

**WICONA®**

By  Hydro



Sustainable design variety  
for transparent architecture

» VARIOLUX

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THE GLASSHOUSE SYSTEM FOR PROJECT SOLUTIONS



# » VARIOLUX – the versatile glasshouse system







Altmarktgarten, Oberhausen

## Unified building solutions

Our VARIOLUX glasshouse system experts support you throughout your project – from the initial idea to completion. We assist you in planning the building shell with technical designs, calculations and drawings. Together with our qualified metal construction partners, we provide you with the supporting substructure, the aluminium profile system, and the corresponding accessories – individually developed for your project.

Our patented VARIOLUX glasshouse system has already proven itself in numerous demanding projects and meets all European standards in the façade sector. VARIOLUX is compatible with all proven WICONA window, door and façade systems – representing quality, system reliability and over 30 years of experience.

## Maximum design freedom

Thanks to the modular profile and sealing system, a wide range of design options can be implemented: an open roof structure, a fully glazed building envelope, a curved roof, or the integration of photovoltaic panels – even retrofitting or building extensions to implement future-oriented green farming concepts in urban areas are possible. All profile systems can be fitted with different glass thicknesses and coated in any RAL or anodised colour – for individual architectural accents.

## Energy-efficient and sustainable

Depending on project requirements, the VARIOLUX glasshouse system is also available as a highly insulated and thermally separated design. The thermal-bridge-free all-round insulation, partly made from recycled material, enables energy savings of more than 40% and meets the strict recommended values of the current Building Energy Act (GEG).

Depending on the design option, the aluminium profile systems are made from Hydro CIRCAL. This particularly sustainable aluminium alloy contains up to 100% recycled end-of-life aluminium – that is, aluminium scrap. Only 5% of the energy required for primary aluminium is needed in production – with the same high quality. In addition, Hydro CIRCAL has one of the lowest CO<sub>2</sub> footprints in the world. In short: With the VARIOLUX glasshouse system, you can score full marks in building certifications such as DGNB, LEED or BREEAM.



**Maximum design freedom**



**Complete solution**



**High insulation**



**Sustainable**

» We offer you more



Bayan Botanical Garden, Kuwait

## More design freedom for architects

**“A wide range of design variants with different technical parameters – there are no limits to your ideas.”**

- Contemporary design and top quality with a wide range of design options – including colour selection
- Expert advice and support for a glasshouse system proven for over 30 years
- Everything under one roof: Aluminium profile system, accessories, supporting sub-construction
- Maximum transparency and outstanding insulation with low energy costs
- Compliance with the requirements of the current GEG
- Sustainable and resource-efficient through the use of Hydro CIRCAL 75R aluminium alloy and recycled material in the insulation





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## Greater cost-effectiveness for building owners and project developers

**“The VARIOLUX glasshouse system combines quality and energy efficiency – with the safety of a systems provider.”**

- One of the most energy-efficient glasshouse systems on the market
- Top quality and certified system security in accordance with European standards
- Versatile glasshouse system proven for over 30 years
- Shortest payback periods thanks to sustainable construction cost savings
- Sustainable and resource-efficient through the use of Hydro CIRCAL aluminium alloy and recycled material in the insulation – for more points in building certifications such as DGNB, LEED or BREEAM



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# » We make the difference

## From concept to completion

### Building shell planning

WICONA supports you in planning the building shell – from the initial idea, through various design options, to technical feasibility and implementation checks.

### Development

We work with you to develop a customised solution for your project. In addition to technical designs, calculations and project drawings, we advise you on selecting the system that best meets your requirements and on determining U values.

### Complete package

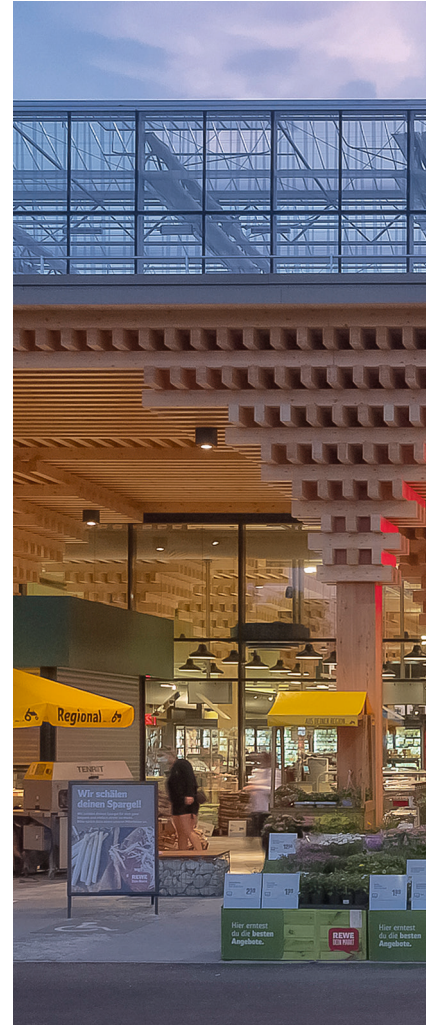
Together with our qualified metal construction partners, we deliver the complete solution. In addition to the aluminium profile system, our partners provide the complete steel/wood sub-construction, including assembly.

### After Sales

Even after project completion, we continue to support you and your customers with spare parts. You can rely on the WICONA system guarantee for the entire system.

### Patented and certified solutions

With the glasshouse system, you benefit from a patented solution whose performance has been tested in accordance with façade standard EN 13830.



REWE Green Farming, Wiesbaden-Erbenheim



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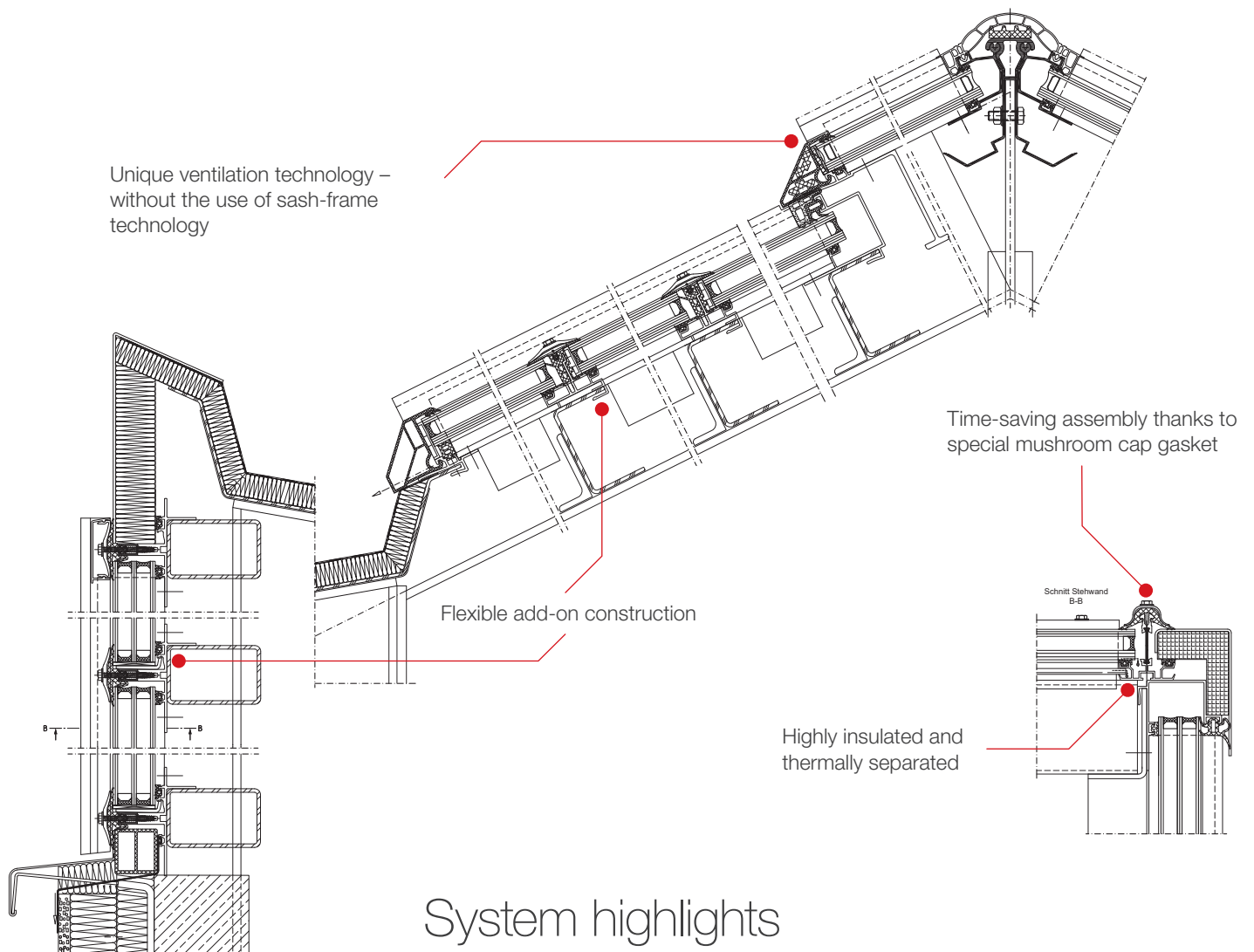
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## Testing and approvals

- Air permeability, watertightness, resistance to wind load and impact resistance in accordance with DIN EN 13830:2003-09.
- Determination of the supporting capacity of pressure plate fixings according to the Technical Rules for the Use of Crash-Safe Glazing (TRAV)
- Determination of the coefficient of heat transmission according to DIN 52 619 Part 3



# » A glasshouse system that convinces



## System highlights

### Modular system

The modular design of the system with universal profile and sealing systems enables a variety of applications – including curved roofs, open-air roof constructions or façade-integrated photovoltaics – both for new buildings and for extensions or retrofits. All profiles can be fitted with different glass thicknesses.

### Flexible add-on construction

The glasshouse system is an aluminium add-on construction made from profiles with an elevation width of 48 mm. This can be installed or mounted on any supporting sub-construction – such as steel or wood. This solution enables a high degree of transparency and thus allows for maximum daylight penetration. Transitions from a skylight construction to the façade can also be designed to be visually elegant and efficient.





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Beck AG, Emmen (CH)

### Unique ventilation technology

The patented design enables continuous ventilation in both the roof and façade – regardless of length. Thanks to the special frameless ventilation sash, multiple ventilation flaps can also be arranged one above the other without difficulty.

### Energy efficient

Depending on project requirements, the VARIOLUX glasshouse system is also available as a highly insulated and thermally separated design. The thermal bridge-free all-round insulation, partly made from recycled material, enables energy savings of more than 40% and meets the strict requirements of the current Building Energy Act (GEG).

Whether for active energy generation or feeding into the grid, suitable photovoltaic insulating glass modules can be easily integrated into the VARIOLUX glasshouse system.

### Time- and cost-saving processing/assembly

Thanks to its sophisticated modular system, VARIOLUX also excels in terms of processing and assembly, achieving time savings of up to 30%. This means shorter construction times, more economical processes and faster project completion.

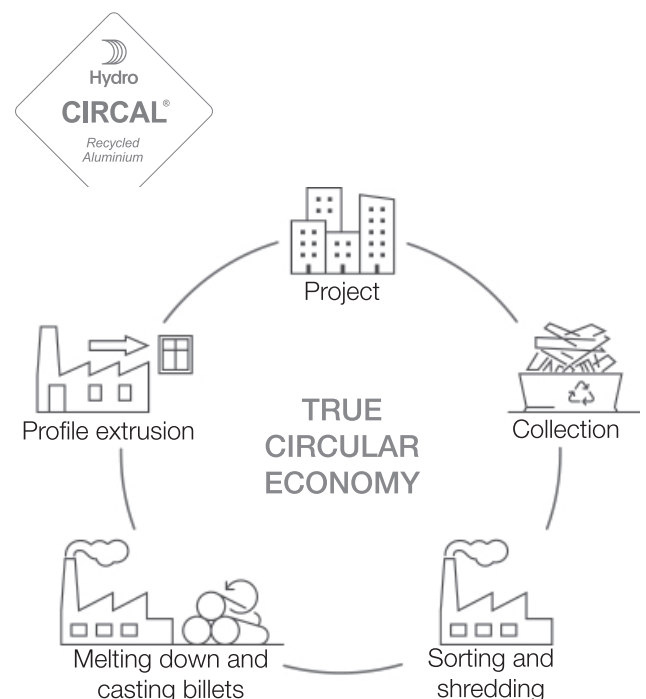
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Beck AG, Emmen (CH)





# » VARIOLUX – from concept to completion

The project solution consists of aluminium profile systems and customised accessories on a supporting sub-construction.



Jardin d'Hiverre, Baarn (NL)

© SmiemansProjecten



Botanical Garden, Gießen



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Research Greenhouse, Goethe University, Frankfurt am Main

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