

SIKA SOLUTIONS FOR FENESTRATION REFERENCE PROJECTS WITH STRUCTURALLY BONDED WINDOWS



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## WHY CHOOSE BONDED WINDOWS?

FOR OVER 50 YEARS, the success of European windows was driven by the development of tilt-and-turn hardware and insulating glass panes. The tilt-and-turn window is now established as one of the leading technologies worldwide.

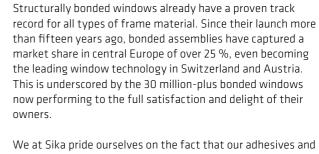
# Conventional 75 % Central Europe 2015

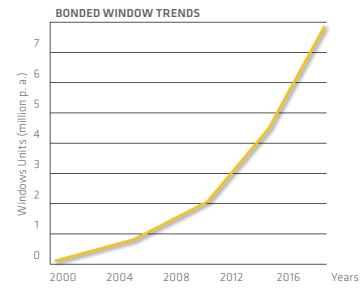
Bonded

**BONDED WINDOW MARKET SHARE** 

In 1999, a team of engineers set out to innovate a new generation of windows. Their aim was to boost the attractiveness of wood windows, which were steadily losing market share. At the University of Applied Sciences for Architecture, Wood and Civil Engineering in Biel, Switzerland, scientists and top window manufacturers collaborated closely with Sika on the development of the structurally bonded window.

Bonding technology will now pave the way for new generations of windows that combine high design appeal with supreme technical performance at a reasonable cost.





sealants are incorporated in most of these products.

In developing window adhesives, we are able to draw on our decades of experience with UV- and weather-resistant adhesives for structurally glazed facades.



#### RESIDENTIAL BUILDINGS

- Single-family Home in Vorarlberg
  Floor-to-ceiling window units with structural glazing look
- Single-family Home in Swabian Alps
  Floor-to-ceiling window units with barely noticeable frame component
- West Art, Zurich
  Integration of high-end residential development in existing cityscape
- Trio Dietikon, Zurich-Dietikon

  Wide balcony doors with heavy acoustical glass in elegantly slender pvc frame
- Goldschlägi Site, Zurich-Schlieren

  Modern residential complex with stringent soundproofing requirements
- Linie 7, Lucerne
  Wide balcony doors in slender, two-tone PVC frame
- Sunny Watt, Zurich-Watt

  Homestyle wood/aluminum windows in passive house standard
- Sophienhof, Frankfurt/Main

  Modern PVC windows in Europe's biggest passive house development
- Residential Development, Ebikon
  Renovated housing with slender-framed window units

# SINGLE-FAMILY HOME IN VORARLBERG

Floor-to-ceiling window units with structural glazing look

Project: Single-family home Location: Vorarlberg, Austria

Window manufacturer: Walch

Window type: Wood with stepped insulating glass

Glass: Stepped insulating glass with silicone opacifier instead of ceramic screen print







Left: Architectural master piece

Top right: Balcony door fitted flush with glass facade

Bottom right: Flowing transition between interior spaces and terrace

# SINGLE-FAMILY HOME IN SWABIAN ALPS

Floor-to-ceiling window units with barely noticeable frame component

Project: Single-family home Location: Swabian Alps, Germany

Window manufacturer: Walch

Window type: Wood with stepped insulating glass

Glass: Stepped insulating glass with silicone opacifier instead of ceramic screen print

Botton

Heavily constructed building with wood siding

Top right: Large sliding doors





#### WEST ART ZURICH

Integration of high-end residential development in existing cityscape

Project: Zurich West Art Zurich, Switzerland Location: Dutli + Sigrist Architekten Architect:

Window manufacturer: 1a hunkeler AG Wood/aluminum Window type:

Left:

Floor-to-ceiling window units for open living environment

Right: Northern front overlooking river Limmat





#### TRIO DIETIKON

Wide balcony doors with heavy acoustical glass in elegantly slender PVC frame

Project: Trio Dietikon
Location: Dietikon, Switzerland
Owner: Swiss Life AG

Architect: SAM Architekten und Partner AG, Zurich

Window manufacturer: EgoKiefer Window type: PVC







Left:

Acoustical glazing on elevation facing railroad

Top right:

Use mix with office, Industrial and residential units

Bottom right:

Floor-to-ceiling glazing in living spaces

### GOLDSCHLÄGI SITE

Modern residential complex with stringent soundproofing requirements

Project: Goldschlägi site
Location: Schlieren, Switzerland
Owner: Migros Pension Fund
Architect: Annette Gigon/Mike Guyer
Window manufacturer: Baumgartner AG
Window type: Wood/aluminum





Bottom: 105 apartments overlooking main Zurich – Bern rail link

Top right: Southern facade with glass parapets



## LINIE 7

Wide balcony doors in slender, two-tone PVC frame

Project: Linie 7

Location: Lucerne, Switzerland
Architect: Schärli Architekten AG, Lucerne

Window manufacturer: 1a hunkeler AG Window type: Wood/aluminum



Lett: Integration of building in street plan

Right:

Doorsets posing a structural challenge

#### **SUNNY WATT**

Homestyle wood/aluminum windows in passive house standard

Project: Sunny Watt Watt, Switzerland kämpfen für architektur ag 1a hunkeler AG Location: Architect:

Window manufacturer:

Wood/aluminum with triple-glazed IGUs to Window type:

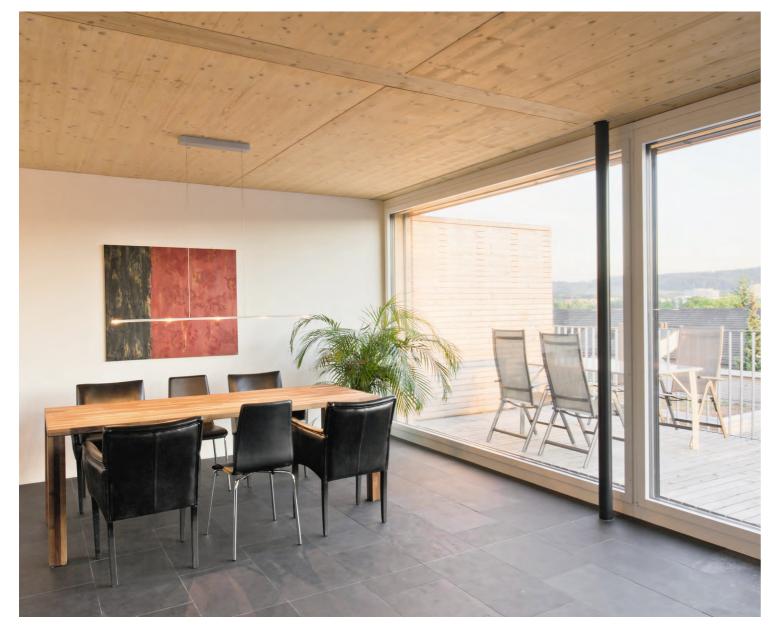
Minergie-P Eco standard

Left:

Eco-friendly living environment with wood/

aluminum windows

Right: Wood-framed buildings with high glazing ratio





#### SOPHIENHOF

Modern PVC windows in Europe's biggest passive house development

Project: Sophienhof

Location: Frankfurt/Main, Germany
Architect: FAAG Technik AG, Frankfurt/Main

Window manufacturer: Internorm Window type: PVC

Glass: Triple-glazed IGU
Special features: passive house standard





Bottom: Modern passive house in big city

Top right:

149 apartments in high living environment

# RESIDENTIAL DEVELOPMENT, EBIKON

Renovated housing with slender-framed window units

Project: Residential development
Location: Ebikon, Switzerland
Architect: Cerutti Partner Architekten AG

Window manufacturer: 1a hunkeler AG Window type: Wood/aluminum

Left:

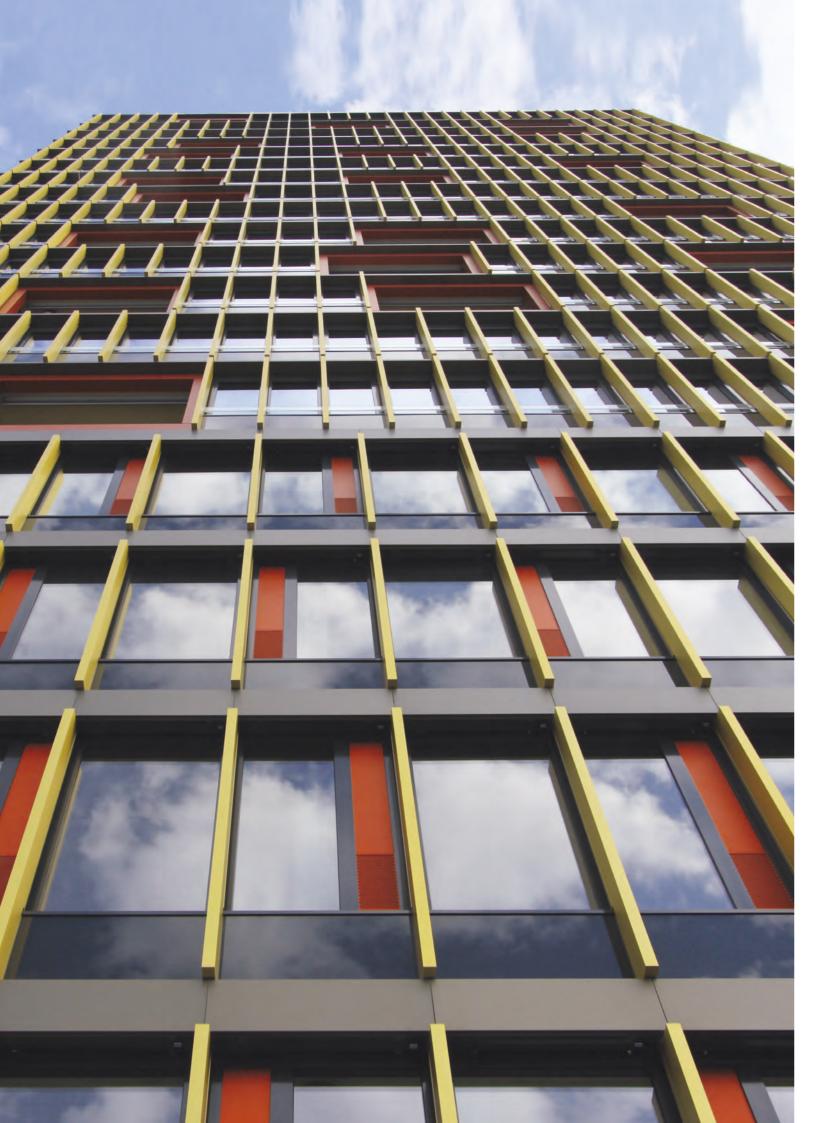
Improved daylighting after renovation thanks to slimmer frames

Right

Partially glazed balconies as extension to living







#### COMMERCIAL BUILDINGS

- Baar Hospital
  Double-skin facade with large wood/aluminum tilt-and-turn windows
- Hotel AVIVA, St. Stefan am Walde Extra-wide balcony, doors with two-tone PVC frame
- Leutschentower, Zurich
  18-story high-rise with 3000 large wood/aluminum tilt-and-turn windows units
- Sika R&D Centre, Zurich
  Windows with interior natural wood finish integrated in modern curtain wall
- D4 Center Z5, Root

  Modern facade composition punctuated by frameless windows
- Hotel Victoria, Basel Faithful renovation of historic building in old city core

#### **BAAR HOSPITAL**

Double-skin facade with large wood/aluminum tilt-and-turn windows

Project: Baar Hospital Baar, Switzerland Location: Owner:

Canton of Zug Burckhardt + Partner AG, Zurich Architect:

Baumgartner AG Window manufacturer: Wood/aluminum Window type:

Opening window behind curtain wall

Right: Southern front of Baar Hospital





#### HOTEL AVIVA

Extra-wide balcony doors with two-tone PVC frame

Project: Hotel AVIVA

Location: St. Stefan am Walde, Austria Architect: Architekturbüro Arkade, Linz

Window manufacturer: Internorm

Window type: Aluminum-faced PVC window







Left:
Special feature: all rooms with south facing balcony

Top right: PVC windows with color aluminum facing

Bottom right: Brightly lit rooms thanks to down-to-floor glazing

# RESIDENTIAL AND COMMERCIAL LEUTSCHENTOWER

18-story high-rise with 3000 large wood/aluminum tilt-and-turn window units

Project: Residential and commercial Leutschentower

Location: Zurich, Switzerland

Owner: SwissRe

Design + project architect: Bétrix Consolascio Architekten AG, Zurich Production information: Zwimpfer Partner Architekten AG, Zurich

Window manufacturer: Baumgartner AG

Window type: Wood/aluminum with opening lights on all stories

Glass: All windows with triple-glazed IGUs

Left:

Daylight-flooded spaces

Right:

Opening windows on stories





#### SIKA R&D CENTRE

Windows with interior natural wood finish integrated in modern curtain wall

Project: Sika R&D Centre Location: Zurich, Switzerland

Owner: Sika AG

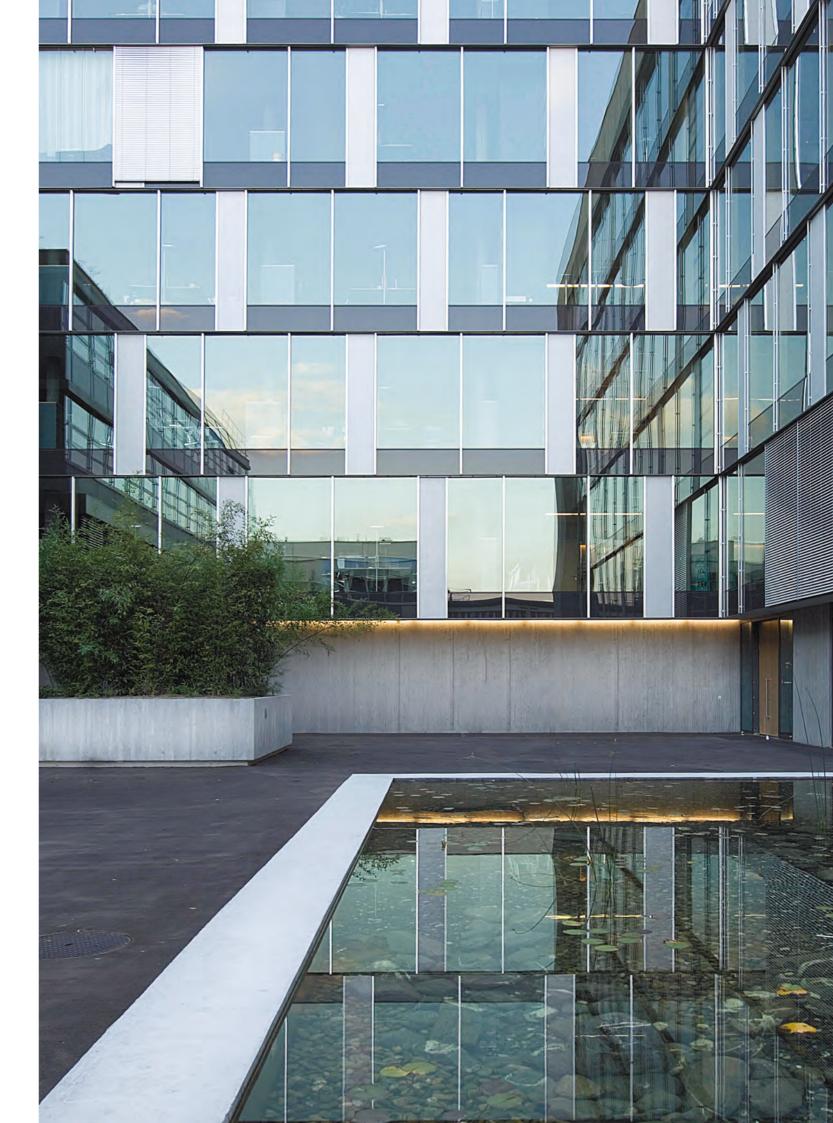
Architect: Architekturbüro Andrea Roost, Bern

Window manufacturer: Baumgartner AG Window type: Wood/aluminum



Left: Daylight for offices

Right: Atrium of the building





#### D4 CENTER Z5

Modern facade composition punctuated by frameless windows

Project: D4 Center Z5
Location: Root, Switzerland

Owner: Suva (Swiss Accident Insurance Fund)
Architect: Scheitlin-Syfrig Architekten, Lucerne

Window manufacturer: 1a hunkeler AG Window type: Wood/aluminum

Left:

Contemporary woodwork facade

Right:

Abundant daylight for offices



#### HOTEL VICTORIA

Faithful renovation of historic building in old city core

Project: Hotel Victoria Location: Basel, Switzerland

Owner: Coop

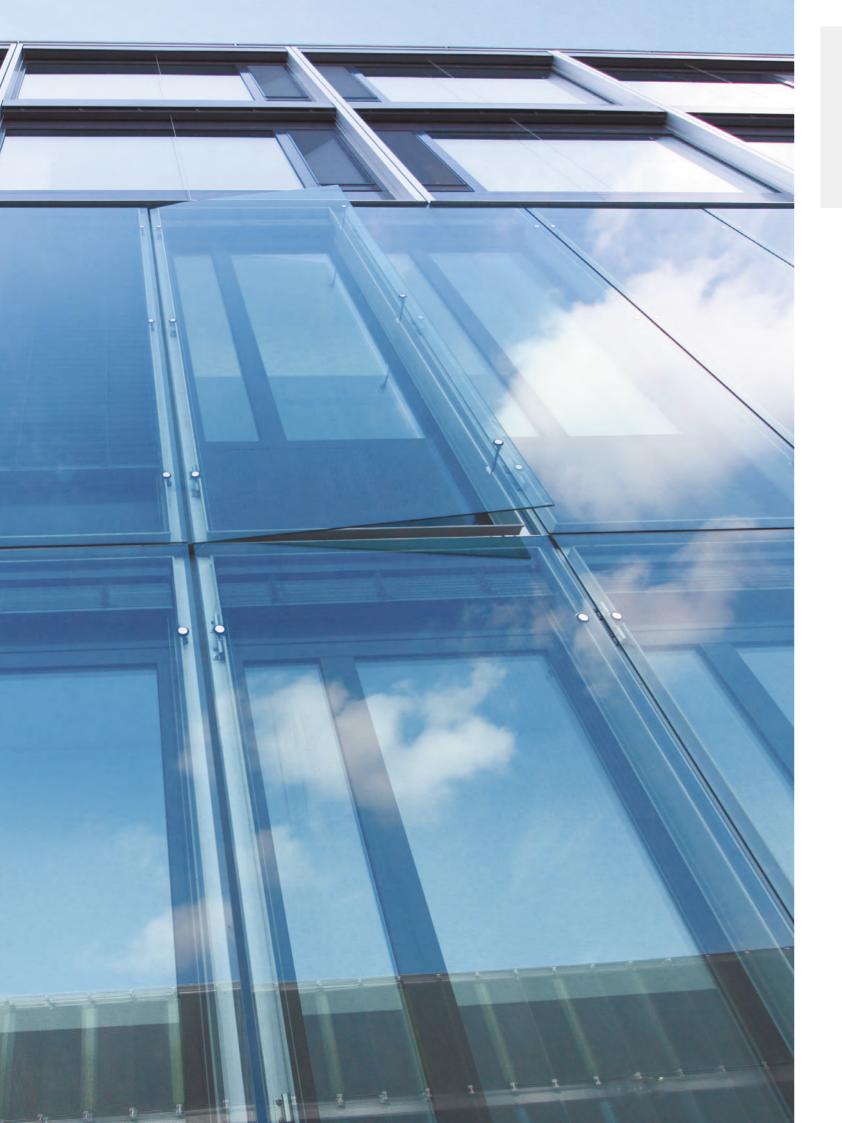
Baumgartner AG Wood/aluminum Window manufacturer: Window type:

Left: 107 rooms fitted with soundproof windows

Right: Triple-glazed IGUs subject to stringent soundproofing requirements







## WINDOW TECHNOLOGY - QUO VADIS

Windows with L frames achieve an optimum frame factor due to the fact that the insulating glass unit is wholly supported by the adhesive. Architects appreciate the resulting full-glass exterior, while the superior thermal and sound insulation in conjunction with a low frame-to-glass ratio makes a compelling argument for the entire design team. Owners are equally delighted by the long service life and minimal maintenance requirement for structurally bonded windows. Sika will provide you with detailed information on structurally bonded windows.

We will be glad to refer you to a local window contractor that deploys innovative bonding technology. Please send your e-mails to: fenestration.team@ch.sika.com



#### GLOBAL BUT LOCAL PARTNERSHIP



#### FOR MORE INFORMATION:



#### WHO WE ARE

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika has subsidiaries in 90 countries around the world and manufactures in over 160 factories. Its more than 17,000 employees generated annual sales of CHF 5,6 billion in 2014.

Our most current General Sales Conditions shall apply.
Please consult the Data Sheet prior to any use and processing.







#### SIKA SERVICES AG

Tueffenwies 16 8048 Zurich Switzerland www.sika.com

#### CONTACT

Phone: +41 58 436 40 40 Fax: +41 58 436 55 30 www.sika.com/ses



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