




MORE TIME OUTSIDE: EXTEND YOUR PATIO SEASON WITH GLASOASE®

weinor has developed the Glasoase® in order to meet the changed demands of its end customers. More and more people want to spend as much time as possible outdoors. The shortest way for house owners to get outside is by stepping onto their patio.



In order to be able to enjoy as much time as possible on their patio also during spring and autumn, they need an effective guard against wind, rain and sun. At the same time, builder-

owners and renovators demand a solution that involves less expenses and costs than a conservatory. Here, the Glasoase® comes into play. It is not to be seen as an expansion of the living

area as defined by the requirements of a conservatory. But it significantly extends the time during which the patio can be used.



Product benefits

The weinor Glasoase® is a combination of a weinor patio roof and weinor all-glass glazing elements. The weinor patio roof of the weinor Glasoase® is usually combined with glass, and in individual cases with sandwich panels.

- The weinor Glasoase® makes it possible **to use the garden much longer** as it would be the case with an awning, without being affected by the disadvantages of a living-room conservatory.
- The glass elements of a weinor Glasoase® can be opened in different ways, if desired. For example, the multi-utility folding partition w49-c offers **highest flexibility**. It can be moved into a flat or V-position, or completely open around the corner, to the left or the right. In most cases, the glass elements are combined with fixed glazing. The goal: minimum frame, **maximum transparency**.
- The Glasoase® **shields against wind**. The light's UV-rays and direct sunlight warm it up quickly on cold days. And the use of the **weinor infrared heater Tempura** helps warming the Glasoase® quicker during the colder season.
- The Glasoase® has been constructed not to be air-tight on purpose. Because the **air circulation** between the glass panels helps reducing heat build-up and the formation of condensed water. Upon request, it is also possible for the user to have a passive, permanent ventilation integrated in the roof.
- Customers often like to **combine** the Glasoase® **with a textile sunscreen** in order to prevent being blinded by the sunlight. Additionally, the sunscreen reduces the warming of the Glasoase®.
- The profiles of the weinor Glasoase® are made **of non-insulated aluminium** – on purpose because they guarantee high stability, a graceful look and highest transparency.



Technical description

- Uninsulated top profiles made of aluminium.
- With glass roofing made of uninsulated LSG (laminated sheet glass) as overhead glazing.
- Uninsulated and single glazing element as weather guard, moveable or as fixed glazing.
- Fixation to a respective foundation is necessary to ensure stability.

The different glass construction types and their distinctions

The different glass construction types depicted here include extensions or buildings with primarily transparent wall and roof building materials. **As a general rule, the respective state building regulations apply for all buildings.** Especially the requirements in terms of the building law, statics and heat insulation for building, foundation and construction depending on the location and the territorial particularities have to be observed.

The description at hand only defines the concept of buildings or extensions that feature at least one wall surface and where the major part of the roof surface is made of transparent or translucent building materials.



Greenhouse

- Building primarily for **guarding plants against climatic conditions.**
- Making use of the **greenhouse effect.**
- **Dampening** of short-term fluctuations of the outside temperature.



Glass extension

- Building for guarding people and plants against climatic conditions.
- Making use of the greenhouse effect.
- Dampening of short-term fluctuations of the outside temperature.
- **People may stay permanently in the greenhouse if it features a statically permissible overhead glazing.**



Conservatory

- Building for guarding people and plants against climatic conditions.
- Making use of the greenhouse effect.
- Dampening of short-term fluctuations of the outside temperature.
- People may stay permanently in the greenhouse if it features a statically permissible overhead glazing.
- **Temperature-control to prevent frost or slightly heatable.** Can also be used temporarily as living or commercial space, depending on the season. No heated room in terms of the Energy Saving Ordinance (Energieeinsparverordnung – EnEv) (Room can be used occasionally at least 19°C. The following applies for conservatories with a floor space of up to 50 m²: when heated for a period of up to 4 months and temperatures between 12 and 19°C: U-value glass roof < 2.70 W/m²K, glazed exterior walls < 1.90 W/m²K).
- **Thermally broken profiles, heat-absorbing glazing** (with ventilation and/or shading components), suitable for the stay of persons during the transitional months (spring, autumn), and the overwintering of sensitive plants.

Living-room conservatory



The living-room conservatory is a conservatory

- that is designed **to be used year-around as living space** and thus intended to be heated up to a room temperature of **more than 19°C** during the heating period.
- the **ventilation and sun protection of which limit the heating during the summer** (depending on the local conditions, the direction and according to the generally recognised state of the art). Given the current state of the art and without cooling, the room temperature can be limited to a maximum of 5°C above the ambient temperature. Exceeding the limit values of the room temperature according to DIN 4108-2 have to be tolerated during 10% of the period of use.

Living-room conservatories with a floor space of up to 50 m²

A simplified proof of energetic quality is possible for living room conservatories with a floor space of up to 50 m² ("small buildings" or building extensions, respectively):

- The U-value of the glass roof must always be less than or equal to 2.0 W/m²K.
- The U-value of the glazed exterior walls must not exceed 1.5 W/m²K (curtain wall).
- The U-value of massive exterior walls and floor construction plus floor slab to unheated rooms or the ground soil must not exceed 0.30 W/m²K.

As an alternative to this regulation according to § 8 and 9 of the EnEV, it is possible to provide extensive proof of the primary energy consumption and transmission heat loss.

Living-room conservatories with a floor space of more than 50 m²

The simplified calculation acc. to § 8 and 9 of the EnEV may not be applied for buildings with a floor space of more than 50 m².



Irrespective of their size, the following applies to living-room conservatories:

- Construction and installation must fulfil the requirements regarding the airtightness set forth in the EnEV.
- The formation of heat bridges must be limited to the degree that reflects the generally recognised state of the art. This also includes the design of thermal glazing with a "warm edge". This reduces the inevitable formation of condensed water.
- The circuit points to the structure must be executed according to the state-of-the-art and taking into consideration the object-specific structural-physical and static requirements.
- The installed heater must be defined according to the particularities of the glass construction. The heater must be planned and executed in such way that, if possible, starting from the coldest points of the room, sufficient ambient air convection is generated so that any temporarily forming condensed water (short-term climate change, e.g. in the morning hours, opening doors to the main house ...) dries up rapidly.
- There are no building regulations for a minimum pitch of glass roofs.
- Building components that are generously glazed on the sides and that feature a predominantly opaque roof are not considered conservatories. Possible lights in an otherwise compact building are categorised as roof-lights, dome lights or window strips.



The Glasoase® compared with a living-room conservatory

This is what the Glasoase® can do:

- **No long-term planning** necessary.
- **Building permit** is granted easier and faster.
- **No statutory requirements as regards energy** must be complied with (EnEv).
- **It can be used for a long period throughout the year**, especially in case of mild winters.
- Just pertaining to the construction, the Glasoase® is about **30% cheaper** than a living-room conservatory. Further high costs for heating, floor, circuit points etc., which must be invested for the living-room conservatory, are also omitted.
- **Full glazing** without disturbing frames: that means a **nicer look**, more light, better visibility.
- **Modular design principle that is kind on the wallet:** in stages, the user can add the patio roof and the side screens step-by-step, until completely glazing the room all around.
- **Significantly less error sources during installation:** Tightness gaps and condensed water are classical workmanship deficiencies in living-room conservatories which do not play an important role in case of the Glasoase®.
- **A greater open air feeling:** While the living-room conservatory is an extra room in the house, the Glasoase® is more connected to the outside area due to its construction. The user has a more intense relationship with nature.
- **Standard compliant construction method acc. to EN 1090** (European standard for the execution of steel structures and aluminium structures).

Caution: No false expectations.

The Glasoase® is able to do a lot, but not everything.

- Not heatable without **high thermal losses**.
- **No complete tightness**, especially in case of driving rain.
This has to be taken into consideration when choosing the floor of the Glasoase®.
- No complete **guard against draft**.
- **No guard against frost.** But: Frost minimises the formation of condensed water.
- Even though the glass elements prevent insects from entering, they are **no 100% insect screen**.
- Caused by the temperature differences, the material is working and just as it is the case with a living-room conservatory, there might be **“cracking noises”** in the Glasoase®.



reddot design award
winner 2009

High-quality technology – award-winning design

The satisfaction of our customers is our main concern. That is why weinor as a medium-sized, internationally operating company offers the best quality

“Made in Germany”. All our products are designed and manufactured in Germany according to high quality standards.

And we also make no compromises in terms of design. In 2009, the weinor Glasoase® received the internationally renowned reddot design award.



We reserve the right to make technical changes. For technical reasons, the colours may appear slightly different when printed.