

NORDAN **HIGH PERFORMANCE**

TIMBER WINDOWS AND DOORS

TABLE OF CONTENT





THIS IS NORDAN

- 4 — Why choose NorDan?
- 6 — Quality from the inside
- 7 — Quality on the outside

EXPLORE WINDOWS

- 8 — NorDan Windows
- 10 — NorDan Passive
- 12 — Product overview
- 14 — Norwegian StormGuard
- 16 — Two Handle Side Hinged
- 18 — One Tilt & Turn
- 20 — One Turn ZS
- 22 — Plug and Play
- 24 — Multisash
- 26 — Combination
- 28 — Angled/Fixed Light
- 30 — TopTech
- 32 — Opus
- 34 — Top Guided Window
- 36 — Sidehinged Reversible
- 38 — Side Hinged (TA)/Top Hinged (TW)

EXPLORE GLASS DOORS

- 40 — Balcony Door
- 42 — Double Balcony Door
- 44 — Sliding Patio Door 2-leaf
- 46 — Sliding Patio Door 4-leaf

EXPLORE FEATURES & OPTIONS

- 48 — Surface treatment
- 52 — Glazing configuration
- 54 — Options and accessories
- 61 — Glass
- 62 — Sash and Case look alike

NORDAN

- 64 — NorDan BIM Objects
- 68 — Certifications
- 70 — NorDan Sales Organisation

WHY CHOOSE NORDAN?



Perfekt Samspill

We believe in our solutions and we believe in the responsible way that we integrate these into our lives. Our core values run throughout every team within our business.

We are constantly looking for perfect interaction between people, production, technology and employees. For customers and suppliers, we are constantly trying to be the perfect supply chain partner. For the customer, we want the products to speak for themselves regarding perfect form and function - with lasting durability..

Vacuum Impregnated timber

There are many ways to protect timber windows, but the single most important factor for longevity is thorough and robust impregnation of the timber that is used to make the window. The process used by NorDan complies with the requirements of BS 8417 'Preservation of Wood Code of Practice', for a 60 year desired service life for external joinery components.

State-of-the-art Powder Coating

In February 2016, NorDan took ownership of a state-of-the-art powder coating line with FOX (Fast OXidising) pre-treatment, only the 5th plant of its type in the world and the only one in Europe. By supplying all aluminium profiles with this standard of quality for pre-treatment, NorDan has created a benchmark for the window manufacturing industry.

Expert Solution Providers

NorDan have a long history of assisting architects, contractors and clients in specifying high performance windows, for both large and small projects alike.

We have a model of continuous improvement and development. Working alongside respected experts in the fields of energy efficiency, lifetime running costs and environmental impact ensures that our products are always at the forefront of advances in the construction industry. We try to lead by example - we've done it for almost 100 years.





QUALITY FROM THE INSIDE

You can't see it, and you don't think about it, but perhaps the most important reason for choosing a window from NorDan is how we impregnate the timber.



There are many ways to protect timber windows, but the single most important factor for longevity is thorough and robust impregnation of the timber that is used in the manufacturing of the window.

Vacuum/pressure Impregnation

Timber is a natural performer. But at NorDan we act to refine this material even further. NorDan windows go through a thorough manufacturing process which includes a vacuum impregnation stage.

The vacuum impregnation process is lengthy and expensive - but we have never taken shortcuts when it comes to quality. This is what allows us to quote a 60 year (plus) life expectancy and offer a warranty up to 30 years against rot and fungus.

The timber window components are placed in a chamber, which is then filled with an impregnating liquid. The chamber is then pressurised to force the preservative liquid deep into the timber. After this process, the chamber is drained of fluid and placed under a high vacuum to remove any excess fluid.

The process used by NorDan complies with the requirements of BS 8417 'Preservation of Wood Code of Practice', for a 60 year desired service life for external joinery components.

Surface penetration of 6mm in conjunction with a minimum of 150mm of end-grain penetration provides a deep barrier of preservative treatment. Couple this with naturally impregnated heartwood from sustainable cold climate forests, and the result is a timber product that is guaranteed to perform for years, in the harshest of weather conditions, without yielding to rot and fungus.

NorDan products are suitable for all locations of the UK. From high rise buildings to exposed coastal conditions - our Norwegian heritage means our products will perform for generations no matter what..



QUALITY ON THE OUTSIDE

Powder coating refers to a method of coating a material, normally metals, with a paint in the form of powder that is melted and cured onto the surface.



Aluminium cladding is the main reason we promote low maintenance of our products. Not only does this protect the timber frame, but it also provides marine grade resistance against sea air and salt water.

NorDan are proud to hold GSB Sea Proof Plus certification which is made possible via our state-of-the-art factories. NorDan aluminium is pre-treated via SAT pre-anodisation. Our factory in Powodowo is the only factory in Europe to offer this level of craftsmanship.

By supplying all aluminium profiles with this level of quality for pre-treatment, NorDan has created a benchmark for the window manufacturing industry. By use of electric current in an acidic aqueous solution, a very stable and non-separable oxide layer is produced onto Aluminium (principle of anodisation).

During pre-anodisation a 3 to 8 µm thick oxide layer is produced in an aqueous sulphuric acid solution under controlled conditions. In contrast to decorative anodisation this layer is not sealed. The resulting quite

cellular surface structure is an excellent adhesion base for the powder or liquid paint coating, which has to be finished within 8 hours. This pre-treatment provides protection against filiform corrosion.

The end result is a powder coated finish, with GSB Sea Proof Plus certification, that will withstand even the toughest marine environments.

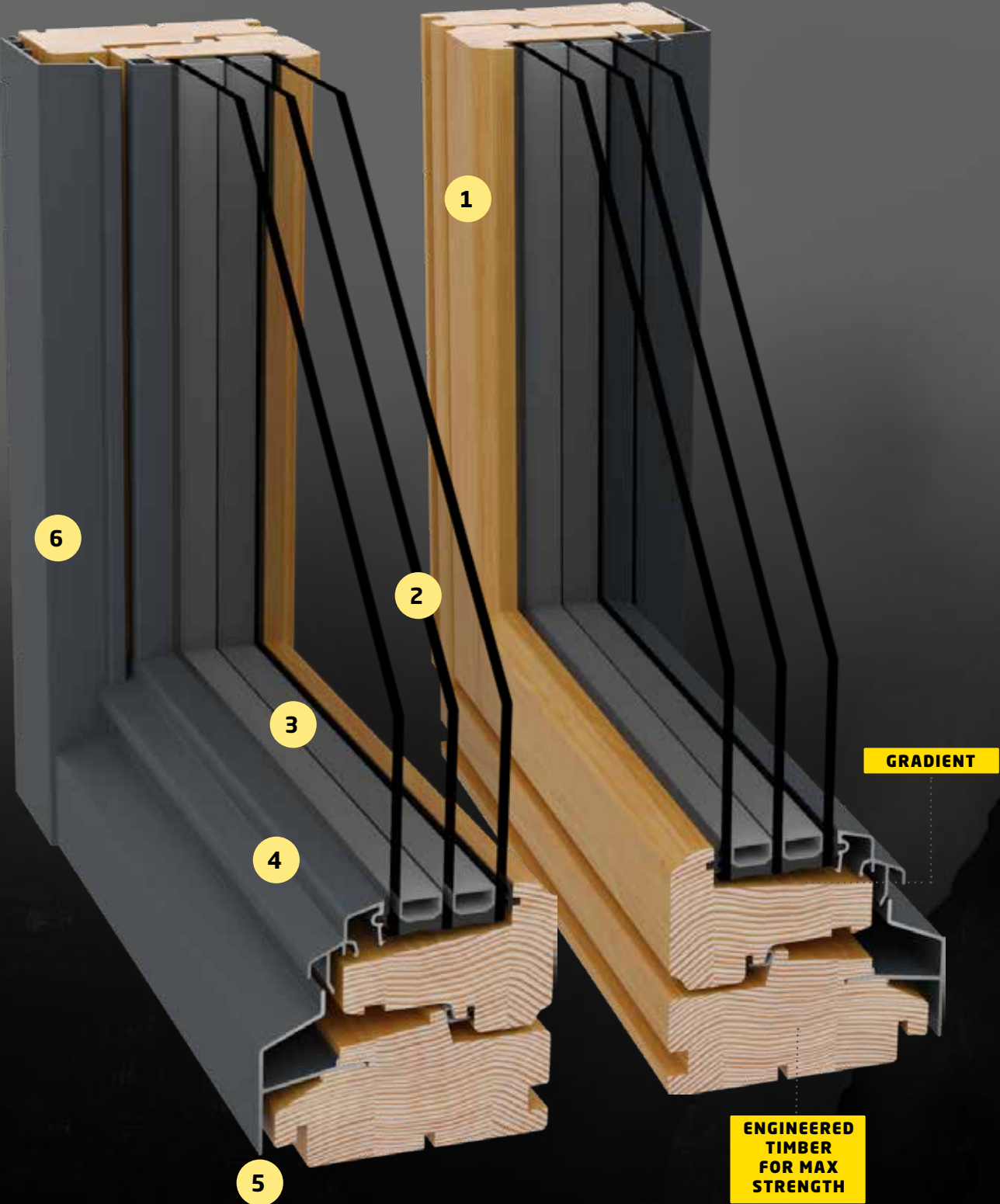
Some of the key advantages of our new powder coating technique are:

- The best corrosion resistance on the market - as standard - coping easily with marine environments
- No hanging marks/shadows
- All profiles coated on all outer surfaces
- More even and consistent finish



Weathering class	Impact of corrosion	Ambient conditions	Recommended pre-treatment	Corrosion test	GSB coating classes	Recommended cleaning interval
GSB - Countryside (C2)	Low	Dry or cold areas, Countryside/small towns with low pollution	Chromium-free/Cromate-free/ Containing chromate*	Condensation - constant atmosphere	Approved	Annually
GSB - Industrial (C3)	Medium	Urban area with medium pollution or some effect of chlorides. Coastal areas with low deposition of chlorides	Chromium-free/Cromate-free/ Containing chromate*	AASS	Master	Annually
GSB - Sea Proof (C4)	High	Urban areas, industrial areas with high pollution or substantial effect of chlorides. Coastal areas with medium deposition of chlorides.	Chromium-free/Cromate-free with documented process/ Containing chromate*	Filiform corrosion test (≤0.3) and AASS	Master/Premium	Annually
GSB - Sea Proof Plus (C5)	Very high	Areas with very high pollution and significant effect of chlorides. Coastal areas/coast lines with high impact of chlorides.	Pre-anodising	Filiform corrosion test (≤0.10) and AASS	Master/Premium	2 x per year

NORDAN WINDOWS



Energy-saving, inward & outward opening windows, fixed lights, balcony and sliding doors with U-values as low as 0.7 W/m²K



1 Frame and sash

construction uses vacuum impregnated pine, protected against rot and fungal attack. Engineered timber to improve strength and stability

2 Triple or double pane

acoustic glazing unit with energy coated glass and filled with argon gas

3 Insulating warm edge

spacer bar for glazing

4 External glazing bead

fitted with concealed fixings

5 Groove for aluminium

extension cill to drive moisture away from the building

6 Profile design to promote removal of moisture

through self draining and ventilating



TIMBER AT THE CORE

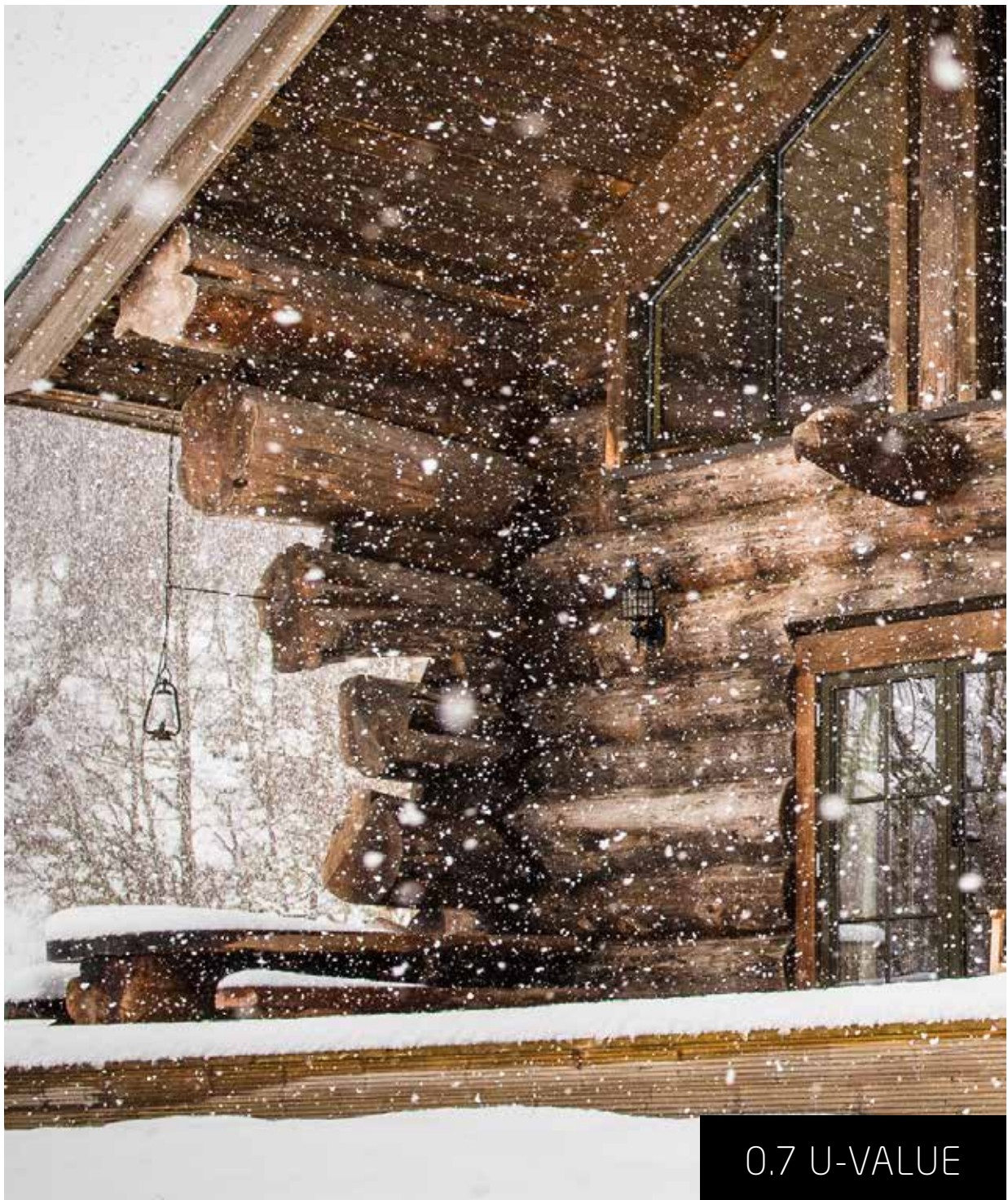
Timber is at the core of everything we do. This has been the way for almost 100 years. Timber is a natural carbon sink - it absorbs and stores more carbon than it emits during its growth time. From a full grown tree, NorDan can extract enough timber for building at least 40 windows. And for every tree felled, we plant 5 more.

Compared to other raw materials, there is no comparison. Carbon emissions from NorDan timber windows are less than half of uPVC and aluminium emissions. Even against other composite windows types, NorDan are different - with an ordinary window made from at least 90% timber.

When a NorDan window is installed in a home it will stay there for at least 60 years. You see, we like to commit ourselves long term. It's the only way if there's going to be a long term at all.

NORDAN **PASSIVE**

Nordic Swan Eco-labelled, energy saving, inward opening windows with U-values as low as 0.7 W/m²K and fixed lights with U-values as low as 0.6 W/m²K.



0.7 U-VALUE

Greater freedom for the architect with NTech 0.7 Passive



NorDan has the capability of providing Scandinavia's broadest product range of low energy products with U-values as low as 0.7 W/m²K. The NTech 0.7 Passive range offers a triple-glazed window solution with insulated sash and frame. The glazing comprises of Low E coated glass panes with argon gas filling the cavities, sealed with a warm edge spacer. Previously the window assembly had been one of the highest sources of heat loss in a building. This has now been rectified with a new generation of high performance windows and doors. The low U-value corresponds to the entire window, instead of just the glass centre pane value, which can also greatly lower the risk of internal condensation.

Greater energy saving

There is a 42% reduction in heat loss if you choose NTech 0.7 Passive rather than our standard NTech 1.2 product with a U-value of 1.2W/m²K. Environmental and energy experts agree that making big energy savings will be essential in providing a sustainable future for our world. Energy prices are rising continuously, which should be taken into account when investing for the future. The NTech 0.7 Passive range today is a wise choice for both new and older buildings.

Design without restrictions

The NorDan NTech 0.7 Passive range gives the architect more freedom to play with size, shape and daylight. Low U-values allow for the design of large windows and glazed areas without being impacted by energy loss. With the NTech 0.7 window, you will not feel the effect of cold draughts and can put the furniture right up to the window area and enjoy the view.

Swan marked products

NorDan is the first manufacturer of windows and balcony doors to have fulfilled the criteria for the Swan mark and been certified according to the Nordic Ecolabel's stringent requirements. This means that the products you buy from NorDan are manufactured with minimal energy consumption and greenhouse gas emissions. Each link in the window's life cycle has been assured as being environmentally friendly.



Benefits of NTech 0.7 Passive windows and doors

More comfortable living: Less heat and a more stable indoor temperature allowing comfortable living.

Energy Security: Low energy consumption and greater financial predictability in times of high energy prices.

Quality: Meets high standards for building quality, including better air sealing and insulation.

Interior Flexibility: Less need for heating systems such as radiators.

Increase in value: The window is produced with your future in mind - contributing to a safer investment in your home and your future. Suitable for new build projects as well as refurbishment.

Swanmark: World class windows.



- › **Frame and sash of vacuum impregnated engineered timber**
- › **Insulated frame and sash**
- › **Warm edge spacer bar between glass panes**
- › **Triple glazing with two Low E coated panes and argon gas filled cavities**
- › **Aluminium glazing bar with no visible fasteners**
- › **Machined rebate for extruded aluminium drip cill**

PRODUCT OVERVIEW



INWARD OPENING



Norwegian StormGuard
page 14



Two handle side hinged
page 16



One tilt & turn
page 18



One turn
page 20

INWARD / OUTWARD OPENING



Multisash
page 24



Combination
page 26

FIXED FRAME OUTWARD OPENING



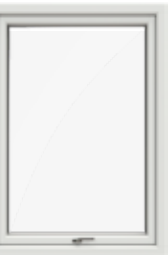
Angled / Fixed light
page 28



TopTech
page 30



Opus
page 32



Top guided window
page 34



Side Swing reversible
page 36

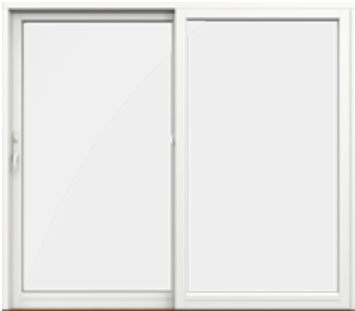
GLASS DOORS



Top/Side hinged
page 38



Balcony door
page 40-43



Sliding Patio Door
page 44-47





NORWEGIAN STORMGUARD

INWARD OPENING



Advanced and easy to use, the Norwegian StormGuard tilts for everyday ventilation and turns to allow access to the outside glass for easy cleaning safely from inside.

Maximum specification

Performance

> 197.5 mph windloading

Security

> PAS24:2016 (Secured by Design)

Fire resistance

> EI30

Life expectancy

> 60 years

Sound Reduction

> Up to 40 dB Rw + Ctr

Thermal Efficiency

> U-values as low as: 0.7 Wm²/K

Technical specification

Glass (double)	6-16G-ES4
Glass (triple)	4ES+16G+4+16G+ES4
Exterior material	Timber / Aluminium clad timber
Interior material	Timber
Child safety	Yes
Escape route	Yes
Ventilation	Yes
Burglar resistance	Yes, Secured by design accredited
Timber protection	Yes, vacuum impregnated
Ironmongery	NorDan

Product features

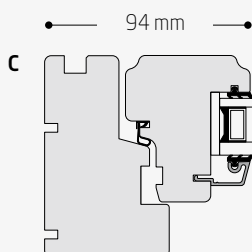
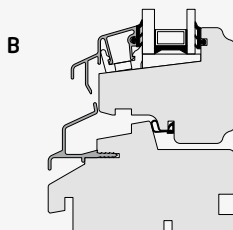
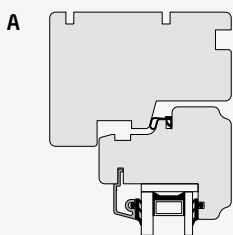
Energy saving	U-value: 0,7-1,2 Wm ² /K
Cleaning	Cleaning from inside
Entry sound reduction	Rw+Ctr 37 to 33
Fire resistance	EI 30 (option)
Watertightness	Class 9A, EN 12208
Passive availability	Yes

Measure	 Timber	 Aluclad	 Timber	 Aluclad
Frame width	92 mm	100 mm	105 mm	113 mm
Min Width	372 mm	372 mm	488 mm	488 mm
Max Width	2 188 mm	2 188 mm	2 188 mm	2 188 mm
Min Height	388 mm	388 mm	488 mm	488 mm
Max Height	2 588 mm	2 588 mm	2 588 mm	2 588 mm
Width + Height	Max: 3 500 mm	Max: 3 500 mm	Max: 3 500 mm	Max: 3 500 mm
Sash weight	Max: 100 kg	Max: 100 kg	Max: 130 kg	Max: 130 kg

92 Timber



— 92 mm —

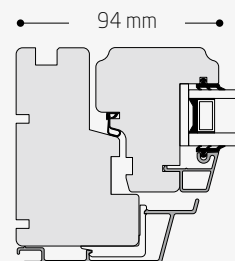
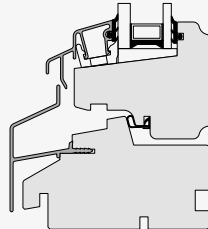
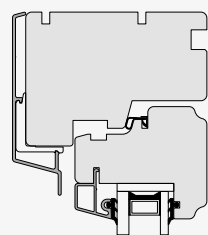


— 94 mm —

100 Aluclad



— 100 mm —

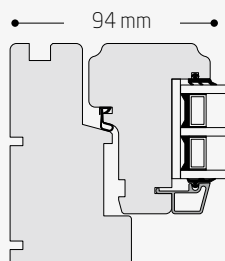
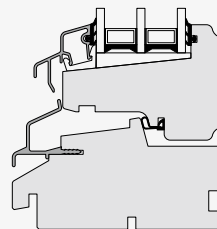
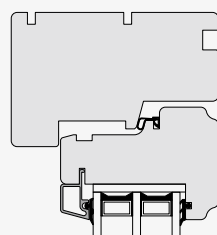


— 94 mm —

105 Timber



— 105 mm —

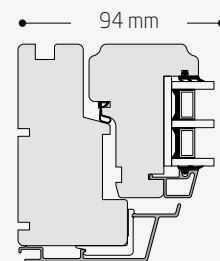
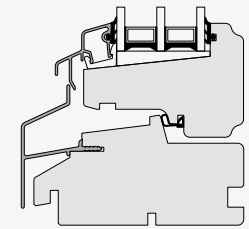
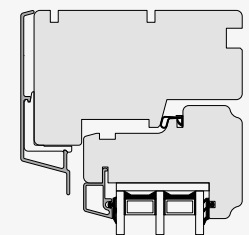


— 94 mm —

113 Aluclad



— 113 mm —



— 94 mm —

105 mm

101 mm

TWO HANDLE SIDE HINGED

INWARD OPENING



Easy to use, the two handle window offers the same performance as the Norwegian StormGuard, but is supplied with a turn only functionality.

Maximum specification

Security

› PAS24:2016 (Secured by Design)

Fire resistance

› EI30

Life expectancy

› 60 years

Sound Reduction

› Up to 40 dB Rw + Ctr

Thermal Efficiency

› U-values as low as: 0.7 Wm²/K

Technical specification

Glass (double)	6-16G-ES4
Glass (triple)	4ES+16G+4+16G+ES4
Exterior material	Timber / Aluminium clad timber
Interior material	Timber
Child safety	Yes
Escape route	Yes
Ventilation	Yes
Burglar resistance	Yes, Secured by design accredited
Timber protection	Yes, vacuum impregnated
Ironmongery	NorDan

Product features

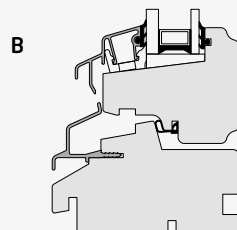
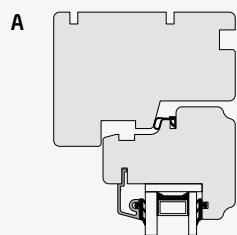
Energy saving	U-value: 0,7-1,2 Wm ² /K
Cleaning	Cleaning from inside
Entry sound reduction	Rw+Ctr 37 to 33
Fire resistance	EI 30 (option)
Watertightness	Class 9A, EN 12208
Passive availability	Yes

Measure	 Timber	 Aluclad	 Timber	 Aluclad
Frame width	92 mm	100 mm	105 mm	113 mm
Min Width	288 mm	288 mm	488 mm	488 mm
Max Width	1 288 mm	1 288 mm	1 288 mm	1 288 mm
Min Height	288 mm	288 mm	288 mm	288 mm
Max Height	2 488 mm	2 488 mm	2 588 mm	2 488 mm
Width + Height	Max: 3 500 mm	Max: 3 500 mm	Max: 3 500 mm	Max: 3 500 mm
Sash weight	Max: 85 kg	Max: 85 kg	Max: 85 kg	Max: 85 kg

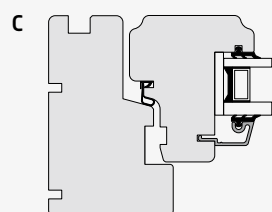
92 Timber



— 92 mm —



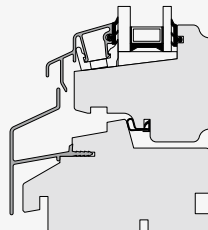
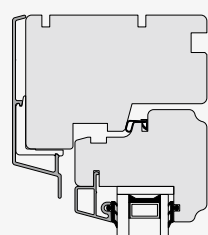
— 94 mm —



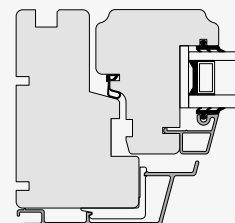
100 Aluclad



— 100 mm —



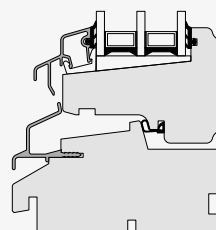
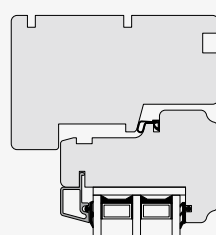
— 94 mm —



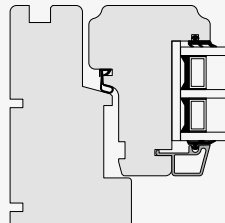
105 Timber



— 105 mm —



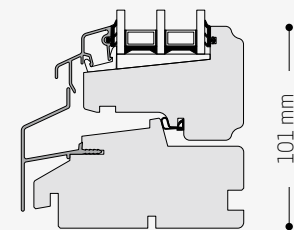
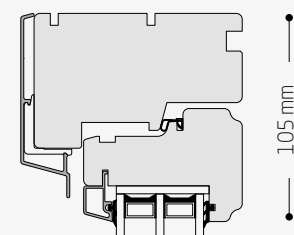
— 94 mm —



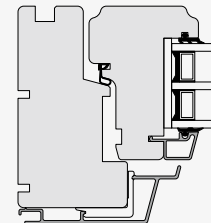
113 Aluclad



— 113 mm —



— 94 mm —



ONE TILT & TURN

INWARD OPENING



Single handle with multiple locking points. The One Tilt & Turn window can be tilted inwards for simple ventilation but also turns inwards into a safe cleaning position so the external glass can be safely cleaned from the inside.

Maximum specification

Performance

› 127.7 mph windloading

Security

› PAS24:2016
(Secured by Design)

Life expectancy

› 60 years

Sound Reduction

› Up to 38 dB Rw + Ctr

Thermal Efficiency

› U-values as low as: 0.7 Wm²/K

Technical specification

Glass (double)	6-16G-ES4
Glass (triple)	4ES+16G+4+16G+ES4
Exterior material	Timber / Aluminium clad timber
Interior material	Timber
Child safety	Yes, optional
Escape route	Yes, size permitted
Ventilation	Yes
Burglar resistance	PAS24:2016 (Secure By Design)
Timber protection	Yes, vacuum impregnated
Ironmongery	Roto

Product features

Energy saving	0,7-1,2 W/m ² K
Cleaning	Cleaning from inside
Entry sound reduction	Rw+Ctr 28 to 38
Fire resistance	-
Watertightness	Class 9A, EN 12208
Passive availability	Yes

Measure

Timber

Aluclad

Frame width	105 mm	113mm
Min Width	488 mm	488 mm
Max Width	1 483 mm	1 483 mm
Min Height	488 mm	488 mm
Max Height	2 588 mm	2 588 mm
Width + Height	Max: 3 888 mm	Max: 3 888 mm
Sash weight	Max: 120 kg	Max: 120 kg

105 Timber

113 Aluclad

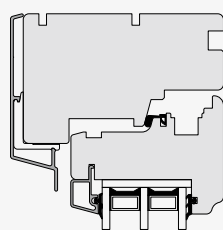
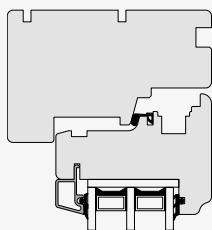
10 **20** **40**
YEARS YEARS YEARS

10 **30** **60**
YEARS YEARS YEARS

— 105 mm —

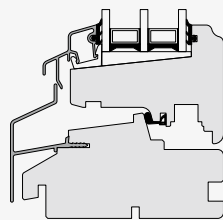
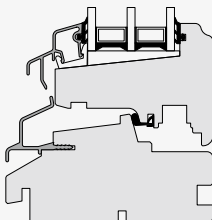
— 113 mm —

A



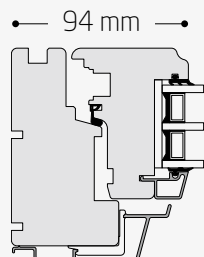
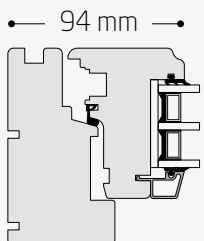
— 105 mm —

B



— 101 mm —

C



— 94 mm —

— 94 mm —

ONE TURN

INWARD OPENING



Single handle with multiple locking points. The One Turn window is based on the same gearing system as the One Tilt & Turn window, but is a turn only window which is Part M compliant.

Maximum specification

Performance

> 127.7 mph windloading

Security

> PAS24:2016
(Secured by Design)

Life expectancy

> 60 years

Sound Reduction

> Up to 38 dB Rw + Ctr

Thermal Efficiency

> U-values as low as: 0.7 Wm²/K

Technical specification

Glass (double)	6-16G-ES4
Glass (triple)	4ES+16G+4+16G+ES4
Exterior material	Timber / Aluminium clad timber
Interior material	Timber
Child safety	Yes, optional
Escape route	Yes, size permitted
Ventilation	Yes
Burglar resistance	PAS24:2016 (Secure By Design)
Timber protection	Yes, vacuum impregnated
Ironmongery	Roto

Product features

Energy saving	0,7-1,2 W/m ² K
Cleaning	Cleaning from inside
Entry sound reduction	Rw+Ctr 28 to 38
Fire resistance	-
Watertightness	Class 9A, EN 12208
Passive availability	Yes

Measure

Timber

Aluclad

Frame width	105 mm	113mm
Min Width	488 mm	488 mm
Max Width	1 483 mm	1 483 mm
Min Height	381 mm	381 mm
Max Height	2 588 mm	2 588 mm
Width + Height	Max: 3 888 mm	Max: 3 888 mm
Sash weight	Max: 120 kg	Max: 120 kg

105 Timber

113 Aluclad

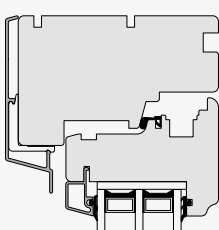
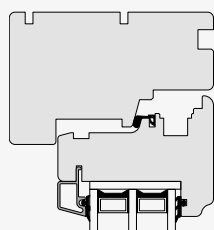
  

— 105 mm —

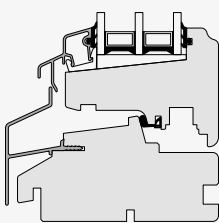
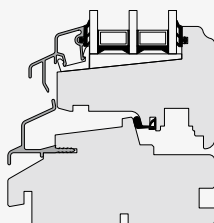
— 113 mm —

A



— 105 mm —

B

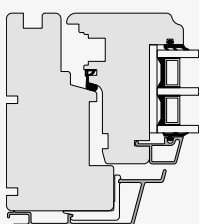
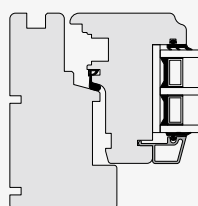


— 101 mm —

— 94 mm —

— 94 mm —

C



FIT & FORGET



NO ASSEMBLY REQUIRED

your window the way you want it

~~~~~

It would probably be easier for us to ship all the accessories separately. After all, a finished window is the result of a lot of big and small components assembled together to create a finished product. But when you order from NorDan, we put in the extra effort to assemble the complete product in the factory. All handles and other ironmongery are in place, and the same goes for glazing bars, vents and other accessories you may have chosen. That way nothing gets lost on the site, and you can avoid delays of waiting to get replacement parts delivered.

**1 Glazing bars / 2 Transoms and mullions**  
**3 Glazing options / 4 Colours / 5 Handles**





# MULTISASH

## IN / OUTWARD OPENING



**These lightweight, elegant frames offer a slender design, and a large area of light. If you require an escape window, the outward opening window can be delivered with a removable centre post for simple operation.**

### **Maximum specification**

#### **Performance**

› See individual product type

#### **Security**

› See individual product type

#### **Fire resistance**

› See individual product type

#### **Life expectancy**

› 60 years

#### **Sound Reduction**

› See individual product type

#### **Thermal Efficiency**

› See individual product type



### Technical specification

|                           |                                |
|---------------------------|--------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                      |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4              |
| <b>Exterior material</b>  | Timber / Aluminium clad timber |
| <b>Interior material</b>  | Timber                         |
| <b>Child safety</b>       | See individual product type    |
| <b>Escape route</b>       | See individual product type    |
| <b>Ventilation</b>        | See individual product type    |
| <b>Burglar resistance</b> | Depending on products used     |
| <b>Timber protection</b>  | Yes, vacuum impregnated        |
| <b>Ironmongery</b>        | See individual product type    |

### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 1.2 to 0.7 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | See individual product type            |
| <b>Entry sound reduction</b> | See individual product type            |
| <b>Fire resistance</b>       | See individual product type            |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | Yes                                    |

**Outward opening**



**Inward opening**



# COMBINATION

## IN / OUTWARD OPENING



For timber and aluminium surface treatment colour options see page 48



**Comprises of a fixed light and an opening window all in one frame. These can be produced in large sizes and provides particularly good architectural possibilities for optimal function.**

### **Maximum specification**

#### **Performance**

› See individual product type

#### **Security**

› See individual product type

#### **Fire resistance**

› See individual product type

#### **Life expectancy**

› 60 years

#### **Sound Reduction**

› See individual product type

#### **Thermal Efficiency**

› See individual product type

### Technical specification

|                           |                                |
|---------------------------|--------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                      |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4              |
| <b>Exterior material</b>  | Timber / Aluminium clad timber |
| <b>Interior material</b>  | Timber                         |
| <b>Child safety</b>       | See individual product type    |
| <b>Escape route</b>       | See individual product type    |
| <b>Ventilation</b>        | See individual product type    |
| <b>Burglar resistance</b> | Depending on products used     |
| <b>Timber protection</b>  | Yes, vacuum impregnated        |
| <b>Ironmongery</b>        | See individual product type    |

### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0.7 to 1.2 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | See individual product type            |
| <b>Entry sound reduction</b> | Rw 37dB                                |
| <b>Fire resistance</b>       | See individual product type            |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | Yes                                    |

**Outward opening**



**Inward opening**



## ANGLED / FIXED FRAME

## FIXED FRAME



**Allows extensive use of large glass areas and particular architectural styles. In all shapes and sizes within the limits set forth by requirements for safety and weight.**

### **Maximum specification**

#### **Performance**

> 127.7 mph windloading

#### **Security**

> PAS24:2016  
(Secured by Design)

#### **Fire resistance**

> EI60 & EI30

#### **Life expectancy**

> 60 years

#### **Sound Reduction**

> Up to  $R_w + C_{tr}$  44 dB

#### **Thermal Efficiency**




> U-values as low as:  $0.7 \text{ Wm}^2/\text{K}$

### Technical specification

|                           |                                   |
|---------------------------|-----------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                         |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4                 |
| <b>Exterior material</b>  | Timber / Aluminium clad timber    |
| <b>Interior material</b>  | Timber                            |
| <b>Child safety</b>       | Yes, as standard                  |
| <b>Escape route</b>       | No                                |
| <b>Ventilation</b>        | No                                |
| <b>Burglar resistance</b> | Yes, Secured by Design accredited |
| <b>Timber protection</b>  | Yes, vacuum impregnated           |
| <b>Ironmongery</b>        | -                                 |

### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0.7 to 1.2 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | -                                      |
| <b>Entry sound reduction</b> | Rw 37dB Rw+Ctr 33dB                    |
| <b>Fire resistance</b>       | EI30/EI60 (optional)                   |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | Yes                                    |

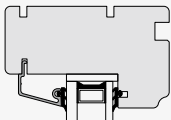
| Measure               |  Timber |  Aluclad |  Timber |  Aluclad |
|-----------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Frame width</b>    | 92 mm                                                                                    | 100 mm                                                                                    | 105 mm                                                                                   | 113 mm                                                                                      |
| <b>Min Width</b>      | 188 mm                                                                                   | 188 mm                                                                                    | 188 mm                                                                                   | 188 mm                                                                                      |
| <b>Max Width</b>      | 4 488 mm                                                                                 | 4 488 mm                                                                                  | 4 488 mm                                                                                 | 4 488 mm                                                                                    |
| <b>Min Height</b>     | 188 mm                                                                                   | 188 mm                                                                                    | 188 mm                                                                                   | 188 mm                                                                                      |
| <b>Max Height</b>     | 4 488 mm                                                                                 | 4 488 mm                                                                                  | 4 488 mm                                                                                 | 4 488 mm                                                                                    |
| <b>Width + Height</b> | Max: 6 000 mm                                                                            | Max: 6 000 mm                                                                             | Max: 6 000 mm                                                                            | Max: 6 000 mm                                                                               |
| <b>Weight</b>         | Max: 240 kg                                                                              | Max: 240 kg                                                                               | Max: 260 kg                                                                              | Max: 260 kg                                                                                 |

#### 92 Timber

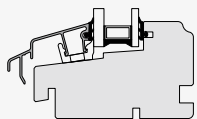


— 92 mm —

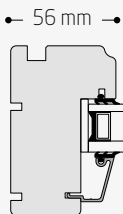
A



B



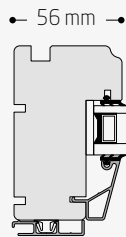
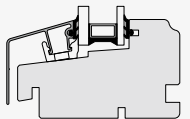
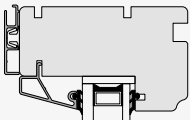
C



#### 100 Aluclad



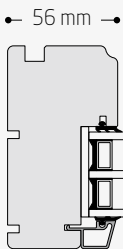
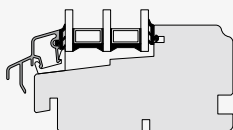
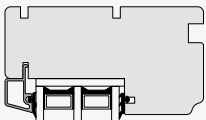
— 100 mm —



#### 105 Timber



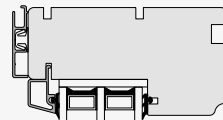
— 105 mm —



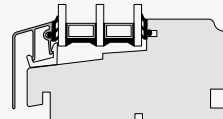
#### 113 Aluclad



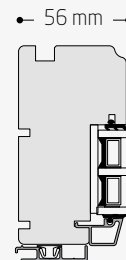
— 113 mm —



• 56 mm •



• 56 mm •



# TOPTECH

## TOP-SWING, OUTWARD OPENING



**With a hinge designed exclusively by NorDan, the TopTech fully reversible window features well balanced ironmongery that ensures the frame can easily be turned 180 degrees for safe cleaning from the inside. The window has a child safety restrictor integrated in the hinge as standard.**

### **Maximum specification**

#### **Performance**

> 127.7 mph windloading

#### **Security**

> PAS24:2016  
(Secured by Design)

#### **Fire resistance**

> EI30

#### **Life expectancy**

> 60 years

#### **Sound Reduction**

> Up to 40 dB Rw + Ctr

#### **Thermal Efficiency**





> U-values as low as: 0.8 Wm<sup>2</sup>/K

### Technical specification

|                           |                                |
|---------------------------|--------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                      |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4              |
| <b>Exterior material</b>  | Timber / Aluminium clad timber |
| <b>Interior material</b>  | Timber                         |
| <b>Child safety</b>       | Yes                            |
| <b>Escape route</b>       | Yes                            |
| <b>Ventilation</b>        | Yes                            |
| <b>Burglar resistance</b> | Yes, Secured by Design         |
| <b>Timber protection</b>  | Yes, vacuum impregnated        |
| <b>Ironmongery</b>        | NorDan TopTech                 |

### Product features

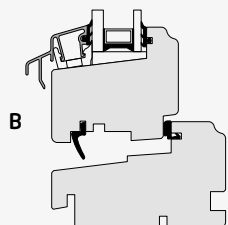
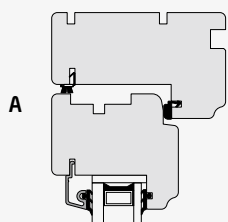
|                              |                                       |
|------------------------------|---------------------------------------|
| <b>Energy saving</b>         | U-value 0.8 to 1.2 Wm <sup>2</sup> /K |
| <b>Cleaning</b>              | Cleaning from inside                  |
| <b>Entry sound reduction</b> | Rw 36dB Rw+Ctr 32dB                   |
| <b>Fire resistance</b>       | EI 30 (option)                        |
| <b>Watertightness</b>        | Class 9A, EN 12208                    |
| <b>Passive availability</b>  | Yes                                   |

| Measure               |  Timber |  Aluclad |  Timber |  Aluclad |
|-----------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Frame width</b>    | 92 mm                                                                                    | 100 mm                                                                                    | 105 mm                                                                                   | 113 mm                                                                                      |
| <b>Min Width</b>      | 348 mm                                                                                   | 348 mm                                                                                    | 348 mm                                                                                   | 348 mm                                                                                      |
| <b>Max Width</b>      | 2 388 mm                                                                                 | 2 388 mm                                                                                  | 2 388 mm                                                                                 | 2 388 mm                                                                                    |
| <b>Min Height</b>     | 388 mm                                                                                   | 388 mm                                                                                    | 450 mm                                                                                   | 450 mm                                                                                      |
| <b>Max Height</b>     | 1 788 mm                                                                                 | 1 788 mm                                                                                  | 1 788 mm                                                                                 | 1 788 mm                                                                                    |
| <b>Width + Height</b> | Max: 3400 mm                                                                             | Max: 3400 mm                                                                              | Max: 3400 mm                                                                             | Max: 3400 mm                                                                                |
| <b>Sash weight</b>    | Max: 80 kg                                                                               | Max: 80 kg                                                                                | Max: 80 kg                                                                               | Max: 80 kg                                                                                  |

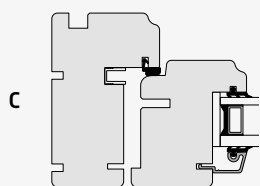
#### 92 Timber



92 mm



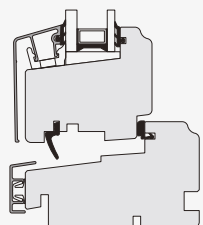
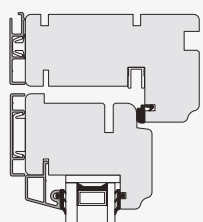
103 mm



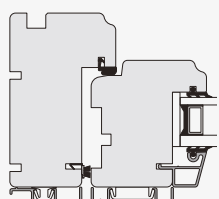
#### 100 Aluclad



100 mm



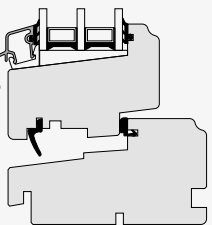
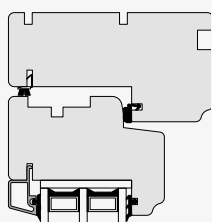
103 mm



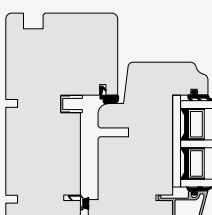
#### 105 Timber



105 mm



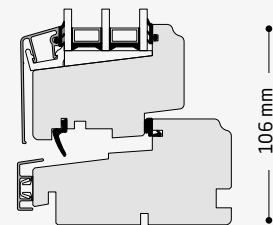
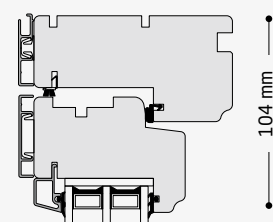
103 mm



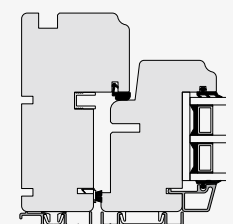
#### 113 Aluclad



113 mm



103 mm





# OPUS

## TOP-SWING, OUTWARD OPENING



**Well balanced ironmongery that ensures the frame can easily be turned 180 degrees for safe cleaning from the inside. The window has a child safety restrictor integrated in the hinge as standard.**

### **Maximum specification**

#### **Performance**

> 127.7 mph windloading

#### **Security**

> PAS24:2016  
(Secured by Design)

#### **Life expectancy**

> 60 years

#### **Sound Reduction**

> Up to 40 dB Rw + Ctr

#### **Thermal Efficiency**





> U-values as low as: 0.9 Wm<sup>2</sup>/K

### Technical specification

|                           |                                   |
|---------------------------|-----------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                         |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4                 |
| <b>Exterior material</b>  | Timber / Aluminium clad timber    |
| <b>Interior material</b>  | Timber                            |
| <b>Child safety</b>       | Yes                               |
| <b>Escape route</b>       | Yes                               |
| <b>Ventilation</b>        | Yes                               |
| <b>Burglar resistance</b> | Yes, Secured by Design accredited |
| <b>Timber protection</b>  | Yes, vacuum impregnated           |
| <b>Ironmongery</b>        | Spilka Opus                       |

### Product features

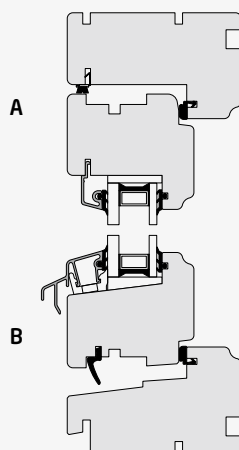
|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0.9 to 1.2 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | Cleaning from inside                   |
| <b>Entry sound reduction</b> | Rw 36dB Rw+Ctr 32dB                    |
| <b>Fire resistance</b>       | -                                      |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | No                                     |

| Measure               |  Timber |  Aluclad |  Timber |  Aluclad |
|-----------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Frame width</b>    | 92 mm                                                                                    | 100 mm                                                                                    | 105 mm                                                                                   | 113 mm                                                                                      |
| <b>Min Width</b>      | 488 mm                                                                                   | 488 mm                                                                                    | 488 mm                                                                                   | 488 mm                                                                                      |
| <b>Max Width</b>      | 2 300 mm                                                                                 | 2 300 mm                                                                                  | 2 300 mm                                                                                 | 2 300 mm                                                                                    |
| <b>Min Height</b>     | 550 mm                                                                                   | 550 mm                                                                                    | 550 mm                                                                                   | 550 mm                                                                                      |
| <b>Max Height</b>     | 1 588 mm                                                                                 | 1 588 mm                                                                                  | 1 588 mm                                                                                 | 1 588 mm                                                                                    |
| <b>Width + Height</b> | Max: 3 300 mm                                                                            | Max: 3 300 mm                                                                             | Max: 3 300 mm                                                                            | Max: 3 300 mm                                                                               |
| <b>Sash weight</b>    | Max: 55 kg                                                                               | Max: 55 kg                                                                                | Max: 55 kg                                                                               | Max: 55 kg                                                                                  |

#### 92 Timber

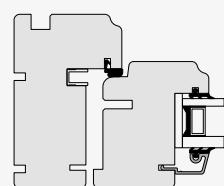


92 mm



C

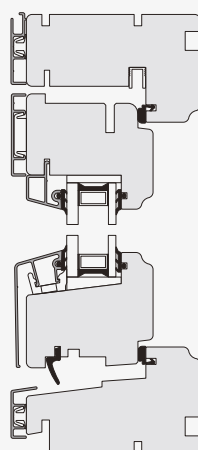
103 mm



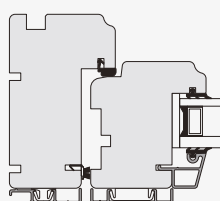
#### 100 Aluclad



100 mm



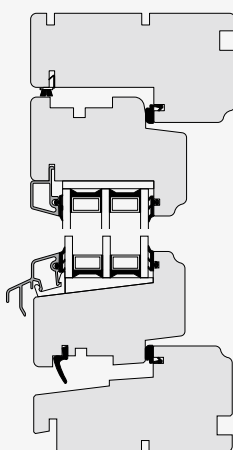
103 mm



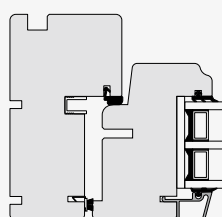
#### 105 Timber



105 mm



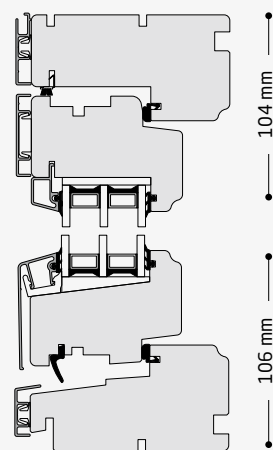
103 mm



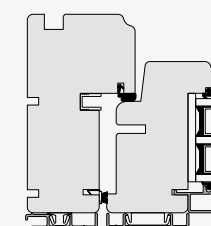
#### 113 Aluclad



113 mm



103 mm



# TOP GUIDED WINDOW

## OUTWARD OPENING



**A user friendly restricted outward opening window, which opens to a maximum of 45° to provide ventilation, when opening, the sash slides down the frame in the top also providing ventilation in the top of the window.**

### **Maximum specification**

#### **Performance**

> 127.7 mph windloading

#### **Security**

> PAS24:2016  
(Secured by Design)

#### **Life expectancy**

> 60 years

#### **Sound Reduction**

> Up to 40 dB Rw + Ctr

#### **Thermal Efficiency**

> U-values as low as: 0.8 Wm<sup>2</sup>/K

### Technical specification

|                           |                                |
|---------------------------|--------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                      |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4              |
| <b>Exterior material</b>  | Timber / Aluminium clad timber |
| <b>Interior material</b>  | Timber                         |
| <b>Child safety</b>       | Yes, as standard               |
| <b>Escape route</b>       | Yes, size permitting           |
| <b>Ventilation</b>        | Yes                            |
| <b>Burglar resistance</b> | PAS24:2016 (Secure By Design)  |
| <b>Timber protection</b>  | Yes, vacuum impregnated        |
| <b>Ironmongery</b>        | NorDan side swing              |

### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0.8 to 1.2 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | Cleaning from inside                   |
| <b>Entry sound reduction</b> | Rw 37dB Rw+Ctr 33dB                    |
| <b>Fire resistance</b>       | -                                      |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | No                                     |

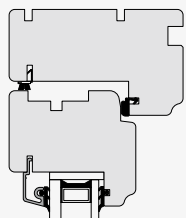
| Measure               |  Timber |  Aluclad |  Timber |  Aluclad |
|-----------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Frame width</b>    | 92 mm                                                                                    | 100 mm                                                                                    | 105 mm                                                                                     | 113 mm                                                                                      |
| <b>Min Width</b>      | 388 mm                                                                                   | 388 mm                                                                                    | 450 mm                                                                                     | 450 mm                                                                                      |
| <b>Max Width</b>      | 2 088 mm                                                                                 | 2 088 mm                                                                                  | 2 088 mm                                                                                   | 2 088 mm                                                                                    |
| <b>Min Height</b>     | 450 mm                                                                                   | 450 mm                                                                                    | 450 mm                                                                                     | 450 mm                                                                                      |
| <b>Max Height</b>     | 1 588 mm                                                                                 | 1 588 mm                                                                                  | 1 588 mm                                                                                   | 1 588 mm                                                                                    |
| <b>Width + Height</b> | Max: 3 400 mm                                                                            | Max: 3 400 mm                                                                             | Max: 3 400 mm                                                                              | Max: 3 400 mm                                                                               |
| <b>Sash weight</b>    | Max: 100 kg                                                                              | Max: 100 kg                                                                               | Max: 100 kg                                                                                | Max: 100 kg                                                                                 |

#### 92 Timber

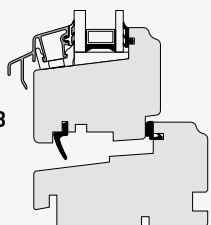


— 92 mm —

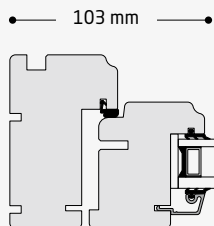
A



B



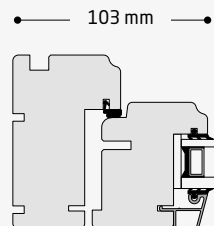
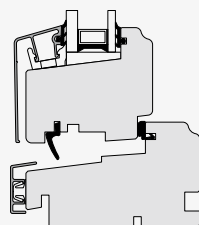
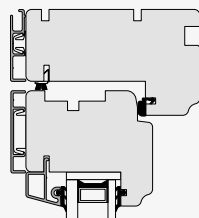
C



#### 100 Aluclad



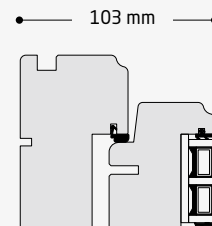
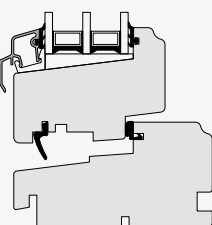
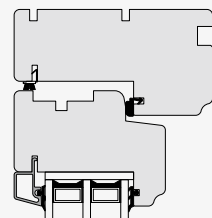
— 100 mm —



#### 105 Timber



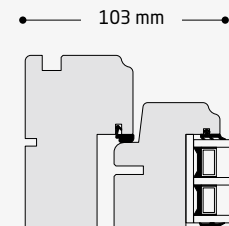
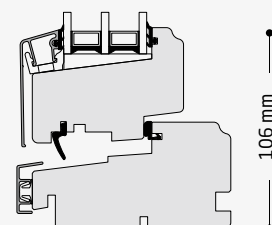
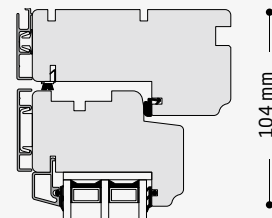
— 105 mm —



#### 113 Aluclad



— 113 mm —



104 mm

106 mm



# SIDE SWING REVERSIBLE

## OUTWARD OPENING



**For new houses with multi-sash windows, or in renovated older buildings, this is an ideal solution as it combines traditional style with child locks and a secure cleaning position.**

### **Maximum specification**

#### **Performance**

> 127.7 mph windloading

#### **Security**

> PAS24:2016  
(Secured by Design)

#### **Life expectancy**

> 60 years

#### **Sound Reduction**

> Up to 36 dB Rw + Ctr

#### **Thermal Efficiency**

> U-values as low as: 0,9 Wm<sup>2</sup>/K

### Technical specification

|                           |                                |
|---------------------------|--------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                      |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4              |
| <b>Exterior material</b>  | Timber / Aluminium clad timber |
| <b>Interior material</b>  | Timber                         |
| <b>Child safety</b>       | Yes, as standard               |
| <b>Escape route</b>       | Yes, size permitting           |
| <b>Ventilation</b>        | Yes                            |
| <b>Burglar resistance</b> | PAS24:2016 (Secure By Design)  |
| <b>Timber protection</b>  | Yes, vacuum impregnated        |
| <b>Ironmongery</b>        | NorDan side swing              |

### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0.8 to 1.2 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | Cleaning from inside                   |
| <b>Entry sound reduction</b> | Rw 37dB Rw+Ctr 33dB                    |
| <b>Fire resistance</b>       | -                                      |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | No                                     |

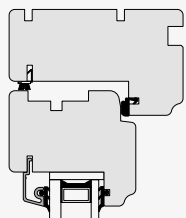
| Measure               |  Timber |  Aluclad |  Timber |  Aluclad |
|-----------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Frame width</b>    | 92 mm                                                                                    | 100 mm                                                                                    | 105 mm                                                                                     | 113 mm                                                                                      |
| <b>Min Width</b>      | 388 mm                                                                                   | 388 mm                                                                                    | 450 mm                                                                                     | 450 mm                                                                                      |
| <b>Max Width</b>      | 988 mm                                                                                   | 988 mm                                                                                    | 988 mm                                                                                     | 988 mm                                                                                      |
| <b>Min Height</b>     | 350 mm                                                                                   | 350 mm                                                                                    | 350 mm                                                                                     | 350 mm                                                                                      |
| <b>Max Height</b>     | 2 188 mm                                                                                 | 2 188 mm                                                                                  | 2 188 mm                                                                                   | 2 188 mm                                                                                    |
| <b>Width + Height</b> | Max: 2 700 mm                                                                            | Max: 2 700 mm                                                                             | Max: 2 700 mm                                                                              | Max: 2 700 mm                                                                               |
| <b>Sash weight</b>    | Max: 50 kg                                                                               | Max: 50 kg                                                                                | Max: 50 kg                                                                                 | Max: 50 kg                                                                                  |

#### 92 Timber

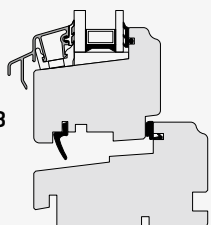


— 92 mm —

A

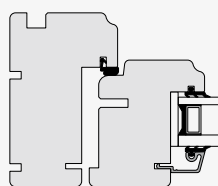


B



— 103 mm —

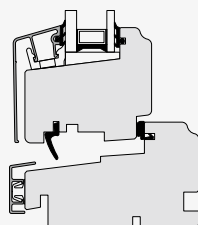
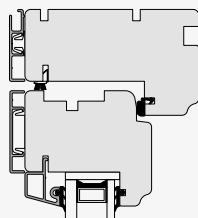
C



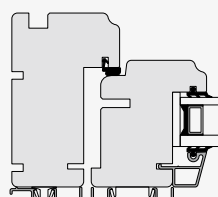
#### 100 Aluclad



— 100 mm —



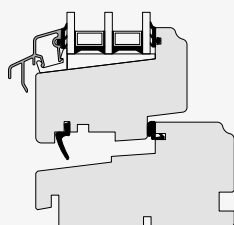
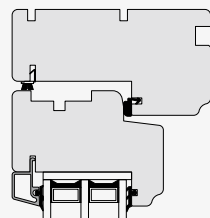
— 103 mm —



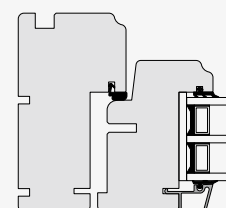
#### 105 Timber



— 105 mm —



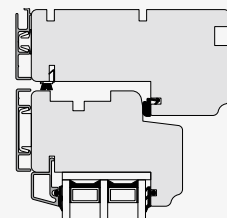
— 103 mm —



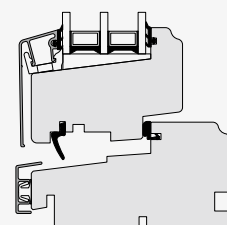
#### 113 Aluclad



— 113 mm —

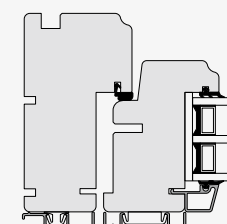


104 mm



106 mm

— 103 mm —



# SIDE HINGED TOP HINGED

## OUTWARD OPENING



**Traditional approach to top and side hinged windows. However, the quality and integrity of the product is of the same high standard, which you would expect from any NorDan product.**

### **Maximum specification**

#### **Performance**

> 98.92 mph

#### **Security**

> PAS24:2016  
(Secured by Design)

#### **Life expectancy**

> 60 years

#### **Sound Reduction**

> Up to 36 dB Rw + Ctr

#### **Thermal Efficiency**

> U-values as low as: 0.9 Wm<sup>2</sup>/K

### Technical specification

|                           |                                |
|---------------------------|--------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                      |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4              |
| <b>Exterior material</b>  | Timber / Aluminium clad timber |
| <b>Interior material</b>  | Timber                         |
| <b>Child safety</b>       | No                             |
| <b>Escape route</b>       | Yes, size permitting           |
| <b>Ventilation</b>        | Yes                            |
| <b>Burglar resistance</b> | NA                             |
| <b>Timber protection</b>  | Yes, vacuum impregnated        |
| <b>Ironmongery</b>        | NorDan                         |

### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0.9 to 1.2 W/m <sup>2</sup> K |
| <b>Entry sound reduction</b> | Rw 37dB Rw+Ctr 33                      |
| <b>Fire resistance</b>       | -                                      |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | No                                     |

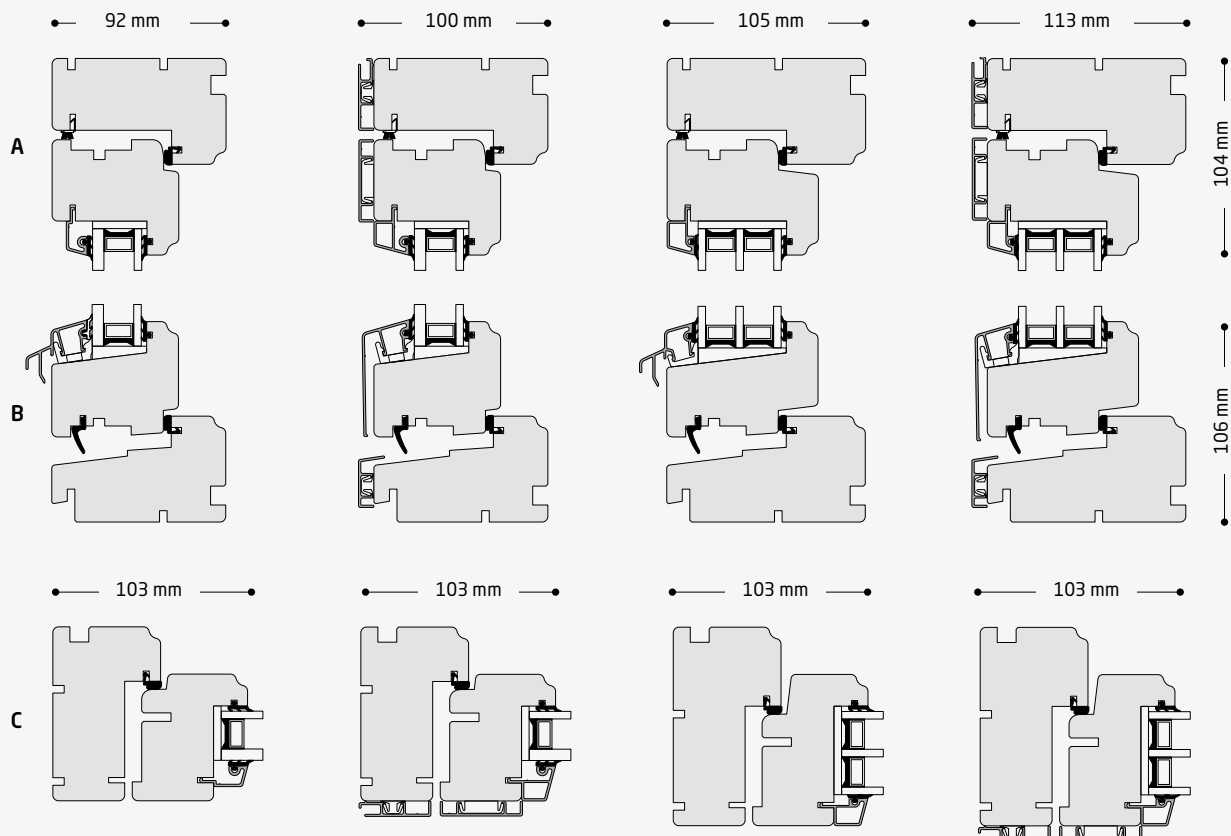
| Measure               | Timber               | Aluclad              | Timber               | Aluclad              |
|-----------------------|----------------------|----------------------|----------------------|----------------------|
|                       | TW / TA              | TW / TA              | TW / TA              | TW / TA              |
| <b>Frame width</b>    | 92 mm                | 100 mm               | 105 mm               | 113 mm               |
| <b>Min Width</b>      | 358 / 388 mm         | 358 / 388 mm         | 358/450 mm           | 358/450 mm           |
| <b>Max Width</b>      | 2 188 / 1 200 mm     | 2 188 / 1 200 mm     | 2 188 / 1 200 mm     | 2 188 / 1 200 mm     |
| <b>Min Height</b>     | 388 / 488 mm         | 388 / 488 mm         | 450 / 388 mm         | 450 / 488 mm         |
| <b>Max Height</b>     | 1 388 / 2 188 mm     | 1 388 / 2 188 mm     | 1388 / 2 188 mm      | 1 388 / 2 188 mm     |
| <b>Width + Height</b> | Min: 2 700 / 2 800mm | Min: 2 700 / 2 800mm | Min: 2 700 / 2 800mm | Min: 2 700 / 2 800mm |
| <b>Sash weight</b>    | Max: 55 kg           | Max: 55 kg           | Max: 55 kg           | Max: 55 kg           |

#### 92 Timber

#### 100 Aluclad

#### 105 Timber

#### 113 Aluclad





# BALCONY DOOR

## INWARD/OUTWARD OPENING



The single balcony door is not just elegant but robust enough to provide **burglar resistance** with the **Secured By Design** accreditation.

### Maximum specification

#### Performance

> 114.3 mph windloading  
(outward opening)

#### Security

> PAS24:2016  
(Secured by Design)

#### Fire resistance

> EI30 (outward opening)

#### Life expectancy

> 60 years

#### Sound Reduction

> Up to 37dB  $R_w + C_{tr}$

#### Thermal Efficiency

> U-values as low as: 0,8 Wm<sup>2</sup>/K

### Technical specification

|                           |                                   |
|---------------------------|-----------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                         |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4                 |
| <b>Exterior material</b>  | Timber / Aluminium clad timber    |
| <b>Interior material</b>  | Timber                            |
| <b>Child safety</b>       | Yes, as standard                  |
| <b>Escape route</b>       | Yes                               |
| <b>Ventilation</b>        | Yes                               |
| <b>Burglar resistance</b> | Yes, Secured by Design accredited |
| <b>Timber protection</b>  | Yes, vacuum impregnated           |
| <b>Ironmongery</b>        | NorDan                            |

### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0.7 to 1.2 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | -                                      |
| <b>Entry sound reduction</b> | 36dB Rw 32dB Rw+Ctr                    |
| <b>Fire resistance</b>       | EI30 (only outward opening)            |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | Yes                                    |

| Measure               |  Timber |  Aluclad |  Timber |  Aluclad |
|-----------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Frame width</b>    | 92 mm                                                                                    | 100 mm                                                                                    | 105 mm                                                                                     | 113 mm                                                                                      |
| <b>Min Width</b>      | 588 mm                                                                                   | 688 mm                                                                                    | 588 mm                                                                                     | 688 mm                                                                                      |
| <b>Max Width</b>      | 1 188 mm                                                                                 | 1 188 mm                                                                                  | 1 188 mm                                                                                   | 1 188 mm                                                                                    |
| <b>Min Height</b>     | 1 338 mm                                                                                 | 1 338 mm                                                                                  | 1 338 mm                                                                                   | 1 338 mm                                                                                    |
| <b>Max Height</b>     | 2 537 mm                                                                                 | 2 537 mm                                                                                  | 2 537 mm                                                                                   | 2 537 mm                                                                                    |
| <b>Width + Height</b> | Max: 3 500 mm                                                                            | Max: 3 500 mm                                                                             | Max: 3 500 mm                                                                              | Max: 3 500 mm                                                                               |
| <b>Sash weight</b>    | Max: 120Kg                                                                               | Max: 120 kg                                                                               | Max: 120Kg                                                                                 | Max: 120Kg                                                                                  |

#### 92 Timber

#### 100 Aluclad

#### 105 Timber

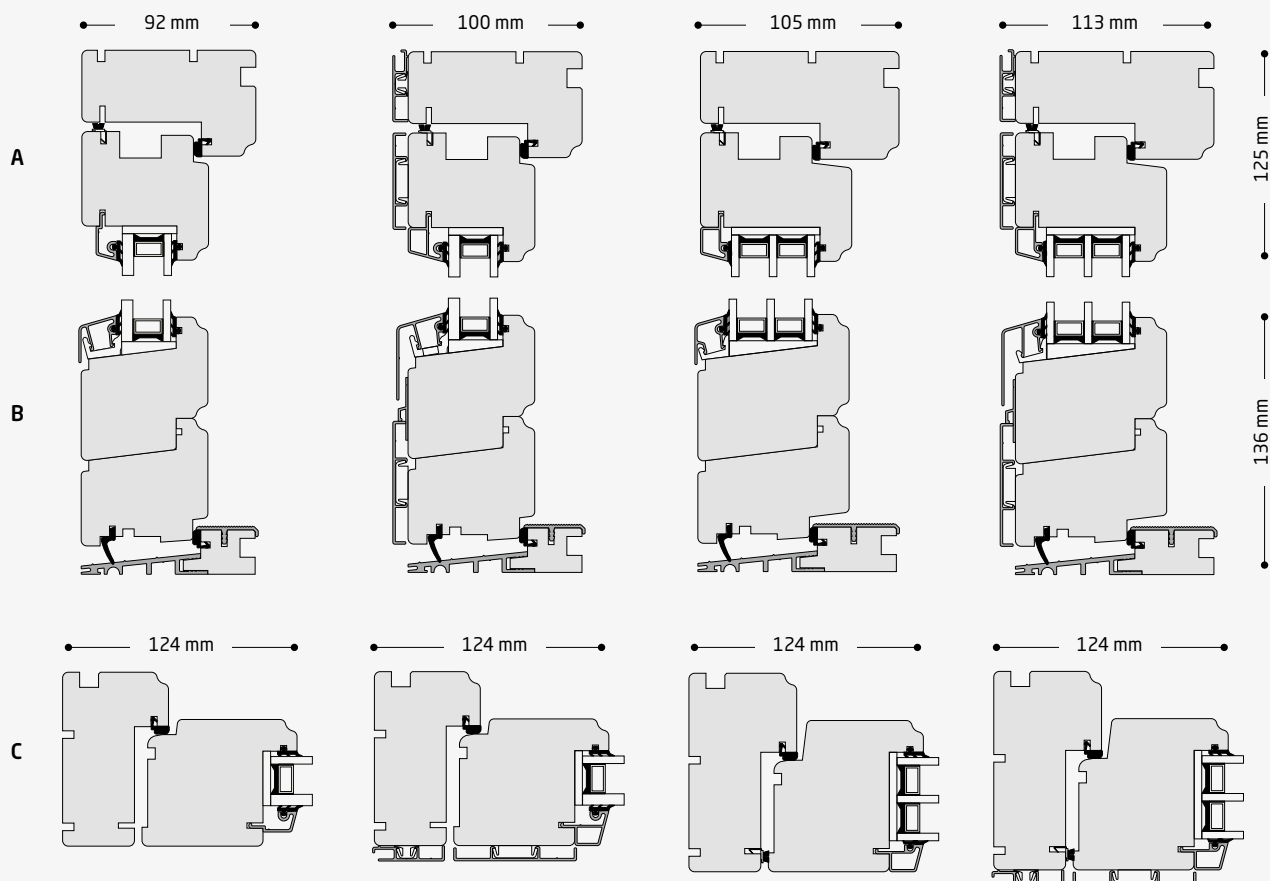
#### 113 Aluclad



# DOUBLE BALCONY DOOR

**INWARD/OUTWARD  
OPENING**



**The double balcony door is not just elegant but robust enough to provide burglar resistance with Secured By Design approval.**

## **Maximum specification**

### **Performance**

> 139.9 mph windloading  
(outward opening)

### **Security**

> PAS24:2016  
(outward opening)

### **Life expectancy**

> 60 years

### **Thermal Efficiency**


> U-values as low as: 0.9 Wm<sup>2</sup>/K

### Technical specification

|                           |                                |
|---------------------------|--------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                      |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4              |
| <b>Exterior material</b>  | Timber / Aluminium clad timber |
| <b>Interior material</b>  | Timber                         |
| <b>Child safety</b>       | Yes, as standard               |
| <b>Escape route</b>       | Yes                            |
| <b>Ventilation</b>        | Yes                            |
| <b>Burglar resistance</b> | PAS24:2016 (Secure By Design)  |
| <b>Timber protection</b>  | Yes, vacuum impregnated        |
| <b>Ironmongery</b>        | NorDan                         |

### Product features

|                              |                                           |
|------------------------------|-------------------------------------------|
| <b>Energy saving</b>         | U-value: 0.7 to 1.2 W/m <sup>2</sup> K    |
| <b>Cleaning</b>              | -                                         |
| <b>Entry sound reduction</b> | 37dB Rw 33dB Rw+Ctr                       |
| <b>Fire resistance</b>       | -                                         |
| <b>Watertightness</b>        | Class 9A, EN 12208                        |
| <b>Passive availability</b>  | No, lowest U-value 0.9 W/m <sup>2</sup> K |

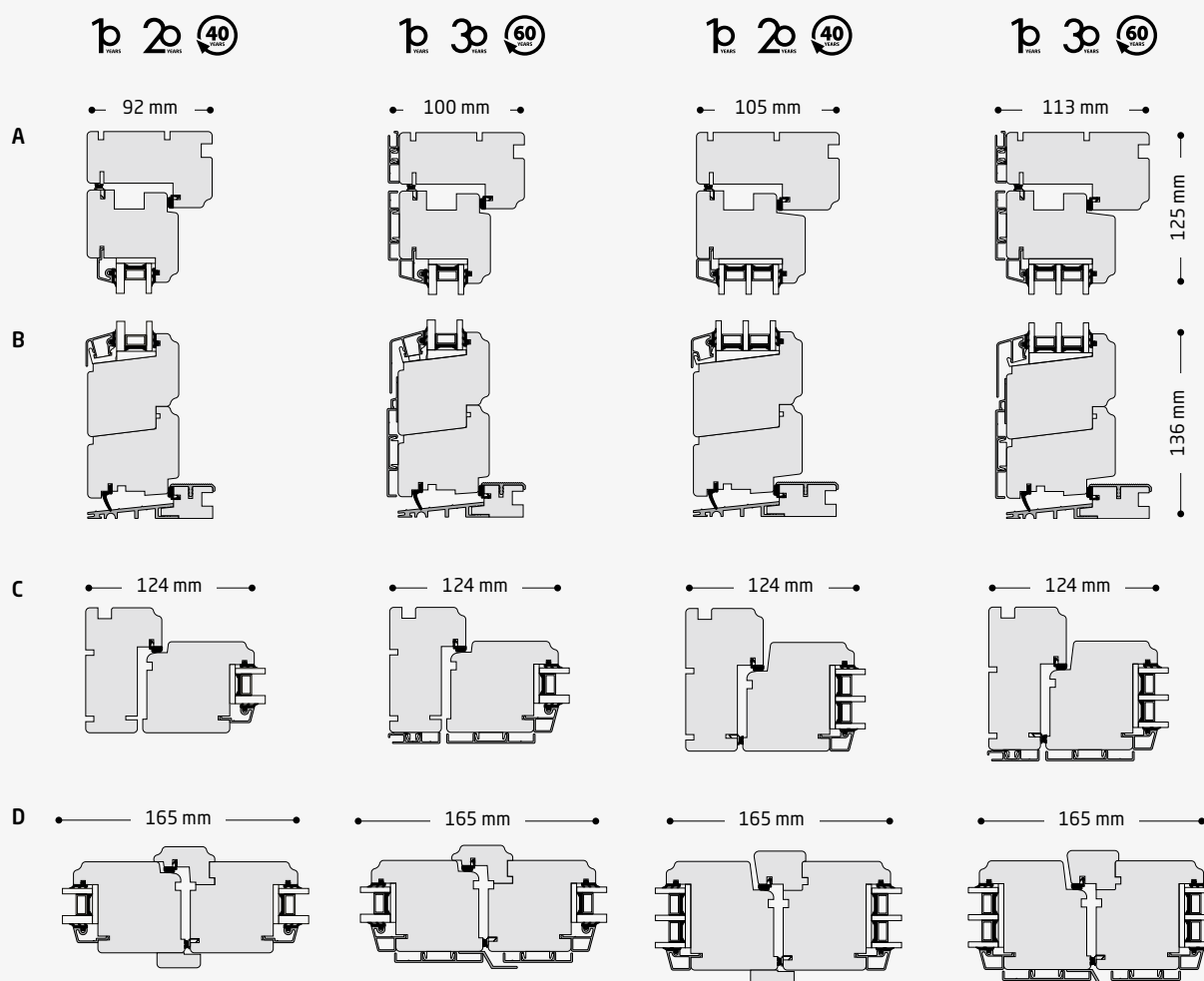
| Measure        |  Timber |  Aluclad |  Timber |  Aluclad |
|----------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Frame width    | 92 mm                                                                                    | 100 mm                                                                                    | 105 mm                                                                                     | 113 mm                                                                                      |
| Min Width      | 998 mm                                                                                   | 998 mm                                                                                    | 988 mm                                                                                     | 988 mm                                                                                      |
| Max Width      | 2 088 mm                                                                                 | 2 088 mm                                                                                  | 2 088 mm                                                                                   | 2 088 mm                                                                                    |
| Min Height     | 1 338 mm                                                                                 | 1 338 mm                                                                                  | 1 338 mm                                                                                   | 1 338 mm                                                                                    |
| Max Height     | 2 537 mm                                                                                 | 2 537 mm                                                                                  | 2 537 mm                                                                                   | 2 537 mm                                                                                    |
| Width + Height | Max: 4 600 mm                                                                            | Max: 4 600 mm                                                                             | Max: 4 600 mm                                                                              | Max: 4 600 mm                                                                               |
| Sash weight    | Max: 110 kg                                                                              | Max: 110 kg                                                                               | Max: 110 kg                                                                                | Max: 110 kg                                                                                 |

#### 92 Timber

#### 100 Aluclad

#### 105 Timber

#### 113 Aluclad





# SLIDING SINGLE DOOR

SLIDE TO SIDE



**Glides smoothly on sealed ball bearings set safely beneath the door, making it easy to open and close even in larger dimensions. When the handle is turned down, the door moves out and away from the seal.**

## **Maximum specification**

### **Performance**

> 114.3 mph windloading

### **Security**

> PAS24:2016  
(Secured by Design)

### **Life expectancy**

> 60 years

### **Sound Reduction**

> Up to 37 dB Rw + Ctr

### **Thermal Efficiency**



> U-values as low as: 0.9 Wm<sup>2</sup>/K

### Technical specification

|                           |                                   |
|---------------------------|-----------------------------------|
| <b>Glass (double)</b>     | 6-16G-ES4                         |
| <b>Glass (triple)</b>     | 4ES-16G-4-16G-ES4                 |
| <b>Exterior material</b>  | Timber / Aluminium clad timber    |
| <b>Interior material</b>  | Timber                            |
| <b>Child safety</b>       | NA                                |
| <b>Escape route</b>       | Yes                               |
| <b>Ventilation</b>        | Yes                               |
| <b>Burglar resistance</b> | Yes, Secured by Design accredited |
| <b>Timber protection</b>  | Yes, vacuum impregnated           |
| <b>Ironmongery</b>        | Assa / NorDan                     |

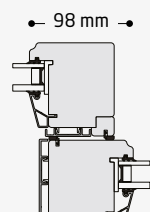
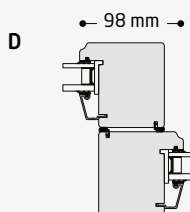
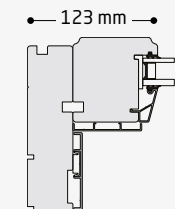
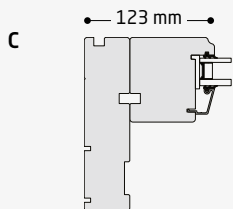
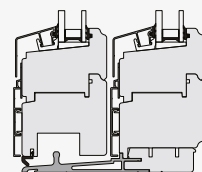
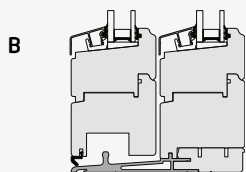
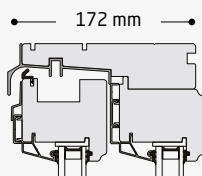
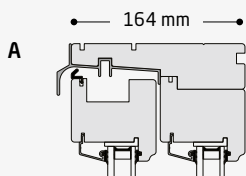
### Product features

|                              |                                        |
|------------------------------|----------------------------------------|
| <b>Energy saving</b>         | U-value: 0,8 to 1.3 W/m <sup>2</sup> K |
| <b>Cleaning</b>              | -                                      |
| <b>Entry sound reduction</b> | Rw 35dB Rw+Ctr 33dB                    |
| <b>Fire resistance</b>       | -                                      |
| <b>Watertightness</b>        | Class 9A, EN 12208                     |
| <b>Passive availability</b>  | NA                                     |

| Measure               |  Timber |  Aluclad |
|-----------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Frame width</b>    | 164 mm                                                                                   | 172 mm                                                                                    |
| <b>Min Width</b>      | 1 388 mm                                                                                 | 1 388 mm                                                                                  |
| <b>Max Width</b>      | 3 988 mm                                                                                 | 3 988 mm                                                                                  |
| <b>Min Height</b>     | 1 650 mm                                                                                 | 1 650 mm                                                                                  |
| <b>Max Height</b>     | 2 588 mm                                                                                 | 2 588 mm                                                                                  |
| <b>Width + Height</b> | Max: 6 676 mm                                                                            | Max: 6 676 mm                                                                             |
| <b>Sash weight</b>    | Max: 150 kg                                                                              | Max: 150 kg                                                                               |

#### 164 Timber

#### 172 Aluclad



# SLIDING DOUBLE DOOR

SLIDE TO SIDE



For timber and aluminium surface treatment colour options see page 48



**Glides smoothly on sealed ball bearings set safely beneath the door, making it easy to open and close even in larger dimensions. When the handle is turned down, the door moves out and away from the seal.**

**Maximum specification**

**Life expectancy**

> 60 years

**Thermal Efficiency**

> U-values as low as: 0.9 Wm<sup>2</sup>/K

Technical specification

|                    |                                |
|--------------------|--------------------------------|
| Glass (double)     | 6-16G-ES4                      |
| Glass (triple)     | 4ES-16G-4-16G-ES4              |
| Exterior material  | Timber / Aluminium clad timber |
| Interior material  | Timber                         |
| Child safety       | NA                             |
| Escape route       | Yes                            |
| Ventilation        | Yes                            |
| Burglar resistance | NA                             |
| Timber protection  | Yes, vacuum impregnated        |
| Ironmongery        | Assa / NorDan                  |

Product features

|                       |                           |
|-----------------------|---------------------------|
| Energy saving         | U-value: 0.8 to 1.3 W/m2K |
| Cleaning              | Yes                       |
| Entry sound reduction | Rw+Ctr 35 - Rw+Ctr 30     |
| Fire resistance       | -                         |
| Watertightness        | Class 9A, EN 12208        |
| Passive availability  | NA                        |

| Measure        | Timber      | Aluclad     |
|----------------|-------------|-------------|
| Frame width    | 164 mm      | 172 mm      |
| Min Width      | 2 788 mm    | 2 788 mm    |
| Max Width      | 7 988 mm    | 7 988 mm    |
| Min Height     | 1 650 mm    | 1 650 mm    |
| Max Height     | 2 588 mm    | 2 588 mm    |
| Width + Height | 10 676mm    | 10 676mm    |
| Sash weight    | Max: 135 kg | Max: 135 kg |

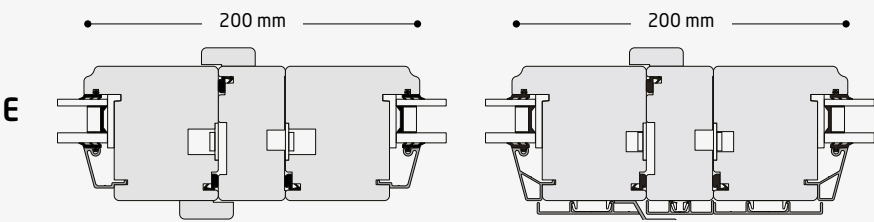
164 Timber



172 Aluclad



- A See page 45
- B See page 45
- C See page 45
- D See page 45









# TIMBER SURFACE COLORS

## NORDAN STANDARD

### Water based paint

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|    |    |    |                                                                                     |
| <b>WHITE (STANDARD)</b><br>NCS S 0502-Y                                             | <b>WHITE</b><br>NCS S 0500-N                                                        | <b>OYSTER WHITE</b><br>RAL 1013                                                     |                                                                                     |
|   |   |   |   |
| <b>SILK GREY</b><br>RAL 7044                                                        | <b>WINDOW GREY</b><br>RAL 7040                                                      | <b>BASALT GREY</b><br>RAL 7012                                                      | <b>DUSTY GREY</b><br>RAL 7037                                                       |
|  |  |  |  |
| <b>SLATE GREY</b><br>RAL 7015                                                       | <b>ANTHRACITE GREY</b><br>RAL 7016                                                  | <b>TRAFFIC GREY B</b><br>RAL 7043                                                   | <b>UMBRA GREY</b><br>RAL 7022                                                       |
|  |  |  |  |
| <b>BLACK</b><br>NCS S8500-N                                                         | <b>BLACK GREY</b><br>RAL 7021                                                       | <b>JET BLACK</b><br>RAL 9005                                                        | <b>GREY BROWN</b><br>RAL 8019                                                       |
|  |  |  |  |
| <b>NUT BROWN</b><br>RAL 8011                                                        | <b>RED</b><br>RAL 3011                                                              | <b>BRILLIANT BLUE</b><br>RAL 5007                                                   | <b>MOSS GREEN</b><br>RAL 6005                                                       |

### Semi-transparent paint

|                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |                                                                                       |
| CLEAR LACQUER<br>RAL 7022                                                             |                                                                                       |
|   |   |
| LITE OAK<br>RAL 7043                                                                  | SILK WHITE<br>RAL 7016                                                                |
|  |  |
| NUT BROWN<br>NCS S8500-N                                                              | TEAK<br>RAL 7015                                                                      |
|  |  |
| EBONY<br>RAL 9005                                                                     | RICH MAHOGANY<br>RAL 7021                                                             |

### Special colours



NorDan can supply most RAL and NCS colours directly to the treated timber or powder coated aluminium surfaces.



# ALUMINIUM SURFACE COLORS NORDAN STANDARD

NorDan offers a wide spectra of standard colours.  
We also offer a wide range of other colours from a standardised palette.

The following colour samples are for illustrative purposes only and may differ from the original colour. Please get in touch if you would like a standard colour sample from us.

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |    |                                                                                       |
| <b>WHITE (STANDARD)</b><br>NCS S 0502-Y                                             | <b>WHITE</b><br>NCS S 0500-N                                                        | <b>OYSTER WHITE</b><br>RAL 1013                                                     | <b>SILK GREY</b><br>RAL 7044                                                         | <b>WINDOW GREY</b><br>RAL 7040                                                        |                                                                                       |
|  |  |  |  |  |                                                                                       |
| <b>BASALT GREY</b><br>RAL 7012                                                      | <b>DUSTY GREY</b><br>RAL 7037                                                       | <b>SLATE GREY</b><br>RAL 7015                                                       | <b>ANTHRACITE GREY</b><br>RAL 7016                                                   | <b>TRAFFIC GREY B</b><br>RAL 7043                                                     |                                                                                       |
|  |  |  |  |  |                                                                                       |
| <b>UMBRA GREY</b><br>RAL 7022                                                       | <b>BLACK</b><br>NCS S8500-N                                                         | <b>BLACK GREY</b><br>RAL 7021                                                       | <b>JET BLACK</b><br>RAL 9005                                                         | <b>GREY BROWN</b><br>RAL 8019                                                         |                                                                                       |
|  |  |  |   |   |  |
| <b>NUT BROWN</b><br>RAL 8011                                                        | <b>RED</b><br>RAL 3011                                                              | <b>BRILLIANT BLUE</b><br>RAL 5007                                                   | <b>MOSS GREEN</b><br>RAL 6005                                                        | <b>WHITE ALUMINIUM</b><br>RAL 9006                                                    | <b>GREY ALUMINIUM</b><br>RAL 9007                                                     |

Whilst every effort is made to verify and ensure the accuracy of the colours shown, the information displayed should be used as a guide only. No purchase should be made without consulting with your local NorDan office.

To view more non-standard colours, please visit: [www.ralcolor.com](http://www.ralcolor.com)

# NTECH PROFILES

## CLASSIC & MODERN



**With the choice of two different profiles, NorDan makes it easier to align the aesthetic expression of the windows with the rest of the building.**

Small details that can really make a difference in the big picture. NorDan has for many years provided the profile that has been called the "NorDan Classic", but now customers will be able to choose a more modern profile.

## CLASSIC

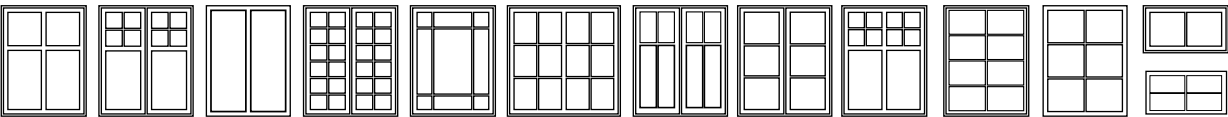
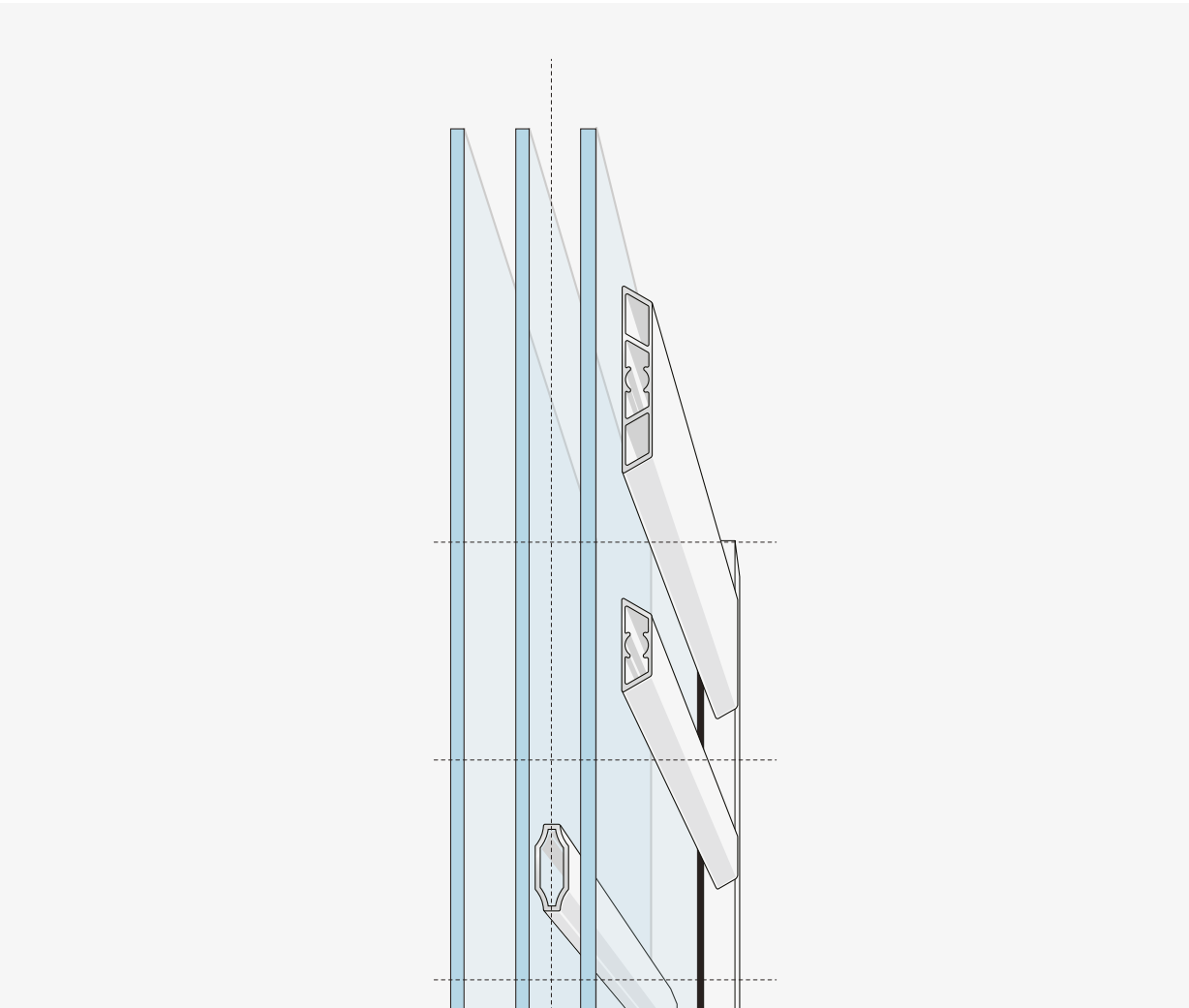


## MODERN



# GLAZING BARS

## DECORATION



### Surface mounted

Available in 28mm, surface mounted glazing bars are securely bonded to the outer glass to give the desired panelling design while the inner glazing bar is safely secured within the sealed unit. Glazing bars are available powder coated in RAL classic range.

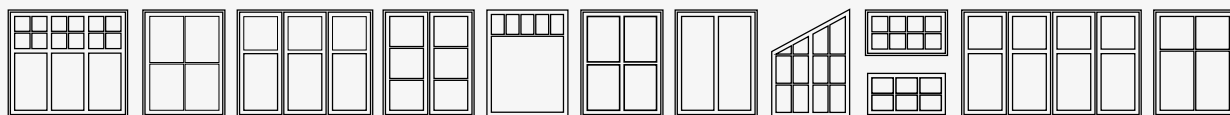
### Integral (thermo)

Integral (thermo) glazing bars have 26mm widths and are completely encapsulated in the glass cavity so that both the inner and outer glass surfaces can be easily cleaned. Available in white finish only.

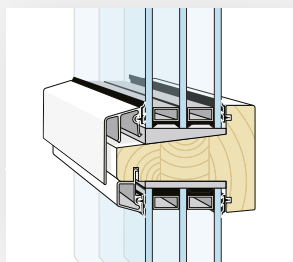


# SOLID TRANSOMS AND MULLIONS

NorDan products are available with solid mullion & transoms in timber and aluminium cladding. Incorporated mullions & transoms divide the glass into individual glazed areas with the advantage that different glass can be installed. The typical widths are 62 and 92 mm with a number of exceptions on specific window and door types.

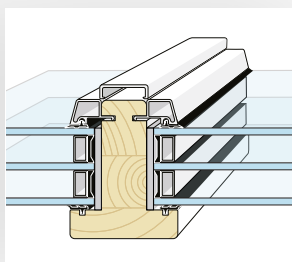


## Openable products



### Transoms

depth 80 mm height 62 mm.



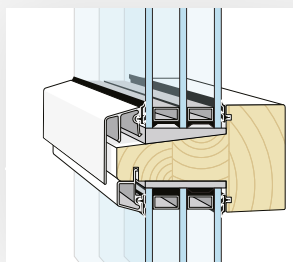
### Mullions

depth 80 mm width 62 mm.



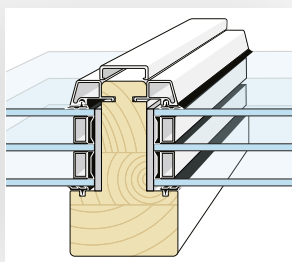
## Classic profile

## For fixed light



### Transoms

depth 105 mm height 62 mm.



### Mullions

depth 105 mm width 64 mm.



## Modern profile



# OPTIONS AND ACCESSORIES

NorDan provide a wide variety of solid fittings with different functions for windows and doors. Contact our expert advisors for more information and advice on compatibility, function, colour and possible customisation for your particular project.

## Window handles

---



**Handle for inward opening window**  
Handle for ND: Silver, white, black.



**Lockable handle with key**  
Handle for ND: Locked with push button.  
Tokyo: Silver, white, black.



**Handle for outward opening windows**  
Handle mini Tokyo: Silver, white, black.



**Lockable handle for outward opening windows**  
Handle for outward opening windows:  
Locked with key / push button.  
Tokyo: Silver, white, black.



### Window handle for inward opening One

Handle for OD, ZD: Silver, White, Black.



### Lockable handle for inward opening One

Lockable with key (Open from start).

Handle for OD, ZD: Silver, White, Black.



### Turn lock (Open from start)

Turn lock (The handle is open in the initial position and can be locked with a finger grip): Silver, white, black.



### Lockable handle for inward opening One

Lockable with key (Locked from start).

Handle for OD, ZD: Silver, white, black.



### Turn lock (locked from start)

Turn lock (The handle is locked in the initial position and can be unlocked with a finger grip): Silver, white, black.



### Blanking plate

Fixed.



### Blanking plate

Blanking plate with cover for loose handle.



### Blanking plate for ONE (OD, ZD)

Blanking plate with cover for loose handle.



### Loose handle

### Security lock and handle

Spring loaded handle mount (FIX 805).

FIX 811 handle, matt silver, delivered separately.



**Door handles**



Interior door handle  
Anodized silver, White and Black



Door handle with exterior plate  
Anodized silver, White and Black



Exterior door handles with cylinder  
Anodized silver, White and Black

**Plates**



Door handle blanking plate  
Anodized silver, White and Black

**Option for Double Balcony doors**

With handles on both active and passive door leaves, the door is equipped with a curved Hoppe London.



Hoppe London door handle  
Anodized silver

**Sliding door handle**



Interior door handle  
Anodized silver, White and Black

Interior handle with cylinder  
Anodized silver, White and Black

Exterior door handles with cylinder  
Anodized silver, White and Black

**Cylinder**



Locking cylinder



Cylinder Extension

**Thumb turns**



Thumb turns

**Locking combinations**



Double cylinder



Thumb turn on inside  
Cylinder on outside



Cylinder on inside



Thumb turn on inside

# BLACKLINE

**The Blackline option adds a modern touch to your products.**

When specified, Blackline offers black ironmongery and a black spacer bar. You can choose to have your entire product in black or let the black details enhance your choice of colour on the frame and sash. Below are some popular examples of Blackline together with some of our other standard colours.



# JULIET BALCONY & GLASS

## Glass

Juliet balcony door can be equipped with a laminated and strong glass pane that lets in maximum daylight while protecting pets, children and adults from falling out.







## PERFORATED PANEL

If you choose a strong perforated panel instead, you can create exciting patterns with different types of holes. You can also choose the panel to deviate from the colour of your products to create an interesting detail on your facade.



# GLASS

**Sound reduction, safety, security, energy saving and decorative NorDan glazing can be supplied depending on the performance criteria you require.**

## Safety glass

NorDan take security seriously. Personal safety and security against intrusion must be carefully considered when deciding on the level of safety glass required. It's also important to consider not just the glass but also the installation and fixing of the frame.

Safety glass comes in many types with protection against multiple hazards (risk of falls, injury from collision, burglary, vandalism, projectiles and pressure loads). Some requirements use thicker glass, others with glass with special properties. The two most commonly used and known safety glass types are toughened and laminated.

## Toughened glass

Toughened glass is about 4-6 times stronger than ordinary glass of the same thickness. Toughened glass is produced by heating the finished cut glass and cooled quickly so that the outer glass surface cools faster than the center of the glass. This gives the outer surface a tension that makes the glass more difficult to break. When toughened glass is broken, the glass particles are small and relatively harmless, but the glass does not stay together.

## Laminated glass

Laminated glass is composed of two or more layers of glass baked together with intermediate layers of plastic. Laminated glass can be constructed of several glass layers and several plastic layers of different types depending on your requirement. When laminated glass breaks the plastic layer holds the glass particles together. The result is that a barrier still remains so that burglars would not be able to get through the glass. NorDan recommends the use of laminated glass in all doors, and areas on the side of the doors, and in areas where collisions can occur. In addition to the safety and security benefits provided by laminated glass it also reduces UV light transmission by approx 99%. UV light is the primary cause of fading of fabrics and furnishings within a building.

## Other glass types

Radiograph, blast resistant, antibacterial, obscure or decorative glass types are all available depending on your requirement. For further information, contact your nearest NorDan representative.



1



2



3



4



5



6

**1 Cotswold / 2 Etched glass / 3 Clear glass  
4 Standard glass / 5 Toughened glass / 6 Laminated glass**

# SASH AND CASE LOOK-ALIKE



STEPPED  
SASH

STEPPED  
TRANSOM

## **Give your StormGuard window a traditional look**

The sash and case look-alike window is a variation on the SBD approved Norwegian StormGuard window. When compared to the traditional sash and case design, NorDan's alternative sash and case look-alike window provides:

- **Higher Watertightness**
- **Seven point locking system**
- **Safe cleaning from inside**
- **Controlled ventilation**
- **Fire escape (size permitting)**
- **Wide range of optional extras**







# NORDAN **BIM** **OBJECTS**

Building Information Modeling, or BIM, is hardly a new concept for most architects and building companies. Increasing demand for quality of data throughout a project's entire life span adds to the list of important requirements for all parties involved in construction. As a leading building product supplier, we take our BIM responsibility seriously.

## **Digital marketplace**

With BIM objects, there are still very few - if any - standards. As common dictionaries and open file formats are still maturing, NorDan has prioritised creating high quality, parametric objects for newer versions of Revit and ArchiCAD. The objects' built-in intelligence allows a user to set a variety of parameters, from transoms and mullions to window sizes, energy efficiency and appearance. The distribution is done through [www.bimobject.com](http://www.bimobject.com), where you can find references to all relevant documentation in addition to downloading the objects themselves.

**Get started at [bimobject.com](http://bimobject.com)**

## **SMARTER CONSTRUCTION**

**BIM might be the single biggest revolution for the building industry. NorDan acknowledges this and provides a complete set of parametric objects for our entire product range.**











**At NorDan, we have a long history of helping architects, contractors and clients specify high-performance windows for large and small projects alike.**

**NorDan products are suitable across a wide range of sectors such as the private rental sector, off-site manufacturing, affordable housing, private house-builders, residential and more.**



# **CERTIFICATION**

**CERTIFICATION OF ENVIRONMENT,  
WORK AND QUALITY**





**NorDan work closely with a number of government and international agencies in connection with product development and certification. The requirements ensure that you as a customer or user can make a fully informed and honest choice.**



## Secured by Design

NorDan UK Ltd - the leading Scandinavian high-performance timber window & door manufacturer supplying to the UK - are longstanding members of Secured by Design, the national police crime prevention initiative.

Secured by Design work closely with standards and certification bodies to ensure that their publicly available standards actually meet the needs of the police and public alike.

NorDan UK Ltd have an extensive range of products, which have achieved Police Preferred Specification and are therefore accredited by Secured by Design.

Products that are part of Secured by Design's product based police accreditation scheme are subject to rigorous testing and additionally must be fully certificated by an independent, thirdparty certification body accredited by the United Kingdom Accreditation Service (UKAS) before being allowed to carry the SBD logo. This is the only way for companies to obtain police accreditation for security-related products in the UK.

## Impregnation

At NorDan AS, impregnation treatment of timber used for manufacturing is in accordance with class AB, based on the European standard EN 351-1 class P5. By impregnating the timber, longevity is increased and protected against rot and fungi. Moreover, the wood is more dimensionally stable in that it does not twist, turn or warp because of the production techniques employed. NorDan also follow requirements set in VOC for emissions to air, soil and water.

## Achilles

Achilles Building Confidence is designed to meet the increasingly demanding legislative and risk management needs of construction clients. Achilles Building Confidence community is managed by an industry Steering Group comprising of members from across the sector to drive industry best practice.

## BBA

The British Board of Agrément is the UK's leading building products certification provider, working with manufacturers worldwide to assess new and innovative construction products and solutions to ensure they are safe and fit-for-purpose.

The organisation has developed a wealth of knowledge and expertise over the last 50 years and offers what many consider to be the very best in building product accreditation and testing. Its Agrément certificates are highly prized and can – due to the BBA's in-depth and exhaustive testing and evaluation regimes – take many months to achieve. An Agrément certificate provides reassurance to construction clients that products are assessed regularly by an independent, UKAS accredited body.

The BBA has been working with NorDan UK Ltd for more than a decade and certifies a wide range of its doors and window systems, as well as working with the company on achieving Secured By Design for many of its products.





# BUSINESS RHYTHM

## NORDAN SALES ORGANISATION

### **Inverness**

Showroom &  
Office Location

### **Aberdeen**

Showroom &  
Office Location

### **Livingston**

Head Office, Showroom  
& Office Location

### **Manchester**

Showroom &  
Office Location

### **Gloucester**

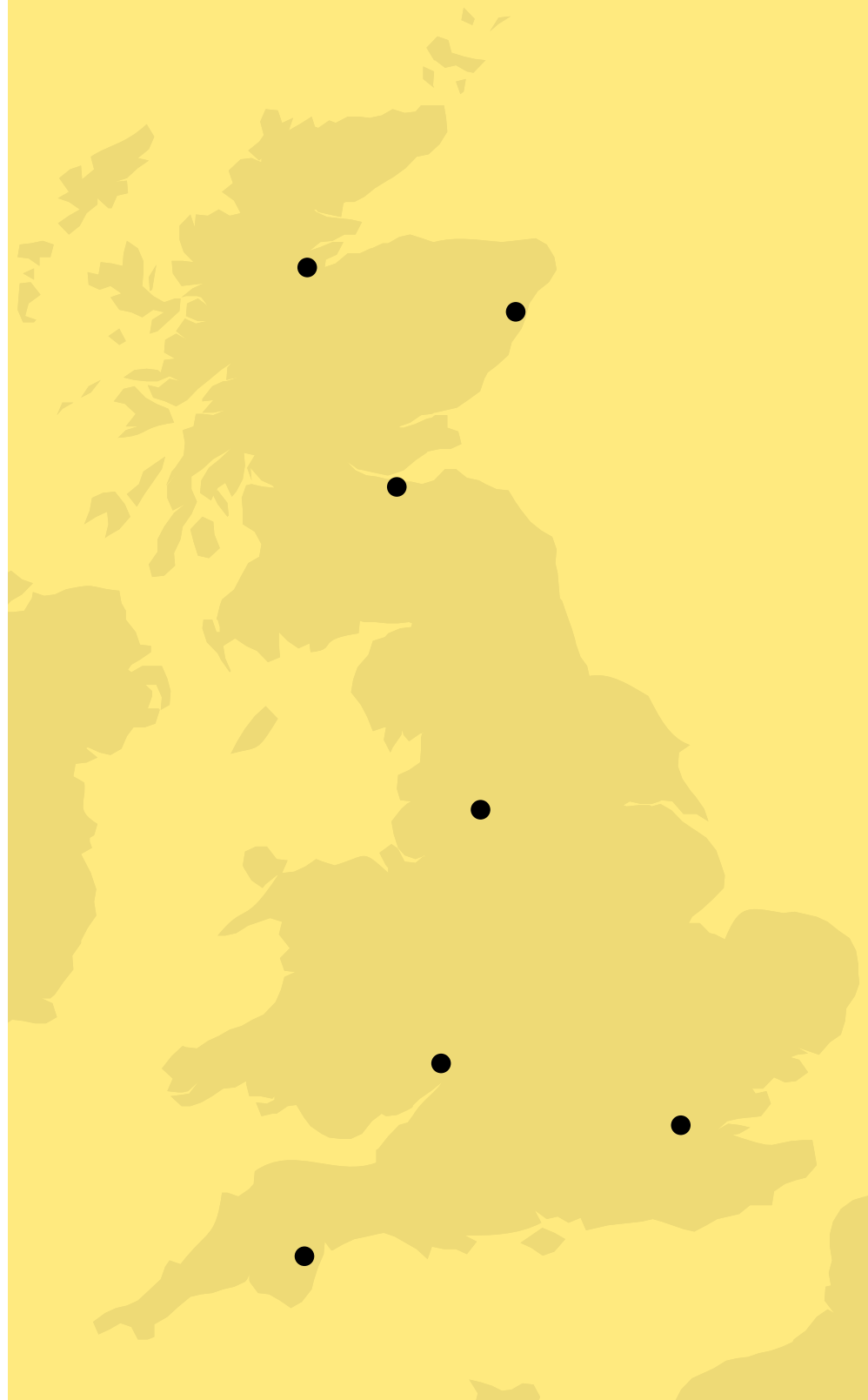
Office Location

### **London**

Showroom &  
Office Location

### **Exeter**

Showroom &  
Office Location





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## ABOUT NORDAN

At NorDan we are happy to be the forerunners in the transition to a sustainable construction industry. We try to lead by example - we've done it for nearly 100 years. Founded in 1926, and still family owned, NorDan is one of Europe's leading manufacturers of high-performance timber windows and doors. NorDan windows and doors offer solutions that combine leading energy performance with longevity, to minimise environmental impact throughout their lifespan.



## LIVINGSTON Head Office

3 Almondview Office Park  
Livingston  
West Lothian  
EH54 6SF

[www.nordan.co.uk](http://www.nordan.co.uk)

### ABERDEEN

Norse House  
Greenwell Road  
East Tullos  
Aberdeen  
AB12 3AX

### MANCHESTER

Ivy Business Centre  
Crown Street  
Failsworth  
M35 9BG

### EXETER

(NorDan Scandic Ltd)  
1b/5a Newton Centre  
Thorverton Road  
Exeter  
EX2 8GN

### LONDON

The Building Centre  
26 Store Street  
Bloomsbury  
WC1E 7BT

### INVERNESS

NorDan UK Ltd  
Brackley House  
Gollanfield  
Inverness  
IV2 7QT

### GLOUCESTER

Suite C, The Opus  
Telford Way  
Waterwells Business Park  
Gloucester  
GL2 2AB