Louvre Windows – Aesthetic and Efficient

Buildings are not only a roof above our life, they also form part of our perception. Just as nature produces wonderful views, buildings show what mankind is capable of. If just for one moment an edifice succeeds in triggering a feeling of admiration in us, then we the creator have tapped our full potential.

We would like to contribute to this potential with our louvre windows, which form part of the complete structure such that they do not lessen the overall concept, but rather visually enhance it. In doing so, we attach great importance to energy efficiency. Our windows conform to the current EnEV (German standard for the energy efficiency of buildings), and with their low joint permeability coefficients and U-values up to 0.5 W/m²K help save energy. Then we as human beings have an obligation to ourselves and to posterity to preserve the wonderful images created by nature.
This new, highly insulating design impresses with its flush, fully glazed look, and its self-locking mechanism. The frames and the louvre blades are made of thermally broken aluminium profiles with a frame assembly depth of 80 mm. The opening fittings are hidden. The outward opening blades are driven by a 24 V electric servomotor. It is possible to monitor a defined space in front of the window using a sensor (protection class 4). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-paint coated to RAL, NCS, DB or in special colours. An adapter profile is pre-fitted to allow assembly.

**Louvre blades:**
The louvre blades are also made of thermally broken extruded aluminium profiles. A choice of double- or triple-glazed insulation glazing up to a total glass thickness of 46 mm and a total thickness of 65 mm is available.
The high-quality metallic look of this highly insulated louvre window system is a result of its design with flush surfaces and elegant construction. The frames and the louvre blades are made of thermally broken aluminium profiles with a frame assembly depth of either 50 or 60 mm. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinder or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-paint coated to RAL, NCS, DB or in special colours. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:
The louvre blades are made of thermally broken extruded aluminium profiles in the following heights (without frame): 174, 192, 200, 275 or 344 mm. The total thickness of the louvre windows in this case is either 38 or 48 mm.
STG ISO 36 BT 50

Vertical section

High-quality all-glass look for flush mounting in glazed façades. The frames and the louvre blades are made of thermally broken aluminium profiles with a frame assembly depth of 50 mm. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinder or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-point coated to RAL, NCS, DB or in special colours. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:
Various insulation glazing versions are available up to a triple-glazed insulated glass version with a U-value = 0.5 W/m²K and a total glass thickness of 36 mm.

Horizontal section

Illustration: Air supply unit on an assembly shop with exterior glazing.
This is the optimum system where there is a high requirement for the greatest possible ventilation area, pleasing appearance and individuality. The TGL ISO 34 BT 60 UM has excellent joint permeability (a-value = 4), driving rain impermeability (7σ = 300 Pascals unprotected) and wind resistance characteristics (C5 = frame deflection < 1/300 at a test pressure of 2,000 Pascals). The frames and the louvre blades are made of thermally broken aluminium profiles with a frame assembly depth of either 50 or 60 mm. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinder or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-paint coated to RAL, NCS, DB or in special colours.

To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

**Louvre blades:**
Choice of panel or insulation glazing up to triple-glazed versions.
Total glass thickness: 24 or 32 mm.
This louvre window system sets new standards in high-performance thermal insulation and combines the highest demands regarding heat insulation with appealing looks. The frames and the louvre blades are made of thermally broken aluminium profiles with a frame assembly depth of 70 mm. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinder or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-point coated to RAL, NCS, DB or in special colours. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:
Choice of panel or insulation glazing up to triple insulation glazing and U-values up to 0.5 W/m²K. Total glass thickness: 44 mm.
This system combines the advantages of thermal insulation and a pleasing all-glass look. The frames and the louvre blades are made of thermally broken aluminium profiles with a frame assembly depth of either 50 or 60 mm. At the same time, the system has only one vertical frame element and no horizontal wing profiles. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinder or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-paint coated to RAL, NCS, DB or in special colours. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:
The insulation glazing chosen is inserted into a lateral clamping profile. Total glass thickness: 24 or 32 mm.
Due to its frameless, pin-supported glass louvre blades, this all-glass glazing system satisfies high demands for transparency. The overlapping louvre blades give the window a scale-like appearance. The frame is made of non-insulated or insulated extruded aluminium profiles with a frame depth of either 50 or 60 mm. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinder or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-paint coated to RAL, NCS, DB or in special colour shades. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:
The louvre blades are made of single-pane, tempered or partially pre-stressed safety glass in thicknesses of 6, 8, 10 or 12 mm. The glass edge are polished all round.
An all-glass system that due to its frameless, pin-supported glass louvre blades satisfies not only high demands for transparency. The stepped overlapping horizontal glass edges also give this system a flush appearance. The frame is made of non-insulated or insulated extruded aluminium profiles with a frame depth of either 50 or 60 mm. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinder or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or coated or wet-paint coated to RAL, NCS, DB or in special colours. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:

The louvre blades are made of laminated safety glass consisting of two partially pre-stressed safety glass panes with completely polished edges. The glass louvre blades pivot on bearings as standard. From a glass thickness of 12 mm the system has a frame depth of 60 mm.
As well as satisfying high demands for transparency, the frameless, pin-supported glass louvre blades give this all-glass system a flush appearance due to the 30° bevel on their horizontal edges. The frame is made of non-insulated or insulated extruded aluminium profiles with a frame depth of either 50 or 60 mm. The opening fittings are hidden. The window is opened either using a hand crank handle, an articulated winding shaft, a pneumatic cylinders or an electric servomotor (24 V DC or 230 V AC). EPDM seals ensure a tight fit. The profiles are anodised, powder coated or wet-point coated to RAL, NCS, DB or in special colour shades. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:
The louvre blades are made of single-pane, tempered or partially pre-stressed safety glass in thicknesses of 6, 10, or 12 mm (overall depth for 12 mm glass = 60 mm). The glass edge are polished all round. The upper and lower edges of the louvre blades have a 30° bevel.
Due to its highly versatile design and glass structure, this special design is particularly suited for use in double-skin façades. Point-fixed vertically arranged glass louvre blades are mounted using pivoting or fixed stainless steel consoles attached to an existing substructure on the building. The technical implementation is carried out to customer requirements. Stainless steel fittings are used. The louvres are opened by an electric servomotor with IP65 protection class (24 V DC or 230 V AC). The stainless steel is either electropolished or bead blasted. The louvre window is mounted using a special adapter on steel struts.

**Louvre blades:**
The louvre blades are either made of laminated safety glass consisting of twin-pane heat-soaked tempered safety glass or twin-pane partially pre-stressed safety glass depending on the loading, or of single-pane heat-soaked tempered safety glass.

Illustration: GG louvre window integrated into the glass façade of an office building.
The S20 is an economical solution. It is made of extruded aluminium profiles to provide shade and privacy together with natural aeration and ventilation. The frame is made of non-insulated or insulated extruded aluminium profiles with a frame depth of 50 mm. The profiles are anodised, powder coated or wet-paint coated to RAL, NCS, DB or in special colours. To install the system, various clamping profiles are available for installation in stick systems, window elements or masonry.

Louvre blades:
The louvre blades are made of extruded aluminium profiles with a height of 200 mm. The s-shaped blade profile allows variable blade spacing, enabling the frame height to be adapted according to requirements.
Designed as an air-supply system, this design offers optimum protection against the elements combined with sound insulation up to 16 or 24 dB. The frame and louvre blade profiles are made of extruded aluminium profiles. Aluminium sheet metal parts are used to install the insulation package. An optional 10 x 10 mm stainless steel wire mesh prevents small animals entering the building. The profiles are anodised, powder coated or wet-paint coated to RAL, NCS, DB or in special colours.

Illustration: AWW 550 air-supply system on a factory roof.