

General Terms and Conditions for Quotations

Status: 2017, January 1st

Please observe the following information aimed at protecting you and your customers from damage and so as not to endanger any claims for compensation and warranty claims. The following information is designed to draw your attention to specific details which are often overlooked, but are important, and therefore must be considered. As such, recommendations are of a general nature, and not aimed at each specific case, they do not lay claim to completeness. All valid laws, directives, standards and recognised technological regulations must also be observed. Please refer to the separate enclosures for product-specific information. Please contact us if there is any doubt. Non-compliance with this information will endanger any claims for compensation or warranty claims.

1. Notes on pricing

1.1 Validity

The prices are valid for orders with of the requested quantity. In case of measure and quantity change or an individual reordering a recalculation is required.

1.2 Surface calculation

Unless agreed otherwise, the minimum calculation surface is 0.5 m². In order to calculate unitprices, the length dimensions (width and height) are rounded up to the nearest amount in centimetres divisible by 3. In the case our pricing is not based on requested dimensions, the square metre prices apply to panes with a maximum size of 4 m², largest edge length 3 m and average for the order of 1 m². When lacking knowledge of individual measurements, we reserve the right to make a price increase, provided that the wastage ratio is above 20%. When calculating the glass surface the smallest circumscribed rectangle must be taken into account.

1.3 Size surcharges

Due to the variety of different glass type, inlets and constructions, the surcharges will be calculated individually on inquiry. Generally speaking, oversize and model surcharges are calculated on the prices proposed.

Major oversize surcharges:

> 2700 x 2700 mm	30%
> 3800 mm	15%
> 4300 mm	20%
> 5000 mm	30%
> 6000 mm	100%

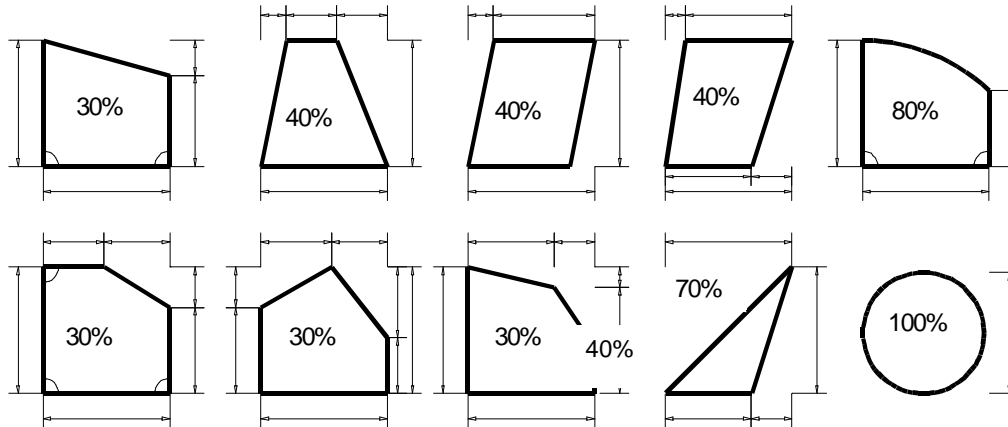
Please note our maximum production quantities depending on the insulating structure.

1.4 Model

Model panes are charged according to the smallest circumscribing rectangle based on information from the customer, plus the applicable model surcharge.

The surcharge for model panes with three right angles and one oblique edge is 30%. We can provide information about other surcharges and dimensions on request.

Example:



The model surcharges apply to all separately listed additional prices, such as edge processing, screen printing, surcharges for excess lengths, drilling holes, etc.

1.5 Stepped glazing unit

In the case of stepped glazing units, the dimensions of the larger pane are used as the basis. We supply stepped glazing units with one step at no extra charge. Please request the extra charges for additional steps.

In the case of projecting glass involving soft-coated panes, the effect of the oxidation process on the coating can become visible in the installed condition and lead to complaints. It is recommended that shading of this area by means of a stuck-on fascia board should be provided right from the price inquiry stage.

1.6 Edge processing

Edge processing is generally charged by minimum length of 1000 mm, based on the edge length of the smallest circumscribed rectangle.

1.7 Screen printing costs

Relevant for the calculation of the screen printing is the smallest circumscribed rectangle of the entire glass surface. This also applies for a partially printed glass.

1.8 Commissioning

For deliveries according to Customers' packaging plan additional costs in the amount of € 7.50 per m² will be charged.

1.9 Shipping insurance

For all offers including fire-resistant glass, walkable glass and alarm glass an additional 2% shipping insurance on the net value will be incurred by the client.

1.10 Product documentation

It is necessary to inform us at the inquiry stage in case product documentation associated with costs is required, such as test certificates, technical certificates or manufacturer's reports.

1.11 Packaging

Unless agreed otherwise, we decide whether to make the delivery in crates or on loaned racks, according to practicality. In the case the customer requests special packaging (and this can be achieved), it is charged according to the costs incurred.

If packaging regulations are specified, the increased packaging and transport costs will be charged according to the costs incurred.

In the case weight limits are specified which entail increased packaging or transport costs then the additional costs incurred shall be passed on by us.

For deliveries on racks, there is **no secondary packaging** as standard. If stretch foil packaging is required around the panes as a protective measure (e.g. against dirt, UV radiation, etc.) then the additional cost is 0.50 €/m² plus VAT (calculated based on the glass). This must be agreed when the order is placed.

1.12 Freight costs for small quantities

When small quantities are ordered, the delivery time might be longer because separate transport cannot be justified on grounds of cost. If a particular delivery date is targeted but this cannot be achieved for the reasons mentioned above, then the product will be delivered without delay upon payment of the relevant freight costs.

1.13 Terms and conditions of payment

Unless agreed otherwise, invoices are due for immediate payment, without discount. Furthermore, our general terms and conditions of sale and delivery apply in the version applicable at the time when the contract is signed. We reserve the right to demand collateral.

1.14 Withholding

Refusing to pay for or withholding payments is excluded if the buyer knew the defect or other reason for complaint and has nevertheless accepted the goods. This applies, even if it remained unknown to him due to gross negligence, unless we have fraudulently concealed the defect or other reason for complaint.

Offsetting is permissible only with undisputed or legally effective counterclaims. Any withholding of payments from previous or other transactions of the ongoing business relationship is not permitted.

1.15 Validity of the offer

Unless agreed otherwise, prices are valid for six weeks. Prices do not include VAT.

Illustrations, calculations and technical specifications which we also supply are given in good faith, but do not represent any assurance of properties. The function values were calculated using the current DIN / EN standards, based on test samples. These values change slightly depending on the type of glass, glass thickness and dimensions and must be requested anew, if necessary.

Specified delivery times may vary according to the season, and therefore it is only possible for confirmed delivery times to be stated on placement of the order and in consultation with the upstream suppliers. Also, such confirmations are dependent on our upstream suppliers rendering their own deliveries on schedule.

All orders are solely subject to our General Terms and Conditions of Business in the version applicable at the time when the contract is signed, which usually accompany our offers and order confirmations. We can send a copy of these general terms and conditions of business on request. They can also be downloaded from of www.okalux.com.

2. General notes

2.1 Glass quality, tolerances and visual quality

These criteria are based on the relevant DIN regulations and other standards that are usual in the industry, e.g. the *guideline for visual quality*. Furthermore, information texts and *customer notes* apply for all product lines. The acceptance of different requirements requires our written agreement. Minor deviations from the agreed quality or non-essential restrictions in usability are irrelevant. Manufacturing-related deviations of dimensions, content, thicknesses, weights and colors are acceptable under the customary tolerance, even with partial or additional deliveries. Other arrangements are to be agreed separately in writing. The Contractor at any time has the right to independently produce a higher quality standard with regard to the qualities mentioned.

2.2 Glass statics

We do not undertake a static inspection of glass thicknesses. Our glass thickness recommendations can only be taken as reference values. They are not suitable for use as static certificates that need to be presented to the local building authority. In such cases, only a recognised statics engineer can provide the certificate. In the case of glued connections with a static support function (structural glazing), we do not check the silicone joint. However, the sealant manufacturer in question can calculate the corresponding dimensions on request. The data required for this should be made available to us. If component tests are required, the test specimens should be provided to us free of charge. We must be informed in good time in advance where structural glazing is involved.

2.3 Certificates under building regulations, especially individual approvals

The costs for an individual approval of special glass designs are not included in the glass price, and not for test panes either. The responsibility for deciding whether an individual approval is required lies with you or with the contractor responsible for the statics, not with ourselves.

2.4 Sampling

Our standard samples are approval samples for our different products. They do not represent a binding reference for specific projects.

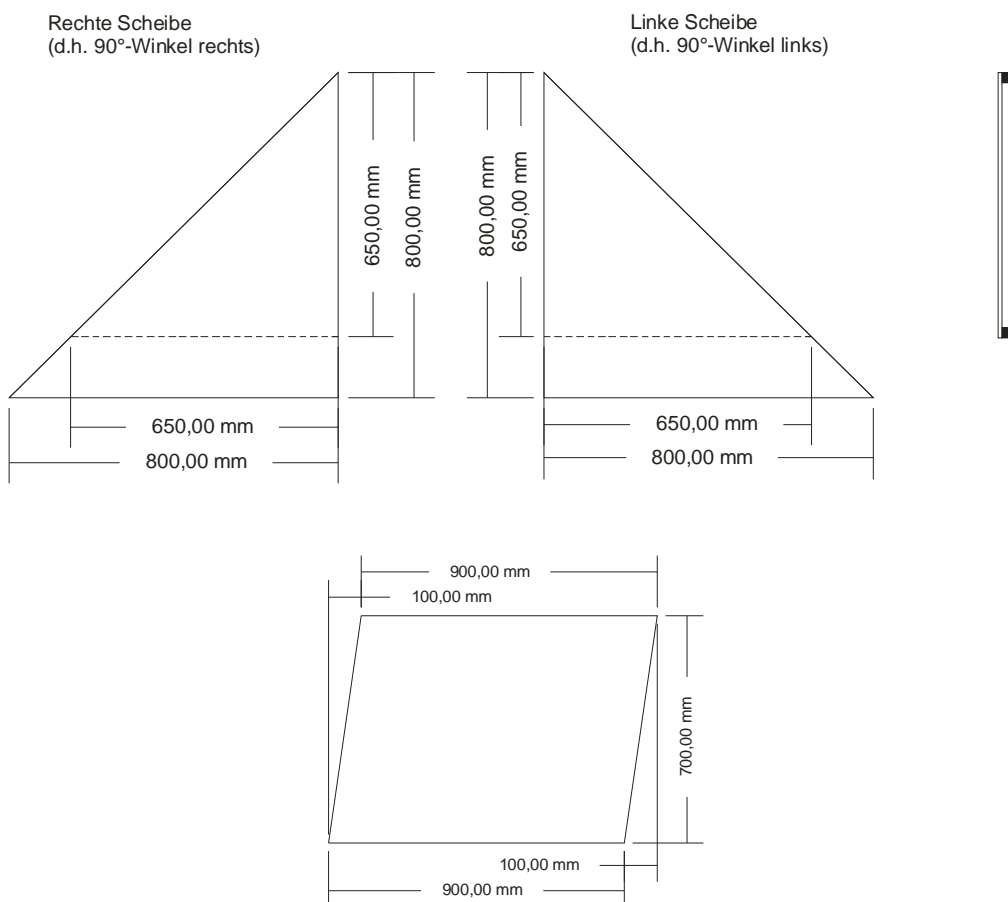
Project-specific samples with an individual structure, size and technical properties must be applied for separately and specifically and will be invoiced

2.5 Dimensioning

Diagrams of panes must always be specified with an exterior view. The rear offset of the interior pane is indicated by broken lines. In the case of trapezoidal shapes, parallelograms and other panes without right angles, the offset must be measured exactly; specifying angles alone is not sufficient. Diagram sheets with dimensions are not allowed to contain any misleading dimensions or information that is unrelated to the glass dimensions.

In specifying dimensions, the first dimension is the width, the second is the height.

E.g. Stepped glazing unit: width in mm x height in mm exterior panes
width in mm x height in mm interior pane



In the case of templates, the exterior view should be indicated and, for stepped glazing units, the step. The templates should be sufficiently rigid to allow the dimensions to be transferred exactly. Other materials such as hardboard or chipboard will not be accepted"

In the case of dimension data lists for model panes, it is necessary to clarify before issuing the order whether the dimensions are compatible with the production control system used, and whether the file formats used for the electronic transfer of lists or drawings can be read.

2.6 Glass racks

Glass racks remain our property. They are an important production resource and will be collected after having been emptied. They must be free from packaging material as well as broken and left-over panes. They must be provided for collection from a central point which can be safely accessed by a truck.

Once the racks have been made ready, we request notification without delay of where the racks can be collected.

The racks may be used for 45 days rent-free. Each subsequent day will be charged at 2.50 € plus VAT per day. Irreparably damaged racks or racks that have not been received back after one year shall be charged at their repurchase price, irrespective of our rental claims.

2.7 Delivery

The delivery condition "ex-works" is regarded as agreed unless another arrangement is stated in our offers. In the case of the delivery condition "CPT named location acc. to Incoterms 2010", deliveries will be handled either by a haulage company's truck or our works truck. If delivery on a crane vehicle is required, this must be agreed separately. Additional costs shall be quoted in the offer. In principle, unloading on site is the responsibility of the recipient. The unloading location must have unobstructed vehicular access. Unless the customer has provided specific information, we reserve the right to select the delivery vehicles. We also reserve the right to charge additional costs resulting from the customer's requirements (e.g. delivery with crane vehicle, separate deliveries, etc.). We must be informed beforehand in writing about particular loadings due to transportation (vibration, impact). In other regards, our *customer notes on delivery* must be complied with.

2.8 Subsequent deliveries

Failures due to breakage and defective quality cannot be avoided in the processing of highquality glazing. The greater the number of processing stages and intermediate transport stages, the greater the number of failures. With regard to coated glazing, we are dependent on the manufacturer of the special coating. Rarely used coatings are only produced at intervals of up to 3 months apart. The coating lines are highly sensitive, which means that production stoppages and delivery delays occur from time to time. Therefore, as a matter of principle, we are obliged to refuse follow-on costs arising from delayed or incomplete delivery and long delivery times for subsequent deliveries.

2.9 Delivery on call

Orders can be stored free of charge up to 2 weeks after the desired completion date / call date. The cost of shipping warehouse and storage risk pass to the Client at this point, and OKALUX is generally entitled to invoice from this point.

Call orders must be placed at least 5 days in advance of the desired delivery date.

2.10 Glazing

Our *customer notes on glazing* must be complied with.

3. Technical information about glass

3.1 Edge processing

Unless specified in our offer, we offer float glass and laminated safety glass made from float glass with an unmachined cut edge and, for toughened glass and heat strengthened glass, a normal bordered edge.

If the glass is provided for glazing without covering rails with silicone joints, the affected glass edges of float glass combinations should be machined, i.e. at least bordered. This is relevant in terms of price, therefore corresponding information should be provided with the order.

In the case of thick glass and heavy panes, the increasing bottom and top breakages and the increasing tolerances in the laminated safety glass combination mean that suitable edge machining must be provided, otherwise serious edge injuries can occur during manipulation prior to installation.

With laminated safety glass the edges of which are visible we recommend to repolish the entire VSG unit in order to ensure the parallelism of the individual panes and to avoid foil projections (does not apply to ESG TVG) Furthermore DIN EN ISO 12543 is applicable.

3.2 Screen printing

If the screen printing price is offered as an extra price in €/m², this additional price refers to the gross glazing area.

Balustrade panes should only be installed in front of a non-transparent and dark background, otherwise they can look hazy and cloudy. Balustrade panes must always be installed with the visible side (no. 1) outwards; otherwise the space between the panes will overheat.

In the case of screen-printed panes, there is a risk of minor colour discrepancies if deliveries are made from different batches.

In the case of subsequent orders for special patterns and colours, it is necessary to take account of the costs for making the new screen, mixing the inks and the setup costs.

In other regards, our *customer notes on screen printing* must be complied with.

3.3 Glass colour deviations

The inherent colour of the glass (referred to as the green tint) is subject to fluctuations due to the manufacturing process. In the case of coloured, coated glass or glass with a vapourdeposited or mirrored/silvered coating, or laminated safety glass with a white or coloured foil, there may be colour discrepancies if deliveries are made from different float glass batches. The colour can appear differently in transmission and reflection.

Colour discrepancies can also occur when different glass thicknesses are used. Only the same glass thickness should be used in a coherent facade, in order to reduce colour variations due to the inherent colour of the glass. Alternatively, white glass can be used. As a general rule, we recommend white glass for designer glass such as OKACOLOR or screen printing.

3.4 Thermal glass breakage due to highly absorbent glass types

Through-dyed glass is highly thermally sensitive and therefore can only be used thermally prestressed. Highly absorbent solar protection coatings respond sensitively to hard shadows and when installed in winter/spring, if the building is not yet heated. At g values below 34%, we recommend using thermally pre-stressed glass panes, or to contact us for advice.

3.5 Insulation glazing

3.5.1 Insulation glazing

If no special edge seal joint is requested, the normal overlapping depth at the back of the spacer is 5 mm to 6 mm, cumulatively 13 mm to 14 mm. In order to establish the dimensions of the edge seal joint, we require the necessary data to be provided. We require information to be provided with the inquiry if there are special requirements on the edge seal joint, e.g. in illuminated ceilings and small pane glazing with a low rebate depth or reduced edge seal joint as well as silicone or point-mounted glazing with increased tensile load and increased edge seal joint depth.

If the client does not specify the use of silicone or polysulphide for the secondary sealing, we shall select what we believe to be the most suitable sealing material for the application. The price for insulating glass using silicone stated in our offer only refers to silicones with UV resistance. If the client provides increased demands with respect to the silicone to be used (for example, an SG-glazing) this gives rise to higher costs. These higher costs should be agreed upon before execution.

Glass constructions without cover strips have a visible edge seal joint, so that colour contrasts and tolerances in the various edge seal joint materials will be shown. In the case that visual properties are demanded in this regard, it is recommended for dark-coloured edge screen printing to be used. If inlays in insulating glass are used, the edge screen printing avoids visible slits caused due to the production process.

For insulating glass with drilling holes for point fixing It should be noted that the warranty period on the tightness of the edge and hole composite is to be agreed separately, but will be in no case more than two years.

In the product families OKALUX, OKASOLAR, OKAFLEX, OKATECH, OKAWOOD and OKACOLOR, the edge covering / penetration depth must be agreed with us individually at the offer stage.

3.5.2 Small-format insulating glass panes

In the case of small-format insulating glass elements of less than about 50 cm, the flexural loading of the glass as well as the strain on the edge seal joint are significantly increased compared to insulating glass with a normal format.

Differences in temperature and air pressure result in tension in the glass and the edge seal joint due to changes in the pressure conditions in the space between the panes, which cannot be dissipated by deformation of the pane as a result of the small dimensions. Under unfavourable conditions, this can result in damage to the edge seal joint or breakage of the glass.

The recommended course is to consult with us regarding the necessary dimensions. We have computer programs for calculating the load on the glass and the edge seal joint. It is recommended for such small panes to be avoided.

3.5.3 Colour variations in solar and thermal insulating coatings

The colour impression of the insulating glass is derived from an interaction between different materials (glass, coatings) with a different refractive index. Colour variations caused by interference arise in the exterior reflection, depending on the wavelength of light and the observation angle. In this regard, please refer to our customer notes in the *guideline for visual quality*. For the same reason, the colour effect of portable samples should be treated with caution. Depending on the glass thickness and the gap between panes in the model, and the lighting conditions, there may be discrepancies from the glass actually used on the building.

If in doubt, we recommend inspecting an original setup in a model facade. Productions and deliveries only following receipt of payment.

3.5.4 Coating wrap-around in fixed-dimension coatings

In fixed-dimension coatings with thermal and sun protection coatings, the edges of the glass and, in part, the edge area of the underside of the glass are also coated for process reasons. The extent of this coating wrap-around varies depending on the coating manufacturer, glazing structure and dimensions/shape. Individual coatings can be chemically removed. The majority of coatings available only permit mechanical removal.

The coating wrap-around can lead to adhesion problems at glued joints (e.g. weatherproof joint). It is necessary to contact the sealant manufacturer in this regard, otherwise their warranty might be restricted. In order to avoid or restrict the problems referred to, we must be informed at the inquiry stage which edges or surfaces are due to be glued and/or which must have their coating removed. Removal of the coating from the glass edge is calculated at 3.50 €/linear metre plus VAT.

3.5.5 Removal of thermal and sun protection coatings from edges

The adhesion properties of the coated glass surface may vary, therefore we always recommend that our customers order the area of the edge seal joint with the coating removed. The corresponding edge areas can be masked to prevent the coating from being applied, although subsequent coating removal can be performed mechanically before further processing into insulating glass. In the case of structural glazing applications, the area of the statically effective silicone joint must always be masked off prior to coating. Therefore, we must be informed at the inquiry stage concerning what application is involved and which edges or surfaces are intended to be glued and/or which need to have their coating removed or be masked off.

Masking off is calculated at 3.50 €/linear metre plus VAT.

Removal of the edge coating or masking off can lead to a gap between the coating and the primary seal of the edge seal joint. In addition, depending on the observation angle, coloured striations can be formed due to interference if the butyl of the primary seal is located in whole or in part on the coating. These "whitelines" or "redlines" cannot be avoided for production reasons, and do not represent grounds for complaint.

In other regards, our *customer notes on decoating edges* must be complied with.

3.5.6 Interferences

In the case of transparent insulating glazing manufactured from float glass panes of the same thickness, there may be interferences (visibility of spectral colours) caused by the outstanding surface planarity of this glass. This does not represent a defect. In order to reduce this risk, particularly in vertical applications, it is recommended to combine two panes of uneven thickness in the insulating glazing.

3.5.7 Pressure equalisation

Depending on the pane formats, the glass structure and the space between the panes, it may be necessary to equalise the pressure. In the case of installation altitudes of more than 500 m above sea level or transport heights of more than 800 m above sea level, we must be informed at the inquiry stage.

3.6 Thermally treated glazing

3.6.1 Anisotropies

Under certain lighting conditions and polarised light, when thermally pre-stressed glazing is observed, anisotropies (polarisation fields) may become apparent and visible in the form of a pattern. As the glass thickness increases, and in the case of coated glass, these anisotropies become more pronounced. This effect is a physical characteristic of thermally pre-stressed glazing and does not provide any grounds for complaint.

3.6.2 Heat-Soak-Test

In order to minimise the risk of breakage in toughened glass due to nickel sulphide inclusions, it is recommended for a heat-soak test to be performed (at extra cost) even if one is not actually mandatory. There is still a residual risk in spite of the heat-soak test. If toughened glass is not mandatory, it is recommended for heat strengthened glass to be used, because this has a much lower probability of failure resulting from nickel sulphide.

In other regards, our *customer notes on heat-soak test* must be complied with.

3.6.3 Roller waves

In toughened glass, monolithic safety glass and laminated safety glass 12 mm thick and more, it is to be expected that roller waves will be present, since they are unavoidable for technical reasons (see EN 12150) and therefore do not constitute a complaint.

3.7 Laminated safety glass

When different glass thicknesses are combined, above all toughened glass, monolithic safety glass and heat strengthened glass, or a combination of coloured and clear glass, or coated panes combined with clear panes before lamination, there may be increased bowing (banana effect) in the laminated safety glass due to the manufacturing process.

3.8 Glued sheet metal connections

In the case that metal sheets are provided by the client, especially powder-coated metal sheets, it is necessary to ensure that they are free from parting agents, waxes and Teflon. A release by the glue manufacturer must be presented to us by the customer when the order is placed. Otherwise, we will not accept any liability for failure of adhesion in the metal sheets that were provided.

4. Other printed material

Following documents have been sent to you together with our quotation. In case you don't have received those printer matters, please request them directly from OKALUX or download it from the Internet at www.okalux.com:

- General terms and conditions of business
- Product-specific information texts

Following customer notes are available as well:

- Customer notes on delivery
- Customer notes alarm glass
- Customer notes screen printing
- Customer notes Structural Glazing / Edge deletion
- Customer notes on heat-soak test
- Customer notes on glazing
- Customer notes SIGNAPUR®
- Customer notes installation of OKAFLEX
- Customer notes installation of OKAPANE
- Customer notes OKAWOOD tolerances
- Customer notes OKACELL product specification
- Cleaning instructions for OKALUX gen.
- Cleaning instructions OKACOLOR
- Guideline for Visual Quality