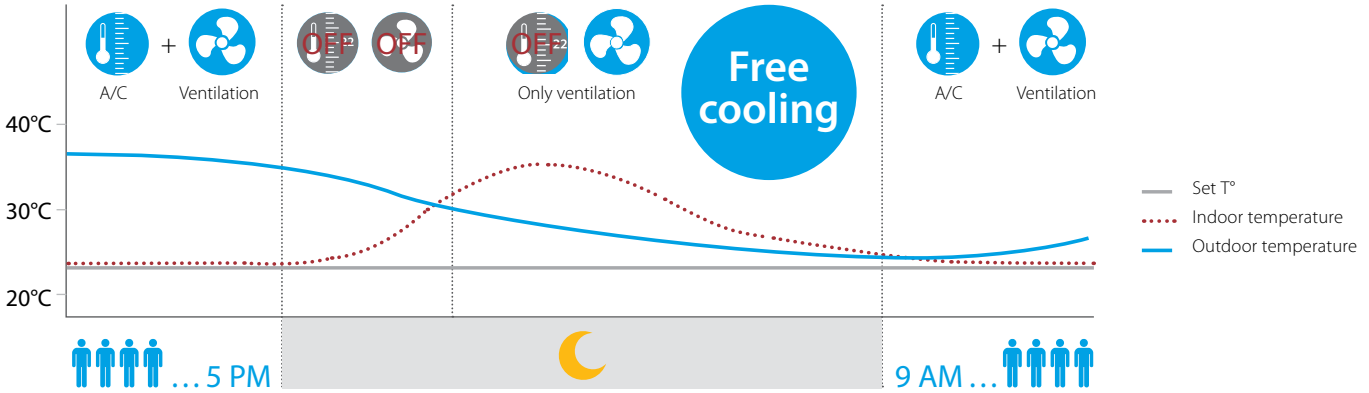


EA: Exhaust air RA: Return air (from room) OA: Outdoor air SA: Supply air (to room)

Nighttime free cooling

Nighttime free cooling operation is **an energy saving function operating at night** when the air conditioning is switched off. By ventilating rooms containing office equipment that increases room temperature, free cooling reduces the cooling load when air conditioning is switched on in the morning, reducing the daily running costs.

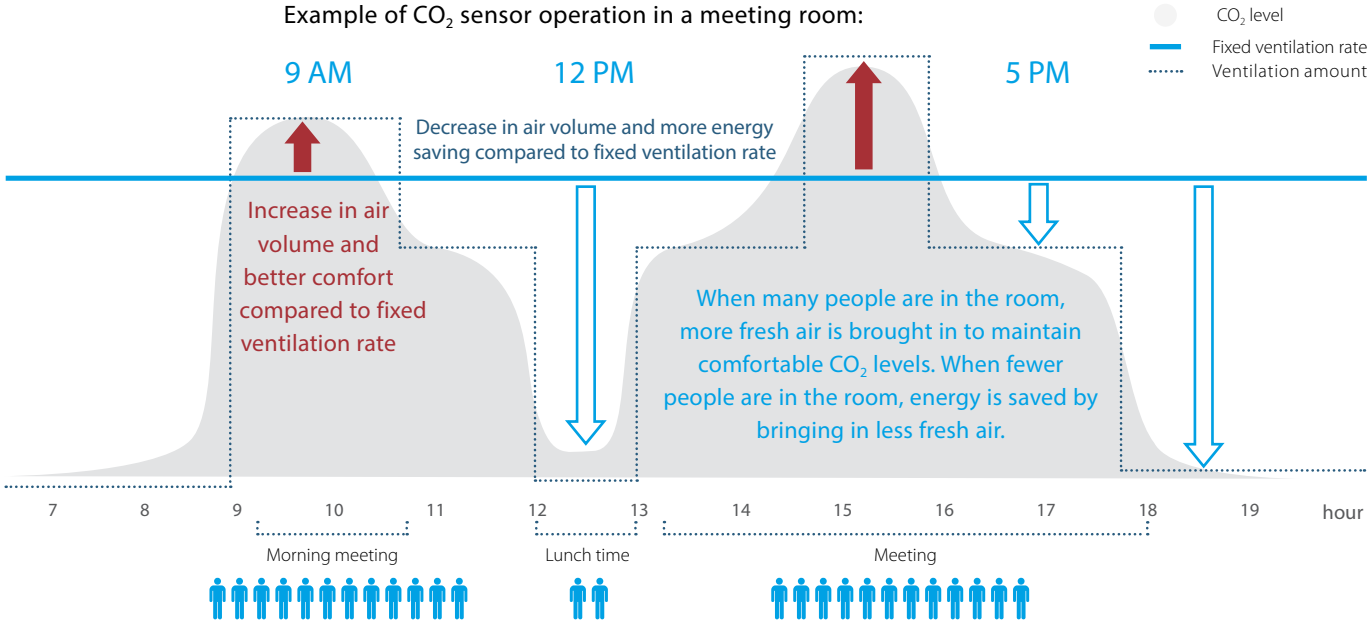
The VAM and Modular L Smart can also perform nighttime free cooling in stand alone operation. The set temperature is a field setting at installation.



Prevent energy losses from over-ventilation with CO_2 sensor

Enough fresh air is needed to create an enjoyable environment, but ventilating constantly is leading to energy waste. Therefore an optional CO_2 sensor can be installed which switches off the ventilation system when there is enough fresh air in the room, thus saving energy.

Example of CO_2 sensor operation in a meeting room:



Up to 75% less energy consumed for ventilation in Herten building

A two-year test at a 'netZero Energy Building' in Herten has revealed that a huge energy saving is possible by using CO_2 sensors in conjunction with the Daikin VAM systems.

4 Best Comfort

- High quality indoor air
- Whisper quiet

Optional medium and fine dust filters available

Optional filters up to ePM_1 70% (F8, VAM) and ePM_1 80% (F9, ALB) are available to meet your customer request or the local legislation.

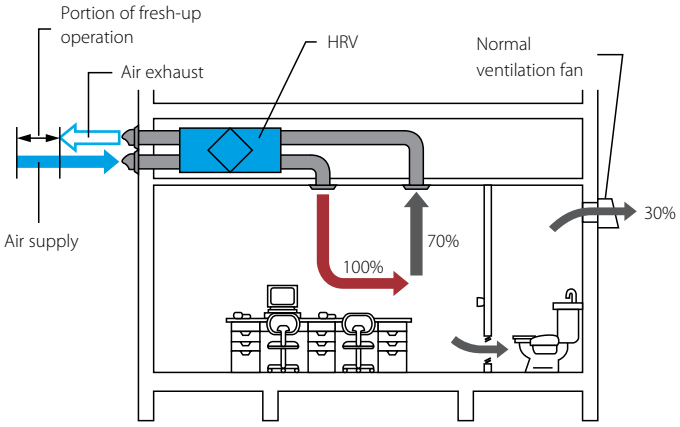
The optional filter comply with ISO 16890

Can operate in over and underpressure to prevent unpleasant odours

The user can select 2 fresh-up modes via the remote control for a more comfortable air environment.

1. Supply rich mode (overpressure):

A higher air supply than air exhaust maintains proper room pressure to prevent back-flow of toilet/kitchen odours or moisture inflow.

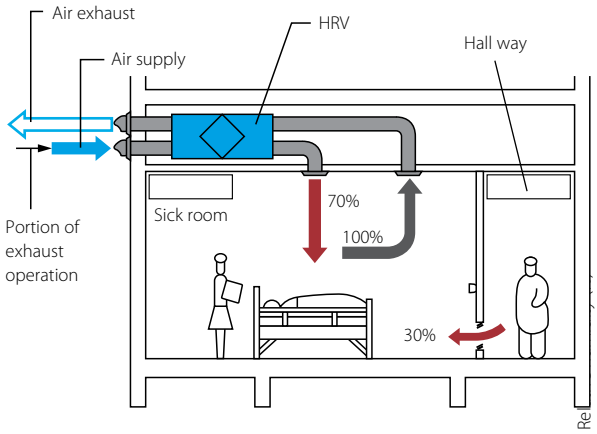


eg. Office

Preventing that toilet odours flow to the office

2. Exhaust fresh-up (underpressure):

A higher exhaust air than air supply decreases room pressure to prevent the leaking of odours or floating bacteria into other rooms.



eg. Hospital

No bacteria can flow from the sick room to the hall way

Low operation sound level

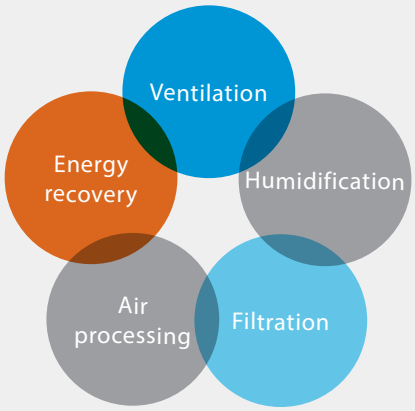
Continuous research by Daikin into reducing operation sound levels has resulted in sound pressure levels down to 20,5dBA (VAM150).

Daikin ERV/HRV unit

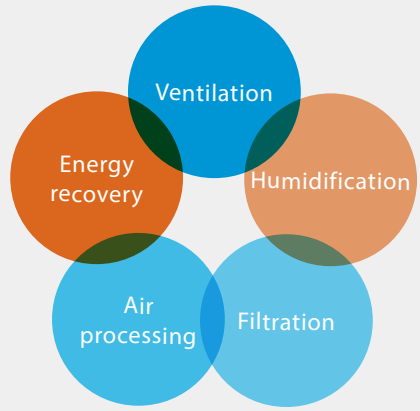
DBA	PERCEIVED LOUDNESS	SOUND
0	Treshold of hearing	-
20	Extremely soft	Rustling leaves
40	Very soft	Quiet room
60	Moderately loud	Normal conversation
80	Very loud	City traffic noise
100	Extremely loud	Symphonic orchestra
120	Threshold of feeling pain	Jet taking off

ERV
energy reclaim ventilation

Heat reclaim ventilation, air processing and humidification



VAM-FC / VAM-J



VKM-GB(M)

High efficiency

- Energy saving ventilation via enthalpy recovery of both heat and humidity
- Reduce the load on the air conditioning system by up to 40%
- Nighttime free cooling
- Prevent energy losses from over-ventilation with CO_2 sensor

Maximum flexibility

- Plug & Play - integrated ventilation
- Flexible installation
- Wide range of units
- High static pressure
- Wide operation range
- Connection to field-supplied booster fan increases flexibility even more (VAM-FC/J only)
- No drain needed (VAM-FC/J only)

High indoor air quality & whisper quiet operation

- Optional medium and fine dust filters (VAM-FC/J only)
- Can operate in over and underpressure to prevent unpleasant odours
- Low operation sound level

Energy saving ventilation via enthalpy recovery of both heat and humidity

Recovers up to **85%** of waste heat

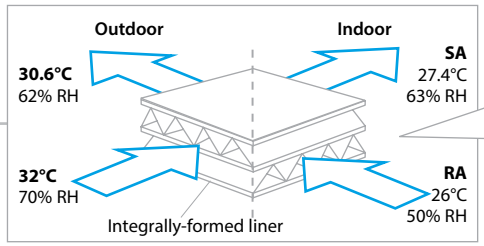
Daikin's ERV solutions prevent energy being wasted by recovering up to 85% waste heat from the outgoing air instead of simply expelling the heat, offering high energy efficiency.

Specially developed heat exchange element

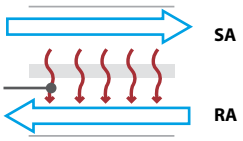
The heat exchange element rapidly recovers heat contained in latent heat (vapour).

Operation of the high efficiency paper.

Cross flow of air to exchange heat and moisture.



Temperature and humidity are exhanged between the layers



RH: Relative Humidity
SA: Supply Air (to room)
RA: Return Air (from room)

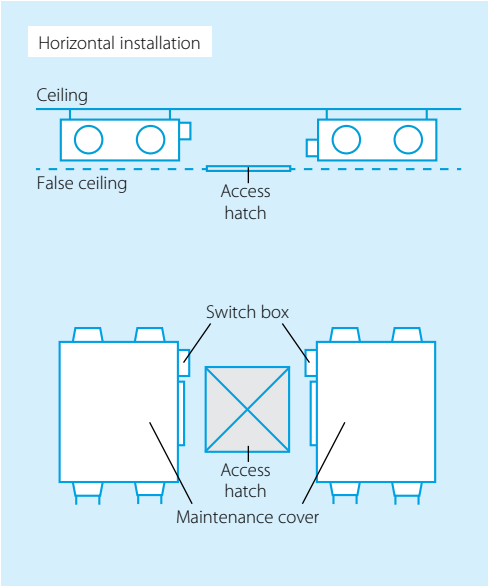
High indoor comfort

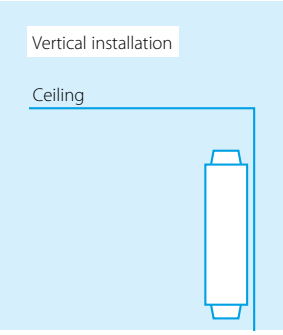
Thanks to the heat and moisture exchange the hot and humid outside air is brought to levels close to indoor conditions saving on the air conditioning running cost and maintaining comfort.

Can be installed horizontally, upside down or vertically

The VAM models do not require a drain, giving greater flexibility for the installation of the units.

In case of upside down or vertical installation the minimum outside temperature is +5°C instead of -10°C.



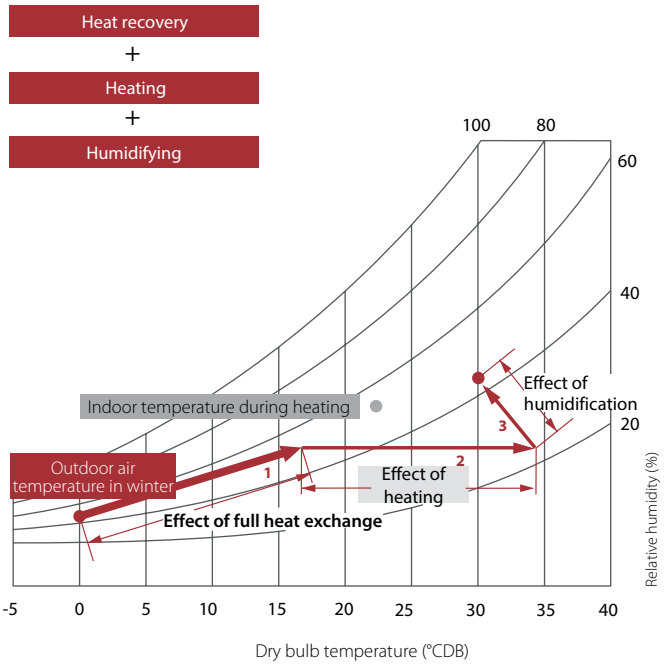


Creating a high quality environment

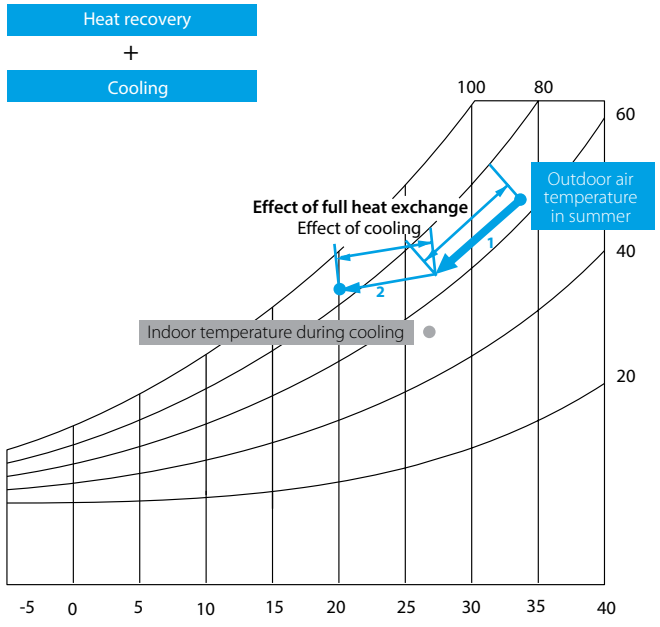
Maintain a comfortable indoor environment without fluctuations in room temperature.

How do the ERV units work?

In heating



In cooling

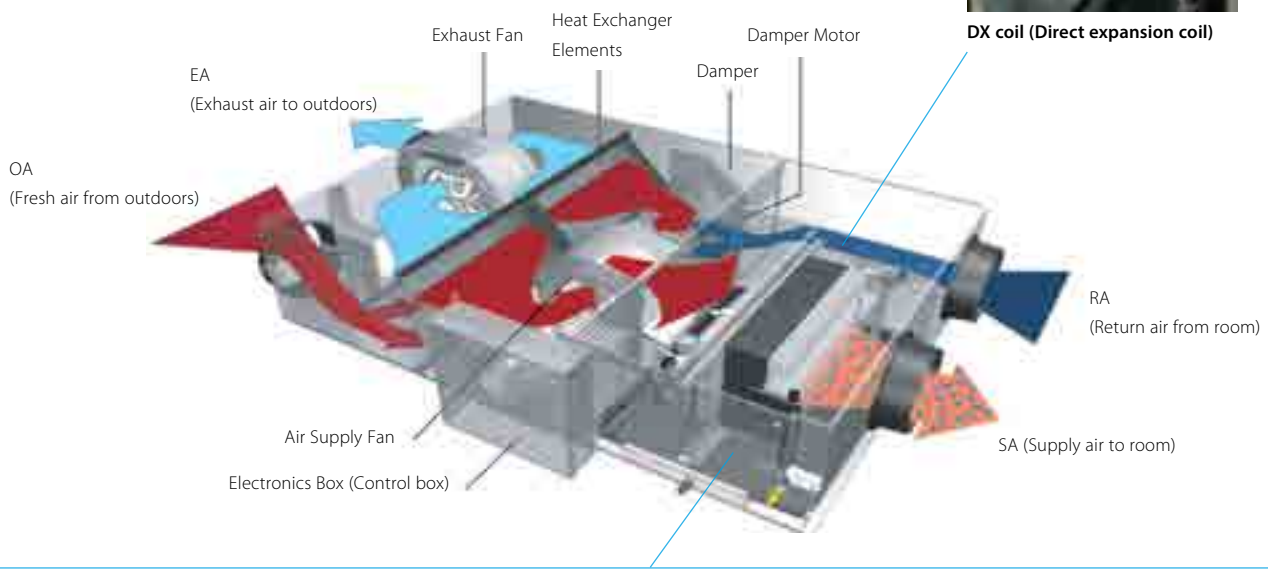


In heating we bring in cold outdoor fresh air and want to avoid cold draught and dry air.	In cooling we bring in hot outdoor fresh air and want to prevent additional load on the air conditioning system and too hot indoor temperatures.
1. Cold outside air is crossed with hot inside air. In the example the incoming air is heated up from 0 to 16°CDB while keeping the same relative humidity. This is the effect of the heat and moisture exchange.	**1.** Hot outside air is crossed with cold inside air. In the example the incoming air is cooled down from 34 to 27°CDB while keeping the same relative humidity. This is the effect of the heat and moisture exchange.
2. The DX coil further heats up the air to prevent cold draught. In the example the incoming air is further heated from 16 to 34°CDB. Because the air is heated up the relative humidity decreases.	**2.** The DX coil further cools down the air to prevent hot indoor temperatures and reduce the load on the air conditioning system. In the example the incoming air is further cooled down from 27 to 20°CDB.
3. To counter negative effects of dry air the air passes the humidifier which adds moisture in case needed. In the example the relative humidity rises from 22 to a comfortable 42%.	**3.** No humidification is needed in cooling as the air is not dried out
The result is incoming fresh air with the same humidity and slightly higher temperature for perfect comfort.	**The result is incoming fresh air with a slightly lower temperature for perfect comfort.**

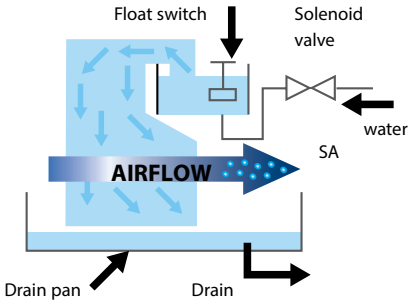
Humidification

Operation example: humidification & air processing (heating mode)[1]

DX coil (Direct expansion coil)



Humidifier element:
Utilizing the principle of capillary action, water is permeated throughout the humidifier element. The heated air from the DX coil passes through the humidifier and absorbs the moisture.

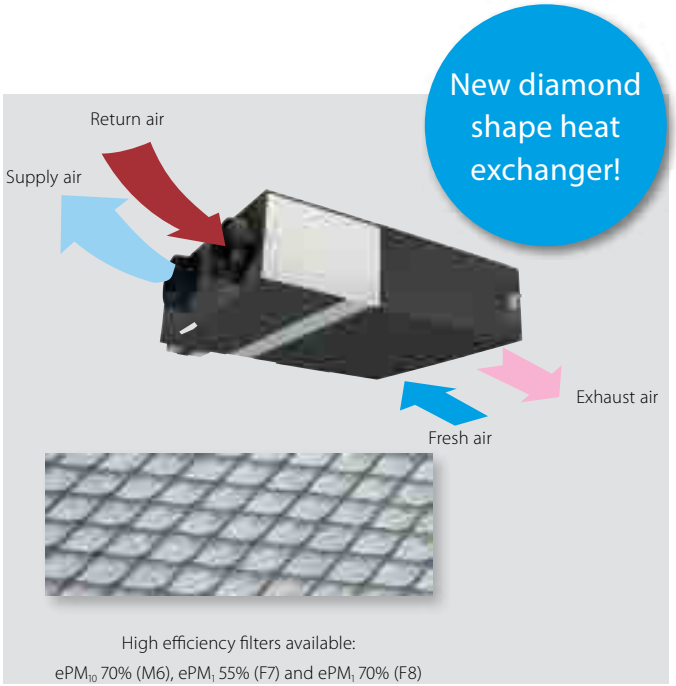


[1] VKM-GM example

Energy reclaim ventilation

Ventilation with heat recovery as standard

- **NEW** Thinnest High Efficiency Enthalpy Heat Exchanger in the market (J-series)
- Energy saving ventilation using indoor heating, cooling and moisture recovery
- Free cooling possible when outdoor temperature is below indoor temperature (eg. during nighttime)
- Prevent energy losses from over-ventilation while improving indoor air quality with optional CO_2 sensor
- **NEW** Possibility to change ESP via wired remote control allows optimisation of the supply air volume (J - series)
- Can be used as stand alone or integrated in the Sky Air or VRV system
- Wide range of units: air flow rate from 150 up to 2,000 m^3/h
- Shorter installation time thanks to easy adjustment of nominal air flow rate, so less need for dampers compared with traditional installation
- No drain piping needed
- Can operate in over- and under pressure
- Total solution for fresh air with Daikin supply of both VAM / VKM and electrical heaters



ErP COMPLIANT

Ventilation				VAM/VAM	150FC	250FC	350J	500J	650J	800J	1000J	1500J	2000J
Power input - 50Hz	Heat exchange mode	Nom.	Ultra high/High/Low	kW	0,132/0,111/0,058	0,161/0,079/0,064	0,097 /0,070 /0,039	0,164 /0,113 /0,054	0,247 /0,173 /0,081	0,303 /0,212 /0,103	0,416 /0,307 /0,137	0,548 /0,384 /0,191	0,833 /0,614 /0,273
	Bypass mode	Nom.	Ultra high/High/Low	kW	0,132/0,111/0,058	0,161/0,079/0,064	0,085 /0,061 /0,031	0,148 /0,100 /0,045	0,195 /0,131 /0,059	0,289 /0,194 /0,086	0,417 /0,300 /0,119	0,525 /0,350 /0,156	0,835 /0,600 /0,239
Temperature exchange efficiency - 50Hz	Ultra high/High/Low			%	77,0 (1) /72,0 (2)/ 78,3 (1) /72,3 (2)/ 82,8 (1) /73,2 (2)	74,9 (1) /69,5 (2)/ 76,0 (1) /70,0 (2)/ 80,1 (1) /72,0 (2)	85,1 /86,7 /90,1	80,0 /82,5 /87,6	84,3 /86,4 /90,5	82,5 /84,2 /87,7	79,6 /81,8 /86,1	83,2 /84,8 /88,1	79,6 /81,8 /86,1
Enthalpy exchange efficiency - 50Hz	Cooling	Ultra high/High/Low		%	60,3 (1)/61,9 (1)/ 67,3 (1)	60,3 (1)/61,2 (1)/ 64,5 (1)	65,2 /67,9/ 74,6	59,2 /61,8 / 69,5	59,2 /63,8 / 73,1	67,7 /70,7 / 76,8	62,6 /66,4 / 74,0	68,9 /71,8 / 77,5	62,6 /66,4 / 74,0
	Heating	Ultra high/High/Low		%	66,6 (1)/67,9 (1)/ 72,4 (1)	66,6 (1)/67,4 (1)/ 70,7 (1)	75,5 /77,6 / 82,0	69,0 /72,2 / 78,7	73,1 /76,3 / 82,7	72,8 /75,3 / 80,2	68,6 /71,7 / 77,9	73,8 /76,1 / 80,8	68,6 /71,7 / 77,9
Operation mode					Heat exchange mode, bypass mode, fresh-up mode								
Heat exchange system					Air to air cross flow total heat (sensible + latent heat) exchange								
Heat exchange element					Specially processed non-flammable paper								
Dimensions	Unit	HeightxWidthxDepth		mm	285x776x525		301x1.113x886		368x1.354x920	368x1.354x1.172		731x1.354x1.172	
Weight	Unit			kg	24,0		46,5		61,5	79,0		157	
Casing	Material				Galvanised steel plate								
Fan	Air flow rate - 50Hz	Heat exchange mode	Ultra high/High/Low	m^3/h	150 /140 /105	250 /230 /155	350 (1)/ 300 (1)/ 200 (1)	500 (1)/ 425 (1)/ 275 (1)	650 (1)/ 550 (1)/ 350 (1)	800 (1)/ 680 (1)/ 440 (1)	1.000 (1)/ 850 (1)/ 550 (1)	1.500 (1)/ 1.275 (1)/ 825 (1)	2.000 (1)/ 1.700 (1)/ 1.100 (1)
		Bypass mode	Ultra high/High/Low	m^3/h	150 /140 /105	250 /230 /155	350 (1)/ 300 (1)/ 200 (1)	500 (1)/ 425 (1)/ 275 (1)	650 (1)/ 550 (1)/ 350 (1)	800 (1)/ 680 (1)/ 440 (1)	1.000 (1)/ 850 (1)/ 550 (1)	1.500 (1)/ 1.275 (1)/ 825 (1)	2.000 (1)/ 1.700 (1)/ 1.100 (1)
	External static pressure - 50Hz	Ultra high/High/Low		Pa	90 /87/40	70 /63/25	90 (1)/70,0 /50,0 (1)						
Air filter	Type				Multidirectional fibrous fleeces		Multidirectional fibrous fleeces (G3)						
Sound pressure level - 50Hz	Heat exchange mode	Ultra high/High/Low		dBA	27,0 /26,0 /20,5	28,0 /26,0 /21,0	34,5 (1)/ 32,0 (1)/ 29,0 (1)	37,5 (1)/ 35,0 (1)/ 30,5 (1)	39,0 (1)/ 36,0 (1)/ 31,0 (1)	39,0 (1)/ 36,0 (1)/ 30,5 (1)	42,0 (1)/ 38,5 (1)/ 32,5 (1)	42,0 (1)/ 39,0 (1)/ 33,5 (1)	45,0 (1)/ 41,5 (1)/ 36,0 (1)
	Bypass mode	Ultra high/High/Low		dBA	27,0 /26,5 /20,5	28,0 /27,0 /21,0	34,5 (1)/ 32,0 (1)/ 28,0 (1)	38,0 (1)/ 35,0 (1)/ 29,5 (1)	38,0 (1)/ 34,5 (1)/ 30,5 (1)	40,0 (1)/ 36,5 (1)/ 30,5 (1)	42,5 (1)/ 40,0 (1)/ 32,5 (1)	42,0 (1)/ 39,0 (1)/ 32,5 (1)	45,0 (1)/ 41,0 (1)/ 35,0 (1)
Operation range	Around unit			°CDB	-		0°C~40°CDB, 80% RH or less						
Connection duct diameter				mm	100	150	200		250			2x250	
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/60/220-240/220								
Current	Maximum fuse amps (MFA)			A	15.0		16.0						
Specific energy consumption (SEC)	Cold climate			kWh/(m^2.a)	-56,0 (5)	-60,5 (5)	-						
	Average climate			kWh/(m^2.a)	-22,1 (5)	-27,0 (5)	-						
	Warm climate			kWh/(m^2.a)	-0,100 (5)	-5,30 (5)	-						
SEC class					D / See note 5	B / See note 5	-						
Maximum flow rate at 100 Pa ESP	Flow rate			m^3/h	130	207	-						
	Electric power input			W	129	160	-						
Sound power level (Lwa)				dB	40	43	51	54	58		61	62	65
Annual electricity consumption				kWh/a	18,9 (5)	13,6 (5)	-						
Annual heating saved	Cold climate			kWh/a	41,0 (5)	40,6 (5)	-						
	Average climate			kWh/a	80,2 (5)	79,4 (5)	-						
	Warm climate			kWh/a	18,5 (5)	18,4 (5)	-						

(1)Measured according to JIS B 8628 | (2)Measured at reference flow rate according to EN13141-7 | Measured according to EN308 : 1997 | In accordance with commission regulation (EU) No 1254/2014 | In accordance with commission regulation (EU) No 1253/2014 | At reference flow rate in accordance with commission regulation (EU) No 1254/2014 | Clean the filter when the filter icon appears on the controller screen. Regular filter cleaning is important for delivered air quality and for the unit's energy efficiency.

VH

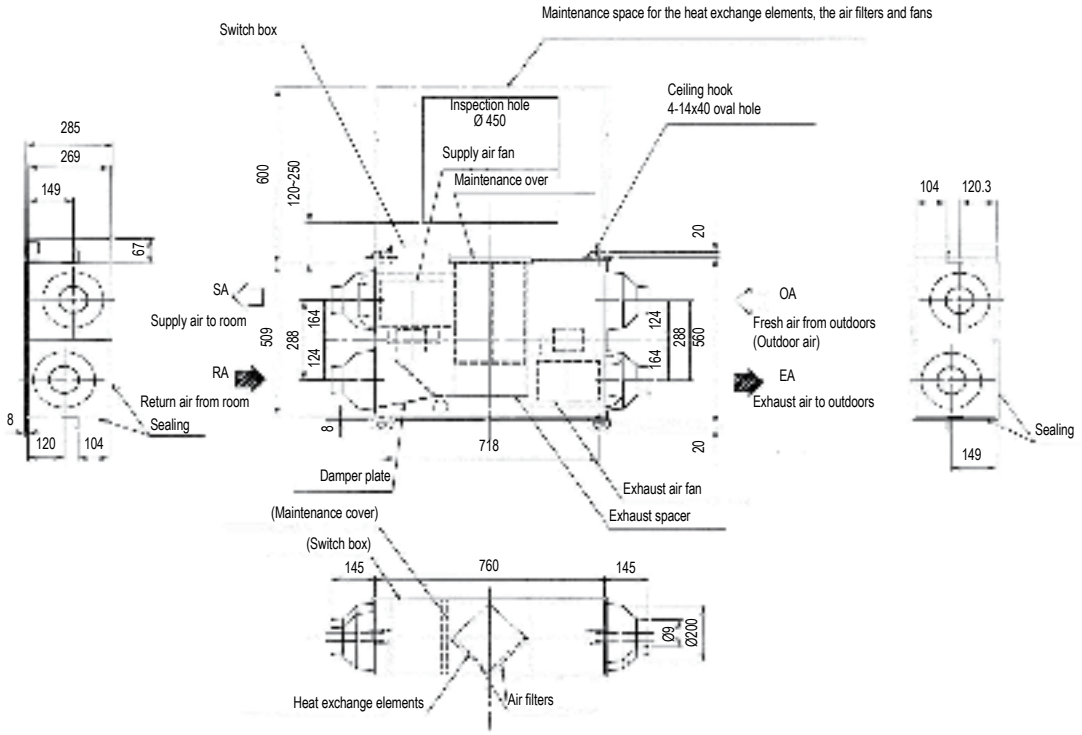
- Total solution for fresh air with Daikin supply of both VAM and electrical heaters
- Increased comfort in low outdoor temperature thanks to the heated outdoor air
- Integrated electrical heater concept (no additional accessories required)
- Standard dual flow and temperature sensor
- Flexible setting with adjustable setpoint
- Increased safety with 2 cut-outs: manual & automatic
- BMS integration thanks to:
  - Volt free relay for error indication
  - 0-10VDC input for setpoint control

ELECTRICAL HEATER FOR VAM VH	(VH)
Supply voltage	220/250V ac 50/60 Hz. +/-10%
Output current (maximum)	19A at 40°C (ambient)
Temperature sensor	5k ohms at 25°C (table 502 1T)
Temperature control range	0 to 40°C / (0-10V 0-100%)
Control fuse	20 x 5mm 250mA
LED indicators	Power ON - Yellow Heater ON - Red (solid or flashing, indicating pulsed control) Airflow fault - Red
Mounting holes	98mm x 181mm centres 5 mm ø holes
Maximum ambient adjacent to terminal box	35°C (during operation)
Auto high temp. cutout	100°C Pre-set
Man. reset high temp. cutout	125°C Pre-set
Run relay	1A 120V AC or 1A 24V DC
BMS setpoint input	0-10VDC

VH		1B	2B	3B	4B	4/AB	5B
Capacity	kW	1	1	1	1,5	2,5	2,5
Duct diameter	mm	100	150	200	250	250	300
Connectable VAM		VAM150FC	VAM250FC	VAM500FC	VAM800FC	VAM800FC	VAM1500FC
		-	VAM350FC	VAM650FC	VAM1000FC	VAM1000FC	VAM2000FC

For the selection of the appropriate capacity, please refer to the VAM selection software.

VAM150FC

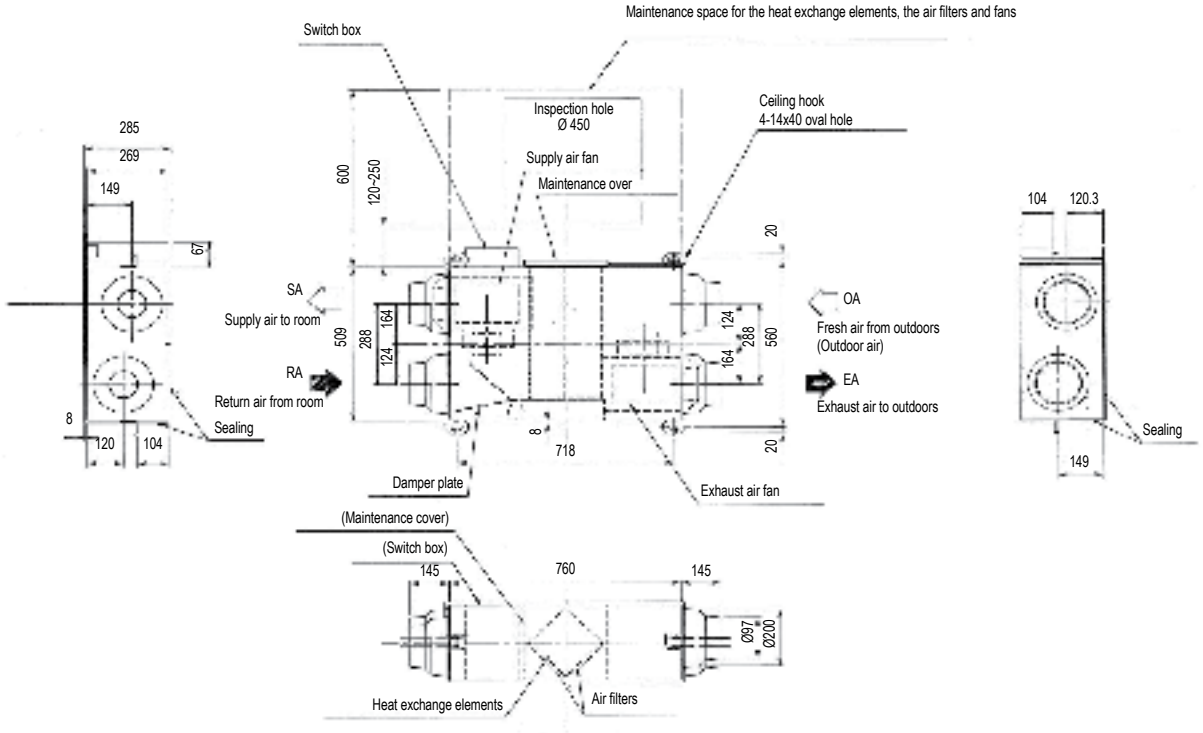


NOTE

1 Be sure to provide the inspection hole (450x450 mm) to inspect the air filters, the exchange elements and fans.

3TW27874-1

VAM250FC

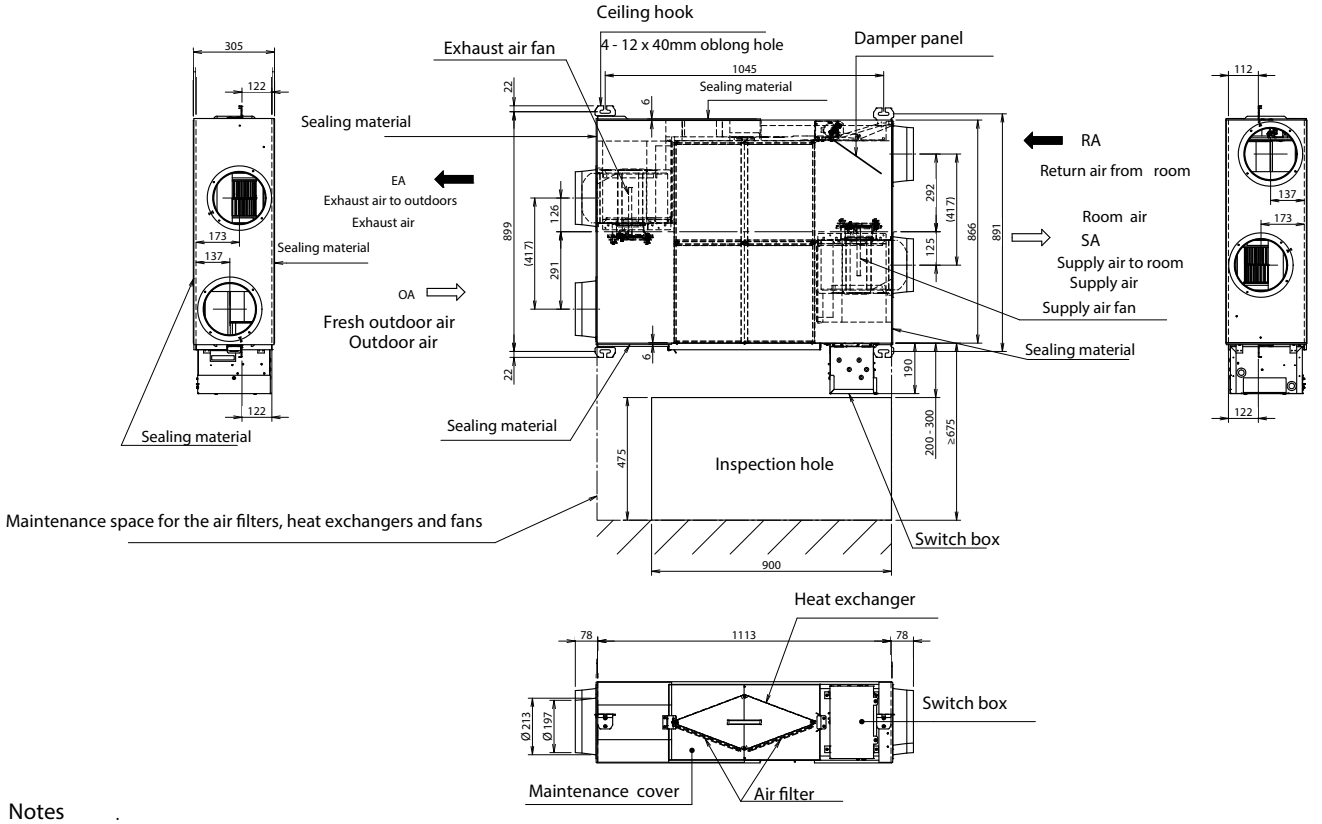


NOTE

1 Be sure to provide the inspection hole (450x450 mm) to inspect the air filters, the exchange elements and fans.

3TW27884-1

VAM350-500J

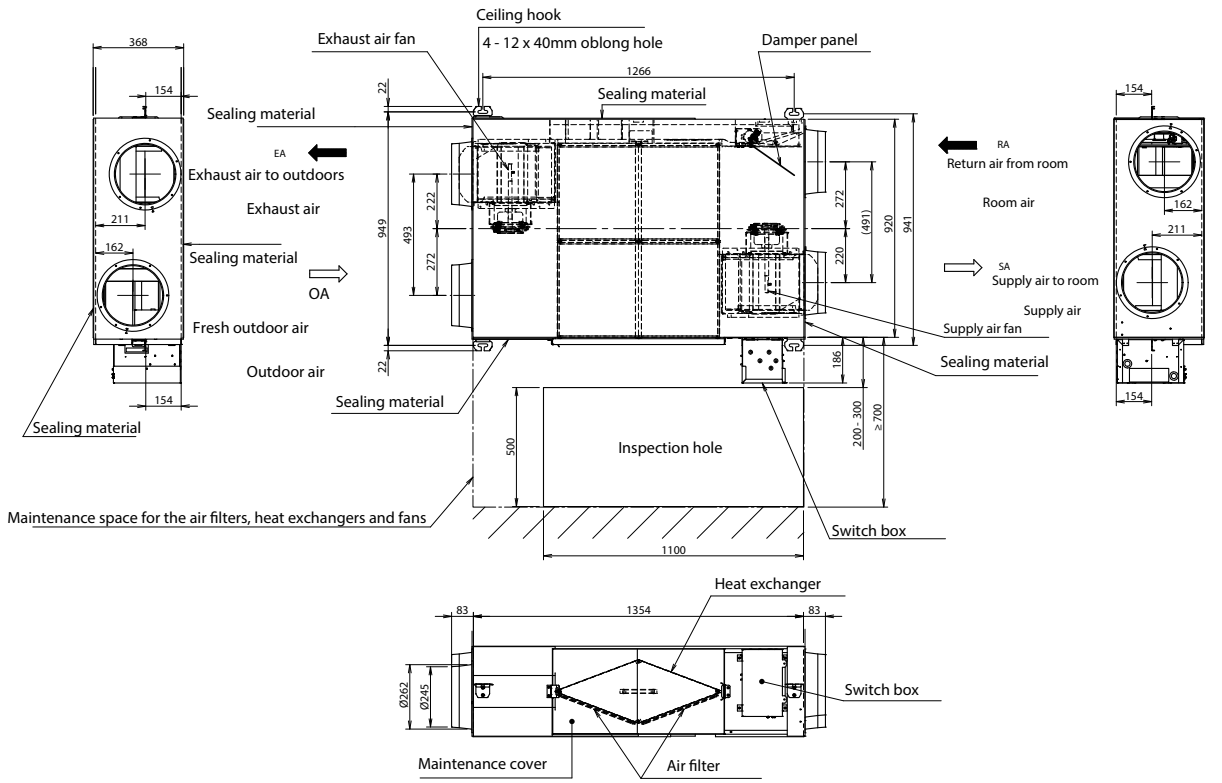


Notes :

1. To allow for the inspection of the air filters, heat exchangers, and fans, be sure to provide the inspection hole.

3D112815B

VAM650J

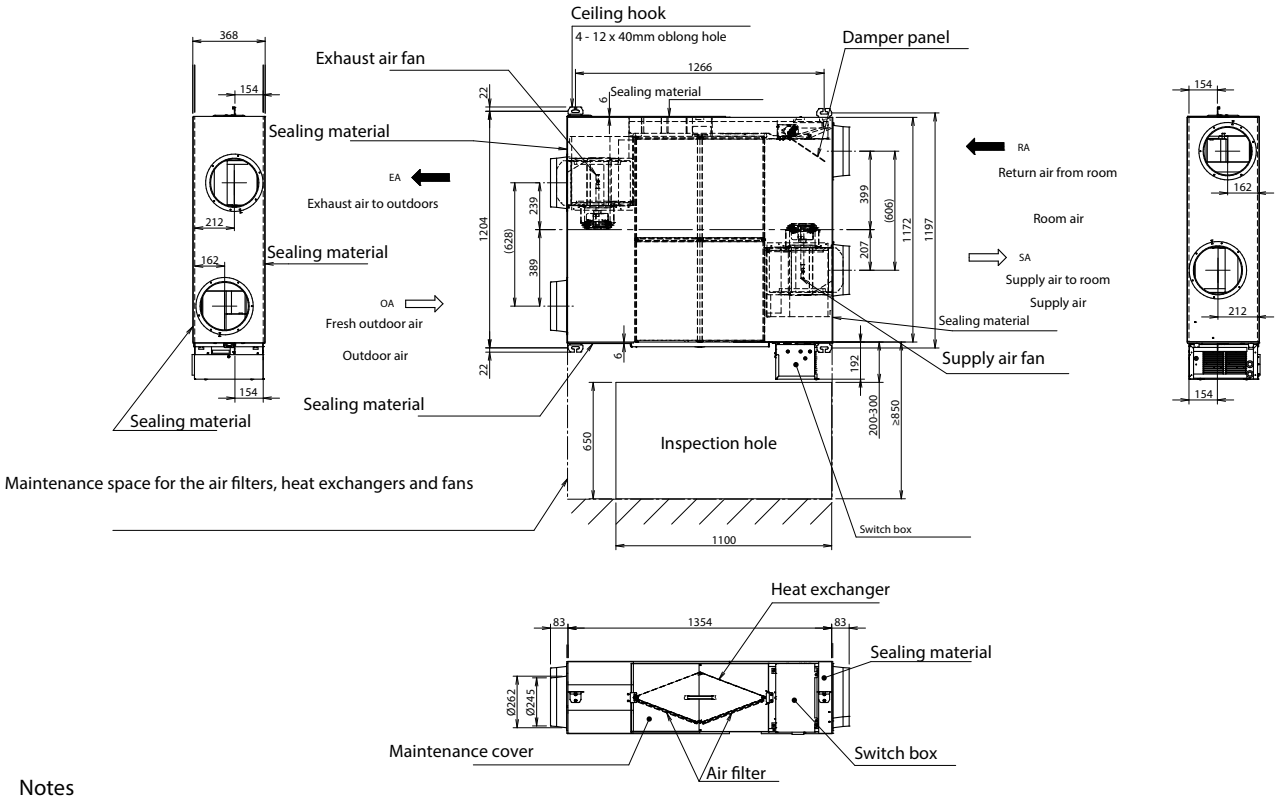


Notes

1.To allow for the inspection of the air filters, heat exchangers, and fans, be sure to provide the inspection hole.

3D112816B

VAM800-1000J

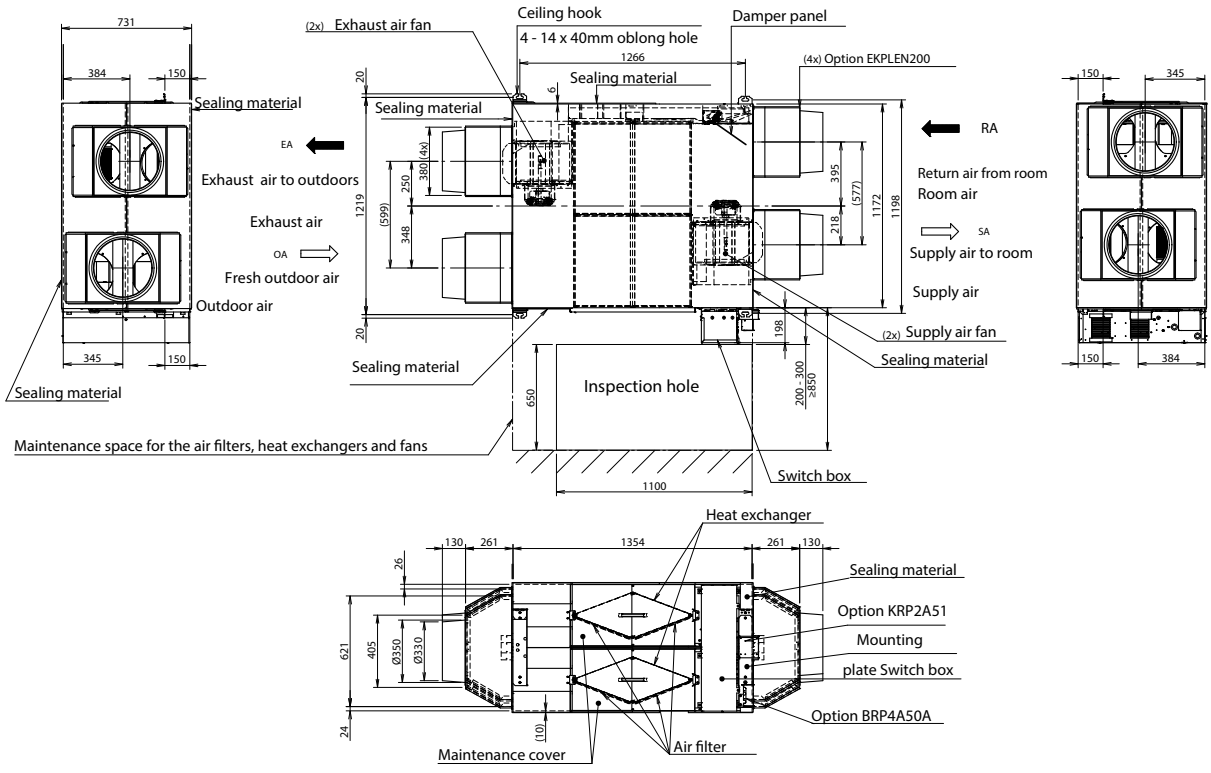


Notes

1.To perform maintenance on the air filter, it is required to provide a service access panel.

3D112817C

VAM1500-2000J

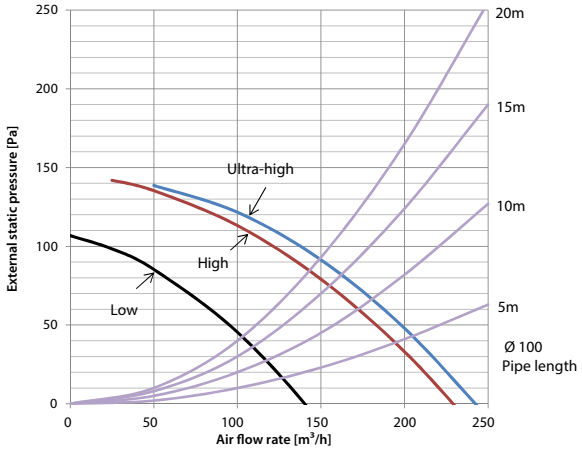


Notes:

1. To allow for the inspection of the air filters, heat exchangers, and fans, be sure to provide the inspection hole.

3D112818B

VAM150FC

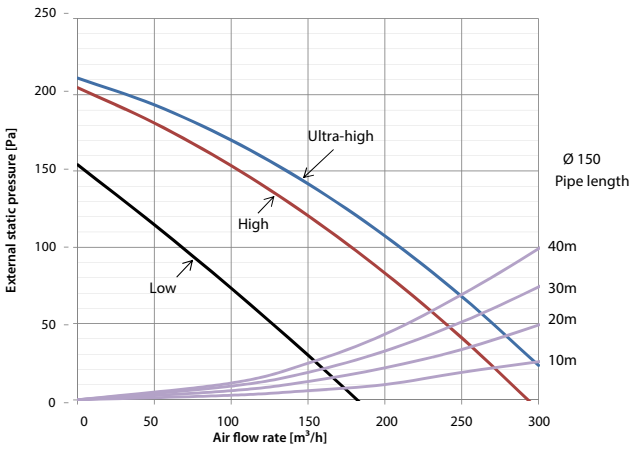


Notes

1. The fan speeds are valid for ·230·V, ·50·Hz power supply.

4D100379

VAM250FC

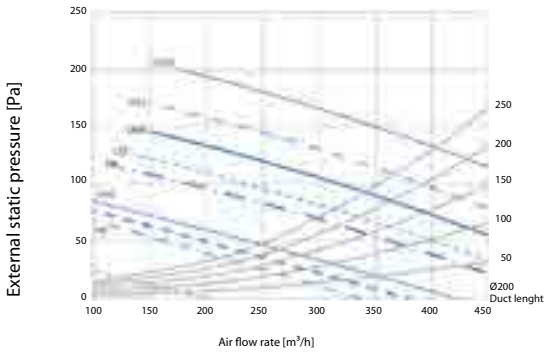


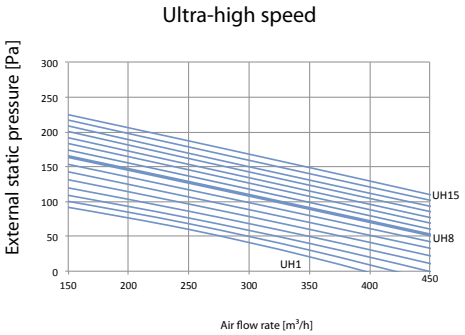
Notes

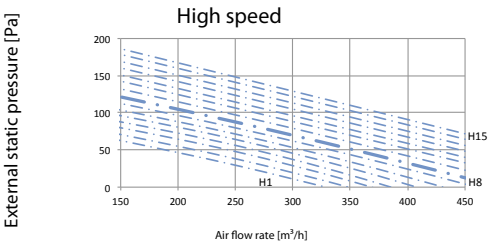
1. The fan speeds are valid for ·230·V, ·50·Hz power supply.

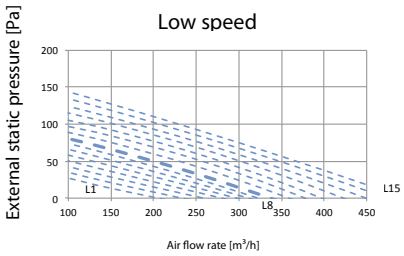
4D100380

VAM350J









Notes

1. The fan curves are determined with ·1/3· of the ESP on the outdoor side (·EA & OA·), and ·2/3· of the ESP on the indoor side (·RA & SA·).
EA= Exhaust air
OA= Outdoor air
RA = Room air
SA = Supply air
2. Measured according to ·JIS B 8628 - 2003·

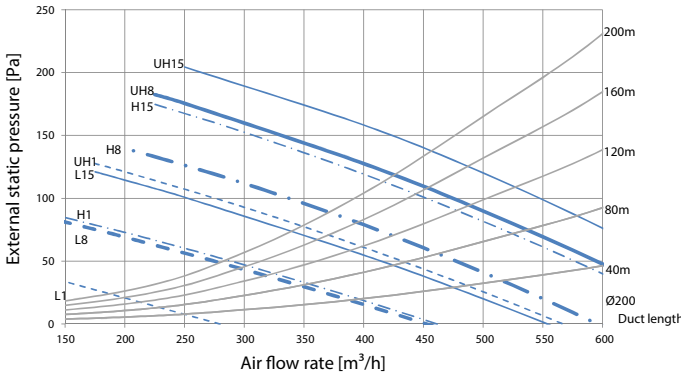
Ultra-high speed
High speed
Low speed

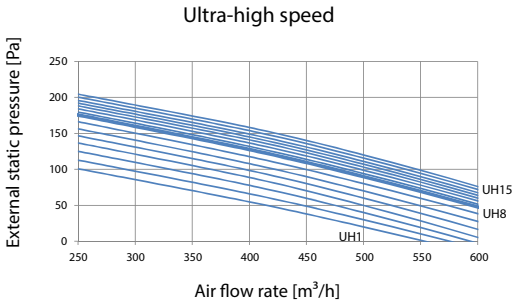
Legend

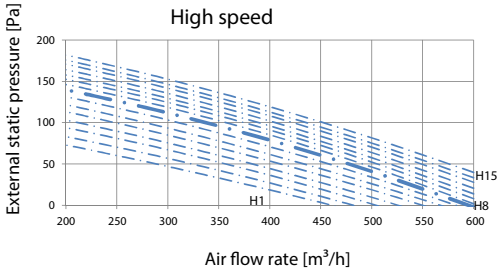
L1	=	Low speed lower limit
L8	=	Low speed factory setting
L15	=	Low speed upper limit
H1	=	High speed lower limit
H8	=	High speed factory setting
H15	=	High speed upper limit
UH1	=	Ultra-high speed lower limit
UH8	=	Ultra-high speed factory setting
UH15	=	Ultra-high speed upper limit

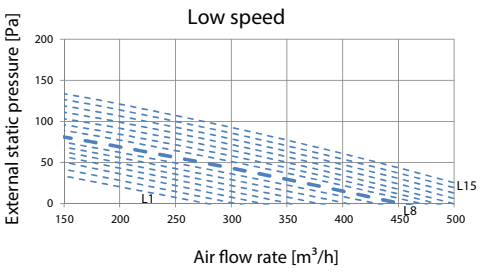
3D113493

VAM500J









Notes
1. The fan curves are determined with ·1/3· of the ESP on the outdoor side (·EA & OA·), and ·2/3· of the ESP on the indoor side (·RA & SA·).
EA= Exhaust air
OA = Outdoor air
RA = Room air
SA = Supply
2. Measured according to ·JIS B 8628 - 2003·

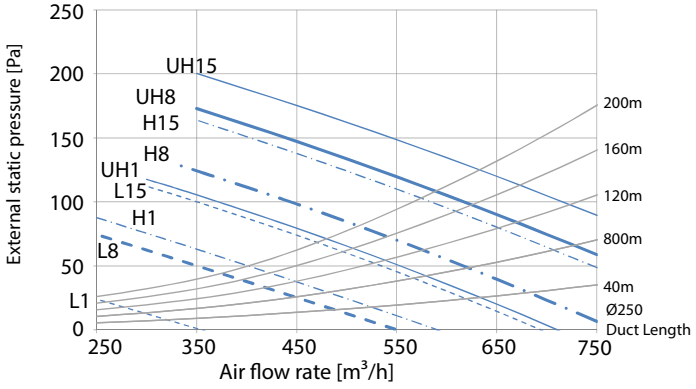
Ultra-high speed
High speed
Low speed

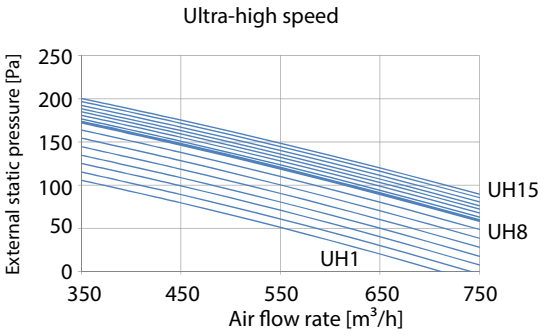
Legend

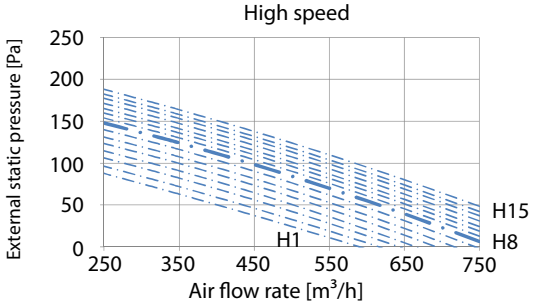
L1= Low speed lower limit
L8= Low speed factory setting
L15= Low speed upper limit
H1= High speed lower limit
H8= High speed factory setting
H15= High speed upper limit
UH1=Ultra-high speed lower limit
UH8= Ultra-high speed factory setting
UH15= Ultra-high speed upper limit

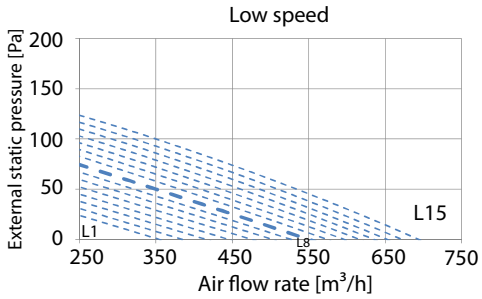
3D113494

VAM650J









Notes
1. The fan curves are determined with 1/3 of the ESP on the outdoor side (EA & OA), and 2/3 of the ESP on the indoor side (RA & SA).
EA = Exhaust air
OA = Outdoor air
RA = Room air
SA = Supply air
2. Measured according to JIS B 8628 - 2003

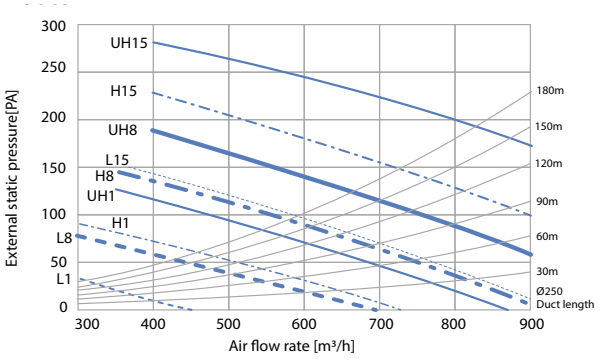
Ultra-high speed
High speed
Low speed

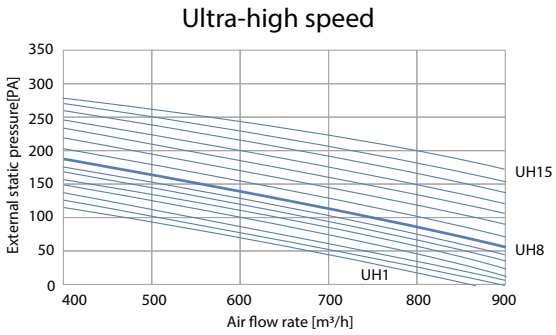
Legend
L1= Low speed lower limit
L8= Low speed factory setting
L15= Low speed upper limit
H1= High speed lower limit
H8= High speed factory setting
H15= High speed upper limit
UH1= Ultra-high speed lower limit
UH8= Ultra-high speed factory setting
UH15= Ultra-high speed upper limit

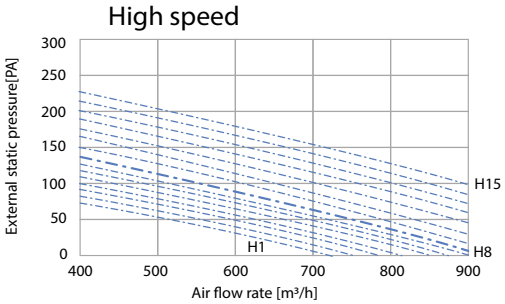
3D113495A

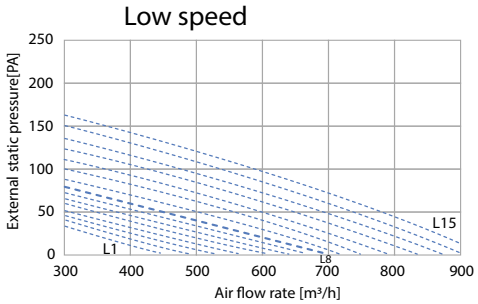
VIEW ALL VAM-FC TECHNICAL DRAWINGS ON MY.DAIKIN.EU

VAM800J









Notes

1. The fan curves are determined with ·1/3· of the ESP on the outdoor side (·EA & OA·), and ·2/3· of the ESP on the indoor side (·RA & SA·).
   EA = Exhaust air
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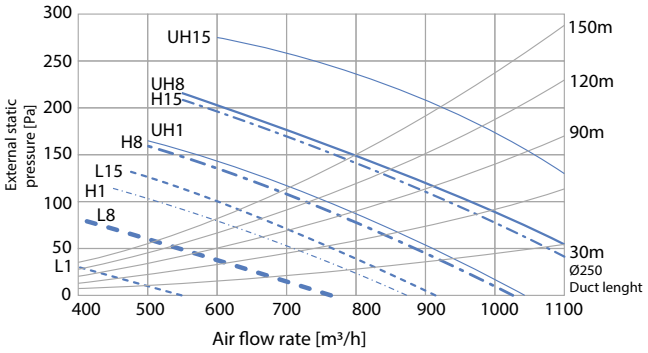
   RA= Room air
   SA = Supply air
2. Measured according to ·JIS B 8628 - 2003·

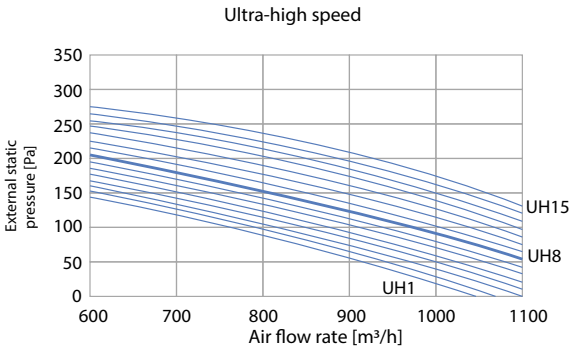
Ultra-high speed
High speed
Low speed

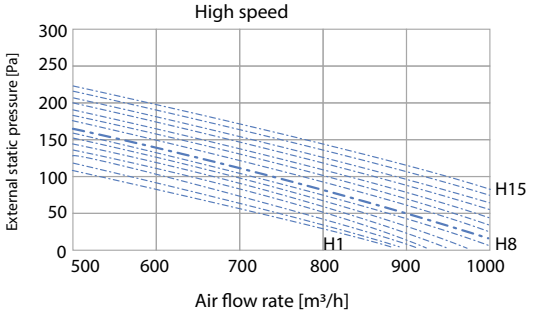
Legend
L1= Low speed lower limit
L8= Low speed factory setting
L15= Low speed upper limit
H1= High speed lower limit
H8= High speed factory setting
H15= High speed upper limit
UH1= Ultra-high speed lower limit
UH8= Ultra-high speed factory setting
UH15= Ultra-high speed upper limit

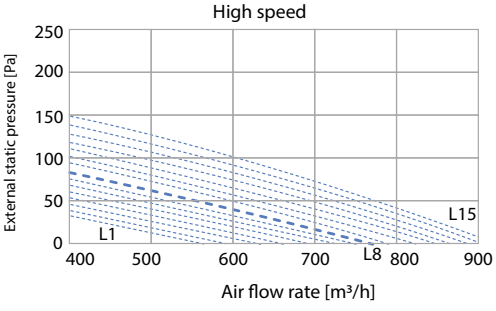
3D112837

VAM1000J









Notes

1.The fan curves are determined with ·1/3· of the ESP on the outdoor side (·EA & OA·), and ·2/3· of the ESP on the indoor side (·RA & SA).

EA= Exhaust air
OA = Outdoor air
RA= Room air
SA= Supply air

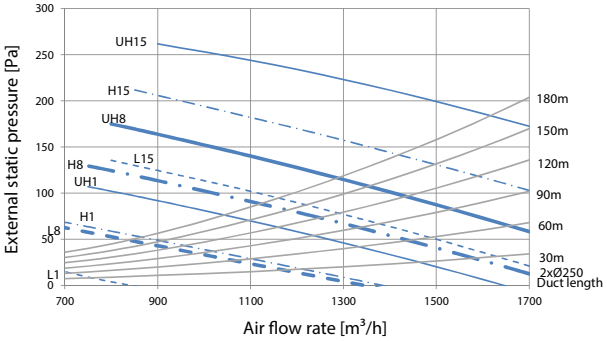
2. Measured according to ·JIS B 8628 - 2003·

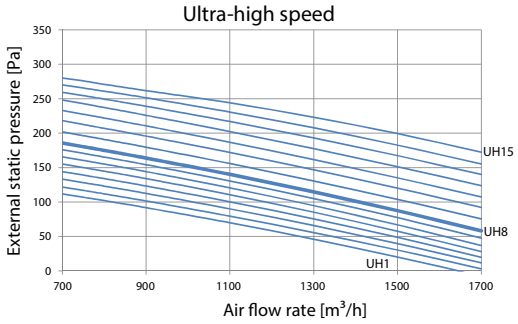
Ultra-high speed
High speed
Low speed

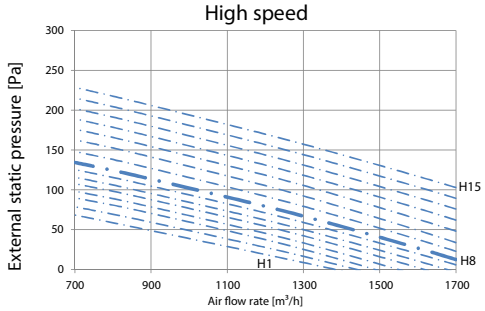
Legend
L1 = Low speed lower limit
LB = Low speed factory setting
L15 = Low speed upper limit
H1 = High speed lower limit
H8 = High speed factory setting
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

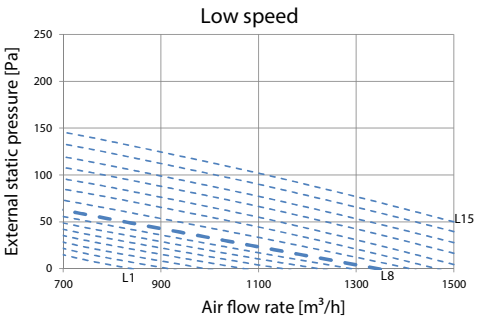
3D112832

VAM1500J









Notes

1. The fan curves are determined with ·1/3· of the ESP on the outdoor side (·EA & OA·),and ·2/3· of the ESP on the indoor side (·RA & SA·).
   EA = Exhaust air
   OA = Outdoor air
   RA = Room air
   SA = Supply air
2 .Measured according to ·JIS B 8628 - 2003·

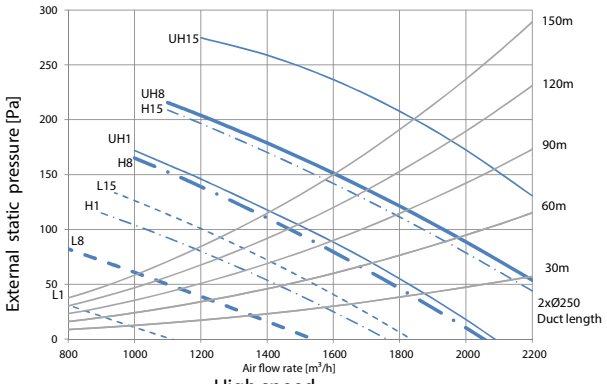
Ultra-high speed
High speed
Low speed

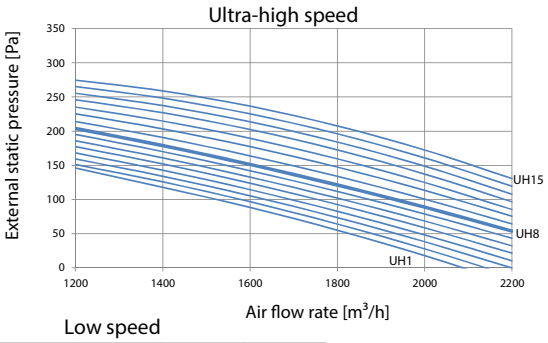
Legend

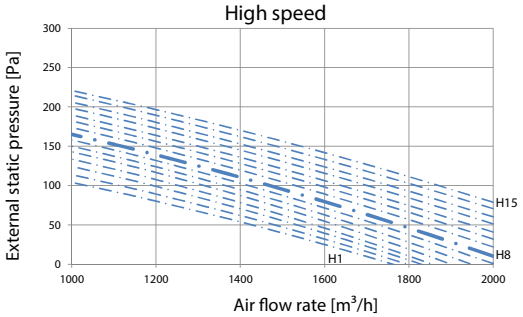
L1 = Low speed lower limit
L8 = Low speed factory setting
L15 = Low speed upper limit
H1 = High speed lower limit
H8 = High speed factory setting
H15 = High speed upper limit
UH1 = Ultra-high speed lower limit
UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

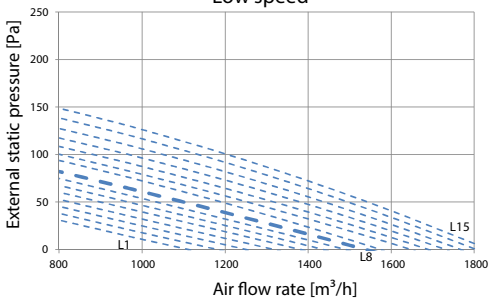
3D112838

VAM2000J









Notes

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Legend

L1 = Low speed lower limit
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UH8 = Ultra-high speed factory setting
UH15 = Ultra-high speed upper limit

3D112839

Energy reclaim ventilation, humidification and air processing

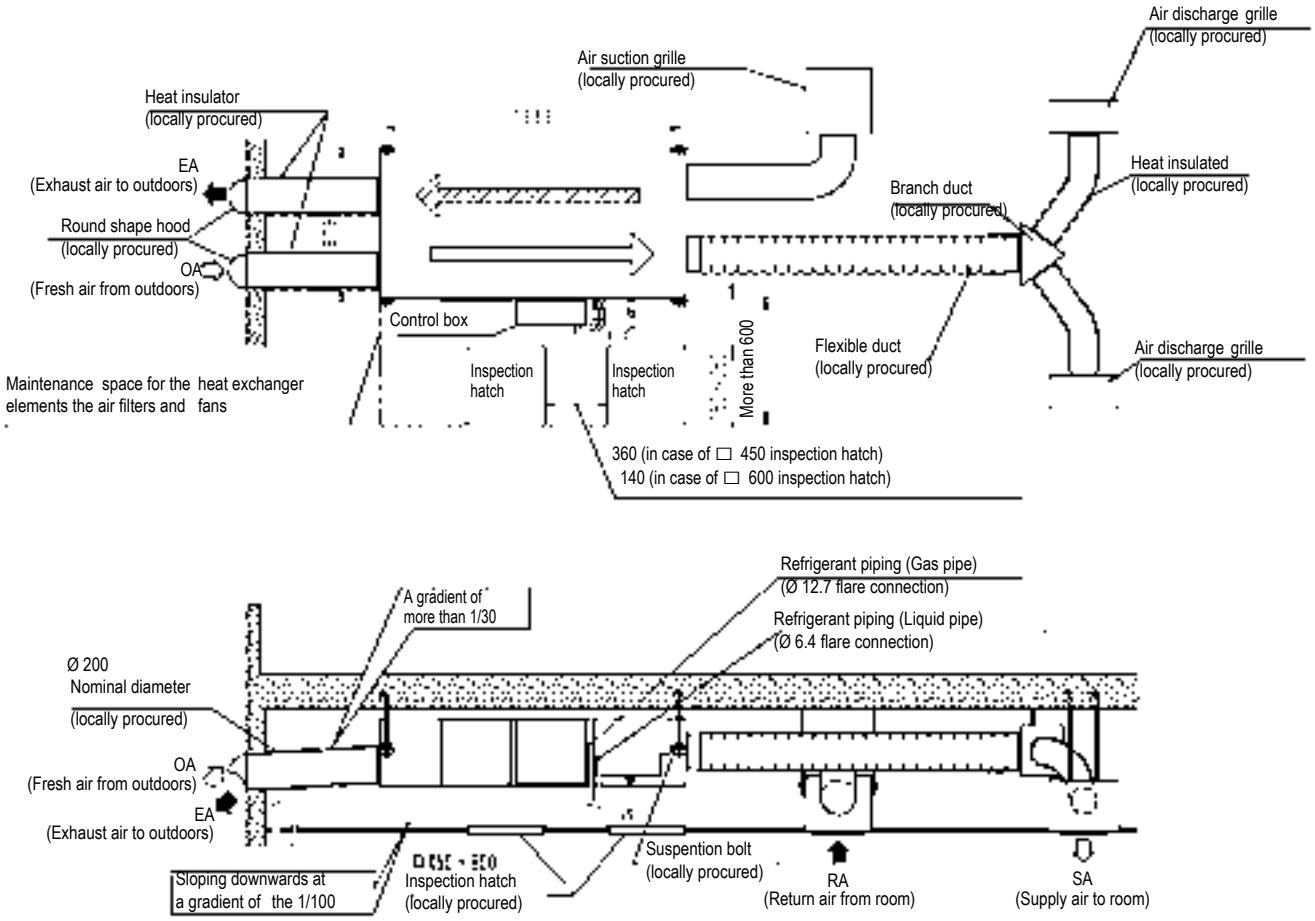
Pre heating or cooling of fresh air for lower load on the air conditioning system

- Energy saving ventilation using indoor heating, cooling and moisture recovery
- Creates a high quality indoor environment by pre conditioning incoming fresh air
- Humidification of the incoming air results in comfortable indoor humidity level, even during heating
- Free cooling possible when outdoor temperature is below indoor temperature (eg. during nighttime)
- Low energy consumption thanks to DC fan motor
- Prevent energy losses from over-ventilation while improving indoor air quality with optional CO_2 sensor
- Shorter installation time thanks to easy adjustment of nominal air flow rate, so less need for dampers compared with traditional installation
- Specially developed heat exchange element with High Efficiency Paper (HEP)
- Can operate in over- and under pressure

VKM80-100GB(M)

Ventilation			VKM-GB/VKM-GBM		50GB	80GB	100GB	50GBM	80GBM	100GBM
Power input - 50Hz	Heat exchange mode	Nom.	Ultra high/ High/Low	kW	0,270/0,230/ 0,170	0,330/0,280/ 0,192	0,410/0,365/ 0,230	0,270/0,230/ 0,170	0,330/0,280/ 0,192	0,410/0,365/ 0,230
	Bypass mode	Nom.	Ultra high/ High/Low	kW	0,270/0,230/ 0,140	0,330/0,280/ 0,192	0,410/0,365/ 0,230	0,270/0,230/ 0,170	0,330/0,280/ 0,192	0,410/0,365/ 0,230
Fresh air conditioning load	Cooling			kW	4,71 / 1,91 / 3,5	7,46 / 2,96 / 5,6	9,12 / 3,52 / 7,0	4,71 / 1,91 / 3,5	7,46 / 2,96 / 5,6	9,12 / 3,52 / 7,0
	Heating			kW	5,58 / 2,38 / 3,5	8,79 / 3,79 / 5,6	10,69 / 4,39 / 7,0	5,58 / 2,38 / 3,5	8,79 / 3,79 / 5,6	10,69 / 4,39 / 7,0
Temperature exchange efficiency - 50Hz	Ultra high/High/Low			%	76/76/77.5	78/78/79	74/74/76.5	76/76/77.5	78/78/79	74/74/76.5
Enthalpy exchange efficiency - 50Hz	Cooling	Ultra high/High/Low		%	64/64/67	66/66/68	62/62/66	64/64/67	66/66/68	62/62/66
	Heating	Ultra high/High/Low		%	67/67/69	71/71/73	65/65/69	67/67/69	71/71/73	65/65/69
Operation mode					Heat exchange mode / Bypass mode / Fresh-up mode					
Heat exchange system					Air to air cross flow total heat (sensible + latent heat) exchange					
Heat exchange element					Specially processed non-flammable paper					
Humidifier	System				-			Natural evaporating type		
Dimensions	Unit	HeightxWidthxDepth		mm	387x1.764x832	387x1.764x1.214		387x1.764x832	387x1.764x1.214	
Weight	Unit			kg	94	110	112	100	119	123
Casing	Material				Galvanised steel plate					
Fan-Air flow rate - 50Hz	Heat exchange mode	Ultra high/High/Low		m^3/h	500/500/440	750/750/640	950/950/820	500/500/440	750/750/640	950/950/820
	Bypass mode	Ultra high/High/Low		m^3/h	500/500/440	750/750/640	950/950/820	500/500/440	750/750/640	950/950/820
Fan-External static pressure - 50Hz	Ultra high/High/Low			Pa	210/170/140	210/160/110	150/100/70	200/150/120	205/155/105	110/70/60
Air filter	Type				Multidirectional fibrous fleeces					
Sound pressure level - 50Hz	Heat exchange mode	Ultra high/High/Low		dBA	39/37/35	41,5/39/37	41/39/36,5	38/36/34	40/37,5/35,5	40/38/35,5
	Bypass mode	Ultra high/High/Low		dBA	40/38/35,5	41,5/39/37	41/39/36,5	39/36/34,5	41/38/36	41/39/35,5
Operation range	Around unit			°CDB	0°C~40°CDB, 80% RH or less					
	Supply air			°CDB	-15°C~40°CDB, 80% RH or less					
	Return air			°CDB	0°C~40°CDB, 80% RH or less					
	On coil temperature	Cooling/Max./Heating/ Min.		°CDB	-15/43			-15/43		
Refrigerant	Control				Electronic expansion valve					
	Type				R-410A					
	GWP				2.087,5					
Connection duct diameter				mm	200	250		200	250	
Piping connections	Liquid	OD		mm	6,35					
	Gas	OD		mm	12,7					
	Water supply			mm	-			6.4		
	Drain				PT3/4 external thread					
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/220-240					
Current	Maximum fuse amps (MFA)			A	15					

VKM50GB

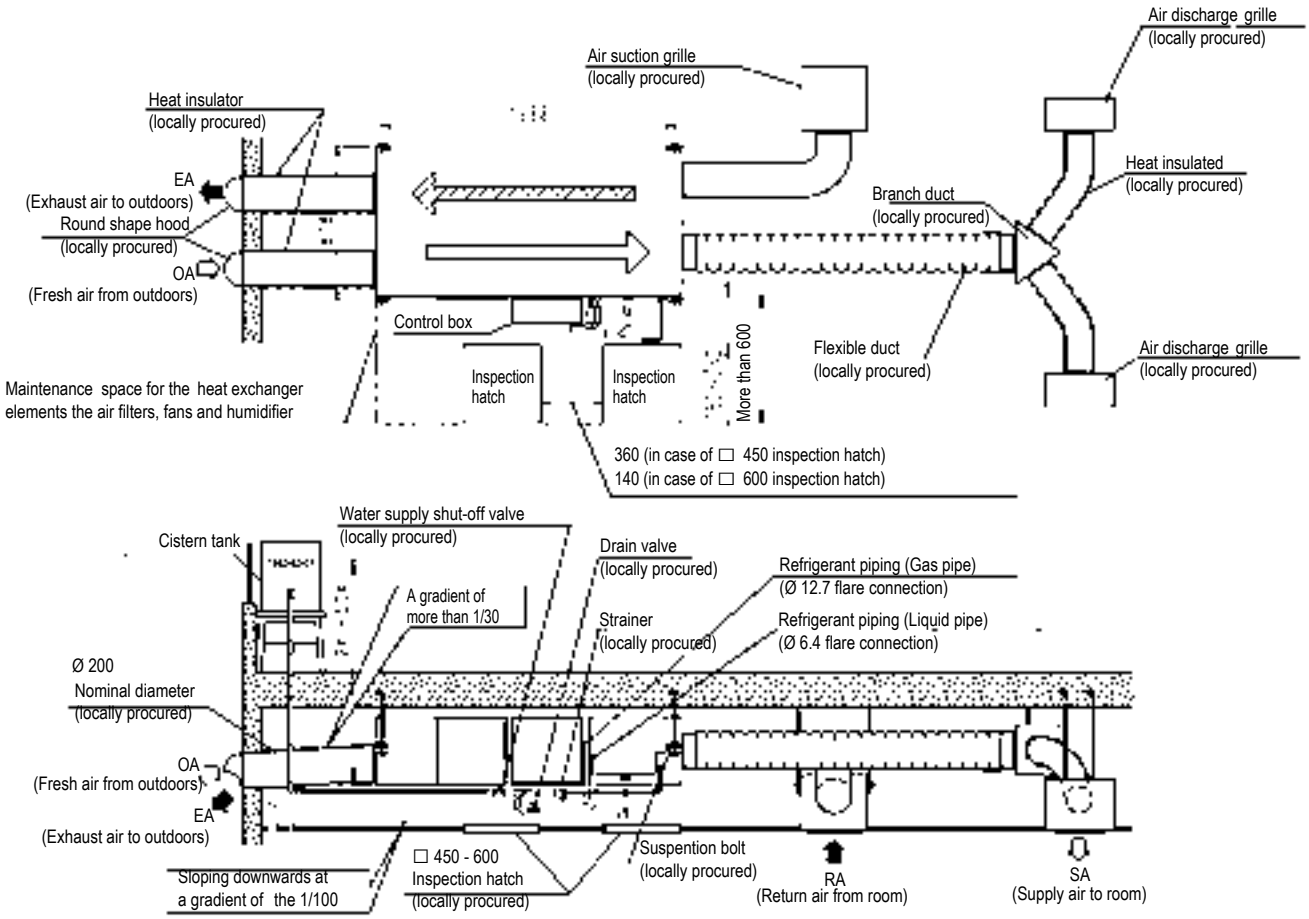


NOTES

1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters heat exchange elements, and fans can easily be inspected and serviced.)
2. Install the two outdoor ducts with down slope (slope of 1/30 or more) to prevent entry of rain water, also, provide insulation for three ducts (outdoor ducts and indoor supply air duct) to prevent dew condensation.(Material: glass wool of 25mm thick)
3. Do not turn the unit upside down.
4. Make sure to install drain piping, and insulate drain piping to prevent dew condensation.
5. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.
6. Do not use a bent cap or a round hood as the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).
7. In areas where freezing may occur, always take steps to preventthe pipes from freezing.
8. Do not place something which shouldn't get wet at the below of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.

3D083014

VKM50GBM



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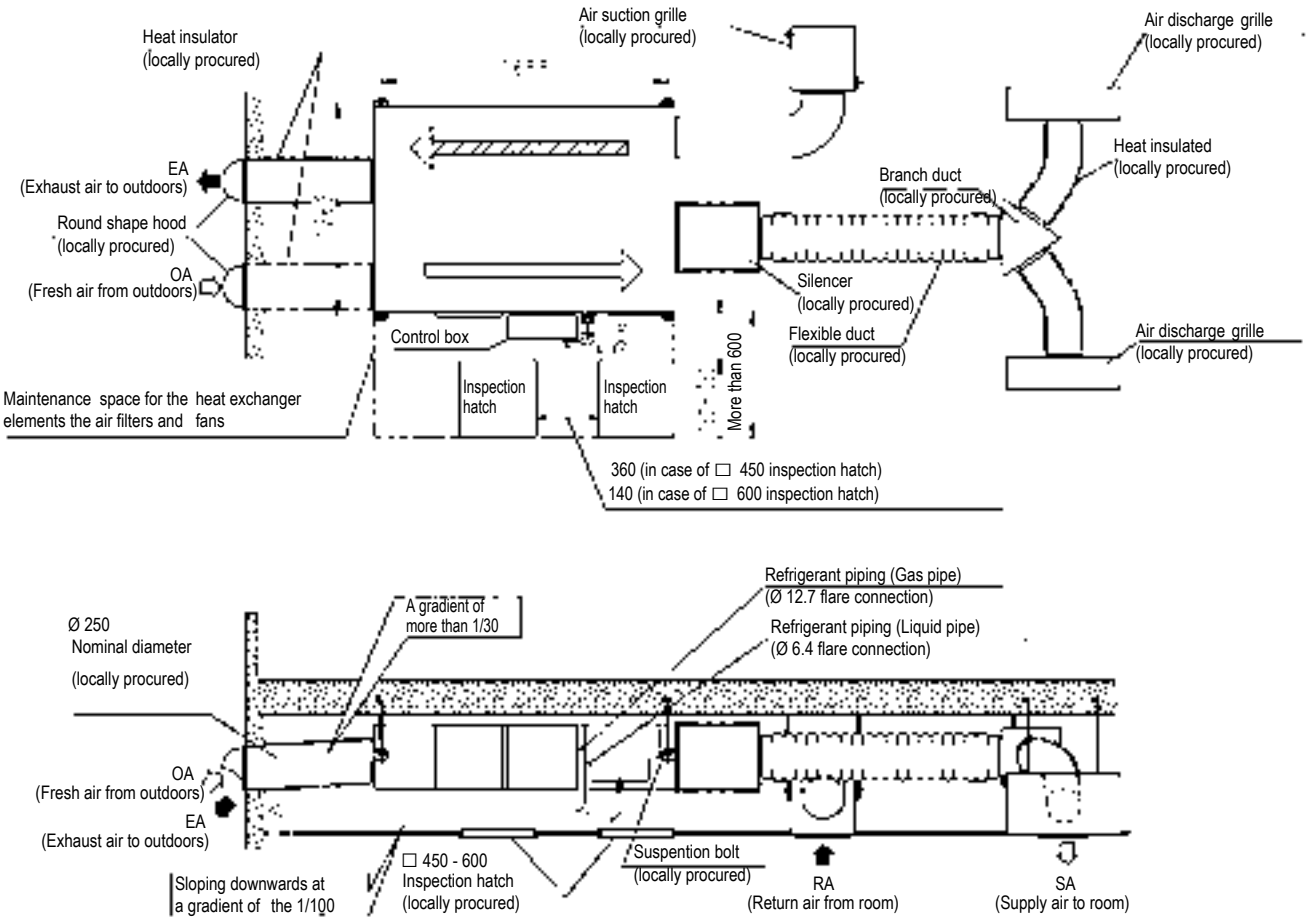
3. Do not turn the unit upside down.
4. Use city water or clean water.
   Include water supply piping with strainer, a water supply shut-off valve, and a drain valve (both locally procured) somewhere along the water supply piping that can be reached from the inspection.
5. It is impossible to connect the water supply piping directly to public piping. Use a cistern tank (ofthe approved type), if you need to get your water supply from public piping.
6. Make sure the supply water 0.02MPa to 0.49MPa (0.2 kg/cm^2 to 5 kg/cm^2)
7. Make sure the supply water is between 5°C and 40°C in temperature.
8. Insulate the water supplypiping to prevent condensation from forming.
9. Make sure to install drain piping, and insulate drain piping to prevent dew condensation.
10. Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air from forming.
11. Install in a location where the air around the unit or taken into the umidifier will notdrop below 0°C.
12. Do not use a bent cap or a round hoodas the outdoor hood if they might get rained on directly (we recommend using a deep hood) (optional accessory).
13. In areas where freezing may occur, always take steps to prevent the pipes from freezing.
14. Do not place something which shouldn't get wet at the below of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.
15. Feed clean water. If the supply water is hard water, use a water softener because of short life.
    Life of humidifying element is about 3 years (4,000 hours), under the supply water conditions of hardness: 150 mg/L. (Life of humidifying element is about 1 years (1500 hours), under the supply water conditions of hardness: 400 mg/L.)

3D083011

VKM80GB



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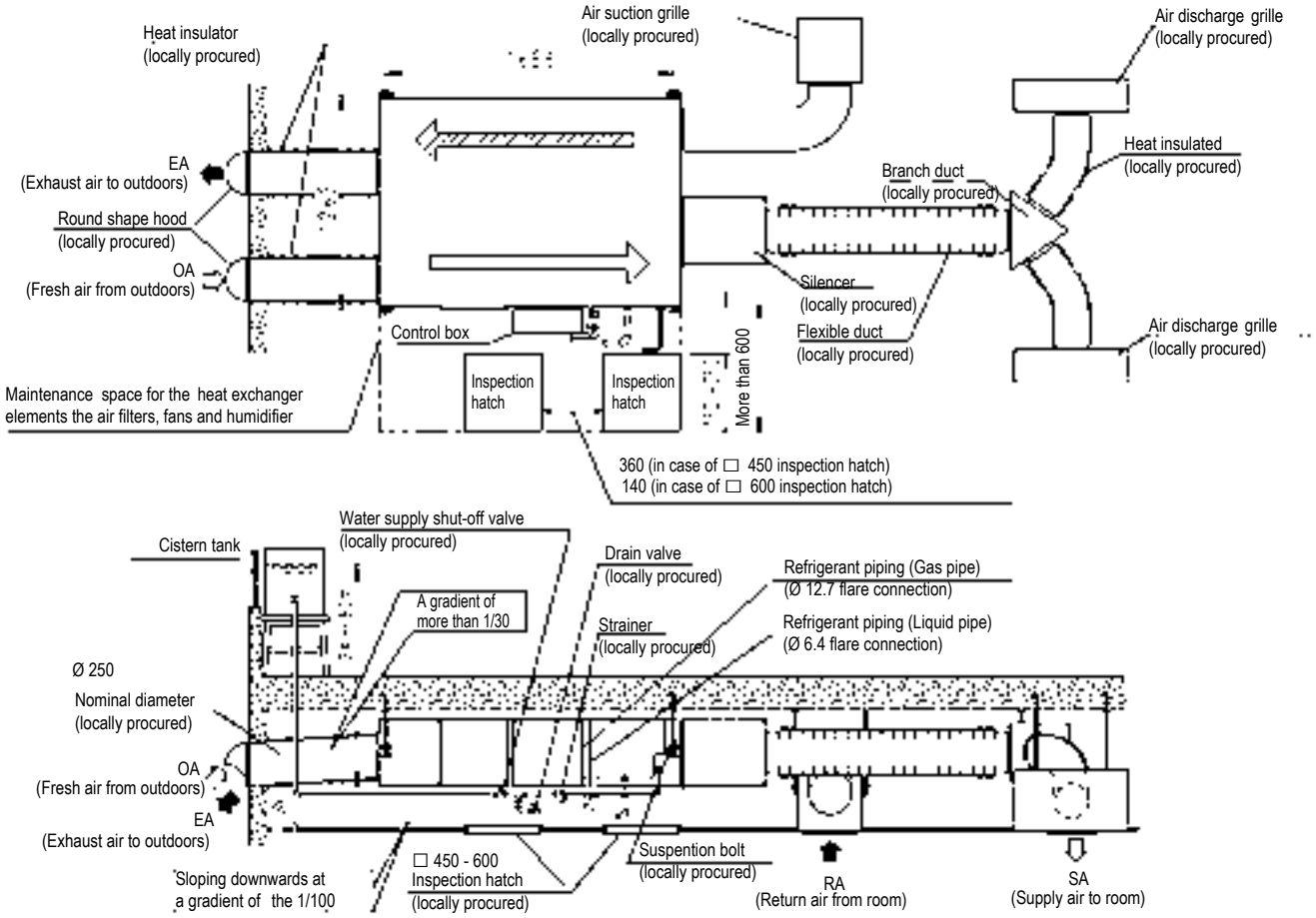
7. In areas where freezing may occur, always take steps to prevent the pipes from freezing.
8. Do not place something which shouldn't get wet at the below of this unit. The dew would fall at following case, where humidity is 80% more, or the exit of drain socket is choked up, or the air filter is very dirty.

3D083015

VKM80GBM



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3. Do not turn the unit upside down.
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5. It is impossible to connect the water supply piping directly to public piping. Use a cistern tank (of the approved type), if you need to get your water supply from public piping.
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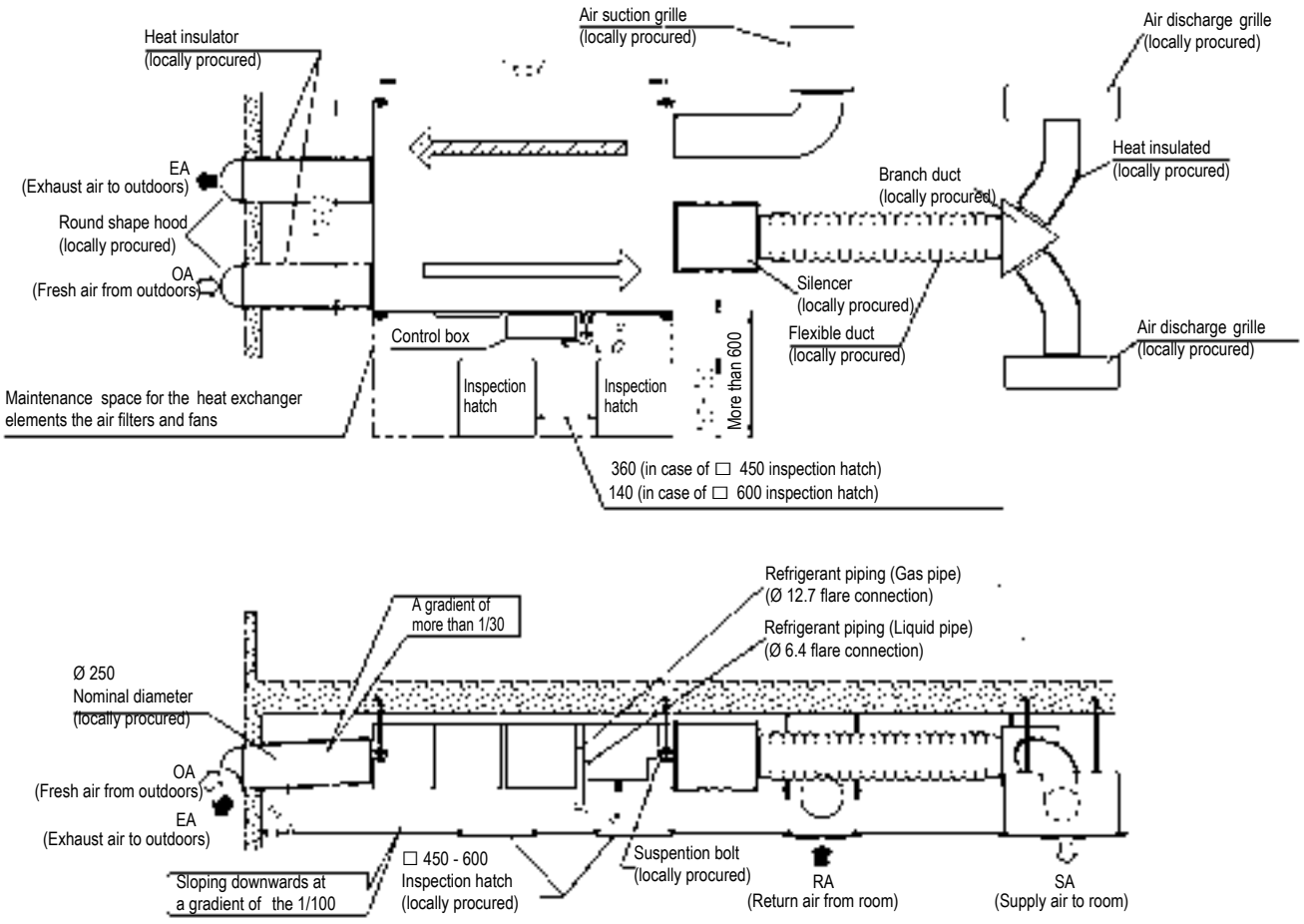
3D083012

VKM100GB



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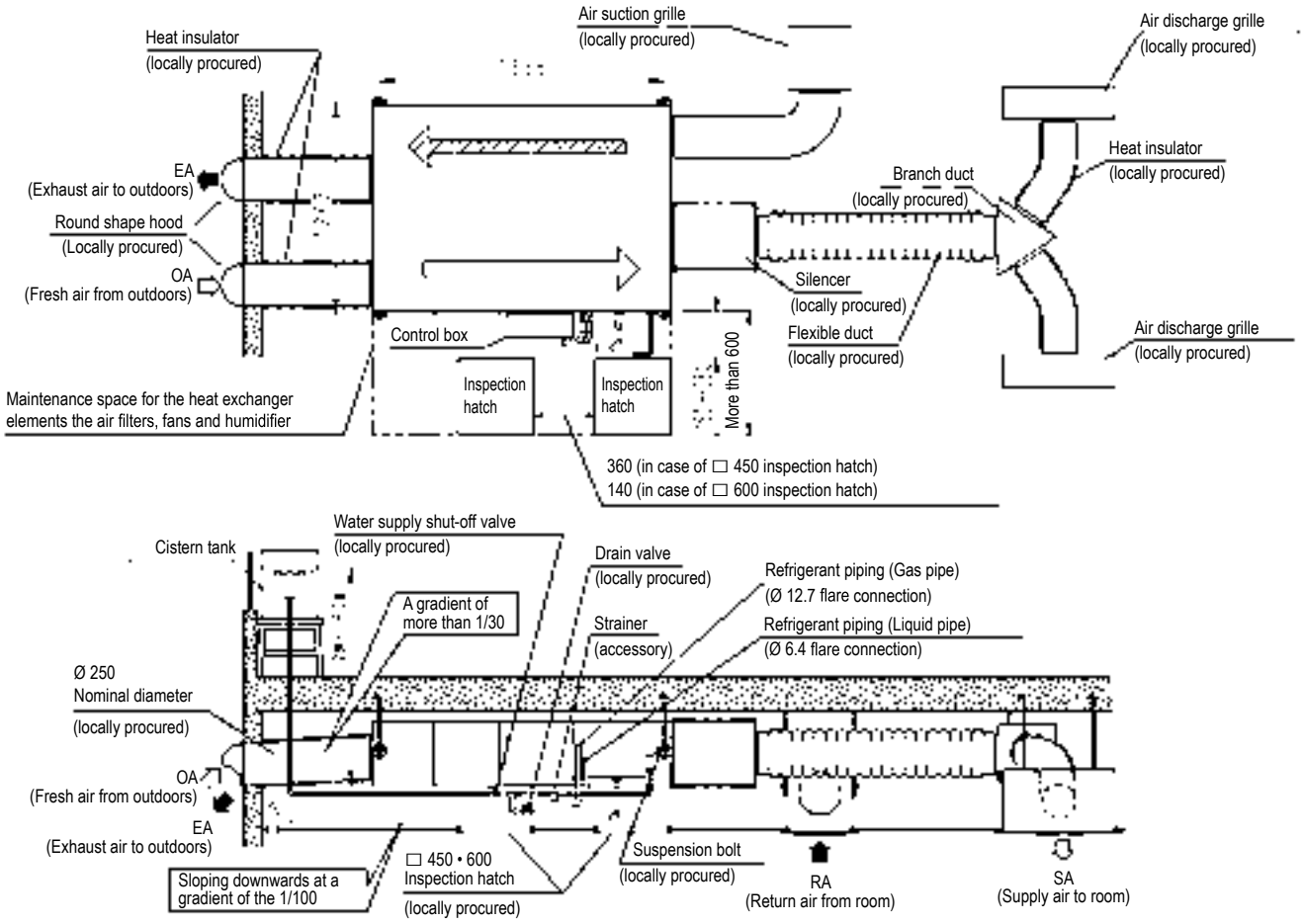
3D083016

VKM100GBM



NOTES

1. Leave space for servicing the unit and include inspection hatch. (Always open a hole on the side of the control box so that the air filters, heat exchange elements, fans and humidifier elements can easily be inspected and serviced.)
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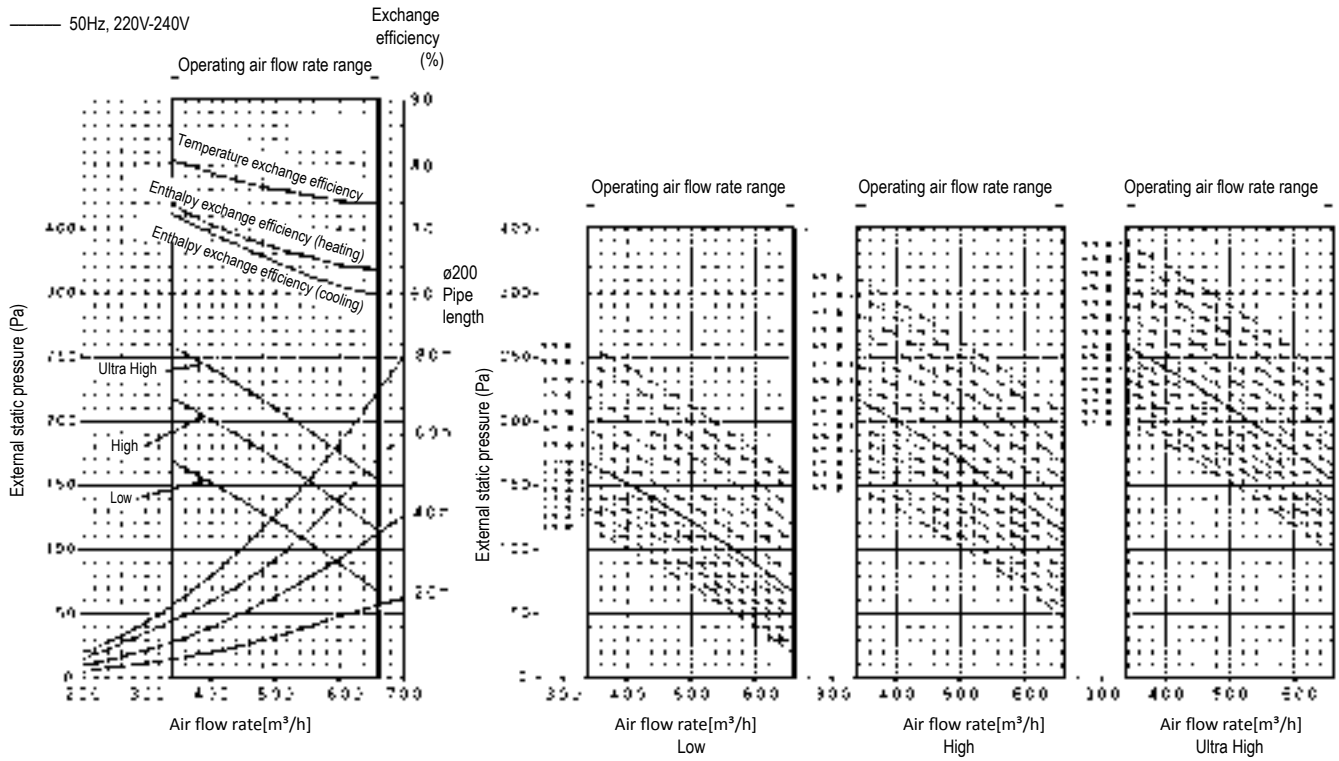
3D083013

VKM50GB



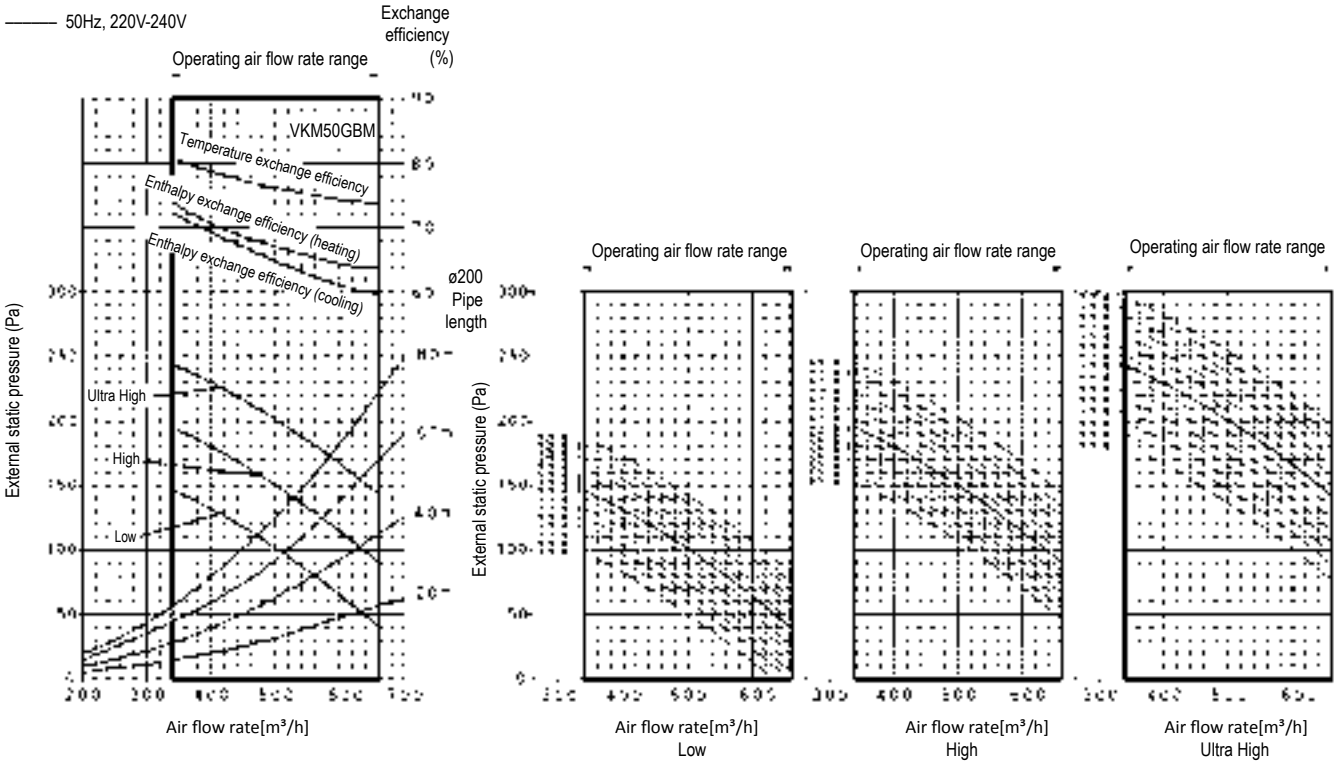
[Reading of Performance Characteristics]

1) For example: 19(29)-■-07
   Mode no. : 19(29)
   First code: ■ (Supply 「2」Exhaust 「3」)
   Second code no. : 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

3D082904

VKM50GBM



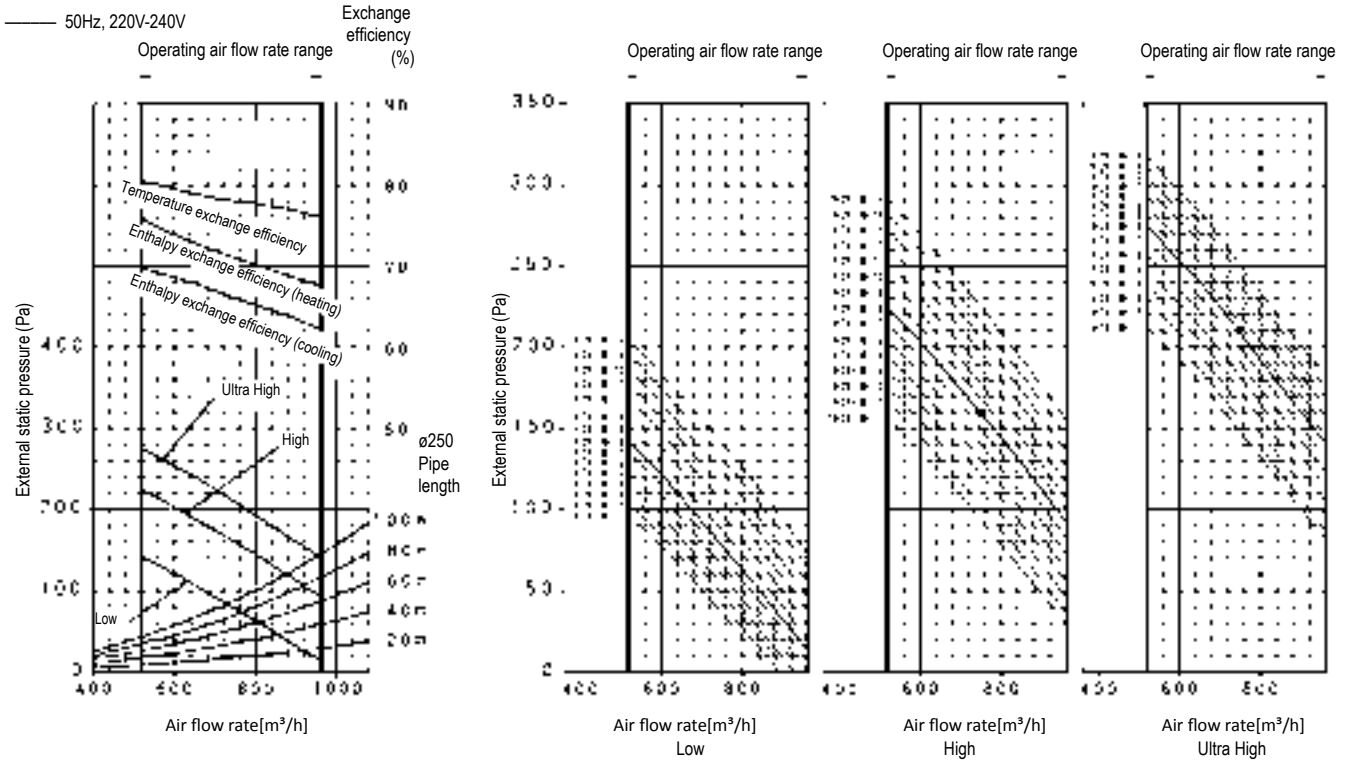
[Reading of Performance Characteristics]

1) For example: 19(29)-■-07
   Mode no. : 19(29)
   First code: ■ (Supply 「2」Exhaust 「3」)
   Second code no. : 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

3D082901

VKM80GB



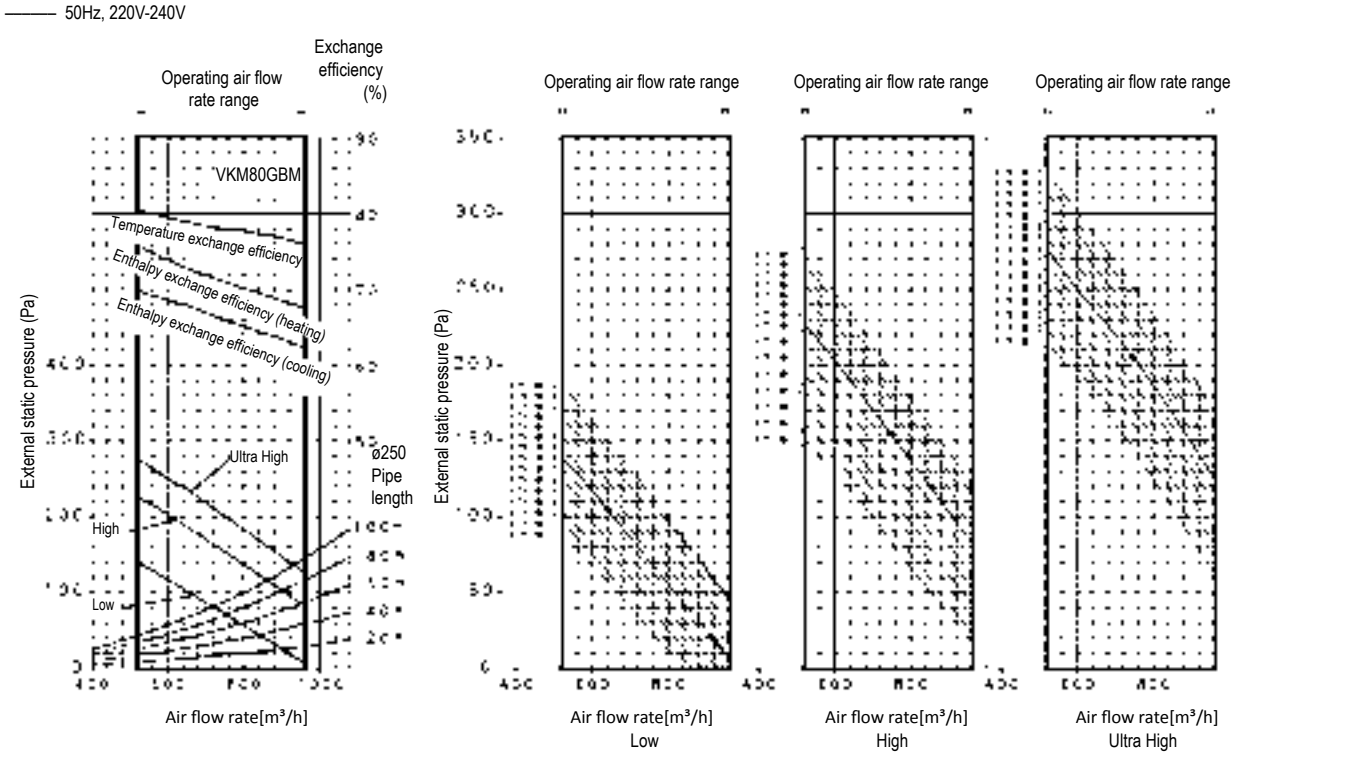
[Reading of Performance Characteristics]

1) For example: 19(29)-■-07
   Mode no. : 19(29)
   First code: ■ (Supply ⌜2⌟ Exhaust ⌜3⌟)
   Second code no. : 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

3D082905

VKM80GBM



[Reading of Performance Characteristics]

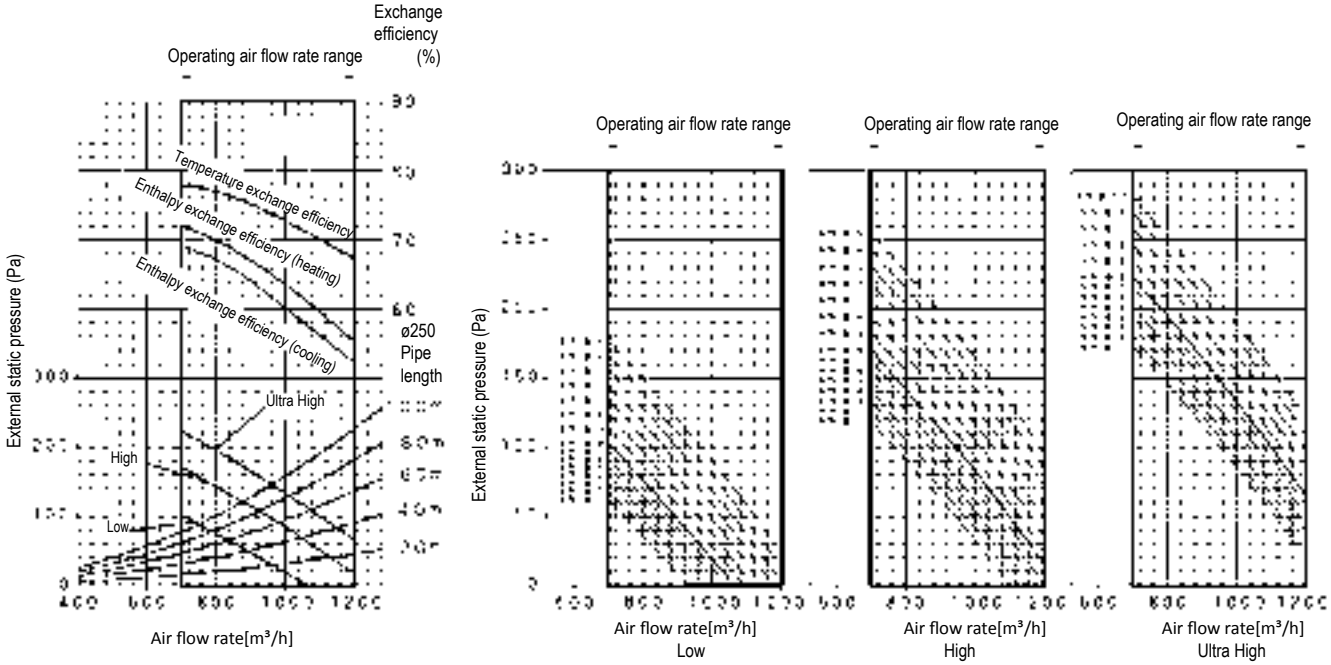
1) For example: 19(29)-■-07
   Mode no. : 19(29)
   First code: ■ (Supply ⌜2⌟ Exhaust ⌜3⌟)
   Second code no. : 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

3D082902

VKM100GB

——— 50Hz, 220V-240V



[Reading of Performance Characteristics]

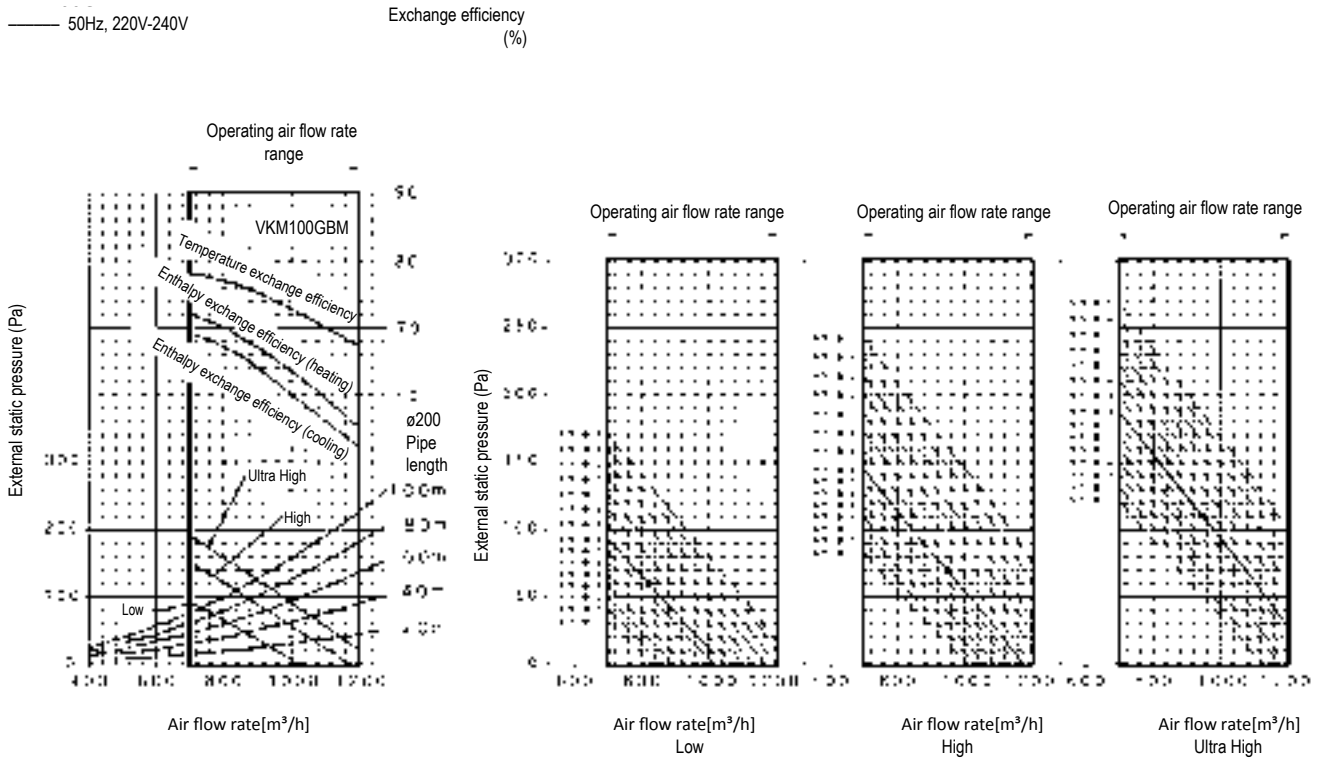
1) For example: 19(29)-■-07
   Mode no. : 19(29)
   First code: ■ (Supply ⌜2⌟ Exhaust ⌜3⌟)
   Second code no. : 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

3D082906

VKM100GBM

——— 50Hz, 220V-240V

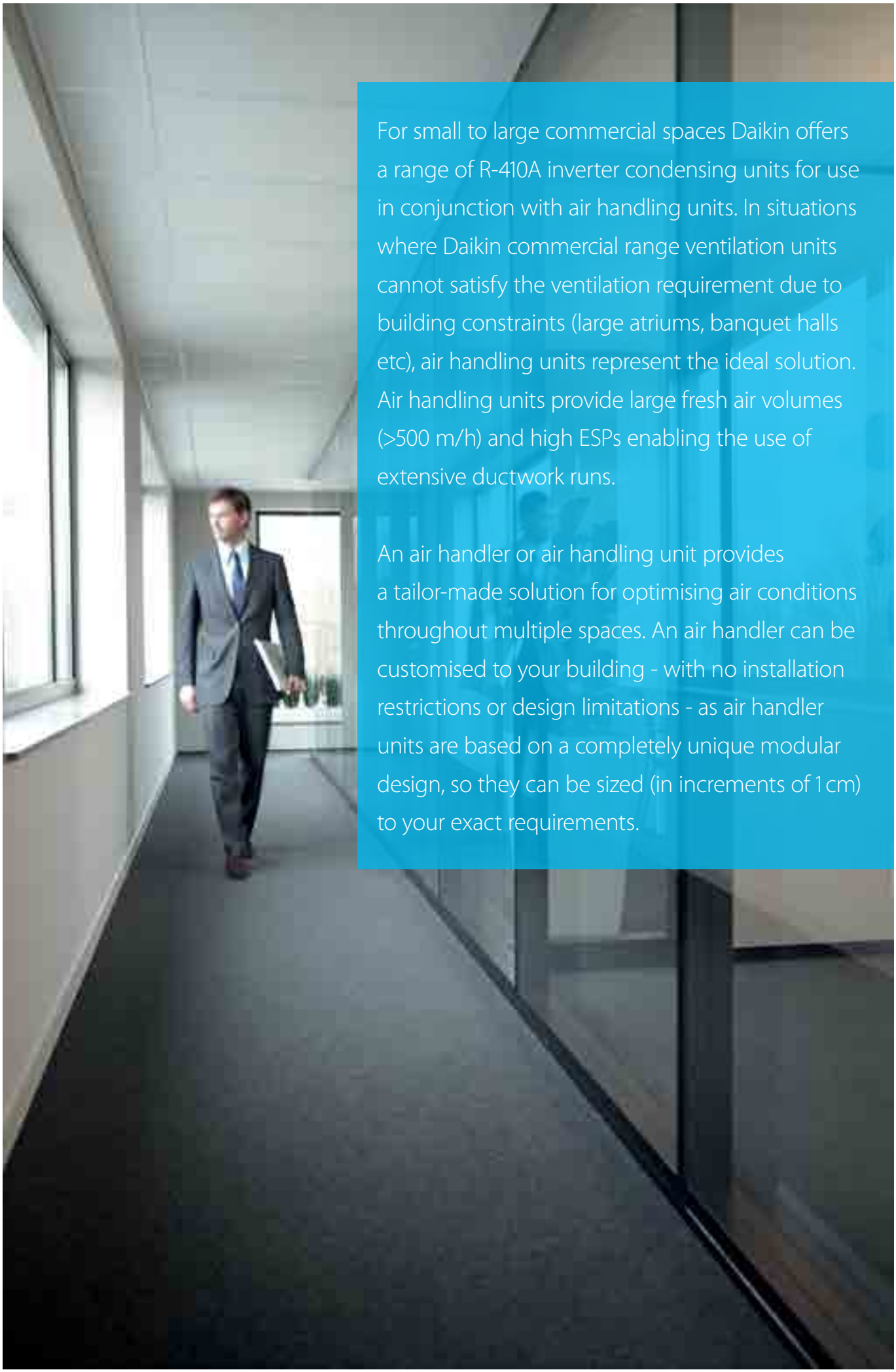


[Reading of Performance Characteristics]

1) For example: 19(29)-■-07
   Mode no. : 19(29)
   First code: ■ (Supply ⌜2⌟ Exhaust ⌜3⌟)
   Second code no. : 07

2) Rated point: ●
3) The characteristic of each tap becomes a setup of the characteristic of the same code number.

3D082903



For small to large commercial spaces Daikin offers a range of R-410A inverter condensing units for use in conjunction with air handling units. In situations where Daikin commercial range ventilation units cannot satisfy the ventilation requirement due to building constraints (large atriums, banquet halls etc), air handling units represent the ideal solution. Air handling units provide large fresh air volumes (>500 m/h) and high ESPs enabling the use of extensive ductwork runs.

An air handler or air handling unit provides a tailor-made solution for optimising air conditions throughout multiple spaces. An air handler can be customised to your building - with no installation restrictions or design limitations - as air handler units are based on a completely unique modular design, so they can be sized (in increments of 1 cm) to your exact requirements.

Five components of indoor air quality

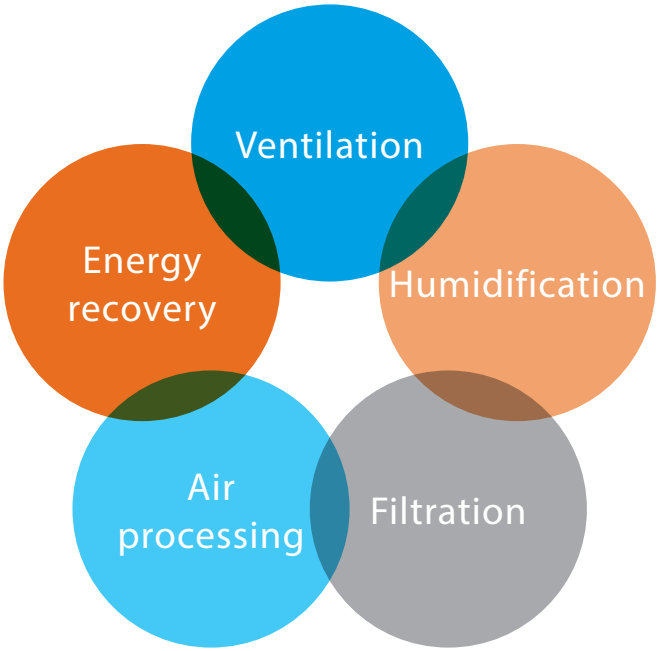
Ventilation: Ensures the correct amount of fresh air

Energy recovery: Delivers energy savings by transferring heat and moisture between airflows

Air processing: Delivers the right supply temperature to decrease the indoor unit load

Humidification: Ensures relative indoor humidity levels are respected

Filtration: Separates pollen, dust and pollution odours that are harmful to individuals' health



Daikin air handling units

Why choose Daikin air handling units?

- Maximum energy efficiency and indoor air quality
- Wide range of functions and options
- **High quality** components
- **Innovative** technology: Unique features and state of the art technology for short payback
- Operation **efficiency** and energy **savings**
- Outstanding **reliability** and **performance**
- Various applications are possible including air conditioning applications, industry-type process cooling, and large-scale district heat source systems.
- Plug and play concept for easy installation and commissioning
- Unique Daikin fresh air package available for connection of AHU to VRV or ERQ

Benefits for the installer

› Simple precise commissioning through pre-programmed DDC controller
› Reduced installation time thanks to internal electrical wiring and external terminal connections avoiding drilling into unit panels
› Flush mounted electrical control panel avoiding risk of damage during transport and installation

Benefits for the consultant

› Quick selection tool - in-house developed web software with improved user interface allowing for a professional report in a few clicks
› Unlimited configuration options

Benefits for the end user

› Energy efficient controls, allowing the user to determine a wide range of settings, resulting in excellent operational flexibility
› Safe operation - fully integrated electrical panel for units taller than 80cm
› Amazing tailor made capability to meet the specific customer needs

Marketing tools

Watch the time-lapse video of a Daikin AHU construction on www.youtube.com/daikineurope

› Download our brochure on air handling units from my.daikin.eu

› Follow the wizard and select or modify your Modular or Professional AHU in a few clicks!

Packaged control solution for Daikin AHU

› Electrical control panel complete with Direct Digital Control (DDC) controller
› Internal fitting of all sensors and pressure measurement devices
› Built-in temperature, humidity and CO_2 sensors
› Internal electrical wiring for all components

Energy efficient while focusing on maximum comfort

› Set points can be specified for supply, return or room temperature
› Precise control of all AHU components such as mixing dampers, heat recovery wheels, water valves, pressure switches for filters and fans, fan motors and inverters

Plug and play design

› Low voltage fast connectors in between AHU sections

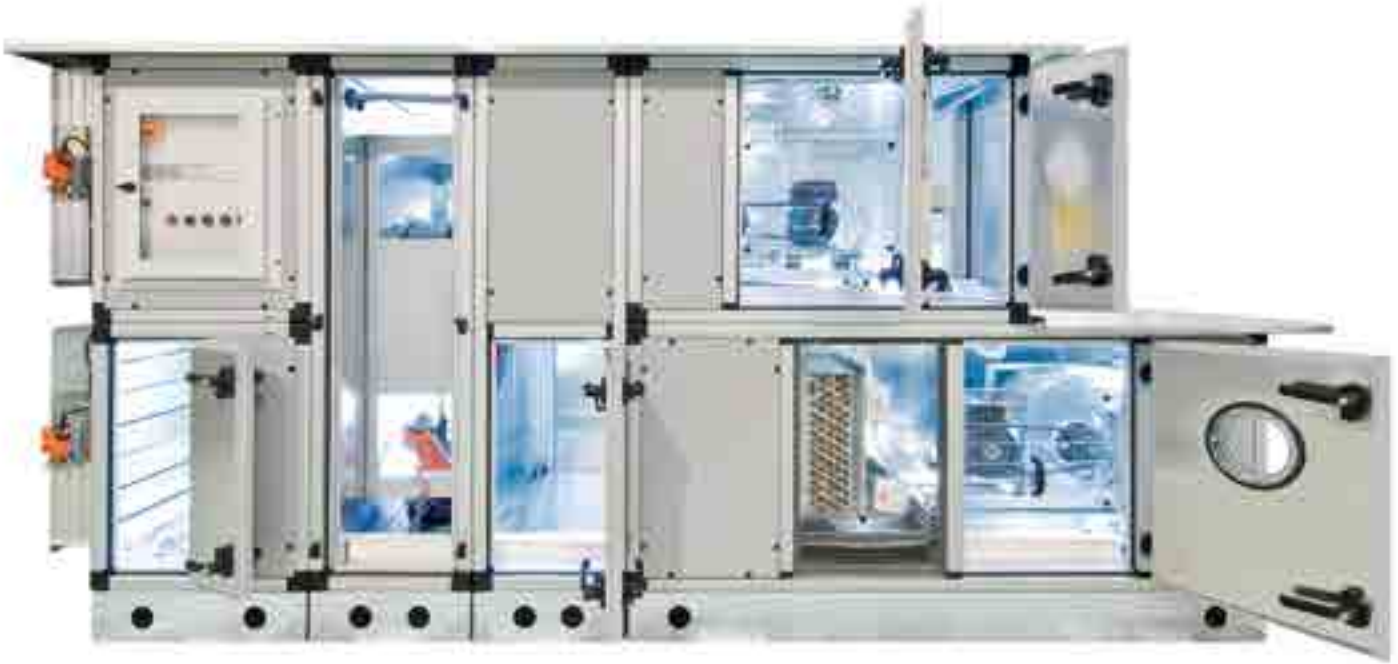
Easy start-up and commissioning

› Pre-programmed and factory-tested controls ensuring all wiring is installed correctly
› Reduced energy and operating costs

Daikin Fresh air package

Unique in the market

› Plug and play connection of Professional or Modular R AHU to Daikin VRV and ERQ
› Factory mounted package containis a.o. expansion valve, electronic interface and sensors
› Ensuring high efficiency and comfort



SMART CONTROLS

DAMPER AND EC FAN

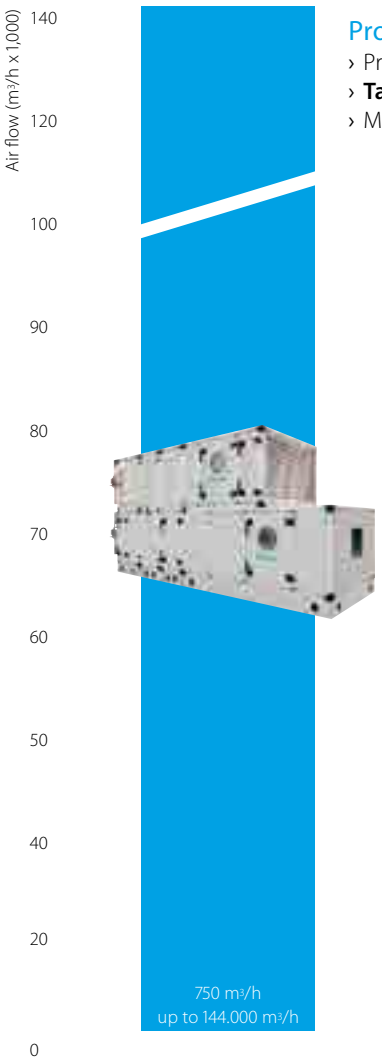
HEAT RECOVERY
WHEEL AND FILTER

D-AHU MODULAR R
INSTALLATION

COMFORTABLE
INDOOR CLIMATE

Products overview

D-AHU Professional



Professional
› Pre-configured sizes
› **Tailored to the individual customer**
› Modular construction

Modular R
› Pre-configured sizes
› Plug and play concept
› EC fan technology
› **Heat recovery wheel (sorption and sensible technology)**
› **Compact design**

D-AHU
Modular R

500 m³/h
up to 20.500 m³/h

Modular P
› Pre-configured sizes
› Plug and play concept
› EC Fan technology
› **High efficiency aluminium counter flow plate heat exchanger**
› **Compact design**

D-AHU
Modular P

500 m³/h
up to 19.000 m³/h

› Modular L / Smart
› Pre-configured sizes
› Plug and play concept
› EC Fan technology
› **High efficiency aluminium counter flow plate heat exchanger**
› **Low height unit**
› **For false ceiling applications**

D-AHU
Modular L / Smart

100 m³/h
up to 3.400 m³/h

Selection software

ASTRA Web

› Quick AHU selection that will save you precious time, drastically reducing selection time through the new software interface.
› Very competitive solution available within the Wizard thanks to pre-uploaded parameters.
› High selection quality, thanks to the intelligence embedded within the software core.

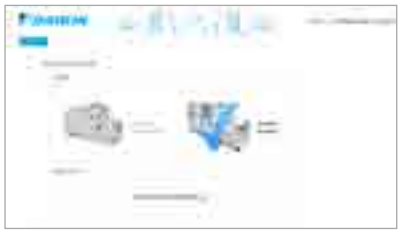
Quickly select your air handling unit by following the wizard:

1. Select the series: D-AHU Professional, D-AHU Modular R, D-AHU Modular P or Modular L / Smart
2. Insert the air flow supply and return
3. Insert the summer/winter air supply setpoint
4. Insert the summer/winter outdoor and extract temperature

You will get immediately your 3D result and it's ready to customize!

Now, you will be able to modify your unit (adding or changing components) in order to have a product that meets all your needs.

When finished a technical report, price list, fan curve chart and psychrometric chart can be generated. These final reports can be downloaded in different formats.



Eurovent certification

Daikin Applied Europe S.p.A. participates in the Eurovent Certified Performance programme for Air Handling Units.
Check ongoing validity of certificate:
www.eurovent-certification.com
or www.certiflash.com

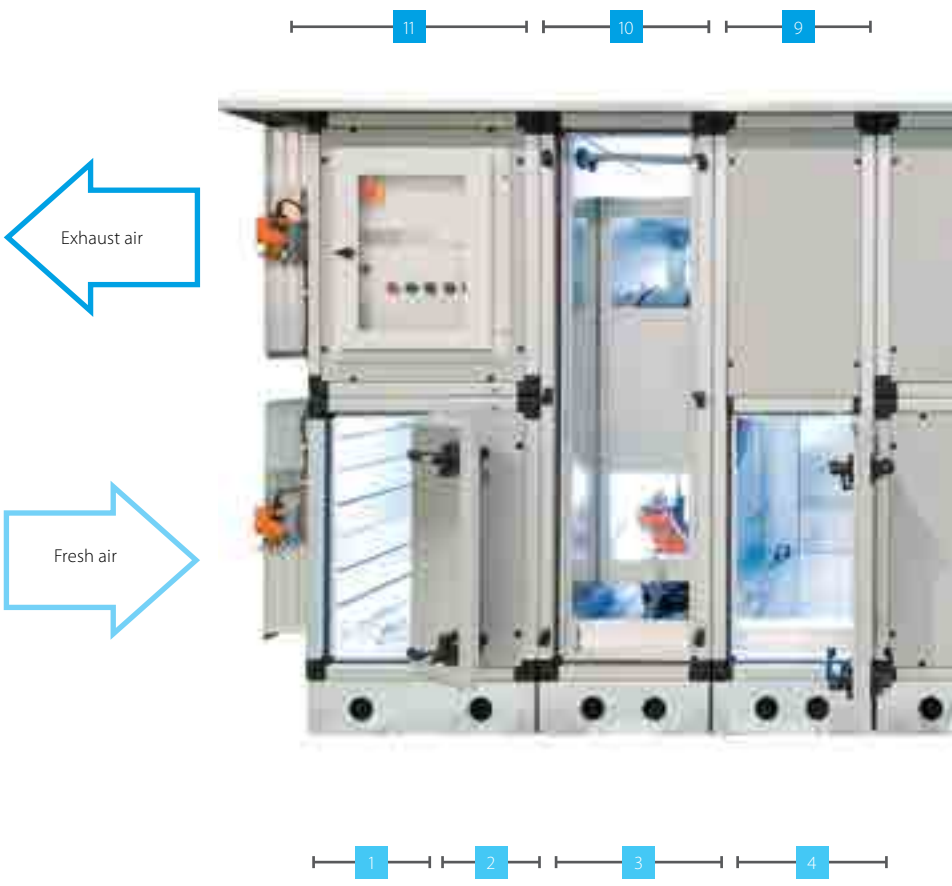
Energy TermiC° S2	Eurovent Classification according to EN1886					
D1	Casing strength class	D1	D2	D3		
	Max. relative deflection mm x m^{-1}	4,00	10,00	EXCEEDING10		
L1	Casing air leakage class at -400 Pa	L1	L2	L3		
	Max. leakage rate (f_{400}) l x s^{-1} x m^{-2}	0,15	0,44	1,32		
L1	Casing air leakage class	L1	L2	L3		
	Max. leakage rate (f_{700}) l x s^{-1} x m^{-2}	0,22	0,63	1,90		
F9	Filter bypass leakage class	F9	F8	F7	F6	G1 TO F5
	Max. filter bypass leakage rate k in % of the volume flow rate	0,50	1	2	4	6
T2	Thermal transmittance	T1	T2	T3	T4	T5
	(U) W/m^2 x K	U <= 0,5	0,5 < U <= 1	1 < U <= 1,4	1,4 < U <= 2	No requirements
TB2	Thermal bridging factor	TB1	TB2	TB3	TB4	TB5
	(kb) W x m^{-2} x K-1	0,75 < K_b <= 1	0,6 < K_b <= 0,75	0,45 < K_b <= 0,6	0,3 < K_b <= 0,45	No requirements

The working principle at a glance

Typical configurations for Daikin air handling units provide a versatile range of functions.
Our system offers numerous options for customisation through an extensive range of variations and added functionality.

Supply side

1. Damper section including ventilation grilles, factory-mounted actuators
2. Bag filter with factory-mounted differential pressure manometer and hinged door
3. Heat recovery system (plate heat exchanger or rotation heat exchanger)
4. Mixing box with damper and factory-mounted actuators
5. R-410A with heat recovery system with galvanised condensate tray and drip protection
6. Supply air fan (with hinged door, opening, drive monitoring, mounted and cabled lighting and ON/OFF switch)



Fans
› EC plug fan
› Forward curved fan
› Backward curved fan
› Backward airfoil blades fan
› Plug fan

Exchangers
› Water coils
› Steam coils
› Direct expansion coil
› Superheated water coils
› Electric coils

Humidifiers
› Evaporative humidifier without pump (loss water)
› Evaporative humidifier with re-circulating pump
› Air washer without pump (loss water)
› Air washer with re-circulating pump
› Steam humidifier with direct steam production
› Steam humidifier with local distributor
› Atomized water spray humidifier

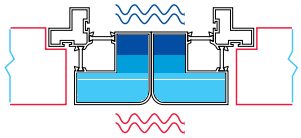
Control system on plug and play solution basis

› Air temperature control
› Chilled water and DX cooling system control
› Free cooling
› CO_2 automatic control

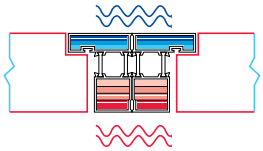
Unique section to section thermal break profile

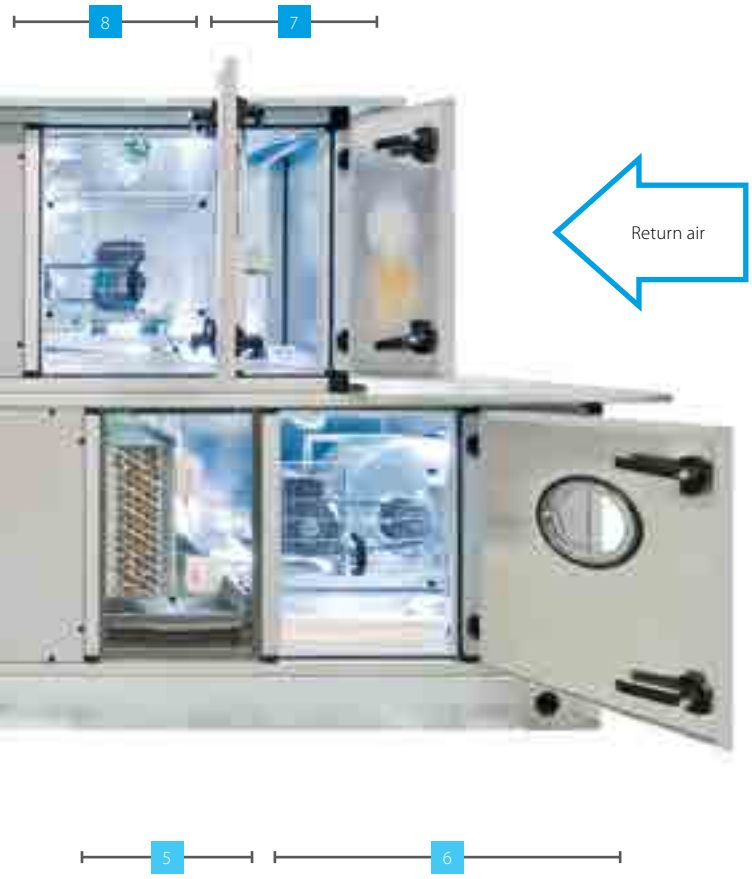
› Thermal bridge free for the entire AHU
› Smooth interior surface with improved IAQ (Indoor Air Quality)

Conventional design



Daikin design





Return side

7 Bag filter with factory-mounted differential pressure manometer and hinged door.

8 Exhaust air fan (with hinged door, opening, drive monitoring, mounted and cabled lighting and ON/OFF switch)

9 Mixing box with damper and factory-mounted actuators

10 Heat recovery system (plate heat exchanger or rotation exchanger)

11 Damper section including ventilation grilles, factory-mounted actuators

Heat recovery systems
› Heat wheel, sensible or sorption
› Plate heat exchanger (optional bypass)
› Run-around coils

Other section
› Attenuator section
› Mixing box section with actuators or manual controlled dampers
› Empty section

Filters
› Synthetic pleated filter
› Flat filter aluminium mesh
› Rigid bag filter
› Soft bag filter
› High efficiency filter
› Carbon absorption filter
› Carbon deodorizing filter

Accessories
› Control features
› Frost protection
› Manometers
› Drive guard
› Roof
› …

Modular Light / Smart

Daikin air handling units, with their plug-and-play design and inherent flexibility, can be configured and combined specifically to meet the exact requirements of any building. Our systems are designed to be the most environmentally friendly and the most energy efficient on the market, thus reducing their ecological impact, while, at the same time, keeping costs down.

The compactness, air flow range coverage through 6 sizes and the achieved filtration efficiency make the Modular Light a precious ally for your ventilation system. The components used and the structure of the unit meet the ever more stringent requirements concerning energy efficiency, fire regulation and hygiene.

The future of ventilation

The new Modular Light represents one of the best solutions in terms of decentralised ventilation with unique selling features such as unit height, air flow range, number of sizes and Indoor Air Quality (IAQ) achievement.

Construction

› External Pre – painted metal sheet
› Internal Aluzinc
› 50 mm double skin panel
› Mineral wool insulation
› Hinged and/or removable doors allowing full maintenance access from bottom side
› All the units feature rectangular duct collars (optional accessory for rectangular - circular transition available)

IAQ matters

According to recent studies, people usually spend 90% of their time indoors and the amount of the air breathed each day is approximately 11000 litres. Hence, providing comfortable environments is our main goal. High IAQ evidently increases productivity levels, physical and psychological well-being and reduces health problems. Furthermore investing in a good indoor climate is an investment in your future and ultimately pays off.

ASTRA Web

Modular L selection program

› Astra Web offers a quick and accurate selection of the best ventilation unit
› Preset parameters ensure that you can always find the optimum and most energy efficient product for your application

Get access to all our selection tools at http://tools.daikinapplied.eu

Highlights

› New decentralised solution for fresh air treatment
› Fully featured unit with "Plug and Play" concept
› Wide airflow coverage
› Best choice when compactness is needed (only 280 mm height for up to 550 m^3/h of air flow)
› Optimized SFP (Specific Fan Power) for an efficient unit operation
› IE4 motor efficiency with EC centrifugal plug fan
› High thermal heat recovery efficiency (up to 93%)
› Excellent indoor air quality (IAQ). Up to F9 filtration level with possibility to have a pre-filter up to F7 for the best IAQ
› Easy and quick installation and commissioning
› Compliant with Hygiene Directive VDI 6022
› Overcoming the ERP 2018 European Regulations
› Eurovent certified

Modular Light Versions

› Modular Light (Microtech III Controller)
› Modular Light Smart (Daikin control PCB)

All the main units are available on right or left connection side (rule: looking in the supply air direction, standing below the ceiling suspended unit)

Astra selection sample

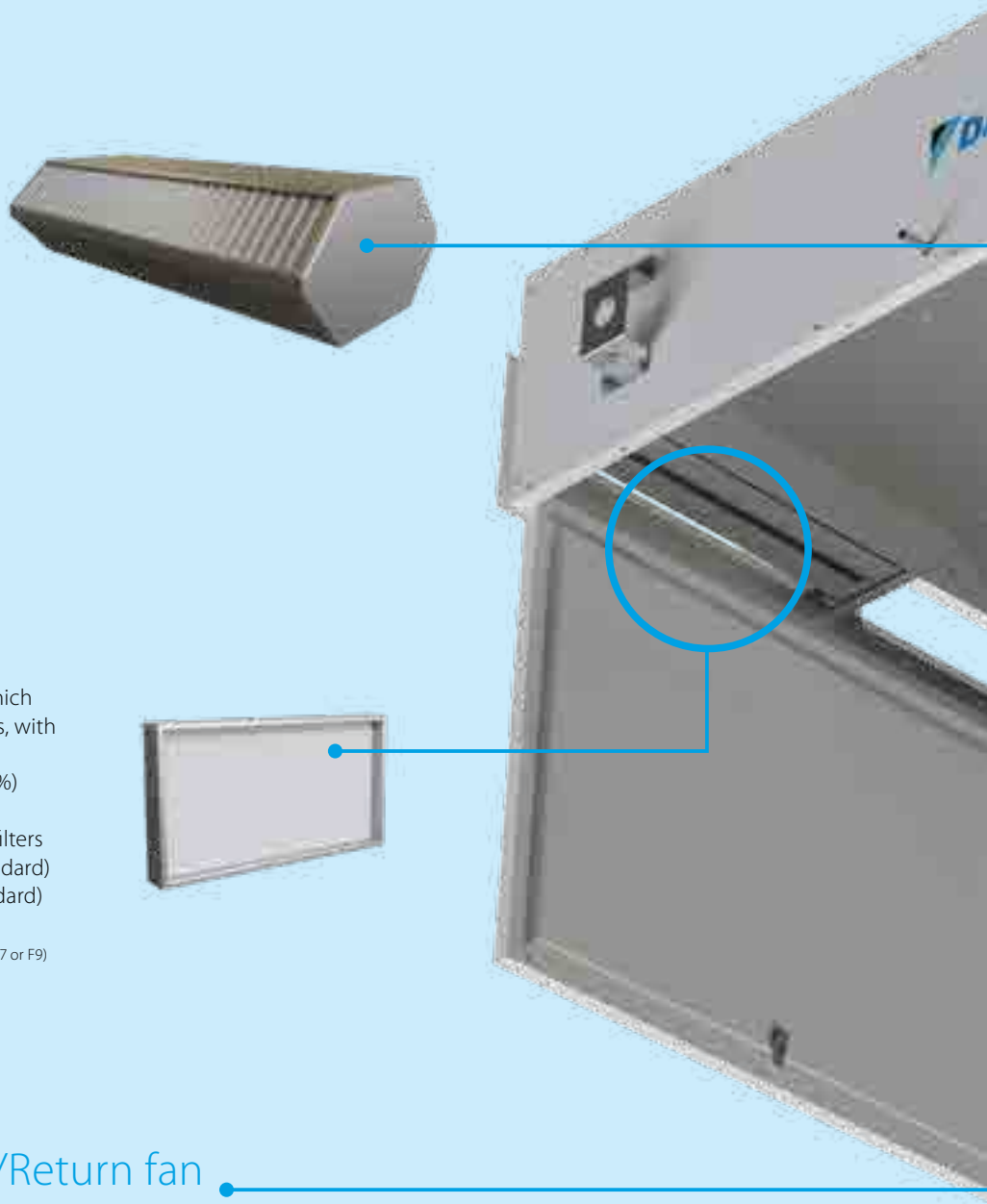
Accessories list

› Filters (G4, M5, F7 and F9)
› Rails (for limited false ceiling space)
› Rectangular – circular duct transition
› Pre and post – heater electric coil
› Heating and/or cooling water coil
    1. Two or three ways valve
    2. Modulating valve actuator
› Silencers
  CO_2 sensor
› Humidity (%RH) sensor
› Temperature probe
› BACnet protocol interface
› Modbus protocol interface
› Commissioning module

Flexibility
to meet your needs

Heat exchanger

› Premium quality counterflow plate heat exchanger
› Up to 93% of the thermal energy recovered
› VDI 6022 compliant
› High grade aluminium that allows best corrosion protection
› Completely joint sealing
› No screws or rivets in any part



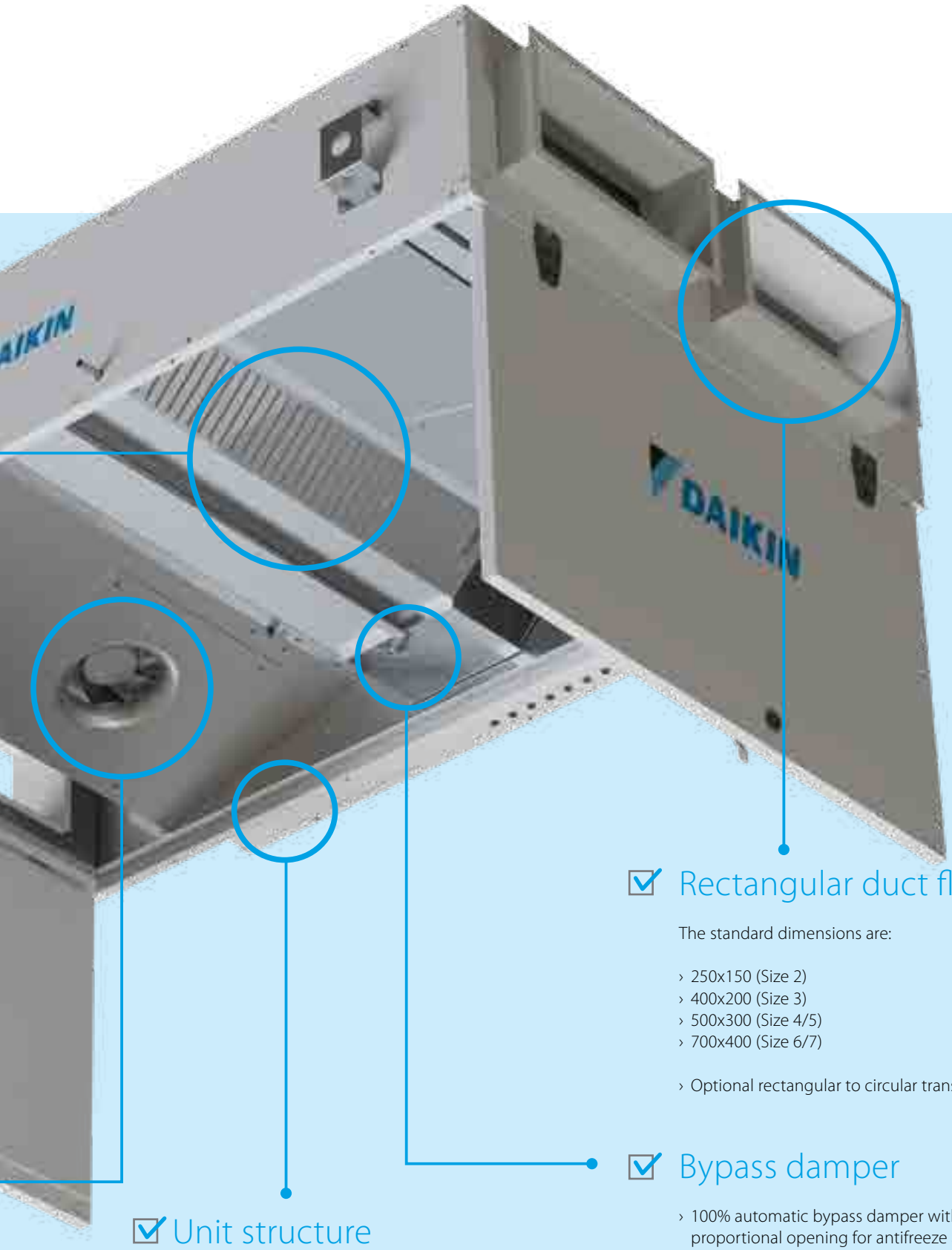
Filters

› Easily replaceable compact filters which can be removed from bottom access, with large filter surface areas
› Up to F7 (ePM1 50%) + F9 (ePM1 80%) filtration efficiency
› No tools are needed to change the filters
› Fresh air filters* (F7 efficiency as standard)
› Return filters* (M5 efficiency as standard)

*Optional additional filter and pre-filter stage (G4, M5, F7 or F9)

Supply/Return fan

› Fan/motor combination with very low noise level
› Reduced energy consumption
› Inverter driven with IE4 motor efficiency
› Infinitely variable speed
› Ultra-efficient blade profiling
› Maintenance-free ball bearings
› No screws or rivets in any part



Rectangular duct flange

The standard dimensions are:

- 250x150 (Size 2)
- 400x200 (Size 3)
- 500x300 (Size 4/5)
- 700x400 (Size 6/7)

- Optional rectangular to circular transition

Bypass damper

- 100% automatic bypass damper with proportional opening for antifreeze and free cooling operation

Unit structure

- 50 mm Double skin panel thickness
- Mineral wool insulated
- Great sound absorption and low noise
- Hinged or fully removable bottom doors make the unit easy accessible for service and maintenance
- Unit is accessible from bottom panels

Modular Light / Modular Light Smart

Heat recovery unit for decentralized ventilation system

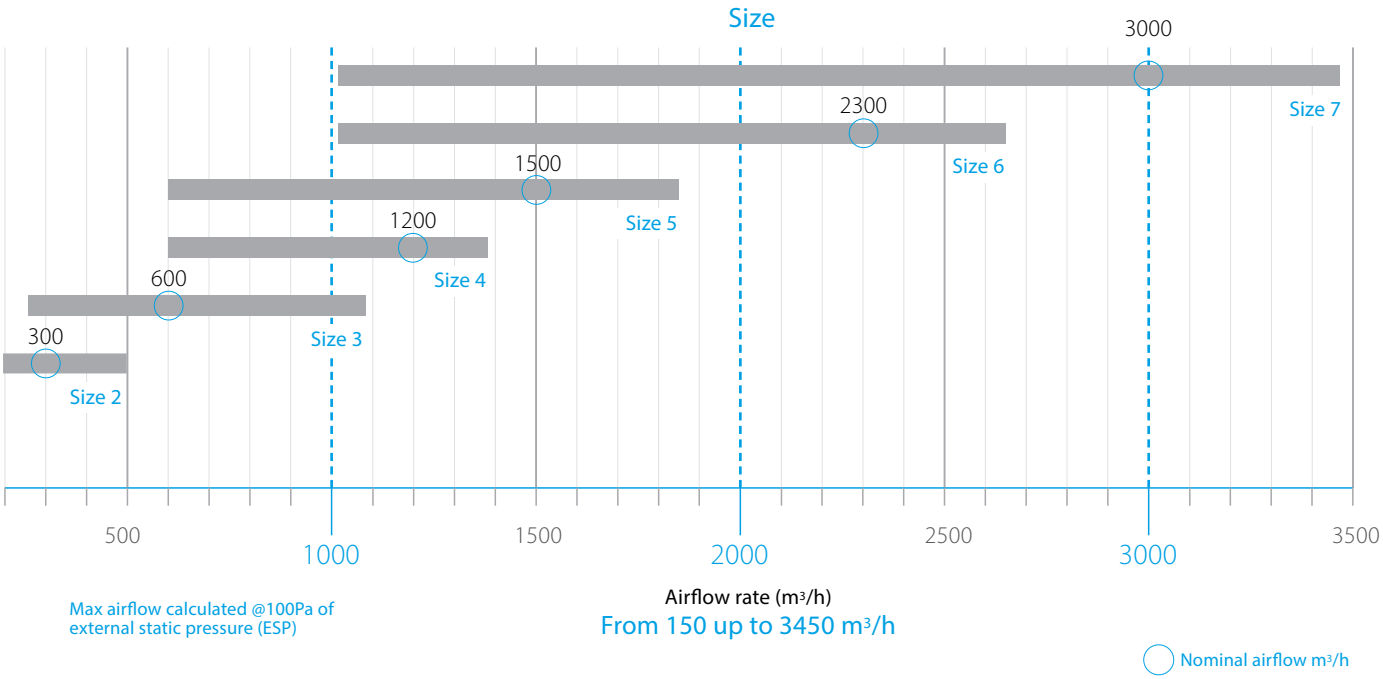
- Available in 6 sizes with an air flow up to 3.600 m³/h
- From 150 Pa up to 500 Pa of external static pressure, depending on the model sizes
- Smallest size is 280 mm of height, while the biggest size is 500 mm of height
- Energy saving solution thanks to the 100% automatic bypass
- Reduced energy consumption thanks to EC fans with IE4 motor efficiency
- Free-cooling operation and energy efficient defrost logic
- Counter flow plate heat exchanger with efficiency up to 93%
- Double filter on supply and return, up to F7+F9 filtration level
- Possibility to have pre – filter (G4, M5, F7)
- CO_2 level management thanks to optional CO_2 sensor
- 50 mm double skin panels, mineral wool insulated
- Modbus and BACnet compatible (accessory)
- Ideal solution for light commercial applications as: retail shops, small and large offices, hotels, cinemas, theatres, school, colleges, universities, etc
- Left or right versions
- Available also with integrated heating coil (water)
- VAM PCB (Smart)
- F1/F2 and P1/P2 protocol (Smart)
- Fully compatible with SkyAir and VRV systems (Smart)
- Direct integration into DIII-net (Smart)
- Controlled through any Daikin local, centralized controllers iTAB, iTM, iTC (Smart)

ALB-R/LB(S)[1]			02	03	04	05	06	07
Airflow/Airflow Smart		m³/h	300	600	1.200	1.500	2.500/2.300	3.000
Thermal efficiency/Thermal efficiency Smart [2]		%	93/90	93/91	93/90	92/90	94/92	93/91
External static pressure	Nom.	Pa	100	100	100	100	100	100
Current/Current Smart	Nom.	A	0,52	1,17	1,91	2,48	4,39/3,76	5,39
Power input/Power input Smart	Nom.	kW	0,12	0,27	0,44	0,57	1,01/0,87	1,24
SFPv/SFPv Smart [3]		kW/m³/s	1,24	1,49	1,25/1,28	1,31/1,32	1,42/1,32	1,46
Electrical supply	Phase	ph	1	1	1	1	1	1
	Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60
	Voltage	V	220/240 Vac	220/240 Vac	220/240 Vac	220/240 Vac	220/240 Vac	220/240 Vac
Dimensions unit	Width	mm	920	1.100	1.600	1.600	2.000	2.000
	Height	mm	280	350	415	415	500	500
	Length	mm	1.660	1.800	2.000	2.000	2.000	2.000
Weight unit		kg	125	180	270	280	355	360
Rectangular duct flange	Width	mm	250	400	500	500	700	700
	Height	mm	150	200	300	300	400	400
Unit sound power level/Unit sound power level Smart		dBA	48	54	57	53	62/60	57
Unit sound pressure level/Unit sound pressure level Smart [4]		dBA	34	39	41	37	46	41

Notes: (1) R= right connection and L= left connection; S = Smart Solution (Daikin PCB) (2) Winter design condition: Outdoor: -10°C (-5°C for Modular Light Smart), 90% Indoor: 22°C,50%; (3) SFPv is a parameter that quantifies the fan efficiency (the lower it is the better will be). This reduces if airflow decreases.; (4) EN 3744. Surrounding, Directivity (Q) = 2, @1,5m distance. For any performances out of the nominal condition here above mentioned kindly refer to the online selection available online at tools.daikinapplied.eu

Electrical data

			ALB02*B	ALB03*B	ALB04*B	ALB05*B	ALB06*B	ALB07*B
Power supply	Phase	ph	1~					
	Frequency	Hz	50/60					
	Voltage	V	200 - 240	200 - 277				
Full Load Condition	FLA	A	2,8	4,5	4,5	4,7	8,9	9,3
	FLI	W	371	1.033	1.033	1.033	2.033	2.033



Declaration EU. REG. 1253/2014

			ALB02*B/S	ALB03*B/S	ALB04*B/S	ALB05*B/S	ALB06*B/S	ALB07*B/S
Manufacturer's name			Daikin Applied Europe S.p.A					
Typology (NRVU,UVU or BVU)*			NRVU BVU					
Type of drive			Variable Speed Drive					
Type of HRS			Other					
Thermal efficiency of the HR		%	77,8	79,6	81,9	80,4	82,1	80,7
Nominal NRVU Flow rate	Supply	m³/h	540	1.152	1.440	1.944	2.736	3.400
	Return	m³/h	540	1.152	1.440	1.944	2.736	3.400
Effective Electric Power Input	Total	kW	0,31	0,69	0,67	0,92	1,26	1,72
SFP Internal		W/(m³/s)	842	1.181	631	787	810	1.010
Face velocity at design flow rate	Supply	m/s	1,5	2	1,4	1,9	1,7	2,3
	Return	m/s	1,5	2	1,4	1,9	1,7	2,3
Internal Pressure Drop of Ventilation Components	Supply	Pa	227	351	169	244	221	315
	Return	Pa	218	347	167	244	220	315
Nominal External Pressure	Supply	Pa	30					
	Return	Pa	30					
Static efficiency of fans**	Supply	%	53	59	53	61	53	61
	Return	%	53	59	53	63	56	64
Maximum External Leakage Rate	+400	%	< 4%	< 3%	< 4%	< 3%	< 3%	< 2%
	-400	%	< 4%	< 3%	< 4%	< 3%	< 3%	< 2%
Maximum Internal Leakage Rate		%	< 2%	< 2%	< 2%	< 2%	< 2%	< 2%
Summer Outdoor Conditions	Temperature	°C	34					
	Humidity	%	50					
Winter Outdoor Conditions	Temperature	°C	-10					
	Humidity	%	90					
Filter Energy Classification			-					
Filter Service Warning***			Displayed on HMI Controller					
Sound Power Level		dBA	53	61	62	58	63	60
Pre-/Dis- assembly Instructions			http://www.daikinapplied.eu/en/index/page/download/1350					

* In accordance with Commission Regulation (EU) No 1253/2014 of July 2014
** In accordance with Regulation (EU) No 327/2011
***Clean/Replace Filter(s) when maximum pressure drop is reached or when warning is displayed on HMI Controller

Accessories list Modular Light

		ALB02*B	ALB03*B	ALB04*B	ALB05*B	ALB06*B	ALB07*B
Compact filter	G4 (ISO Coarse 55%)	ALF02G4A	ALF03G4A	ALF05G4A		ALF07G4A	
	M5 (ePM10 55%)	ALF02M5A	ALF03M5A	ALF05M5A		ALF07M5A	
	F7 (ePM1 50%)	ALF02F7A	ALF03F7A	ALF05F7A		ALF07F7A	
	F9 (ePM1 80%)	ALF02F9A	ALF03F9A	ALF05F9A		ALF07F9A	
Silencer	900 mm depth	ALS0290A	ALS0390A	ALS0590A		ALS0790A	
Probes	CO_2	ALP00COA					
	Humidity (%RH)	ALP00HUA					
	Temperature	ALP00TEA					
Coil module	Electric pre -heating	ALD02HEFA	ALD03HEFA	ALD05HEFA		ALD07HEFA	
	Electric post - heating	ALD02HESA	ALD03HESA	ALD05HESA		ALD07HESA	
	Water cooling (post - heating)	ALD02CWSA	ALD03CWSA	ALD05CWSA		ALD07CWSA	
	Water heating (pre/post - heating)	ALD02HWUA	ALD03HWUA	ALD05HWUA		ALD07HWUA	
Mechanical accessories	Rail	ALA02RLA	ALA03RLA	ALA05RLA		ALA07RLA	
	Rectangular-Circular duct transition	ALA02RCA	ALA03RCA	ALA05RCA		ALA07RCA	
Valves	2-way water heating	ALV02HW2A	ALV03HW2A	ALV05HW2A		ALV07HW2A	
	3-way water heating	ALV02HW3A	ALV03HW3A	ALV05HW3A		ALV07HW3A	
	2-way water cooling	ALV02CW2A	ALV03CW2A	ALV05CW2A		ALV07CW2A	
	3-way water cooling	ALV02CW3A	ALV03CW3A	ALV05CW3A		ALV07CW3A	
Electrical Accessories	Modulating Valve Actuator	ALE00AMVA					
Controls	Module Bacnet Interface	ALC00908A					
	Module Modbus Interface	ALC00902A					
	Room Thermostat (included in Main Unit)	ALC00822A					
	Commissioning Module	ALC00895A					

› The accessory compatibility might be limited on the basis of the control features. Kindly refer to your sales representative in case of doubts.
› CO_2 probe (ALP00COA) selection leaves the Humidity probe(ALP00HUA) out and vice versa.
› For Modbus (ALC00902A) and BACnet (ALC00908A) modules selection there is no exclusion.
› Room thermostat (ALC00822A) is supplied with the main unit (ALB***B) as a standard item.
› Commissioning module (ALC00895A) is required for purpose of either airflow volumes' or static pressure value changes from the ones set at factory.

Installation location (air direction) Modular Light

		Supply	Fresh	Return	Exhaust
Coil	Electric pre - heating		●		
	Electric post - heating	●			
	Water cooling (post - heating)	●			
	Water heating (pre/post - heating)	●	●		
Silencer	900 mm depth	●	●	●	●
Compact filter	Filter		●	●	
Probes	CO_2			●	
	Humidity (%RH)			●	
Mechanical accessories	Rectangular - circular duct transition	●	●	●	●

Smart

		Instalation location (air direction)			
		Supply	Fresh	Return	Exhaust
Coil	Electric pre - heating		●		
Silencer	900 mm depth	●	●	●	●
Compact filter	Filter		●	●	
Probes	CO_2				●
Mechanical accessories	Rectangular - circular duct transition	●	●	●	●

External electric coil Modular Light

Material Name	Main unit size	Description	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	V,ph,Hz	Output (kW)
ALD02HEFA	2	Electric pre - heating	485	370	220	7,5	230/1/50	1,5
ALD03HEFA	3		635	370	270	10		3
ALD05HEFA	4		735	500	370	14	400/3/50	7,5
	5							
ALD07HEFA	6		935	500	470	21	400/3/50	15
	7							
ALD02HESA	2	Electric post - heating	485	370	220	7,5	230/1/250	2,1
ALD03HESA	3		635	370	270	10	400/3/50	4
ALD05HESA	4		735	500	370	18	400/3/50	10
	5							
ALD07HESA	6		935	500	470	21	400/3/50	15
	7							

External electric coil Smart

Material Name	Main unit size	Description	Depth (mm)	Width (mm)	Height (mm)	Weight (kg)	V,ph,Hz	Output (kW)
ALD02HEFB	2	Electric pre - heating	370	470	193	7	230/1/50	1,5
ALD03HEFB	3		370	620	243	10		3
ALD05HEFB	4		370	720	343	15	400/3/50	7,5
	5							
ALD07HEFB	6		370	920	443	21	400/3/50	15
	7							

Electrical Accessories Smart

Material Name	Description
BRYMA200	CO_2 
BRC1H519W/S/K	Room Thermostat 

External water coil Modular Light

Material Name	Main unit size	Description	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Airflow (m3/h)	Press.drop (Pa)
ALD02CWSA	2	Water cooling (post -heating)	NOT YET RELEASED					
ALD03CWSA	3		590	395	298	12,6	600	60
ALD05CWSA	4		690		398	16,6	1.500	100
	5						1.500	100
ALD07CWSA	6		890		498	27,3	3.000	125
	7						3.000	125
ALD02HWUA	2	Water heating (pre/post -heating)	NOT YET RELEASED					
ALD03HWUA	3		563	190	238	5,5	600	25
ALD05HWUA	4		663		338	8	1.500	45
	5						1.500	45
ALD07HWUA	6		863		438	12,5	3.000	55
	7						3.000	55

Material Name	Main unit size	Description	Inlet air temp. (°C)	Outlet air temp. (°C)	Output (KW)	Water flow (l/s)	Water press. Drop (kPa)	N° tube rows
ALD02CWSA	2	Water cooling (post -heating)	25	NOT YET RELEASED				4
ALD03CWSA	3			13,9	2,5	0,12	2,56	
ALD05CWSA	4			13,9	6,5	0,31	9,44	
	5			13,9	6,5	0,31	9,44	
ALD07CWSA	6			14,1	12,5	0,6	13,95	
	7			14,1	12,5	0,6	13,95	
ALD02HWUA	2	Water heating (pre/post -heating)	0	NOT YET RELEASED				2
ALD03HWUA	3			21,8	4,7	0,23	9,22	
ALD05HWUA	4			19,7	10,7	0,52	23,12	
	5			19,7	10,7	0,52	23,12	
ALD07HWUA	6			18,5	2,1	0,97	29,89	
	7			18,5	2,1	0,97	29,89	

The outlet air temperature is based on 0°C air inlet (pre - heating). For post - heating please consider that air inlet to the coil is higher taking into account the heat recovery system

Useful information

- Both pre (ALD**HEFA) and post (ALD**HESA) electric coils must be equipped with an additional temperature probe (ALP00TEA) fitted in the duct and wired to the terminal.
- Both water heating (ALD**CWSA) and water cooling coil must be equipped with an additional temperature probe (ALP00TEA) fitted in the duct and wired to the terminal. In addition, either a 2 or 3 ways valves (ALV**HW2A, ALV**HW3A, ALV**CW2A, ALV**CW3A) must be ordered along with its modulating actuators for water valve (mandatory option ALE00AMVA)
- Electric pre – heating (ALD**HEFA) is available in two steps while electric post – heating (ALD**CWSA and ALD**HWUA) is modulating

Rails

Material Name	Main unit size	Description	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
ALA02RLA	2	Rail	1.660	84	51	3,5
ALA03RLA	3		1.800	84	51	3,5
ALA05RLA	4		2.000	84	51	3,92
	5		2.000	84	51	3,92
ALA07RLA	6		2.000	84	51	4,3
	7		2.000	84	51	4,3

Filter

Material Name	Main unit size	Description	AP Clean (Pa)
ALF02G4A	2	G4 Compact Filter	76
ALF03G4A	3		92
ALF05G4A	4		72
	5		90
ALF07G4A	6		100
	7		120
ALF02M5A	2	M5 Compact Filter	44
ALF03M5A	3		53
ALF05M5A	4		41
	5		51
ALF07M5A	6		57
	7		69
ALF02F7A	2	F7 Compact Filter	61
ALF03F7A	3		74
ALF05F7A	4		58
	5		72
ALF07F7A	6		80
	7		96
ALF02F9A	2	F9 Compact Filter	76
ALF03F9A	3		92
ALF05F9A	4		72
	5		90
ALF07F9A	6		100
	7		120

The pressure drop is referring to nominal airflow.

Standard material name - Base module

	Product		Components	Size		Connection side	Model revision	Controls
Digit	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	A	**L**	**B**	**0**	**2**	**R**	**B**	**S**
Character	A = Ahu	L = Modular Light	B = Base module	02= Size 02 03= Size 03 07 = Size 07		R = Right L = Left	A = First release B = Second release	M = Microtech III S = Smart Solution (Daikin PCB)

Standard unit will be provided with: Smart Controller (Daikin PCB), aluminium counter flow plate heat exchanger, F7 filter on supply air, M5 filter on return air. Double skin panel (inner Aluzinc AZ185, outer pre - painted)

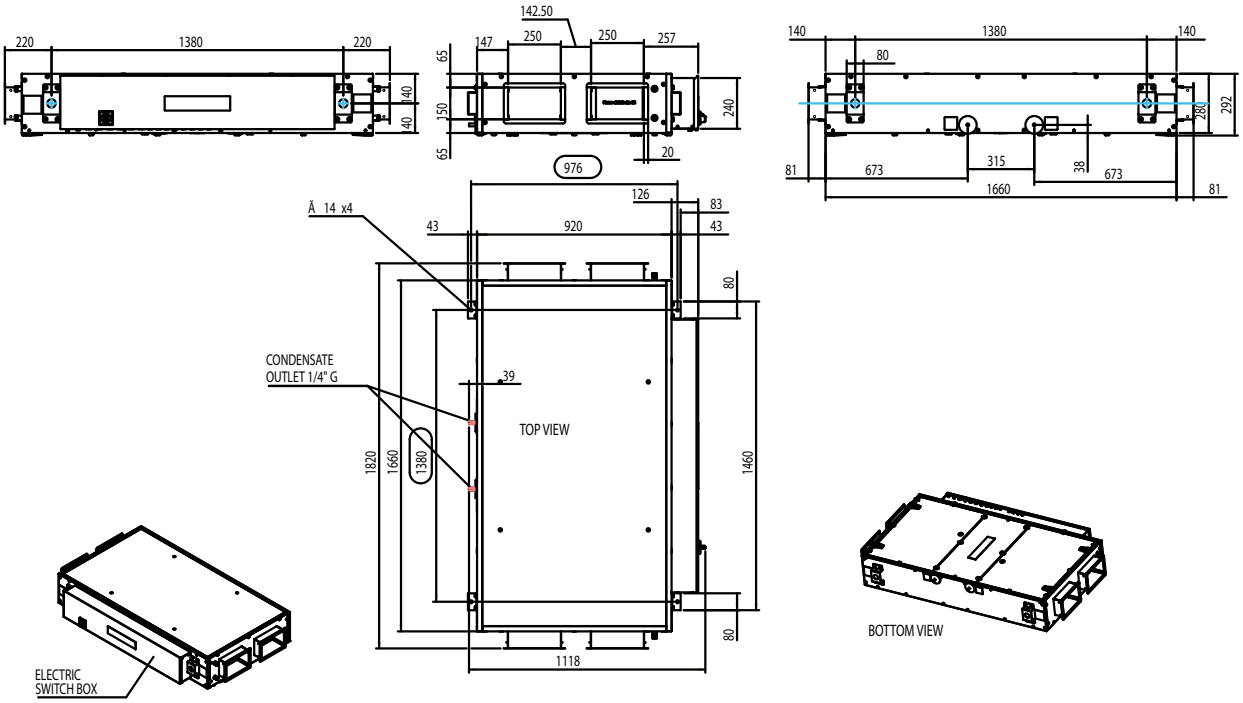
Modular Light	Main Unit	
	Right	Left
Size 2	ALB02RB	ALB02LB
Size 3	ALB03RB	ALB03LB
Size 4	ALB04RB	ALB04LB
Size 5	ALB05RB	ALB05LB
Size 6	ALB06RB	ALB06LB
Size 7	ALB07RB	ALB07LB

Modular L Smart	Connection	
	Right	Left
Size 2	ALB02RBS	ALB02LBS
Size 3	ALB03RBS	ALB03LBS
Size 4	ALB04RBS	ALB04LBS
Size 5	ALB05RBS	ALB05LBS
Size 6	ALB06RBS	ALB06LBS
Size 7	ALB07RBS	ALB07LBS

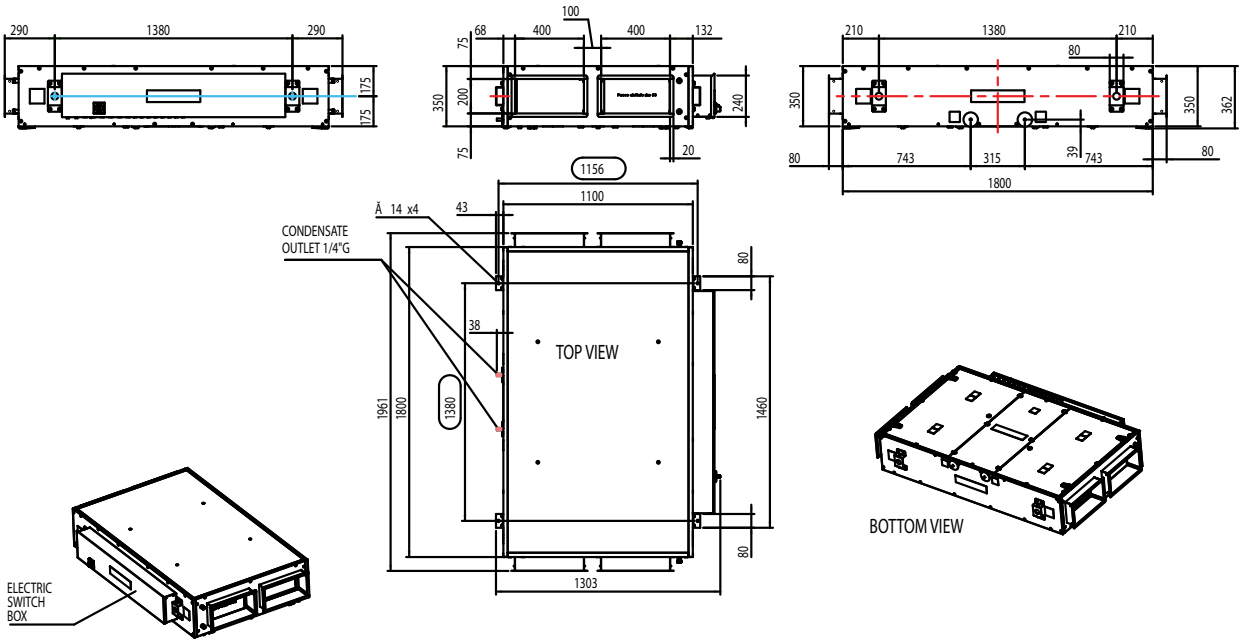
		Modular Light	Modular Light Smart
	Control platform	Microtech III	Daikin control PCB
	Remote Controller	Standard (POL822)	Optional (BRC1[E/H]) compulsary
	BACnet or Modbus integration	Direct integration (Optional)	Through iTM and interfaces (Optional)
	LonWorks	N/A	●
	Cloud connection	Daikin On Site	Daikin Cloud Service
	Airflow management	Constant and Variable air volume (CAV-or VAV)	N/A
	Temperature Control	Supply, Return or Ambient set point choice	Comparison between outside & inside temp.
	Defrost operation	Advance logic though modulating by-pass or pre-heater	Pre-heater command
	Free cooling operation	●	●
External accessories	CO_2 control	●	●
	RH (%) control	●	N/A
	Water heating/cooling coil	●	N/A
	Electrical heater	Heating and Pre-Heating	Only for pre heater
	Compact filter	●	●
	Silencers	●	●
	Rails	●	●

N/A: not available

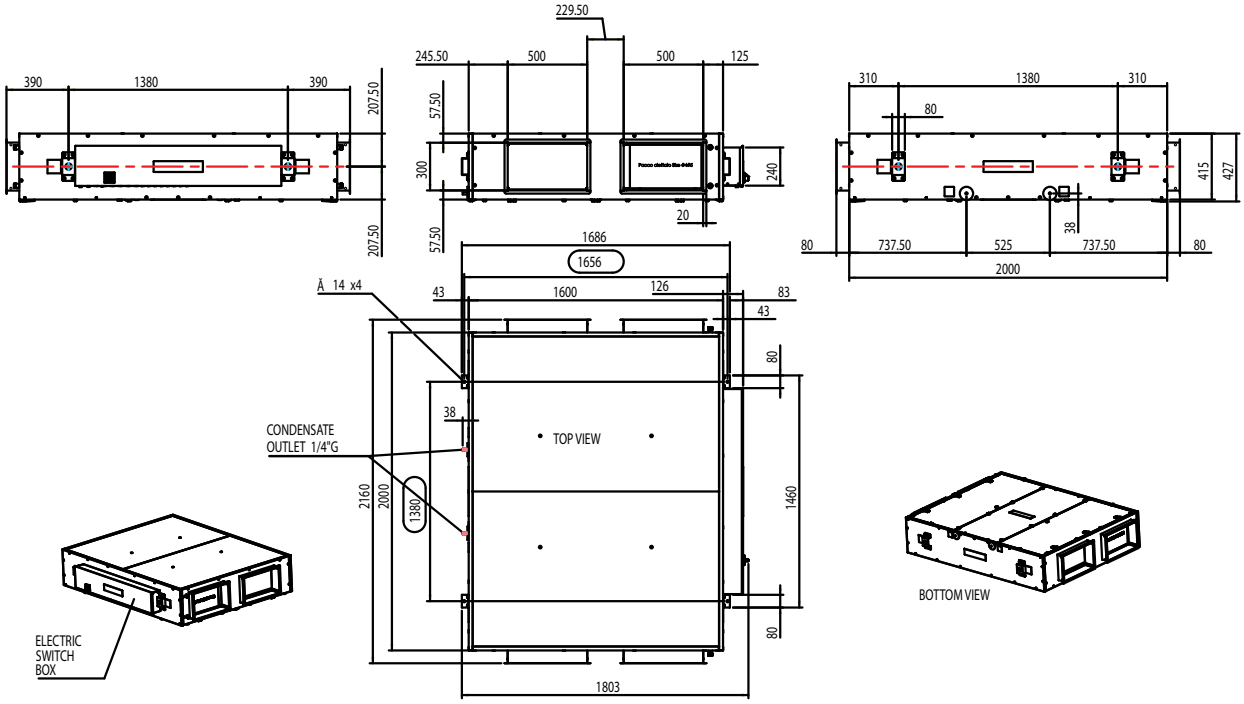
Dimensional drawing: size 2



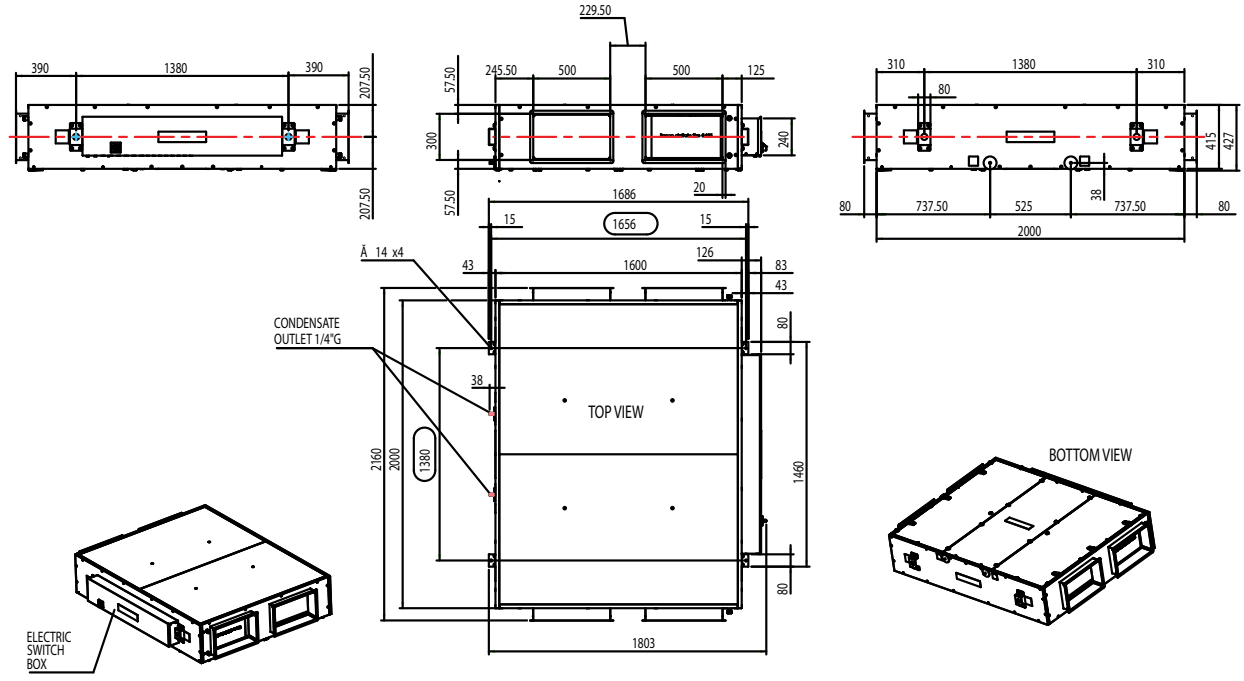
Dimensional drawing: size 3



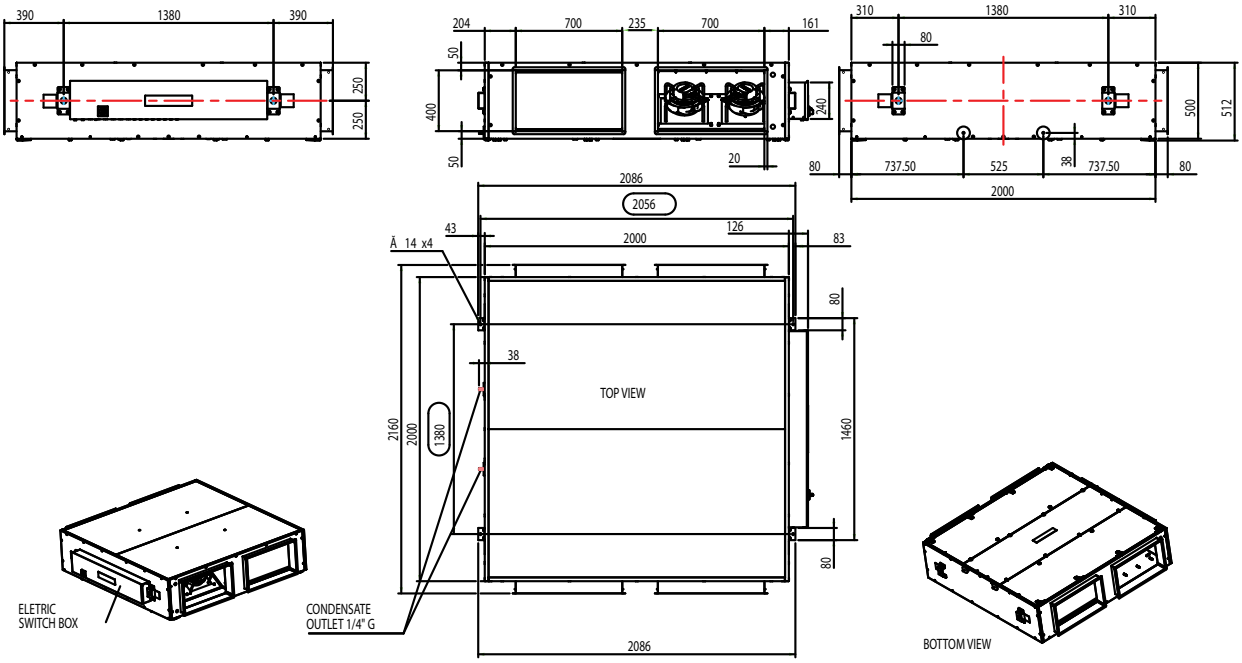
Dimensional drawing: size 4



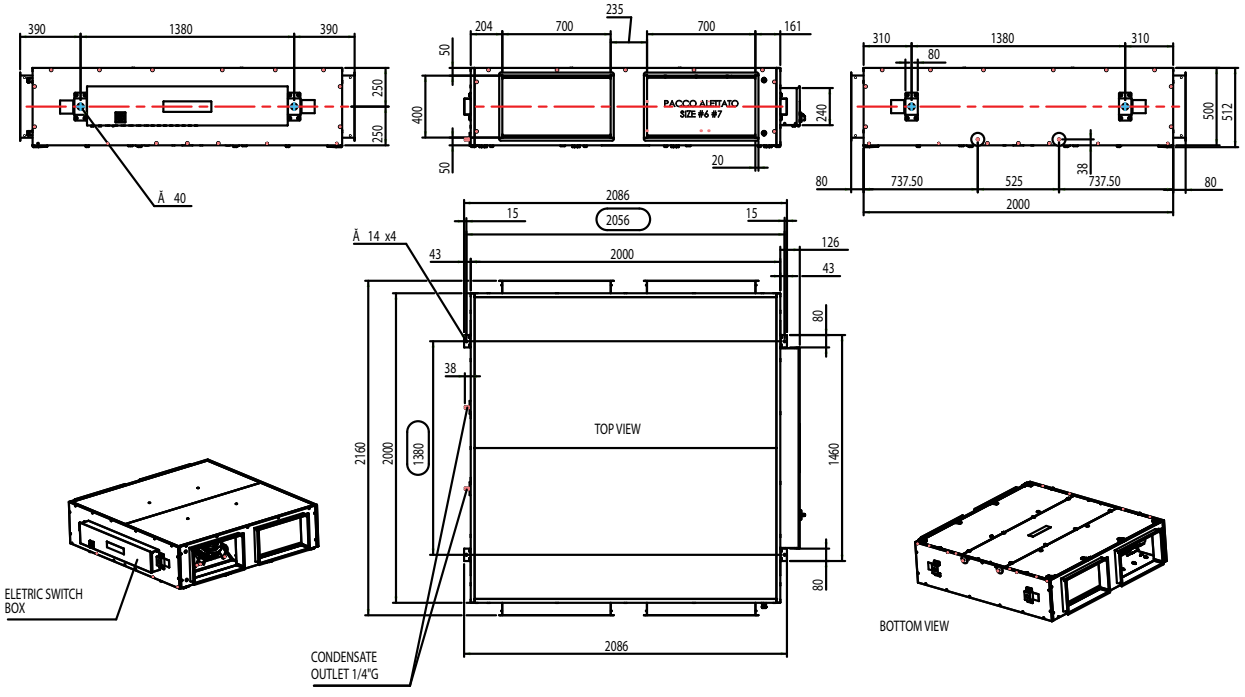
Dimensional drawing: size 5



Dimensional drawing: size 6



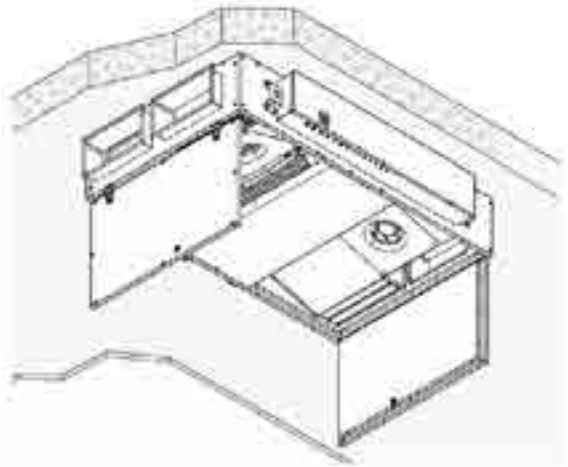
Dimensional drawing: size 7



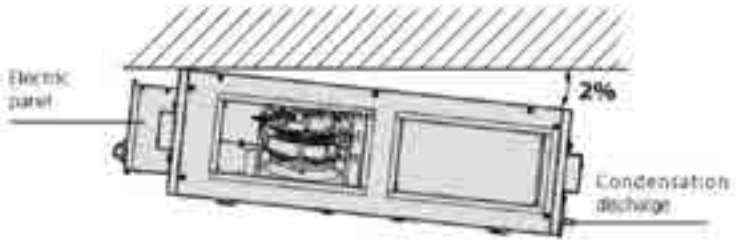
Unit installation

Modular Light perfectly fits with false ceiling applications. The ceiling must be:

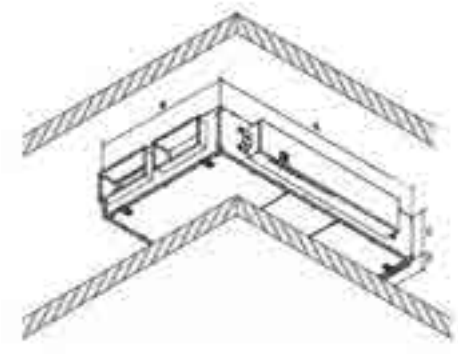
› Perfectly flat and without roughness
› Able to support the weight of the unit considering an appropriate safety margin

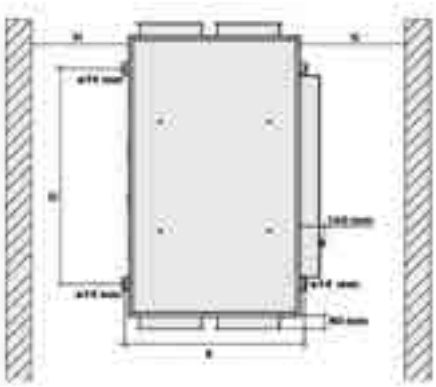


The unit must be tilted by approximately 2% of the width (lifting it towards the electrical panel)



Unit clearances

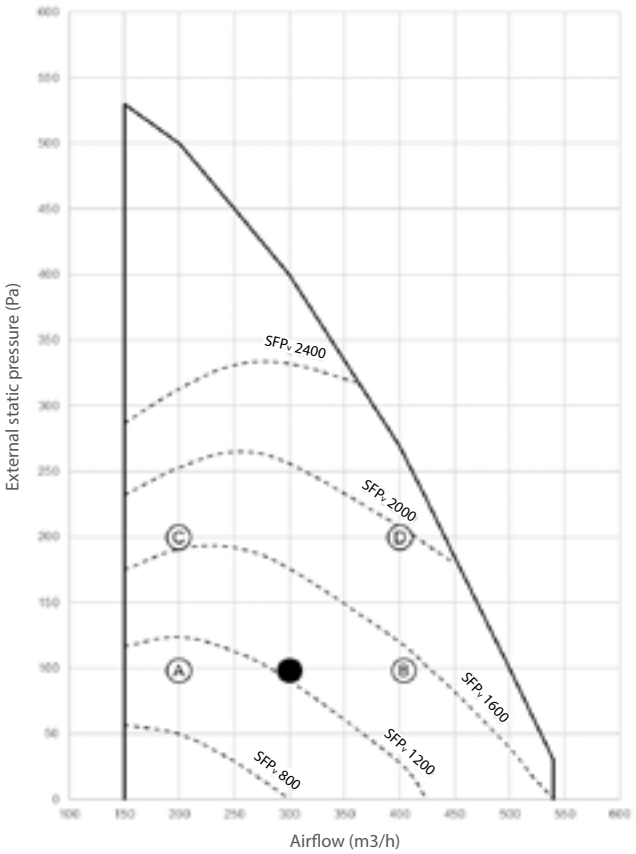




		ALB02*B	ALB03*B	ALB04*B	ALB05*B	ALB06*B	ALB07*B
A	mm	1.660	1.800	2.000			
B	mm	920	1.100	1.600		2.000	
C	mm	280	350	415		2.000	
D	mm	1.380					
E	mm	976	1.156	1.656		2.056	
F*	mm	630	670	675			
F**	mm	70					
G	mm	500					
H	mm	300					

Note: * Hinged doors; ** Sliding doors with optional rails (ALA**RLA)

Performance data: size 2

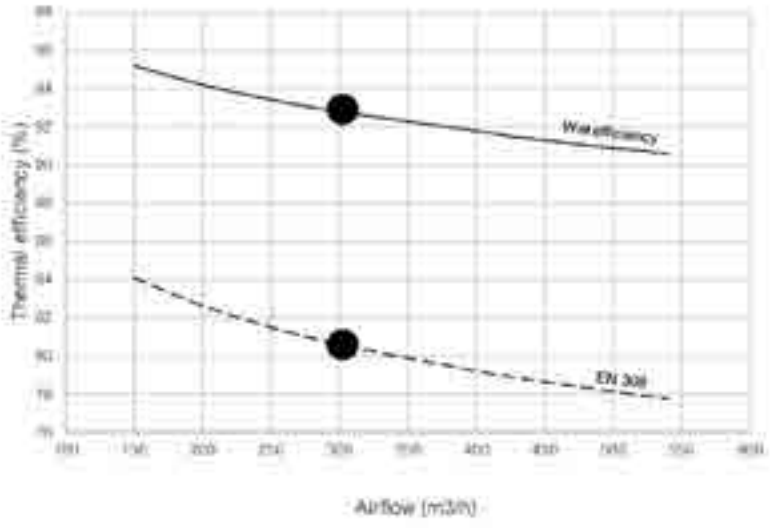


The diagram shows the available external pressure for the duct system given an airflow.

SFPv = Specific Fan Power (W/m³/s)

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

● Nominal working point
Ⓐ Ⓑ Ⓒ Ⓓ Sound data (see next page)



Thermal efficiency

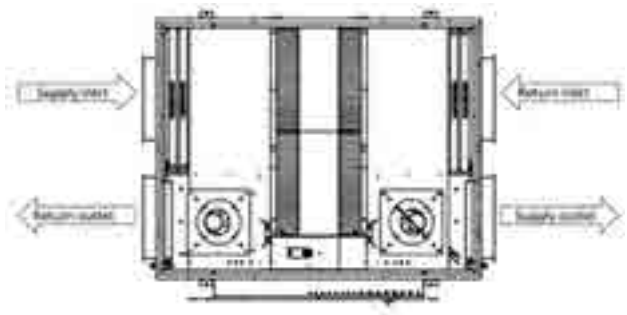
› Wet efficiency: -10°C/ RH 90% Outdoor and +22°C/50% Indoor
› With air ratio 1:1 and according to EN 308

Surrounding power level

The airborne is the sound power emitted by the unit. The surrounding power level is the logarithmic sum of the two airborne values (supply and return).

Surrounding pressure level

It is calculated in accordance with EN3744. The evaluation is done at 1,5m from the source and with a directivity factor equal to 2.



Point Ⓐ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	54	55	53	44	45	42	28	18	50
	Supply outlet	59	62	67	65	59	60	52	47	67
	Return inlet	54	55	54	45	45	42	28	19	50
	Return outlet	59	63	67	66	59	61	53	47	67
	Surrounding power	62	54	50	48	39	38	31	20	48
Surrounding pressure (dBA)										31

Point Ⓑ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	58	56	56	47	48	47	36	29	54
	Supply outlet	64	64	69	68	63	66	60	57	71
	Return inlet	58	56	55	47	48	47	36	28	53
	Return outlet	63	64	69	67	62	66	60	57	51
	Surrounding power	67	55	52	50	43	43	38	30	52
Surrounding pressure (dBA)										35

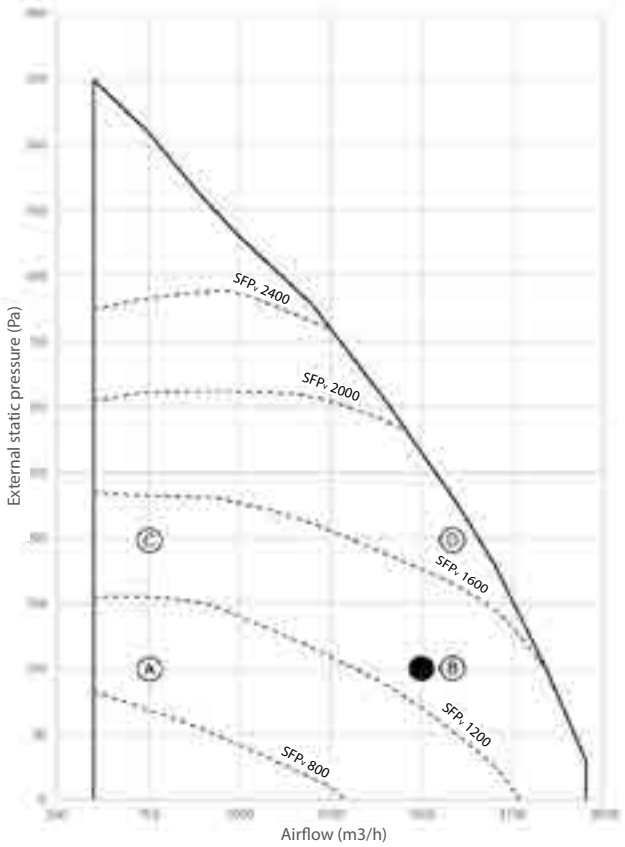
Point Ⓒ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	57	58	57	49	48	46	32	24	54
	Supply outlet	62	66	71	70	62	64	57	52	71
	Return inlet	57	59	58	49	48	46	33	24	54
	Return outlet	62	66	71	70	63	64	57	52	71
	Surrounding power	65	57	54	52	43	42	35	25	52
Surrounding pressure (dBA)										35

Point Ⓓ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	60	59	59	50	51	49	38	31	56
	Supply outlet	65	67	72	71	66	68	63	59	74
	Return inlet	60	59	59	50	51	49	38	31	56
	Return outlet	65	66	72	71	65	68	62	59	74
	Surrounding power	68	58	55	53	45	45	40	33	54
Surrounding pressure (dBA)										37

Performance data: size 3

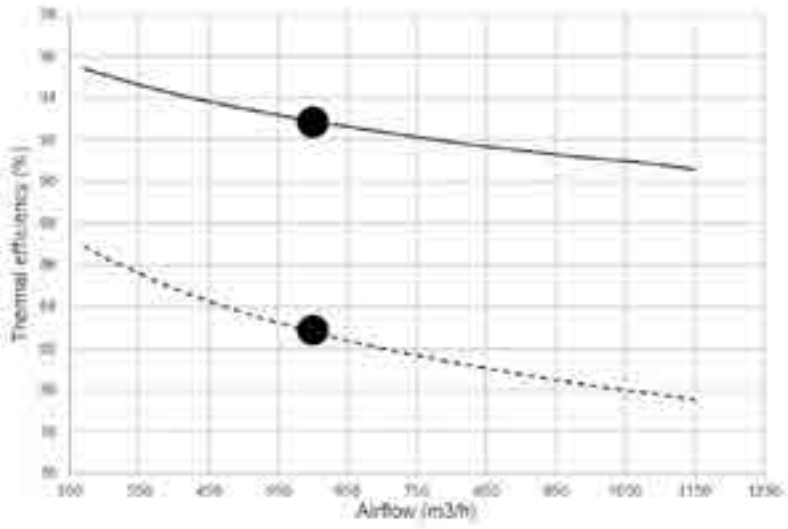


The diagram shows the available external pressure for the duct system given an airflow.

SFPv = Specific Fan Power (W/m³/s)

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

● Nominal working point
Ⓐ Ⓑ Ⓒ Ⓓ Sound data (see next page)



Thermal efficiency

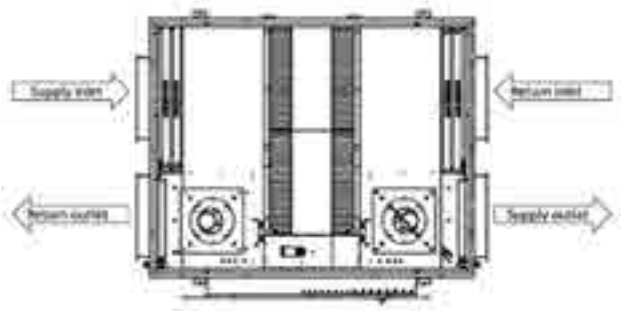
› Wet efficiency: -10°C/ RH 90% Outdoor and +22°C/50% Indoor
› With air ratio 1:1 and according to EN 308

Surrounding power level

The airborne is the sound power emitted by the unit. The surrounding power level is the logarithmic sum of the two airborne values (supply and return).

Surrounding pressure level

It is calculated in accordance with EN3744. The evaluation is done at 1,5m from the source and with a directivity factor equal to 2.



Point Ⓐ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	62	64	62	53	51	46	32	20	58
	Supply outlet	67	72	76	74	65	64	56	48	74
	Return inlet	62	64	62	53	51	46	32	20	58
	Return outlet	67	72	76	74	65	64	56	48	74
	Surrounding power	70	63	59	56	45	42	34	21	56
Surrounding pressure (dBA)										39

Point Ⓑ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	67	69	63	51	52	50	38	28	59
	Supply outlet	72	76	77	72	66	68	62	56	75
	Return inlet	68	69	64	53	53	51	39	29	60
	Return outlet	73	77	78	74	67	69	63	57	76
	Surrounding power	76	68	61	55	47	47	41	30	59
Surrounding pressure (dBA)										42

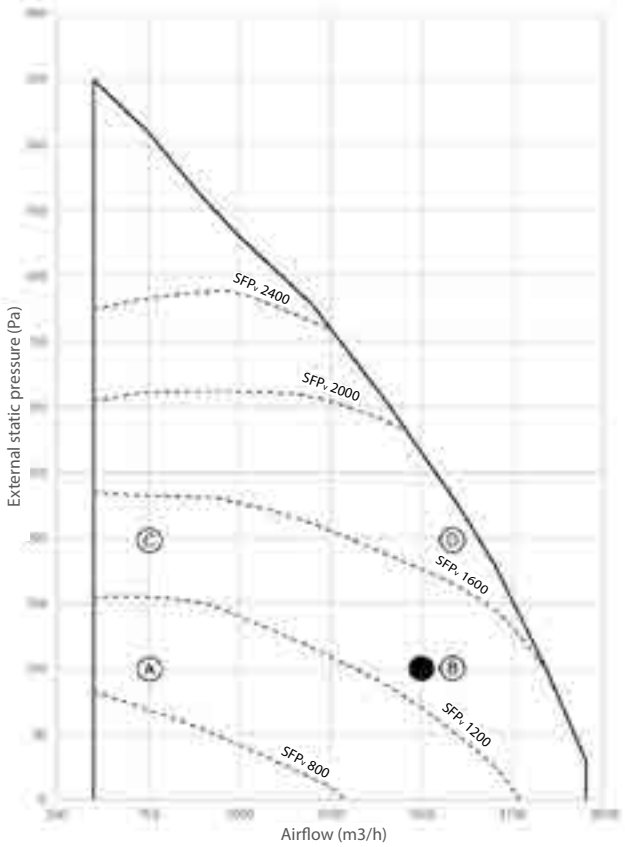
Point Ⓒ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	64	67	66	56	54	49	36	24	61
	Supply outlet	69	75	80	77	68	68	60	52	77
	Return inlet	64	68	66	57	54	49	36	24	61
	Return outlet	69	75	80	77	68	68	60	53	78
	Surrounding power	72	66	63	60	48	45	38	26	60
Surrounding pressure (dBA)										43

Point Ⓓ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	69	70	66	55	55	52	41	31	62
	Supply outlet	74	78	80	76	69	71	65	59	78
	Return inlet	69	71	67	56	56	53	41	32	63
	Return outlet	74	79	81	77	70	72	66	60	79
	Surrounding power	77	70	64	59	50	49	44	33	61
Surrounding pressure (dBA)										44

Performance data: size 4

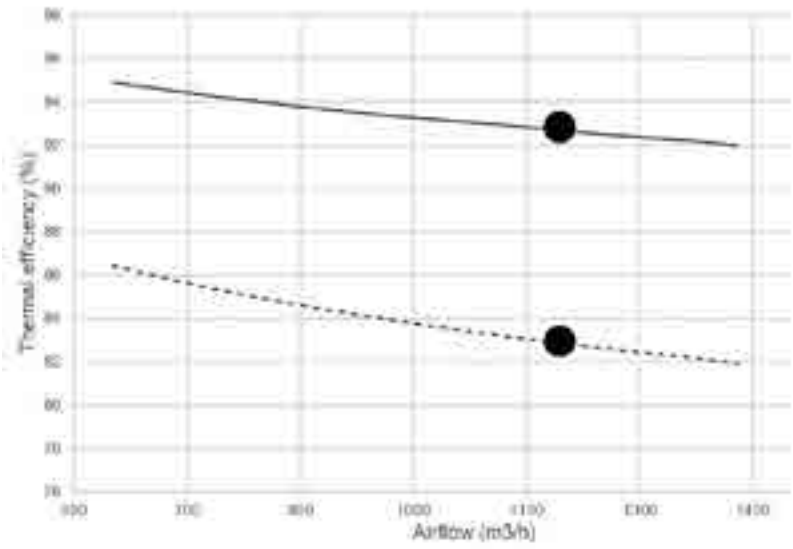


The diagram shows the available external pressure for the duct system given an airflow.

SFPv = Specific Fan Power (W/m³/s)

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

● Nominal working point
Ⓐ Ⓑ Ⓒ Ⓓ Sound data (see next page)



Thermal efficiency

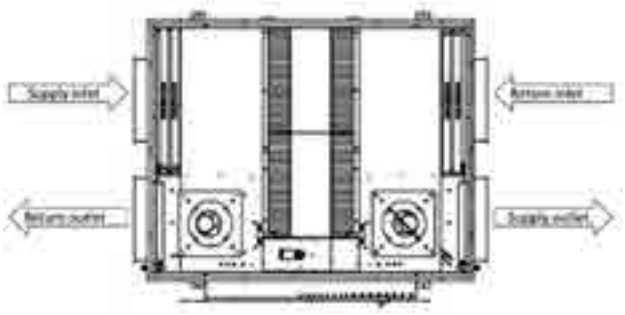
› Wet efficiency: -10°C/ RH 90% Outdoor and +22°C/50% Indoor
› With air ratio 1:1 and according to EN 308

Surrounding power level

The airborne is the sound power emitted by the unit. The surrounding power level is the logarithmic sum of the two airborne values (supply and return).

Surrounding pressure level

It is calculated in accordance with EN3744. The evaluation is done at 1,5m from the source and with a directivity factor equal to 2.



Point Ⓐ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	63	64	57	44	46	44	31	20	53
	Supply outlet	68	72	71	65	60	62	56	48	69
	Return inlet	64	64	58	45	46	44	32	21	54
	Return outlet	68	72	71	66	60	63	56	49	69
	Surrounding power	71	63	54	48	40	40	34	22	52
Surrounding pressure (dBA)										34

Point Ⓑ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	58	61	60	50	52	51	40	31	57
	Supply outlet	63	68	73	71	66	70	64	59	75
	Return inlet	60	62	60	50	52	51	40	31	58
	Return outlet	65	70	74	71	66	70	65	60	75
	Surrounding power	67	60	57	53	46	47	43	33	55
Surrounding pressure (dBA)										37

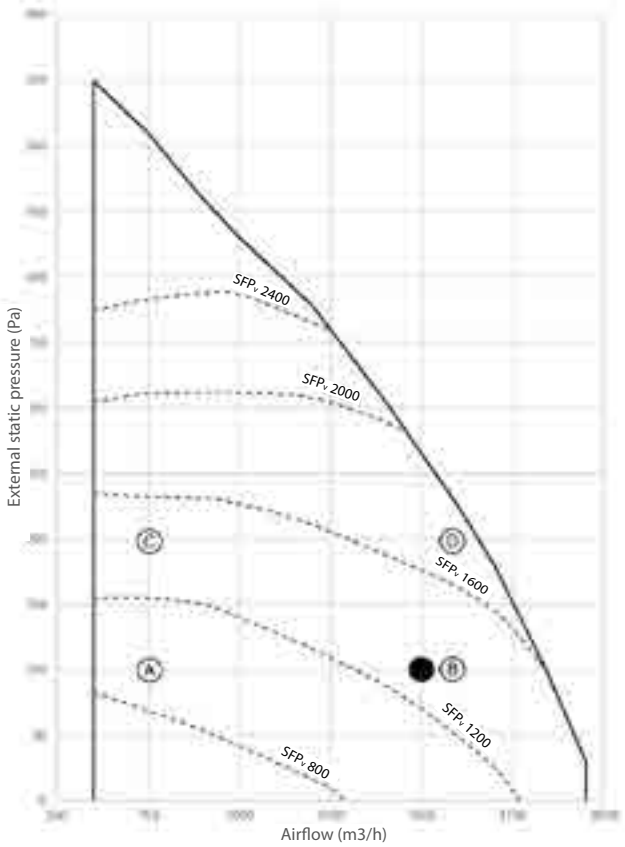
Point Ⓒ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	65	67	61	50	50	47	35	24	57
	Supply outlet	70	74	75	70	64	66	60	53	73
	Return inlet	65	67	62	50	50	48	35	25	57
	Return outlet	70	74	75	71	74	66	60	53	73
	Surrounding power	73	65	58	53	44	44	37	26	56
Surrounding pressure (dBA)										38

Point Ⓓ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	68	69	64	52	53	52	42	32	60
	Supply outlet	73	76	78	72	68	71	66	61	77
	Return inlet	69	69	64	52	53	52	42	33	60
	Return outlet	74	77	78	73	68	71	66	61	77
	Surrounding power	76	68	61	55	47	48	44	34	59
Surrounding pressure (dBA)										41

Performance data: size 5

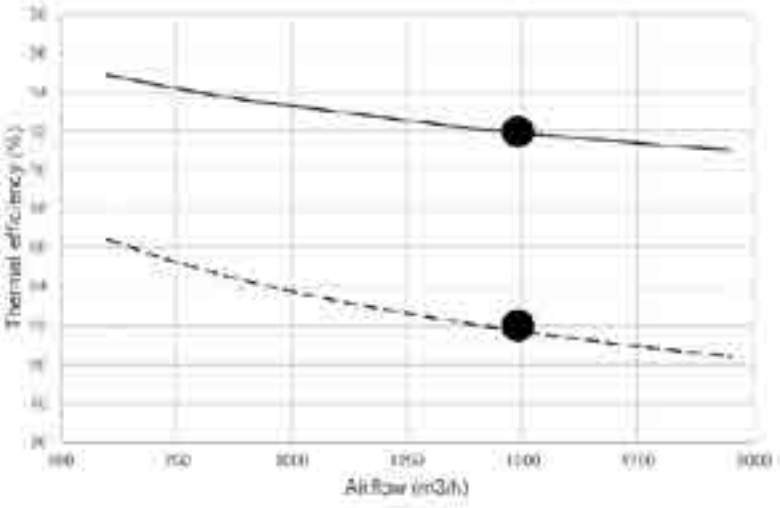


The diagram shows the available external pressure for the duct system given an airflow.

SFPv = Specific Fan Power (W/m³/s)

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

● Nominal working point
Ⓐ Ⓑ Ⓒ Ⓓ Sound data (see next page)



Thermal efficiency

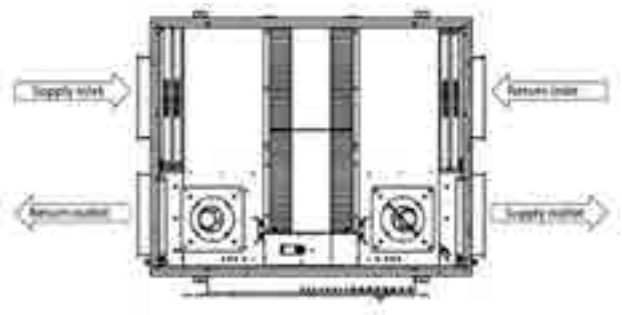
› Wet efficiency: -10°C/ RH 90% Outdoor and +22°C/50% Indoor
› With air ratio 1:1 and according to EN 308

Surrounding power level

The airborne is the sound power emitted by the unit. The surrounding power level is the logarithmic sum of the two airborne values (supply and return).

Surrounding pressure level

It is calculated in accordance with EN3744. The evaluation is done at 1,5m from the source and with a directivity factor equal to 2.



Point Ⓐ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	68	68	58	43	42	38	30	16	54
	Supply outlet	66	75	70	64	58	61	54	46	68
	Return inlet	68	69	59	43	42	38	30	17	55
	Return outlet	66	76	71	64	58	62	55	46	69
	Surrounding power	69	67	54	47	38	39	33	19	53
Surrounding pressure (dBA)										35

Point Ⓑ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	73	69	62	51	50	47	39	31	59
	Supply outlet	64	66	74	69	64	69	62	58	73
	Return inlet	74	70	64	52	51	48	40	32	59
	Return outlet	67	68	75	69	65	69	62	59	74
	Surrounding power	69	58	57	52	45	46	40	32	55
Surrounding pressure (dBA)										37

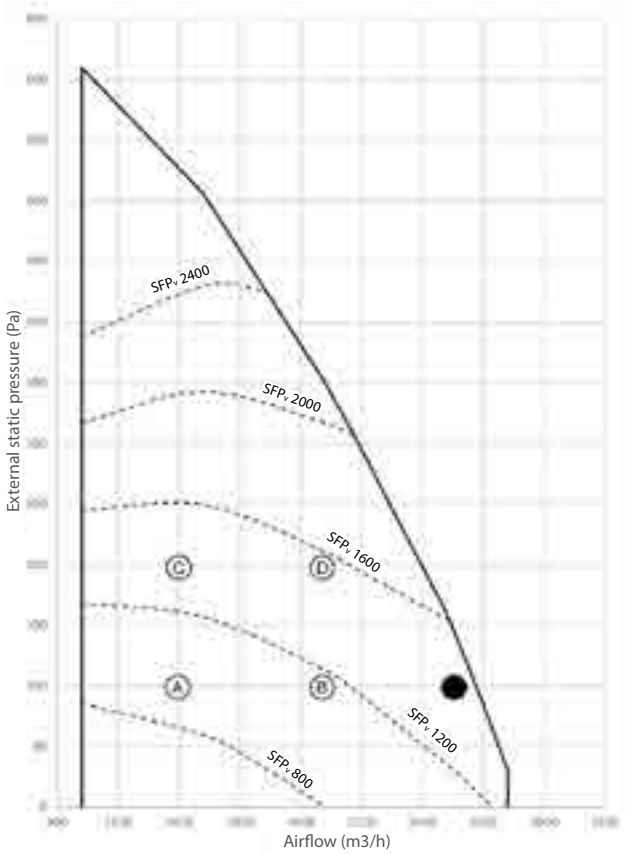
Point Ⓒ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	70	73	64	48	46	42	35	22	60
	Supply outlet	73	81	77	70	63	67	59	51	74
	Return inlet	70	73	65	48	46	42	35	22	60
	Return outlet	73	81	77	70	63	67	59	51	74
	Surrounding power	76	72	60	53	43	44	37	24	59
Surrounding pressure (dBA)										41

Point Ⓓ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	74	72	66	53	52	48	41	32	61
	Supply outlet	70	70	77	72	66	71	64	61	76
	Return inlet	74	72	66	54	52	49	42	32	62
	Return outlet	70	71	78	73	68	72	66	63	77
	Surrounding power	73	62	61	55	47	49	43	35	58
Surrounding pressure (dBA)										40

Performance data: size 6

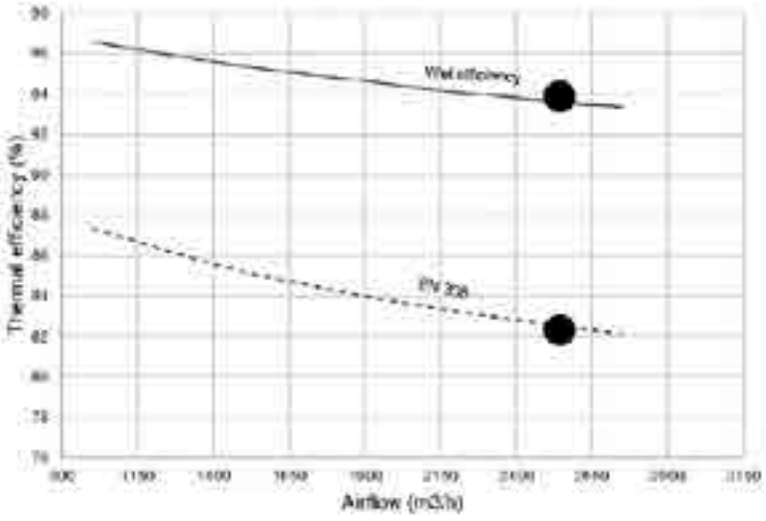


The diagram shows the available external pressure for the duct system given an airflow.

SFPv = Specific Fan Power (W/m³/s)

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

● Nominal working point
Ⓐ Ⓑ Ⓒ Ⓓ Sound data (see next page)



Thermal efficiency

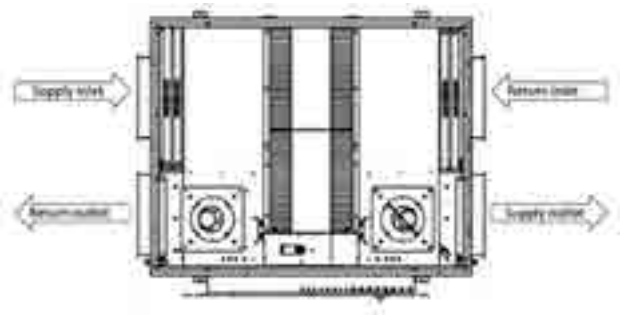
› Wet efficiency: -10°C/ RH 90% Outdoor and +22°C/50% Indoor
› With air ratio 1:1 and according to EN 308

Surrounding power level

The airborne is the sound power emitted by the unit. The surrounding power level is the logarithmic sum of the two airborne values (supply and return).

Surrounding pressure level

It is calculated in accordance with EN3744. The evaluation is done at 1,5m from the source and with a directivity factor equal to 2.



Point Ⓐ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	66	67	70	47	49	47	34	23	56
	Supply outlet	71	75	74	68	63	66	59	51	72
	Return inlet	67	68	62	49	50	48	36	25	58
	Return outlet	72	76	75	70	64	67	70	53	73
	Surrounding power	75	67	57	51	44	44	38	26	56
Surrounding pressure (dBA)										38

Point Ⓑ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	72	71	62	48	47	43	35	23	58
	Supply outlet	68	76	74	68	63	66	60	52	72
	Return inlet	73	73	65	51	49	45	38	25	61
	Return outlet	71	79	78	71	65	68	62	54	75
	Surrounding power	73	69	59	52	44	44	38	26	57
Surrounding pressure (dBA)										39

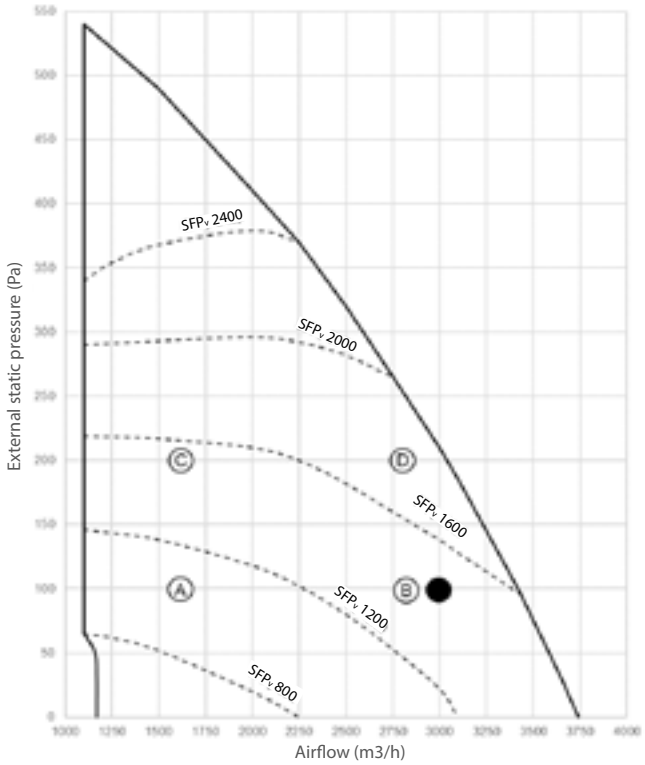
Point Ⓒ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	68	70	64	53	53	50	38	28	60
	Supply outlet	73	77	78	73	67	69	63	56	76
	Return inlet	69	70	66	54	54	52	39	29	61
	Return outlet	74	78	79	75	69	70	64	57	77
	Surrounding power	77	69	62	57	48	47	41	30	60
Surrounding pressure (dBA)										42

Point Ⓓ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	74	74	67	54	50	46	39	27	62
	Supply outlet	72	80	82	73	66	69	63	56	77
	Return inlet	75	75	70	57	51	47	41	28	64
	Return outlet	73	81	87	76	66	70	64	58	80
	Surrounding power	76	72	68	57	46	47	42	30	62
Surrounding pressure (dBA)										44

Performance data: size 7

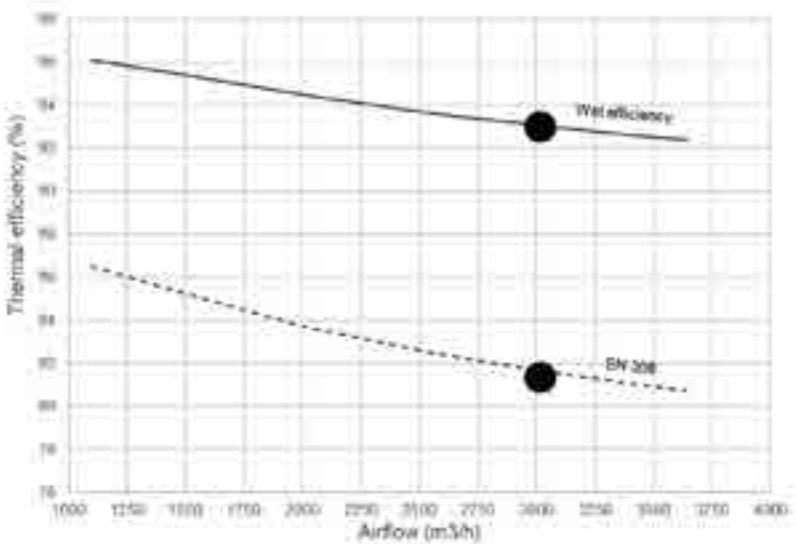


The diagram shows the available external pressure for the duct system given an airflow.

SFPv = Specific Fan Power (W/m³/s)

The SFPv curves are referring to the complete unit. Moreover, it includes power to both supply and extract fan divided by either the supply or extract volume whichever is the greater.

● Nominal working point
Ⓐ Ⓑ Ⓒ Ⓓ Sound data (see next page)



Thermal efficiency

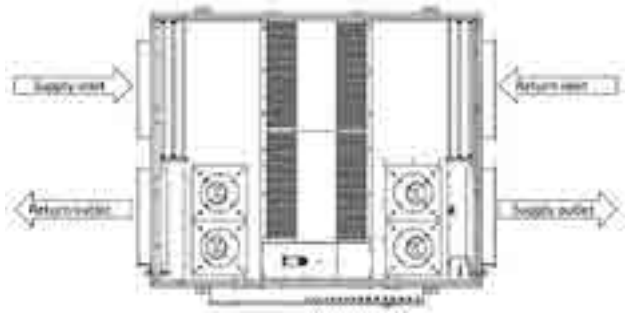
› Wet efficiency: -10°C/ RH 90% Outdoor and +22°C/50% Indoor
› With air ratio 1:1 and according to EN 308

Surrounding power level

The airborne is the sound power emitted by the unit. The surrounding power level is the logarithmic sum of the two airborne values (supply and return).

Surrounding pressure level

It is calculated in accordance with EN3744. The evaluation is done at 1,5m from the source and with a directivity factor equal to 2.



Point Ⓐ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	71	71	61	46	45	41	32	20	57
	Supply outlet	68	78	73	66	61	64	57	49	71
	Return inlet	72	74	64	48	46	42	35	22	60
	Return outlet	72	82	76	70	64	67	60	51	74
	Surrounding power	73	71	58	51	42	43	36	23	58
Surrounding pressure (dBA)										40

Point Ⓑ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	76	72	65	53	52	50	42	33	61
	Supply outlet	66	69	76	71	66	70	64	60	75
	Return inlet	76	74	68	56	54	51	43	34	63
	Return outlet	72	73	80	74	68	72	66	62	78
	Surrounding power	73	62	61	55	47	49	43	34	58
Surrounding pressure (dBA)										40

Point Ⓒ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	74	71	66	53	51	48	40	31	61
	Supply outlet	70	70	78	72	65	70	63	59	75
	Return inlet	74	72	66	54	51	48	41	31	61
	Return outlet	71	71	79	72	66	70	64	60	76
	Surrounding power	74	62	62	55	46	47	42	33	58
Surrounding pressure (dBA)										40

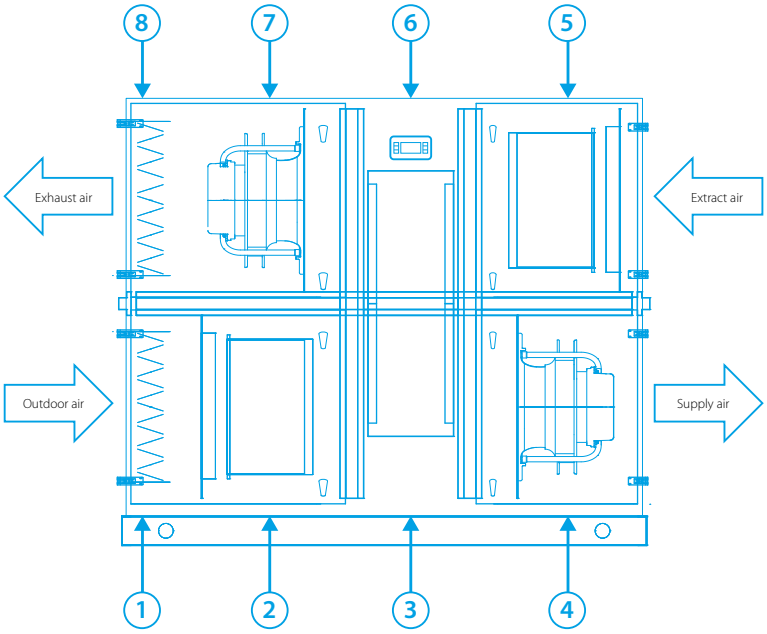
Point Ⓓ

Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Avg (dBA)
Sound power (dB)	Supply inlet	76	74	68	56	54	51	43	34	63
	Supply outlet	72	73	80	74	68	72	66	62	78
	Return inlet	77	76	70	58	55	52	45	35	65
	Return outlet	75	75	83	77	71	76	69	66	81
	Surrounding power	77	65	64	58	50	52	46	37	61
Surrounding pressure (dBA)										43

Modular R / P

With their Plug & Play design and inherent flexibility, Daikin air handling units can be configured and combined to meet the exact requirements of any building, no matter what it is used for or who is to work there.

Our systems are designed to be the most environmentally friendly and the most energy efficient. This means they have a reduced ecological impact, while, at the same time, keeping costs down by minimising energy consumption. When combined with the small physical footprint of the system, these features make our air handling units ideal for all markets.



Unit configuration

1. Outdoor air damper
2. Filter supply
3. Heat recovery wheel
4. EC fan supply
5. Filter extraction
6. HMI Controls
7. Fan exhaust
8. Damper exhaust

Heat recovery solutions

They are not only modular and compact, the new series are also extremely efficient. The inclusion of a heat recovery wheel type heat exchanger in the units ensures it has **85% temperature efficiency** and up to **60% humidity efficiency**.

A lifetime of savings

While the initial investment and installation are major factors in the overall cost of an air handling unit, Modular series units are designed to reduce energy costs throughout their entire working life. Features such as Constant Air Flow (CAV) or Pressure Control (VAV), economy mode, night mode operation and the programmable timer all provide considerable savings. Savings that ensure a rapid payback of the investment.

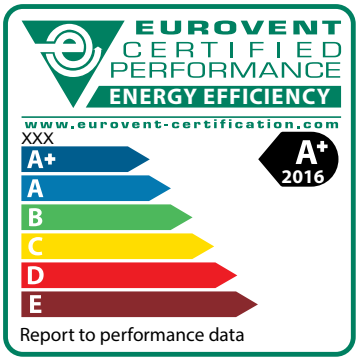
Strengths

› Air flow control by measuring at the inlet nozzle
› Easy commissioning
› Nominal air flow programmed at factory
› Silent operation
› premium efficiency motors with an IE4 rating
› Eurovent certified.

Norms and standards

Daikin Modular air handling units are built in compliance with the strictest standards in the marketplace:

› EN 1886:2007
› EN 13053:2011
› EN 13779:2007
› VDI 6022-1:2011
› EN 15251:2007
› EN 308:1997



Unrivalled compatibility

Daikin's Modular series come in pre-defined sizes and are available as indoor or outdoor versions. This means that modular systems can be designed and installed in a variety of applications. And with an operating range of -25°C (-40°C with electric heaters) to +43°C, they are suitable for any European climate. Daikin air handling units are wired at the factory and are also pre-commissioned, with each unit's software tuned and the set points already established. On site, all that is required is to plug the system into the power supply, connect any pipes and wires, and switch the unit on.
Like all Daikin air handling units, the Modular series are compatible with all common heating and cooling equipment. They are extremely user-friendly thanks to their full compatibility with ITM and all other Daikin equipment. In combination with Daikin chillers, ERQ and VRV condensing units, they offer a unique package assuring excellent heat recovery and indoor air quality, as well as high quality and reliability.

Simple and quick installation

The series' Plug & Play design is more than just a convenient feature for installers. It also offers cost saving benefits as there is no need for expensive adjustments before the unit is commissioned. Plug & Play makes everyone's life simpler, safer and more economical.

ASTRA Web
Modular selection program

› ASTRA Web offers a quick and accurate selection of the best AHU
› Preset parameters will guide you to the optimum solution
› High selection quality, thanks to the huge number of the pre-defined units embedded within the software.

Modular R

High-end solution with heat wheel

Energy efficiency and indoor air quality

- Predefined sizes
- IE4 premium efficiency motor
- High efficiency heat wheel (heat recovery)
- Compact design
- Advanced control features
- Easy installation
- Indoor air quality compliant with VDI 6022 hygiene guideline
- Operating limits from -25 °C, -40 °C with electric heaters, up to +46 °C ambient temperature
- VRV IV and ERQ coupling capability
- Indoor and outdoor versions
- Free cooling capability
- Economy and Night mode operation
- Monitoring and control through Daikin ITM

EC Fan

- Air flow or pressure control (Variable Air Volume - Constant Air Volume)
- Nominal air flow programmed at factory
- Silent operation

Details:

- up to 20.500m³/h according ERP 2018
- Casing: Pre-Painted 0,7 or Aluzinc 0,8 with Thermal Break
- Insulation: Polyuretane or Mineral Wool
- Frame: Aluminium 100mm
- Casing 42mm

D-AHU Modular R			1	2	3	4	5	6	7	8	9	10
Airflow		m³/h	1.200	1.700	2.700	4.100	5.500	6.100	7.000	9.100	11.500	15.000
Temp. efficiency winter		%	82,4	82,4	82,4	82,6	82,2	82,4	83	82,6	82,5	82,7
External static pressure	Nom.	Pa	200	200	200	200	200	200	200	200	200	200
Current	Nom.	A	2,38	3,18	1,65	2,58	3,35	3,86	4,32	5,36	7,15	9,50
Power input	Nom.	kW	0,55	0,73	1,14	1,79	2,32	2,68	2,99	3,72	4,95	6,58
SFPv		kW/m³/s	1,64	1,55	1,52	1,57	1,52	1,58	1,54	1,47	1,55	1,58
Electrical supply	Phase	ph	1	1	3 + N	3 + N	3 + N	3 + N	3 + N	3 + N	3 + N	3 + N
	Frequency	Hz	50	50	50	50	50	50	50	50	50	50
	Voltage	V	230	230	400	400	400	400	400	400	400	400
Dimensions unit	Width	mm	720	720	990	1.200	1.400	1.400	1.600	1.940	1.940	2.300
	Height	mm	1.320	1.320	1.540	1.740	1.740	1.920	1.920	2.180	2.460	2.570
	Length	mm	1.700	1.700	1.800	1.920	2.080	2.280	2.400	2.450	2.280	2.400
Weight unit		kg	325	350	475	575	750	790	950	1.330	1.410	1.750

Airflow depending on a constant Temperature efficiency

Modular P

AHU with plate heat exchanger

Highlights

› 10 Predefined sizes
› Compliant with VDI 6022
› Operating limits from -25 C, -40C with electric heaters
› Plug & Play Controls
› Monitoring and control through Daikin ITM
› Easy installation and commissioning

EC Fan

› Inverter driven with IE4 premium efficiency motor
› High-efficient blade profiling
› Reduced energy consumption
› Optimized SFP (Specific Fan Power) for an efficient unit operation

Details:

› up to 19.000m³/h according ERP 2018
› Casing: Pre-Painted 0,7 or Aluzinc 0,8 with Thermal Break
› Insulation: Polyuretane or Mineral Wool
› Frame: Aluminium 100mm
› also WITHOUT built in controller
› Casing 42mm

Heat exchanger

› Premium quality counter flow plate heat exchanger
› Up to 93% of the thermal energy recovered
› No cross contamination

D-AHU Modular P			1	2	3	4	5	6	7	8	9	10
Airflow		m³/h	1.100	1.600	2.400	3.100	3.700	4.750	5.500	8.000	10.400	12.500
Thermal efficiency		%	93,9	93,6	93,2	93,1	93,1	93,1	93,1	93,3	93,1	93,1
External static pressure	Nom.	Pa	200	200	200	200	200	200	200	200	200	200
Current	Nom.	A	1,75	2,51	1,28	1,67	2,09	2,69	3,04	4,14	5,88	6,97
Power input	Nom.	kW	0,40	0,58	0,89	1,15	1,45	1,86	2,11	2,87	4,07	4,83
SFPv		kW/m³/s	1,32	1,30	1,33	1,34	1,41	1,41	1,38	1,29	1,41	1,39
Electrical supply	Phase	ph	1	1	3 + N	3 + N	3 + N	3 + N	3 + N	3 + N	3 + N	3 + N
	Frequency	Hz	50	50	50	50	50	50	50	50	50	50
	Voltage	V	230	230	400	400	400	400	400	400	400	400
Dimensions unit	Width	mm	720	820	990	1.200	1.400	1.400	1.600	1.940	1.940	2.300
	Height	mm	1.320	1.320	1.540	1.740	1.740	1.920	1.920	2.180	2.460	2.570
	Length	mm	2.030	2.200	2.610	2.660	2.800	3.210	3.340	3.840	4.060	4.190
Weight unit		kg	343	358	512	604	785	852	964	1.449	1.700	2.071

Airflow depending on a constant Temperature efficiency

Components and Accessories for Modular R/P

Components

› MIX – Mixing Module
› ATTENUATOR – Attenuator Module
› ELECTRICAL HEATER – Pre Heater / Post Heater
› FILTER – Filter Module
› COIL – Cooling / Heating / Cooling+Heating / Heating+Cooling / DX / DX+Heatin

Accessories

Mechanical
› Flat Roof
› Screen Door
› Port Hole
› Rain Hood
› Louvre
› Circular Spigot
› Flexible Connection

Electrical
› Lamp wired to external switch
› Microswitch

Sensor
› CO_2
› Humidity

Interface
› Remote
› Bacnet
› Modbus

Thermostat
› Room
› Frost protection (auto reset)

Filter
› U Manometer
› Minihelic

Fan
› Noise Reduction NRL


DAIKIN

Professional

Flexible solution for custom applications

Flexible design

Daikin Professional air handlers are tailored to your needs, optimizing always the unit for the most cost-effective selection and manufacturing standardization.

› Air flow from 500 m^3/h up to 144.000 m^3/h.
› All the units can be modularly designed to facilitate the transport and the assembly on site.

Variable dimensioning

Size	Airflow (m^3/h)	Height - mm	Width - mm
1	1.800	640	720
2	2.200	640	810
3	3.500	740	980
4	5.400	840	1.190
5	6.600	840	1.390
6	7.600	940	1.390
7	9.000	1.090	1.380
8	11.000	1.150	1.550
9	14.000	1.270	1.720
10	18.300	1.390	1.970
11	23.800	1.570	2.190

Size	Airflow (m^3/h)	Height - mm	Width - mm
12	29.800	1.690	2.480
13	33.800	1.870	2.510
14	43.200	1.990	2.940
15	51.000	2.110	3.230
16	63.000	2.290	3.620
17	68.000	2.290	3.890
18	77.000	2.290	4.410
19	87.000	2.410	4.660
20	95.400	2.470	4.960
21	111.200	2.590	5.460
22	127.000	2.650	6.060

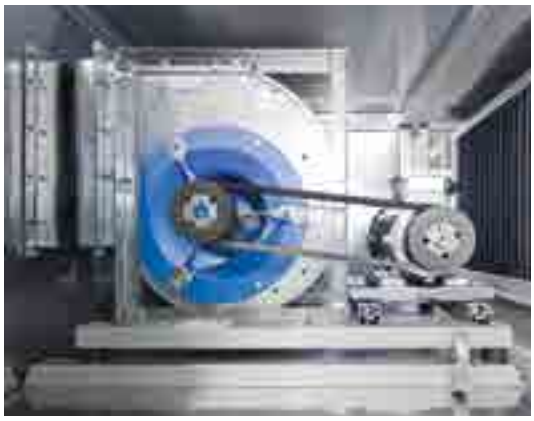
› 1 cm increment for width & height dimensions
› No additional cost for customized unit size
› No additional lead time

Example

Airflow (m^3/h)	Unit Size	Height (mm)	Width (mm)	Face Velocity (m/s)
47.000	Size 15	2.110	3.230	2,27
	1.920x2.720	2.110	2.950	2,5

Plug and play: More control, more flexibility

The plug and play control system allows for more precise control than ever before, allowing the user to determine a wide range of settings, resulting in excellent operational flexibility.
The factory-fitted electrical control panel, complete with Direct Digital Control (DDC) is combined with in-built temperature, humidity and CO_2 sensors to control mixing dampers, heat recovery wheels, water valves, pressure switches for filters and fans, fan motors and inverters.
All these components are wired internally and individual AHU modules are linked by fast connectors.
The AHU control system can manage the chilled water coil, hot water coil, DX cooling and/or heating coil(s) (in conjunction with ERQ/VRV) of single or multiple refrigerant circuits (up to a maximum of four circuits per DX coil).



Design

› Double-Deck
› Side by Side
› Linear

Casing:
› 42mm or 62mm
Panels:
› Pre-Coated 0,7 - 1,5mm
› Aluzinc 0,8 - 1,5mm
› Aluminium 1,0 - 1,5mm
› Stainless Steel (SS304/316) 0,5 - 1,5mm
Profiles:
› Anodized
› Thermal Break
Insulation:
› Foam
› Mineral Wool

› For indoor and outdoor use
› with or without built in controller
› for hygienic use (hospital)
› calculations in ASTRA according ERP2018

Combinable to Daikin VRV or ERQ

ERQ VRV IV

Daikin - a member of the Eurovent network

EUROVENT
EUROPEAN INDUSTRY ASSOCIATION

Why Clean Air?

Clean and unpolluted air is one of the most important needs of the human being. People spend more than 90% of their life inside buildings, so fresh air becomes a major topic nowadays.
Daikin Air Handling Units help to create this safe and healthy environment.

IAQ matters
Yes to a better Indoor Air Quality

Indoor quality and energy efficiency

Indoor quality and energy efficiency were not always linked together in the past. Ecodesign legislation found a useful way by motivating the manufacturer to come up with more efficient components to close the gap between energy loss and a healthy indoor environment.

Energy recovery systems (heat-wheels, plate-heat-exchanger,..) and fan motors are much more efficient, also the cross dimensions of Air handling units grew by about 30% to reach better SFP (specific fan power) values.

Other improvements are variable speed drives and demand controls (CO_2, humidity,..).

Investing in a highly efficient AHU in combination with an intelligent control system gives you the best result in the creation of an optimal indoor air quality (IAQ).

European Union legislation

Modern Air handling units are a result of the new building requirements by the European Union legislation. The application possibilities for these units are infinite. They are used for hotels, offices, museums, art galleries, cruise ships, swimming pools, hospitals, clean rooms, pharmaceutical manufacturing plans, schools, kindergartens, housings, apartments, industry and many more.

New energy usage data shows that about **40% are related to building energy**. It is very important to understand how energy use depends on the system design.

The most economical system has to be found without reducing the quality of the supplied air and the functionality of the system.
The transport of the air has the greatest influence on the energy costs. The main task is to deliver air wherever and whenever it is needed, which is the main task of the control system.
A balance between pressure drop and investment cost related also to the ductwork. Enough space should be provided to keep the pressure drop as small as possible.

Life-Cycle Costs

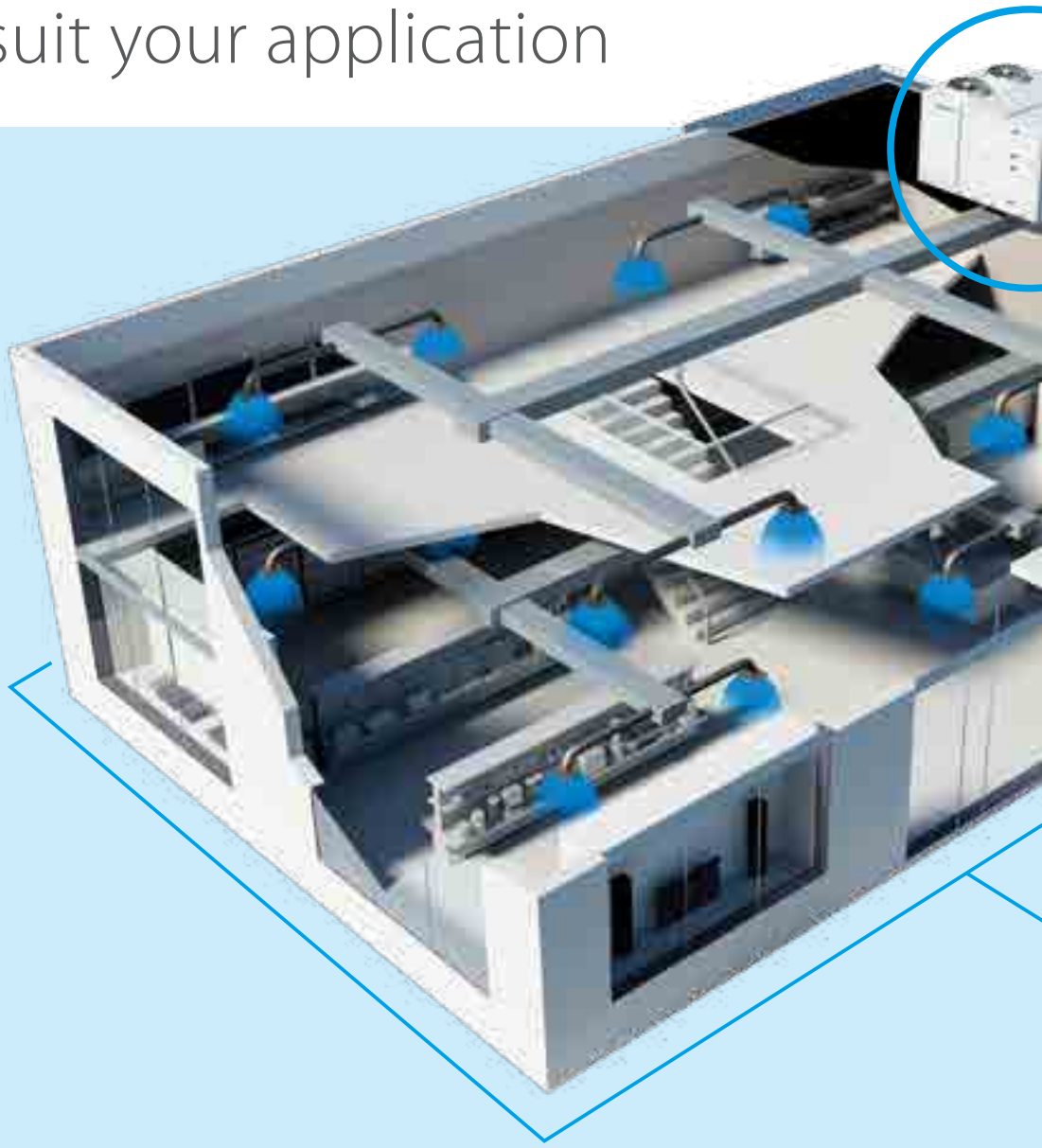
A big focus is also placed on the life-cycle costs (LCC) of the complete system where all the cost for investment, installation, commissioning, energy and maintenance are comprised.

This highlights the complete system and not only some parts out of it. High quality AHUs with highly efficient components together with a control system and a low pressure duct design leads to lower operating cost during life time which is in average 15-20 years.

For refference: Eurovent Guidebook October 2018 | First release

Daikin rooftops

Flexible to suit your application



Rooftop for Retail & Department Stores

Retail & department stores need challenging design because of **limited space and complex building structure, containing different floors and spaces**. Daikin rooftops provide the solution:

› Ductwork can be connected flexibly (front, left, right, bottom) to optimize installation space.
› High efficiency EC plug fans are maintenance free, limiting the downtime of the system for maintenance.
› Extraction damper and fan ensure there is no overpressure in the building and air circulation is optimised.
› High indoor air quality can be guaranteed thanks to integrated fresh air provision.

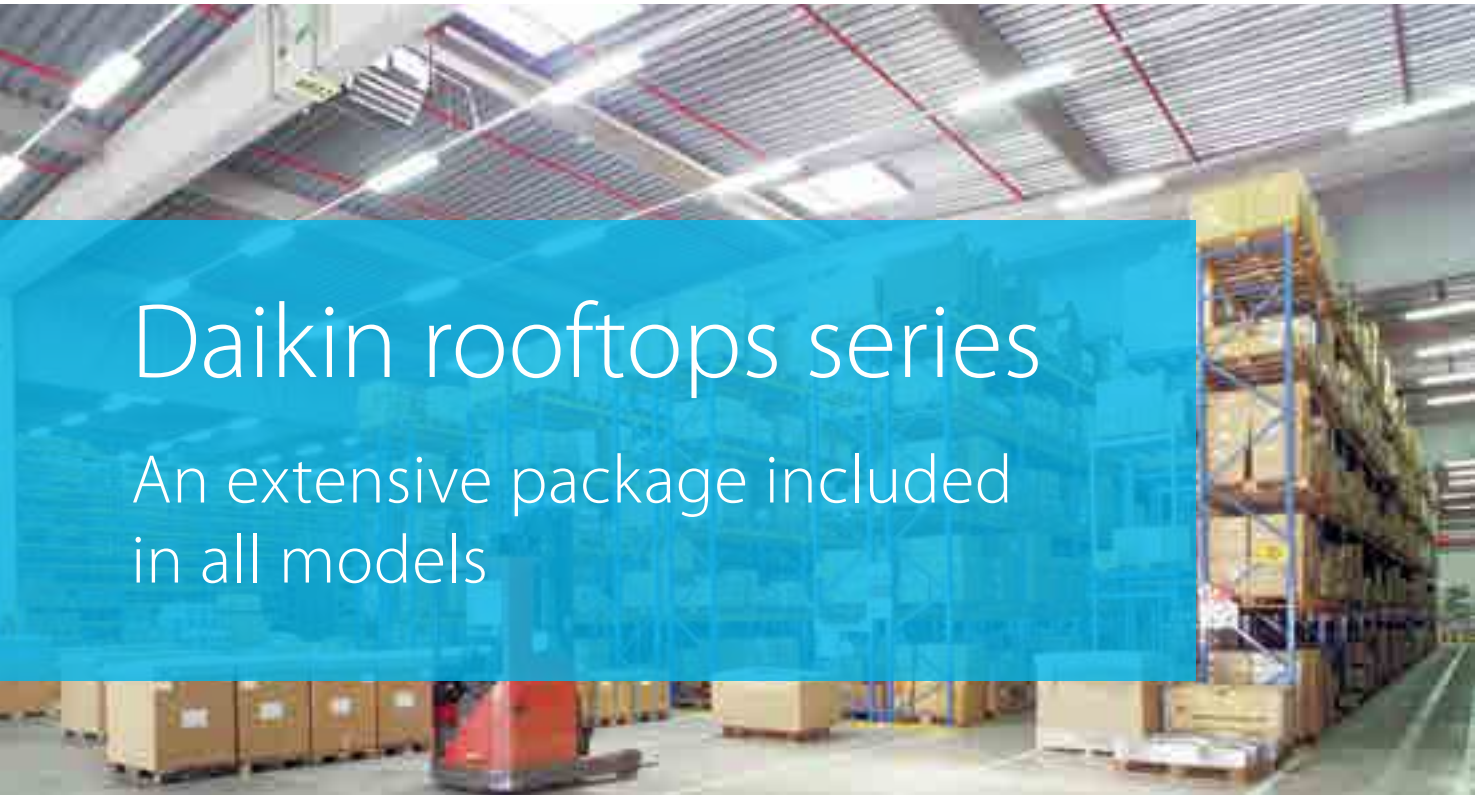
Supply and extract ducting ensures even distribution in the building.

Plug & play installation as indoor and outdoor are in one package.

Rooftop for Warehouses & Industry

For building managers and engineers, warehouses or industrial applications can pose serious HVAC **challenges because of their size and unique design**. Daikin rooftops provide the solution:

› Pre-connected indoor/outdoor units and factory charged refrigerant provide cost-effective installation.
› High ESP up to 300Pa allows extensive ductwork to evenly distribute the air across a large space.
› Scroll compressor and free cooling ensure highly efficient 24/7 operation.
› Clogged filter alarm indicates when filter needs cleaning, ensuring optimum operation and minimized energy consumption.



Daikin rooftops series

An extensive package included in all models

ErP compliant 2018

3 years warranty

1 Standard integrated high efficiency EC plug fans

› Static pressure up to 300Pa
› Inverter controlled
› Maintenance free

2 Standard flexible air delivery

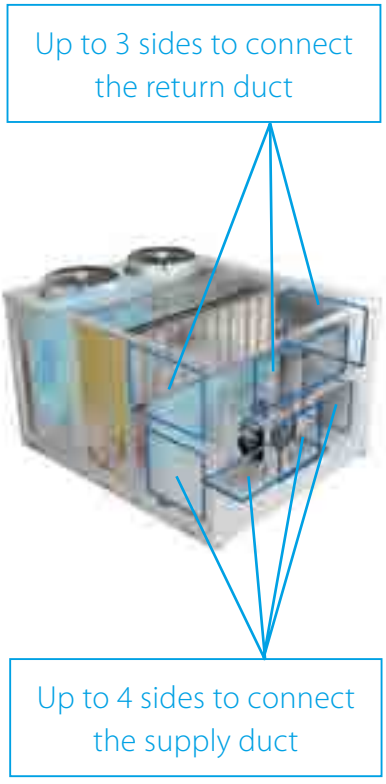
› Up to 4 possible sides can be selected on site (front, left, right, bottom)

3 Latest pCO5 controller

› Direct integration into Daikin intelligent Touch Manager BMS (via optional BACnet protocol)
› Easy integration in 3rd party BMS systems
  › Standard Modbus protocol
  › Optional BACnet protocol

4 Standard clogged filter alarm

› Indicates when a filter requires cleaning
› Improved indoor air quality and efficiency



5 Hydrophilic coated aluminium fins on indoor and outdoor side

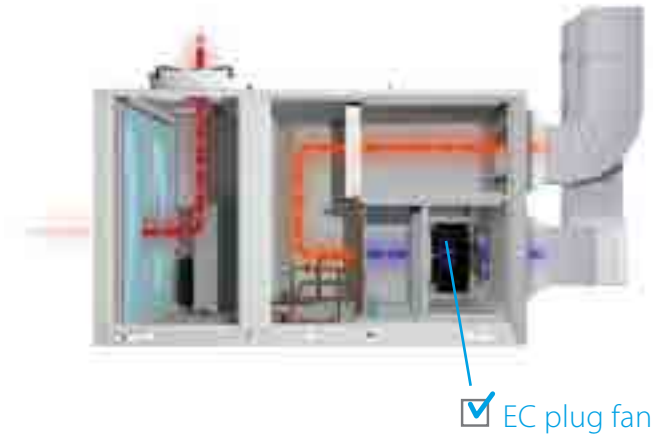
UATYQ-ABAY1

High installation flexibility and easy servicing

› Easy to install 'plug and play' concept plus single installation configuration; no additional piping is required since indoor and outdoor sides are pre-connected

› High efficiency and reliable scroll compressor

› Factory pre-charged refrigerant ensures clean and efficient operation



Cooling operation example

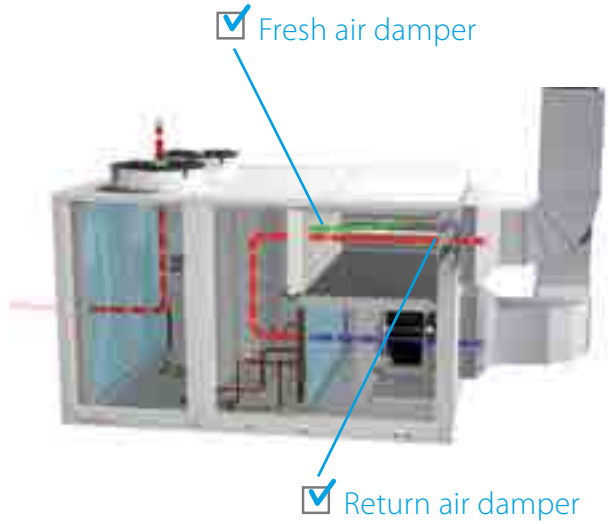
UATYQ-AFC2Y1

2 damper version, with integrated fresh air

› Free cooling with 100% fresh air possible
  › Improved air quality
  › Energy saving using fresh outdoor air to cool the building

› Standard CO_2 sensor connection
  › Ideal balance between efficiency and indoor air quality

› Includes all Base model features



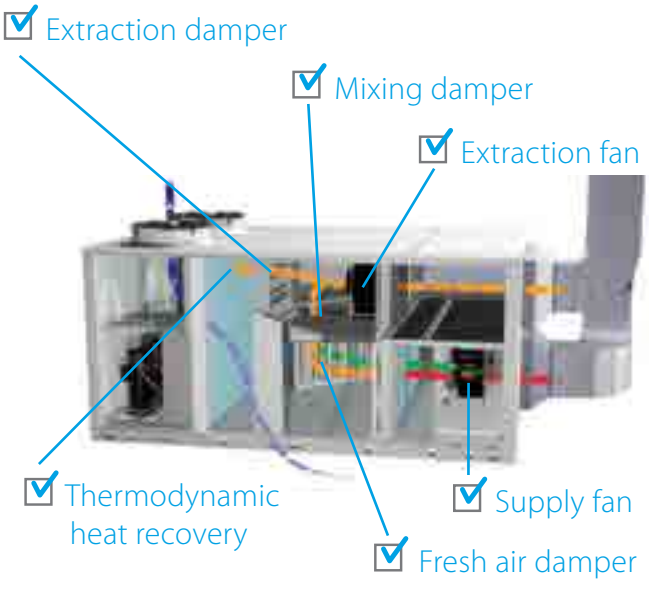
Cooling operation example

UATYQ-AFC3Y1

3 damper version, with integrated fresh air and extraction

› Extraction damper integrated
  › Eliminates excessive overpressure in the building
  › UATYQ45-115AFC3Y1 models include high efficient extraction fan for optimum air circulation in larger buildings

› Thermo dynamic heat recovery
  › Saves energy by recovering waste heat through the outdoor heat exchanger
  › Available on UATYQ20-55AFC3Y1



Heating operation example

UATYQ-ABAY1

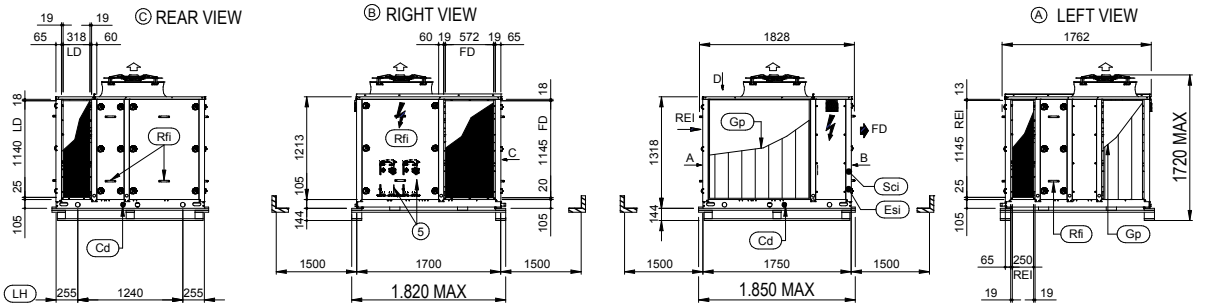
Rooftop unit with extensive base package for high installation, flexibility and easy servicing

- Easy to install 'plug and play' concept
- Highly efficient ERP compliant models, meeting the latest eco-design requirements
- High efficiency inverter controlled EC plug fans, providing up to 300Pa static pressure
- 4 possible sides can be selected on site for both return and supply air connection (front, left, right, bottom)
- Controller allows direct integration with Daikin BMS, or third party BMS via BACnet or Modbus
- Factory pre-charged refrigerant ensures a very quick installation and reliable & efficient system operation
- Minimized delivery lead time thanks to stock availability

					UATYQ-ABAY1	20	25	30	45	50	55	65	75	90	100	115
Cooling capacity	Nom.			kW		19,5	28,0	30,4	44,1	49,2	51,6	63,5	73,9	90,3	101,6	106,8
Heating capacity	Nom.			kW		17,9	27,0	31,3	46,1	51,9	56,3	63,8	76,6	93,3	104,5	114,2
Space cooling	Capacity	Pdesign		kW		19,5	28,0	30,4	44,1	49,2	51,6	63,5	73,9	90,3	101,6	106,8
	ηs,c			%		135,0	143,5	127,5	119,5	134,1	129,0	130,4	124,6	118,2	137,9	127,0
Space heating (Average climate)	Capacity	Pdesign		kW		17,9	27,0	31,3	46,1	51,9	56,3	63,8	76,6	93,3	104,5	114,2
	ηs,h			%		115,4	129,0	119,5	115,4	125,2	124,8	121,0	118,2	116,0	125,3	124,3
Power input	Cooling	Nom.		kW		6,6	10,0	12,0	17,0	19,7	22,5	23,6	29,7	33,8	39,0	44,3
	Heating	Nom.		kW		5,8	8,0	9,6	14,6	16,3	18,1	20,0	25,1	29,9	33,2	37,3
EER						2,94	2,79	2,54	2,60	2,50	2,29	2,69	2,49	2,67	2,60	2,41
COP						3,07	3,38	3,26	3,15	3,19	3,11	3,20	3,05	3,12	3,15	3,06
Evaporator	Supply side	Fan	Air flow rate	m^3/h		4,950	7,260	8,250	11,000	12,100	13,200	15,400	17,600	20,900	23,650	25,300
			Nom. external static pressure	Pa		300										
		Air discharge direction				Frontal, Left			Frontal, Left, Right, Bottom			Left, Right, Bottom				
	Return side	Air intake direction				Rear			Rear, Right, Left			Rear				
Condensor	Air flow rate	Cooling		m^3/h		11,500	12,000		19,000			33,200		44,000		
Condensor	Refrigerant	Type / GWP				R-410A / 2.087,5										
Condensor		Charge		TCO_2Eq /kg		15,7 / 7,5	27,1 / 13,0		35,5 / 17,0			31,3 / 15,0		41,8 / 20,0	43,8 / 21,0	48,0 / 23,0
Dimensions	Unit	Height x Width x Depth		mm		1.576x1.828x1.762	2.126x1.828x1.762		1.799x2.712x2.263			1.799x3.760x2.252		2.180x4.059x2.252		
Weight	Unit			kg		672	780		1.068	1.221	1.247	1.553	1.581	1.738	1.742	1.794
Casing	Colour					RAL 7035										
Sound pressure level	Cooling			dBA		60			61	63		64		65		
Sound power level	Cooling			dBA		77	78		79	81		83		85		
Operation range	Cooling	Min. ~ Max.		°CDB		0 ~ 47										
	Heating	Min. ~ Max.		°CWB		-12,1 ~ 19,5										
Power supply	Voltage / Phase / Frequency			V / Hz		400/3+N/50 ±5%								400/3/50 ±5%		
Current	Recommended fuses			A		25	32	40	50	63		80	100		125	

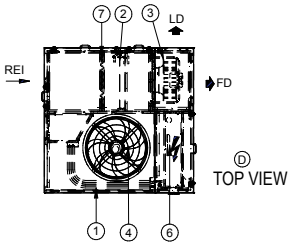
Dimensional drawings

UATYQ20ABAY1

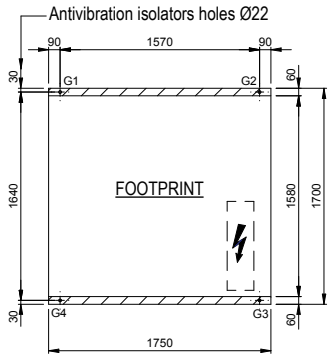


DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel



Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55



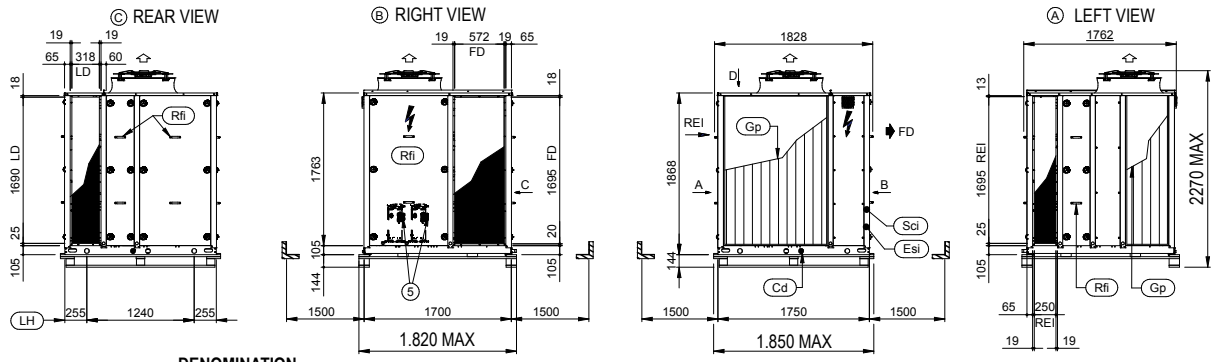
Discharge air direction
FD= Frontal discharge
LD= Left discharge

Intake air direction
REI=Rear intake

[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
672	122	210	235	105	UATYQAVM1

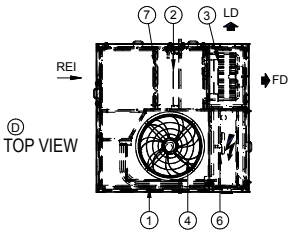
DDIM000225A

UATYQ25-30ABAY1

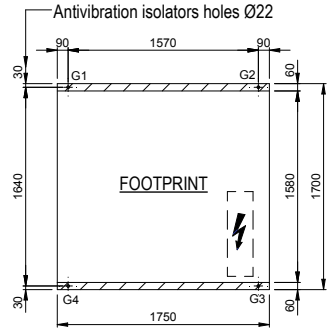


DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter



Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55



Discharge air direction
FD= Frontal discharge
LD= Left discharge

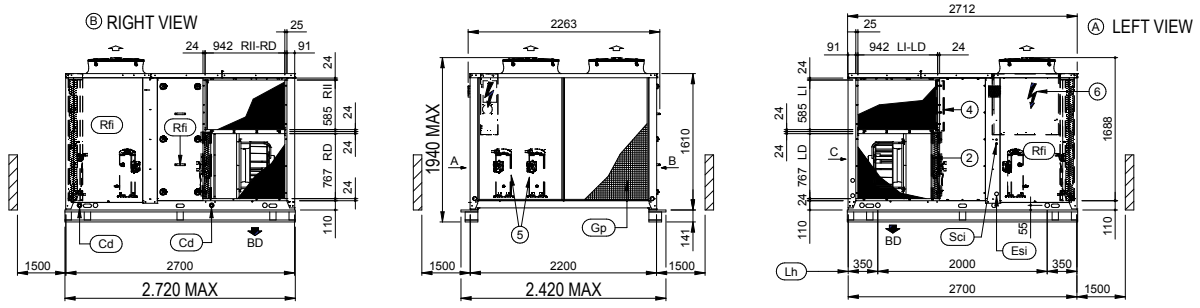
Intake air direction
REI=Rear intake

[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
780	139	250	270	121	UATYQAVM1

DDIM000234A

Dimensional drawings

UATYQ45ABAY1



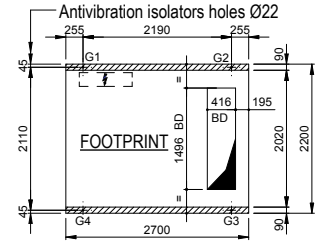
Discharge air direction
FD= Frontal discharge
LD= Left discharge
RD=Right discharge
BD=Bottom discharge

Intake air direction
REI=Rear intake
RII=Right intake
LI=Left intake

Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55

DENOMINATION

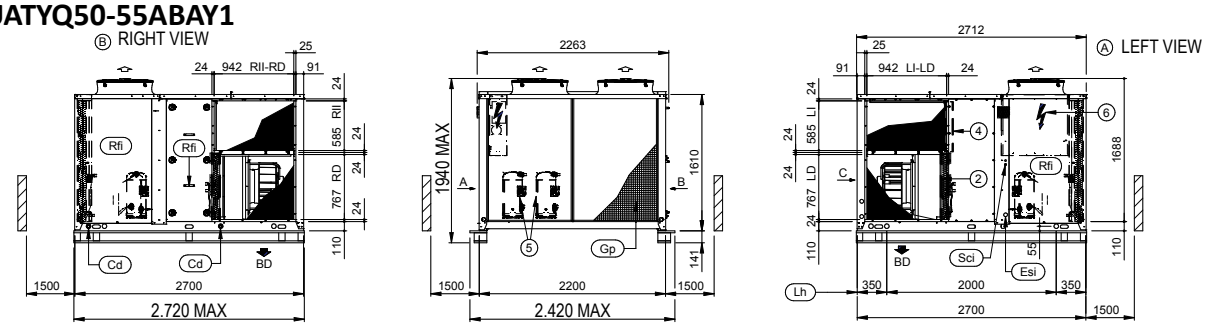
1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) EU4 filter
5) Compressor
6) Electrical panel



[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
1.068	323	277	216	252	UATYQAVM1

DDIM000247B

UATYQ50-55ABAY1



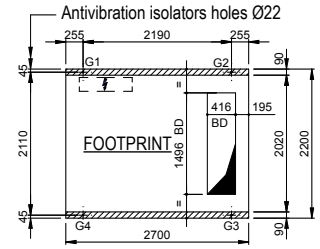
Discharge air direction
FD= Frontal discharge
LD= Left discharge
RD=Right discharge
BD=Bottom discharge

Intake air direction
REI=Rear intake
RII=Right intake
LI=Left intake

Gp	GRID PROTECTIONS	Esi	ELECTRICAL SUPPLY INLET
Cd	CONDENSATE DRAIN	Sci	SIGNAL CABLES INLET
Rfi	REMOVE FOR INSPECTION	Lh	LIFTING HOLES Ø55

DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) EU4 filter
5) Compressor
6) Electrical panel

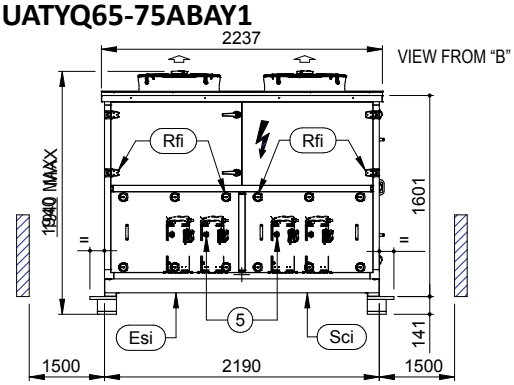


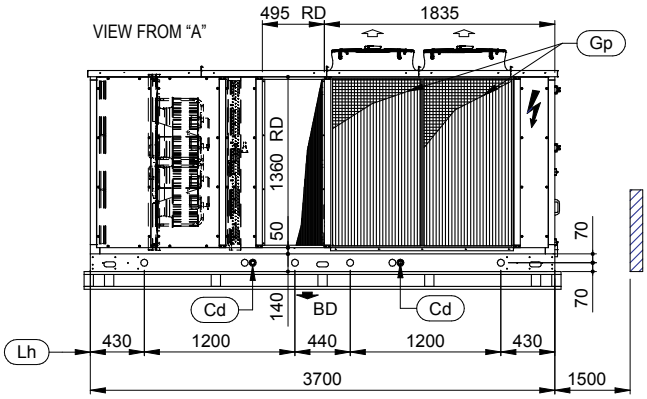
	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ50ABAY1	1.221	385	305	241	290	UATYQAVM1
UATYQ55ABAY1	1.247	392	311	247	297	

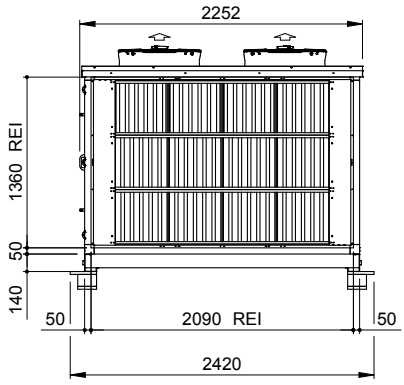
DDIM000292A

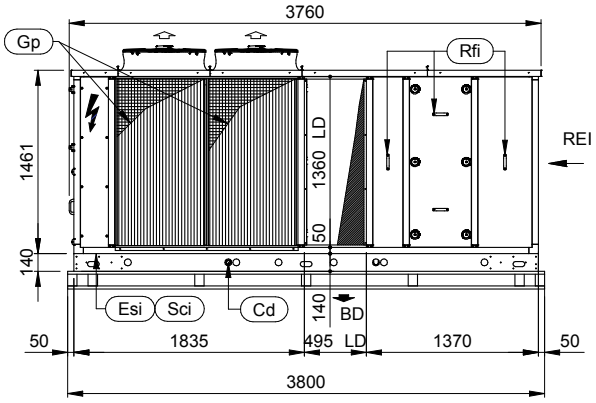
Dimensional drawings

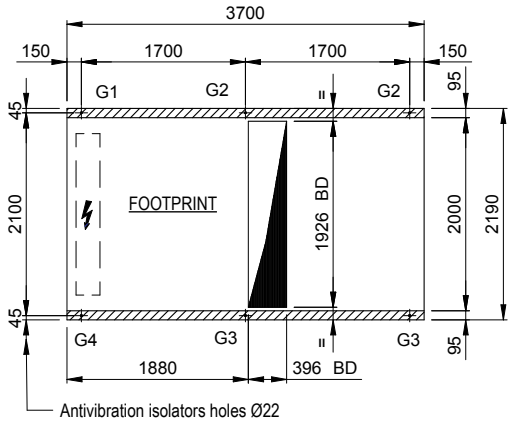
UATYQ65-75ABAY1

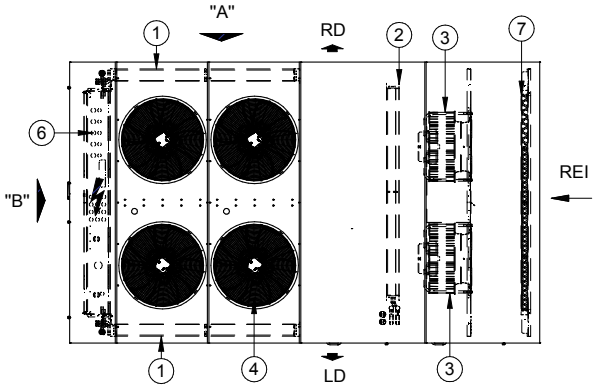












DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter

Discharge air direction
BD=Bottom discharge
LD= Left discharge
RD=Right discharge

Intake air direction
REI=Rear intake

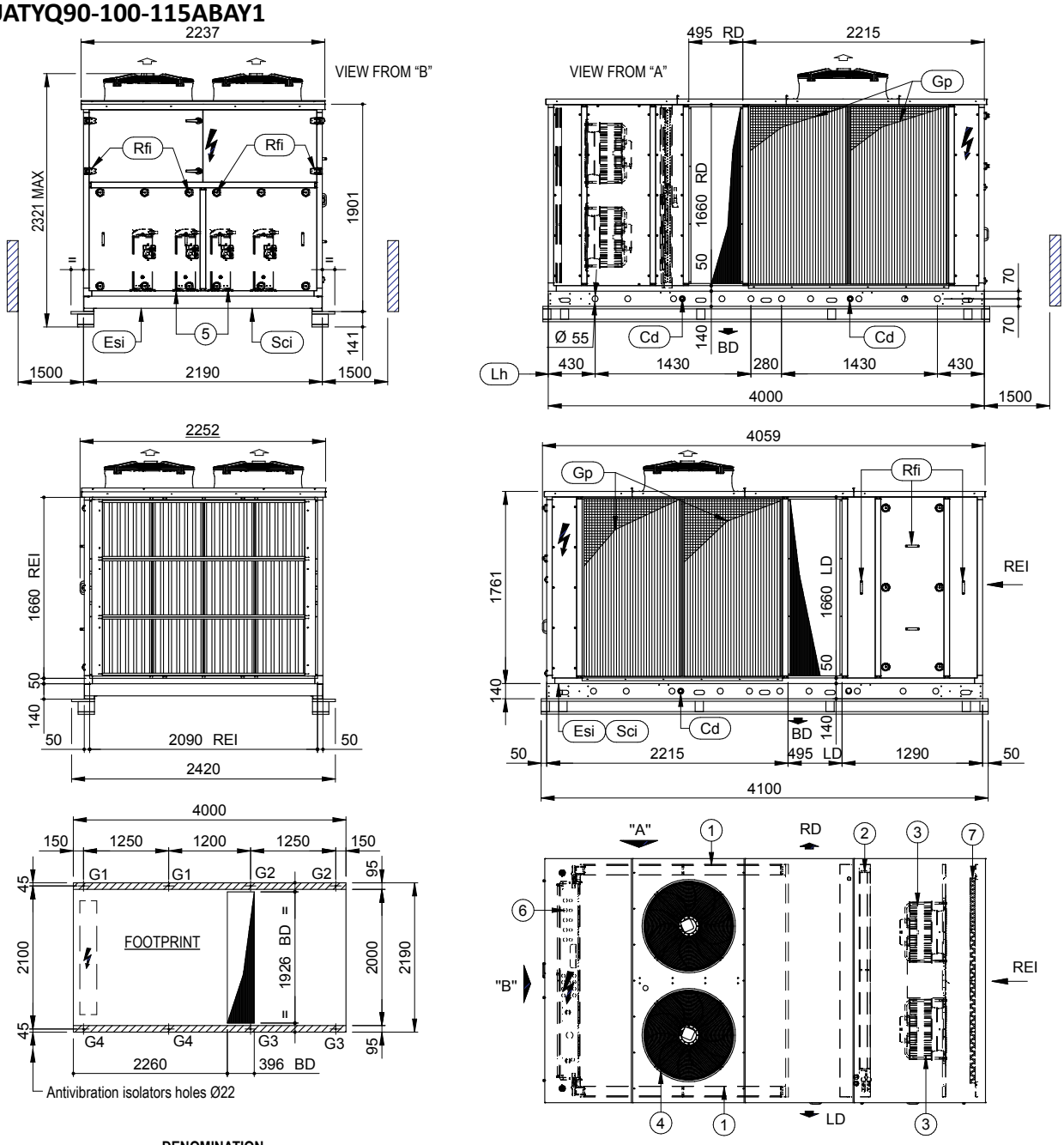
Gp	GRID PROTECTIONS	Lh	LIFTING HOLES Ø55		CLEARANCES	Cd	CONDENSATE DRAIN	Rfi	REMOVE FOR INSPECTION	Esi	ELECTRICAL SUPPLY INLET	Sci	SIGNAL CABLES INLET

	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ65ABAY1	1.553	303	209	241	350	UATYQAVM1
UATYQ75ABAY1	1.581	308	209	246	363	

DDIM000274A

Dimensional drawings

UATYQ90-100-115ABAY1



DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter

Discharge air direction
BD=Bottom discharge
LD= Left discharge
RD=Right discharge

Intake air direction
REI=Rear intake

Gp	GRID PROTECTIONS	Lh	LIFTING HOLES Ø55		CLEARANCES		
Cd	CONDENSATE DRAIN	Rfi	REMOVE FOR INSPECTION	Esi	ELECTRICAL SUPPLY INLET	Sci	SIGNAL CABLES INLET

	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ90ABAY1	1.738	250	175	183	261	UATYQAVM1
UATYQ100ABAY1	1.742	251	174	183	263	
UATYQ115ABAY1	1.794	264	173	182	278	

DDIM000277A

Sound data

Sound Level data

UATYQ20,25,30ABAY1 / UATYQ20,25,30AAFC2Y1 / UATYQ20,25,30AAFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
UATYQ20A*	71	54	74	57	76	59	72	55	72	55	71	54	65	48	59	42	77	60
UATYQ25A*	72	54	75	57	77	59	73	55	73	55	72	54	66	48	60	42	78	60
UATYQ30A*	72	54	75	57	77	59	73	55	73	55	72	54	66	48	60	42	78	60

UATYQ45-50-55ABAY1 / UATYQ45-50-55AFC2Y1 / UATYQ45-50-55AFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
UATYQ45A*	89	71	86	68	83	65	75	57	72	54	65	47	61	43	52	34	79	61
UATYQ50A*	91	73	88	70	85	67	77	59	75	57	67	49	62	44	53	35	81	63
UATYQ55A*	91	73	88	70	85	67	77	59	75	57	67	49	62	44	53	35	81	63

UATYQ65,75,90,100,115ABAY1 / UATYQ65,75,90,100,115AFC2Y1 / UATYQ65,75,90,100,115AFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
65	94	75	90	71	77	58	80	61	76	57	69	50	65	46	53	34	83	64
75	94	75	90	71	77	58	80	61	76	57	69	50	65	46	53	34	83	64
90	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65
100	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65
115	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65

Lw: sound power levels on free field calculated based upon ISO 3744. Values refer to basic unit only.
Lp: average sound pressure level at 1 meter on free field on a reflecting surface.

Theoretical Noise Attenuation Values Based On Distance In Free Field

Distance	(m)	1	2	3	4	5	6	7	8	9	10
Attenuation	(dB)	0	6	9,5	12	14	15,5	17	18	19	20

UATYQ-AFC2Y1

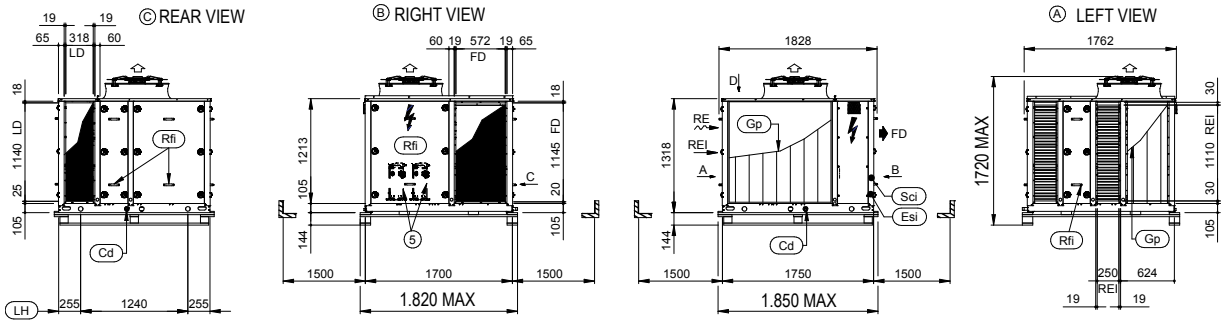
Rooftop unit 2 damper version with integrated fresh air

- Easy to install 'plug and play' concept
- Free cooling with up to 100% fresh air intake, saving on energy consumption and improving indoor air quality
- Demand controlled fresh air management possible (CO_2)
- Highly efficient ERP compliant models, meeting the latest eco-design requirements
- High efficiency inverter controlled EC plug fans, providing up to 300Pa static pressure
- 4 possible sides can be selected on site for both return and supply air connection (front, left, right, bottom)
- Controller allows direct integration with Daikin BMS, BACnet or Modbus
- Minimized delivery lead time thanks to stock availability
- Factory pre-charged refrigerant ensures a very quick installation and reliable & efficient system operation

					UATYQ-AFC2Y1	20	25	30	45	50	55	65	75	90	100	115
Cooling capacity	Nom.			kW		19,5	28,0	30,4	44,1	49,2	51,6	63,5	73,9	90,3	101,6	106,8
	with 30% fresh air			kW		20,9	30,0	32,5	47,8	52,3	55,1	68,1	78,9	96,7	108,2	114,2
Heating capacity	Nom.			kW		17,9	27,0	31,3	46,1	51,9	56,3	63,8	76,6	93,3	104,5	114,2
	with 30% fresh air			kW		18,3	27,5	31,8	48,8	52,6	57,2	65,5	77,8	94,9	106,0	116,6
Space cooling	Capacity	Pdesign		kW		19,5	28,0	30,4	44,1	49,2	51,6	63,5	73,9	90,3	101,6	106,8
	ηs,c			%		135,0	143,5	127,5	119,5	134,1	129,0	130,4	124,6	118,2	137,9	127,0
Space heating (Average climate)	Capacity	Pdesign		kW		17,7	27,0	31,3	46,1	51,9	56,3	63,8	76,6	93,3	104,5	114,2
	ηs,h			%		115,4	129,0	119,5	115,4	125,2	124,8	121,0	118,2	116,0	125,3	124,3
Power input	Cooling	Nom.		kW		6,6	10,0	12,0	17,0	19,7	22,5	23,6	29,7	33,8	39,0	44,3
	Heating	Nom.		kW		5,8	8,0	9,6	14,6	16,3	18,1	20,0	25,1	29,9	33,2	37,3
EER	with 30% fresh air					3,14	2,95	2,67	2,74	2,60	2,41	2,85	2,61	2,82	2,73	2,53
COP	with 30% fresh air					3,37	3,75	3,56	3,42	3,48	3,40	3,64	3,31	3,38	3,43	3,35
Evaporator	Supply side	Fan	Air flow rate	m^3/h		4.950	7.260	8.250	11.000	12.100	13.200	15.400	17.600	20.900	23.650	25.300
			Nom. external static pressure	Pa		300										
		Air discharge direction				Frontal, Left			Frontal, Left, Right, Bottom			Left, Right, Bottom				
	Return side	Air intake direction				Rear						Right-Rear				
	Fresh air	Standard				yes										
		Ratio	Standard	%		30										
			In free cooling	%		100										
Condensor	Air flow rate	Cooling		m^3/h		11.500	12.000		19.000			33.200		44.000		
Condensor	Refrigerant	Type / GWP				R-410A / 2.087,5										
Condensor		Charge		TCO_2Eq / kg		15,7 / 7,5	27,1 / 13,0		35,5 / 17,0			31,3 / 15,0		41,8 / 20,0	43,8 / 21,0	48,0 / 23,0
Dimensions	Unit	Height x Width x Depth		mm		1.576x1.828x1.762	2.126x1.828x1.762		1.799x2.712x2.263			1.799x4.675x2.252		2.180x4.875x2.252		
Weight	Unit			kg		679	788		1.098	1.251	1.277	1.698	1.726	1.906	1.914	1.966
Casing	Colour					RAL 7035										
Sound pressure level	Cooling			dBA		60			61	63		64		65		
Sound power level	Cooling			dBA		77	78		79	81		83		85		
Operation range	Cooling	Min. ~ Max.		°CDB		0 ~ 47										
	Heating	Min. ~ Max.		°CWB		-12,1 ~ 19,5										
Power supply	Voltage/Phase/Frequency			V / Hz		400/3+N/50 ±5%								400/3/50 ±5%		
Current	Recommended fuses			A		25	32	40	50	63		80	100		125	

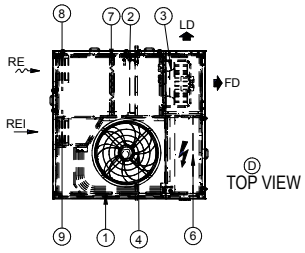
Dimensional drawings

UATYQ20AFC2Y1

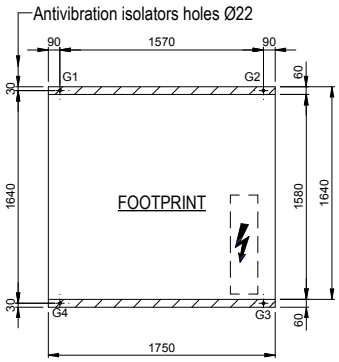


DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter
8) External air damper
9) Mixing damper



Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55



Discharge air direction
FD= Frontal discharge
LD= Left discharge

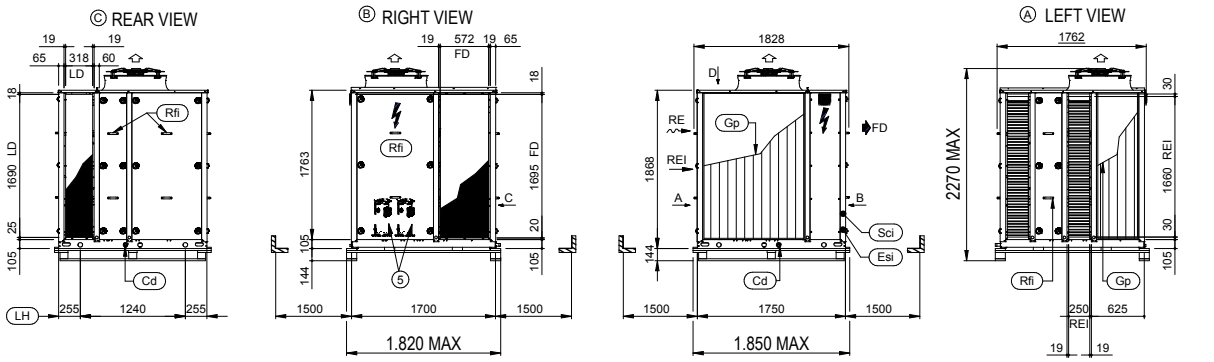
External air direction
RE=Rear external air

Intake air direction
REI=Rear intake

[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
679	123	212	237	107	UATYQAVM1

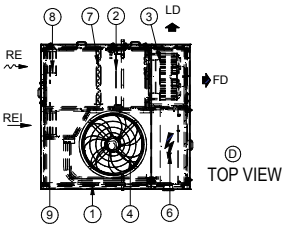
DDIM000232A

UATYQ25-30AFC2Y1

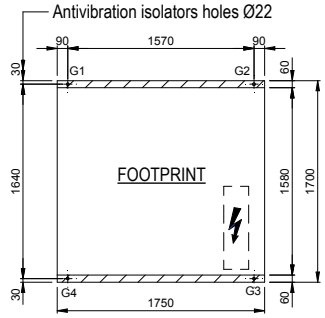


DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter
8) External air damper
9) Mixing damper



Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55



Discharge air direction
FD= Frontal discharge
LD= Left discharge

External air direction
REI=Rear intake

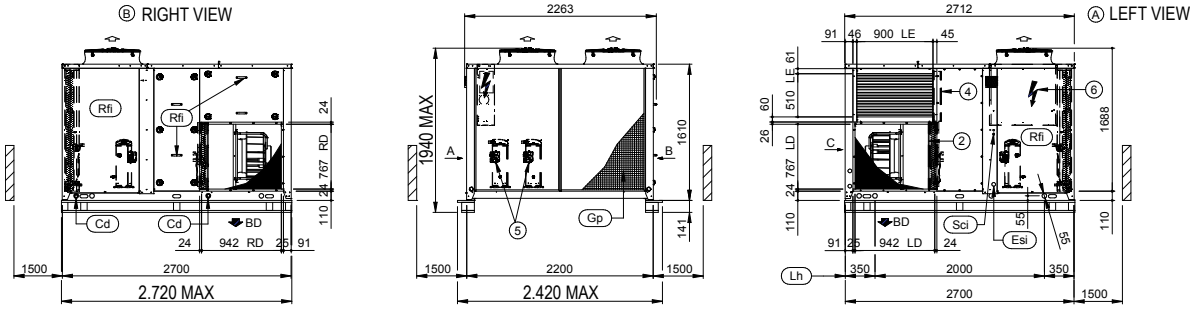
Intake air direction
REI=Rear intake

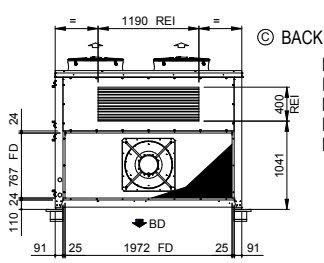
[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
788	141	252	272	123	UATYQAVM1

DDIM000241A

Dimensional drawings

UATYQ45AFC2Y1

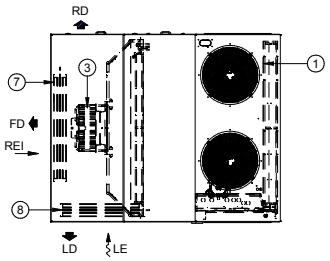


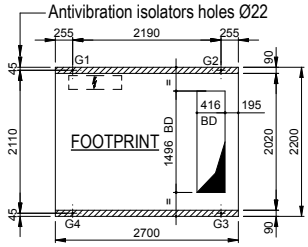


Discharge air direction
FD= Frontal discharge
LD= Left discharge
RD=Right discharge
BD=Bottom discharge

Intake air direction
REI=Rear intake

External air direction
LE=Left external air





Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55

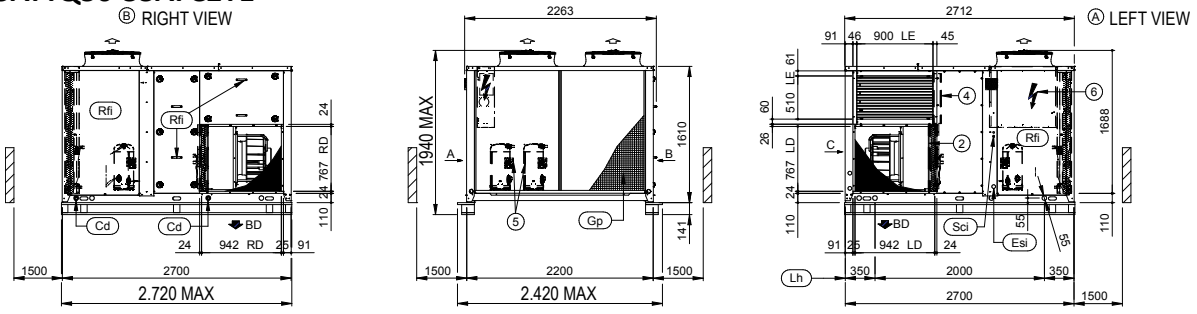
DENOMINATION

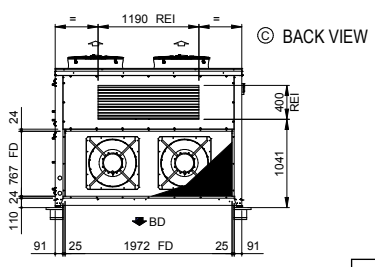
1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) EU4 filter
5) Compressor
6) Electrical panel
7) Mixing air damper
8) External air damper

[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
1.098	322	293	230	253	UATYQAVM1

DDIM000251B

UATYQ50-55AFC2Y1

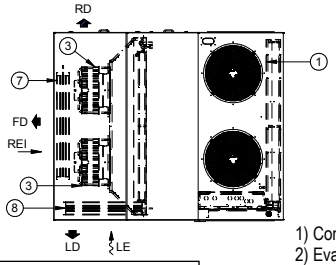


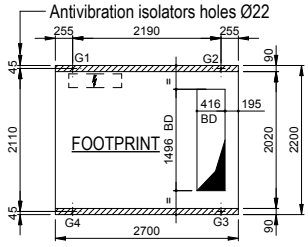


Discharge air direction
FD= Frontal discharge
LD= Left discharge
RD=Right discharge
BD=Bottom discharge

Intake air direction
REI=Rear intake

External air direction
LE=Left external air





Gp	GRID PROTECTIONS	Esi	ELECTRICAL SUPPLY INLET
Cd	CONDENSATE DRAIN	Sci	SIGNAL CABLES INLET
Rfi	REMOVE FOR INSPECTION	Lh	LIFTING HOLES Ø55

DENOMINATION

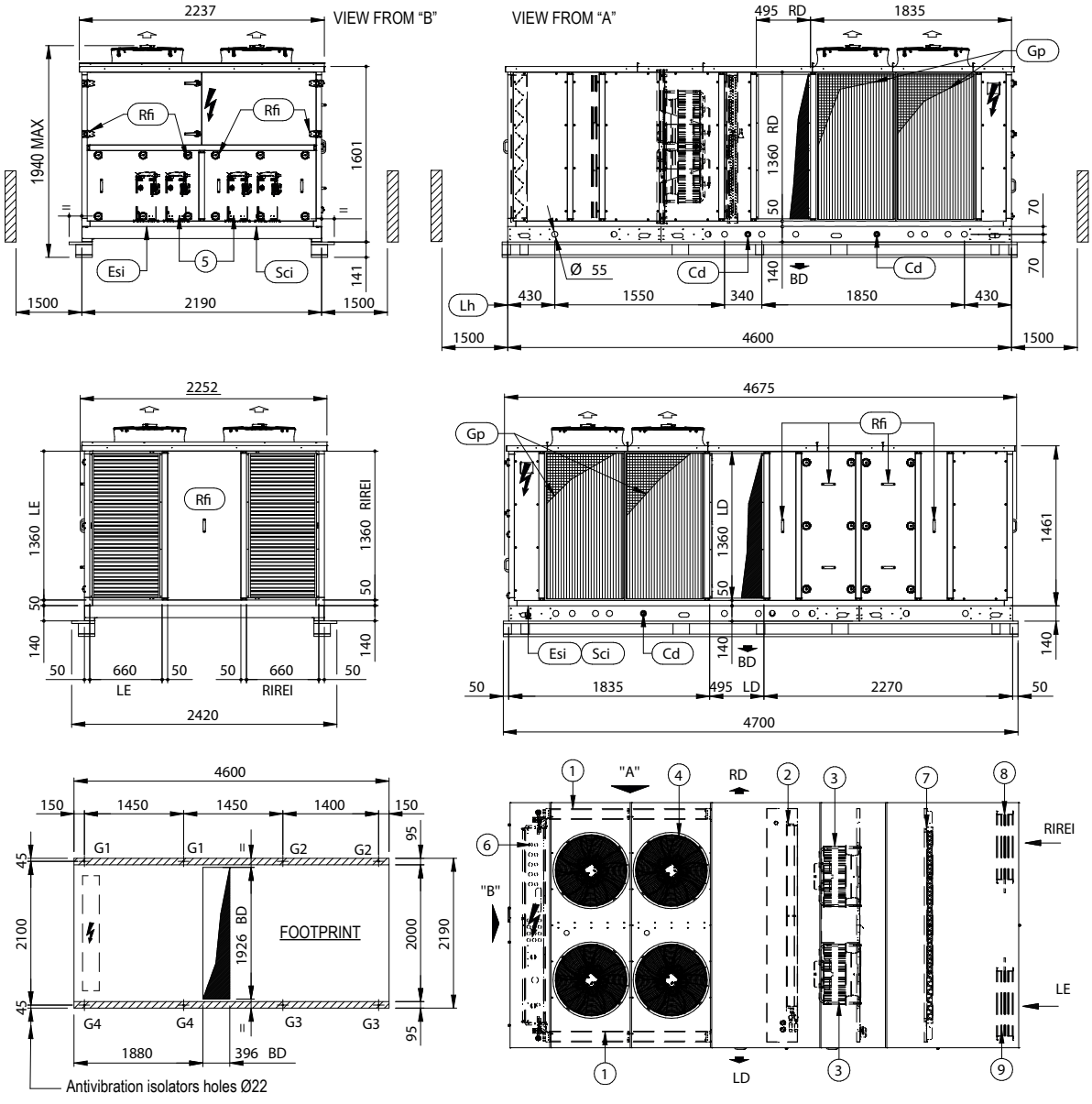
1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) EU4 filter
5) Compressor
6) Electrical panel
7) Mixing air damper
8) External air damper

	[Kg]				
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ50AFC2Y1	1.251	384	321	255	291	UATYQAVM1
UATYQ55AFC2Y1	1.277	391	327	261	298	

DDIM000293A

Dimensional drawings

UATYQ65-75AFC2Y1



Discharge air direction
BD = Bottom discharge
LD = Left discharge
RD = Right discharge

Intake air direction
LE = Left external air
RIREI = Right rear intake

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor

DENOMINATION
6) Electrical panel
7) EU4 air filter
8) Damper intake
9) External air Damper

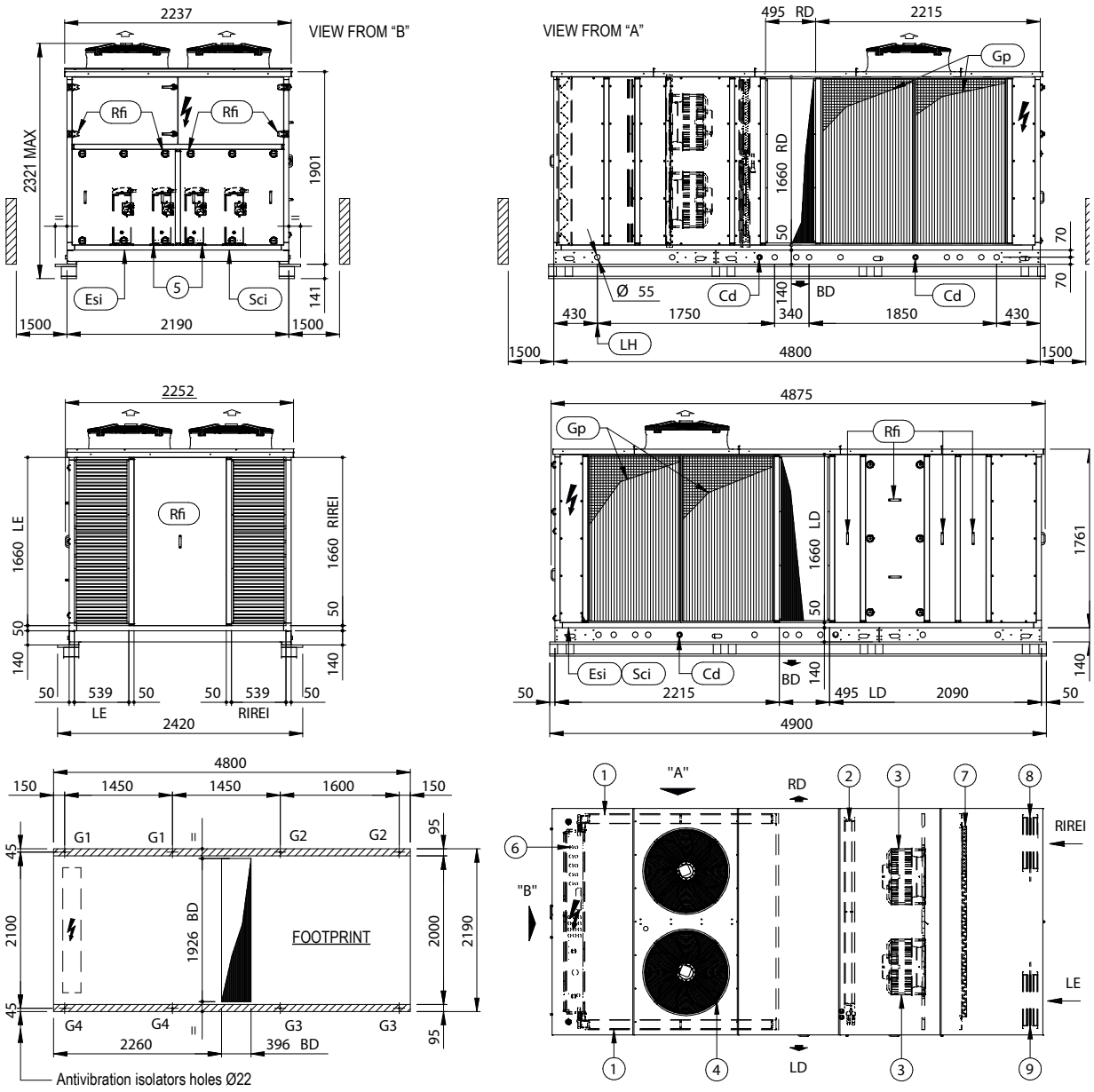
Gp	GRID PROTECTIONS	Lh	LIFTING HOLES Ø55		CLEARANCES		
Cd	CONDENSATE DRAIN	Rfi	REMOVE FOR INSPECTION	Esi	ELECTRICAL SUPPLY INLET	Sci	SIGNAL CABLES INLET

	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ65AFC2Y1	1.698	254	143	163	289	UATYQAVM1
UATYQ75AFC2Y1	1.726	257	142	165	299	

DDIM000275D

Dimensional drawings

UATYQ90-100-115AFC2Y1



Discharge air direction
BD = Bottom discharge
LD = Left discharge
RD = Right discharge

Intake air direction
LE = Left external air
RIREI = Right rear intake

DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter
8) Damper intake
9) External air Damper

Gp	GRID PROTECTIONS	Lh	LIFTING HOLES Ø55		CLEARANCES		
Cd	CONDENSATE DRAIN	Rfi	REMOVE FOR INSPECTION	Esi	ELECTRICAL SUPPLY INLET	Sci	SIGNAL CABLES INLET

	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ90AFC2Y1	1.906	298	169	176	310	UATYQAVM1
UATYQ100AFC2Y1	1.914	300	168	176	313	
UATYQ115AFC2Y1	1.966	313	167	175	328	

DDIM000278D

Sound data

Sound Level data

UATYQ20,25,30ABAY1 / UATYQ20,25,30AAFC2Y1 / UATYQ20,25,30AAFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
UATYQ20A*	71	54	74	57	76	59	72	55	72	55	71	54	65	48	59	42	77	60
UATYQ25A*	72	54	75	57	77	59	73	55	73	55	72	54	66	48	60	42	78	60
UATYQ30A*	72	54	75	57	77	59	73	55	73	55	72	54	66	48	60	42	78	60

UATYQ45-50-55ABAY1 / UATYQ45-50-55AFC2Y1 / UATYQ45-50-55AFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
UATYQ45A*	89	71	86	68	83	65	75	57	72	54	65	47	61	43	52	34	79	61
UATYQ50A*	91	73	88	70	85	67	77	59	75	57	67	49	62	44	53	35	81	63
UATYQ55A*	91	73	88	70	85	67	77	59	75	57	67	49	62	44	53	35	81	63

UATYQ65,75,90,100,115ABAY1 / UATYQ65,75,90,100,115AFC2Y1 / UATYQ65,75,90,100,115AFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
65	94	75	90	71	77	58	80	61	76	57	69	50	65	46	53	34	83	64
75	94	75	90	71	77	58	80	61	76	57	69	50	65	46	53	34	83	64
90	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65
100	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65
115	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65

Lw: sound power levels on free field calculated based upon ISO 3744. Values refer to basic unit only.
Lp: average sound pressure level at 1 meter on free field on a reflecting surface.

Theoretical Noise Attenuation Values Based On Distance In Free Field

Distance	(m)	1	2	3	4	5	6	7	8	9	10
Attenuation	(dB)	0	6	9,5	12	14	15,5	17	18	19	20

UATYQ-AFC3Y1

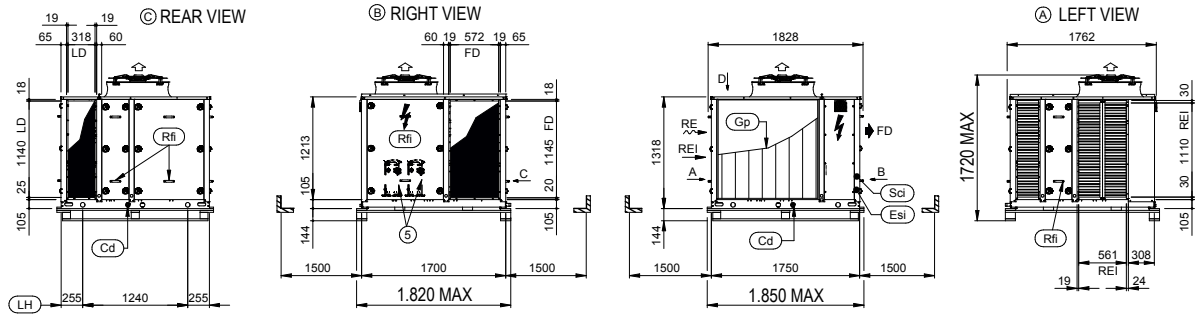
Rooftop unit 3 damper version with integrated fresh air and extraction

- Easy to install 'plug and play' concept
- Integrated extraction damper ensures an optimal pressure balance inside the building
- Thermo dynamic heat recovery, recovers waste heat through the outdoor heat exchanger (available on sizes 20-55)
- Free cooling with up to 100% fresh air intake, saving on energy consumption and improving indoor air quality
- Demand controlled fresh air management possible (CO_2)
- High efficiency inverter controlled EC plug fans, providing up to 300Pa static pressure
- 4 possible sides can be selected on site for both return and supply air connection (front, left, right, bottom)
- Controller allows direct integration with Daikin BMS via BACnet or Modbus
- Factory pre-charged refrigerant ensures a very quick installation and reliable & efficient system operation
- Minimized delivery lead time thanks to stock availability

					UATYQ-AFC3Y1	20	25	30	45	50	55	65	75	90	100	115
Cooling capacity	Nom.			kW		19,5	28,0	30,4	44,1	49,2	51,6	63,5	73,9	90,3	101,6	106,8
	with 30% fresh air			kW		21,1	30,4	33,2	47,8	53,4	56,3	68,1	78,9	96,7	108,2	114,2
Heating capacity	Nom.			kW		17,9	27,0	31,3	46,1	51,9	56,3	63,8	76,6	93,3	104,5	114,2
	with 30% fresh air			kW		18,9	28,7	33,2	48,8	54,9	59,7	65,5	77,8	94,9	106,0	116,6
Space cooling	Capacity	Pdesign		kW		19,5	28,0	30,4	44,1	49,2	51,6	63,5	73,9	90,3	101,6	106,8
	ηs,c			%		135,0	143,5	127,5	119,5	134,1	129,0	130,4	124,6	118,2	137,9	127,0
Space heating (Average climate)	Capacity	Pdesign		kW		17,9	27,0	31,3	46,1	51,9	56,3	63,8	76,6	93,3	104,5	114,2
	ηs,h			%		115,4	129,0	119,5	115,4	125,2	124,8	121,0	118,2	116,0	125,3	124,3
Power input	Cooling	Nom.		kW		6,6	10,0	12,0	17,0	19,7	22,5	23,6	29,7	33,8	39,0	44,3
	Heating	Nom.		kW		5,8	8,0	9,6	14,6	16,3	18,1	20,0	25,1	29,9	33,2	37,3
EER	with 30% fresh air					3,25	3,08	2,82	2,82	2,70	2,51	2,82	2,58	2,79	2,70	2,51
COP	with 30% fresh air					3,46	3,84	3,66	3,44	3,51	3,42	3,58	3,26	3,33	3,38	3,30
Evaporator	Supply side	Fan	Air flow rate	m^3/h		4.950	7.260	8.250	11.000	12.100	13.200	15.400	17.600	20.900	23.650	25.300
			Nom. external static pressure	Pa		300										
		Air discharge direction				Frontal. Left			Frontal. Left. Right. Bottom			Left. Right. Bottom				
	Return side	Fan	Air flow rate	m^3/min		N/A			11.000	12.100	13.200	15.400	17.600	20.900	23.650	25.300
			Nom. external static pressure	Pa		N/A			300							
		Air intake direction				Rear			Rear, Right, Left			Rear, Right, Left, Bottom				
		Therm. heat recovery				yes						no				
	Fresh air	Standard				yes										
		Ratio	Standard	%		30										
			In free cooling	%		100										
Condensor	Air flow rate	Cooling		m^3/h		11.500	12.000		19.000			33.200		44.000		
Condensor	Refrigerant	Type / GWP				R-410A / 2.087,5										
Condensor		Charge		TCO_2Eq / kg		15,7 / 7,5	27,1 / 13,0		35,5 / 17,0			31,3 / 15,0		41,8 / 20,0	43,8 / 21,0	48,0 / 23,0
Dimensions	Unit	Height x Width x Depth		mm		1.576x1.828x1.762	2.126x1.828x1.762		1.799x3.518x2.272			1.799x5.660x2.252		2.180x5.660x2.252		
Weight	Unit			kg		686	796		1.382	1.535	1.561	2.142	2.166	2.338	2.346	2.398
Casing	Colour					RAL 7035										
Sound pressure level	Cooling			dBA		60			61	63		64		65		
Sound power level	Cooling			dBA		77	78		79	81		83		85		
Operation range	Cooling	Min. ~ Max.		°CDB		0 ~ 47										
	Heating	Min. ~ Max.		°CWB		-12,1 ~ 19,5										
Power supply	Voltage / Phase / Frequency			V / Hz		400/3+N/50 ±5%								400/3/50 ±5%		
Current	Recommended fuses			A		25	32	40	63	80		100		125		

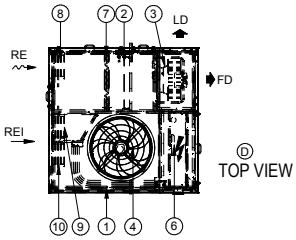
Dimensional drawings

UATYQ20AFC3Y1

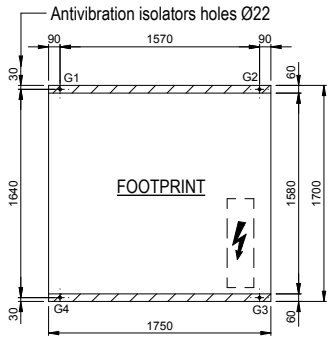


DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter
8) External air damper
9) Mixing damper
10) Expulsion air damper



Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55



Discharge air direction
FD= Frontal discharge
LD= Left discharge

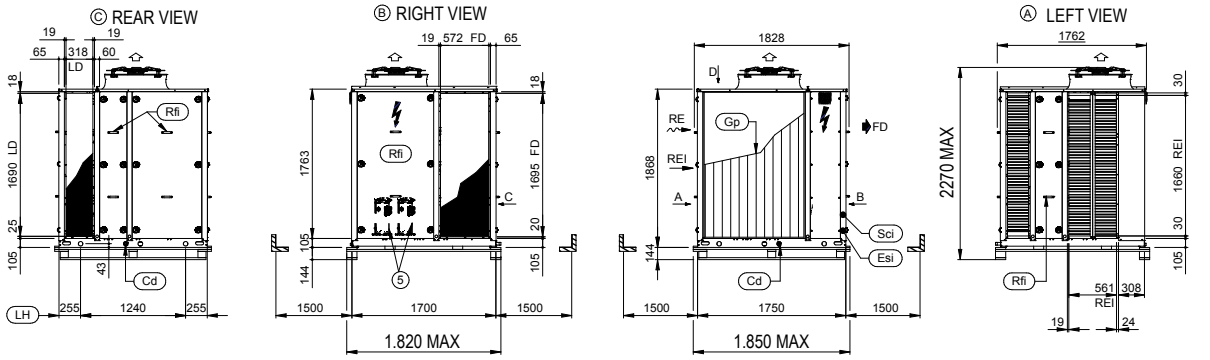
External air direction
RE=Rear external air

Intake air direction
REI=Rear intake

[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
686	128	212	237	109	UATYQAVM1

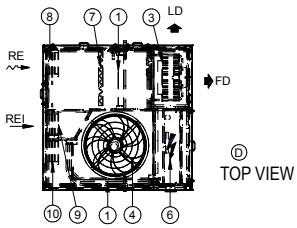
DDIM000233A

UATYQ25-30AFC3Y1

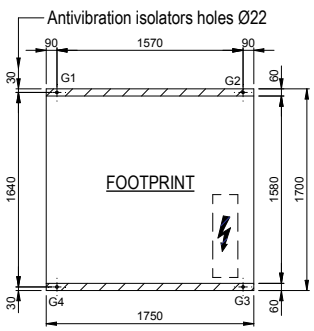


DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Condensing fan
5) Compressor
6) Electrical panel
7) EU4 air filter
8) External air damper
9) Mixing damper
10) Expulsion air damper



Gp	GRID PROTECTIONS
Cd	CONDENSATE DRAIN
Rfi	REMOVE FOR INSPECTION
Esi	ELECTRICAL SUPPLY INLET
Sci	SIGNAL CABLES INLET
Lh	LIFTING HOLES Ø55



Discharge air direction
FD= Frontal discharge
LD= Left discharge

Intake air direction
REI=Rear intake

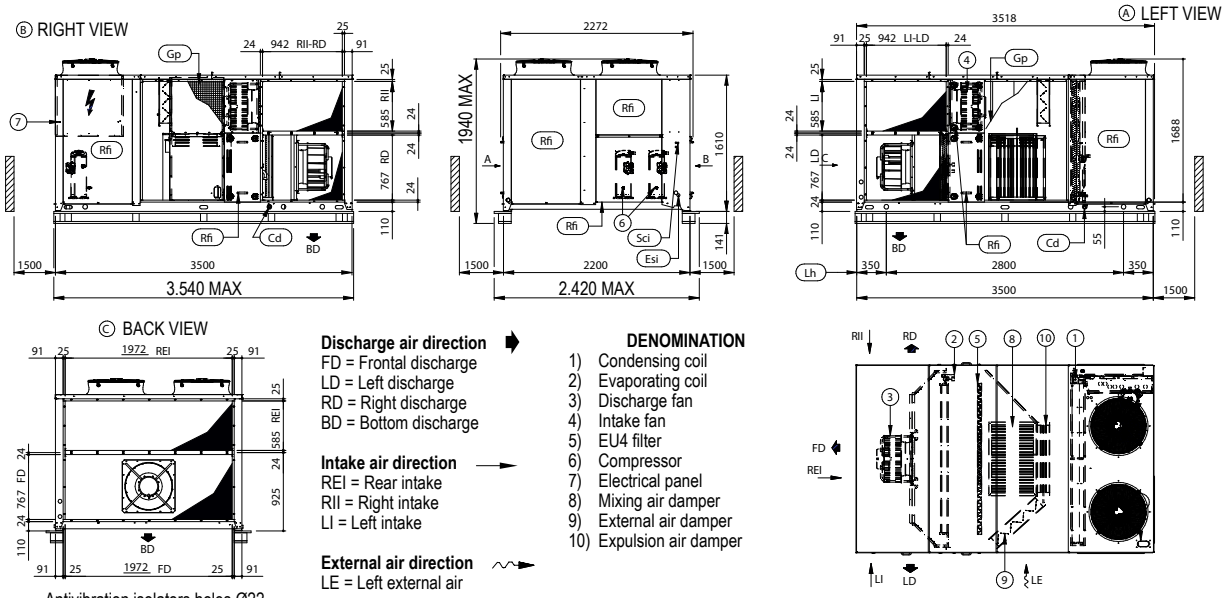
External air direction
RE=Rear external air

[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
796	147	252	271	126	UATYQAVM1

DDIM000245A

Dimensional drawings

UATYQ45AFC3Y1



Discharge air direction
FD = Frontal discharge
LD = Left discharge
RD = Right discharge
BD = Bottom discharge

Intake air direction
REI = Rear intake
RII = Right intake
LI = Left intake

External air direction
LE = Left external air

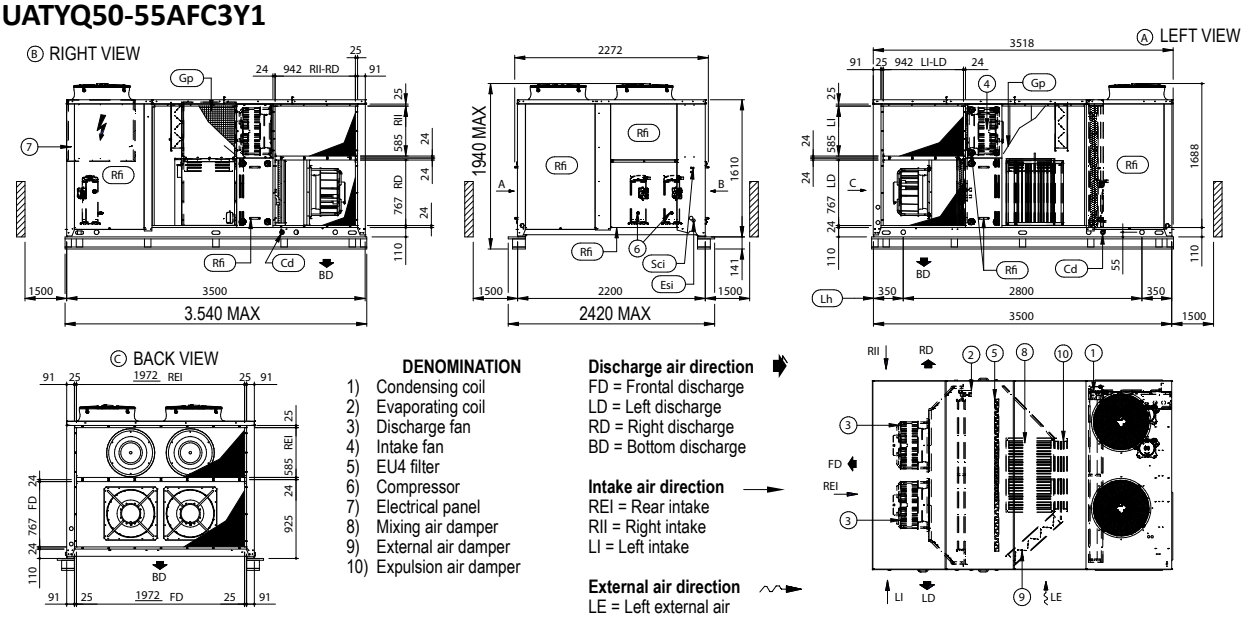
DENOMINATION
1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Intake fan
5) EU4 filter
6) Compressor
7) Electrical panel
8) Mixing air damper
9) External air damper
10) Expulsion air damper

Gp	GRID PROTECTIONS	Esi	ELECTRICAL SUPPLY INLET
Cd	CONDENSATE DRAIN	Sci	SIGNAL CABLES INLET
Rfi	REMOVE FOR INSPECTION	Lh	LIFTING HOLES Ø55

[Kg]					
OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
1.382	250	194	226	292	UATYQAVM1

DDIM000252D

UATYQ50-55AFC3Y1



DENOMINATION
1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Intake fan
5) EU4 filter
6) Compressor
7) Electrical panel
8) Mixing air damper
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RD = Right discharge
BD = Bottom discharge

Intake air direction
REI = Rear intake
RII = Right intake
LI = Left intake

External air direction
LE = Left external air

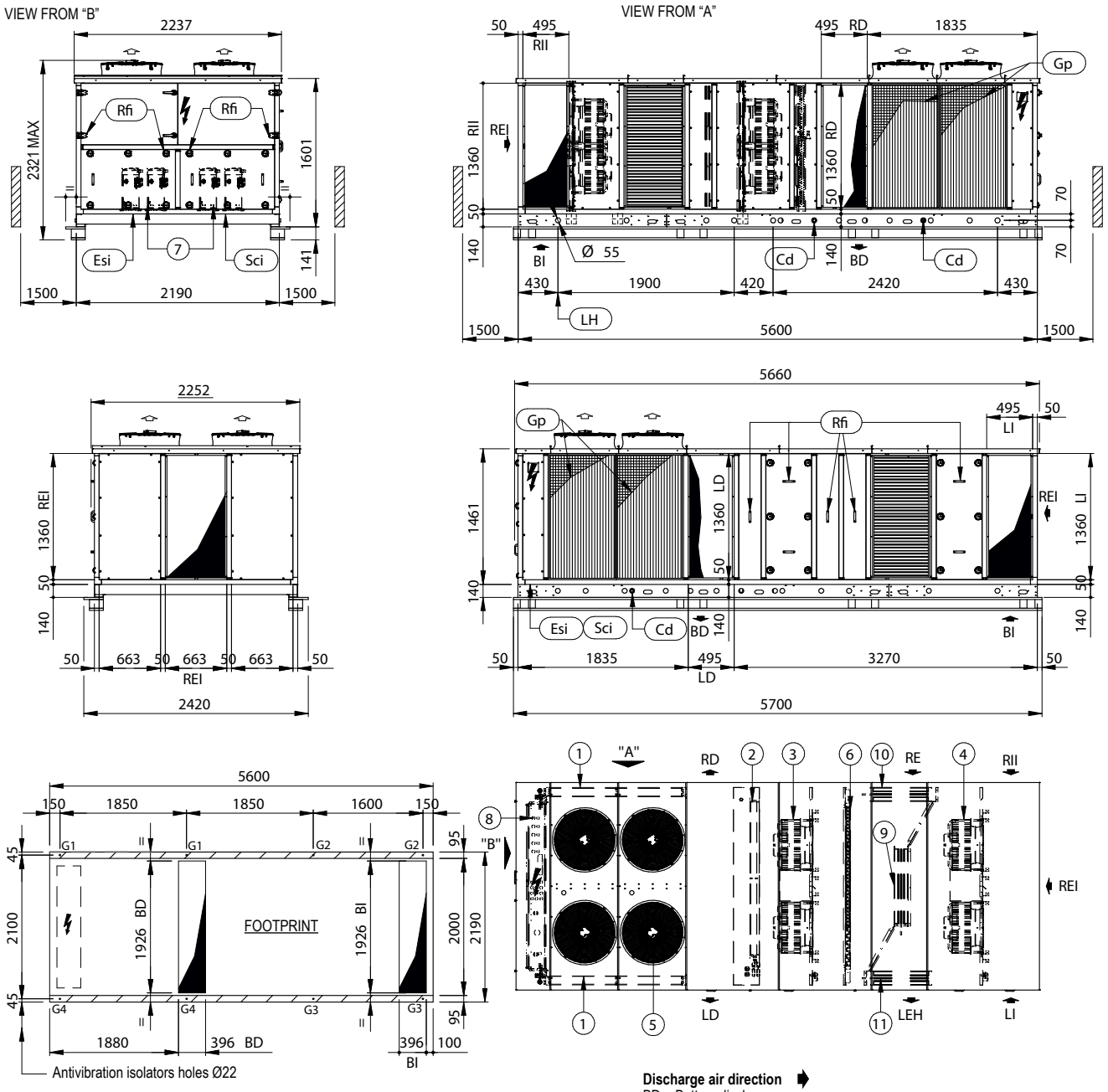
Gp	GRID PROTECTIONS	Esi	ELECTRICAL SUPPLY INLET	Sci	SIGNAL CABLES INLET
Cd	CONDENSATE DRAIN	Lh	LIFTING HOLES Ø55	Rfi	REMOVE FOR INSPECTION

	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ50AFC3Y1	1.535	309	207	243	326	UATYQAVM1
UATYQ55AFC3Y1	1.561	316	209	246	335	

DDIM000294D

Dimensional drawings

UATYQ65-75AFC3Y1



DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Intake fan
5) Condensing fan
6) EU4 air filter
7) Compressor
8) Electrical panel
9) Mixing air damper
10) External air Damper
11) Expulsion air damper

Discharge air direction
BD = Bottom discharge
LD = Left discharge
RD = Right discharge

Intake air direction
REI = Rear intake
RII = Right intake
BI = Bottom intake
LI = Left intake

External air direction
RE = Right external air

Exhaust air
LEH = Left exhaust air

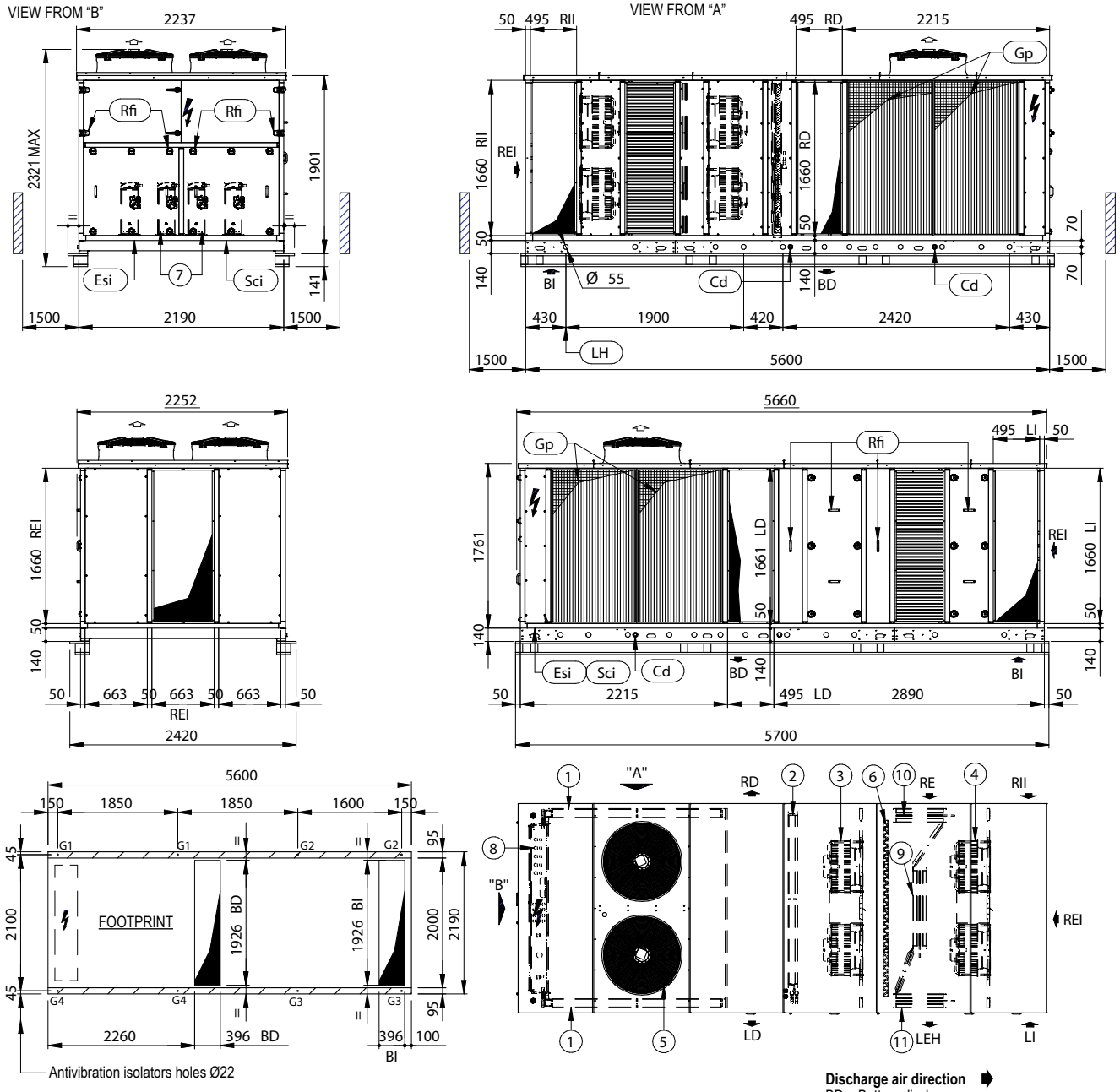
Gp	GRID PROTECTIONS	Lh	LIFTING HOLES Ø55	
Cd	CONDENSATE DRAIN	Rfi	REMOVE FOR INSPECTION	
	CLEARANCES	Esi	ELECTRICAL SUPPLY INLET	Sci SIGNAL CABLES INLET

	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ65AFC3Y1	2.142	268	215	262	326	UATYQAVM1
UATYQ75AFC3Y1	2.166	271	214	264	334	

DDIM000265D

Dimensional drawings

UATYQ90-100-115AFC3Y1



DENOMINATION

1) Condensing coil
2) Evaporating coil
3) Discharge fan
4) Intake fan
5) Condensing fan
6) EU4 air filter
7) Compressor
8) Electrical panel
9) Mixing air damper
10) External air Damper
11) Expulsion air damper

Gp	GRID PROTECTIONS	Lh	LIFTING HOLES Ø55		
Cd	CONDENSATE DRAIN	Rfi	REMOVE FOR INSPECTION		
	CLEARANCES	Esi	ELECTRICAL SUPPLY INLET	Sci	SIGNAL CABLES INLET

Discharge air direction
BD = Bottom discharge
LD = Left discharge
RD = Right discharge

Intake air direction
REI = Rear intake
RII = Right intake
BI = Bottom intake
LI = Left intake

External air direction
RE = Right external air

Exhaust air
LEH = Left exhaust air

	[Kg]					
	OPERATING WEIGHT	G1	G2	G3	G4	ANTIVIBRATION ISOLATOR CODE
UATYQ90AFC3Y1	2.338	310	262	273	324	UATYQAVM1
UATYQ100AFC3Y1	2.346	312	261	274	326	
UATYQ115AFC3Y1	2.398	325	260	273	341	

DDIM000276D

Sound data

Sound Level data

UATYQ20,25,30ABAY1 / UATYQ20,25,30AAFC2Y1 / UATYQ20,25,30AAFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
UATYQ20A*	71	54	74	57	76	59	72	55	72	55	71	54	65	48	59	42	77	60
UATYQ25A*	72	54	75	57	77	59	73	55	73	55	72	54	66	48	60	42	78	60
UATYQ30A*	72	54	75	57	77	59	73	55	73	55	72	54	66	48	60	42	78	60

UATYQ45-50-55ABAY1 / UATYQ45-50-55AFC2Y1 / UATYQ45-50-55AFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
UATYQ45A*	89	71	86	68	83	65	75	57	72	54	65	47	61	43	52	34	79	61
UATYQ50A*	91	73	88	70	85	67	77	59	75	57	67	49	62	44	53	35	81	63
UATYQ55A*	91	73	88	70	85	67	77	59	75	57	67	49	62	44	53	35	81	63

UATYQ65,75,90,100,115ABAY1 / UATYQ65,75,90,100,115AFC2Y1 / UATYQ65,75,90,100,115AFC3Y1

MODEL	Octave bands [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
65	94	75	90	71	77	58	80	61	76	57	69	50	65	46	53	34	83	64
75	94	75	90	71	77	58	80	61	76	57	69	50	65	46	53	34	83	64
90	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65
100	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65
115	93	73	89	69	89	69	81	61	77	57	72	52	79	59	63	43	85	65

Lw: sound power levels on free field calculated based upon ISO 3744. Values refer to basic unit only.
Lp: average sound pressure level at 1 meter on free field on a reflecting surface.

Theoretical Noise Attenuation Values Based On Distance In Free Field

Distance	(m)	1	2	3	4	5	6	7	8	9	10
Attenuation	(dB)	0	6	9,5	12	14	15,5	17	18	19	20

Options

		Base series - UATYQ-ABAY1			2 damper series - UATYQ-AFC2Y1					3 damper series - UATYQ-AFC3Y1				
		20-55	65-75	90-115	20	25-30	45-55	65-75	90-115	20	25-30	45-55	65-75	90-115
UATYQWRC Remote controller (standard 1 delivered with the unit)		•	•	•	•	•	•	•	•	•	•	•	•	•
UATYQBACNET BMS interface: BACnet (IP); Modbus (TCP/IP)		•	•	•	•	•	•	•	•	•	•	•	•	•
UATYQAVM1 Anti-vibration mounts		• 2x	• 3x	• 4x	• 2x	• 2x	• 2x	• 4x	• 4x	• 2x	• 2x	• 3x	• 4x	• 4x
Rainproof hood & protection grill					UATYQRAPH1	UATYQRAPH2	UATYQRAPH3	UATYQRAPH4	UATYQRAPH5	UATYQRAPH1	UATYQRAPH2		UATYQRAPH4 x2 (1)	UATYQRAPH5 x2 (1)

(1) Requires 2 kits for both fresh air and exhaust air

Daikin VRV and Air Handling Unit Combinations

You will find your match

Why choose Daikin air handling units with a DX connection?

Simplifying business

The unique total solution approach by Daikin helps businesses to propose better cross-pillar solutions, to increase their success ratio by providing unmatchable product combinations to the end-user and to simplify the life of installers by supplying high-quality products coming from the same manufacturer. Contrary to other manufacturers, Daikin does not use OEM products in its AHU with DX offer. Many competitors are either offering OEM DX outdoor units or OEM AHU which create additional problems when warranties or faults arise. **Having a single interface for your business makes Daikin the right choice.**

One stop shop

Daikin is the only global manufacturer in the market **capable of offering a true Plug & Play solution** where Daikin AHUs manufactured by Daikin Applied Europe and certified by Eurovent, offer off-the-shelf compatibility with Daikin's unique VRV outdoor unit range for the best performance in the market.
This unique integration of cross-pillar products under the same umbrella, gives the costumer both peace-of-mind and added value when promoting a total solution approach.

Complete range of possibilities

Thanks to the **most complete offer in the market**, Daikin has the solution for all types of commercial applications requiring fresh air. Daikin provides ventilation solutions based on AHU from 2,500 m³/h up to 140,000 m³/h either with natural heat recovery or more advanced ventilation solutions where a VRV outdoor unit can be connected to the Daikin AHU for ultimate climate control. The harmonized control between the VRV outdoor unit and the AHU offer outstanding 24h/7 control of the system when connected to an iTM.

Advantages

- Unique manufacturer offering a complete range
- Plug & Play solution
- Direct iTM compatibility

Daikin's fresh air solution

High efficient EC fan

Factory fitted and tested DX heat exchanger

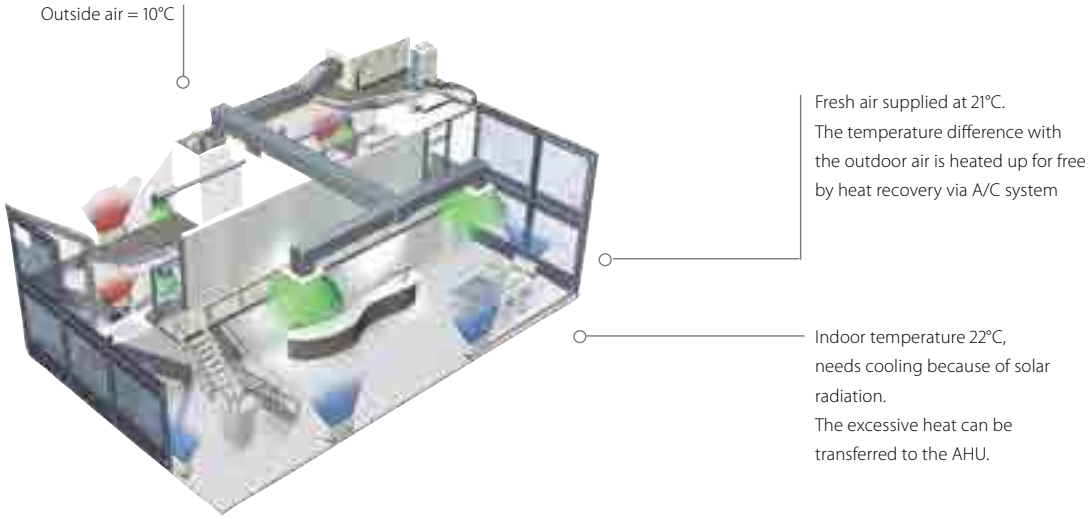
Efficient filtration

Heat wheel for heat recovery

Why use VRV and ERQ condensing units for connection to air handling units?

High Efficiency

Daikin heat pumps are renowned for their high energy efficiency. Integrating the AHU with a heat recovery system is even more effective since an office system can frequently be in cooling mode while the outdoor air is too cold to be brought inside in an unconditioned state. In this case heat from the offices is merely transferred to heat up the cold incoming fresh air.



Fast response to changing loads resulting in high comfort levels

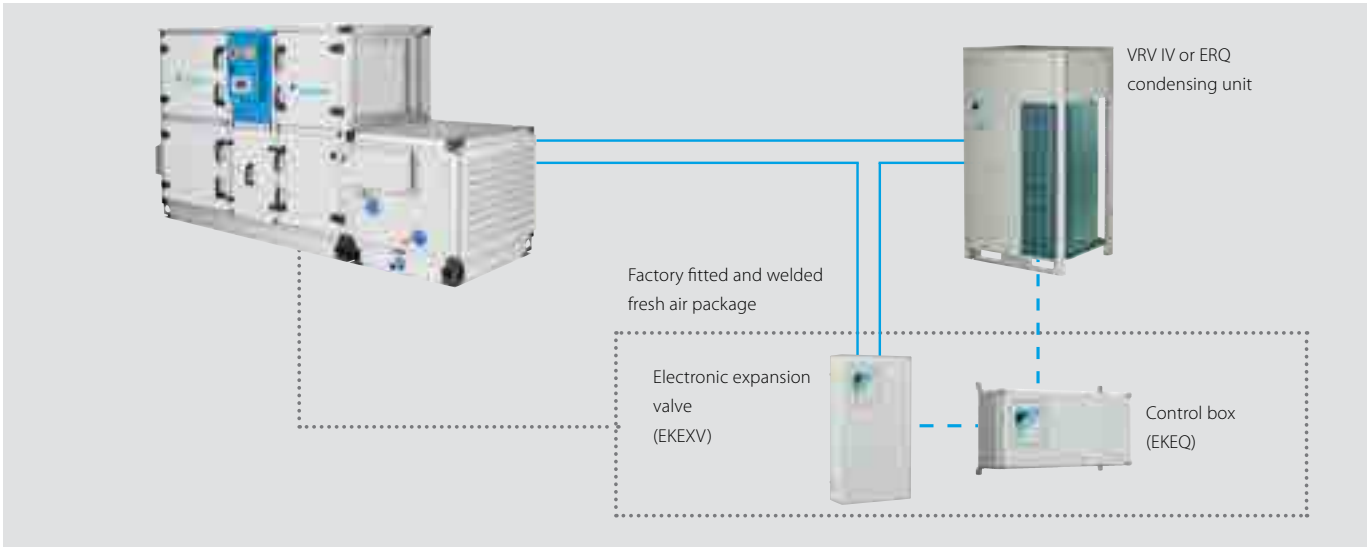
Daikin ERQ and VRV units respond rapidly to fluctuations in supply air temperature, resulting in a steady indoor temperature and resultant high comfort levels for the end user. The ultimate is the VRV range which improves comfort even more by offering continuous heating, also during defrost.

Easy Design and Installation

The system is easy to design and install since no additional water systems such as boilers, tanks and gas connections etc. are required. This also reduces both the total system investment and running cost.

Daikin Fresh air package

› Plug & Play connection between VRV/ERQ and the entire D-AHU modular range.
› Factory fitted and welded control and expansion valve kits.



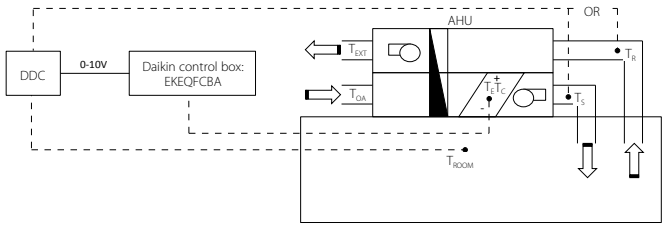
In order to maximise installation flexibility, 4 types of control systems are offered

W control: Off the shelf control of air temperature (discharge temperature, suction temperature, room temperature) via any DDC controller, easy to setup
X control: Precise control of air temperature (discharge temperature, suction temperature, room temperature) requiring a preprogrammed DDC controller (for special applications)

Z control: Control of air temperature (suction temperature, room temperature) via Daikin control (no DDC controller needed)
Y control: Control of refrigerant (Te/Tc) temperature via Daikin control (no DDC controller needed)

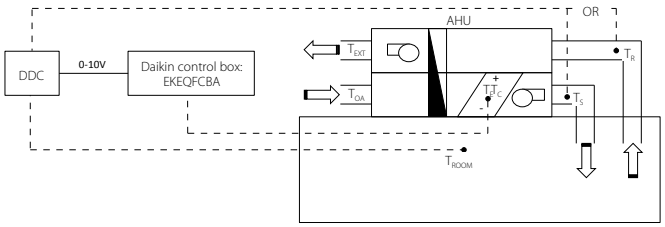
1. W control (T_S/T_R/T_{ROOM} control):

Air temperature control via DDC controller
Room temperature is controlled as a function of the air handling unit suction or discharge air (customer selection). The DDC controller is translating the temperature difference between set point and air suction temperature (or air discharge temperature or room temperature) into a proportional 0-10V signal which is transferred to the Daikin control box (EKEQFCBA). This voltage modulates the capacity requirements of the outdoor unit.



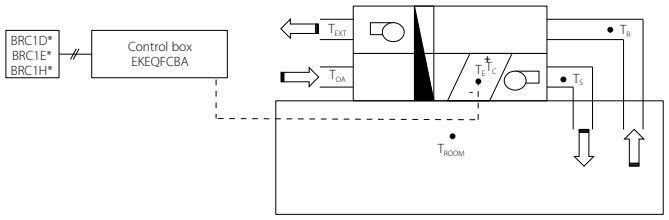
2. X control (T_S/T_R/T_{ROOM} control):

Precise air temperature control via DDC controller
Room temperature is controlled as a function of the air handling unit suction or discharge air (customer selection). The DDC controller is translating the temperature difference between set point and air suction temperature (or air discharge temperature or room temperature) into a reference voltage (0-10V) which is transferred to the Daikin control box (EKEQFCBA). This reference voltage will be used as the main input value for the compressor frequency control.



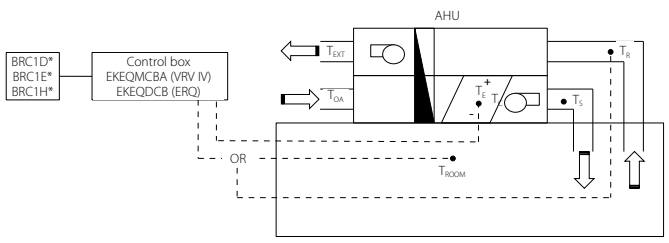
3. Y control (T_E/T_C control):

By fixed evaporating /condensing temperature
A fixed target evaporating or condensing temperature can be set by the customer. In this case, room temperature is only indirectly controlled. A Daikin wired remote control (BRC1* - optional) have to be connected for initial set-up but not required for operation.



4. Z control (T_S/T_{ROOM} control):

Control your AHU just like a VRV indoor unit with 100% fresh air
Allows the possibility to control the AHU just like a VRV indoor unit. Meaning temperature control will be focused on return air temperature from the room into the AHU. Requires BRC1* for operation. The only control that allows the combination of other indoor units to the AHU at the same time.



T_S = Supply air temperature
T_{EXT} = Extraction air temperature
T_R = Return air temperature
T_E = Evaporating temperature
T_{OA} = Outdoor air temperature
T_C = Condensing temperature
T_{ROOM} = Room air temperature

	Option kit	Features
Possibility W	EKEQFCBA	Off-the-shelf DDC controller that requires no pre-configuration
Possibility X		Pre-configured DDC controller required
Possibility Y		Using fixed evaporating temperature, no set point can be set using remote control
Possibility Z	EKEQDCB EKFQMCBA*	Using Daikin infrared remote control BRC1* Temperature control using air suction temperature or room temperature (via remote sensor)

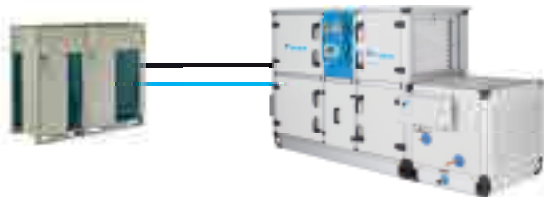
* EKEQMCB (for 'multi' application)

VRV - for larger capacities (from 8 to 54HP)

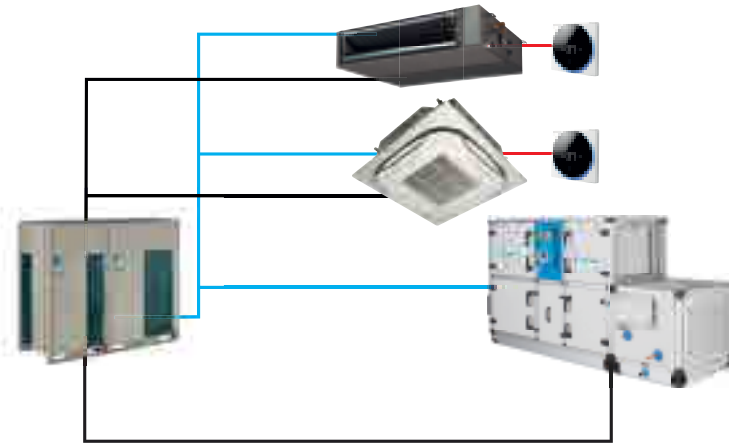
An advanced solution for both pair and multi application

› Inverter controlled units
› Heat recovery, heat pump
› R-410A
› Control of room temperature via Daikin control
› Large range of expansion valve kits available
› BRC1H519W/S/K is used to set the set point temperature (connected to the EKEQMCBA).
› Connectable to all VRV heat recovery and heat pump systems

W, X, Y control for VRV IV heat pump



Z control for all VRV outdoor units



Refrigerant piping
F1-F2
P1-P2

ERQ - for smaller capacities (from 100 to 250 class)

A basic fresh air solution for pair application

› Inverter controlled units
› Heat pump
› R-410A
› Wide range of expansion valve kits available
› Perfect for the Daikin Modular air handling unit

The "Daikin Fresh Air Package" provides a complete Plug & Play Solution including AHU, ERQ or VRV Condensing Unit and all unit control (EKEQ, EKEX, DDC controller) factory mounted and configured. The easiest solution with only one point of contact.

ERQ-AW1

Ventilation			ERQ	100AV1	125AV1	140AV1
Capacity range			HP	4	5	6
Cooling capacity	Nom.		kW	11,2	14,0	15,5
Heating capacity	Nom.		kW	12,5	16,0	18,0
Power input	Cooling	Nom.	kW	2,81	3,51	4,53
	Heating	Nom.	kW	2,74	3,86	4,57
EER				3,99		3,42
COP				4,56	4,15	3,94
Dimensions	Unit	HeightxWidthxDepth	mm	1.345x900x320		
Weight	Unit		kg	120		
Casing	Material			Painted galvanized steel plate		
Fan-Air flow rate	Cooling	Nom.	m^3/min	106		
	Heating	Nom.	m^3/min	102	105	
Sound power level	Cooling	Nom.	dBA	66	67	69
Sound pressure	Cooling	Nom.	dBA	50	51	53
level	Heating	Nom.	dBA	52	53	55
Operation range	Cooling	Min./Max.	°CDB	-5/46		
	Heating	Min./Max.	°CWB	-20/15,5		
	On coil temperature	Heating/Min./Cooling/Max.	°CDB	10/35		
Refrigerant	Type			R-410A		
	Charge		kg	4,0		
			TCO_2eq	8,4		
	GWP			2.087,5		
	Control			Expansion valve (electronic type)		
Piping connections	Liquid	OD	mm	9,52		
	Gas	OD	mm	15,9		19,1
	Drain	OD	mm	26x3		
Power supply	Phase/Frequency/Voltage		Hz/V	1N~/50/220-240		
Current	Maximum fuse amps (MFA)		A	32,0		

Ventilation			ERQ	125AW1	200AW1	250AW1
Capacity range			HP	5	8	10
Cooling capacity	Nom.		kW	14,0	22,4	28,0
Heating capacity	Nom.		kW	16,0	25,0	31,5
Power input	Cooling	Nom.	kW	3,52	5,22	7,42
	Heating	Nom.	kW	4,00	5,56	7,70
EER				3,98	4,29	3,77
COP				4,00	4,50	4,09
Dimensions	Unit	HeightxWidthxDepth	mm	1.680x635x765	1.680x930x765	
Weight	Unit		kg	159	187	240
Casing	Material			Painted galvanized steel plate		
Fan-Air flow rate	Cooling	Nom.	m^3/min	95	171	185
	Heating	Nom.	m^3/min	95	171	185
Sound power level	Nom.		dBA	72	78	
Sound pressure level	Nom.		dBA	54	57	58
Operation range	Cooling	Min./Max.	°CDB	-5/43		
	Heating	Min./Max.	°CWB	-20/15		
	On coil temperature	Heating/Min./Cooling/Max.	°CDB	10/35		
Refrigerant	Type			R-410A		
	Charge		kg	6,2	7,7	8,4
			TCO_2eq	12,9	16,1	17,5
	GWP			2.087,5		
	Control			Electronic expansion valve		
Piping connections	Liquid	OD	mm	9,52		
	Gas	OD	mm	15,9	19,1	22,2
Power supply	Phase/Frequency/Voltage		Hz/V	3N~/50/400		
Current	Maximum fuse amps (MFA)		A	16	25	

Integration of ERQ and VRV in third party air handling units

a wide range of expension valve kits and control boxes

Combination table

		Control box			Expansion valve kit										Mixed connection with VRV indoor units
		EKEQDCB	EKEQFCBA	EKEQMCBA	EKEXV50	EKEXV63	EKEXV80	EKEXV100	EKEXV125	EKEXV140	EKEXV200	EKEXV250	EKEXV400	EKEXV500	
		Z control	W,X,Y control	Z control	-	-	-	-	-	-	-	-	-	-	
1-phase	ERQ100	P	P	-	-	P	P	P	P	-	-	-	-	-	Not possible
	ERQ125	P	P	-	-	P	P	P	P	P	-	-	-	-	
	ERQ140	P	P	-	-	-	P	P	P	P	-	-	-	-	
3-phase	ERQ125	P	P	-	-	P	P	P	P	P	-	-	-	-	
	ERQ200	P	P	-	-	-	-	P	P	P	P	P	-	-	
	ERQ250	P	P	-	-	-	-	-	P	P	P	P	-	-	
VRV III		-	-	n1	n1	n1	n1	n1	n1	n1	n1	n1	n1	n1	Mandatory
VRV IV H/P / VRV IV W-series VRV IV S-series		-	P (1 -> 3)	n2	n2	n2	n2	n2	n2	n2	n2	n2	n2	n2	Possible (not mandatory)
VRV IV H/R VRV IV i-series		-	n1	-	n1	n1	n1	n1	n1	n1	n1	n1	n1	n1	Mandatory

- P (pair application): combination depends on the capacity of the air handling unit
- n1 (multi application) - Combination of AHUs and VRV DX indoors (mandatory). To determine the exact quantity please refer to the engineering data book.
- n2 (multi application) - Combination of AHUs and VRV DX indoors (not mandatory). To determine the exact quantity please refer to the engineering data book.data book
- Control box EKEQFA can be connected to some types of VRV IV outdoor units (with a maximum of 3 boxes per unit). Do not combine EKEQFA control boxes with VRV DX indoor units, RA indoor units or hydroboxes

Capacity table

Cooling

EKEXV Class	Allowed heat exchanger capacity (kW)			Allowed heat exchanger volume (dm³)	
	Minimum	Standard	Maximum	Minimum	Maximum
50	5,0	5,6	6,2	1,33	1,65
63	6,3	7,1	7,8	1,66	2,08
80	7,9	9,0	9,9	2,09	2,64
100	10,0	11,2	12,3	2,65	3,30
125	12,4	14,0	15,4	3,31	4,12
140	15,5	16,0	17,6	4,13	4,62
200	17,7	22,4	24,6	4,63	6,60
250	24,7	28,0	30,8	6,61	8,25
400	35,4	45,0	49,5	9,26	13,2
500	49,6	56,0	61,6	13,2	16,5

Saturated evaporating temperature: 6°C
Air temperature: 27°C DB / 19°C WB

Heating

EKEXV Class	Allowed heat exchanger capacity (kW)			Allowed heat exchanger volume (dm³)	
	Minimum	Standard	Maximum	Minimum	Maximum
50	5,6	6,3	7,0	1,33	1,65
63	7,1	8,0	8,8	1,66	2,08
80	8,9	10,0	11,1	2,09	2,64
100	11,2	12,5	13,8	2,65	3,30
125	13,9	16,0	17,3	3,31	4,12
140	17,4	18,0	19,8	4,13	4,62
200	19,9	25,0	27,7	4,63	6,60
250	27,8	31,5	34,7	6,61	8,25
400	39,8	50,0	55,0	9,26	13,2
500	55,1	63,0	69,3	13,2	16,5

Saturated condensing temperature: 46°C
Air temperature: 20°C DB

EKEXV - Expansion valve kit for air handling applications

Ventilation			EKEXV	50	63	80	100	125	140	200	250	400	500
Dimensions	Unit		mm	401x215x78									
Weight	Unit		kg	2,9									
Sound pressure level	Nom.		dBA	45									
Operation range	On coil	Heating Min.	°CDB	10 (1)									
	temperature	Cooling Max.	°CDB	35 (2)									
Refrigerant	Type / GWP			R-410A / 2.087,5									
Piping connections	Liquid	OD	mm	6,35	9,52							12,7	15,9

(1) The temperature of the air entering the coil in heating mode can be reduced to -5°CDB. Contact your local dealer for more information. (2) 45% Relative humidity.

EKEQ - Control box for air handling applications

Ventilation		EKEQ	FCBA	DCB	MCBA
Application			See note	Pair	Multi
Outdoor unit			ERQ / VRV	ERQ	VRV
Dimensions	Unit	mm	132x400x200		
Weight	Unit	kg	3,9	3,6	
Power supply	Phase/Frequency/Voltage	Hz/V	1~/50/230		

The combination of EKEQFCBA and ERQ is in pair application. The EKEQFCBA can be connected to some type of VRV IV outdoor units with a maximum of 3 control boxes. The combination with DX indoor units, hydroboxes, RA outdoor units, ... is not allowed. Refer to the combination table drawing of the outdoor unit for details.

Pair application selection

- **the outdoor unit is connected to ONE COIL (with single circuit or maximum 3 interlaced circuits) using up to 3 control boxes**
- **indoor unit combination is not allowed**
- **only works with X, W, Y control**

Step 1: Required AHU capacity

An AHU with double flow, heat recovery and 100% fresh air is to be installed in Europe where the outdoor sizing temperature is 35 ºCDB and the target supply air temperature for fresh air is 25 ºCDB. Load calculations point to a required capacity of 45kW.
By checking on the EKEXV capacity table, for cooling operation, 40kW falls within the 400 class valve. Since 40kW is not the nominal capacity, a class adjustment has to be done. 40/45=0,89 and 0,89x400=356. So the capacity class of the expansion valve kit is 356.

Step 2: Outdoor unit selection

For this AHU, a VRV IV heat pump model with continuous heating is going to be used (RYYQ-T series). For a capacity of 40kW at 35 ºCDB, an outdoor of 14HP (RYYQ14T) is selected. The capacity class of the 14 HP outdoor unit is 350.

Total connection ratio of the system is 356/350=102% hence it falls within the range 90-110%.

Step 3: Control box selection

In this particular case, the control will work with precise air temperature control. Only W or X control allow this. Since the consultant wants to use an "off-the-shelf" DDC module, the EKEQFCBA box with W control allows easy set-up due to pre-set factory values.

Multi application selection

- **the outdoor unit can be connected to MULTIPLE COILS (and their control boxes)**
- **indoor units are also connectable but not mandatory**
- **only works with Z control**

Step 1: Required AHU capacity

An AHU with double flow, heat recovery and 100% fresh air is to be installed in Europe where the outdoor sizing temperature is 35 ºCDB and the target supply air temperature for fresh air is 25 ºCDB. On top of this, for this building, 5 round-flow cassette units FXFQ50A will also be connected to this OU.
Load calculations point to a required capacity of 20kW for the AHU and 22,5 kW for the indoor untis.
By checking on the EKEXV capacity table, for cooling operation, 20kW falls within the 200 class valve. Since 22,4 kW is the nominal capacity, a class adjustment has to be done. 20/22,4=0,89 and 0,89x200=178. So the capacity class of the expansion valve kit is 178. Total capacity class of the indoor unit system is 178+250=428

Step 2: Outdoor unit selection

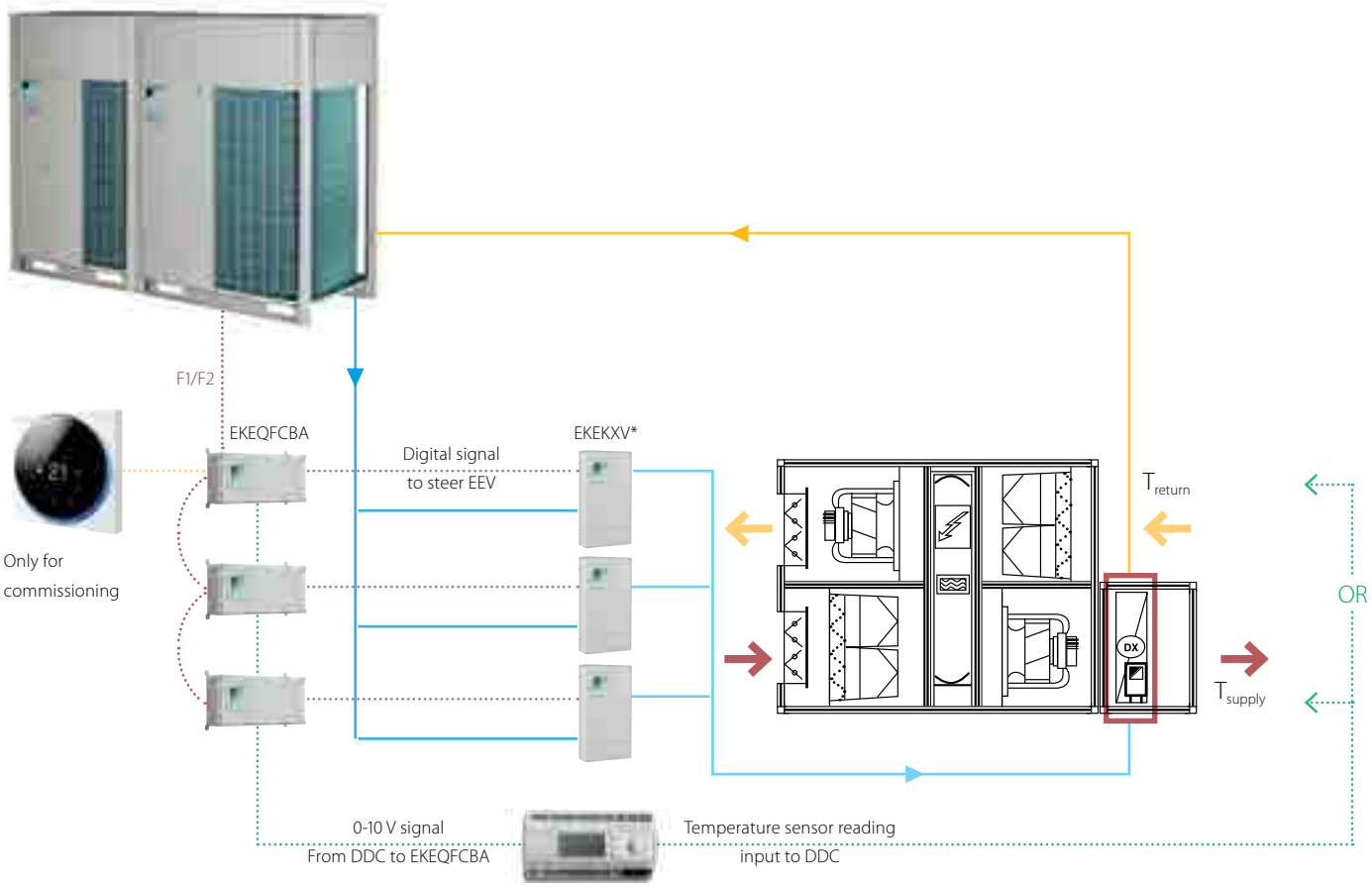
For this system where a AHU is connected with indoor units, it is mandatory to use a heat recovery unit. By consulting the engineering databook for REYQ-T, the total required capacity of 42,5 kW requires a 16HP model REYQ16T. Which will deliver 45kW at the design temperature of 35 ºCDB. This unit has a capacity class of 400. Total connection ratio of the system is 428/400=107% hence it falls within the range 50-110%.

Step 3: Control box selection

In this particular case, the only available control is Z control and the combination of AHU and VRV DX indoor units requires EKEQMCBA control box.

Pair application examples

Pair application layout #1: Example for W or X control with EKEQFCBA box



Outdoor unit compatibility

RYYQ8T	>	RYYQ54T
RXYQ8T	>	RXYQ54T
RWEYQ8T9	>	RWEYQ30T9
ERQ100	>	ERQ250 [1]

(1) Only available in 1 to 1 combination

Connection restrictions

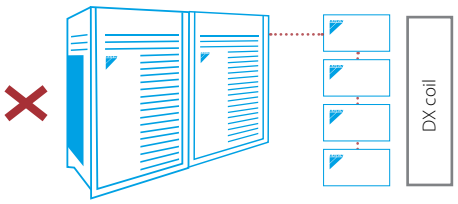
Connection Ratio VRV: between 90-110%

Connection Ratio ERQ: between 50-110%

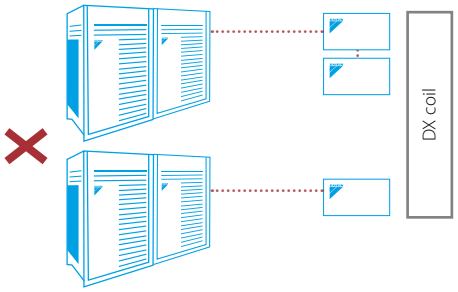
$$CR = \frac{\Sigma \text{ IU CC}}{\Sigma \text{ OU CC}} = \frac{\Sigma (CF \times EKEXV\ CC)_{1\text{-}3}}{\Sigma \text{ OU CC}}$$

CF is the correction factor

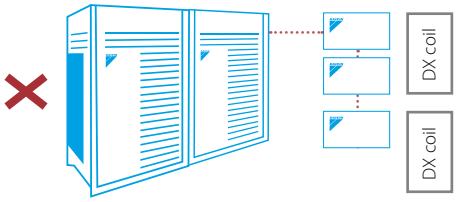
CC is the capacity class



More than 3 control boxes connected to same outdoor

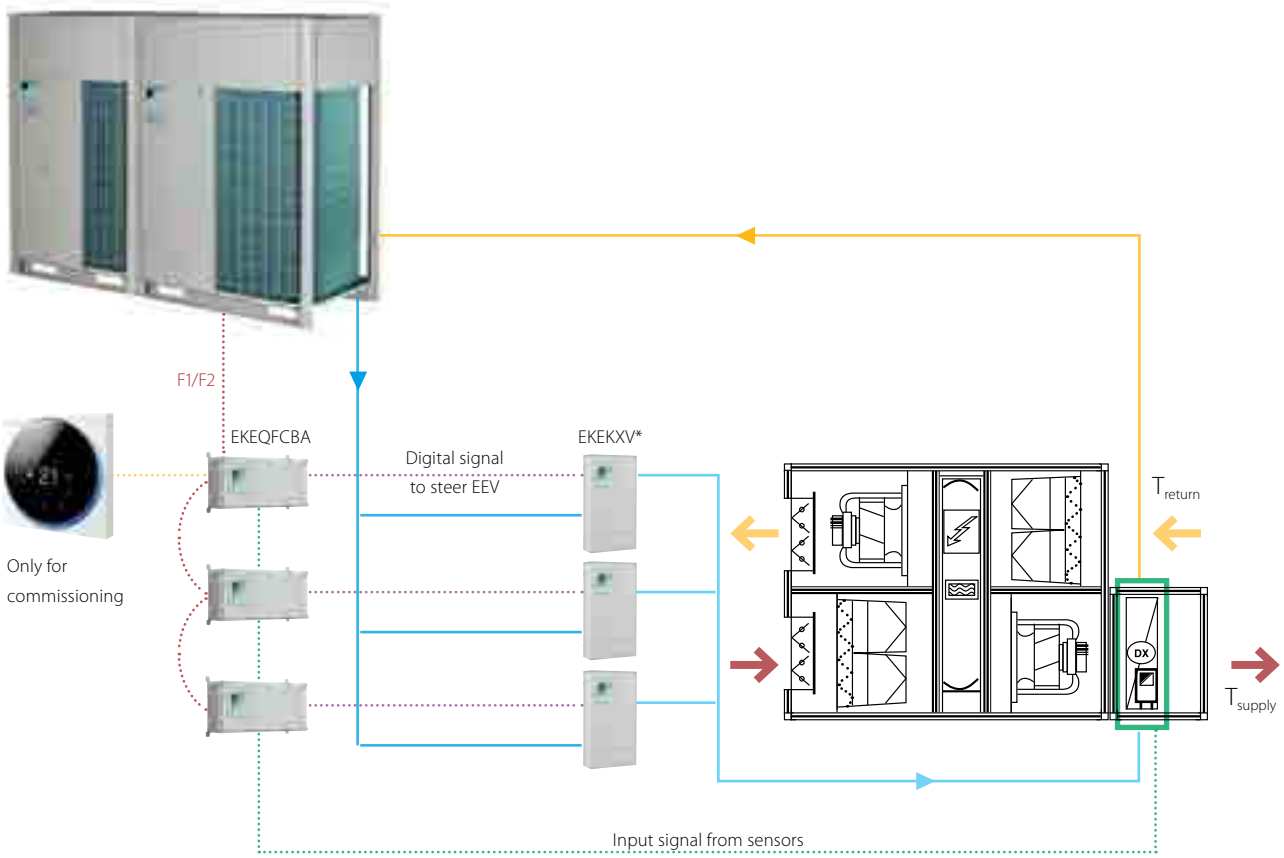


Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.



Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor

Pair application layout #2: Example for Y control with EKEQFCBA box



Outdoor unit compatibility

RYYQ8T	>	RYYQ54T
RXYQ8T	>	RXYQ54T
RWEYQ8T9	>	RWEYQ30T9
ERQ100	>	ERQ250 [1]

(1) Only available in 1 to 1 combination

Connection restrictions

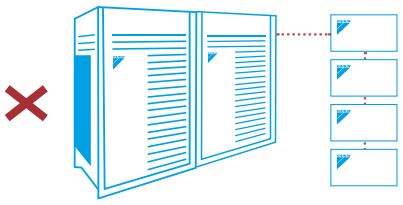
Connection Ratio between 90-110%

Connection Ratio ERQ: between 50-110%

$$CR = \frac{\Sigma \text{ IU CC}}{\Sigma \text{ OU CC}} = \frac{\Sigma \text{ (CF x EKEXV CC)}_{1\text{-}3}}{\Sigma \text{ OU CC}}$$

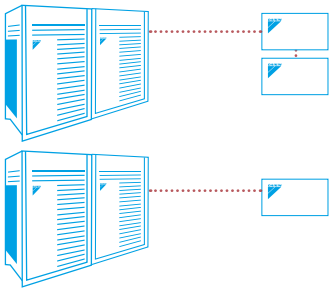
CF is the correction factor

CC is the capacity class



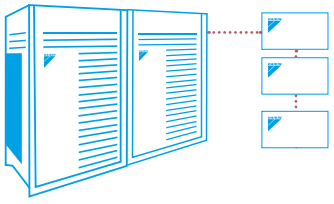
More than 3 control boxes connected to same outdoor

OK



Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.

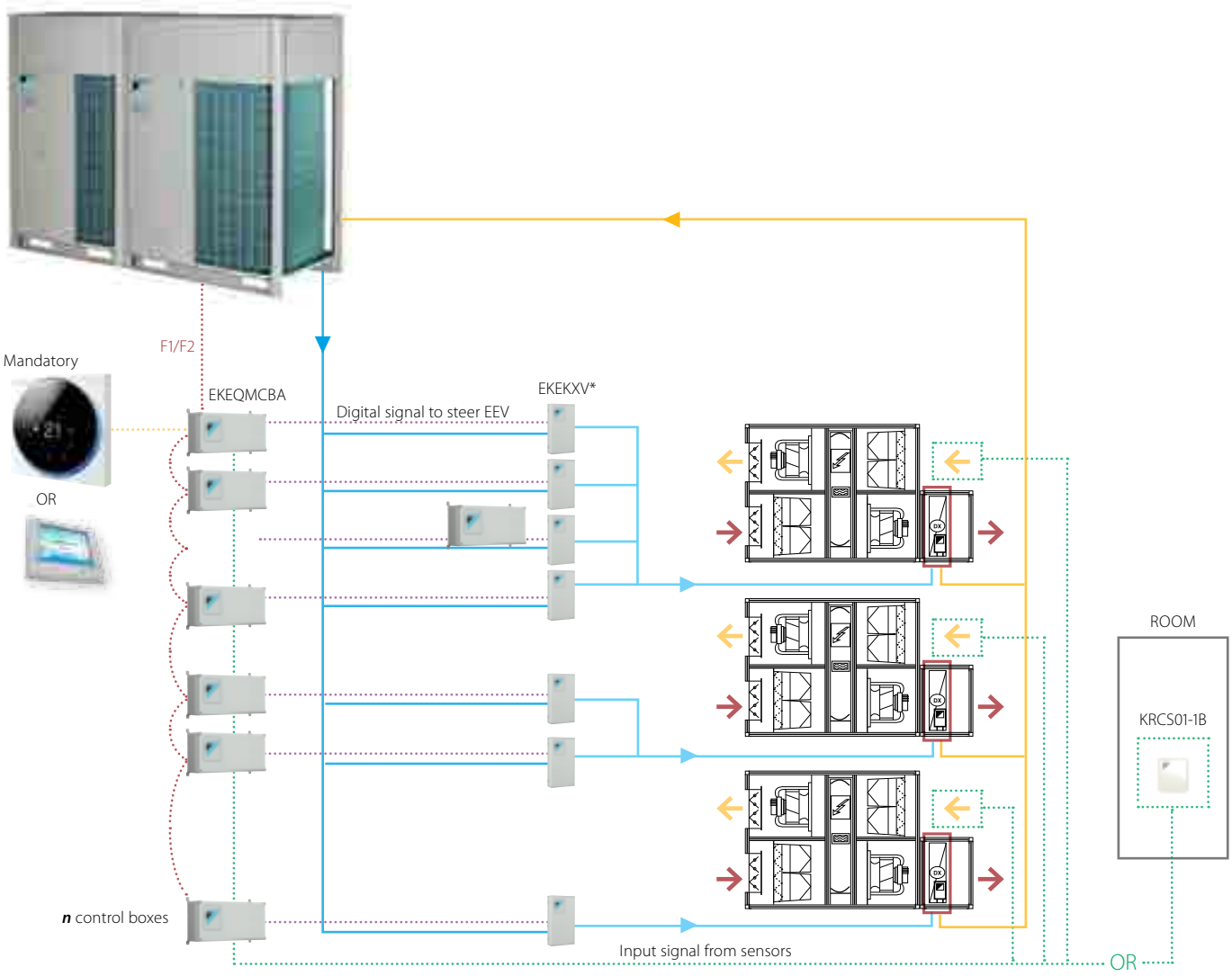
OK



Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor

Multi application examples

Multi application layout #1: Example for Z control with EKEQMCBA box and no VRV indoor units



Outdoor unit compatibility

RYYQ8T > RYYQ54T

RXYQ8T > RXYQ54T

RWEYQ8T9 > RWEYQ30T9

EKEQMCBA control box

ERQ100 > ERQ250 [1]

EKEQDCB control box

(1) Only available in 1 to 1 combination

Connection restrictions

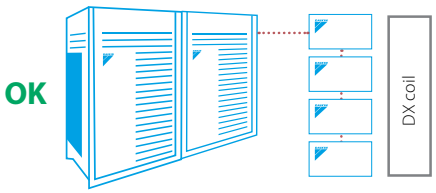
Connection Ratio between 90-110%

Connection Ratio ERQ: between 50-110%

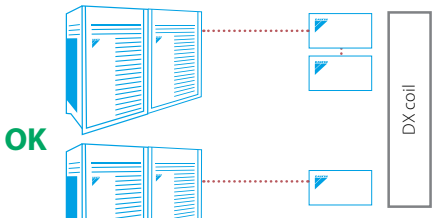
$$CR = \frac{\Sigma \text{ IU CC}}{\Sigma \text{ OU CC}} = \frac{\Sigma (\text{CF} \times \text{EKEXV CC})_{1\text{-}n}}{\Sigma \text{ OU CC}}$$

CF is the correction factor

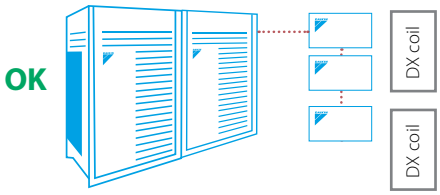
CC is the capacity class



More than 3 control boxes connected to same outdoor

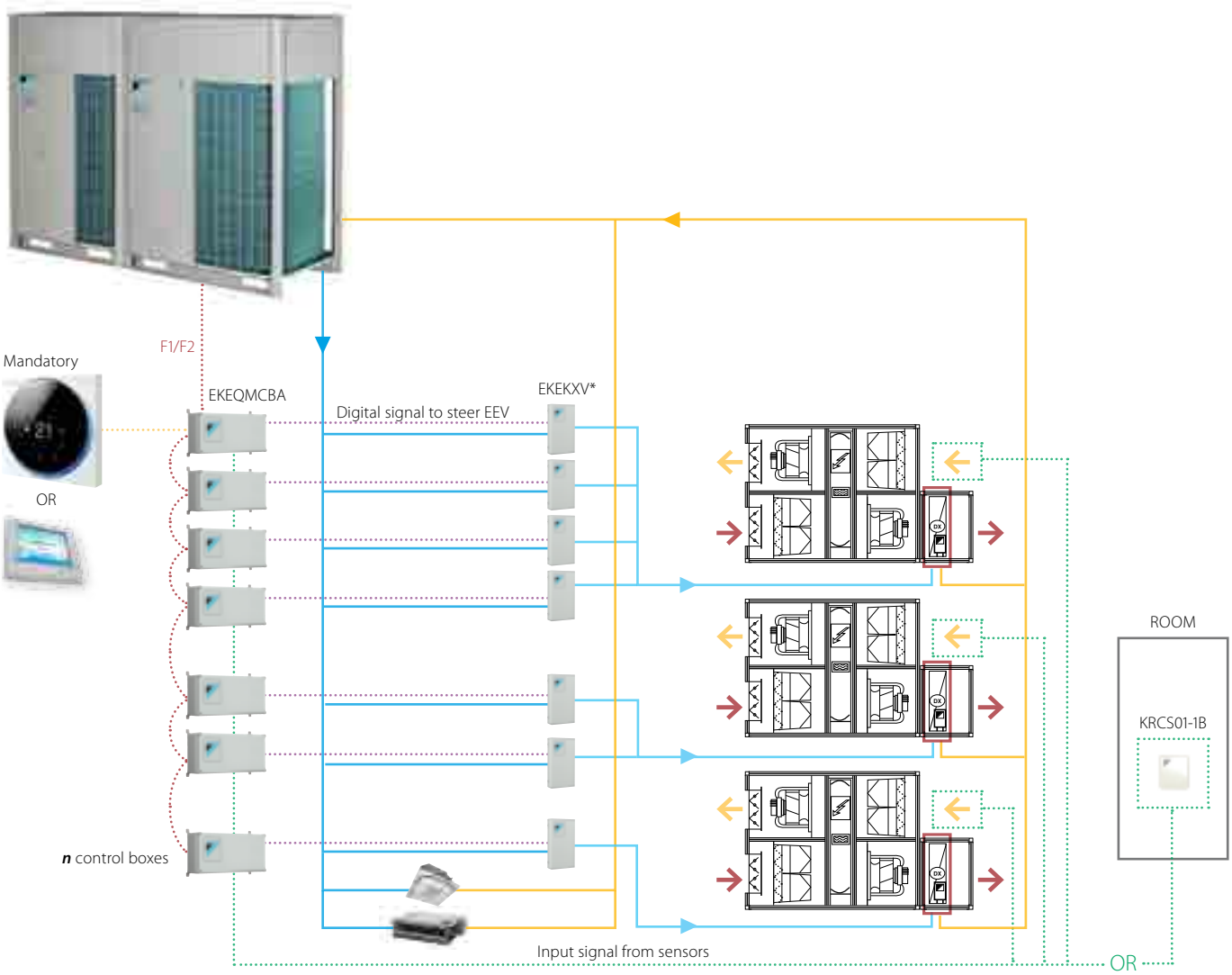


Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.



Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor

Multi application layout #2: Example for Z control with EKEQMCBA box and VRV indoor units



Outdoor unit compatibility

Not mandatory to have VRV DX indoors:

RYYQ8T > RYYQ54T

RXYQ8T > RXYQ54T

RWEYQ8T9 > RWEYQ30T9

Mandatory to have VRV DX indoors:

REYQ8T > REYQ54T

Connection restrictions

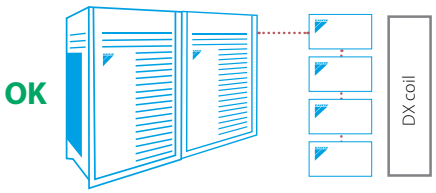
Connection Ratio between 50-110%

$$CR = \frac{\Sigma \text{ IU CC}}{\Sigma \text{ OU CC}} = \frac{\Sigma \text{ (CF x EKEXV CC)}_{1\text{-}n}}{\Sigma \text{ OU CC}}$$

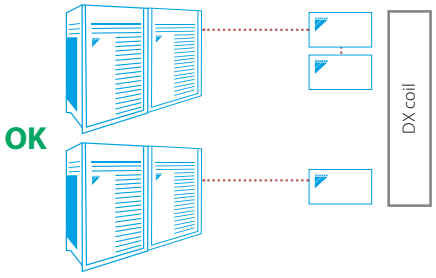
RULES: Σ EKEXV CC: 0-60% Σ IU CC: 50-110%

CF is the correction factor

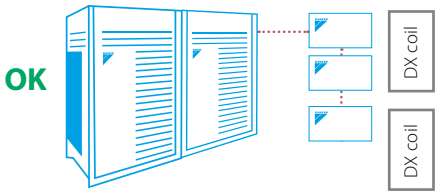
CC is the capacity class



More than 3 control boxes connected to same outdoor



Two control boxes connected to Outdoor 1 to circuits 1 and 2 of coil A. Control box 3 connected to outdoor 2 and circuit 3 of coil A.



Two control boxes on coil A (2 circuits) and another control box on coil B (1 circuit). Both connected to same outdoor

Options & accessories

VH ELECTRICAL HEATER FOR VAM

CONTROLS

FILTERS

Madoka

User-friendly wired remote contoller with premium design

White

Silver

Black

BRC1H519W/S/K

- Sleek and elegant design
- Intuitive touch button control
- 3 color versions
- Advanced settings and monitoring can be easily done via your smartphone
- Flat back for easy wall installation
- Compact to fit standard size socket boxes

reddot award 2018 winner

DESIGN AWARD 2018

Advanced user settings

Field settings

DIRECT INTEGRATION
WITH DAIKIN VENTILATION PRODUCTS

		Heat Recovery Ventilation - Modular L (Smart)								
		ALB02LBS/RBS	ALB03LBS/RBS	ALB04,05LBS/ RBS	ALB06,07LBS/ RBS	VAM 150FC	VAM 250FC	VAM 350J	VAM 500J	
Individual control systems	**BRC301B61** VAM wired remote control	•	•	•	•	•	•	•	•	
	Madoka **BRC1H519W** (Glossy white) / **BRC1H519S** (Silver Metallic) / **BRC1H519K** (Black matte) User-friendly wired remote controller with premium design	•	•	•	•	•	•	•	•	
	BRC1E53A/B/C Wired remote control with full-text interface and back-light	•	•	•	•	•	•	•	•	
	BRC1D52 Standard wired remote control with weekly timer	•	•	•	•	•	•	•	•	
Centralised control systems	**DCC601A51** intelligent Tablet Controller	•	•	•	•	•	•	•	•	
	DCM601A51 intelligent Touch Controller	•	•	•	•	•	•	•	•	
	DCS302C51 Central remote control	•	•	•	•	•	•	•	•	
	DCS301B51 Unified ON/OFF control	•	•	•	•	•	•	•	•	
	DST301B51 Schedule timer	•	•	•	•	•	•	•	•	
Building Management System & Standard protocol interface	**DCM601A51** intelligent Touch Manager	•	•	•	•	•	•	•	•	
	EKMBDXA Modbus interface	•	•	•	•	•	•	•	•	
	DMS502A51 BACnet Interface	•	•	•	•	•	•	•	•	
	DMS504B51 LonWorks Interface	•	•	•	•	•	•	•	•	
Filters	Coarse 55% (G4)	ALF02G4A	ALF03G4A	ALF05G4A	ALF07G4A					
	ePM_{10} 75% (M5)	ALF02M5A	ALF03M5A	ALF05M5A	ALF07M5A					
	ePM_{10} 70% (M6)							EKAFVJ50F6	EKAFVJ50F6	
	ePM_1 50% (F7)	ALF02F7A	ALF03F7A	ALF05F7A	ALF07F7A					
	ePM_1 55% (F7)							EKAFVJ50F7	EKAFVJ50F7	
	ePM_1 70% (F8)							EKAFVJ50F8	EKAFVJ50F8	
	ePM_1 80% (F9)	ALF02F9A	ALF03F9A	ALF05F9A	ALF07F9A					
	High efficiency filter									
	Replacement air filter									
Mechanical accessories	Rail	ALA02RLA	ALA03RLA	ALA05RLA	ALA07RLA					
	Rectangular to round duct transition	ALA02RCA	ALA03RC	ALA05RCA	ALA07RCA					
	Separate plenum									
CO_2 sensor		BRYMA200 (preliminary)	BRYMA200 (preliminary)	BRYMA200 (preliminary)	BRYMA200 (preliminary)			BRYMA65	BRYMA65	
Electrical heater		ALD02HEFB	ALD03HEFB	ALD05HEFB	ALD07HEFB	VH1B	VH2B	VH3B	VH3B	
Silencer (900mm depth)		ALS0290A	ALS0390A	ALS0590A	ALS0790A					
Electrical accessories	Wiring adapter for external monitoring/ control (controls 1 entire system)					KRP2A51	KRP2A51	KRP2A51 (2)	KRP2A51 (2)	
	Adapter PCB for humidifier					KRP50-2	KRP50-2	KRP1C4 (5)	KRP1C4 (5)	
	Adapter PCB for third party heater					BRP4A50	BRP4A50	BRP4A50A (4)	BRP4A50A (4)	
	External wired temperature sensor									
	Adapter PCB Mounting plate									

Notes

(1) Do not connect the system to DIII-net devices LONWorks interface, BACnet interface, …; (intelligent Touch Manager, EKMBDXA are allowed)

(2) Installation box KRP1BA101 needed

(3) Adapter PCB mounting plate needed, applicable model can be found in the table above

(4) 3rd party heater and 3rd party humidifier cannot be combined

(5) Installation box KRP50-2A90 needed

(6) Contains 1 plenum and can be used for half side of the unit (up to 4 plenums can be used on 1 unit)

(7) Available only with optional plenum

Energy reclaim ventilation - VAM					Energy reclaim ventilation VKM			Air handling unit applications		
VAM 650J	VAM 800J	VAM 1000J	VAM 1500J	VAM 2000J	VKM 50GB (M)	VKM 80GB (M)	VKM 100GB (M)	EKEQ FCBA (1)	EKEQ DCB (1)	EKEQ MCBA (1)
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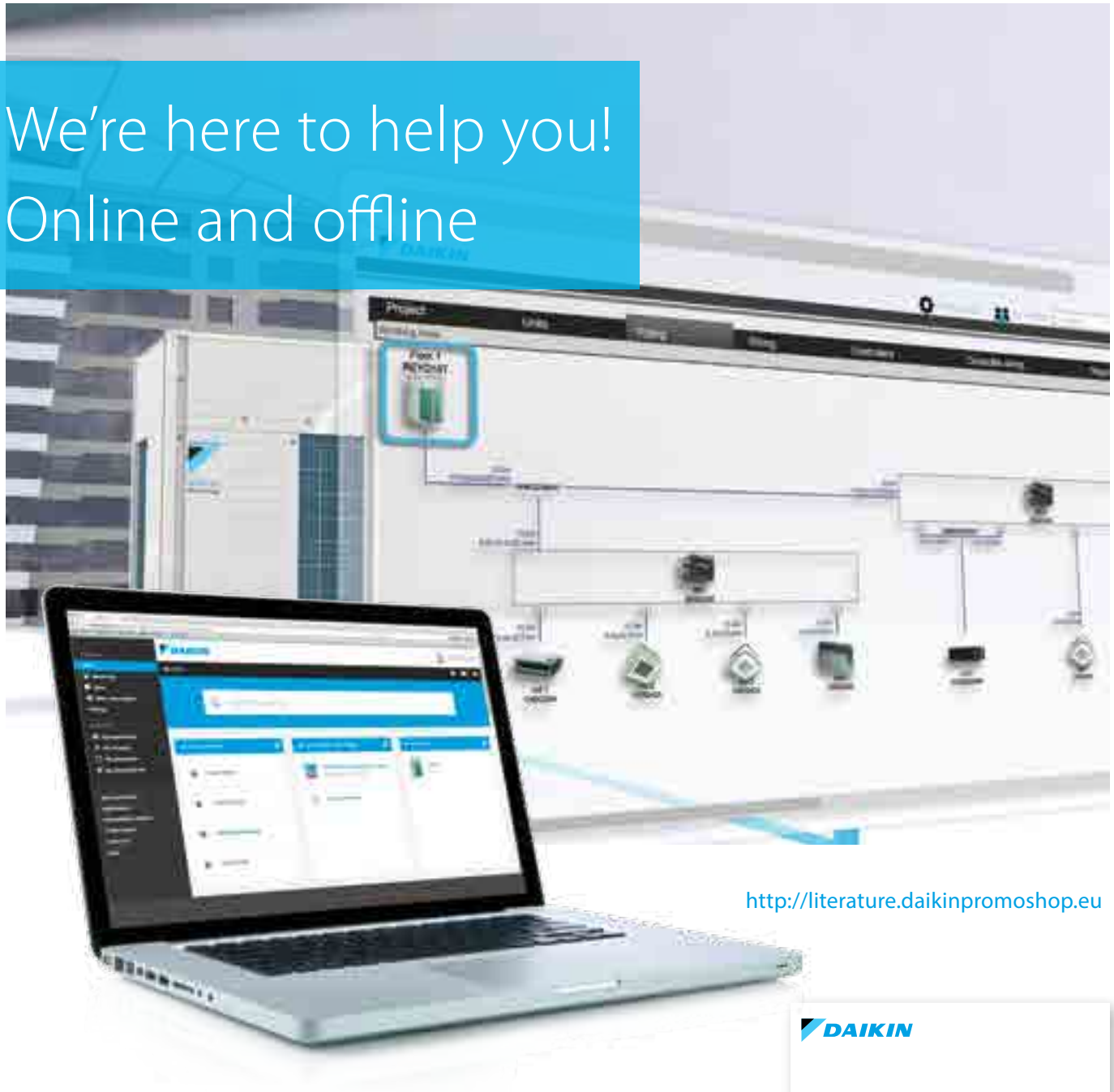
EKAFVJ65F6	EKAFVJ100F6	EKAFVJ100F6	EKAFVJ100F6 x2	EKAFVJ100F6 x2						
EKAFVJ65F7	EKAFVJ100F7	EKAFVJ100F7	EKAFVJ100F7 x2	EKAFVJ100F7 x2						
EKAFVJ65F8	EKAFVJ100F8	EKAFVJ100F8	EKAFVJ100F8 x2	EKAFVJ100F8 x2						
					KAF242H80M	KAF242H100M	KAF242H100M			
					KAF241H80M	KAF241H100M	KAF241H100M			
			EKPLEN200 (6)	EKPLEN200 (6)						
BRYMA65	BRYMA100	BRYMA100	BRYMA200	BRYMA200	BRYMA65	BRYMA100	BRYMA200			
VH4B / VH4/AB	VH4B / VH4/AB	VH4B / VH4/AB	VH5B(7)	VH5B(7)						
KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (4)			
KRP1C4 (3/5)	KRP1C4 (5)	KRP1C4 (5)	KRP1C4 (3/5)	KRP1C4 (3/5)	BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (4)			
BRP4A50A (3/4)	BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (3/4)	BRP4A50A (3/4)	BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (4)			
									KRCS01-1	
EKMP65VAM			EKMPVAM							

We're here to help you!
Online and offline



http://literature.daikinpromoshop.eu

Tools and platforms

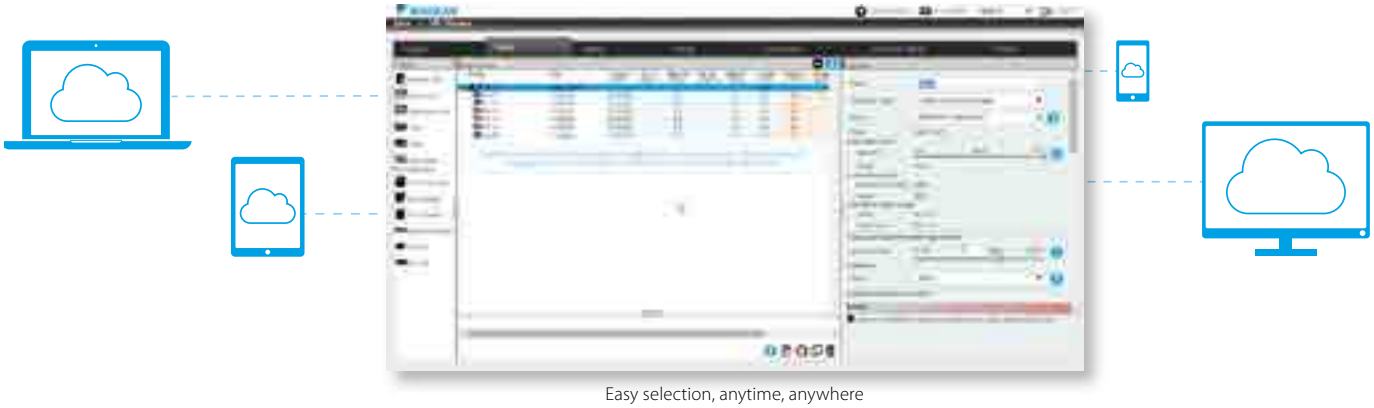
Supporting
tools, software and apps

https://www.daikin.eu/en_us/installers/software-downloads.html#!#professionals

New web based Xpress selection software

Making selection easy, anytime, anywhere

- Web & cloudbased access to your projects from anywhere, at any time…
- Platform (Windows, Mac, …) and hardware (laptop, desktop, tablet) independent
- Re-engineered GUI for maximum easy of use
- No need to do local installation
- No tool updates required (always latest version available)
- Possibility to copy / share projects



Easy selection, anytime, anywhere

Main functions

Easy editing of piping

Intuitive interface

Clear wiring overview, easy to make control groups

Clear overview of control groups and central controls

Other selection software

VRV Pro

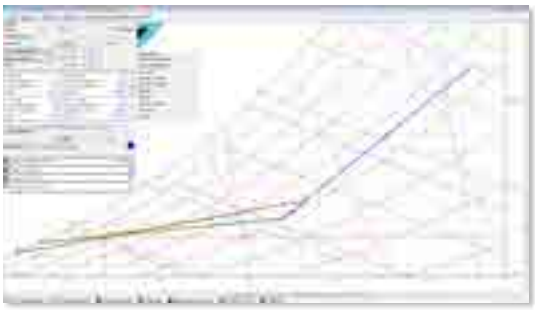
Enables VRV air conditioning systems to be engineered in a precise and economical way, taking into account the complex piping rules. Moreover, it ensures optimum operating cycles and maximum energy efficiency.

› Accurate heat load calculation
› Precise selection based on peak loads
› Energy consumption indication

Ventilation Xpress

Selection tool for ventilation devices (VAM, VKM). The selection is based on given supply/extract airflows (including fresh up and given ESP of supply/extract ducting):

› Determines size of electrical heaters
› Visualisation of psychrometric chart
› Visualisation of selected configuration
› Required field settings mentioned in the report



Webbased ASTRA selection for air handling units NEW

A powerful tool to select the right Air Handling Units for your needs.

› 3D interface
› quick selection procedures
› new print-out possibilities and report shapes

WAGO selection tool NEW

The WAGO Selection Tool is specifically designed to select the optimal WAGO I/O system for your needs.

› Easy selection of WAGO materials
› Material list creation
› Time saving
  • Includes wiring schemes
  • Contains commissioning/preset data for

Plug-ins and third-party software tools

Building Information Modelling (BIM) support

- BIM improves efficiency of design and build phase
- Daikin is among the first to supply a full library of BIM objects for its VRV products

www.daikin.eu/bim

VRV CAD 2D

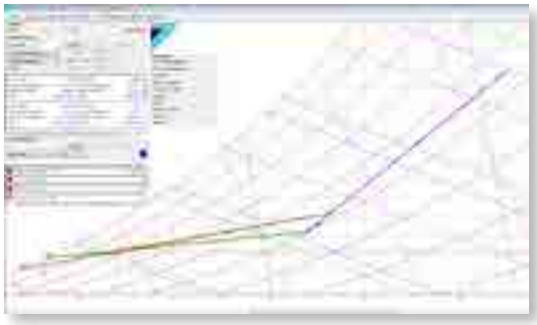
- Displays VRV pipe design on a Autocad 2D floorplan
- Improves project management
- Accurately calculates the pipe dimensions and refnets
- Determines the outdoor unit size
- Validates VRV pipe rules
- Accounts for the extra refrigerant charge, including a max room concentration check

Energy simulation and design aid tools

Seasonal simulator

- The Seasonal Simulator is an innovative software tool that calculates and compares potential seasonal efficiency ratings.
- This user-friendly tool compares various Daikin systems, annual power consumption, CO_2 emissions, and much more, to present an accurate ROI calculation in a matter of minutes.

Psychrometrics diagram NEW



- The Psychrometrics Diagram Viewer demonstrates the changing properties of moist air.
- With this tool, users can choose two points with specific conditions, plot them on the diagram and select actions to change the conditions, i.e. heat, cool and mix air.

Service tools

Error code app

Quickly know the meaning of fault codes, for each product family and the potential cause

D-Checker

D-checker is a software application used to record and monitor operation data of Daikin applied, split, Multi-split, Sky-air units, Daikin Altherma LT, ground source heat pump, Hybrid, ZEAS, Conveni-pack & R-410A Booster unit

Bluetooth adaptor NEW

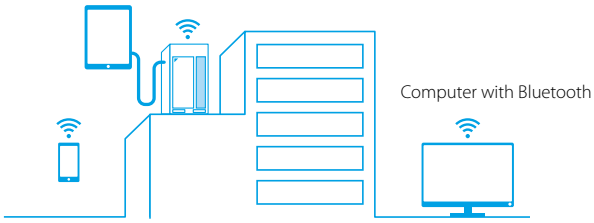
Monitoring of Split, Sky Air and VRV data via any bluetooth device

› No need to access the outdoor unit
- Connects with D-Checker software (for laptops)
- Connects with monitoring app (for tablets or smartphones)

VRV Service-Checker

› Connected via F1/F2 bus to check multiple systems at the same time
› Connection of external pressure sensors possible

Diagnosis of the Bluetooth system possible:

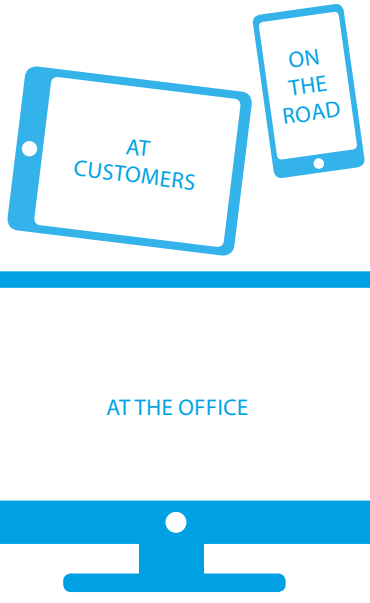


Online support

NEW Business portal

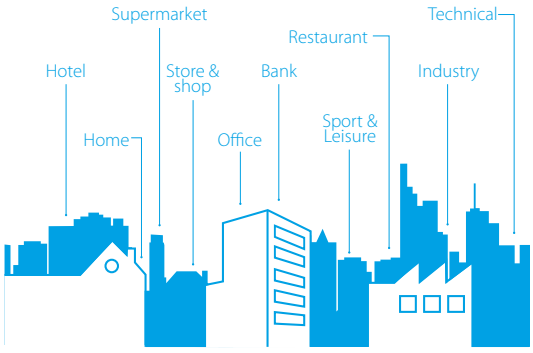
› Experience our new extranet that thinks with you at my.daikin.eu
› Find information in seconds via a powerful search
› Customise the options so you see only info relevant for you
› Access via mobile device or desktop

my.daikin.eu



Internet

Find our solution for different applications:



› Get more commercial details on our flagship products via our dedicated minisites

Notes

Notes

Pre-sized fresh air solution

Easy ordering of AHU + DX package

Select your AHU like any other VRV indoor

- ☑ Easy selection
- ☑ Fast quotation
- ☑ Easy ordering
- ☑ Easy installation

DAIKIN AIRCONDITIONING CENTRAL EUROPE HandelsgmbH

Lemböckgasse 59/1/1, 1230 Vienna, Austria · Tel.: + 43 (0) 1 253 21 11 · e-mail: office@daikin-ce.com · www.daikin-ce.com

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www.eurovent-certification.com

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