DAIKIN

Daikin, your partner to boost your

BREEAM project

Team up with us to achieve your BREEAM objectives, while staying within budget

Creating a sustainable future together

Air is something that surrounds us 24 hours a day. At Daikin, the future of the world's air is our greatest concern. We use our expertise about air, our feeling for innovation and our mastery of technology to improve the air we breathe. Aiming for sustainable growth, and a sustainable society through technological strength and outstanding human resources, guided by the United Nations Sustainable Development Goals (SDGs).

The Sustainable Development Goals, defined in 2015, are a set of 17 global development goals that aim to contribute to global sustainable development and to tackle broad topics such as poverty, health, education, energy, global warming and gender equality.

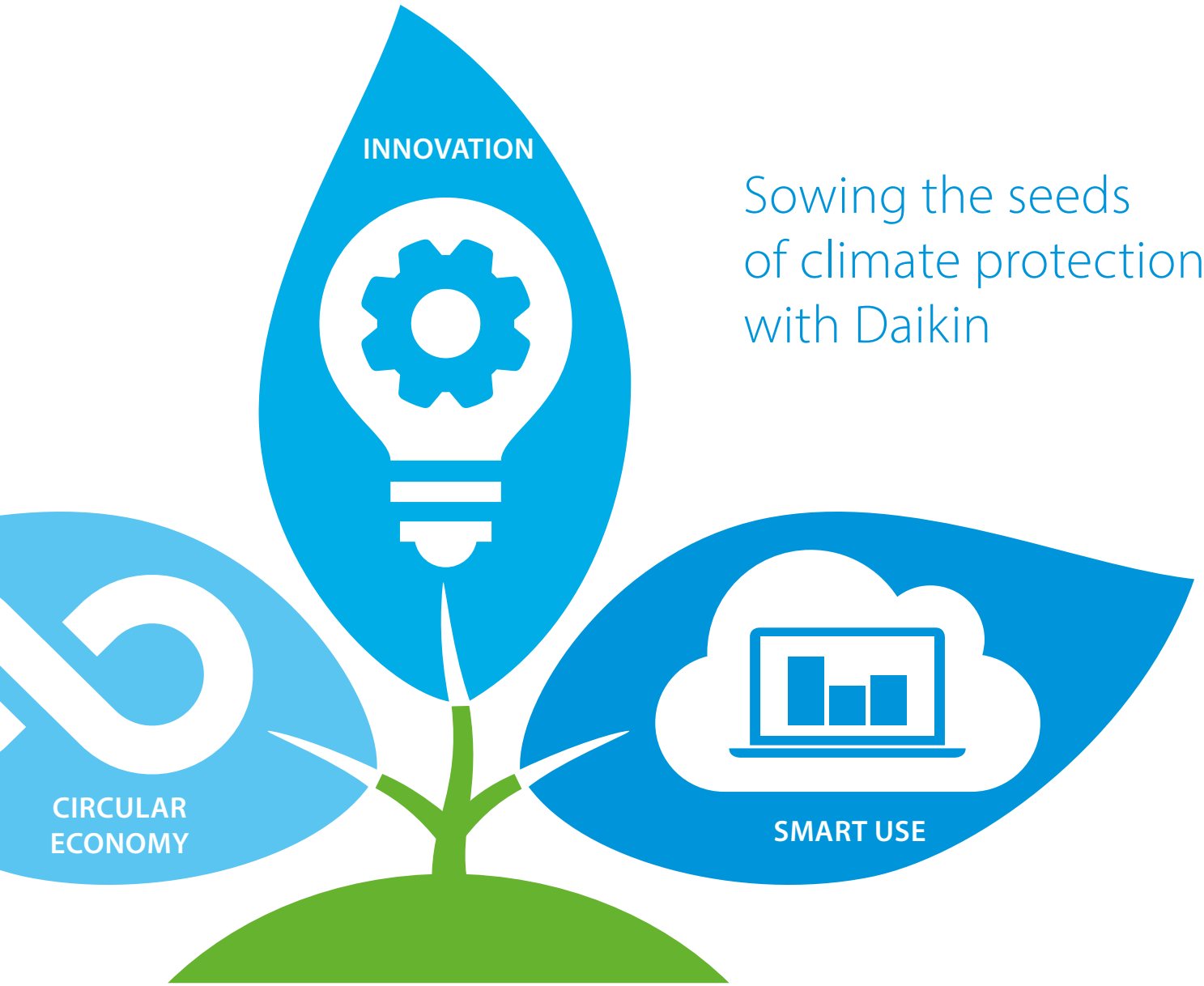
The target date set for the SDGs to be achieved is 2030. For more information on the Sustainable Development Goals, please visit: sdgs.un.org/goals

BREEAM®

If you're also committed to explore sustainable solutions that allow you to increase the market value and decrease the running costs of your building, BREEAM and this brochure is your ideal guidance. As a **BREEAM expert**, Daikin offers **advice** and the **solutions** to reach the **sustainable performance of your building** you want within the budget you foresee.

Determined to reduce our environmental footprint and the one of our customers, we aim to be CO_2-neutral by 2050. A circular economy, innovation and smart use – these are the stepping stones on our path.

For more information visit: daikin.eu/building-a-circular-economy



Sowing the seeds of climate protection with Daikin

Through a circular economy

- Re-use refrigerants through L∞P by Daikin
- Enable customers to create their own circular economy of refrigerants through the recover-reclaim-reuse program

Through innovation

- Introducing lower GWP refrigerants such as R-32, R-1234ze, ...
- Offer high seasonal efficiencies
- Maximise efficiency 24/7 by deploying unique auto cleaning filters
- Adapted systems for well insulated or passive buildings

Through smart use

- Rigorously follow up on energy consumption via the Daikin Cloud Plus and Daikin On Site
- Factor in expert advice to continuously optimise system efficiency
- Enable predictive maintenance to ensure optimum operation and uptime
- Prevent energy waste with smart key cards and sensors

What is BREEAM?

BREEAM (British Research Establishment Environmental Assessment Method) is **a certification system that recognises sustainable buildings that exceed national standards**. As an internationally leading quality label, it provides investors and building owners the guidelines to focus sustainability in building design as well as the environmental impact of products in buildings.

The BREEAM label assesses the overall building concept in **10 different categories**. **Credits** are awarded and weighted for each category in order to generate the **final score for the building**, in levels from 'pass' to 'outstanding'. The final BREEAM building score recognises the effort the investor or building owner have done and result in increased property, leasing or renting value.

Daikin contributes in 7 BREEAM categories:


Management


Health & Wellbeing


Energy


Materials


Waste


Pollution


Innovation


Land Use


Transport


Water

Why BREEAM?

BREEAM offers many advantages for project developers, building tenants and building owners:

Highly improved quality of life for the building user

- Improved comfort
- Easier to attract talent
- Higher work efficiency
- Lower sick rates

High building value for the developer and owner

- Higher selling and rental prices (up to 20%!)
- Fast sale or rent out
- Higher project ROI

Lower operational, maintenance and refurbishment costs

- Lower running costs thanks to highly efficient building technologies
- Lower renovation costs thanks to building flexibility and longer compliancy with legislation

Lower environmental impact of the building

- Lower CO_2 footprint of the building
- Cleaner technologies for better health and pollution reduction
- Better waste management
- Efficient use of land and resources

Daikin, your partner for your green project

Choosing the sustainable path is no longer a matter of choice, it's an obligation. As every building is unique, it requires a different solution to match its unique properties. It is essential to have an **HVAC partner** like Daikin, with knowledge and portfolio **to achieve your BREEAM objectives while staying within budget**.

Our HVAC total solutions increase the environmental value of buildings and enhance the working environment of tenants. Integration of Daikin technologies will therefore contribute to the overall sustainability level of the building and enable you **to reach a BREAAM Excellent or Outstanding score**.

Daikin heat pumps can contribute in
7 out of 10 BREEAM categories

and achieve
29 ~ 50 BREEAM credits*

* Feasibility analysis done by Daikin

Scan the code to download

Save time by using our in-depth BREEAM assessment sheet, created by our team of experts, as base of evidence towards assessors when applying for BREEAM credits.

Why Daikin?

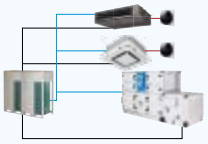
to maximize your BREEAM rating

1. Team up with our own **accredited professionals (AP's)** assisting you to achieve your green building certification.
2. A global leader with local manufacturing service infrastructure and resources to provide **oustanding aftercare support**, advanced commissioning and hand-over.
3. Daikin remote monitoring services ensure a **pro-active aftercare,** by detecting excessive energy use or potential issues before they occur to maximise system lifetime and minimize operational costs.
4. **First class Indoor Air Quality** thanks to low VOC emission, optimal thermal zoning fresh air supply, monitoring and a low acoustic performance.
5. **Responsible sourcing and waste reduction**: BES6001 and ISO14001 certification delivers extra credits for the project.
6. Low carbon heating, cooling, ventilation and refrigeration thanks to **market-leading seasonal efficiency**.
7. Reduced environmental impact thanks to **refrigerant leak detection** systems and reuse of existing refrigerant through the **L∞P by Daikin** program.
8. High quality and performant products result in a **positive life cycle analysis**.
9. Our system are designed to be **easily adaptable** and upgradable to meet future building demands

Find out in which categories Daikin gains credits in the BREEAM International New Construction V6.0 2021 on the next pages.

VRV

Credits related to VRV solutions

Category	Page	Section	Objective	Maximum credits that can be obtained VRV	
Management	page 10	MAN 02	Promote the use of life cycle costing and service life planning and the sharing of data to raise awareness and understanding.	1	
		MAN 04	Encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.	2	
		MAN 05	Offer one-year post-handover support for building occupants, ensuring alignment with design intent and operational needs, facilitating smooth operation and adaptation.	2	
Health & Wellbeing	page 12	HEA 02	Recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.	2	
		HEA 04	Ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.	3	
		HEA 05	Assure the building's acoustic performance, including sound insulation meets the appropriate standards for its purpose.	1	
Energy	page 14	ENE 01	Design buildings to minimise operational energy demand, primary energy consumption, and CO_2 emissions	Up to 13	
		ENE 02	Offer energy sub-metering to enable post-handover performance comparison with targets, enhancing management insights and effectively addressing any performance gaps.	2	
		ENE 04	Encourage the adoption of design measures which reduce building energy demand - and associated carbon emissions - and maximize on-site renewables.	1	
Materials	page 16	MAT 01	Recognise and encourage the use of robust and appropriate life cycle assessment tools and consequently the specification of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building.	Up to 7	
		MAT 03	Promote the specification and procurement of responsibly sourced construction products	1	
		MAT 06	Optimize material efficiency to reduce environmental impact while maintaining building's structural integrity, durability, and service life.	1	
Waste	page 18	WST 01	Promote resource efficiency via the effective and appropriate management of construction waste.	2	
		WST 05	Mitigate the impact of extreme weather conditions arising from climate change over the lifespan of the building	1	
		WST 06	Accommodate future changes of use of the building over its lifespan	2	
Pollution	page 20	POL 01	Reduce the level of greenhouse gas emissions arising from the leakage of refrigerants used to heat or cool the building.	Up to 3	
		POL 02	Contribute to a reduction in local Nox emission levels through the use of low emission heat sources in the building	2	
		POL 05	Minimize potential noise from new development's fixed installations to prevent disturbance to neighboring noise-sensitive structures.	1	
Innovation	page 22	MAN 05	Gather energy data, set targets, optimize controls for reduction, and share feedback with developers for future project energy efficiency enhancements.	Up to 1	
		ENE 01	Report energy consumption targets by end use, design assumptions and input data	Up to 2	
				Up to 50 credits	

Credits related to Applied systems (Chillers, Air handling units, Fan coil units) ..... page 29

Detailed credit information

Management

This category encourages the adoption of sustainable management practices in connection with design, construction, commissioning, handover and aftercare activities to ensure that robust sustainability objectives are set and followed through into the operation of the building.

Issues within this category focus on embedding sustainability actions through the key stages of design, procurement and initial occupation from the initial project brief stage to the appropriate provision of aftercare.

MAN 02 – Life Cycle Cost (LCC)

3 credits can be scored in the below assessment criteria:

1. Elemental life cycle cost (LCC)
2. **Component level LCC options appraisal**
3. Capital cost reporting

VRV IV / VRV 5 heat pumps:

+1 CREDIT

Our heat pumps minimise the life cycle costs of the building thanks to the long-lasting quality and upgradability.

Our local support teams (service, key accounts, consulting sales, ...) assist in project management by providing the necessary information on system costs, ROI, servicing, ...

MAN 04 – Commissioning and handover

4 credits can be scored in the below assessment criteria:

1. Commissioning, testing schedule and responsibilities
2. **Commissioning building services**
3. Testing and inspecting building fabric
4. **Handover**

VRV IV / VRV 5 heat pumps:

+2 CREDITS

We provide installation manuals and a schedule of commissioning for the HVAC work, including an overview for commissioning and recommissioning.

Our local service support teams can assist in advanced commissioning and hand-over and can provide an extensive set of documentation to make a user guide and training schedule for HVAC.

MAN 05 – Aftercare support

3 credits can be scored in the below assessment criteria:

1. **Aftercare support**
2. **Seasonal commissioning**
3. Post-occupancy evaluation (POE)

VRV IV / VRV 5 heat pumps:

+2 CREDITS

Our local service infrastructure and resources provide oustanding aftercare support. Also the Daikin Cloud Plus ensures a pro-active aftercare, by detecting potential issues before they occur.

Detailed credit information

Health & Wellbeing

This category encourages an increase in the comfort, health and safety of building occupants, visitors and others within the vicinity.

Issues within this category aim to enhance the quality of life in building by recognizing those that encourage a healthy and safe internal and external environment for occupants.

HEA02 – Indoor air quality

5 credits can be scored in the below assessment criteria:

1. **Indoor Air Quality (IAQ) plan**
2. **Ventilation**
3. Emissions from construction products
4. Post construction indoor air quality measurement
5. Adaptability – Potential for natural ventilation

VRV IV / VRV 5 heat pumps:
+2 CREDITS

Daikin VRV systems have no negative reaction on the VOC and formaldehyde emission on the building. Daikin ventilation units are fully integrateable in the heat pump solution.
The system is also part of the indoor air quality plan (description of the systems in the building + which influence they have on the indoor air quality).

Advantages of direct expansion

VRV systems

The use of refrigerant as heat transfer medium makes our VRV systems highly efficient and allows very precise zone and climate control with a fast response to changing temperatures.

HEA04 – Thermal comfort

3 credits can be scored in the below assessment criteria.

1. **Thermal modelling**
2. **Adaptability for a projected climate change scenario**
3. **Thermal zoning and controls**

VRV IV / VRV 5 heat pumps:

+3 CREDITS

Our heat pumps provide an optimal indoor thermal comfort. Every indoor unit can be individually controlled and has a very fast response to changing temperature conditions, thanks to our direct expansion VRV technology with Variable Refrigerant Temperature.
This results in a positive Predicted Mean Vote (PMV) modeling and Predicted Percentage of Dissatisfied (PPD) measurement.

HEA05 – Acoustic performance

2 credits can be scored in the below assessment criteria:

1. **Indoor ambient noise and sound insulation**
2. Room acoustics

VRV IV / VRV 5 heat pumps:

+1 CREDIT

Our heat pumps satisfy the low acoustic performance of indoor units offering wide range of indoor systems and solutions for acoustic attenuation.
The indoor acoustic values should always be checked with a suitably qualified acoustician (SQA).

Curious to find out more?

Discover how Daikin's HVAC solutions significantly impact BREEAM's other categories such as:

Energy

› how to monitor energy and reduce carbon emissions efficiently;

Materials

› how to maximise responsible sourcing of construction products and material efficiency;

Waste

› how to set up waste management, adapt to climate change and design for disassembly and adaptability;

Pollution

› how to prevent and control pollution.

Download our entire guide to find out more,
discover your options and team up with us to achieve your green objectives, while staying within budget.

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