



VRV THE TOTAL SOLUTION
INTEGRATED CLIMATE CONTROL

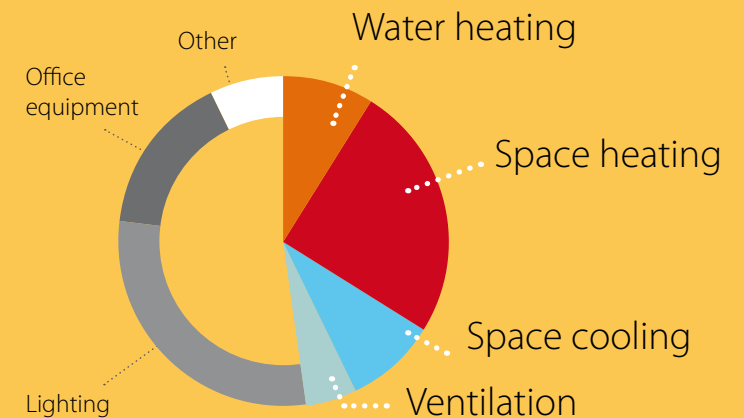
Total Solution Concept

The Daikin VRV Total Solution provides a single point of contact for the design and maintenance of your integrated climate control system. Our modular units enable you to select the right mix of equipment and technology to ensure that you achieve the optimal balance of temperature, humidity and air freshness for the perfect comfort zone with maximum energy efficiency and cost effectiveness.

DID YOU KNOW THAT...

you can use our VRV solution to manage **up to 50%** of an office building's energy consumption, giving you a huge potential of cost and energy savings, while limiting the environmental impact.

Total energy consumption for an office building



Source: EIA; 1995, Commercial buildings Energy consumption survey

VRV Outdoor Units Integrated heat pump solution

- › Solution for every climate from -25°C to +52°C
- › Flexible to fit any building
- › Can be customized to your specific needs to achieve the highest seasonal efficiency
- › The new standard in heating comfort



Heating and cooling

Wide range of indoor units that fit rooms of any size and shape

- › Perfect comfort
- › Whisper-quiet operation
- › Stylish design
- › Concealed installation possible

→ SAVE UP TO 15% COMPARED TO TRADITIONAL SYSTEMS



Hot water

Use renewable energy to produce hot water

- › Free heating of water possible
- › Possibility to combine with solar panels
- › Hot water for showers, sinks, tap water for cleaning, under floor heating or radiators
- › Hot water up to 80°C

→ SAVE UP TO 17% COMPARED TO A GAS BOILER



User friendly control systems

Full control for maximum efficiency

- › From individual control to the management of multiple buildings
- › User friendly touch screen control
- › Remote control & monitoring via internet
- › Zone control
- › Energy management tools



Air separation through air curtains

A highly efficient solution to doorway climate separation

- › Most efficient open-door solution
- › Air curtain heating for free
- › Year-round comfort, even on the most demanding days

→ SAVE UP TO 72% COMPARED TO AN ELECTRIC AIR CURTAIN



Ventilation

Create a high-quality indoor environment

- › Heat is reclaimed between out and indoor air
- › Free cooling
- › Optimum control of humidity
- › Air filtration ensures a steady supply of clean air

→ SAVE UP TO 40% THANKS TO LOWER COOLING AND HEATING REQUIREMENTS

Possible Shop Solution

VRV heat pump system



- › Energy saving inverter heat pump technology, COP up to 4.5
- › Control each indoor unit individually
- › Can be customized to your specific needs to achieve the highest seasonal efficiency thanks to VRT technology
- › The new standard in heating comfort
- › Flexible to fit any building:
 - › indoor installation of outdoor unit, useful in city centres as there is no visual impact and low noise
 - › outdoor installation of outdoor unit, to maximise selling area



DID YOU KNOW THAT...

... if your system has just 10% less refrigerant than the optimal amount, the power consumption to maintain capacity can rise by 40%. Therefore we have developed our automatic refrigerant charging function & automatic refrigerant containment check to ensure the optimal capacity and efficiency through the life time of the system and to comply with F-gas regulations.



To view the full VRV product range, refer to www.daikineurope.com or your local sales representative



Round flow cassette with auto cleaning panel

- › Up to 50% energy savings compared to standard cassettes
- › Lower maintenance cost (filter cleaning can be done with a vacuum cleaner)
- › Intelligent sensors switch off the unit when there is nobody in the room, saving up to 27%
- › Perfect comfort: 360° air discharge and presence detection directing the airflow away from persons



User-friendly control

- › Easy to use menu making it easier than ever to control your system
- › Energy saving functions, reducing your running costs
- › Contemporary design
- › Weekly schedules increase comfort and efficiency
- › Supports multiple languages
- › Lock-key function to avoid improper use



Biddle air curtain

Highly efficient solutions to combat the issue of climate separation across your doorway

- › Most efficient open-door solution giving substantial energy savings of up to 72% and a payback period of only 1.5 years compared to electric air curtains
- › Year-round comfort ensured by the constant discharge velocity and unique adjustable jet air-flow width (European patent)



Possible Office Solution

VRV heat recovery system



- › Provide hot water and free heating by transferring heat from areas requiring cooling
- › perfect comfort: simultaneously heat spaces while cooling others
- › Flexible to fit any building:
 - › indoor installation of outdoor unit, useful in city centres as there is no visual impact and low noise
 - › outdoor installation of outdoor unit, maximise selling area

DID YOU KNOW THAT...

... if your system has just 10% less refrigerant than the optimal amount, the power consumption to maintain capacity can rise by 40%. Therefore we have developed our automatic refrigerant charging function & automatic refrigerant containment check to ensure the optimal capacity and efficiency through the life time of the system and to comply with F-gas regulations.



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Central control

- › Power consumption allocation per indoor unit.
- › Possible to control other than HVAC systems, like blinds, lights, pumps etc.
- › Easy to use touch screen
- › Detailed and easy monitoring and control for up to 128 indoor units
- › Monitoring and control of multiple buildings, via the web
- › Many energy saving functions such as scheduled shut down of the system in the evening, connection to movement sensors, holiday schedules, and so on
- › Easy management of electrical consumption and division of running costs among multiple tenants



Cassette

- › Perfect comfort: sound level down to 25 dBA = sound of rustling leaves.
- › Fits flush into 60x60 ceiling modules thus lowering installation costs

+
MOST SILENT
CASSETTE ON
THE MARKET



Fresh air

- › Minimise energy waste by recovering heat of exhausted air
- › Combining ventilation and air conditioning in one system
- › Ideal for medium to large buildings
- › Air filtration ensures a steady supply of clean air

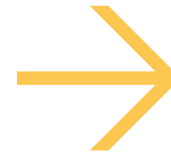


Hot water

- › Use heat pump technology to produce hot water
- › Free production of hot water possible by transferring heat from areas requiring cooling.
- › Possibility to connect solar panels
- › Possible applications: sinks, under floor heating, showers and radiators

Possible Hotel Solution

VRV heat recovery system



- › Provide hot water and free heating by transferring heat from areas requiring cooling
- › perfect comfort: simultaneously heat spaces while cooling others
- › Flexible to fit any building:
 - › indoor installation of outdoor unit, useful in city centres as there is no visual impact and low noise
 - › outdoor installation of outdoor unit, maximise selling area



DID YOU KNOW THAT...

... You can also connect a VRV system to a geothermal water ring. As the temperature at 10m under the ground is almost constant all year round this ensures high efficiencies even in extreme weather conditions.



To view the full VRV product range, refer to www.daikineurope.com or your local sales representative



Concealed unit

- › Especially developed for small, well-insulated rooms such as hotel bedrooms
- › Perfect comfort: very low sound level ensuring a good night's rest
- › Blends unobtrusively with any interior décor
- › Maximises usable space: very compact dimensions to reduce the ceiling void to a minimum



Central control

- › Full control and management of VRV systems with up to 2,560 indoor units
- › Simple intuitive navigation and extensive graphical reporting
- › Power consumption allocation per indoor unit
- › Full control of all the air conditioning system's functions and the basic building functions such as fire alarm etc. to optimize energy efficiency, comfort and safety
- › Smart energy management to optimize your VRV system
- › Monitoring and control of multiple buildings via the web



Intelligent hotel room controller

- › Connects to all types of controllers, including easy to use touchscreens
- › Change setpoint automatically when guest leaves the room or opens the window, saving energy
- › Meets all the guests' needs because every room is individually controlled
- › Easy integration in hotel looking software

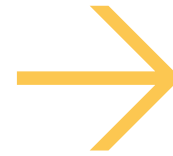


Hot water

- › Use renewable energy through heat pump technology to produce hot water
- › Free production of hot water possible by transferring heat from areas requiring cooling.
- › Possible applications:
 - › bathrooms, under floor heating and radiators
- › Hot water up to 80°C

Possible Residential Solution

Mini VRV, heat pump



- › Cost effective, low energy consumption heating system
- › Lower CO₂ emissions compared to traditional heating systems
- › Up to 9 stylish indoor units
- › Compact design
- › Low outdoor unit sound



DID YOU KNOW THAT...

when you opt for a Daikin air conditioner, you are also thinking of the environment?

When we produce your air conditioner, we do our utmost to recycle, reduce waste and use renewable energy.



To view the full VRV product range, refer to www.daikineurope.com or your local sales representative



+
**UNIQUE:
THE FEEL OF A
RADIATOR...**

Stylish indoor units

- › Remarkable blend of iconic design and functionality
- › Combines the feel of a radiator with the comfort and energy efficiency of a heat pump
- › Air purification filter
- › Perfect comfort: Whisper-quiet at around 19 dBA
- › Cools your house in summer



reddot design award
honourable mention 2010



**product
design
award**
2010



Good Design Award

The VRV Total Solution

Innovation in action

Our heat pump technology is highly energy efficient as it uses renewable energy from the outdoor air to drive the heating process, without the need for a secondary heating system. This technology delivers high output for low input, leading to a direct saving in CO₂ emissions and running costs.

The Daikin VRV uses advanced heat recovery technology to extract heat from cooled areas and then reuses it to warm other areas or create hot water, thus enabling it to heat and cool different parts of the building at the same time.

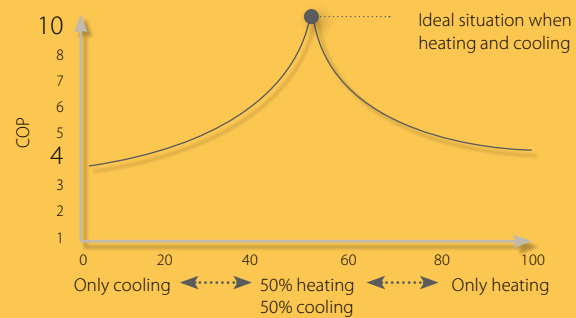




.....> Desired room temperature

DID YOU KNOW THAT...

... the Daikin VRV system regularly delivers a Coefficient of Performance (COP) of 4 or more, meaning that it produces four units of heat energy for every one unit of electrical energy used. However, when operating in heat recovery mode, the COP can be as high as 10, making the Daikin VRV system the most advanced of its kind.



Coefficient of performance of a Daikin VRV heat recovery system

Personal comfort

When viewed from the perspective of the occupants of a building, it is the **comfort** level provided by the climate control system that is the most important and so:

- > the temperature has to be right
- > there has to be enough fresh air entering the area
- > the humidity level needs to be correct
- > the sound level has to be acceptable

Our integrated system addresses all of these requirements and provides individual control where possible.

Special attention has been paid to minimising the sound levels of the system. The sound levels of our indoor units can be as low as 19 dBA, while the sound emitted by our outdoor units can be lowered during noise-sensitive times such as night.

Flexible response for

Optimal conditions

Our modular system allows for a high level of flexibility and we have the equipment to meet all climate control situations: from heating when the outside temperatures are as low as -25°C to ultimate cooling when it is +50°C.

Our outside equipment can be either placed on the roof to maximise interior space utilisation or inside. While, our extremely wide range of indoor units allows us to select the best possible solution no matter what the size of room or its shape. Our specially designed indoor units, ventilation units and the Biddle air curtains can be visible and form part of the décor or they can be almost invisible, depending on the needs of the users – whatever you need, our solutions are flexible enough to provide an optimal result.



Quality is something we take very seriously indeed. As a result of our ISO9001 certified production processes and the testing in our own specialised testing facilities, we know that we are supplying equipment that meets the most exacting standards for manufacture and reliability.

All this is backed up by our renowned support and **maintenance service**, which has the widest after-sales service network in the industry.

Daikin prides itself on being a reliable partner for your business and in offering a truly **trouble-free total climate control solution**.

DID YOU KNOW THAT...

Daikin provides an 'active' type of predictive maintenance service system that utilises information gained through the remote monitoring of your system, thus allowing for a service engineer to attend to problems before they impact the performance of the system. This 24/7 service ensures optimal efficiency and reliability during the life-time of the system.

Daikin is the market leader for innovation in climate control technology

With more than 85 years experience in air conditioning and 50 years in heat pumps, Daikin's passion for innovation led it to invent and then develop the variable refrigerant flow concept (the Daikin VRV system) more than a quarter of a century ago and we are now the leading exponents of this type of integrated climate control.

Daikin, in its role as a responsible market leader, continuously seeks to improve the energy efficiency and environmental friendliness of its products and to develop new ones: for example, a VRF system based on CO₂, an environmentally friendly refrigerant.





Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.

VRV products are not within the scope of the Eurovent certification programme.



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