Hansen Millennium™ Window, Door and Façade System for all Building Types
Hansen Millennium™

a unique profile system

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Innovative Technology

**Hansen Millennium™** combines classic building architecture with modern technology.

With a minimum sightline in the frame, the slim profiles are proving to be extremely popular among imaginative architects and designers who value aesthetics.

The profile system is adapted for exterior use. Thermal 20-28 mm double glazed construction, alternatively 36-42 mm triple glazed.

For interior use 6 mm single glazed.

**Hansen Millennium™** is a unique profile system with numerous advantages:

- Extremely slim profiles
- Optimal light transmittance and G-value
- Integrated concealed vents
- Inward opening windows with single handle dual function
- Patented profile attachment system for windows/facades
- Integrated thermal break
- Concealed hinges
- Concealed drainage

Vents are structurally bonded into position under factory conditions. Fixed elements are glazed on site.

Surface finishes are available either anodized or in a range of powder coated finishes. Dual Colour options is possible on internal and external surfaces.

Elements will be designed according to wind loading, size w x h, and number of mullions/transoms. Options for specially designed non-angular window elements are possible to support circular and arched solutions.

**Hansen Millennium™** profile system can also be used for hinged doors, terrace doors, and turn/tilt doors.
Distinct Architectural Character

In the early 1900s, the style of construction saw many buildings furnished in a fashion for window and small façade design using narrow steel profiles. The architecture from this period is still preserved in many towns and cities in Northern Europe.

Trends within architecture have changed and technical development provides new and better windows, doors and façade systems.

The old steel profiles having no thermal break, promoted high energy loss and condensation.

This prompted famous Danish architects C.F. Moellers Tegnestue to seek a high performance fenestration solution with a new low maintenance material – aluminium - for a project at Aarhus University.

It was imperative that the profiles were slim with optimum sightlines and an aesthetic appearance. The system should also offer extremely good U-values.

It was natural for Mr Mads Moeller to choose Hansen Group as his partner for this exciting project.

The solution became Hansen Millennium™!

Today many of these period buildings in Northern Europe are being renovated with Hansen Millennium™.

Hansen Millennium™ is under continuous development and is designed to satisfy the demanding standards set down by the Danish Window Institute and to comply with the relevant European and British Standards Codes of Practice.
Hansen Millennium™

DOUBLE-GLAZED CONSTRUCTION:

with internal rectangular glazing bead

with internal angular glazing bead

with internal sloped glazing bead

Horizontal detail
1:2 Scale

We reserve the right to make alterations and modifications.
We reserve the right to make alterations and modifications.
Hansen Millennium™

TRIPLE-GLAZED CONSTRUCTION:

with internal rectangular glazing bead

with internal angular glazing bead

with internal sloped glazing bead

Horizontal detail
1:2 Scale

We reserve the right to make alterations and modifications.
Vertical detail
1:2 Scale

transom connected at opening vent

We reserve the right to make alterations and modifications.
U-value calculations according to EN ISO 10077-2 and ISO 15099

U-value fixed element

Glazing:
Double glazed thermal Ug=1.0 W/m²K which provides the construction with a total U-value of Uw=1.3 W/m²K

Glazing:
Triple glazed thermal window Ug=0.5 W/m²K which provides the construction with a total U-value of Uw=0.8 W/m²K

Hansen Millennium™ with:
- low U-values
- slim profiles and optimal light transmittance
- efficient thermal break
- warm edge and optimal glass construction

We reserve the right to make alterations and modifications.
U-value calculations according to EN ISO 10077-2 and ISO 15099

U-value opening vents

Glazing:
Double glazed thermal $U_g = 1.0 \text{ W/m}^2\text{K}$
which provides the construction with a total
U-value of $U_w = 1.4 \text{ W/m}^2\text{K}$

Glazing:
Triple glass thermal $U_g = 0.5 \text{ W/m}^2\text{K}$
which provides the construction with a total
U-value of $U_w = 1.0 \text{ W/m}^2\text{K}$

Hansen Millennium™ with:

• low U-values
• slim profiles and optimal light transmittance
• efficient thermal break
• warm edge and optimal glass construction
• concealed vent

We reserve the right to make alterations and modifications.
Project

Järnvägsverkstäderna i Johanneslust, Malmö

Present Company:
Friskis & Svettis, Malmö

Architects:
Konstruera Arkitekter och Ingenjörer AB, Malmö

Client:
Lifra L&B i Malmö AB

Building Contractor:
Byggnadsfirman Otto Magnusson AB, Malmö

Profile System:
Hansen Millennium™
**Unique Mixture of Elegance and Function!**

**Hansen Millennium™** fulfills all requirements of minimal profile thickness, design, function and performance.

Preconal Hansen has delivered the optimal fitted Hansen Millennium™ profile system. All opening vents are integrated into the façade and are almost invisible.

Järnvägsverkstäderna in Johanneslust, Malmö has a classically handsome façade with a strong expression which leaves an unforgettable impression.
Prize-winning Project


Major restoration and renovation work has taken the exterior of the building back to its original appearance. The work has been carried out lovingly and respectfully of the national heritage. This includes restoration of the exterior in a paint scheme in appropriate period colours.

To adapt the interior space to its industrial character, the original tile structure has been preserved.

New rooms for new functions have been inserted but that does not disturb the ambition of making use of the existing industrial premises.

With the rebuilding and renovation of the old iron foundries in Johanneslust, part of Malmö’s industrial history has been preserved. In the future it will without doubt become an important part of the continued development of this area.

Järnvägsverkstäderna has become a valuable part of Malmö City’s environment. Window and door elements have been replaced with Hansen Millennium™.
Transomed Windows

Old steel/cast iron windows were often manufactured with many mullions and transoms. To imitate former windows, Hansen Millennium™ can be manufactured in similar sections for a rustic appearance.
Project

Barnängshuset at Södermalm in Stockholm, in total approx. 9,000 square metres. Barnängshuset was originally built in 1917 by Kreuger & Toll and designed by the architect Cyrillus Johansson.

During the first thirty years, Barnängshuset was a cotton mill. After that time, it became a printing and publishing house. The building has also been offices for architects, furniture designers, and the Province Landsting of Stockholm.

In 1996, JM took over the building, and in 2001 restoration work was initiated to take the industrial building back to its original configuration. The building is 5 metres high and as the restored building was to become the headquarters of various creative companies, increased sightlines would be a real bonus. Hansen Millennium™ was chosen for replacement of the old windows.
The Handsome Façade

Hansen Millennium™ is extremely capable for specially designed windows such as arched or circular solutions which are integrated into the original façade to keep similar lines to the original vents.

The photo shows how a former Boiler Works looks today after restoration and replacement of windows.

Solid Workmanship

Hansen has a long tradition and a century’s experience of manufacturing metal windows. We have developed our own suite of profiles which enables us to design and manufacture special window- and façade solutions.

In 1929, Blacksmith HS Hansen, who was the first generation of the Hansen family, got his first order for steel windows for a new dairy in Lem in Western Jutland in Denmark.

With an intensive focus on product development, Hansen was to become the first company in Denmark to take up production in aluminium profile systems.

The evident characteristic of minimalistic slim profiles is still the pride of our company. These profiles are now also available with thermal break.
Project
IKEA HK Helsingborg

Client:
IKEA

Architects:
Wikerståhl Arkitekter

Contractor:
Skanska

Profile System:
Hansen Millennium™

External Colour:
DC Metal 386

Internal Colour:
NCS S 1500

IKEA moved into the new premises in autumn 2004.
The Building

In 1890, Sockerbruket in Helsingborg was built on the initiative of Mr Petter Olsson. It soon became the largest workplace in town. The company stayed there until 1948.

Design work included measurement on site of window openings which all had different dimensions and arc radii.

Each window was delivered from factory with individually manufactured thermal glazing. Glazing was carried out from the inside of the building.
Opening Vents

The photo shows an opening vent which has been integrated into the profile system.

Hansen Millennium™ can be manufactured in different window frame profiles:

Concealed vent

Vent is not visible anywhere outside as glass is bonded onto the interior window frame at factory. This is important for architects who want to conceal where the vents have been positioned in the façade.

Visible vent

Window frames visible from both the internal and the external side. Glass is fitted from internal side with glazing beads. For architects who want the opening vents to be visible.
The Building

For many centuries, both the Danish Customs and the Tax Authorities have been collecting money to finance Government expenses.

Today, the Northern wing of Jens Vilhelm Dahlerup’s big red warehouse houses a Customs and Tax Museum. The old windows have been replaced with Hansen Millennium™.

Jens Vilhelm Dahlerup
Architect (1836-1907)

Jens Vilhelm Dahlerup was one of the most well-known Danish architects in the late 19th century. He designed numerous important buildings in Copenhagen in his characteristic historic style, among them, Det Kgl. Teater (the Royal Danish Theatre) and Statens Museum for Kunst (Denmark’s National Gallery). As a consultant for Copenhagen’s Harbor, he was also employed to design the development of the harbour area in the late 19th century.
Project

Dahlerups Pakhus
Copenhagen

Profile System:
Hansen Millennium™

Hansen Millennium™ has here been designed to conceal the vents in the façade when viewed from the exterior of the building. This is very obvious on the photo to the right where some of the vents are open.
Project

Kv. Magnus Stenbock
Malmö

Property Development:
Vasakronan

Property:
Office premises

Project Management:
Stefan Klemt AB

Building Contractor:
Preconal Hansen

Profile System:
Hansen Millennium™

Product:
Hansen Millennium™ opening vents with turn/tilt operation.

Hansen Millennium™ windows have been manufactured from unique slim profiles which provide an increased sightline.

The window elements can be manufactured in three different configurations -
Opening vent - side hung hinges
Opening vent - Tilt/turn mode which provides optimal ventilation.
Fixed, closed element.

The units are fitted with a userfriendly handle.

In tilt position, the vent is open at top, providing excellent air circulation into the premises.

Preconal Hansen has delivered the solar shading system which is installed in an external box above the external window units. The operation mode is electric.
Project
Kv. Magnus Stenbock
Malmö

Phase 1: Replacement of windows was carried out in autumn 2006.

Phase 2: Replacement of windows will be carried out in summer 2009.
**Project**

Citroën’s Headquarter with showroom in Copenhagen

Architects: Århus Arkitekterne

Profile System: *Hansen Millennium™*
The Building

Citroën’s headquarters in Copenhagen is a great example of using Hansen Millennium™ for renovation of old buildings.

Hansen Millennium™ has been manufactured as half arched transomed units. Citroën’s curving logo has been integrated into the window.

When viewing the element from the inside, it is obvious that Hansen Millennium™ is an impressive and streamlined system with flexible and strong profiles.
**Project**

Property:
Skånsk Byggtjänst

Type of Property:
Office building in Svalöv at the outskirts of Malmö

Architect:
Bengt Larsson

Design:
Tomas Gustavsson

Completion:
2007

Main building:
200 square meters

Profile System:
Hansen Millennium™

Products:
Tilt and slide patio doors with fixed window units.
Hansen Millennium™
Tilt and Slide Door

The photo shows a door in tilt position
Project
Villa Gulliksson Bjärred

Architects:
Wikeborg & Sander Malmö

Completion:
2005

Profile System:
Hansen Millennium ™

Products:
Tilt and Slide doors in everyday rooms, dormitories and kitchen. Sliding window in bathroom.

Hansen Millennium ™ tilt and slide doors manufactured from unique slim profiles, providing optimal sightlines in each element.

Doors can be in open, closed or tilt position. In open position the door is concealed behind the fixed element next to the door opening.

Even rather large door elements are simple to open, slide or close.

The elements are fitted with a user-friendly tilt/turn handle.

In tilt position, the door is open at top and provides optimal ventilation and reduces draughts.
Project

Skansen Malmö
New Building

Architects:
Wikeborg & Sander Malmö

Completion:
2005

Profile system:
Hansen Millennium™
Hansen CellGlazing™

Products:
Hansen Millennium™ entrance doors in a Hansen CellGlazing™ curtain wall.
Project

Potterrow Development
Edinburgh

Architects:
Bannett Associates
Edinburgh

Client:
Balfour Beatty, Edinburgh
Fenestration and Façade

Engineers:
MagHansen

Completion:
2006-2008

Profile System:
Hansen Millennium™
Hansen Thermestra™
Structural Glazing

The Building:
Education premises for
Edinburgh University,
department for Advanced
Science Techniques.
**Project**

New head office for the Tax Authorities in Aarhus, Denmark

Architects: schmidt hammer lassen architects

Client: Aarhus Council

Contractor: A. Enggaard A/S

Profile System: Hansen Millennium™ Komfort, Hansen Fenster™, Hansen Fasad

Typical detail sections

Space for blind
Coupled 1 + 2 windows

**Hansen Millennium™ Komfort** is a product with two frames in one, offering low U-values and excellent sound reduction.

Each frame is fitted with a single pane of glass on the outside and a low energy, double glazed unit on the inside.

The vents can incorporate an integral fully adjustable venetian blind within the window assembly. The blind is well protected and is easily maintained because it is installed in the cavity between the double glazed unit and the outer glass.

A variety of surface treatments, blind materials and transparency options are available. The venetian blind can be operated manual or electric.

The coupled frames can be installed as single windows, as elements in window ribbons or in curtain walls.
Hansen Group provide:

- high performance, tailored solutions for the internal and external fabric of buildings
- unique, high quality and fully tested products developed and manufactured in-house
- design, installation and project management services
- extensive product information
- free technical support

Vision

Hansen Group’s vision is to be the Company
- from whom our customers choose to buy
- with whom people choose a career
- profitably grow with colleagues living our values

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