

# Futura+ & Futura+i

WOOD/ALU & ALU/ALU COMPOSITE WINDOWS



THE WINDOW OF  
THE FUTURE HAS

**idealcore**<sup>™</sup>

Lasts longer  
Insulates better

**idealcombi** 

Windows. Designed & Manufactured in Denmark





### **Manufactured with care by skilled Danes**

At the largest window factory in Denmark on the west coast, facing the North Sea, we develop, test and manufacture all Idealcombi product ranges.

The 550 dedicated employees take care of all aspects of manufacturing the wide range of products in our window and door series. The state of the art production facility is of great importance for the local community as well.

# “That’ll do!” never really does it, on the Danish west coast.



**At Idealcombi we have since the beginning in 1973 put all our professional pride into developing a better window. Improving durability, insulation, minimising maintenance and improving the aesthetics by exploring new materials, new designs and new manufacturing methods.**

The first big milestone was in 1988 when we were the first to launch the aluminium clad sash/frame timber window. It was designed as a traditional timber window with external frame and sash profiles in aluminium and timber internally.

We have now, once again, developed an innovative window solution. This time by creating a unique frame design using the imperishable and superinsulating material polyurethane (PUR) to add unmatched properties to our windows and doors.

As a worlds first, Idealcombi is manufacturing windows and doors using **idealcore™** – a unique frame design, where the core of the frame is moulded in thermal PUR at the factory in the North West of Denmark.



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# Two window systems - one external design Architectural freedom



Futura+



Futura+ sets a new standard for energy efficient windows and doors of the future. The slim sightlines and large glass areas provides a unique opportunity to design any project in a Danish minimalist style. Futura+ has a record high energy performance and a wide range of functionality. Futura+ meets all requirements for contemporary architecture.

Futura+ is an outward opening window system with all the traditional opening functions, and more. Futura+i is the inward opening equivalent of Futura+ with tilt-turn functions while maintaining the external 53 mm profile. Together, the two systems offer an unrivalled complete range of opening functions, allowing total architectural freedom.

#### **With highly insulating idealcore™**

The impressive energy performance of Futura+ is all down to the innovative use of thermal materials - we call it **idealcore™**. Between the external aluminium profile and the internal timber frame we have moulded a core of thermal PUR, providing our windows with ground breaking low values in the over all energy calculations.

The imperishable **idealcore™** ensures maintenance free surfaces in the windows wet zone, thus vastly improving the life span of the window and lowering the overall total economy for a building project. The innovative design is a result of increased focus on environmental impact, lowering energy consumption and overall financial savings.



Futura+i

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Futura+ & Futura+i

Two series - one design

**360° INNOVATION**

unlimited possibilities





















# Uncompromising quality

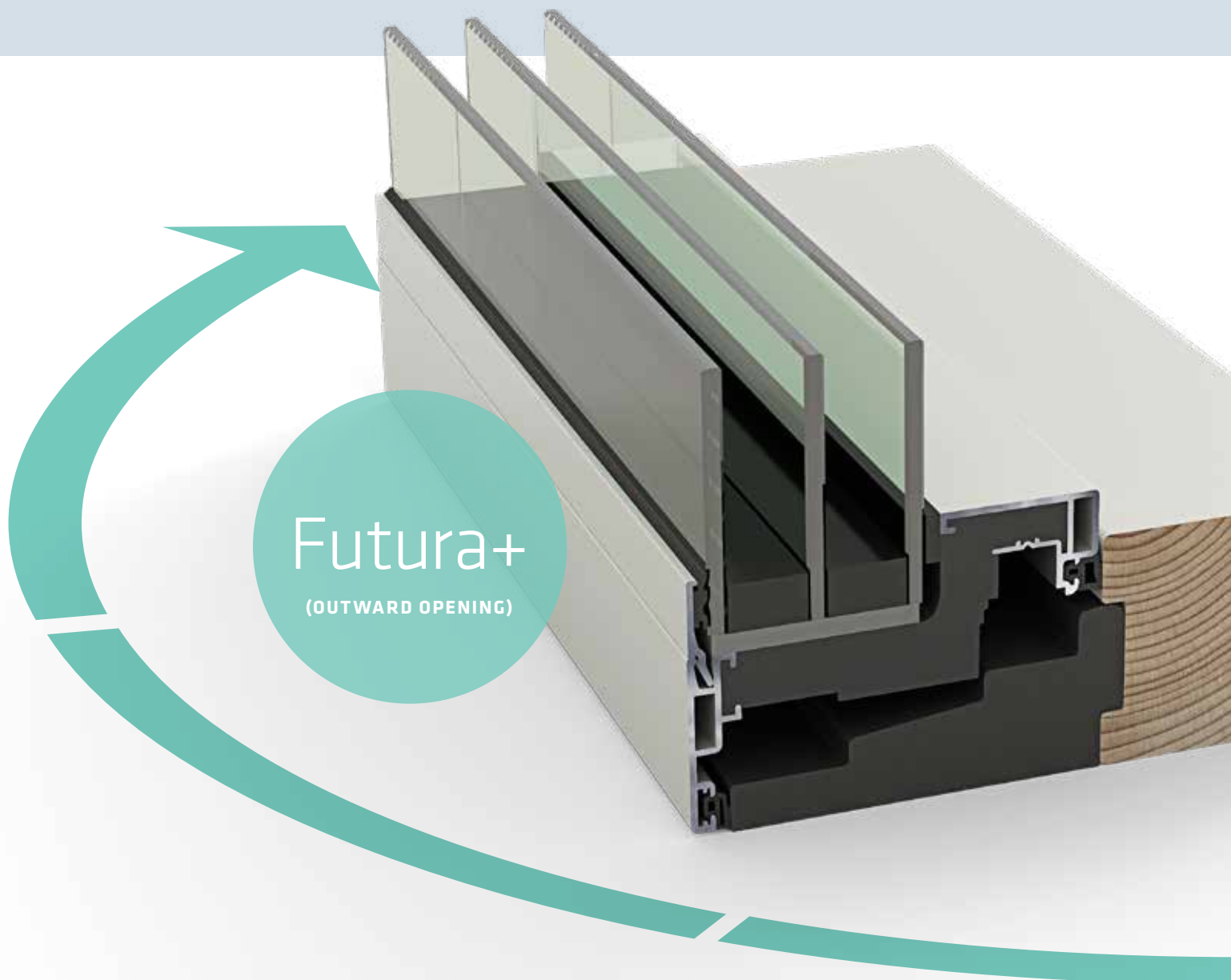
At Idealcombi we are all about quality. Not just in our product design but in everything we do.

The quality is in the choice of materials, exclusive solutions, minimal need for maintenance and long product life-span.

With FSC®-certified pine wood, the maintenance-free

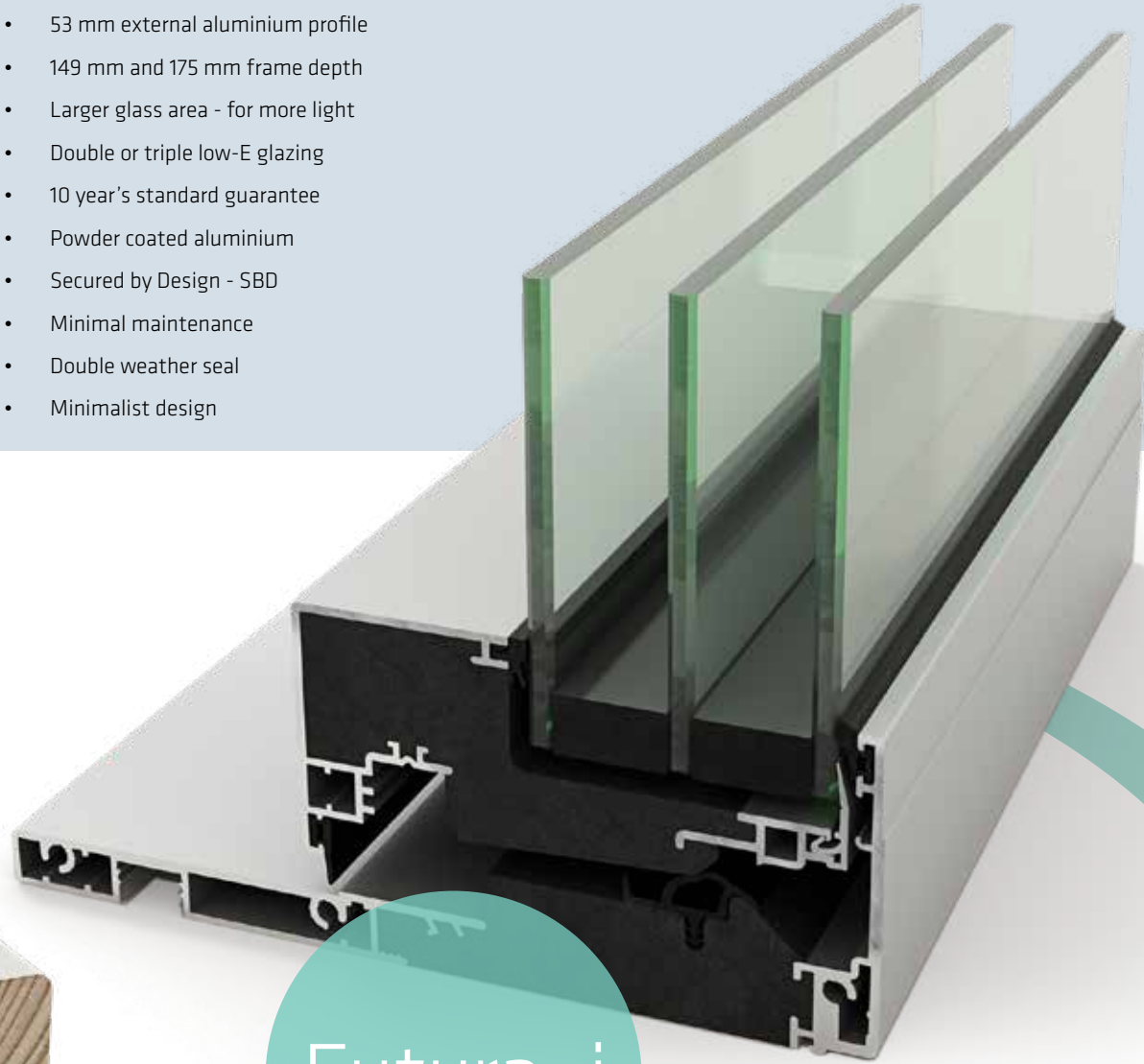
and super insulating idealcore™, powder coated aluminium and low energy glazing we develop new and innovative facade systems with windows and doors that adhere to our definition of quality.

We use materials where they make most sense and overall provides the greatest benefit.





- Inward opening and outward opening facade system with same external design
- Finger jointed and quality optimized FSC® certified pine wood
- Imperishable material in the frame rebate's 'wet zone'
- Highly insulating **idealcore™** (core of thermal PUR)
- Design handle with built-in ventilation position
- 53 mm external aluminium profile
- 149 mm and 175 mm frame depth
- Larger glass area - for more light
- Double or triple low-E glazing
- 10 year's standard guarantee
- Powder coated aluminium
- Secured by Design - SBD
- Minimal maintenance
- Double weather seal
- Minimalist design



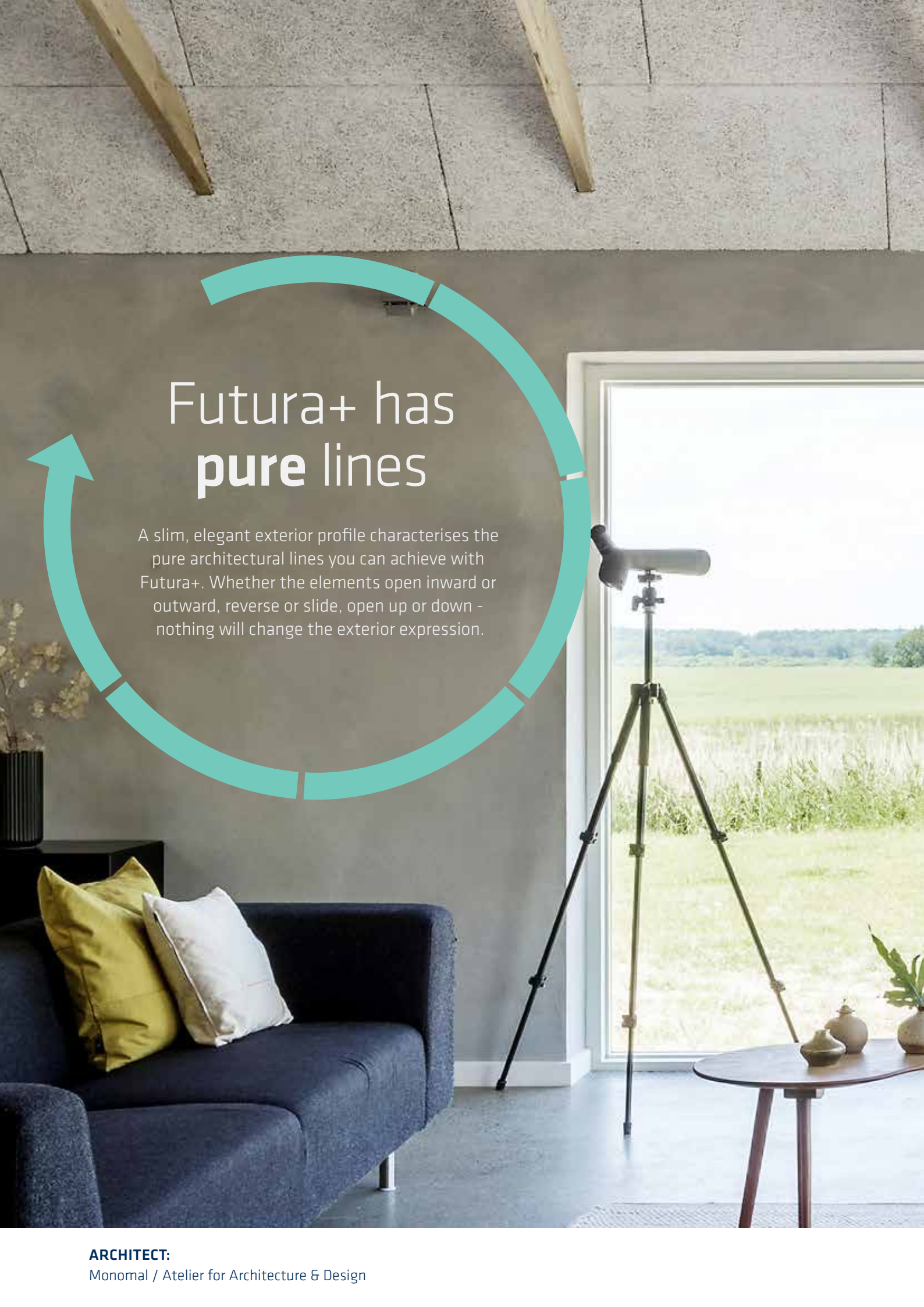
Futura+i

(INWARD OPENING)

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# Futura+ has **pure** lines

A slim, elegant exterior profile characterises the pure architectural lines you can achieve with Futura+. Whether the elements open inward or outward, reverse or slide, open up or down - nothing will change the exterior expression.

**ARCHITECT:**

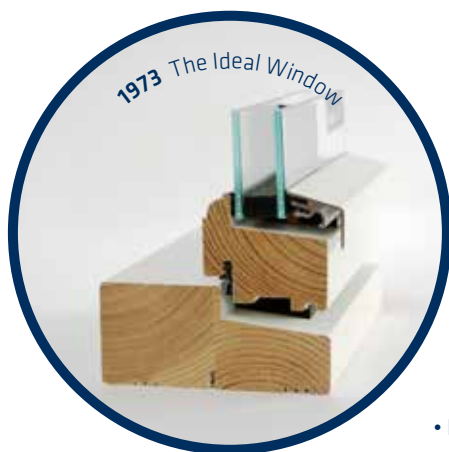
Monomal / Atelier for Architecture & Design





# The road to the perfect solution

That'll do! never does it, at Idealcombi. We are always searching for the next idea that will evolve the window even further. To make the good even better. That is why we have always focused our efforts on the weakest point of the window the frame and the rebate.



## Frame rebate in wood

The first Ideal windows from 1973 were made entirely from pine wood.

### Pros:

- Simple production
- Natural material

### Cons:

- Risk of rot in the wet zone
- Needs continuous external painting & maintenance
- Needs regular painting of the frame rebate 1973 The Ideal Window



## The challenges

There are 4 main reasons why the frame and frame rebate is crucial for the life-span of a window:

### 1. Water

When the rain falls on the window the water will collect in the frame rebate. The same happens for water from condensation on both sides of the window. If the entire frame is made from wood water will, at some point, penetrate the paint and cause the wood to deteriorate and rot.

### 2. Cold weather

One of the most important functions of the window is to keep the cold weather out of your home and the heat in. This is where materials play a key part. Some combinations of materials can result in thermal bridges where heat is lost through the external

aluminium profiles causing low temperatures and condensation on the inside of the glass.

### 3. Dirt and bugs

In windy conditions dirt will be carried to the window and it usually ends up sitting in the frame rebate. At the same time bugs love to hide in drainage holes and cavities around the frame. Cobwebs, dirt and dead bugs will block the drainage holes and channels.

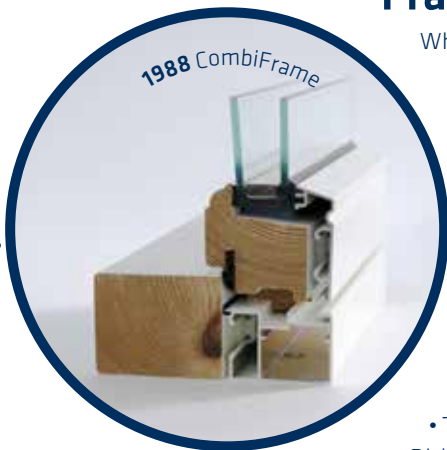
### 4. Replacement

Unlike the rest of the components in a window the frame cannot be replaced without performing major works.



## Frame rebate in aluminium

When we launched the original CombiFrame wood/alu window in 1988 it had a powder coated aluminium rebate similar to the external protective aluminium profile.



### Pros:

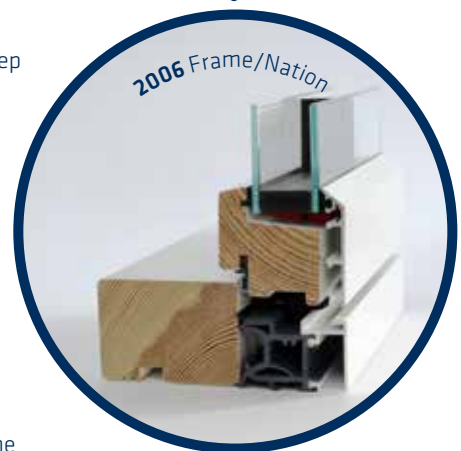
- Imperishable material in the wet zone
- Low maintenance
- No repainting
- Long life span
- Great total economy

### Cons:

- Thermal bridging from aluminium rebate to the internal timber frame
- Risk of internal condensation

## Composite rebate

To combat the thermal challenges the next step was a composite solution with a thermal break of extruded plastic.

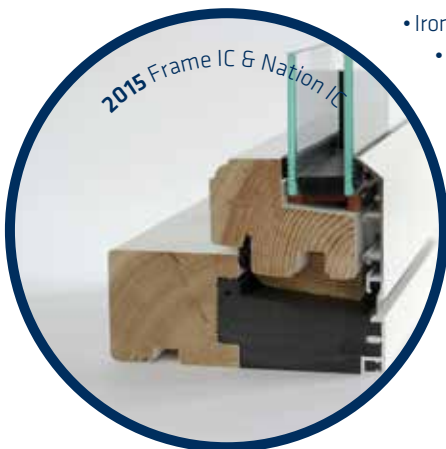


### Pros:

- Imperishable material in the wet zone
- Reduction of thermal bridging

### Cons:

- Drain holes can be blocked by dust and dirt.
  - Ironmongery grooves makes cleaning harder.
- Sealant must be applied further back
  - Risk of standing water in the wet zone

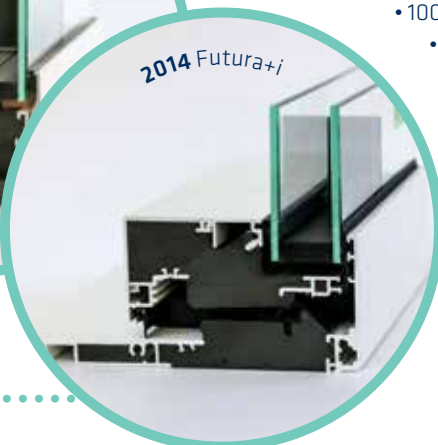


## Rebate in thermal PUR

With idealcore™ our research and development team has found the ideal solution.

### Pros:

- Imperishable material in the wet zone
- Solid
- Super insulating
- Smooth surface (easy cleaning)
  - No drainage holes & cavities to be blocked by bugs and dirt
  - 100% water- & moisture resistant
  - No maintenance of rebate
  - Longer lifespan



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# Idealcore™.

## The window of the future

**Through the years we have developed and tested many different frame designs. All in a quest to solve the four basic challenges in window design. Our development team has finally cracked the code by creating ground breaking frame design with an imperishable and highly insulating frame rebate in polyurethane - also known as thermal PUR.**

We have named the new solution **idealcore™**, because that is exactly what it is. An ideal core that unlike any other design on the market solves all four challenges at once.

### 1. Long life-span

Thermal PUR is an imperishable material. The compact rebate moulded from polyurethane will not deteriorate or break when being exposed to water collecting in the rebate.

The window is designed for a life-span of 70 years - provided it is maintained as instructed in our manual.

### 2. Minimal heat loss

Thermal PUR is a highly insulating material with a lambda value of just 0,074 W/mK. This ensures there will be no thermal bridging from the outside to the inside of the frame. Windows with **idealcore™** therefore have an energy performance that comfortably exceeds building regulations and can be used for any type of build.

### 3. Easy to clean

The **idealcore™** PUR rebate is solid and does not have any cavities which eliminates the need of any drainage holes. This means the the frame rebate has a smooth surface that is very easy to clean with a damp cloth and offers no shelter for bugs to nest in.

### 4. Does not need replacing

Using an imperishable material in the frame rebate significantly extends the life-span of windows and doors with **idealcore™**. It will therefore not be necessary to replace the frame that is fixed to the building. Other components such as sash, glass and ironmongery can be replaced as required.

## What is Thermal PUR?

**Thermal PUR (polyurethane) is a synthetic resin in which the polymer units are linked by urethane groups. Polyurethane foams can be both soft and rigid and with different masses and properties.**

Today you will find PUR in a range of products such as; shoes, mattresses (ie. Tempur®), car seats, sports equipment and as insulation for pipes, refrigerators and building materials.

Thermal PUR excels in many ways. It is strong, flexible, has a low weight and most importantly PUR has excellent insulating properties.

At the same time there is no health related risks associated with the use of PUR.

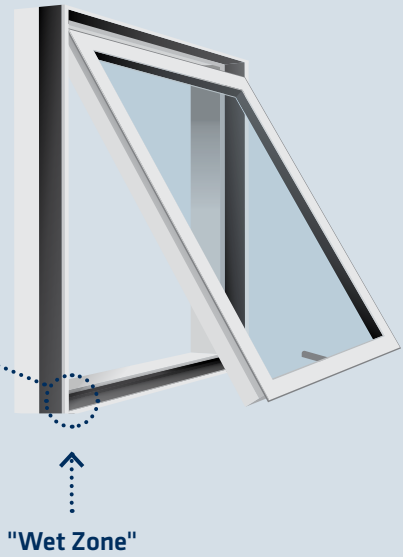
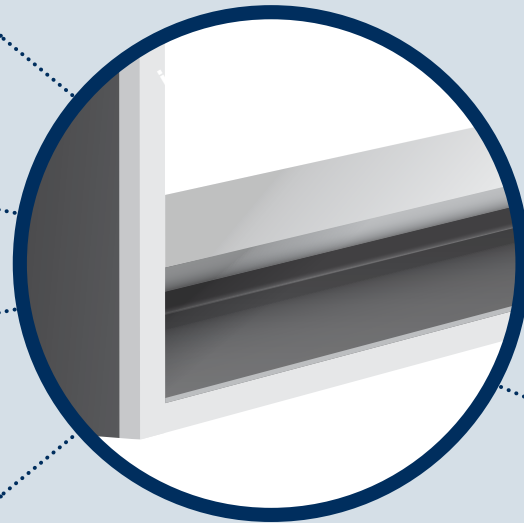


**Imperishable  
idealcore™ rebate**  
extends lifetime

**Highly insulating**  
for low heat loss

**Reduced risk of  
condensation** due  
to a warmer rebate

**Smooth surface**  
without drainage holes  
is easier to clean



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# Idealcore™ is the key to energy performance

## Standard U-values and g-values

Outward opening Futura+	$E_{ref}$	Gas	$U_w$	$T_{oi}$ °C	$g_g$
Futura+, 30 mm pane, DGU standard low-energy pane	+0.6	Argon	1.31	12.3	0.73
Futura+, 44 mm pane, TGU standard low-energy pane	+30.6	Argon	0.78	14.1	0.62

Inward opening Futura+i	$E_{ref}$	Gas	$U_w$	$T_{oi}$ °C	$g_g$
Futura+, 28 mm pane, DGU standard low-energy pane	-5.7	Argon	1.38	13.7	0.73
Futura+, 48 mm pane, TGU standard low-energy pane	+30.6	Argon	0.78	15.7	0.62

## Alternatives with lower U-values and g-values

Outward opening Futura+	$E_{ref}$	Gas	$U_w$	$T_{oi}$ °C	$g_g$
Futura+, 44 mm pane, TGU alternative low-energy pane	+19.5	Argon	0.74	14.1	0.53

Inward opening Futura+i	$E_{ref}$	Gas	$U_w$	$T_{oi}$ °C	$g_g$
Futura+, 48 mm pane, TGU alternative low-energy pane	+19.5	Argon	0.74	15.7	0.53



## Idealcore™ & Energy Performance

It goes without saying that Futura+ windows and doors can contribute to lowering the overall energy consumption (energy accounts) of a building project.

**Idealcore™** (Thermal PUR) is the core to saving energy and the use of **Idealcore™** in the Futura+ series has set new standards for material choice for modern windows.

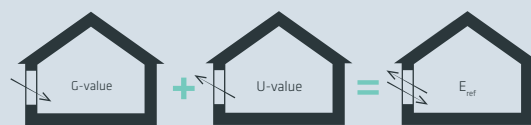
**Idealcore™** is exceptionally insulating and takes the series to the absolute top of the market, when it comes to energy performance.

**Idealcore™**, in Futura+, is moulded into the aluminium profiles and does not omit any gasses or odours in the finished building. The material can be recycled by reuse or incineration after use and is therefore a sustainable choice.

### What does the energy balance mean?

The energy balance,  $E_{ref}$  is an expression for the difference between heat loss through the window and the free solar gain through the glass. If the energy balance is positive, more energy has been gained than lost.

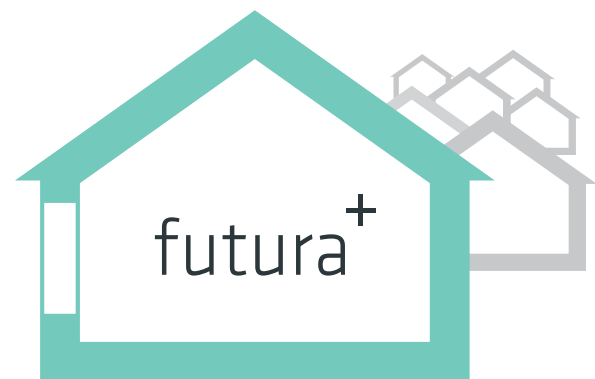
The  $E_{ref}$ -value always given for a standard opening window measuring: 1230 x 1480 mm and is calculated as an average over the heating season.



## Improved building envelope

At Idealcombi we believe a window should last as long as the building it is fitted in, and that it should be an integrated part of the envelope, providing a great living space for its occupants.

The use of **Idealcore™** vastly extends the lifetime of the window itself and when we deploy the values of great craftsmanship and quality in everything we do, we know our windows will benefit the whole bulid. With correct maintenance you should not be surprised to see Idealcombi windows lasting 70 years or more.



## Surface temperature of at least 13°C

Futura+ ensures a surface temperature of at least 12,3°C for a window with double glazing. For windows triple glazing, the surface temperature is 14-15°C.

A high surface temperature results in the best indoor climate and eliminates the risk of internal condensation.

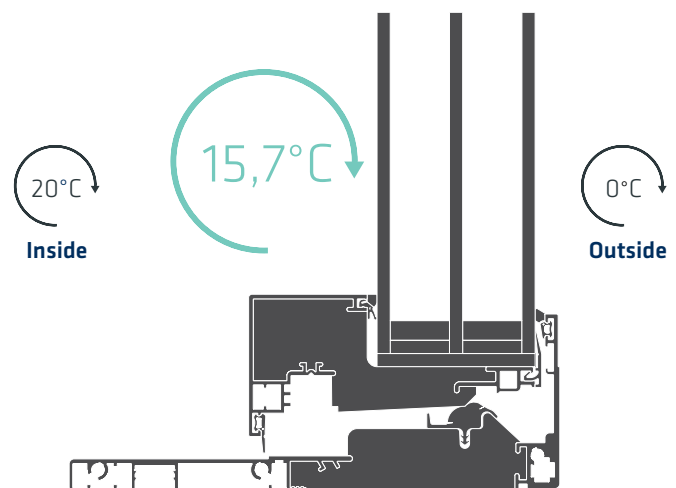


Illustration of Futura+i

# The handle - **360°** innovative trademark

You know a window by its handle, and Idealcombi's handle sets **the standard** for designs of the **future**. It is **functional** and **beautiful**, **inviting** and **strong**, **user-friendly** and **time-less**, and above all it **bears** repetition.



idealcombi



## DESIGNERS

Birgitte Smedegaard and Sine Weis Damkjær



“A strong handle with architectural and user-friendly qualities“

**Idealcombi's watershed handle was designed by the Danish design duo from Smedegaard & Weis – Birgitte Smedegaard and Sine Weis Damkjær. A lot of thought and ideas have gone into this beautiful and inviting handle, and the designers reveal here what it takes to develop the strongest feature of the window.**

Idealcombi's clear ambition is to create and ensure quality, so we needed to design a handle that reflected values and attitudes towards a high level of quality, and functional and user-friendly products.

One of the things we focused on in the early phase was ensuring that the handle would have novelty value to make it stand out from the crowd. It needed to have a strong, recognisable identity as well as a simple, logical and self-explanatory design – and be easy to operate and inviting.

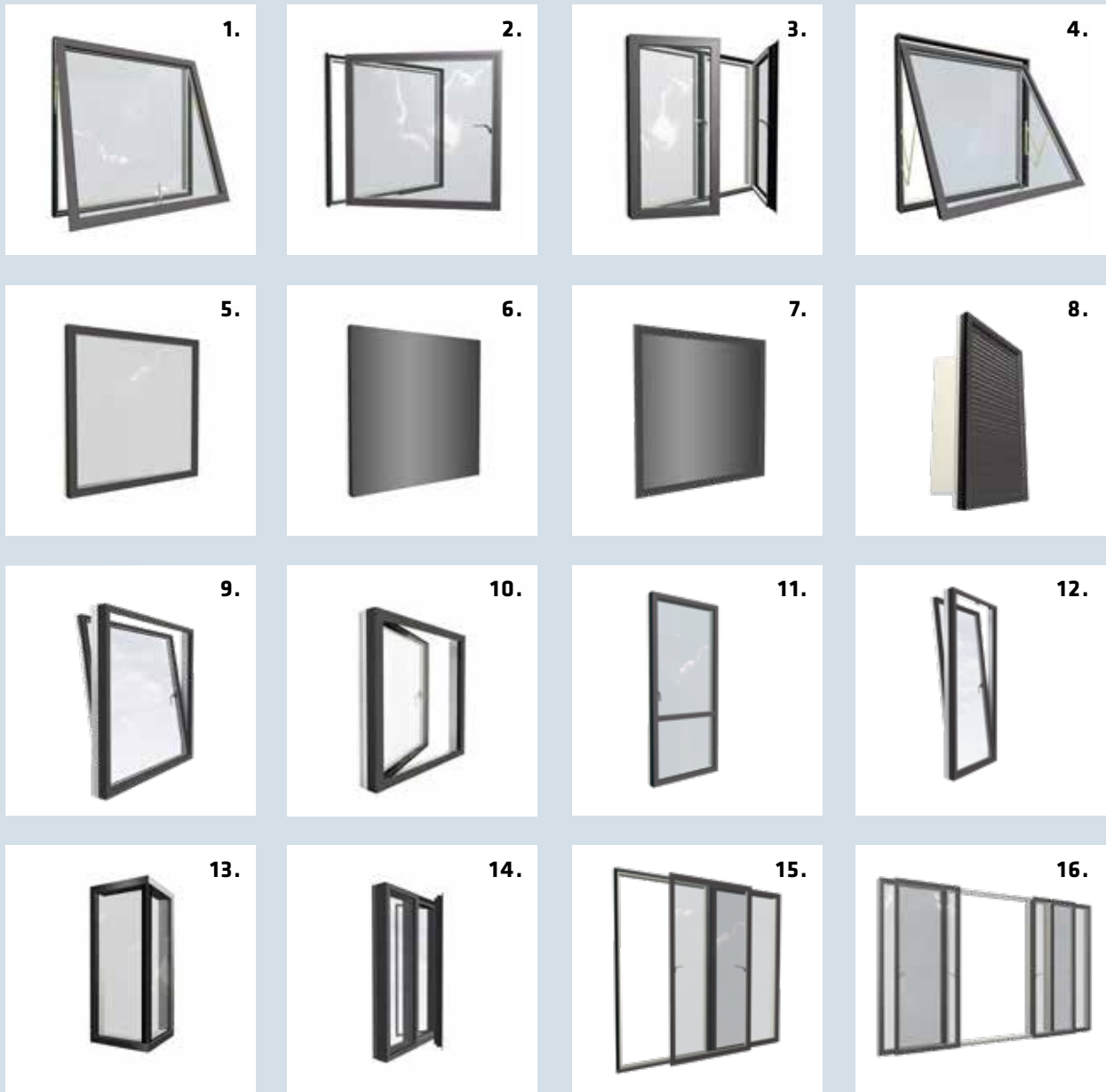
### Idealcombi's unique handle

We feel Idealcombi's handle is unique and stands apart by being more poetic and decorative than what you see on other new windows. It is also industrial and functional and has a rugged, highquality expression. The handle's stringent yet soft form gives it character without being dominating. The balance between its stringent, industrial side and soft nature, fitting human hands in a range of sizes, is the handle's clear strength.

Futura+ has a handle which is an active and decorative element for the windows and doors, it is 'proud' and has great personality.

Same external design across opening functions

## - architectural freedom



1. Top guided 2. Side guided 3. Side hung 4. Top swing reversible 5. Fixed light 6. Flat screen 7. Facade panel  
8. Louvre shutter 9. Inward opening tilt-turn window 10. Inward opening turn window 11. Terrace door  
12. Inward opening tilt-turn terrace door 13. Glass to glass 14. Acoustic window 15. Sliding door 16. Double sliding door  
17. Low threshold sliding door





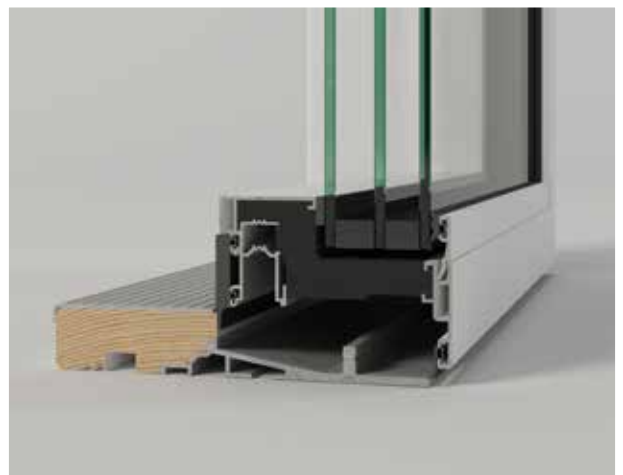
17.

## Sliding doors

### connecting inside and outside

Futura+ offers a wide range of sliding doors for example a double sliding door provides a free opening up to 2.6 m wide. The beautiful sliding doors are not only extremely practical – the large glass surfaces and openings connect indoor and outdoor life.

Futura+ sliding doors are now being introduced with a low threshold – a requirement which is increasingly being seen in projects of all sizes. The low bottom frame makes it easy for anyone to pass, and results in an elegant delineation between the two areas.





**ARCHITECT:**  
Gaunt Francis Architects



# 360° built in security

At **Idealcombi** we place **high demands** on security and believe it should not cost extra to feel you have **maximum** protection.

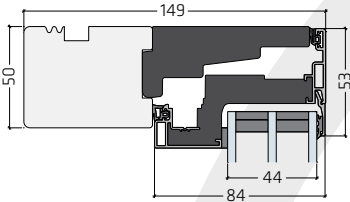
All **Futura+** windows and doors come with **high security** ironmongery as standard, making it very **difficult** for a burglar to break in.

- + **Glazed units are glued to rebate of frame to prevent removal from outside**
- + **The aluminium profile ensures the window cannot be removed.**
- + **Multiple locking points make it practically impossible to force the window open**
- + **Espagnolettes with mushroom bolts and extra strong receivers which ensures they are extremely resistant to twisting forces and tools and/or any other violent attacks to force the window out of it's frame.**

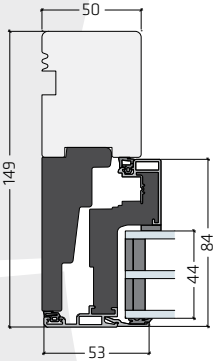
# Drawings

## Futura+ Outward opening

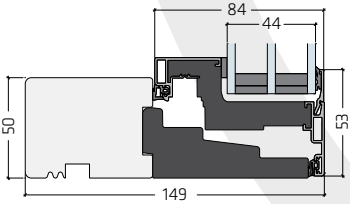
PLU01-20L44  
**Head**



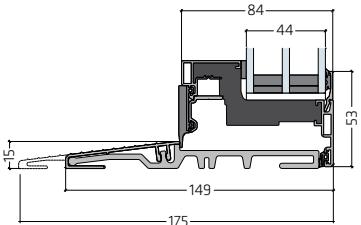
PLU01-30L44  
**Jamb**



PLU01-10L44  
**Sill**

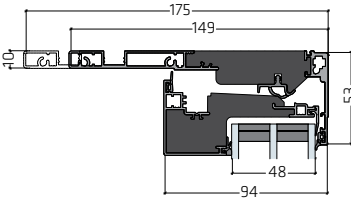


PLU20-11L44  
**Threshold terrace door**

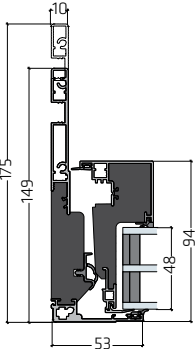


## Futura+ Inward opening

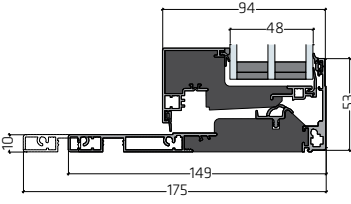
PLU09-20L48  
**Head**



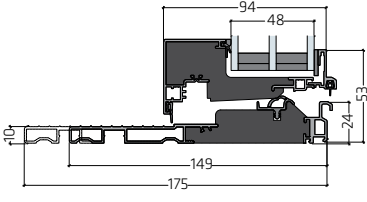
PLU09-30L48  
**Jamb**



PLU09-10L48  
**Sill**

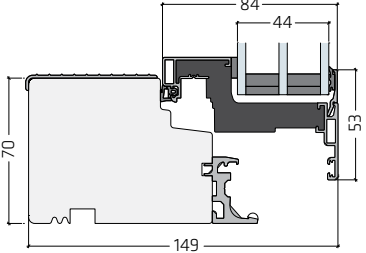


PLU28-10L48  
**Threshold terrace door**

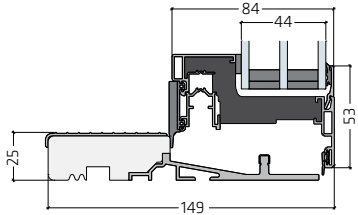


## Futura+ Sliding door

PLU29-10L44  
**Threshold sliding door**



PLU29-15L44  
**25 mm threshold - sliding door**



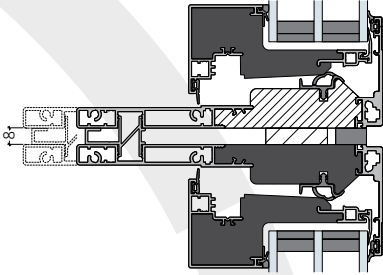


# Accessories

## Couplings

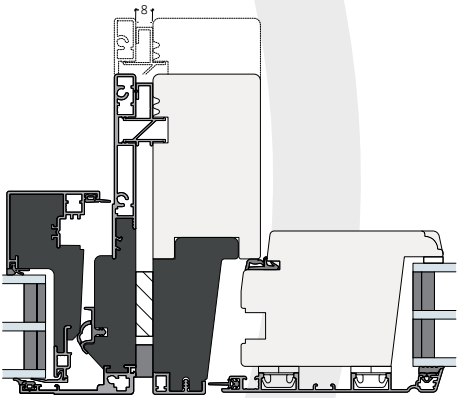
PLU-PF0033

**Standard packer / cross tongue**



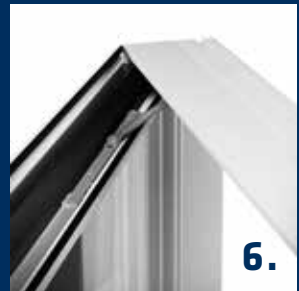
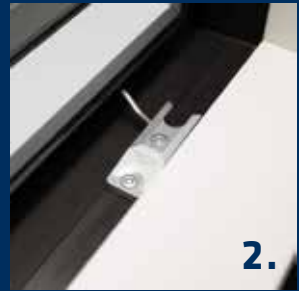
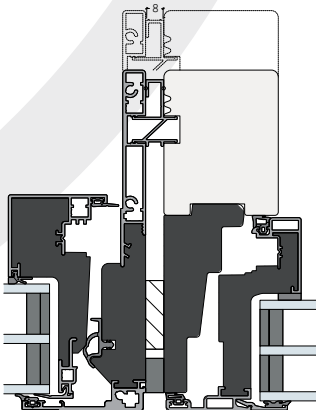
PLU-PF0045

**Tilt-turn combined with outward opening entrance door**



PLU-PF0034

**Tilt-turn combined with outward opening window**



1. Locking cylinder in sash
2. Ventilation catch (standard on Futura+)
3. Espagnolette with mushroom bolt (standard)
4. Trickle vent
5. Keep (standard)
6. Friction brake
7. Electric motor



Today Idealcombi is owned and run by Martin and Mikael Søgaard, who are sons of the founders of Idealcombi

## Idealcombi was started in a barn by two brothers

The story of Idealcombi starts with two entrepreneurial brothers, Henning and Bent Søgaard. In 1973 they started manufacturing windows in their parents' barn in the most western part of Denmark. And they did it well!

It didn't take long before the company started growing. And growing. And growing. Until achieving its current status as the largest window factory in Denmark with over 100,000 m<sup>2</sup> and over 550 skilled employees.

All thanks to the two Danes' sense of quality and their distinctive eye for innovation and product development.

Today Idealcombi's future is in the hands of the next generation, the cousins Martin and Mikael Søgaard.



The brothers Bent and Henning Søgaard founded Idealcombi in 1973.





## Quality assurance and certificates

At Idealcombi we have made a focussed effort to create the best possible window systems - at all levels. Our in-house test lab performs water, wind and air-tightness tests, to ensure our windows meet current and future demands. It is also in our test lab we ensure our windows and doors can be accredited with independent third party certifications like Secured by Design and CWCT. To document this work we have a number of certifications. We are proud of them all as they are an expression of our dedication to qual



### ISO 9001:2015 (Quality)

We are ISO 9001:2015 certified and ensures hereby that all our business procedures meet this standard. This includes continuous improvements of our operations. In the ISO certification customer satisfaction is a focus area and ensures focus on continued customer related business development.



### DVV (Danish Window Verification)

Idealcombi's windows and doors are DVV-certified, which is requirement for all members of the Association of Danish Window Manufacturers. The DVV certification means that windows and doors are manufactured according to the Technical Requirements of the Association.



### ISO 14001:2015 (Environmental)

We are ISO 14001:2015 certified and ensures hereby a uniformed and continuous effort in quality and environmental management.



### Association of Danish Window Manufacturers and DVV

Idealcombi is a member of the Association of Danish Window Manufacturers and is therefore affiliated to Danish Window Verification (DVV), which is the body checking that the products as a minimum meet the requirements set out in the Technical Requirements of the Association.



### CE-Marking

Idealcombi's products are CE-marked

### FSC® certified

Idealcombi uses FSC®-certified pine wood. This means that all pine-based windows and doors can be delivered with FSC labelling.

In an FSC-certified forest, no more wood is felled than the forest can naturally reproduce. At the same time, FSC is a guarantee that animals and plant life are protected, and that the people who work in the forest are guaranteed training, safety equipment and a decent salary



The mark of responsible forestry



### Secured by Design

An increasingly important issue for our customers is the security of their projects. For this reason we have sought Secured by Design status for a selection of our windows and doors.

## Idealcombi UK

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Boycott Avenue  
Milton Keynes  
MK6 2TA

### *Commercial*

Tel: +44 (0) 1582 860 940  
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**idealcombi** 

Learn more about Futura+ and Futura+i on [idealcombi.com](https://www.idealcombi.com)  
and follow us on LinkedIn, Facebook, Instagram and Twitter.