



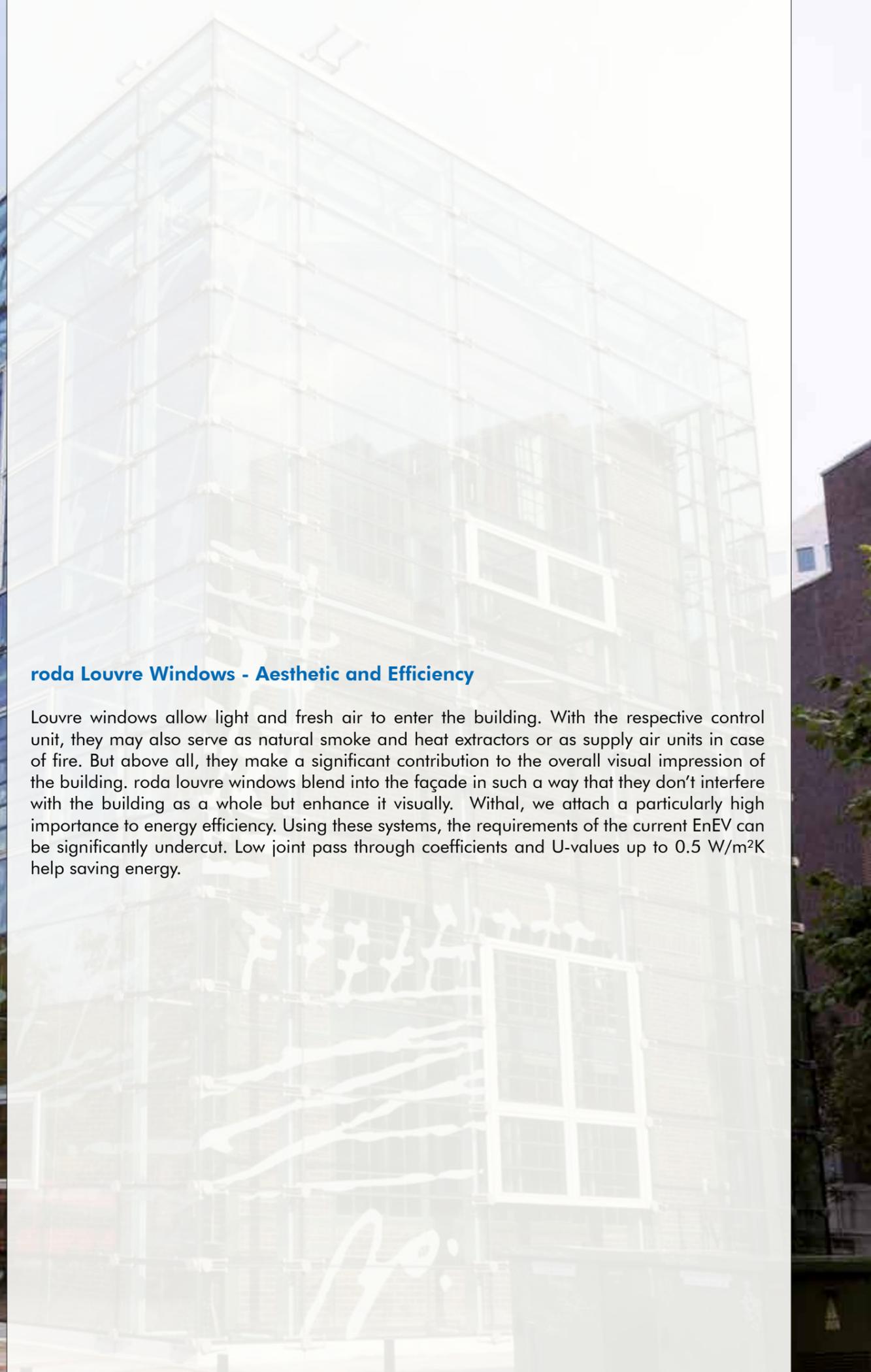
**Louvre Windows**





#### **roda Louvre Windows - Aesthetic and Efficiency**

Louvre windows allow light and fresh air to enter the building. With the respective control unit, they may also serve as natural smoke and heat extractors or as supply air units in case of fire. But above all, they make a significant contribution to the overall visual impression of the building. roda louvre windows blend into the façade in such a way that they don't interfere with the building as a whole but enhance it visually. Withal, we attach a particularly high importance to energy efficiency. Using these systems, the requirements of the current EnEV can be significantly undercut. Low joint pass through coefficients and U-values up to  $0.5 \text{ W/m}^2\text{K}$  help saving energy.



## Functionality and Safety

### Opening Method:

roda louvre windows consist of one or more slats lying on top of each other, which open as pivoted slats via a horizontal rotation axis. The part of the blade that is below the rotation axis opens to the outside, whilst the upper part opens to the inside. In general, the rotation axis is centrally positioned to the slat height, however, it can be moved up to 1/3 – 2/3 if necessary (except type S200). Please refer to page EAL for the opening method of the EAL slats.

### Fittings:

Fittings are made of corrosion free material and are concealed.

### Surface Areas:

Profiles are anodised, powder- or wet coated according to RAL, NCS or DB. Special colours are available.

### Drives:

Manually via hand lever or articulated crank rod

Electrically via 230 V AC

24 VDC

Pneumatically

### Technical specification (except type GG Joint):

Approved according to DIN EN 14351-1:2006+A1:2010:

- Resistance to repeated opening and closing classification 3 (DIN EN 1191)

Approved according to DIN EN 12101-2:2003:

- Functional reliability RE 1000 (annexe C)
- Functional reliability under loads SL-0 (annexe D)
- Functional reliability at low temperatures T-0 (annexe E)
- Heat resistance B 300 E (annexe G)

Further data can be found on the equivalent product pages.

### Mounting:

The louvre windows are meant to be installed into walls and upright façades. Various clamping profiles are available for mounting in mullion-transom constructions, glazing elements and masonry.



## S 200

The S 200 is an economical solution for industrial use as a supply air system, which is also designed to serve as a shading or privacy screening system. The frame is made of extruded aluminium profiles with a frame construction depth of 50 mm and a frame face width of 38 mm. The S200 is approved as a smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

Slats are made of extruded aluminium profiles with a height of 200 mm. The S-shaped slat profile allows a variant centre distance of 120 to 180 mm. Thus, the frame height can be adjusted to requirements.

### Technical specification tested as per DIN EN 12101-2:2003:

- Aerodynamic:  $C_v = 0.55 - 0.57$  (opening angle  $78^\circ$ )\*
- Structural stability under wind load WL 3000

\* subject to model and size.

Further technical data on page 2.

### Possible Sizes:

Minimum frame width = 300 mm

Maximum frame width = 1800 mm

(broader elements are available divided by glazing bars)

[Link to S200 cross section](#)



Picture: S200 supply air system fitted into a façade of a multi-storey car park.

## NTL ISO 24 BT50

The NTL ISO 24 BT50 was developed as a glazed supply air element for industrial use. Window and louvre frame are made of extruded aluminium profiles with a frame construction depth of 50 mm and a frame face width of 38 mm. The 2-fold insulating glazing infill is circumferentially framed. The visible width of the vertical slat profiles is 200 mm on the inside, the horizontal slat joint is 49 mm on the inside. The NTL ISO is approved as a natural smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

Choice of panel or insulating glazing up to 2-fold insulating glazing.  
Total thickness of slats: 24 mm  
Variable slat height from 120 to 400 mm (120 – 245 mm as NSHE)

### Sealings:

Lateral with sealing brushes  
Horizontal profile joints with sealing brushes

### Technical specification tested as per DIN EN 12101-2:2003:

- Aerodynamic:  $C_v = 0,56 - 0,61$  (opening angle  $78^\circ$ )\*
- Structural stability under wind load WL 3000

\* subject to model and size.

Further technical data on page 2.

### Possible Sizes:

Minimum frame width = 300 mm

Maximum frame width = 2000 mm  
(NSHEV 2000 mm)

(broader elements are available divided by glazing bars)

[Link to NTL ISO 24 BT50 cross section](#)



Picture: NTL ISO 24 BT50 louvre window fitted into a façade of an assembly hall.

## TGL ISO 24 BT50 / 32 BT60 / 44 BT70

The TGL ISO is the thermally separated version of the NTL. Window and slat frames are made of thermally separated aluminium profiles with a frame construction depth of 50, 60 or 70 mm. The TGL ISO is approved as a natural smoke and heat extracting system according to DIN EN 12101-2:2003.

### Louvre blades:

Choice of panel or insulating glazing up to 3-fold insulating glazing.  
Total thickness of slats: BT50 - 24 mm, BT60 - 32 mm, BT70 - 44 mm.  
BT50 variable slat height: 120 – 400 mm  
BT60 / BT70 variable slat height: 200 – 400 mm

### Sealings:

Lateral with sealing brushes, horizontal profile joints with sealing brushes and EPDM gasket.

### Technical specification tested as per DIN EN 12101-2:2003:

- BT50 - Aerodynamic:  $C_v = 0,56 - 0,61$  (opening angle  $78^\circ$ )\*
- BT60 - Aerodynamic:  $C_v = 0,50 - 0,56$  (opening angle  $64^\circ$ )\*
- Structural stability under wind load WL 3000
- Function at low temperatures: T-20\*

### Technical specification tested as per DIN EN 14351-1:2006+A1:2010:

- Driving rain tightness according to DIN EN 12207:  
BT50 - classification 6A  
BT60 - classification 7A with additional sealing
- Joint permeability according to DIN EN 12208:  
BT50 - classification 3  
BT60 - classification 4 with additional sealing
- Wind resistance according to DIN EN 12210:  
BT50 - classification C2  
BT60 - classification C5 with additional sealing

### Further technical specification:

- Airborne sound insulation according to DIN EN ISO 717-1:  
BT50 - 38 dB\*  
BT60 - 39 dB\*
  - Burglar resistance according to DIN EN 1627: BT60 - RC2 / BT70 - RC3
  - Ball impact resistance according to DIN 18032-3: existing for the BT60
  - Pendulum impact test with 900 Joule (fall proof)
- \* subject to model and size. Technical values for TGL ISO 44 BT70 on request.

### Possible sizes:

Minimum frame width = 300 mm  
Maximum frame width = 2000 mm (broader elements are available divided by glazing bars)  
Maximum frame width can be extended to 2500 mm with tandem control or double-acting drive.

[Link to TGL ISO 24 BT50 cross section](#)

[Link to TGL ISO 32 BT60 cross section](#)

Picture: TGL ISO 24 BT50 louvre window fitted into a façade of an assembly hall.



## TGL ISO SLP 38 BT50 / 48 BT60

The classy metal look of this highly insulating louvre window system results from its flush-fitting structural shape. Window frame and slats are made of thermally separated aluminium profiles with a frame construction depth of 50 or 60 mm and a frame face width of 38 mm. The TGL ISO SLP is approved as a natural smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

Slats are made of thermally separated extruded aluminium profiles with heights of 174, 192, 200, 211, 275 or 344 mm (frame excluded).  
Total thickness of slats: BT50 - 38 mm, BT60 - 48 mm.

### Sealings:

Lateral with sealing brushes, horizontal profile joints with sealing brushes and EPDM gasket.

### Technical specification tested as per DIN EN 12101-2:2003:

- BT50 - Aerodynamic:  $C_v = 0,54 - 0,60$  (opening angle  $78^\circ$ )\*
- BT60 - Aerodynamic:  $C_v = 0,48 - 0,52$  (opening angle  $64^\circ$ )\*
- Structural stability under wind load WL 3000
- Function at low temperatures: T-20\*

\* subject to model and size.

### Technical specification tested as per DIN EN 14351-1:2006+A1:2010:

- Driving rain tightness according to DIN EN 12207:  
BT50 - classification 7A  
BT60 - classification 7A
- Joint permeability according to DIN EN 12208:  
BT50 - classification 4  
BT60 - classification 4
- Wind resistance according to DIN EN 12210:  
BT50 - classification C5  
BT60 - classification C5

### Further technical specification:

- Pendulum impact test with 900 Joule (fall proof)

Further technical data on page 2.

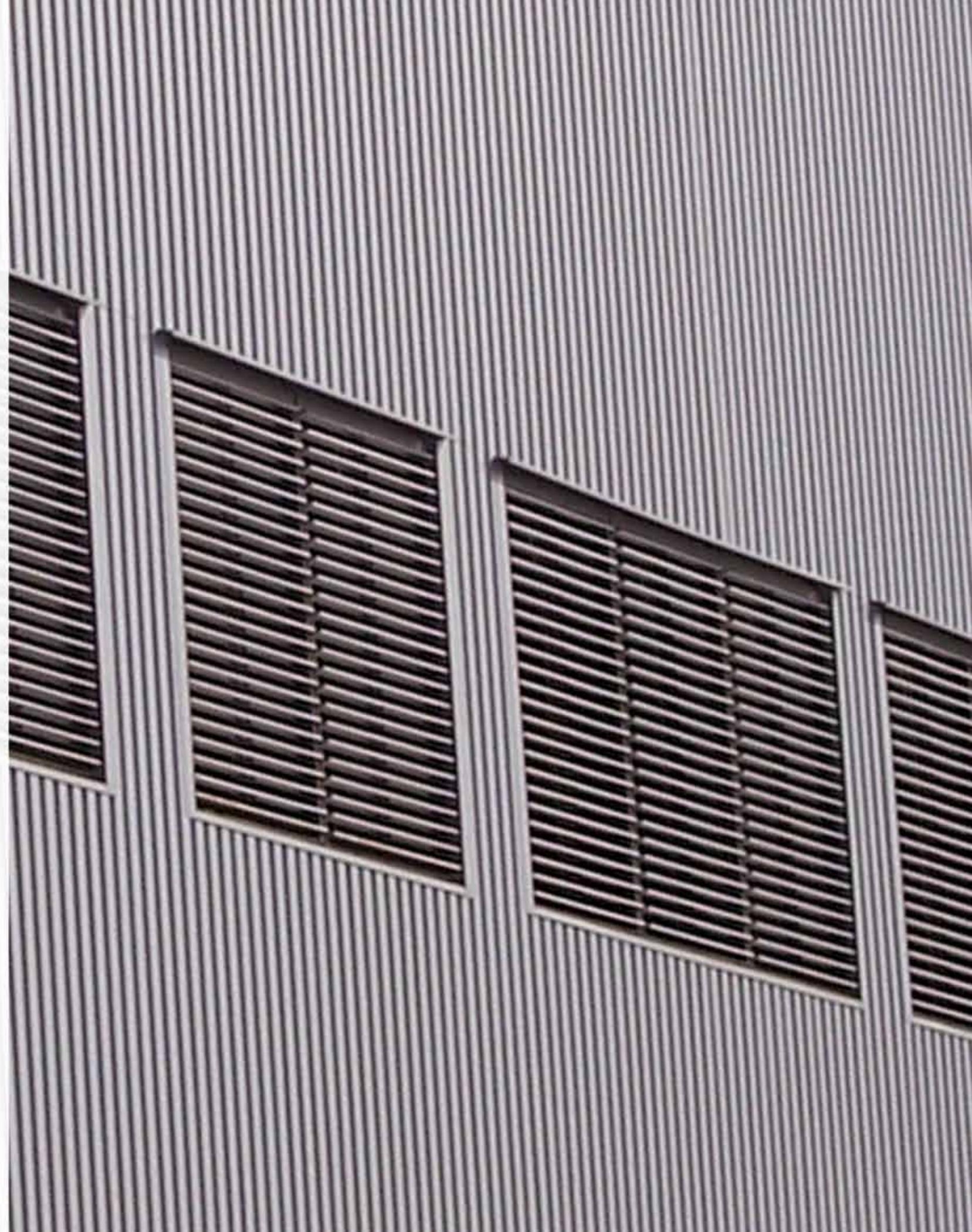
### Possible sizes:

Minimum frame width = 300 mm

Maximum frame width = 1800 mm (broader elements are available divided by glazing bars)

[Link to TGL ISO SLP 38 BT50 cross section](#)

[Link to TGL ISO SLP 48 BT60 cross section](#)



## STG ISO 36 BT50 / 46 BT60

With its high-quality all-glass look this louvre window is designed for flush installation in glass façades. Window and slat frames are made of thermally separated aluminium profiles with a frame construction depths of 50 or 60 mm and a frame face width of 38 mm. The visible width of the vertical slat profiles is 33 mm on the inside, the horizontal slat joint is 66 mm on the inside. The STG ISO is approved as a natural smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

Choice of various insulating glazing options up to a 3-fold insulation glazing with u-values of up to 0.5 W/m<sup>2</sup>K

Variable slat height: 120 – 400 mm

Total thickness of slats: 42 mm (with a 6 mm thick outer pane)

### Sealings:

Lateral with sealing brushes, horizontal profile joints with sealing brushes and EPDM gasket.

### Technical specification tested as per DIN EN 12101-2:2003:

- BT50 - Aerodynamic:  $C_v = 0,53 - 0,58$  (opening angle 78°)\*
- BT60 - Aerodynamic:  $C_v = 0,47 - 0,51$  (opening angle 64°)\*
- Structural stability under wind load WL 2500
- Function at low temperatures: T-20\*

\* subject to model and size.

### Technical specification tested as per DIN EN 14351-1:2006+A1:2010:

- Driving rain tightness according to DIN EN 12207:  
BT50 - classification 4A  
BT60 - classification 7A
- Joint permeability according to DIN EN 12208:  
BT50 - classification 3  
BT60 - classification 4
- Wind resistance according to DIN EN 12210:  
BT50 - classification C2  
BT60 - classification C5

### Further technical specification:

- BT50 - Airborne sound insulation according to DIN EN ISO 717-1: 41 dB\*
- Ball impact resistance according to DIN 18032-3: existing
- Burglar resistance according to DIN EN 1627: BT60 - RC2
- Pendulum impact test with 900 Joule (fall proof)

Further technical data on page 2.

### Possible sizes:

Minimum frame width = 300 mm

Maximum frame width = 2000 mm (broader elements are available divided by glazing bars)

[Link to STG ISO 36 BT50 cross section](#)

[Link to STG ISO 46 BT60 cross section](#)

Picture: Supply air systems of an assembly hall glazed on the outside.



## GG ISO 24 BT50 / 32 BT60

This system combines the benefits of thermally insulated systems and an appealing all-glass look. Window and slat frames are made of thermally separated aluminium profiles with a frame construction depth of 50 or 60 mm and a frame face width of 38 mm. The system has only a vertical frame section with a visible width of 33 mm without a horizontal blade profile. The GG ISO is approved as a natural smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

The insulated glazing of your choice is fitted into a lateral border profile.

Total thickness of slats: BT50 - 24 mm, BT60 - 32 mm

Slat height BT50 variable: 120 – 300 mm

Slat height BT60 variable: 200 – 350 mm

### Sealings:

Lateral with sealing brushes, horizontal profile joints with sealing brushes and EPDM gas.

### Technical specification tested as per DIN EN 12101-2:2003:

- BT50 - Aerodynamic:  $C_v = 0,54 - 0,61$  (opening angle  $78^\circ$ )\*
- BT60 - Aerodynamic:  $C_v = 0,49 - 0,55$  (opening angle  $64^\circ$ )\*
- Structural stability under wind load WL 3000
- Function at low temperatures: T-20\*

\* subject to model and size.

### Technical specification tested as per DIN EN 14351-1:2006+A1:2010:

- Driving rain tightness according to DIN EN 12207:  
BT60 - classification 4A
- Joint permeability according to DIN EN 12208:  
BT60 - classification 4
- Wind resistance according to DIN EN 12210:  
BT60 - classification C2

### Further technical specification:

- Pendulum impact test with 900 Joule (fall proof)

Further technical data on page 2.

### Possible sizes:

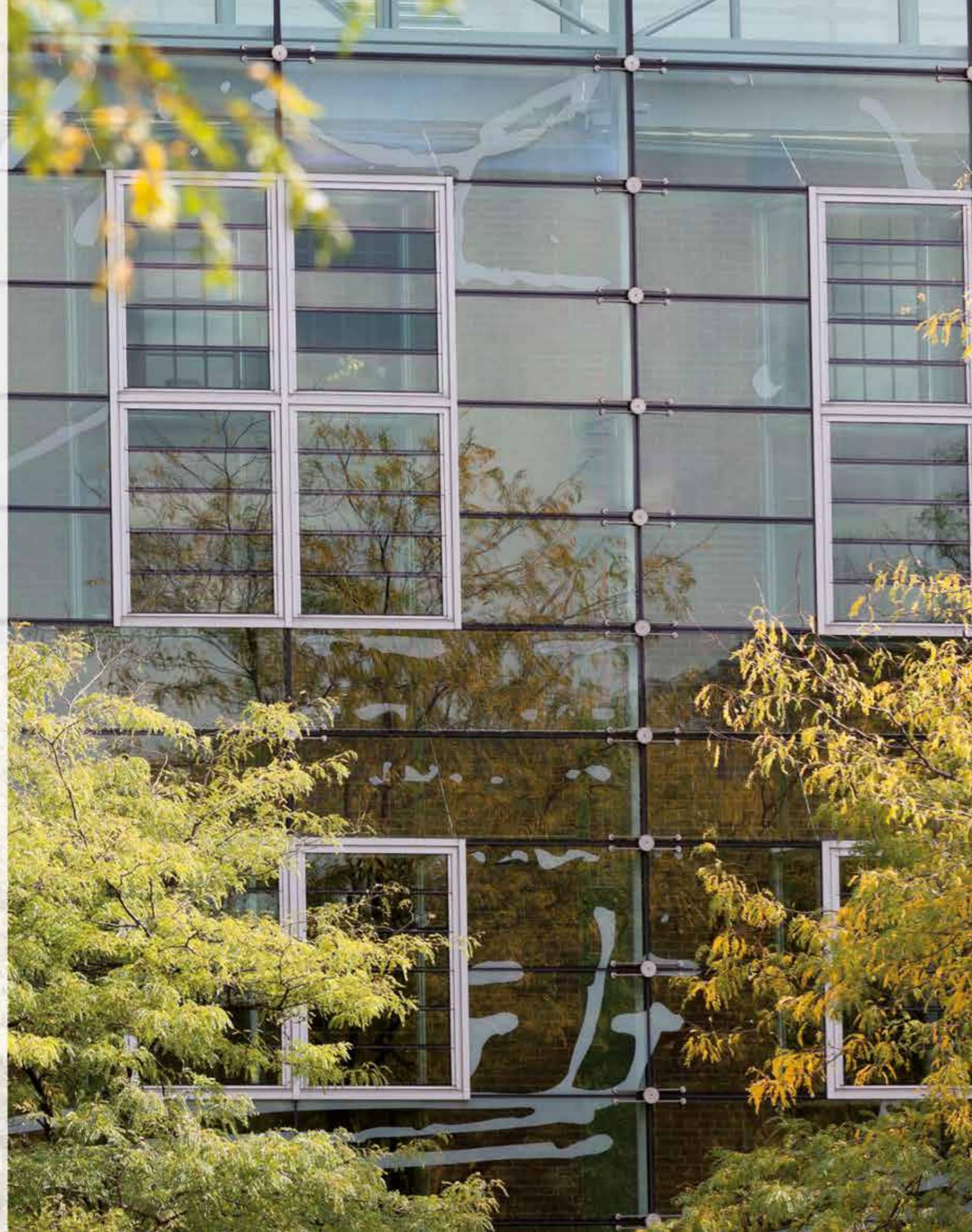
Minimum frame width = 300 mm

Maximum frame width BT50 = 1400 mm (NSHEV 1000 mm)

Maximum frame width BT60 = 1500 mm (broader elements are available divided by glazing bars)

[Link to GG ISO 24 BT50 cross section](#)

[Link to GG ISO 32 BT60 cross section](#)





## GG BEVELLED EDGE BT50 / BT60

In addition to its high standards of transparency provided by pivoted frameless glass slats, the all-glass system offers a flush-mounted look. The frame construction is made of extruded aluminium profiles with a frame construction depth of 50 or 60 mm and a frame face width of 38 mm. The GG Bevelled Edge is approved as a natural smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

Slats consist of pivoted all-glass single glazing panes made of ESG glass with circumferentially polished glass edges. The horizontal glass edges have 30° mitres  
Glass thicknesses: BT50 - 6, 8 or 10 mm, BT60 - 12 mm  
Variable slat height: 120 – 300 mm

### Sealings:

Lateral with felt seal and sealing brushes, frame gasket made of silicon.

### Technical specification tested as per DIN EN 12101-2:2003:

- BT50 - Aerodynamic:  $C_v = 0,52 - 0,59$  (opening angle 78°)\*
  - BT60 - Aerodynamic:  $C_v = 0,48 - 0,54$  (opening angle 64°)\*
  - Structural stability under wind load WL 1500
- \* subject to model and size.

Further technical data on page 2.

### Possible sizes:

Minimum frame width = 300 mm

Maximum frame width BT50 = 1500 mm (1400 NSHEV)

Maximum frame width BT60 = 1800 mm  
(broader elements are available divided by glazing bars)

[Link to GG Bevelled Edge BT50 cross section](#)

[Link to GG Bevelled Edge BT60 cross section](#)



## GG STEP-CASCADED GLASS BT 50 / BT60

As an all-glass system the GG Step-cascaded glass also impresses by its flush-mounted appearance, which is achieved by overlapping horizontal glass edges that are designed in steps. Like the GG SK30, the frame construction is made of extruded aluminium profiles with a frame construction depth of 50 or 60 mm and a frame face width of 38 mm. The GG Step-cascaded glass is approved as a natural smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

Slats are made of a point-supported 2-fold VSG glazing (laminated safety glass) (TVG (partly toughened glass) or ESG (single safety glass) panes) with circumferentially polished glass edges. Glass slats come standard with axle bearings.

Glass thicknesses: BT50 - 8 mm, BT60 - 12 mm

Variable slat height: 120 – 300 mm

### Sealings:

Lateral with felt seal and sealing brushes, frame gasket made of silicon.

### Technical specification tested as per DIN EN 12101-2:2003:

- BT50 - Aerodynamic:  $C_v = 0,52 - 0,59$  (opening angle  $78^\circ$ )\*
- BT60 - Aerodynamic:  $C_v = 0,48 - 0,54$  (opening angle  $64^\circ$ )\*
- Structural stability under wind load WL 1500

\* subject to model and size.

Further technical data on page 2.

### Possible sizes:

Minimum frame width = 300 mm

Maximum frame width BT50 = 1500 mm (1400 NRWG)

Maximum frame width BT60 = 1800 mm  
(broader elements are available divided by glazing bars)

[Link to GG Step-cascaded glass BT50 cross section](#)

[Link to GG Step-cascaded glass BT60 cross section](#)





## GG OVERLAPPING BT50 / BT60

The difference to GG Step-cascaded glass is that GG Overlapping slats have no steps in horizontal direction for a flush-mounted look, but imbricate when closed. The GG Overlapping frame also consists of extruded aluminium profiles with a frame construction depth of 50 or 60 mm and a frame face width of 38 mm. The GG Schuppe is approved as a natural smoke and heat extraction system according to DIN EN 12101-2:2003.

### Louvre blades:

Slats consist of point-fixed all-glass single glazing panes made of ESG glass with circumferentially polished glass edges.

Glass thicknesses: BT50 - 6, 8 or 10 mm, BT60 - 12 mm

Variable slat height BT50: 120 – 300 mm

Variable slat height BT60: 200 – 300 mm

### Sealings:

Lateral with felt seal and sealing brushes, frame gasket made of silicon.

### Technical specification tested as per DIN EN 12101-2:2003:

- BT50 - Aerodynamic:  $C_v = 0,52 - 0,59$  (opening angle  $78^\circ$ )\*
- BT60 - Aerodynamic:  $C_v = 0,48 - 0,54$  (opening angle  $64^\circ$ )\*
- Structural stability under wind load WL 1500

\* subject to model and size.

Further technical data on page 2.

### Possible sizes:

Minimum frame width = 300 mm

Maximum frame width BT50 = 1500 mm (1400 NSHEV)

Maximum frame width BT60 = 1800 mm

(broader elements are available divided by glazing bars)

[Link to GG Overlapping BT50 cross section](#)

[Link to GG Overlapping BT60 cross section](#)



## GG JOINT BT50 / BT60

The GG Joint glazings have no steps or bevelled edges, but stand on top of each other with a minimal joint of 2 mm. This makes the GG Joint a low-cost alternative amongst the available all-glass louvre windows. The GG Joint frame too is made of extruded aluminium profiles with a frame construction depth of 50 or 60 mm and a frame face width of 38 mm.

### Louvre blades:

Slats consist of point-fixed all-glass single glazing panes made of ESG glass with circumferentially polished glass edges.

Glass thicknesses: BT50 - 6, 8 oder 10 mm, BT60 - 12 mm

Variable slat height: 120 – 300 mm

### Sealings:

Lateral with felt seal and sealing brushes, frame gasket made of silicon.

### Technical specification tested as per DIN EN 14351-1:2006+A1:2010:

- Resistance to repeated opening and closing classification 3 (DIN EN 1191)

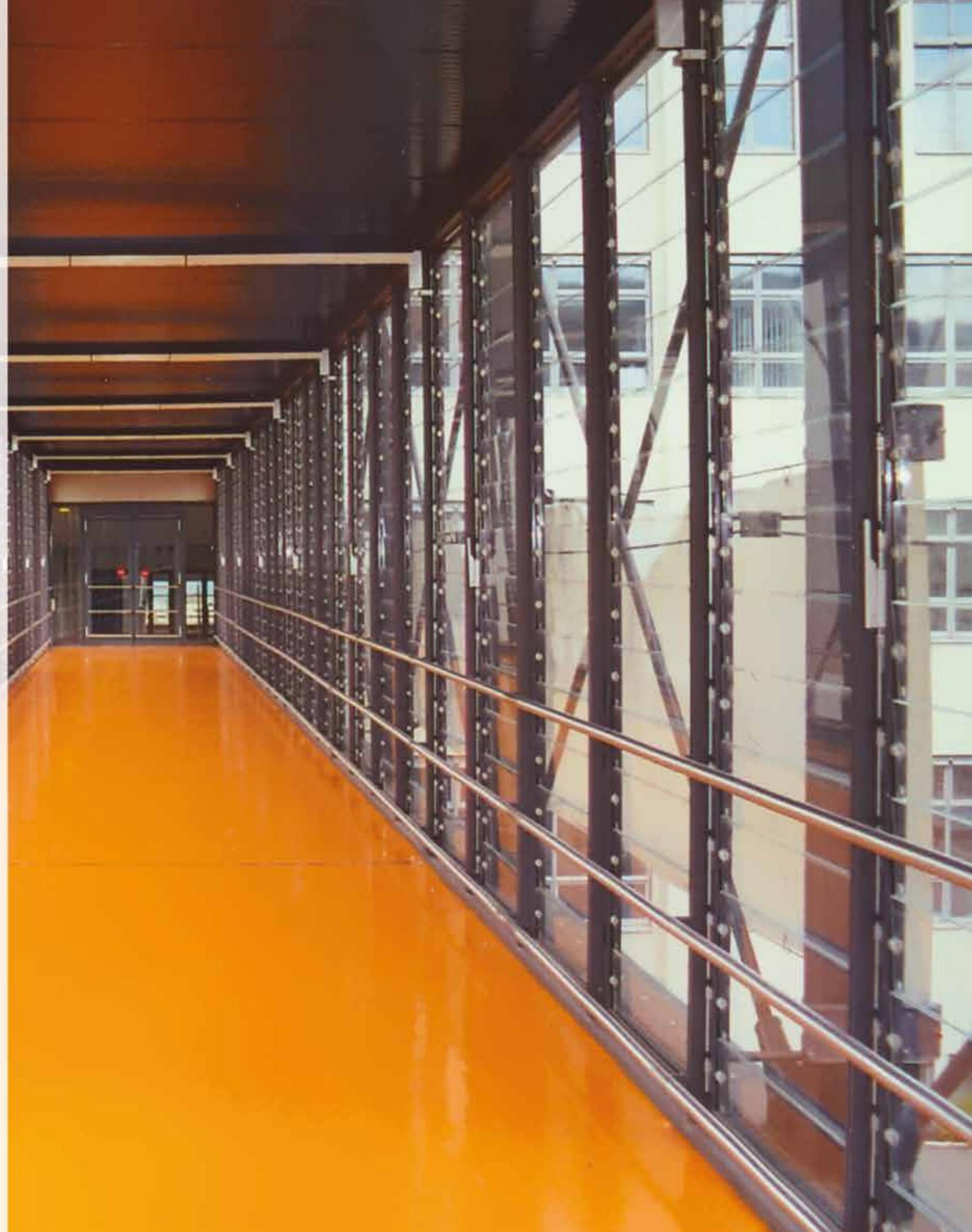
### Possible sizes:

Minimum frame width = 300 mm

Maximum frame width = 1500 mm

[Link to GG Joint BT50 cross section](#)

[Link to GG Joint BT60 cross section](#)





## Louvre window EAL

The uniqueness of the louvre window EAL is found in its slats that open completely outwards and are fitted with a self-retained locking mechanism. Optically, the construction impresses by its flush-mounted all-glass appearance. Frame and blades are made of thermally separated aluminium profiles with a frame construction depth of 171 mm and a frame face width of 60 mm at the inside. The visible width of the vertical blades is 65 mm. For the assembly, an adapter profile is already mounted at the element. Available sizes on request.

### Louvre blades:

Slats are also made of thermally separated, extruded aluminium profiles. 2- or 3-fold insulating glazing of your choice is available up to a total thickness of 38 to 46 mm.

### Sealings:

Two sealing levels designed for longevity with special TPE/PP structure.

### Technical specification tested as per DIN EN 12101-2:2003:

- Aerodynamic:  $C_v = 0,53- 0,58$  (opening angle  $80^\circ$ )\*
- Structural stability under wind load WL 2500

### Technical specification tested as per DIN EN 14351-1:2006+A1:2010:

- Driving rain tightness according to DIN EN 12207: Classification 9A
- Joint permeability according to DIN EN 12208: Classification 4

\* subject to model and size.

Further technical data on page 2.

Possible sizes by request.

[Link to EAL cross section](#)



Picture: EAL opening slat in detail.



Showroom



A MEMBER OF LAMILUX GROUP