Commercial air purification & ventilation

2025
NEW

Indoor Air Quality matters more than ever. Since indoor air quality can be up 2 to 5 times worse than outdoor air quality, a correct air treatment is important.

Daikin offers the widest range in DX commercial ventilation from decentralised heat recovery systems to large-scale air handling units and air purification solutions in order to provide a healthy solution for your project.

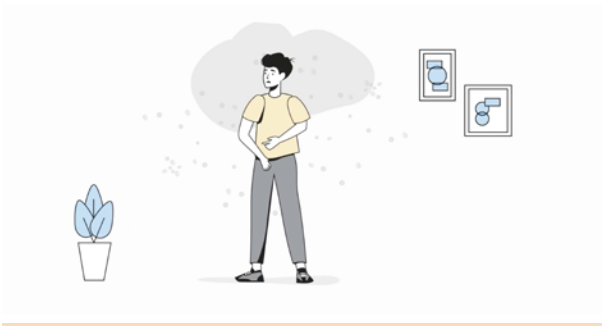
Commercial Ventilation & Air Purification

Want to know more about ventilation systems and how indoor air quality can be secured by ventilation? Follow our online webinar via the YouTube playlist.

For latest data, please consult my.daikin.eu

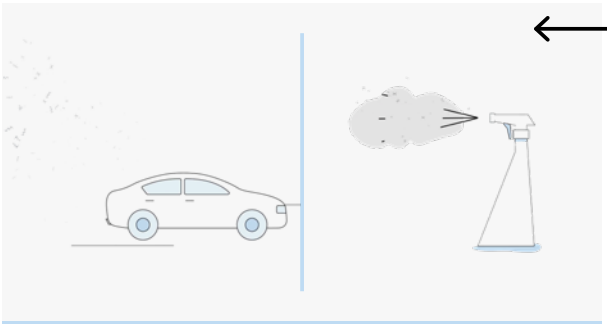
Why Indoor Air Quality?

We spend 90% of our time indoors in closed spaces such as schools, buildings, offices, etc.



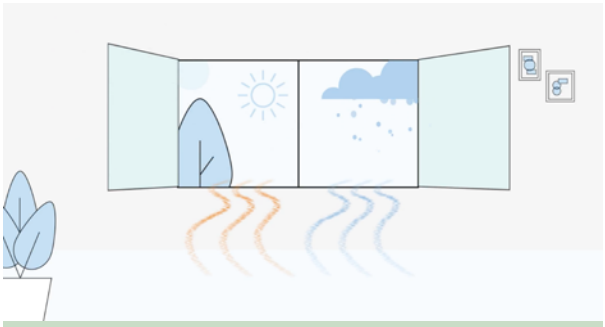
But did you know that the indoor air can be up to **2-5 times worse** than the air outside?

Due to growing urbanization and high insulation of the buildings, pollutants get trapped inside leading to poor indoor air quality causing moisture increase and other health issues.



Sources of indoor air pollution are more common than we think. VOCs released from cleaning products, furniture, or even from new building materials can linger inside. Pollution from the outside released from vehicles, etc. can also be a potential source of indoor air pollution.

Poor IAQ is linked to respiratory short-term issues like allergies, asthma, and also in the long term to diseases such as respiratory infections, and cardiovascular disease. The risk is greatest for the elderly and young children who tend to spend more time indoors.



Opening windows could also lead to ingress of pollutants and substantial energy losses. Moreover, many situations linked to security, acoustic, outside pollution, etc… do not allow to make use of them.

The solution? **A combination of various components** such as ventilation, air processing, filtration & air purification can contribute to better indoor air quality.

Watch our indoor air quality video on YouTube **to learn more** about sources and consequences of poor air quality.

5 components for ensuring good indoor air quality

Air processing

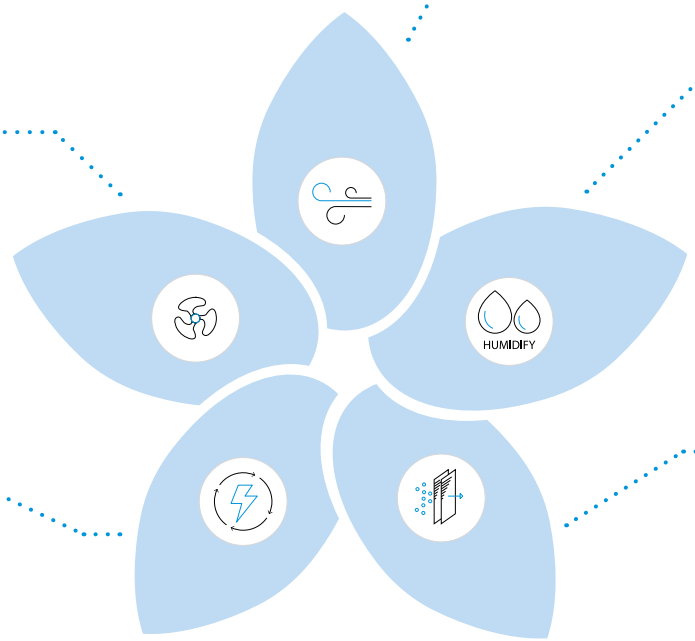
Delivers the required conditioned air to **optimise the energy efficiency** of indoor HVAC equipment

Humidification

Ensures the **desired moisture level** in the conditioned space

Ventilation

Ensures the provision of fresh and clean outdoor air and **removes contaminated stale air**



Energy & recovery

Delivers **energy savings** by transferring heat and moisture between airflows, thus helping to condition the supply air to the required indoor temperature and humidity levels

Filtration & purification

Ensures **clean and healthy air** by filtering out pollen, dust, odours and other contaminants that are harmful to our health

Ventilation

Ventilation systems ensure **optimal climate conditions** by providing a **fresh, healthy and comfortable** environment for buildings of all sizes and applications. When a room is enclosed, air cannot easily enter or leave, allowing airborne pollutants to remain and accumulate within the space. This concentration could have an impact on the health of the room's occupants. **Ventilation is essential for diluting and removing these pollutants.**

A **well-maintained ventilation system** and **adequate air-exchange rate** have been demonstrated to be an effective solution to **protect people** from contaminants, including viruses.

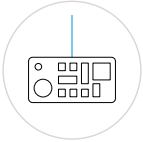
Widest range of DX integrated ventilation on the market

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

Unique portfolio within DX manufacturers that can easily be integrated into any project

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

Energy Recovery Ventilation

Our energy recovery units **recover sensible energy** (Compact L/ Compact T) or **total (sensible + latent) energy** (VAM/EKVDX/VKM-GBM), 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.

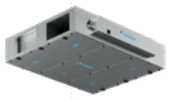
Products overview

150 | 500 | 1,000 | 2,000 | 2,500 | 3,000 | 3,500 | 4,000 | 15,000 | 25,000 | 140,000 [m³/h]

Decentralised systems

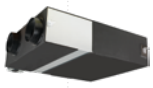
- Superior IAQ level: up to three stage filtration on supply side
- DX coil integration for a unique Daikin fresh air package
- Plug&Play control solution, for a quick and easy start-up

Compact T 200 m³/h up to 4,200 m³/h



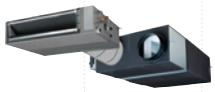
- High efficiency counterflow heat exchanger
- VDI 6022 Compliant
- Compact design for false ceiling installation

Compact L 150 m³/h up to 4,000 m³/h



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

VAM-FC9 / VAM-J 150 m³/h up to 2,000 m³/h



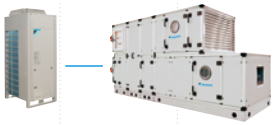
- DX coil for post-treatment of fresh air
- Split up concept increases application flexibility
- Integrates both in R-32 and R-410A VRV systems

VAM + DX coil 500 m³/h up to 2,000 m³/h

- With DX coil for post-treated fresh air
- Increased comfort
- Humidifier option

VKM-GBM 500 m³/h up to 1,000 m³/h

Centralised systems



- Fully customizable
- Daikin Digital Plug & Play Control as option
- With DX or water coil option

D-AHU PROFESSIONAL 750 m³/h up to 144,000 m³/h

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

D-AHU Modular P 500 m³/h up to 25,000 m³/h

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

D-AHU Modular R 500 m³/h up to 25,000 m³/h

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

Market leading controls & connectivity

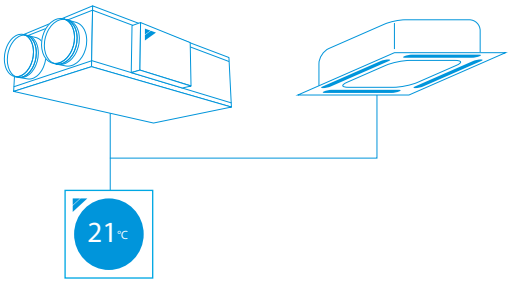
- Interlock of ventilation and air conditioning system
  - Control ERV/HRV and air conditioning from the same controller
  - Aligns the operation mode between the systems to save energy
- Easy integration in the total solution
  - Online control and monitoring via the Daikin Cloud Service
  - Full portfolio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

Madoka

DAIKIN CLOUD PLUS

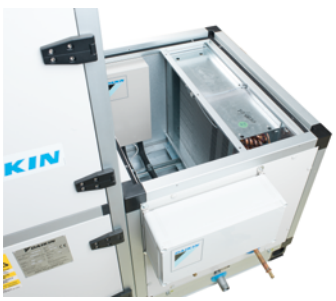
DESIGN AWARD 2018

reddot award 2018 winner



Unique installation benefits

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



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%** energy recovery

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 extract air to warm up and humidify fresh air to comfortable levels (VAM, VKM)

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:

Please refer to our dedicate page on Indoor Air Quality for more information.

Cognitive function scores …

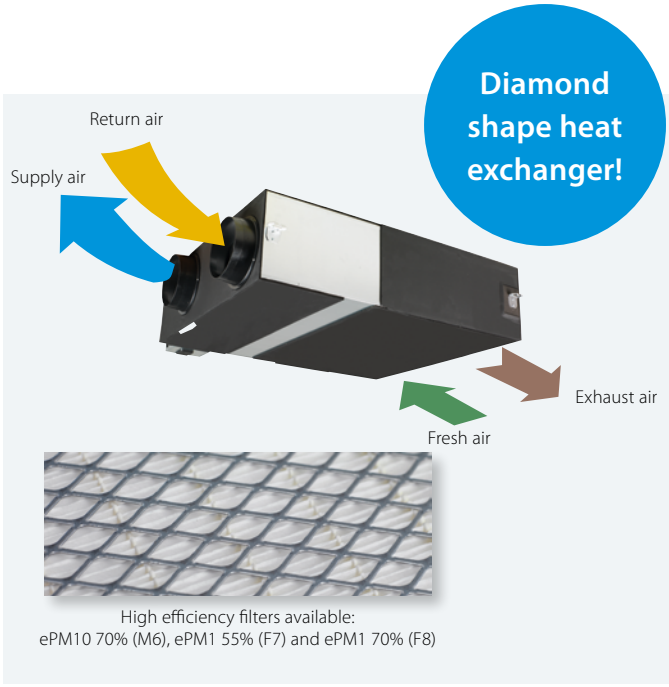
+ 61% in green building conditions

+ 101% in enhanced green building conditions

Energy recovery ventilation

Ventilation with heat recovery as standard

- 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 (J-series)
- 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 create under/over-pressure conditions in the served room
- Total solution for fresh air with Daikin supply of both VAM / VKM and electrical heaters
- VAM-J8 series are connectable to EKVDX DX coil for air processing
- Possibility of CO_2 concentration when combining VAM-J8 with optional BRYMA CO_2 sensor and Madoka remote controller (with or without EKVDX)



High efficiency filters available:
ePM10 70% (M6), ePM1 55% (F7) and ePM1 70% (F8)

ErP COMPLIANT

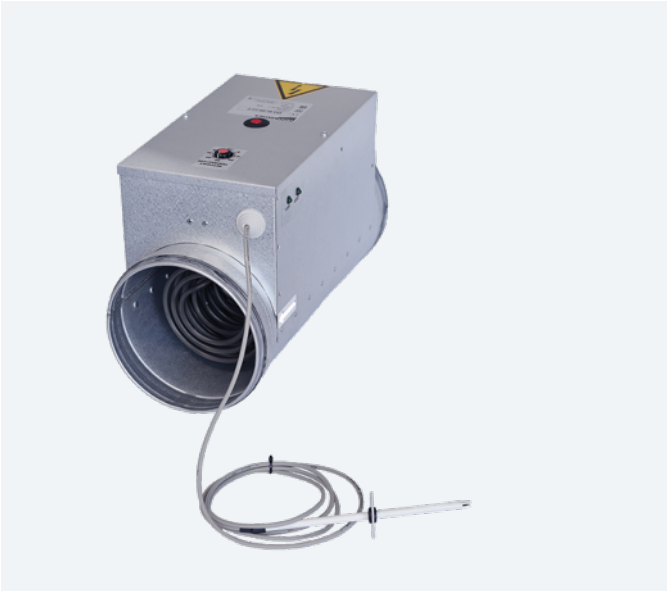
VAM-FC9 VAM-J8

Ventilation				VAM/VAM	150FC9	250FC9	350J8	500J8	650J8	800J8	1000J8	1500J8	2000J8
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 | (5) At reference flow rate in accordance with commission regulation (EU) No 1254/2014

Electrical heater for VAM

- 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



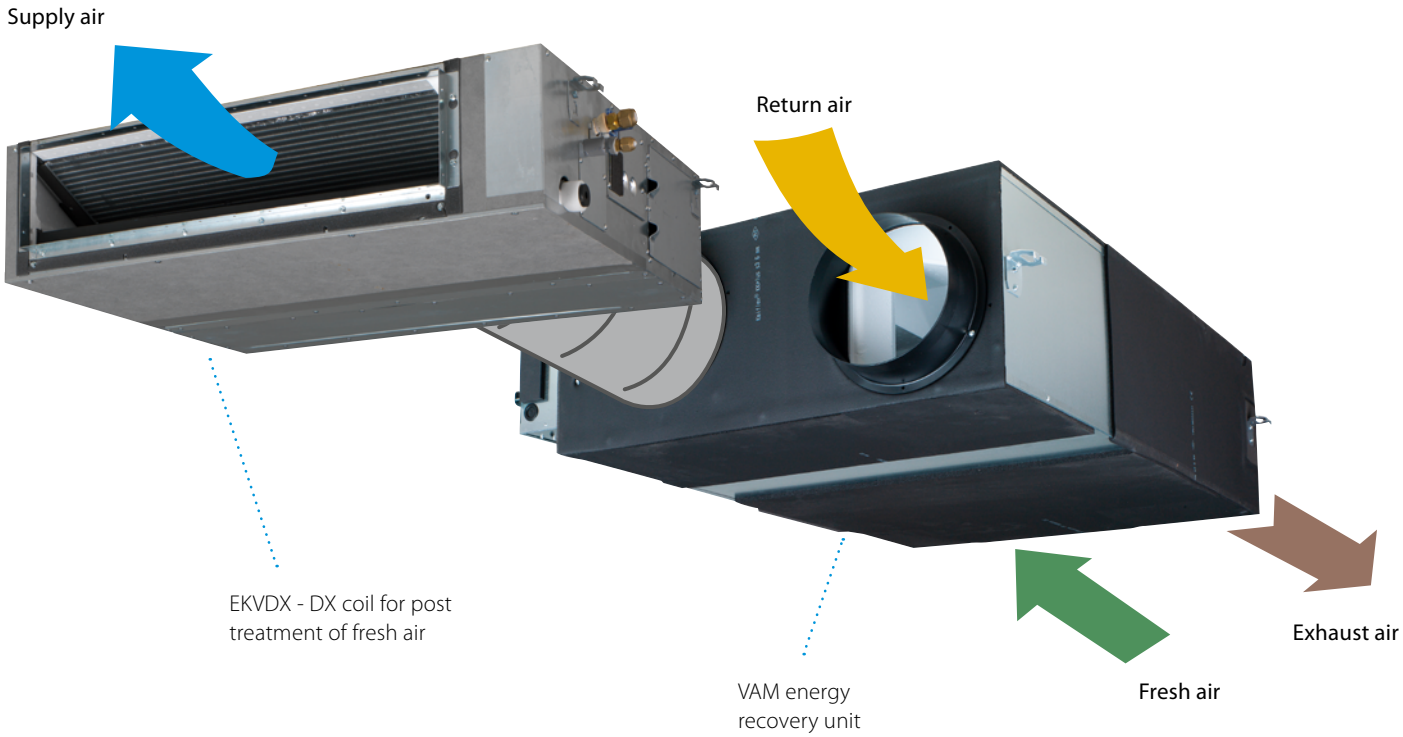
GSIEKA

	GSIEKA	10009	15018	20024	25030	35530[1]
Capacity	kW	0.9	1.8	2.4	3.0	3.0
Duct diameter	mm	100	150	200	250	355
Connectable VAM		VAM150FC9	VAM250FC9	VAM350,500J8	VAM650J8, VAM800J8, VAM1000J8	VAM1500J8, VAM2000J8

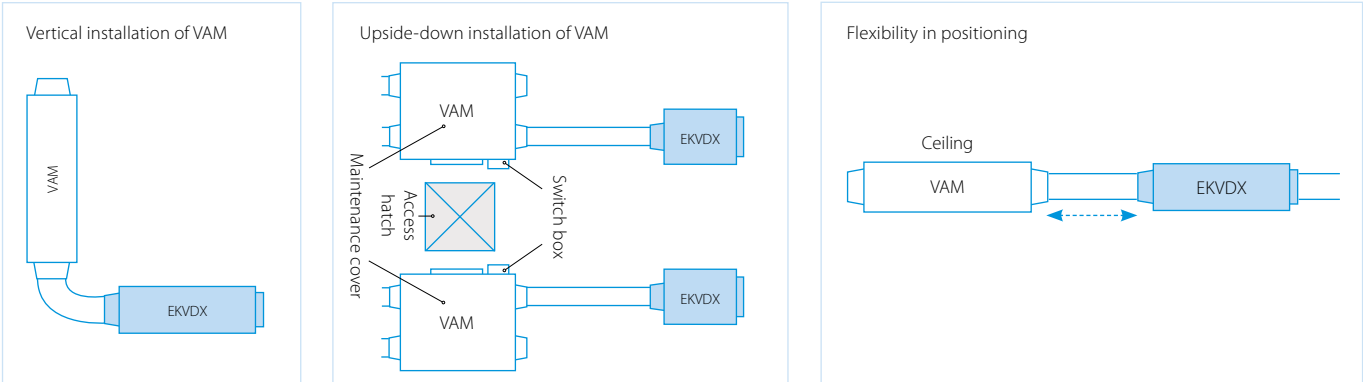
				GSIEKA10009	GSIEKA15018	GSIEKA20024	GSIEKA25030	GSIEKA35530
Dimensions		Height	mm	171	221	271	321	426
		Depth	mm	100	150	200	250	355
		Width	mm	370	370	370	370	373
Minimum air velocity / airflow			m/s	1.5				
			m^3/h	45	100	170	265	535
Power supply				1~230 VAC/50Hz				
Nominal current			A	4.1	8.2	10.9	13.1	13.1
Heating power			kW	0.9	1.8	2.4	3.0	3.0
Connection duct diameter			mm	100	150	200	250	355
Operation range		Min.	°C	-40°C				
		Max.	°C	40°C				
		Rel. Humidity	%	90%				
Temperature sensor				10 kΩ at +25°C / TJ-K10K				
Temperature sensor range				- 30°C to 105°C				
Temperature set point range				- 10°C to 50°C				
LED indicators	LED 1	flashing every 5 seconds		heater is starting up				
		flashing every second		air flow detected, heating allowed				
		OFF		no power supply or no flow				
		ON		problem with duct temperature sensor, set point potentiometer or PTC airflow sensor				
	LED 2	OFF		heater is not operating				
		ON		heater is operating				
Ambient temperature adjacent to controller				0°C to +50°C				
Auto high temperature cut-out				50°C				
Manual reset high temperature cut-out				100°C				

EKVDX-A

DX coil for post treatment of fresh air



- Creates a high quality indoor environment by pre conditioning of incoming fresh air
- Maximum installation flexibility thanks to separate DX coil
- Different installation possibilities to suit the application

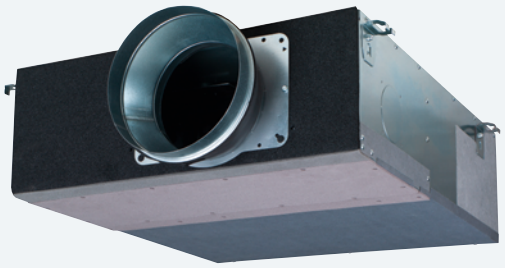


- Fresh air flows from 500 up to 2,000 m^3/h
- High ESP up to 150 Pa
- Can be integrated in both R-32/R-410A VRV systems
- Replaces VKM-GB range, delivering increased capacity range and reduced sound levels

DX coil for air processing

Post heating or cooling of fresh air to lower the load on the air conditioning system

- Creates a high quality indoor environment by pre conditioning of incoming fresh air
- Maximum installation flexibility thanks to separate DX coil
- Wide range of units covering fresh air flows of 500 up to 2,000 m^3/h
- High ESP up to 150 Pa
- Can be integrated in both R-32/R-410A VRV systems



EKVDX50A

EKVDX-A

					EKVDX32A	EKVDX50A	EKVDX80A	EKVDX100A
Power input - 50Hz	Cooling	Nom.		kW	0.035	0.035	0.035	0.035
	Heating	Nom.		kW	0.035	0.035	0.035	0.035
Casing	Material				Galvanised steel plate			
Insulation material					Opcell and anti-sweat material			
Dimensions	Unit	Height		mm	250			
		Width		mm	550	700	1,000	1,400
		Depth		mm	809			
Weight	Unit			kg	19	23.4	30.1	37.7
Operation range	Around unit			°CDB	10°C~40°CDB, 80% RH or less			
	On coil temperature	Cooling	Max.	°CDB	35			
		Heating	Min.	°CDB	11			
Piping connections	Liquid	OD		mm	6.35			
	Gas	OD		mm	12.7			
	Drain				VP20 (I.D. 20/O.D. 26), drain height 625 mm			
Refrigerant	Type				R410A/R32			
	GWP				2,087.5/675			
Heat exchange system					Direct expansion			
Power supply	Phase				single phase			
	Frequency			Hz	50/60			
	Voltage			V	220-240/220			

Possible Combination VAMJ8 + EKDVX					**EKVDX32A + VAM500J8**	**EKVDX50A + VAM650J8**	**EKVDX50A + VAM800J8**	**EKVDX80A + VAM1000J8**	**EKVDX100A + VAM1500J8**	**EKVDX100A + VAM2000J8**
Cooling capacity	Total (VAM+DX coil)		At ultra high fan speed	kW	5.1	7.1	8.6	9.3	15.4	18.4
	DX coil		At ultra high fan speed	kW	3.4	4.8	5.5	5.7	9.5	11.2
			At high fan speed	kW	2.7	4.1	4.4	4.5	8.8	9.2
Heating capacity	Total (VAM+DX coil)		At ultra high fan speed	kW	6.7	8.5	11	11.9	18.7	22.9
	DX coil		At ultra high fan speed	kW	4.2	5.1	6.9	7	10.8	13
			At high fan speed	kW	3.6	4.6	5.8	6.3	9.6	11.7
Fan	Air flow rate - 50Hz	Heat exchange mode	Ultra high	m^3/h	500	650	800	1,000	1,500	2,000
			High	m^3/h	425	550	680	850	1,275	1,700
		Bypass mode	Ultra high	m^3/h	500	650	800	1,000	1,500	2,000
			High	m^3/h	425	550	680	850	1,275	1,700
	External static pressure - 50Hz	Maximum		Pa	81.9	73.0	133.7	106.0	153.6	92.1
		Ultra high		Pa	51.9	43.0	23.7	26.0	43.6	12.1
		High		Pa	39.0	33.9	19.4	21.4	35.1	11.9
Sound pressure level - 50Hz	Cooling		Ultra high	dBA	32	34	35.5	40.5	38.5	43.5
			High	dBA	30.5	32	34	38	37	40
	Heating		Ultra high	dBA	32.5	34.5	36	40.5	39	44
			High	dBA	31.5	32	34	38.5	37	40.5
Current	Maximum fuse amps (MFA)			A	6	6	6	6	16	16

The heat reclaim ventilation unit and the EKVDX indoor unit MUST share the same electrical safety devices and power supply

Energy recovery ventilation, humidification and air processing

VKM80-100GBM

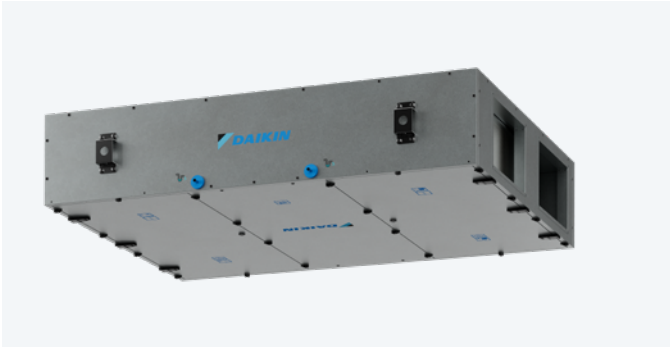
Post heating or cooling of fresh air for lower load on the air conditioning system

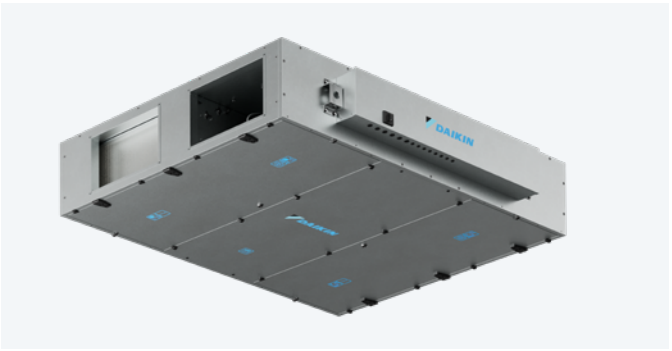
- Energy saving ventilation using indoor heating, cooling and moisture recovery
- Creates a high quality indoor environment by pre conditioning of incoming fresh air
- Humidification of the fresh air results in comfortable indoor humidity level, even during heating
- Free cooling possible when outdoor 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

VKM-GBM

Ventilation				VKM-GBM	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
	Bypass 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
Fresh air conditioning load	Cooling			kW	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
Temperature exchange efficiency - 50Hz	Ultra high/High/Low			%	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
	Heating	Ultra high/High/Low		%	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	
Weight	Unit			kg	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
	Bypass mode	Ultra high/High/Low		m^3/h	500/500/440	750/750/640	950/950/820
Fan-External static pressure - 50Hz	Ultra high/High/Low			Pa	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	38/36/34	40/37.5/35.5	40/38/35.5
	Bypass mode	Ultra high/High/Low		dBA	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		
Refrigerant	Control				Electronic expansion valve		
	Type				R-410A		
	GWP				2,087.5		
Connection duct diameter				mm	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		

Compact L Smart





Premium efficiency heat recovery unit

Highlights
- Connects Plug&Play into the Sky Air and VRV control network
- Easy installation and commissioning
- Internal pre-filter stage (up to ePM1 50% (F7) + ePM1 80% (F9)) making the unit reach highest indoor air quality requirements.
- Wide air flow coverage from 150m³/h to 4,000m³/h
- Exceeding ErP 2018 requirements
- Best choice when compactness is needed (only 280 mm height up to 550 m³/h)
- 50 mm double skin panel for a maximum sound and thermal insulation

EC centrifugal fan
- Maximum ESP available 600 Pa (depending on model sizes and airflow)
- Inverter driven with IE4 premium efficiency motor
- High-efficient blade profiling
- Reduced energy consumption
- Optimized SFP (Specific Fan Power) for an efficient unit operation

Heat exchanger
- Premium quality counter flow plate heat exchanger
- Up to 91% of the thermal energy recovered
- High grade aluminum allowing optimum corrosion protection

For integration with Applied systems,
please refer to the Compact L, in the AHU chapter

D-AHU Compact L Smart			ALB02*C* (1)	ALB03*C*	ALB04*C*	ALB05*C*	ALB06*C*	ALB07*C*
Airflow	Nominal	m³/h	300	600	1,200	1,500	2,500	3,000
Electrical supply	Phase	ph	1					
	Frequency	Hz	50/60					
	Voltage	V	220/240					
	Ampere	A	16					
Main unit dimensions	Width	mm	920	1,100	1,600		2,000	
	Height	mm	280	350	415		500	
	Length	mm	1,660	1,800	2,000			
Weight unit	Net weight	kg	115	170	255	265	310	320
	Gross weight	kg	125	180	270	280	325	335
Duct dimensions		mm	250	400	500	500	700	700
		mm	150	200	300	300	400	400

(1) ALB02*C* refers to all configuration available for Compact L size 02 (Smart or Pro version and right or left handing)

Please refer to Databook or Astra selection software for more details.

Electrical heater for Compact L Smart

- Total solution for fresh air with Daikin supply of both Compact L Smart and electrical heaters
- Increase 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
- Heater only consumes what is required to pre-heat to the desired minimum fresh air temperature; thus saving energy

ALD-HEFB

Electrical heater for Compact L Smart (ALD)	02HEFB	03HEFB	05HEFB	07HEFB
Capacity kW	1.5	3	7.5	15
Connectable Compact L Smart size	02	03	04, 05	06, 07
Supply voltage	230V,1ph		400V,3ph	
Output current (maximum) (A)	6.6	13.1	10.9	21.7
Temperature sensor	15k ohms at -20 °C 10k ohms at +10 °C	16k ohms at -20 °C 10k ohms at +10 °C	17k ohms at -20 °C 10k ohms at +10 °C	18k ohms at -20 °C 10k ohms at +10 °C
Temperature control range	- 20 °C to 10 °C			
Control fuse	Mini Circuit Breaker 6 A			
LED indicators	Yellow = Airflow fault Red = Heat ON			
Mounting holes	Depends on duct size			
Maximum ambient adjacent to terminal box	30°C (during operation)			
Auto high temperature cutout	75°C Pre-set			
Manual reset high temperature cutout	120°C Pre-set			
Width (mm)	470	620	720	920
Depth (mm)	370	370	370	370
Height (mm)	193	243	343	443

Compact T Smart

Top connected Air Handling Unit

Highlights

- Duct connections are located at the top, reducing the unit's footprint
- Low power consumption and low SFP (Specific Fan Power) for a very efficient unit operation
- Superior IAQ level: up to three stage filtration on supply side (more than the 90% of PM1 is removed from outdoor air)
- Plug&Play control solution, for a quick and easy start-up
- Very compact unit, starting from 550 mm width, for an air flow up to 1,100 m^3/h

ATB-S

IAQ matters

An excellent IAQ improves people's performance and well-being, and decreases risk factors for various diseases. Compact T satisfies the ventilation and filtration needs of the indoor environment, guaranteeing an outstanding level of IAQ.

The future of ventilation

The Compact T, with its unique features, represents the latest product developed by Daikin for fresh air treatment and not only. Thanks to its optimized design, it can be easily transported and installed into new projects or existing buildings.

D-AHU Compact T Smart			ATB03*B* (1)	ATB04*B*	ATB05*B*	ATB06*B*	ATB07*B*
Airflow	Nominal	m^3/h	800	1,650	2,300	2,700	3,900
Electrical supply	Phase	ph	1				
	Frequency	Hz	50				
	Voltage	V	230				
	Max internal fuse	A	16				
Main unit dimensions	Width	mm	550		790		890
	Height	mm	1,600		1,900	1,850	2,050
	Length (2)	mm	1,580	1,650	2,170	2,620	2,950
Duct dimensions		mm	250	315	355	400	500
Weight unit	Net weight	kg	185	230	370	475	580
	Gross weight	kg	195	240	390	505	610

(1) ATB03*B* refers to all configuration available for Compact T size 03 (Smart or Pro version and right or left handing)
(2) Size 05 is provided in two sections while Size 06 and 07 are provided in three sections.

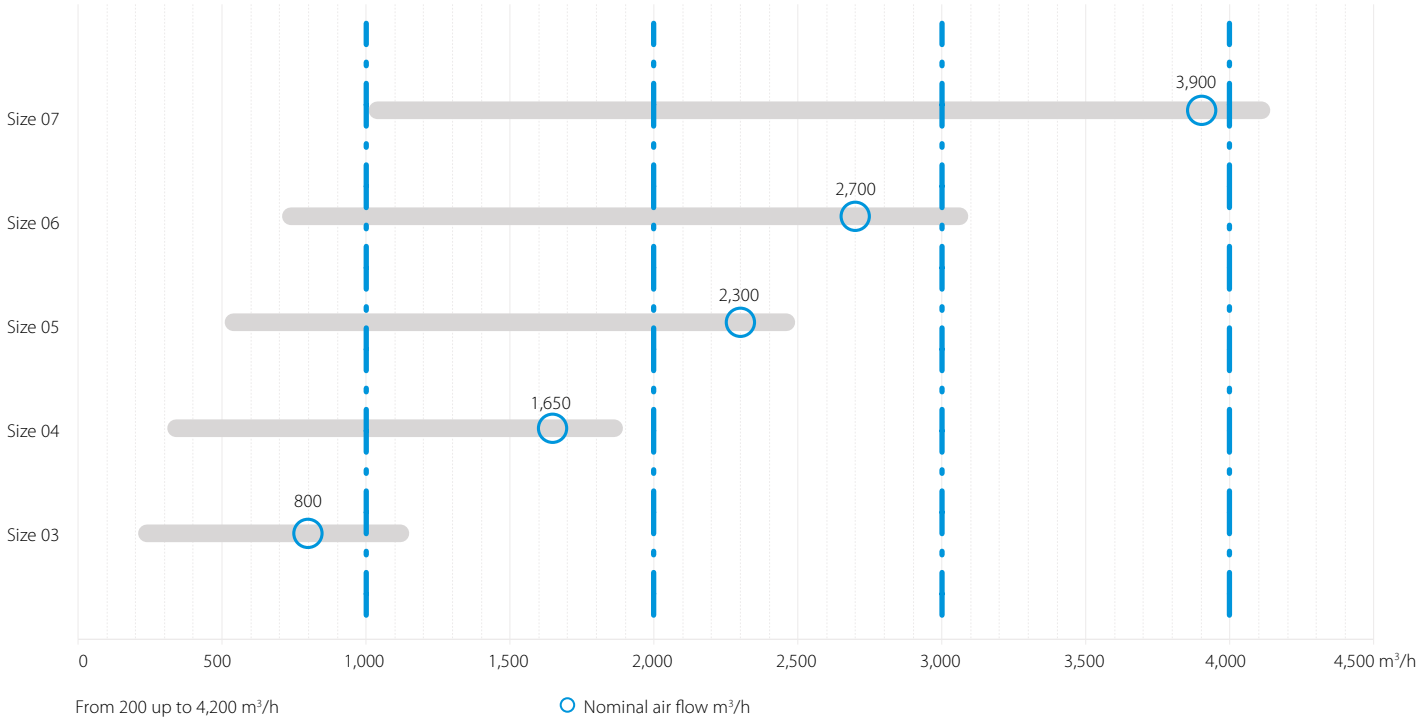
Please refer to Databook or Astra selection software for more details.

Air flow range

Compact T is available in 5 sizes covering a wide range of applications such as hotels, offices, schools, gyms and light commercial buildings.

Sectioning

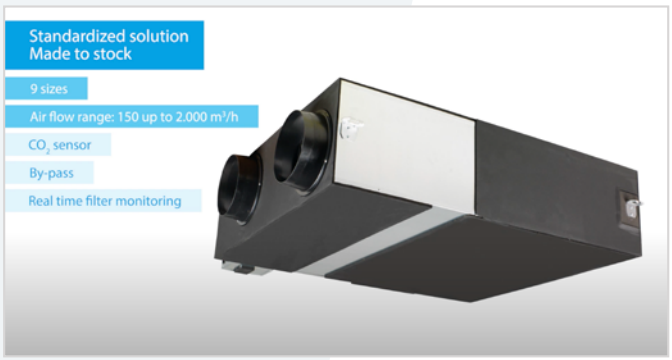
To ensure an easy and quick installation Compact T size 05 will be provided in two sections, while size 06 and 07 in three sections to pass smoothly through standard doors[1].



1. Please refer to technical data table for more details

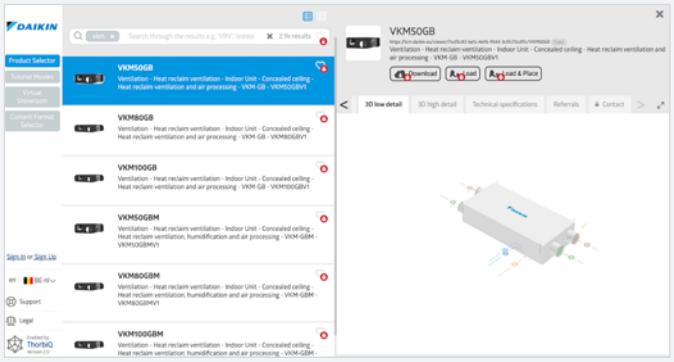
Marketing tools

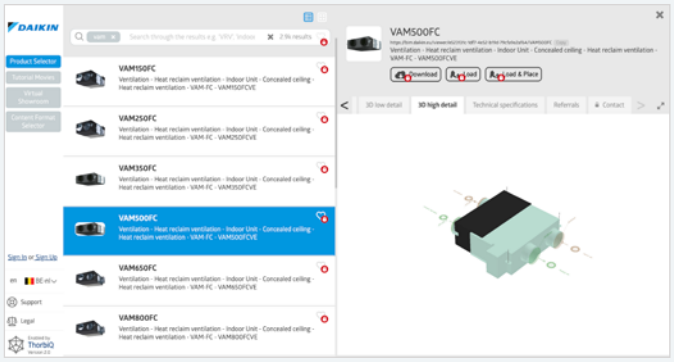
- Watch the explanation of VAM range, its USPs from our Indoor Air Quality Seminar **www.youtube.com/daikineurope**
- Watch the Compact T promotional video: www.youtube.com/daikineurope
- Download our brochure on Commercial Ventilation from **my.daikin.eu**
- Get access to our selection tool **bim.daikin.eu** to find your ventilation unit in a few click.
- Consult the "Argue Card" document to support in promoting
- the Compact L and Compact T range (available on request)



BIM models

- Get the VAM, Compact L and T BIM tools on **bim.daikin.eu**





Benefits for the installer

Plug and play design

- Pre-programmed and factory-tested controls for an easier and fast commissioning
- Lightweight, low height and small footprint units
- Easy access for servicing

Benefits for the consultant

Quick selection tool

- In-house developed web software with improved user interface and preset parameters ensure that you can always find the optimum and most energy efficient product for your application
- Interconnection with other product groups (e.g. automatic introduction of ventilation selection into a VRV Web Xpress selection)
- Extremely flexible design

BIM models

- BIM models are available and can be downloaded with just a few clicks

Benefits for the end user

Best comfort

- Wide range of units to control fresh air and humidity
- Wide range of optional filters to suit the application available up to ePM1 80% (F9)
- Special paper heat exchanger recovers heat and moisture from extract air to warm up and humidify fresh air to comfortable levels (VAM, VKM)

Easy control and visualization

- Wide and easy functionality with the use of Madoka remote controllers
- Possibility to visualize the CO_2 concentration (with combination of VAM-J8 unit/BRYMA sensor/Madoka remote controller)

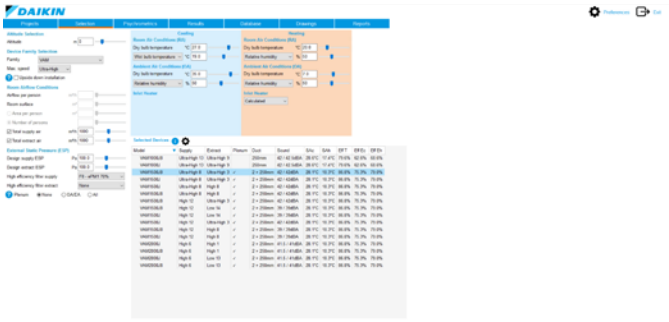
Supporting tools, software and apps

Web based selection tools dedicated to the Daikin ventilation portfolio

Ventilation Web Xpress

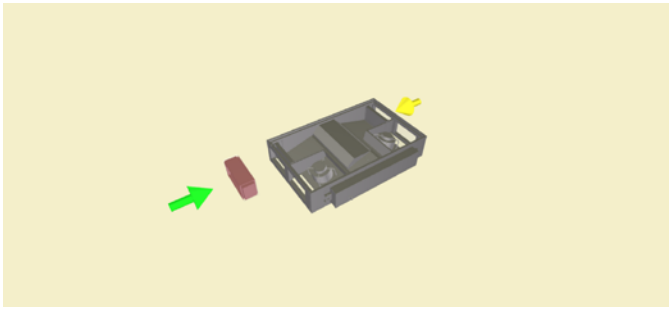
Selection tool for ventilation devices (VAM (+EKVDX) and VKM). The selection is based on given supply/extract airflows (including fresh up and given ESP of supply/extract ducting:

- Easy calculation of fresh air per person or per area
- Visualisation of psychrometric chart
- Visualisation of selected configuration
- Required field settings mentioned in the report



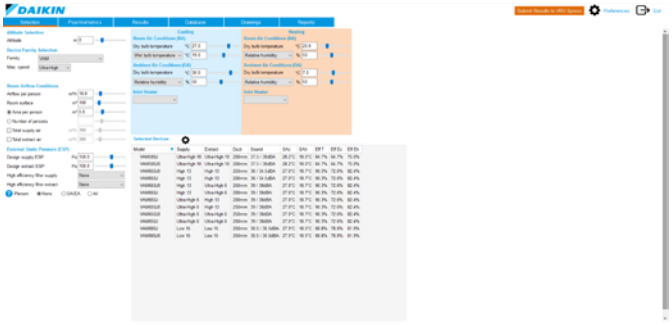
ASTRA Web

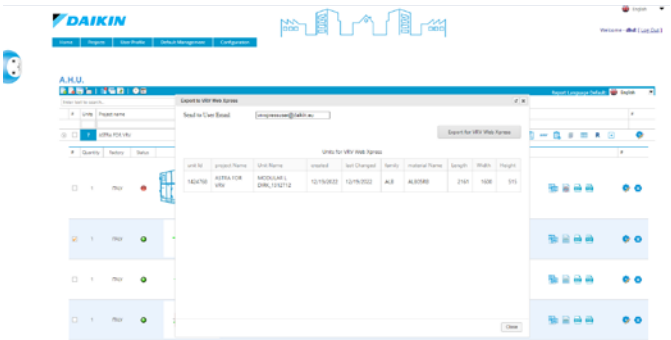
- Quick Compact L/T selection that will save you precious time, drastically reducing selection time through the ASTRA software interface.
- Very competitive solution available within the Wizard thanks to pre-uploaded parameters.
- High selection quality, thanks to the intelligence embedded within the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

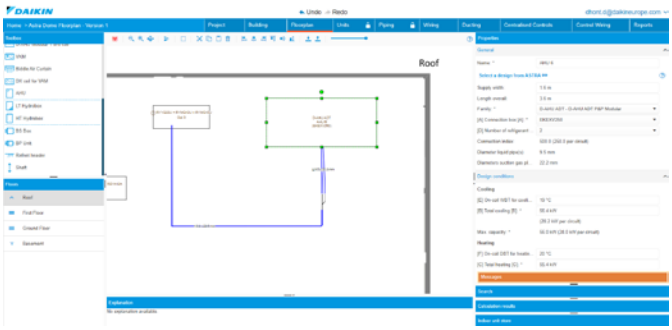


VRV Xpress integrates seamlessly with our ventilation selection software

- The ventilation selection meant for a VRV project can be initiated directly from VRV Web Xpress.
- The selected ventilation products -either on Ventilation Web Xpress or ASTRA- can be introduced into the VRV selection on VRV Web Xpress.
- Integration of ventilation selection into 2D Floorplan.







https://my.daikin.eu/denv/en_US/home/sales/ventilation-software.html

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 ERA

Certifications

- Eurovent certified performances
- Exceeding 2018 ErP – ECODESIGN requirements
- Certified according to the Hygiene Directive VDI 6022 (Professional ranges)
- Certified according to the Hygiene Directive DIN 1946 (Professional range)
- RLT certified performances

The unique quality of Daikin AHU is accomplished by:

Panels

- Inner and outer panels available in different materials (pre-painted, aluminium, stainless steel, etc.) to meet all project specifications

Gasket

- Liquid gasket technology drastically reduces unit air leakage

Frame

- All anodized aluminium which has the highest corrosion resistance compared to natural aluminium
- Unique Daikin thermal break (35 mm or 27 mm thermal break). Polyamide bars design to enhance thermal break unit performances
- Distinctive Section to section thermal break profile to ensure thermal break design on the whole unit
- Rounded profile for increased ease of cleaning

IAQ

- Flush internal surface and rounded corner flush surface to avoid the retention of dirt and to be easily cleanable
- Wide filtration possibility to reduce pollution

Plug & Play Controls

- Pre-commissioned and Factory-tested control for quicker on site commissioning
- Sole manufacturer to provide a complete AHU DX solution from a single manufacturer available for connection of AHU to VRV or ERA (everything factory-mounted)

D-AHU MODULAR R

Pre configured unit with side connection and rotary heat exchanger (sensible or sorption)

D-AHU MODULAR P

Pre configured unit with side connection and aluminium counter flow plate heat exchanger

D-AHU PROFESSIONAL

Fully customize solution to meet all projects demand

For more information on Modular R/P and Professional please refer to the Air Handling Unit section

Why use DX outdoor units with Air Handling Units?

High comfort levels

- Rapid response of supply air temperature to changing loads, results in a steady indoor temperature
- VRV offers the ultimate comfort thanks to continuous heating, also during defrost

Low carbon footprint and operating costs

- DX heat pumps are highly efficient inverter units using a lower GWP refrigerant
- By integrating a VRV heat recovery system, excess heat from rooms in cooling can be reused to heat up incoming fresh air

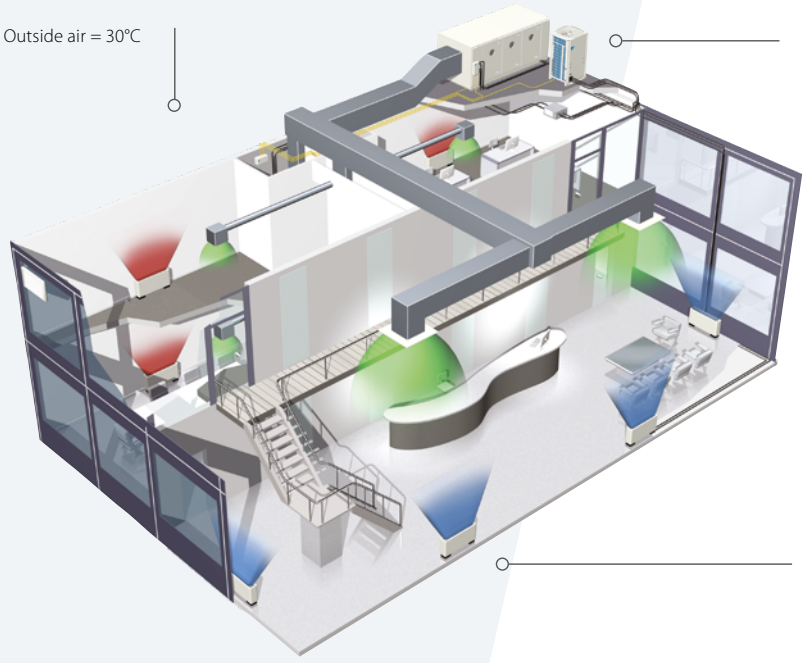
Easy design, all components integrated

- A DX system is an all-in-one system, no boilers, tanks or pumps are needed reducing the total investment cost

One-stop shop, Daikin's fresh air package

- A plug & play package with a Daikin DX outdoor unit and Daikin Air Handling Unit
- One point of contact for the design, installation and commissioning, streamlining the process

Total solution operation example



Daikin Air Handling Unit kits for connection to DX outdoor units

R-32

NEW Expansion valve kits

- **3 new capacities** (300, 350, 400) offer a complete range of expansion valve kits **from 5 to 69.3kW**
- **Improved flexibility** thanks to combination ratio from 65% up to 110%
- Unified range connectable both to **R-32 and R-410A** systems
- Can be used in the most **extreme outdoor conditions**, down to -20°C
- F**ully compliant to IEC60335-2-40**, thanks to Shîrudo Technology

Extended operation range
-20°CWB > 52°CDB

NEW Control box

- Complete offer of **5 control possibilities**
- Daikin **integrated** or **third-party controller**
- Control of return air or fresh air supply temperature
- All **control methods** unified in **one box**
- Hinged door for **easy servicing**

Expansion valve set (EKEXVA*)

- Controls the refrigerant flow in the AHU DX coil
- Fully brazed and wired in case of a Daikin AHU

Control box (EKEACB)

- Controls the expansion valve set and outdoor unit(s) capacity
- Mounted and wired in case of a Daikin AHU

Specifications

EKEXVA – Expansion valve kit

Ventilation	EKEXVA				50	63	80	100	120	140	200	250	300	350	400	450	500
Dimensions	Unit			mm	404x217x80.5												
Weight	Unit			kg	2.9												
Operation range	On coil temperature	Heating	Min.	°CDB	10.0												
		Cooling	Max.	°CDB	35.0												
Ambient installation conditions	Min.			°CDB	-20.0												
	Max			°CDB	52.0												
Sound pressure level	Cooling	Nom.		dBA	36.5	37.5	38.6	39.5	40.5	41.1	42.5	43.5	44.3	45.1	45.6	46.1	46.5
	Nom.			dBA	24.8	25.8	26.8	27.8	28.8	29.4	30.8	31.8	32.5	33.3	33.8	34.3	34.8
Refrigerant	Type / GWP				R-32 / 675 R-410A / 2,087.5												
Piping connections	Liquid	Type		mm	Braze connection (only liquid line connected)												
		OD		mm	6.35			9.52					12.7				

EKEACB – Control box

			EKEACB
Layout			Pair | Multi | Mix
Dimensions	Unit	mm	300x400x150
Weight	Unit	kg	5.1
Ambient installation conditions	Min	°CDB	-20
	Max	°CDB	52
Power supply	Phase		1~
	Frequency	Hz	50/60
	Voltage	V	220-240/220

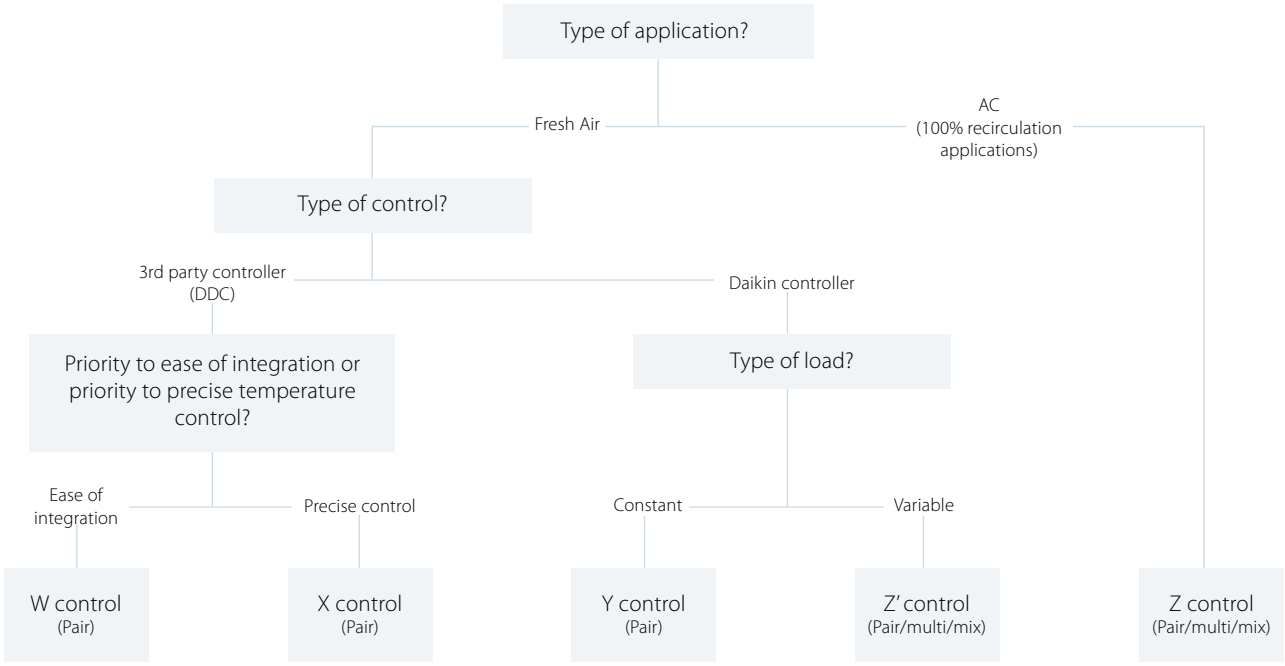
Click for more information on **EKEACB** or **EKEXVA** outdoor units

Air Handling Unit kits

Control possibilities

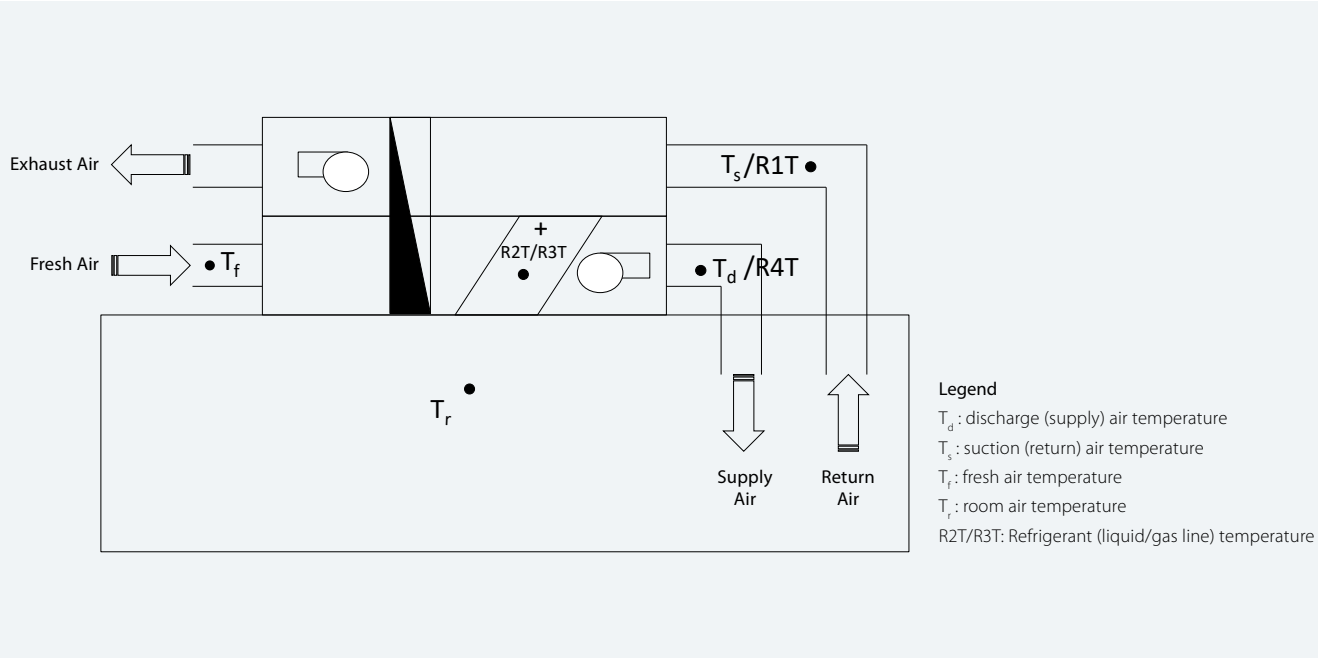
Every application is different. Is there a constant load or not, how to control your temperature and which controls are available? **With our complete offering of 5 control possibilities**, anything is possible.

Flow chart to select your control type



Control type benefits	Sensor Used	Controller
W control – control of supply or return air temperature ▪ **Responds to load variation** (capacity is changed as a function of measured temperature, but slower than X- control) ▪ **Air temperature control** ▪ **Easy to integrate, as no additional programming** is needed for most standard AHU controllers	**Td, Ts/f or Tr** (field supplied)	External controller (DDC) using a proportional 0~10 V signal for capacity control **(5 steps)**
X control – control of supply or return air temperature ▪ **Fastest response to load variation** (capacity is immediately changed as a function of measured temperature) ▪ **Precise air temperature control** ▪ **Ideal for comfort sensitive applications.** This is also used **by default** in Daikin AHU controls	**Td, Ts/f or Tr** (field supplied)	External controller (DDC) using a proportional 0~10 V signal for capacity control **(Stepless)**
Y control – control of evaporating/condensing temperature ▪ **Cost effective and simple solution**, no additional DDC controller required ▪ **Fixed evaporating/condensing temperature**, no direct temperature control ▪ **Ideal for applications with a constant cooling/heating load**	**R2T/R3T** (Daikin supplied)	**3rd party thermostat** (Daikin controller for field settings)

Sensors used



Control type benefits	Sensor Used	Controller
Z' control – control of supply air temperature ▪ **Cost efficient and simple** solution, no additional DDC controller required ▪ You can **combine VRV indoor units and AHUs** in one system or connect **several AHUs to 1 outdoor unit** ▪ **Ideal for pre-conditioning of fresh air** via Td temperature control ▪ Less accurate room temperature control compared to X/W/Z control	R4T Daikin supplied)	Daikin controller (set point can be set via field setting)
Z control – return air temperature control ▪ Cost **efficient and simple solution**, no additional DDC controller required ▪ You **can combine VRV indoor units** and AHUs in one system or connect **several AHUs to 1 outdoor unit** ▪ **Ideal for AHU's that operate at 100% recirculation** like indoor units or if no particular supply temperature required ▪ **No supply temperature control**	R1T (Daikin supplied)	Daikin controller (set point can be set via remocon or via C1C2)

Air Handling Unit kits

Layout possibilities

With our wide capacity range and different control options, a variety of layout possibilities to match your application:

- **Pair layout:** one or more outdoor units combined with 1 air handling unit
- **Multi layout:** one outdoor unit combined with multiple air handling units
- **Mix layout:** one outdoor unit combined with an air handling unit AND indoor units

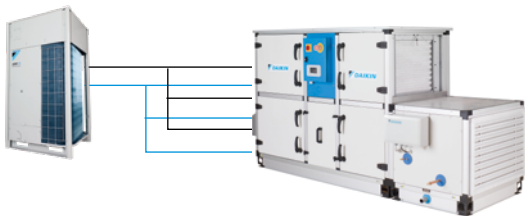
Pair layout

One ERA or VRV heat pump (system) connected to one AHU through one refrigerant circuit

- with W, X, Y, Z, Z' control
- not allowed for VRV H/R

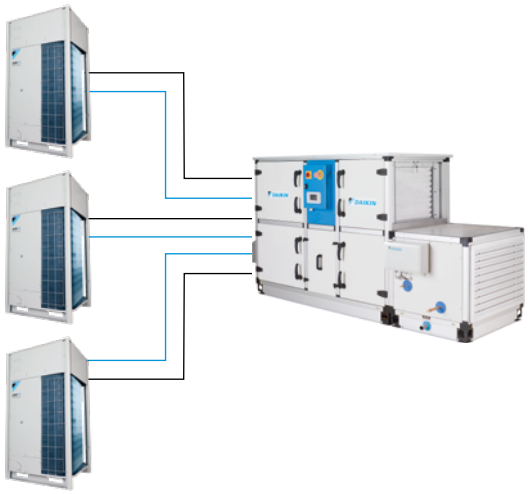
One VRV heat pump (system) connected to the interlaced coil of one AHU through several refrigerant circuits

- with W, X, Y control
- not allowed for VRV H/R and VRV-i



Several ERA or VRV heat pumps connected to the interlaced coil of one AHU through several refrigerant circuits

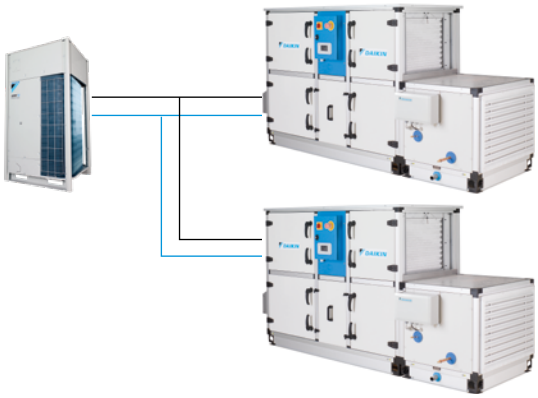
- with W, X, Y control
- not allowed for VRV H/R and VRV-i



Multi layout

One VRV heat pump connected to several AHUs

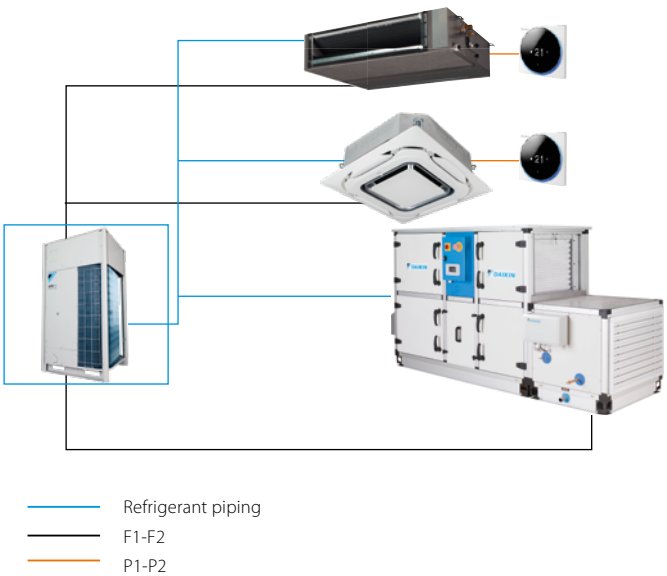
- with Z, Z' control and field supplied controls on AHU side.
- not allowed for VRV H/R
- no interlaced coil possible



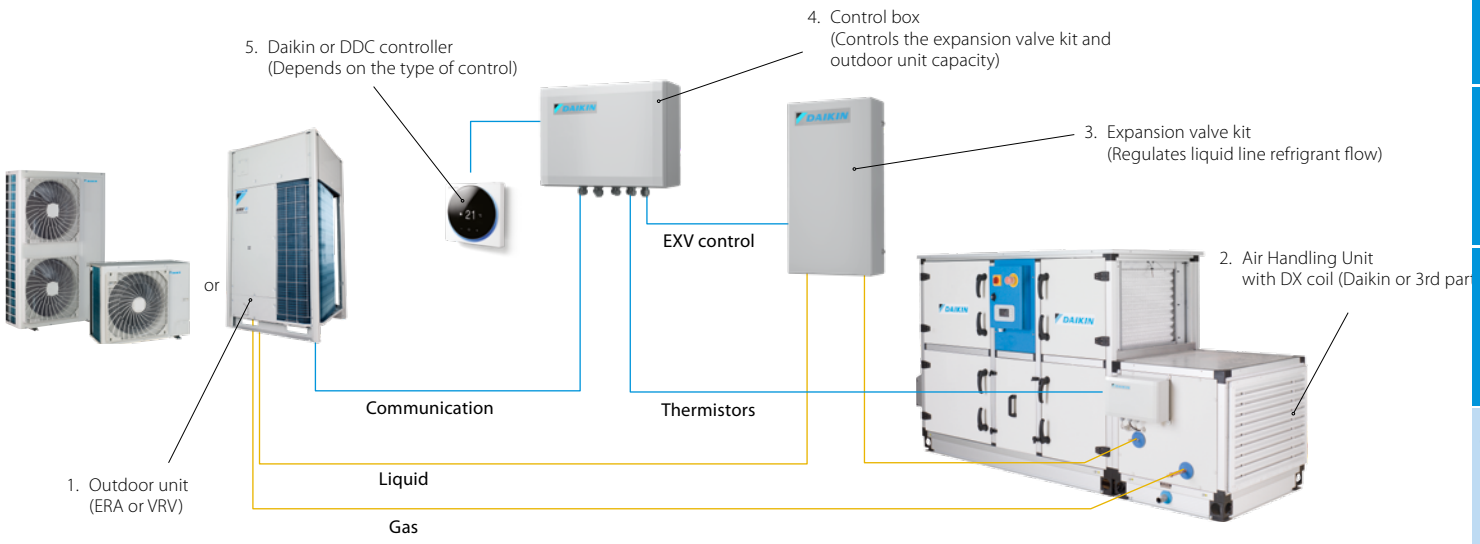
Mix layout

VRV indoor units and AHU(s) mixed in the same VRV heat pump or heat recovery system

- with Z, Z' control and field supplied controls on AHU side
- no interlaced coil possible
- hydrobox not possible



Main components with detailed piping and wiring principle



Detailed combination table

Range	Outdoor Unit	Control box	Expansion valve kits EKEXVA											
		EKEACBVE	50	63	80	100	125	140	200	250	300	350	400	450	500
ERA	ERA100A7V1B	P	-	P(a)	P(b)	P(b)	-	-	-	-	-	-	-		
	ERA125A7V1B	P	-	-	-	P(b)	P(b)	-	-	-	-	-	-		
	ERA140A7V1B	P	-	-	-	P(a)	P(b)	P(b)	-	-	-	-	-		
	ERA100A7Y1B	P	-	P(a)	P(b)	P(b)	-	-	-	-	-	-	-	-	-
	ERA125A7Y1B	P	-	-	-	P(b)	P(b)	-	-	-	-	-	-	-	-
	ERA140A7Y1B	P	-	-	-	P(a)	P(b)	P(b)	-	-	-	-	-	-	-
	ERA200AMYFB	P	-	-	-	-	-	P(b)	P(b)	-	-	-	-	-	-
	ERA250AMYFB	P	-	-	-	-	-	-	P(b)	P(b)	-	-	-	-	-
	ERA250AMYFB	P	-	-	-	-	-	-	P(a)	P(b)	P(b)	-	-	-	-

DX coil volume limitations when combined with ERA:
Please follow the AHU HEX volume limitations according to the table below:

Capacity class	Minimum heat exchanger volume [dm³]		Maximum heat exchanger volume [dm³]
	Pair combination (a)	Pair combination (b)	Pair combination
63	1.18	1.02	2.08
80	1.64	1.42	2.64
100	1.74	1.51	3.30
125	2.29	1.98	4.12
140	2.94	2.54	4.62
200	3.49	3.02	6.60
250	4.58	3.97	8.25
300	5.23	4.53	9.90

VRV IV & VRV IV+	H/P (RYYQ, RXYQ, RXYSQ, RXYTQ, RXYLQ, RXYS(C)Q, RWEYQ (H/P))	P/M	Pair and multi: 65% (1) < CR < 110% Mix: CR < 110% and 50% < IU CR < 110%
	VRV-i (RKXYQ)	P(2)/M	Pair and multi: 65%(1) < CR < 110% Mix: CR < 110% and 50% < IU CR < 110%
	H/R (REYQ, RWEYQ (H/R))	M(3)	Multi(3): 65%(1) < CR < 110% Mix: CR < 110% and 50% < IU CR < 110%
VRV 5	H/P (RXYSA, RXYA)	P/M	Pair and multi: 65%(1) < CR < 110% Mix: CR < 110% and 50% < IU CR < 110%
	H/R REYA	M(3)	Multi(3): 65%(1) < CR < 110% Mix: CR < 110% and 50% < IU CR < 110%

P: Pair layout - One or more outdoor units connected to an (interlaced) coil of one AHU
M: Mix or multi layout - Combination of (multiple) AHU(s) with (mix combination) or without (multi combination) VRV DX indoor(s). Only Z or Z' control possible (no interlaced coils)
(1): For 65%<CR<75% please refer to the specifically required coil size
(2): Only Z or Z' control possible (no interlaced coils)
(3): Technically is possible to connect H/R in pair combination, but there's no benefit to do it

R-32

Growing together towards a sustainable future

ERA-AYF

ERA-AY/AV

INVERTER

Condensing unit range connectable to Air Curtains and Direct Expansion (DX) Air Handling Units (AHUs) for fresh air and recirculation applications.

R-32

Range based on inverter technology with the use of lower GWP R-32 refrigerant for capacities from 6.3 kW up to 30 kW.

AUTO

Securing the highest comfort conditions due to the quick response of DX systems and the available control logics.

NEW

Presenting the Daikin ERA

- New line up with low GWP refrigerant R-32 up to 12 HP
- Immediate cooling and heating under any ambient or room conditions
- Better management of load for medium size spaces due to VRV technology
- Continuous Heating: Avoid cold drafts during defrost cycle
- Benefit from the high efficiency and fast response time of ERA units for changing loads
- Energy saving due to inverter technology
- Wide range of expansion valve kits available for capacities of 6.3 to 30 kW

ERA-AYF ERA-AY/AV

ERA-AV ERA-AY ERA-AYF

				ERA100AV	ERA125AV	ERA140AV	ERA100AY	ERA125AY	ERA140AY	ERA200AYF	ERA250AYF	ERA300AYF
Capacity range			HP	4	5	6	4	5	6	8	10	12
Cooling capacity	Prated,c		kW	12.1	14.0	15.5	12.1	14.0	15.5	22.4	28.0	33.5
Heating capacity	Prated, h		kW	12.1	14.0	15.5	12.1	14.0	15.5	22.4	28.0	33.5
	Max.		kW	14.2	16.0	18.0	14.2	16.0	18.0	25.0	31.5	37.5
Dimensions	HxWxD		mm	869x1,100x460						1,430x940x320	1,615x940x460	
Weight			kg	102						144	180	
Sound power level	Cooling		dB(A)	67.0	68.1	69.0	67.0	68.1	69.0	73.2	74.0	76.1
	Heating		dB(A)	69.0	70.0	71.0	69.0	70.0	71.0	73.5	74.0	76.0
Sound pressure level	Cooling		dB(A)	49.0	51.0		49.0	51.0		58.1	57.0	60.0
Operation range	Cooling	Min °C	°CDB	-5 ~ 46						-5 ~ 52		
	Heating	Max °C	°CWB	-20 ~ 16						-20 ~ 15.5		
Refrigerant	Type/GWP			R-32 / 675.0						R-32 / 675.0		
	Charge	tCO2eq/ kg	kg	3.40/2.30						5.2/3.51	7/4.73	7.1/4.79
Piping connections	Liquid OD		mm	9.52						9.5		12.7
	Gas OD		mm	15.9						19.1		22.2
	Max piping length		m	50						50		
Power supply	Phase/Freq./ Voltage		Hz/V	1~/50/220-240			3N~/50/380-415			3N~/50/380-415		
Current - 50Hz	Max. fuse amps (MFA)		A	32			16			25		32

Daikin Fresh Air package

What is included?

- A **plug & play package** with a Daikin DX outdoor unit and Daikin Air Handling Unit
- Factory fitted and welded **DX coil, expansion valve kit** and **control box**
- **One point of contact**

VRV or ERA
outdoor condensing unit

Daikin Air Handling Unit

Factory fitted and welded DX coil, expansion valve kit and control box

Simplified business

- Unique **total solution approach** of heating, cooling and ventilation
- Off-the-shelf **compatibility** between Daikin outdoor unit and Daikin AHU
- Plug&play control for **outstanding reliability**
- **Peace-of-mind** thanks to a single point of contact

Simple selection in 2 steps

STEP 1

Select your design in ASTRA software

Share with Xpress

STEP 2

Add the AHU design in Xpress (including capacity, dimensions, refrigerant connection location,…)

Complete range of possibilities

750 m³/h up to 144,000 m³/h

D-AHU Professional

- Infinite variable sizes
- Tailored to the individual customer

500 m³/h up to 25,000 m³/h

D-AHU
Modular R

- Pre-configured sizes
- Plug and play concept
- EC Fan technology
- Heat recovery wheel (sorption and sensible technology)
- Modular design

500 m³/h up to 25,000 m³/h

D-AHU
Modular P

- Pre-configured sizes
- Plug and play concept
- EC Fan technology
- High efficiency aluminium counter flow PHE
- Modular design

Integration with 3rd party Air Handling Units

Also for the integration with 3rd party AHU's Daikin provides expert support for the design and installation.

Selection of the expansion valve kit – Fresh air application

- Define the required heating/cooling load of your project
- Define 3rd party AHU heat exchanger capacity
- Use the Xpress selection software or the below table to select the correct expansion valve kit
- The 3rd party AHU design should respect the allowed heat exchanger volume
- Xpress selection software will select the correct outdoor unit at the design ambient temperatures.

Cooling

	EKEXVA Class	Allowed heat exchanger capacity (kW)			Allowed heat exchanger volume (dm³)*		
					Minimum		Maximum
		Minimum	Nominal	Maximum	General Limits	(65%<CR<75%) Only for pair and multi layout	Maximum
	50	5.0	5.6	6.2	0.95	1.09	1.65
	63	6.3	7.1	7.8	1.02	1.18	2.08
	80	7.9	9.0	9.9	1.42	1.64	2.64
	100	10.0	11.2	13.1	1.51	1.74	3.30
	125	13.2	14.0	15.4	1.98	2.29	4.12
	140	15.5	16.0	21.0	2.54	2.94	4.62
	200	21.1	22.4	24.6	3.02	3.49	6.60
	250	24.7	28.0	30.8	3.97	4.58	8.25
NEW	300	30.9	33.5	36.9	4.53	5.25	9.9
NEW	350	37.0	40.0	44.0	5.48	6.32	11.55
	400	44.1	45.0	49.5	6.04	6.97	13.2
NEW	450	49.6	50.4	55.4	6.99	8.07	14.5
	500	55.5	56.0	61.6	7.55	8.72	16.5

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

* Applicable when connected to VRV outdoor units. For the corresponding DX coil limitations when the DX coil is connected to ERA units, please refer to the table on page 589.

Heating

	EKEXVA Class	Allowed heat exchanger capacity (kW)			Allowed heat exchanger volume (dm³)*		
					Minimum		Maximum
		Minimum	Nominal	Maximum	General Limits	(65%<CR<75%) Only for pair and multi layout	Maximum
	50	5.6	6.3	7.0	0.95	1.09	1.65
	63	7.1	8.0	8.8	1.02	1.18	2.08
	80	8.9	10.0	11.1	1.42	1.64	2.64
	100	11.2	12.5	14.7	1.51	1.74	3.30
	125	14.8	16.0	17.3	1.98	2.29	4.12
	140	17.4	18.0	23.6	2.54	2.94	4.62
	200	23.7	25.0	27.7	3.02	3.49	6.60
	250	27.8	31.5	34.7	3.97	4.58	8.25
NEW	300	34.8	37.5	41.5	4.53	5.23	9.9
NEW	350	41.6	45.0	49.5	5.48	6.32	11.55
	400	49.6	50.0	55.7	6.04	6.97	13.2
NEW	450	55.8	56.5	62.4	6.99	8.07	14.85
	500	62.5	63.0	69.3	7.55	8.72	16.5

Saturated evaporating temperature: +46°C
Air temperature: +20°C DB

* Applicable when connected to VRV outdoor units. For the corresponding DX coil limitations when the DX coil is connected to ERA units, please refer to the table on page 589..

Selection of the expansion valve kit – Recirculation application

- Define the required heating/cooling load of your project
- Use the Xpress selection software or the below table to select the correct expansion valve, following the procedure used as for standard VRV indoor units
- The 3rd party AHU design should respect the allowed heat exchanger (DX coil) volume limitations which in are in place for VRV (above on this page) and ERA (page 7)
- Xpress selection software will select the correct outdoor unit at the design ambient temperatures

Cooling

	EKEXVA Class	On-coil air temperature [°C]						
		14WB 20DB	16WB 23DB	18WB 26DB	19WB 27DB	20WB 28DB	22WB 30DB	24WB 32DB
		kW	kW	kW	kW	kW	kW	kW
	50	3.8	4.5	5.2	5.6	5.9	6.0	6.2
	63	4.8	5.7	6.6	7.1	7.5	7.7	7.8
	80	6.1	7.2	8.4	9.0	9.5	9.7	9.9
	100	7.6	9.0	10.5	11.2	11.8	12.1	12.3
	125	9.5	11.3	13.1	14.0	14.8	15.1	15.4
	140	10.8	12.9	15.0	16.0	16.9	17.3	17.6
	200	15.1	18.0	21.0	22.4	23.6	24.2	24.6
	250	18.9	22.5	26.2	28.0	29.5	30.2	30.8
NEW	300	22.6	26.9	31.3	33.5	35.3	36.1	36.9
NEW	350	27.0	32.2	37.4	40.0	42.1	43.1	44.0
	400	30.4	36.2	42.1	45.0	47.4	48.5	49.5
NEW	450	34.0	40.5	47.2	50.4	53.1	54.3	55.4
	500	37.8	45.0	52.4	56.0	59.0	60.4	61.6

Heating

	EKEXVA Class	On-coil air temperature [°C]						
		10.0	16.0	18.0	20.0	21.0	22.0	24.0
		kW	kW	kW	kW	kW	kW	kW
	50	6.6	6.6	6.6	6.3	6.1	5.9	5.5
	63	8.4	8.4	8.4	8.0	7.7	7.5	7.0
	80	10.5	10.5	10.5	10.0	9.7	9.4	8.7
	100	13.1	13.1	13.1	12.5	12.1	11.7	10.9
	125	16.8	16.8	16.8	16.0	15.5	15.0	13.9
	140	18.9	18.9	18.9	18.0	17.4	16.8	15.7
	200	26.2	26.2	26.2	25.0	24.2	23.4	21.8
	250	33.1	33.1	33.1	31.5	30.5	29.5	27.5
NEW	300	39.4	39.4	39.4	37.5	36.3	35.1	32.7
NEW	350	47.2	47.2	47.2	45.0	43.6	42.1	39.2
	400	52.4	52.4	52.4	50.0	48.4	46.8	43.6
NEW	450	59.2	59.2	59.2	56.5	54.7	52.9	49.3
	500	66.0	66.0	66.0	63.0	61.0	59.0	54.9

BR00000554/676/749/751

Astropure 2000, Air Purifier for Commercial Applications

Plug & play, mobile recirculation unit with high efficiency filtration – for better indoor air quality in commercial spaces

- For areas where additional, extra high, filtration performance is needed.
- Airflow rate up to 2,000 m^3/h
- HEPA H14 filter in accordance with EN1822
- Pre-filter options up to ISO Coarse 70%
- Insulated double-wall construction provides whisper-quiet operation down to 35 dB(A)
- Easy installation, operation, and maintenance in a totally self-contained system
- For commercial areas up to 200m^2

Applications

Schools and Universities

Commercial Buildings

Healthcare

Hospitality

Shops and Shopping malls

Models

Model	BR00000554	BR00000749	BR00000676	BR00000751
Plug type	EU	UK	EU	UK
HEPA Filter (H14)	✓		✓	
LCD Screen			✓	
Activ. Carbon (Gas phase) pre-filter			✓	

Providing high-efficiency 2-stage filtration

Standard prefilter

All units are delivered with a prefilter, increasing filter life and protecting the installed HEPA filter

RedPleat - 4531002424
- Delivered with BR00000554/749
- ISO 16890: ISO coarse 70%
- Available with Antimicrobial treated media (RedPleat ULTRA)

RedPleat Carb - 4139002424
- Delivered with BR00000676/751
- ISO 16890: ISO coarse 65%
- Effectively removes offensive odors

Main filter

The HEPA filter features eFRM filtration media which combines ultra-high efficiency and particulate loading to remove 99.99% of dust, pollen, mold, bacteria, viruses, and any airborne particle with a size of 0.3 microns or greater.

AstroCel III - 1493299990
- H14 filtration efficiency according EN 1822
- V-shaped filter configuration, combined with microglass media, delivers higher flow and the lowest possible pressure drop vs traditional box style HEPA filters
- Compatible with Discrete Particle Counter (DPC) and photometric test methods as access and instrumentation allow

Astropure 2000, Air Purifier for Commercial Applications

Plug & play, mobile recirculation unit with high efficiency filtration – for better indoor air quality in commercial spaces

- Airflow rate up to 2,000 m³/h
- HEPA H14 filter in accordance with EN1822
- Optional touch sensitive LCD Display (BR00000676/751)
- Insulated double-wall construction provides whisper-quiet operation
- Activated carbon filter
- Sliding tray design provides easy access and servicing of filters
- Designed with internal variable fan speed (electronically commutated) to meet specific application requirements
- Suitable for in-room use or sheltered outdoor installation
- CE-compliance, VDI 6022 guided design

BR00000676/751

BR00000554 BR00000676

Ventilation				BR00000554	BR00000749	BR00000676	BR00000751
Features	Plug type			EU	UK	EU	UK
	HEPA Filter (H14)			✓		✓	
	LCD Screen					✓	
	Activ. Carbon (Gas phase) pre-filter					✓	
Design air flow rate			m³/h	2,000			
Application				Floor standing type			
Casing	Colour			Painted galvanized steel finish			
Dimensions	Unit	HxWxD	mm	1,628x720x770			
Weight	Unit		kg	150 (depending on version)			
Pre-filter	Dust collecting method			Prefilter RedPleat, ISO Coarse 70%		Prefilter RedPleat Carb, ISO Coarse 65% gas phase filter	
HEPA filter	Bacteria filtering method			Astrocel III HEPA H14			
Air purifying operation	Power input	High fan speed	kW	0.379			
Sound pressure level	Air purifying operation	High fan speed	dBA	55.9			
Fan Motor				Stepless adjustable			
Safety devices	Item			Safety switch (operation stops when the back door is open)			
Standard Accessories	Prefilter			1			
	HEPA filter			1			
	Quick Start and Maintenance Guide			1			
	Installation and Operation Manual			1 (download)			
Power cord			m	3			
Power supply	Phase			1~			
	Frequency		Hz	50/60			
	Voltage		V	230			
Running current	Air purifying operation	High fan speed	A	1.73			

		Energy recovery ventilation - VAM								
		VAM 150FC9	**VAM 250FC9**	**VAM 350J8**	**VAM 500J8**	**VAM 650J8**	**VAM 800J8**	**VAM 1000J8**	**VAM 1500J8**	**VAM 2000J8**
Individual control systems	**BRC301B61** VAM wired remote control	•	•	•	•	•	•	•	•	•
	Madoka **BRC1H52W7** (White) / **BRC1H52S7** (Silver) / **BRC1H52K7** (Black) 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	•	•	•	•	•	•	•	•	•
	DCS601C51 intelligent Touch Controller	•	•	•	•	•	•	•	•	•
	DCS302C51 Central remote control	•	•	•	•	•	•	•	•	•
	DCS301B51 Unified ON/OFF control	•	•	•	•	•	•	•	•	•
Building Management System & Standard protocol interface	**DCM601A51** intelligent Touch Manager	•	•	•	•	•	•	•	•	•
	DGE601A51 Edge adapter for connection to Daikin Cloud Plus	•	•	•	•	•	•	•	•	•
	DGE602A51 Edge lite adapter for connection to Daikin Cloud Plus	•	•	•	•	•	•	•	•	•
	EKMBDXB Modbus interface	•	•	•	•	•	•	•	•	•
	DMS502A51 BACnet Interface	•	•	•	•	•	•	•	•	•
	DMS504B51 LonWorks Interface	•	•	•	•	•	•	•	•	•
Filters	Coarse 55% (G4)									
	ePM10 75% (M5)									
	ePM10 70% (M6)			EKAFVJ50F6	EKAFVJ50F6	EKAFVJ65F6	EKAFVJ100F6	EKAFVJ100F6	EKAFVJ100F6 x2	EKAFVJ100F6 x2
	ePM1 50% (F7)									
	ePM1 60% (F7)			EKAFVJ50F7	EKAFVJ50F7	EKAFVJ65F7	EKAFVJ100F7	EKAFVJ100F7	EKAFVJ100F7 x2	EKAFVJ100F7 x2
	ePM1 70% (F8)			EKAFVJ50F8	EKAFVJ50F8	EKAFVJ65F8	EKAFVJ100F8	EKAFVJ100F8	EKAFVJ100F8 x2	EKAFVJ100F8 x2
	ePM1 80% (F9)									
	High efficiency filter									
	Replacement air filter									
Mechanical accessories	Rail									
	Rectangular to round duct transition									
	Separate plenum								EKPLEN200 (5)	EKPLEN200 (5)
CO_2 sensor				BRYMA65	BRYMA65	BRYMA65	BRYMA100	BRYMA100	BRYMA200	BRYMA200
Electrical heater for pre treatment of fresh air		GSIEKA10009	GSIEKA15018	GSIEKA20024	GSIEKA20024	GSIEKA25030	GSIEKA25030	GSIEKA25030	GSIEKA35530 (6)	
DX coil for post treatment of fresh air					EKVDX32A	EKVDX50A	EKVDX50A	EKVDX80A	EKVDX100A	EKVDX100A
Silencer (900mm depth)										
Electrical accessories	Wiring adapter for external monitoring/ control (controls 1 entire system)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)	KRP2A51 (2)
	Adapter PCB for humidifier									
	Adapter PCB for third party heater	BRP4A50A	BRP4A50A	BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (3/4)	BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (3/4)	BRP4A50A (3/4)
	External wired temperature sensor									
	Adapter PCB Mounting plate	EKMP25VAM	EKMP25VAM			EKMP65VAM			EKMPVAM	
	Installation box for adaptor PCB	KRP1BA101	KRP1BA101	KRP1BA101	KRP1BA101	KRP1BA101	KRP1BA101	KRP1BA101	KRP1BA101	KRP1BA101

Notes

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

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

(6) Available only with optional plenum

(7) To be combined with option BRP4A50A using external 230VAC with local supplied circuit breaker (max. 3A)

Energy recovery ventilation VKM			Air handling unit applications
VKM 50GBM	**VKM 80GBM**	**VKM 100GBM**	**EKEACB (1)**
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•	•	•	
KAF242H80M	KAF242H100M	KAF242H100M	
KAF241H80M	KAF241H100M	KAF241H100M	
BRYMA65	BRYMA100	BRYMA100	
GSIEKA20024 (7)	GSIEKA20024 (7)	GSIEKA20024 (7)	
BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (4)	
BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (4)	
BRP4A50A (4)	BRP4A50A (4)	BRP4A50A (4)	
			KRCS01-1

Options - Ventilation

Accessories	Compact L Pro						Compact T Pro				
	ALB02LCM ALB02RCM	**ALB03LCM ALB03RCM**	**ALB04LCM ALB04RCM**	**ALB05LCM ALB05RCM**	**ALB06LCM ALB06RCM**	**ALB07LCM ALB07RCM**	**ATB03RBM ATB03LBM**	**ATB04RBM ATB04LBM**	**ATB05RBM ATB05LBM**	**ATB06RBM ATB06LBM**	**ATB07RBM ATB07LBM**
Iso Coarse 55% (G4) Filter	ALF02G4A	ALF03G4A	ALF05G4A		ALF07G4A		ATF03G4A	ATF04G4A	ATF05G4A	ATF06G4A	ATF07G4A
ePM10 75% (M5) Filter	ALF02M5A	ALF03M5A	ALF05M5A		ALF07M5A		ATF03M5A	ATF04M5A	ATF05M5A	ATF06M5A	ATF07M5A
ePM1 50% (F7) Filter	ALF02F7A	ALF03F7A	ALF05F7A		ALF07F7A		ATF03F7A	ATF04F7A	ATF05F7A	ATF06F7A	ATF07F7A
ePM1 80% (F9) Filter	ALF02F9A	ALF03F9A	ALF05F9A		ALF07F9A		ATF03F9A	ATF04F9A	ATF05F9A	ATF06F9A	ATF07F9A
Sound attenuator	ALS0290A	ALS0390A	ALS0590A		ALS0790A		ATS0360A	ATS0460A	ATS0560A	ATS0660A	ATS0760A
Rails for door	ALA02RLA	ALA03RLA	ALA05RLA		ALA07RLA						
Duct transition	ALA02RCA	ALA03RCA	ALA05RCA		ALA07RCA						
Flexible joints	ALA02FXB	ALA03FXB	ALA05FXB		ALA07FXB						
Mixing damper									ATA05MDA	ATA06MDA	ATA07MDA
External damper	ALA02EDA	ALA03EDA	ALA05EDA		ALA07EDA		ATA03EDA	ATA04EDA	ATA05EDA	ATA06EDA	ATA07EDA
Electric pre heater [1]	ALD02HEFA	ALD03HEFA	ALD05HEFA		ALD07HEFA		ATD03HEFAU	ATD04HEFAU	ATD05HEFAU	ATD06HEFAU	ATD07HEFAU
Electric post heater [1]	ALD02HESA	ALD03HESA	ALD05HESA		ALD07HESA		ATD03HESAU	ATD04HESAU	ATD05HESAU	ATD06HESAU	ATD07HESAU
DX coil [2]			ALD05CDSA		ALD07CDSA		ATD03UDSAR	ATD04UDSAR	ATD05UDSAR	ATD06UDSAR	ATD07UDSAR
							ATD03UDSAL	ATD04UDSAL	ATD05UDSAL	ATD06UDSAL	ATD07UDSAL
								ATD04UDSBL	ATD05UDSBL	ATD06UDSBL	ATD07UDSBL
								ATD04UDSBR	ATD05UDSBR	ATD06UDSBR	ATD07UDSBR
WATER coil [2]	ALD02CWSA	ALD03CWSA	ALD05CWSA		ALD07CWSA		ATD03UWSAR	ATD04UWSAR	ATD05UWSAR	ATD06UWSAR	ATD07UWSAR
							ATD03UWSAL	ATD04UWSAL	ATD05UWSAL	ATD06UWSAL	ATD07UWSAL
Water pre heating coil	ALD02HWUA	ALD03HWUA	ALD05HWUA		ALD07HWUA		ATD03HWFAU	ATD04HWFAU	ATD05HWFAU	ATD06HWFAU	ATD07HWFAU
Water post heating coil [2]	ALD02HWUA	ALD03HWUA	ALD05HWUA		ALD07HWUA		ATD03HWSAR	ATD04HWSAR	ATD05HWSAR	ATD06HWSAR	ATD07HWSAR
							ATD03HWSAL	ATD04HWSAL	ATD05HWSAL	ATD06HWSAL	ATD07HWSAL
Droplet Eliminator	ALA02DEA	ALA03DEA	ALA05DEA		ALA07DEA						
Water valve 2 way cooling/heating	ALV02CW2A	ALV03CW2A	ALV05CW2A		ALV07CW2A		ATV03CW2A	ATV04CW2A	ATV05CW2A	ATV06CW2A	ATV07CW2A
Water valve 3 way cooling/heating	ALV02CW3A	ALV03CW3A	ALV05CW3A		ALV07CW3A		ATV03CW3A	ATV04CW3A	ATV05CW3A	ATV06CW3A	ATV07CW3A
Valve modulating actuator	ATE00AMVA										
Damper modulating actuator	ATE00AMDA										
Digital PCB							ATE00DPUA				
Spring return modulating actuator	AUE00ASUA										
Frost switch	ALE00FSUA						ATE00FSUA				
CO_2 sensor	ALP00COA										
Humidity sensor	ALP00HUA										
Temperature probe	ALP00TEA										
Pressure transducer	AUE00PTUA										
Room Interface	ALC00822A (POL 822)										
Commissioning module	ALC00895A (POL 895)										
Modbus RTU module	ALC00902A (POL 902)										
Bacnet IP module	ALC00908A (POL 908)										
Expansion module	ALC00955A										
LonWorks Interface											
Intelligent Touch Manager											
Intelligent Tablet Controller											
Intelligent Touch Controller											
Central remote control											
Unified ON/OFF control											

Notes

(1) For Compact T pro only, both electric heater can be used as pre and post heater

(2) For Compact T pro only, sixth digit on main unit material name has to be aligned with last digit of the coil material name (with the exception of the electric heater and water pre heating coil)
ATB0**R**BM --> ATB0*UDSA**R**
ATB0**R**BM --> ATB0*UDSB**R**
ATB0**R**BM --> ATB0*UWSA**R**
ATB0**R**BM --> ATB0*HWSA**R**
ATB0**L**BM --> ATB0*UDSA**L**
ATB0**L**BM --> ATB0*UDSB**L**
ATB0**L**BM --> ATB0*UWSA**L**
ATB0**L**BM --> ATB0*HWSA**L**

(3) Please refer to the selection software for more details on accessories and their incompatibilities.

Compact L Smart						Compact T Smart				
ALB02LCS ALB02RCS	**ALB03LCS ALB03RCS**	**ALB04LCS ALB04RCS**	**ALB05LCS ALB05RCS**	**ALB06LCS ALB06RCS**	**ALB07LCS ALB07RCS**	**ATB03RBS ATB03LBS**	**ATB04RBS ATB04LBS**	**ATB05RBS ATB05LBS**	**ATB06RBS ATB06LBS**	**ATB07RBS ATB07LBS**
ALF02G4A	ALF03G4A	ALF05G4A		ALF07G4A		ATF03G4A	ATF04G4A	ATF05G4A	ATF06G4A	ATF07G4A
ALF02M5A	ALF03M5A	ALF05M5A		ALF07M5A		ATF03M5A	ATF04M5A	ATF05M5A	ATF06M5A	ATF07M5A
ALF02F7A	ALF03F7A	ALF05F7A		ALF07F7A		ATF03F7A	ATF04F7A	ATF05F7A	ATF06F7A	ATF07F7A
ALF02F9A	ALF03F9A	ALF05F9A		ALF07F9A		ATF03F9A	ATF04F9A	ATF05F9A	ATF06F9A	ATF07F9A
ALS0290A	ALS0390A	ALS0590A		ALS0790A		ATS0360A	ATS0460A	ATS0560A	ATS0660A	ATS0760A
ALA02RLA	ALA03RLA	ALA05RLA		ALA07RLA						
ALA02RCA	ALA03RCA	ALA05RCA		ALA07RCA						
ALA02FXB	ALA03FXB	ALA05FXB		ALA07FXB						
ALD02HEFB	ALD03HEFB	ALD05HEFB		ALD07HEFB		ATD03HEFBU	ATD04HEFBU	ATD05HEFBU	ATD06HEFBU	ATD07HEFBU
BRYMA200										
BRC301B61 / BRC1H52W7 / BRC1H52S7 / BRC1H52K7 / BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52										
EKMBDXB										
DMS502A51										
DMS504B51										
DCM601A51										
DCC6011A51										
DCC6011C51										
DCS302C51										
DCS301B51										