

OKASOLAR W Insulating Glass with Integral Sun Control Louvres

Outer pane

Toughened and heat soak tested or heat-strengthened clear float with or without solar or thermal control coating, glass thickness according to static requirements

Cavity

Cavity in total 22 mm (variable), with three-dimensionally roll-formed steel louvres. The louvres are coated with UV-stable Trital. The louvre panel does not contain volatile substances such as grease or oil. Since the louvres are quite stable because they are made using a three-dimensional roll forming process, they are available in widths up to 1 m without supporting profile. The types of supporting profile which should be used are described in our leaflet "OKASOLAR supporting profiles". With panes exceeding a certain width, a profile optically and mechanically connects the jointed louvres.

The side support of the louvres is covered by a channel which is installed directly on the edge of the insulating glass. With glazing systems using cover profiles, the channel is partially hidden by the cover profile.

The louvres are there to control the light and protect from the sun. They also have several partial facets with different alignments and functions. The partial facets produce a 'selection edge' which reflects direct radiation outwards when the sun profile angle is high by reflecting the radiation between the louvres. Via this selection edge, a direction-selective g-value is obtained which achieves minimum values down to 11% when the position of the sun is high, depending on the specification.

The selection edge also causes direct irradiation from lower sun profile angles to be partially transmitted and partially deflected towards the ceiling and deep into the room in order to produce the effect of indirect daylight and therefore reduce the risk of dazzle.

The shape of the louvres, which is curved inwards and upwards, allows the light to enter at the top and also reduces the risk of dazzle.

The type and design of the louvres must be adjusted in collaboration with the manufacturer on an individual basis to the local insolation conditions, the alignment of the facade and the use of the room behind.

Inner pane

type and thickness of glass according to static requirements

TENDER SPECIFICATION



We take architectural glass a step ahead.

Technical data upon as required:

Total solar transmittance/
Solar heat gain coefficient %, depending on the angle of incidence and design

U value (previously k value) W/(m²K)

Light transmittance %, dependent on the angle of incidence and design

Number of units

Dimensions Width mm x Height mm

Height of installation above sea level

Orientation (facade alignment)

OKASOLAR S insulating glass with optically controlled sun protection for sloping facades and roofs

Outer pane

Toughened and heat soak tested or heat-strengthened clear float with or without solar or thermal control coating, glass thickness according to static requirements

Cavity

24 mm overall with parabolic roll-formed steel louvres. The louvres have a UV resistant Trital coating. The insert does not contain volatile substances such as oil or grease. The louvres are mechanically stabilised by beading along the edges on both sides.

The louvre mounting at the side is obscured by a channel which is installed directly on the edge of the insulating glass. With glazing systems with a cover profile, part of the channel is hidden by the profile.

A total glass penetration of 24 mm is catered for in the facade structure.

The type and design of the louvres must be adjusted in collaboration with the manufacturer on an individual basis to the local insolation conditions, the alignment of the facade and the use of the room behind.

Inner pane

Laminated safety glass made of heat-strengthened clear float glass, thickness of glass according to static requirements

Technical data upon as required:

Total solar transmittance/ Solar heat gain coefficient % , depending on the angle of incidence and design
U value (previously k value) W/(m ² K)
Light transmittance % , dependent on the angle of incidence and design
Number of units
Dimensions	Width mm x Height mm
Height of installation above sea level
Orientation (facade alignment)
Roof slope

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OKASOLAR Retro insulating glass with optically controlled sun protection for vertical facades

Outer pane

Toughened and heat soak tested or heat-strengthened clear float with or without solar or thermal control coating, glass thickness according to static requirements

Cavity

30 mm overall with three-dimensional roll-formed louvres. The louvres have a UV-resistant, high-reflectance coating. The insert does not contain volatile substances such as oil or grease. Stiffened in three dimensions by their roll shape, the louvres are available up to 1 m width without intermediate supporting profile. The supporting profiles which may be necessary have a sightline of 7.2 mm.

The louvre mounting at the side is hidden by a channel which is installed directly on the edge of the insulating glass. With glazing systems with a cover profile, part of the channel is hidden by the profile.

The louvres are there to control the light and protect from the sun. They also have several partial facets with different alignments and function.

The partial facets produce a 'selection edge' which reflects direct radiation outwards when the sun profile angle is high by reflecting the radiation between the louvres. This selection edge is used to obtain a direction-selective g-value which achieves minimum values down to 8% when the position of the sun is high, depending on the specification.

In order to produce the effect of indirect daylight and therefore reduce the risk of dazzle, the selection edge also causes direct irradiation from lower sun profile angles to be partially transmitted and partially deflected towards the ceiling and deep into the room.

The louvre shape, which is curved inwards and upwards, allows the light to enter at the top and reduces the risk of dazzle.

Inner pane

type and thickness of glass according to static requirements

TENDER SPECIFICATION



We take architectural glass a step ahead.

Technical data upon as required:

Total solar transmittance/
Solar heat gain coefficient %, depending on the angle of incidence and design

U value (previously k value) W/(m²K)

Light transmittance %, dependent on the angle of incidence and design

Number of units

Dimensions Width mm x Height mm

Height of installation above sea level

Orientation (facade alignment)

OKASOLAR F Insulating Glass with Integral Sun Control Louvres

Outer pane

Toughened and heat soak tested or heat-strengthened clear float with or without solar or thermal control coating, glass thickness according to static requirements

Cavity

The space between the panes measures 16 mm with three-dimensional roll-shaped steel louvres. The louvres are provided with a UV-resistant highly reflective Feran coating. The insert does not contain volatile substances such as oil or grease. Stiffened in three dimensions by their roll shape, the louvres are available up to 1 m width without intermediate supporting. The lateral bracket for the louvres is concealed by a U-shaped profile which is fitted directly to the frame of the insulating glass. In the case of glazing systems which are provided with a covering strip, this strip partially conceals the U-shaped profile.

The louvre types U and O have different functions.

Type U is completely retro-reflecting and offers exceptionally good sun protection. Direct irradiation is reflected back without affecting any neighbouring louvres. This reduces the secondary energy input. In addition to the light transmission, which is dependent on the location of the sun, a directionally-selective g value is also achieved; with a high sun location and depending on the specification we see minimum values of 15% in the two-layer structure and 9% in the three-layer insulating glazing. The shape of the louvres has no convex surfaces on the top – which reduces the risk of glare.

Alongside the retro-reflecting function, type O also offers a light-deflecting function. Daylight is diverted at a flat angle onto the ceiling. This makes very effective use of the daylight. The louvre element which deflects the light is integrated in the structure of the louvre such that it cannot be seen from inside or outside.

Intermediate pane

Thermally treated glass, type and thickness of glass according to static requirements

Inner pane

Thermally treated glass with low-e coating face #5, type and thickness of glass according to static requirements

TENDER SPECIFICATION



We take architectural glass a step ahead.

Technical data upon as required:

Total solar transmittance/
Solar heat gain coefficient %, depending on the angle of incidence and design

U value (previously k value) W/(m²K)

Light transmittance %, dependent on the angle of incidence and design

Number of units

Dimensions Width mm x Height mm

Height of installation above sea level

Orientation (facade alignment)