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blyweert bioclimatic solutions

Bioclimatic architecture is a way of designing buildings and manipulating the environment by working with natural forces around the building rather than against them

www.blyweertbeaufort.com





blyweert bioclimatic concept

Bioclimatic architecture is a way of designing buildings and manipulating the environment by working with natural forces around the building rather than against them.

Bioclimatic architecture refers to the design of buildings and spaces (interior-exterior-outdoor) based on local climate, aimed at providing thermal and visual comfort, making

Passive Building Principles

The term 'passive' has been associated to Bioclimatic Architecture since its inception. Passive buildings are designed, and built to ensure that they maximise the environments natural resources. Thus reducing overall energy consumption through 'active' heating and cooling systems therefore having a 'passive' effect on the environment.

The key principles to designing passive buildings:

Solar Orientation - The layout of the site and the position of the building will ultimately determine the amount of natural energy the building can receive.

Building Design - How the building reacts to the environment and how it harnesses

use of solar energy and other environmental sources.

Blyweert Bioclimatics incorporates these key factors into the core of product design to provide overall holistic building envelope solutions.

The core values and concepts of Blyweert Bioclimatics are:

the solar energy around it. Building design determines the layout of rooms, positioning of windows, facades and shading all focusing on maximising and controlling solar energy.

Building Structure - The composition of the walls and roof are vital. The levels of insulating materials, and the breathability of the material used, determines the passiveness of a building. In order to achieve passive status all cold bridges must be sealed and the building must be naturally ventilated.

Technology - Renewable energy then allows a passive building to become self sufficient. A passive building requires a low amount

- **Ultra Low U-values**
- **Maximised Light**
- **Natural Ventilation**
- **Solar Control**
- **Acoustic Insulation**
- **Security**

of heating therefore less energy is required. Peripheral systems are used to control and minimise the amount of 'active' heating and cooling systems.



Realisation of Synergy

The realisation of synergy ensures positive use of the external environmental constraints, and all the organic natural resources that are essential to life. We strive to generate a synergy between the Architecture and its environment, capitalising on natural resources ensuring optimum performance and minimum energy consumption.

It is our endeavour to distinguish between three natural concepts, simultaneous but

distinct, creating synergy throughout:

- Savings in the use of raw materials such as energy, using them in a Renewable way (which can be renewed without long-term effects).
- Efficiency; Combining state of the art products and superior performance with clever architecture, allowing us to positively enhance the natural elements to create self generating efficiencies

- Reducing pollution, using systems and products that avoid contamination in the surrounding environment and offering maximum sustainability

Blyweert Bioclimatic Solutions is an essential part of an overall approach to long-term, sustainable architecture. Offering a range of high performing products designed to provide Bioclimatic solutions to any project

Living things are sustainable, if we design living buildings we will make sustainable solutions

blyweert bioclimatic solutions

Bioclimatic design can be found in all Blyweert Aluminium systems, from window and doors, to curtain wall and proprietary systems. Blyweert Bioclimatic solutions use an integrated design approach considering all elements as a holistic approach to the building envelope. The aim is to minimise energy consumption whilst maximising occupant comfort at an overall building cost equal, or lower, to that of a similar building using conventional products.



Window & Door Systems

Thermally enhanced framing coupled with multi-chamber profiles provides a range of solutions to suit any project. All systems are designed to offer outstanding weather, security and thermal performance.

Products

- Athena HI
- Apollo HI
- Triton HI
- Triton POV HI
- Hermes HI

Key Benefits

- Enhanced Thermal Performance
- Acoustic Control
- Maximum Solar Control
- Energy Efficiency
- Natural Ventilation
- Maximum Light Transmittance



Ground Floor Treatments

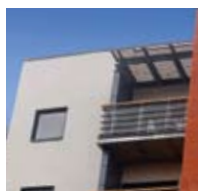
This comprehensive and high performing system includes thermally enhanced screening and a range of high-traffic doors. A versatile and flexible solution to shop fronts, entrances and ground floor framing

Products

- Krios
- LPS1175 (SR2) Commercial Door

Key Benefits

- Enhanced Thermal Performance
- Acoustic Control
- Maximum Solar Control
- Energy Efficiency
- Maximum Light Transmittance



Sliding Door Systems

A wide variety of high performance and thermally insulated sliding door systems allowing multi-panel combinations of both fixed lights and sliding doors.

Products

- Kolos HI
- Pegasse HI

Key Benefits

- Enhanced Thermal Performance
- Acoustic Control
- Maximum Solar Control
- Energy Efficiency
- Maximum Light Transmittance



Curtain Wall Systems

A complete range of façade systems designed to meet the demands of modern day architecture. The system is thermally broken and can incorporate fixed lights, opening vents and a full range of doors

Products

- Kratos HI
- Bio Wall (Naturally Ventilated)
- Bio Wall (Externally Ventilated)

Key Benefits

- Enhanced Thermal Performance
- Acoustic Control
- Maximum Solar Control
- Energy Efficiency
- Natural Ventilation
- Maximum Light Transmittance



Peripheral Systems

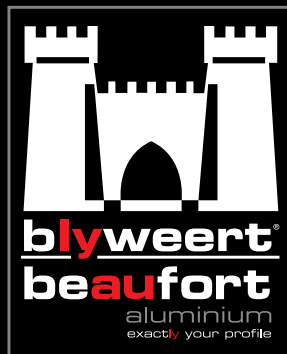
A range of systems designed to allow you maximum Bioclimatic control of the building envelope. Systems offer a variety of Solar Shading, Louvres, Photovoltaics and Building Management Systems

Products

- Icarus Solar Shading
- Louvres
- Ventilators
- Building Integrated Photovoltaics
- BMS

Key Benefits

- Enhanced Thermal Performance
- Acoustic Control
- Maximum Solar Control
- Energy Efficiency
- Natural ventilation
- Maximum Light Transmittance



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