



Megrame EXPORT

Kirtimu str. 37A, Vilnius LT-02244, Lithuania

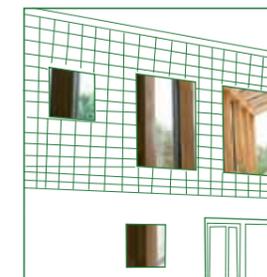
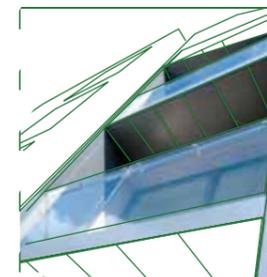
Tel. +370 5 264 07 11

E-mail: info@megrameexport.com

www.megrameexport.com

© 2010 Megrame Export

MEGRAME WINDOWS, DOORS, CURTAIN WALLS
Timber and timber-aluminium





5	About us
7	Quality and warranty
9	Commitment to the environment
11	Timber window quality
15	Aluminium cladding
16	Design
17	Product lines
19	EURO
20	FIXED WINDOWS
21	TILT & TURN WINDOWS
22	HOW TO CHOOSE THE RIGHT TERRACE DOORS?
24	TERRACE DOORS
25	LIFT & SLIDE DOORS
26	TILT & SLIDE DOORS
27	FOLDING-SLIDING DOORS
28	HOW TO CHOOSE ENTRANCE DOORS?
30	CLASSIC ENTRANCE DOORS
32	FLUSH ENTRANCE DOORS
35	NORDIC
36	FIXED WINDOWS
37	SIDE HUNG WINDOWS
38	TOP HUNG
39	CLASSIC ENTRANCE DOORS
40	FLUSH ENTRANCE DOORS
43	NOVUS
44	CURTAIN WALL SYSTEM
47	SASH WINDOWS
49	Finishing
51	Glazing options
55	Glazing bars
57	Mullions and transoms, corner posts, cills
63	Design elements
65	Thresholds and accessories for entrance doors
67	Handles and locks
73	Vents, insect screens and other accessories

Contents



MEGRAME – windows for a lifetime.

About us

MEGRAME Group was established in 1992 and is the biggest manufacturer of highest quality timber, aluminium-clad timber, aluminium and pvc windows, doors and facades in Lithuania.

MEGRAME is a family owned group of companies and today it is an international establishment with activities in Lithuania, the United Kingdom, Ireland, Russia, Ukraine, Sweden, etc. Through all these years of growth and success Megrame has gained invaluable experience and can guarantee highest quality, high performance, stylish, competitively priced and superbly engineered and constructed products that are long lasting and energy efficient.

All of our products are made-to-order to meet clients' requirements. From the size, shape and colour, to style, finish, and accessories – whatever combination you choose, MEGRAME windows meet the highest specifications and are built to last a lifetime.



Our modern production plants and highest quality products fully live up to the demands of our clients in different countries.

A continuous policy of investment in R&D and product development ensures that we not only provide solutions for today but also for tomorrow. Our products meet low U-values, good acoustic values, are eco-friendly and energy efficient. This gives our products a long life cycle, low maintenance and high customer satisfaction.

We offer a wide range of different products for both modern and classic buildings. All of our windows are internally glazed, which means the glass cannot be removed from the outside, thus guaranteeing the security of the products. We only use the best Nordic timber available from sustainable forests.

MEGRAME Group companies offer the complete package including consulting, development, survey, design, production, delivery, installation and after sales service. The team of highly qualified professionals will offer individual solutions for every project – from large commercial developments to individual home renovations.



Quality and warranty



In 1999 in the Baltic States MEGRAME products were first certified to be in compliance with the quality standards LST EN ISO 9002 and LST EN ISO 14001:2004, LST EN ISO 9001:2008 and OHSAS 8001:2007.



MEGRAME products were several times nominated as the best Lithuanian Product of the Year.



MEGRAME timber products have been certified as complying with the following British standards: EURO and NORDIC windows to BS 7950, aluminium clad timber windows to BS EN 1026, BS EN 12207, BS EN 1027, BS EN 12208, BS EN 12211, BS EN 12210. EURO doors have met the enhanced security performance requirements for door assemblies according to PAS 24-1:1999.

MEGRAME is committed to bringing you products of the highest quality and value. We are just as committed to backing up our products with quick responsive service and a comprehensive warranty. Windows and doors made by MEGRAME are covered by a limited 10 year warranty guaranteeing they will remain free from defects in manufacturing, materials, and workmanship for up to 10 years from the purchase date.





Commitment to the environment

MEGRAME recognises the need to limit our impact on the environment – respect for the environment is important to us. Sustainability is about responsible materials sourcing, energy efficiency, recycling, carbon emissions and life expectancy of products.

Responsible materials sourcing. It is essential to consider how your windows are made, and what they are made of. MEGRAME is committed to the use of raw materials from sustainable sources, maximising the use of recycled materials, and minimising the use of energy from non-renewable sources. Our timber comes from sustainable forests, from FSC (Forestry Stewardship Council) accredited suppliers. All our finishes are water-based and eco friendly.

Energy efficiency. Products used in the building construction can significantly improve energy efficiency and reduce running costs. Windows with low U-values are very important and MEGRAME windows can reach U-values as low as 0.78W/m²K.

Recycling. In our factories we have a waste sorting policy. Spare and broken glass is reprocessed, sawdust that remains

after processing timber is automatically collected and remade into blocks for burning, and our spray booths collect and recycle residue. We use a water-based microporous preservative and paint/stain system that contains absolutely no toxic chemicals.

Carbon emissions. Argon filled energy efficient glass units maximise thermal gain, reduce thermal loss and reflect heat back into the room in the winter time in order to drastically reduce the need for heating and therefore the release of CO₂. In the summer MEGRAME windows can be designed to reduce solar gain and increase natural ventilation, thus reducing the need for air conditioning.

Life expectancy of products. As our motto is 'Windows for a lifetime' we do everything to deliver this to our customers. MEGRAME offers a comprehensive warranty of 10 years on all windows and doors.





Timber window quality

As people are becoming more aware of their environment many are looking for natural products when choosing windows and doors for their homes. When choosing timber windows today people do not have to compromise on comfort or durability, choice of style, shape or colour. High quality timber windows and doors now offer style, comfort, warmth and durability to any home and are increasingly the first choice of architects and designers.

MEGRAME manufactures timber windows, curtain wall, balcony and entrance doors using only the highest quality knot free timber with a moisture content of $12\% \pm 2$.

The pine wood used to manufacture our products consists of a minimum 60% heartwood from sustainable forests in North Scandinavia where the trees grow slowly and naturally and no fertilisers are used.

We use only laminated triple-layer wood. Three layers are used because this technology prevents the window frame from warping and increases the lifetime of the windows. The outer layers are radial or half-radial cut and this method protects window surfaces from wood splitting.

Species of wood available:

- pine (finger-joint or solid)
- oak
- meranti
- mahogany
- other species of traditional (eucalyptus, larch) or exotic (hemlock, oregon, white saraya) timber

All of these timbers have proven to be extremely stable over time and will deliver years of trouble free service.



Hemlock



Oak



Larch



Pine



Fir



Eucalyptus



Meranti



Mahogany

Why MEGRAME timber windows?

The old attitude of wooden windows meaning "short life & high maintenance" has been banished as timber proves to be the option that can outlast all others.

The timber used to manufacture our products is carefully selected and treated and, with correct installation and proper maintenance, MEGRAME windows will last and give satisfaction for several decades.

All MEGRAME timber windows and doors are made-to-measure and can be fitted with a complete range of opening and

closing solutions. Different units can be combined to create more complex constructions such as curtain walling, screens, patios, bays and bows, all created to your exact specifications. MEGRAME timber windows and doors can help you to create your dream home and capture that look you really want.

Our correctly designed and manufactured windows are delivered fully finished and glazed prior to careful installation – giving our clients a high quality product which will benefit their homes for years.





Aluminium cladding

Timber windows with aluminium cladding combine the best properties of two different materials:

- Wood as a proven and environmentally friendly building material is not only highly durable and capable of withstanding strain; it also creates a friendly and warm atmosphere in living quarters.
- Aluminium is a modern high-tech product characterised by versatility and indestructibility combined with low weight. Being weatherproof, it provides optimum external protection for the wood.

Frames and sashes of MEGRAME aluminium clad timber windows, doors and curtain wall systems are externally covered with pre-assembled aluminium sections that are held clear of the timber surface to allow drainage and ventilation.



Aluminium clad timber products are highly durable yet require low maintenance and are ideal for places in harsh environments, high-rise apartments, or where access to the windows is impaired.

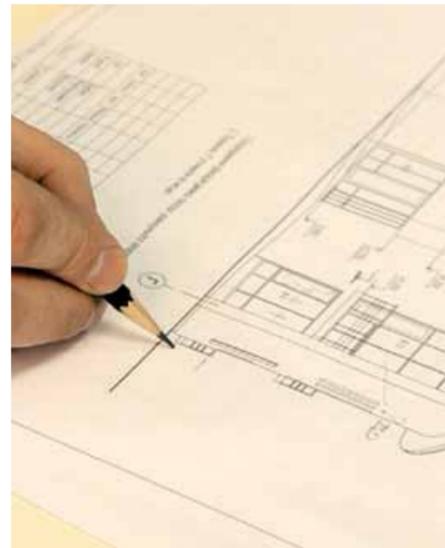
All aluminium clad timber windows are made-to-measure, and can be fitted with a complete range of opening and closing solutions.

The advantages of aluminium clad timber products:

- Timber-aluminium windows last a lifetime, because aluminium protects the exterior surfaces of wood window like bark does and gives a long-term protection from the negative environmental influences: rain, snow, sunlight, etc.
- MEGRAME aluminium profile systems provide optimum back ventilation to ensure that no humidity will concentrate between the aluminium profile and the wood, so preventing mould, etc.
- Aluminium is an easy-to-clean, low maintenance and colour-stable material.
- You can choose from a nearly unlimited number of possible colours and textures for the exterior design – all RAL colours, anodized colours of aluminium, and different textures.
- There are wood-aluminium solutions for every type of window, ranging from single casement turn windows to tilt & turn windows, sliding doors, curtain walls, etc.
- Timber-aluminium windows are available in almost every type and shape for customised facade design.

Design

Company Megrame is greatly experienced in designing and manufacturing timber, timber-aluminium windows, doors and curtain walls. Our team of design professionals has specialised in timber window design and manufacturing for more than 20 years. Today we manufacture more than 10 product lines and each line has its own characteristics that can be applied to each project individually in order to have an optimal solution.



We work with builders, architects and homeowners providing a wide selection of window and door products, from the traditional to the extraordinary. Our specialists assist customers in choosing the right product line. We will prepare a project and all drawings of windows, doors, curtain walls for each project; we will customise the windows, if needed, for any individual projects; we will prepare drawings of window assembly, coupling, etc. if necessary.

Product lines

Euro
Euro^{ALU}

Nordic
Nordic^{ALU}

Novus^{ALU}

Sash

Euro – inward opening windows, terrace and entrance doors

Nordic – outward opening windows, entrance doors

Novus – timber-aluminium curtain wall system

Sash – sash windows

ALU – aluminium cladding option

Euro / Euro^{ALU}

EURO design line contains elegant inward opening European style products. This is a most popular and common line in Continental Europe. The products of this line are manufactured either from 68 mm or 78 mm wide profiles from any timber species offered. Our EURO tilt and turn windows, terrace or sliding doors, entrance doors are suitable for apartments, private houses and commercial buildings. The EURO line windows and doors offer easy cleaning & maintenance, as they open inwards. If your project requires especially large or units with non-standard dimensions the EURO 78 mm profile can be used.

SECURITY

EURO line is one of the safest and most secure in the market. All products are internally beaded improving security because it means the glass cannot be removed from the outside. Enhanced security EURO windows were tested and certified as complying with BS 7950. Window restrictors are available to restrict opening of windows for child safety.

ENERGY EFFICIENCY

The products of the EURO line can be listed as being among the most energy efficient. When triple glazed with a 42mm glass unit, our EURO 78 mm window can reach a U value of 1.1 W/m²K. Standard double-glazed window with a 68 mm wide profile reaches U value of 1.5 W/m²K, the glass unit can be up to 32mm wide. This line also has "Passive house" windows with 110 mm wide profiles and U value of 0,78 W/m²K. Vents can be installed in the sash or frame of our EURO windows. All products have two gaskets, ensuring an airtight seal.

SOUND INSULATION

The products of this line reach very good acoustic values and are perfectly suitable for houses close to busy roads or other high noise generating objects. The windows with 78 mm wide profile can reach up to Rw – 48 dB.

DOORS

We have two types of EURO series entrance doors – classical and flush doors. All doors are assembled with an exceptionally low 20 mm threshold which is adaptable for disabled people. EURO series has a very wide selection of terrace doors – side hung, tilt and turn, sliding, folding. Lift & slide doors can be up to 3 meters high and 6 meters wide with especially large glass area that allows maximum light into the premises.

OPTIONAL ALUMINIUM CLADDING

The optional aluminium cladding greatly improves the life span of the product and reduces maintenance costs. Aluminium clad timber products are highly durable yet low maintenance and are ideal for harsh environments, high-rise apartments, or where access to the windows is impaired. External aluminium can be powder coated to any RAL colour of your choice.

COLOURS

The finishing materials we use are environmentally friendly water-based surface coatings – covering paints and transparent lacquers. The wide choice of lacquers and the RAL palette of paints allow us to obtain the desired colour effect at the same time as preserving natural beauty and warmth of wood.

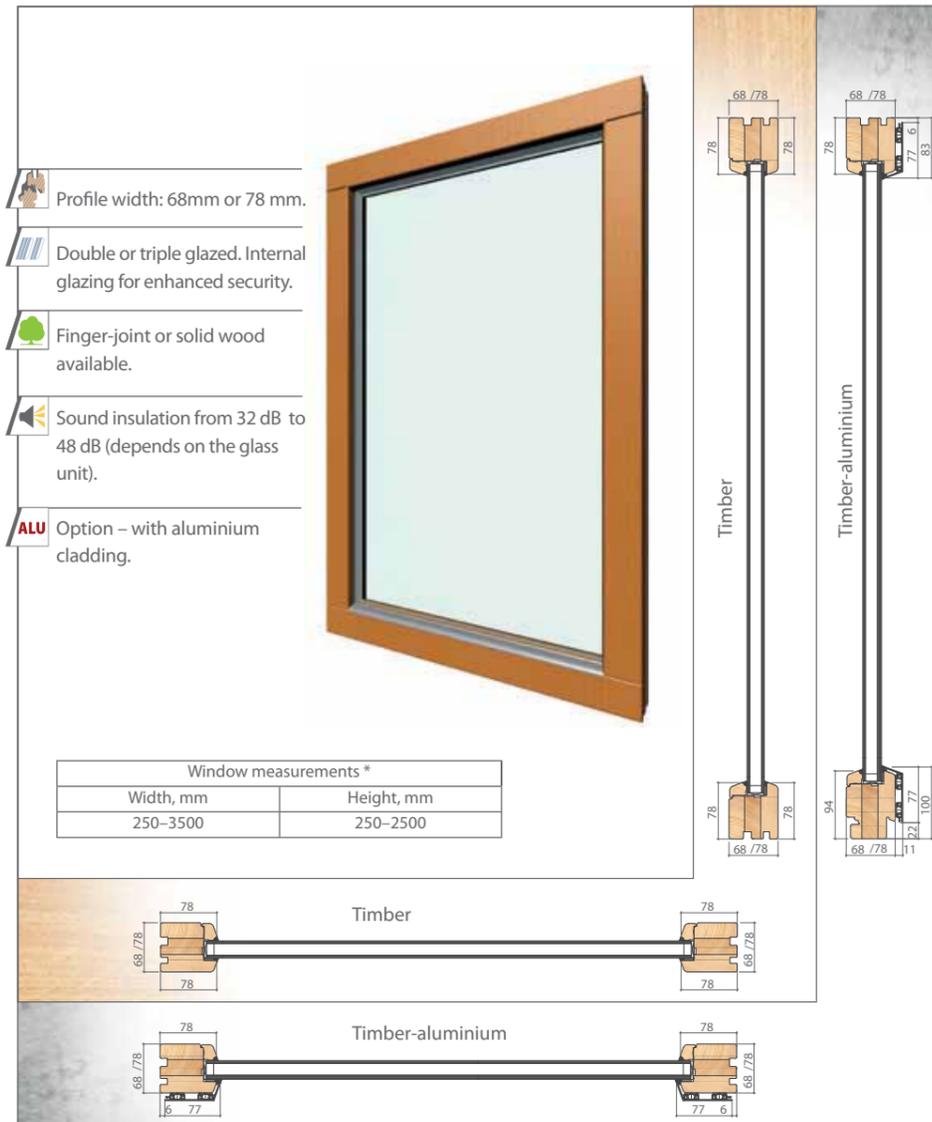
Euro
Euro^{ALU}

Fixed windows

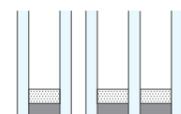
The fixed windows can be coupled with all other EURO series window or door types. This allows formation of larger composite sections.

Accessories and options:

- Vents 73 p.
- Glazing bars 55 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.



Glass unit



Glass unit options:
68 mm from 6 mm single glass up to 32 mm glass unit.
78 mm from 6 mm up to 42 mm.

Opening types

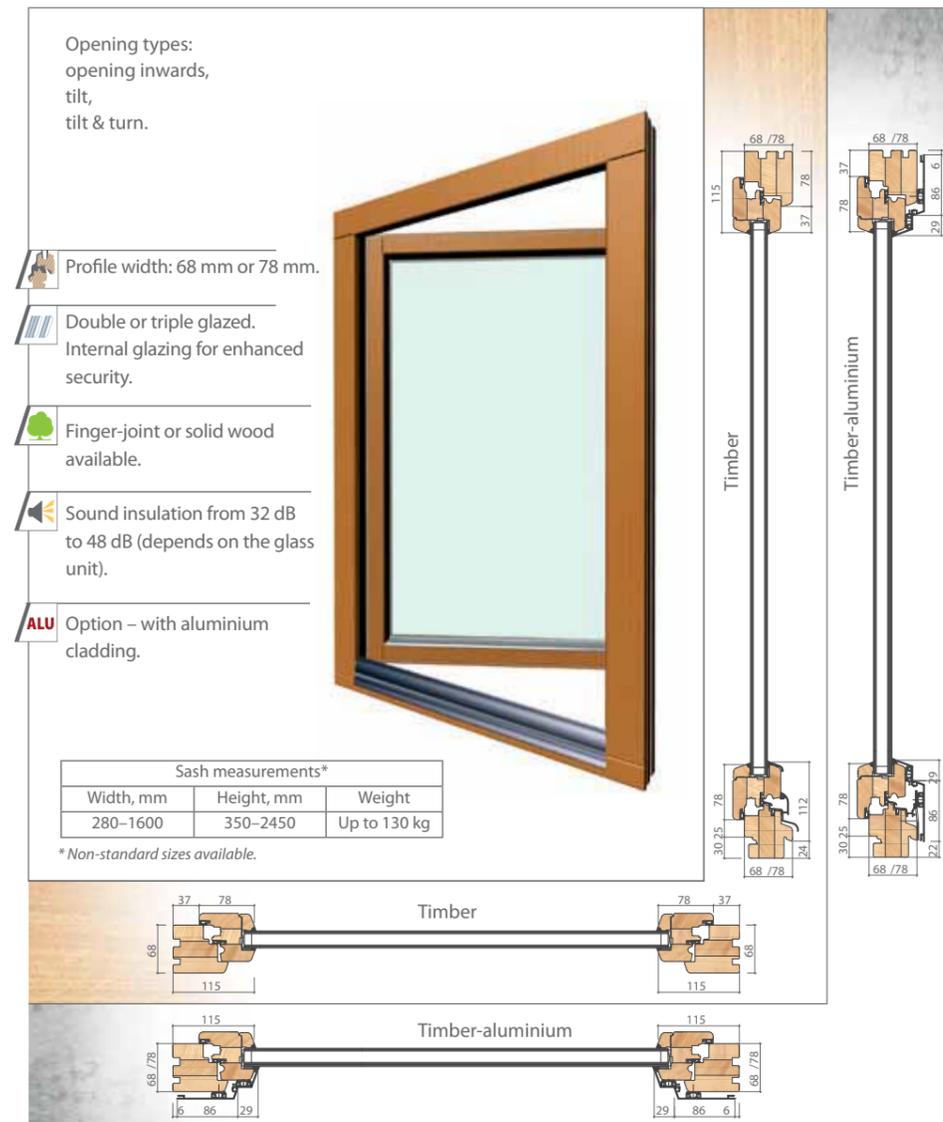


Tilt & turn windows

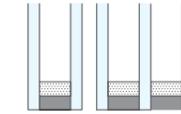
Tilt & turn windows offer superior insulation, security, easy cleaning & maintenance and venting. Multi-point locking and dual weather-stripping satisfy the most demanding construction and architectural standards for security, strength, dealing, egress and insulation. A single lever handle controls all window functions.

Accessories and options:

- Handle options 67 p.
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.

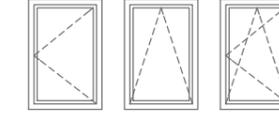


Glass unit



Glass unit options:
68mm from 6mm single glass up to 32 mm glass unit.
78 mm from 6mm up to 42 mm.

Opening types



How to choose the right terrace doors?

In order to choose the best solution the following criteria should be taken into account:

- **Desired opening.** What is the function of the terrace door? Is it only entry-exit or is there a need to open your living area completely?
- **Ease of operation.** Who will operate the doors? Will children be opening them? Is there a need to lock the doors from the outside?
- **Price.** What is your budget? Prices of different systems may vary radically.
- **Threshold height.** Will there be a lot of movement? Maybe there is a need for barrier free use?
- **Characteristics required.** Are there any special safety or acoustics requirements? Bigger maximum sash weight allows heavier glass units to be installed, this increases the sound insulation and safety of the doors.

The following table will help to compare different criteria and to choose the right terrace door:

Type of Terrace door	Sash weight (max)	Opening (max)	Height of threshold	Ease of operation*	Price**
Tilt & turn door	130 kg	One sash – 1,04 m, two sashes – 2,09 m	62 mm, possibility to install entrance door threshold 20 mm	1	1
Folding door	80 kg	Three sashes (min) – 2,5 m, seven sashes (max) – 6,2 m	93 mm (when folds in); 83mm (when fold out)	4	3
Tilt & slide door	150 kg	One sash – 1,42 m, two sashes – 2,91 m,	76 mm	3	2
Lift & slide door	300 kg	One sash – 3,1 m, two sashes – 5,99 m	From 30 mm to 60 mm	2; possible automated operation	4

* Easiest – 1, most difficult – 4.

** Min – 1, max – 4.

When the inside space is limited and there is no possibility to use tilt & turn or folding terrace doors we suggest tilt & slide or lift & slide doors, where the sashes slide in front of a fixed glass panel and stack perfectly within the door frame, providing a seamless transition from outside to inside.



Terrace doors

The terrace door may be used as a direct exit or as a doorway to a balcony, for example from a living room or bedroom. The terrace door can be coupled with all other EURO window types. Outwards opening EURO terrace doors are also available. The sash is operated by a single handle which incorporates two functions: inward opening to 90° for safe cleaning; inward tilting, to create an overhead ventilation gap.

Accessories and options:

- Handle options 67 p.
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.

Opening types: opening inwards, opening outwards, tilt & turn.

Profile width: 68 mm or 78 mm.

Double or triple glazed. Internal glazing for enhanced security.

Finger-joint or solid wood available.

Sound insulation from 32 dB to 48 dB (depends on the glass unit).

ALU Option – with aluminium cladding.

Thresholds – window profile for opening inwards doors, 30 mm timber threshold for opening out doors.

Sash measurements*		
Width, mm	Height, mm	Weight
700–1150	1850–2450	Up to 130 kg

* Non-standard sizes available.

Glass unit

Glass unit options: 68mm from 6mm single glass up to 32 mm glass unit. 78mm from 6 mm up to 42 mm.

Opening types

Lift & slide doors

Lift & slide doors are ideal in any situation where space is limited (where a wide opening and a big amount of light is needed), such as balconies or terraces. With their slim appearance our lift & slide doors discretely fit into a modern living ambience.

Accessories and options:

- Handle options 67 p.
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.

Maximum size: 2,9 m height and 6,0 m width.

Profile width: 68 mm or 78 mm.

Double or triple glazed. Internal glazing for enhanced security.

Finger-joint or solid wood available.

Sound insulation from 32 dB to 48 dB (depends on the glass unit).

ALU Option – with aluminium cladding.

Sash measurements*		
Width, mm	Height, mm	Weight
700–3300	850–2765	Up to 300 kg

* Non-standard sizes available.

Glass unit

Glass unit options: 68mm from 6 mm single glass up to 32 mm glass unit. 78 mm from 6mm up to 42 mm.

Opening types

Tilt & slide doors

Tilt & slide doors are ideal where large and heavy doors are needed. Elements with large sashes operate easily and smoothly, controlled with one hand. Tilt function allows ventilation of premises without opening the whole door.

Accessories and options:

- Handle options 67 p.
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.

Profile width: 68 mm or 78 mm.

Double or triple glazed. Internal glazing for enhanced security.

Finger-joint or solid wood available.

Sound insulation from 32 dB to 48 dB (depends on the glass unit).

ALU Option – with aluminium cladding.

Sash measurements*		
Width, mm	Height, mm	Weight
720–1600	820–2370	Up to 150 kg

* Non-standard sizes available.

Glass unit

Glass unit options:
68mm from 6mm single glass up to 32 mm glass unit.
78mm from 6mm up to 42 mm.

Opening types

Folding-sliding doors

Folding sliding doors offer the ultimate in living space flexibility. Effectively creating a glass wall that you can slide out of the way to open your living area completely, folding doors offer unrivalled flexibility in how you blend the space between the inside and outside of your home. Folding sliding doors ensure the entire opening is completely clear, with no fixed sections.

Accessories and options:

- Handle options 67 p.
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.

Opening types:
folding inwards,
folding outwards.

Profile width: 68 mm or 78 mm.

Double or triple glazed. Internal glazing for enhanced security.

Finger-joint or solid wood available.

Sound insulation from 32 dB to 48 dB (depends on the glass unit).

ALU Option – with aluminium cladding for inwards opening doors only.

Sash measurements*		
Width, mm	Height, mm	Weight
400–900	850–2350	Up to 80 kg

* Non-standard sizes available.

Glass unit

Glass unit options:
68 mm from 6 mm up to 32 mm.
78 mm from 6 mm up to 42 mm.

Opening types

How to choose entrance doors?

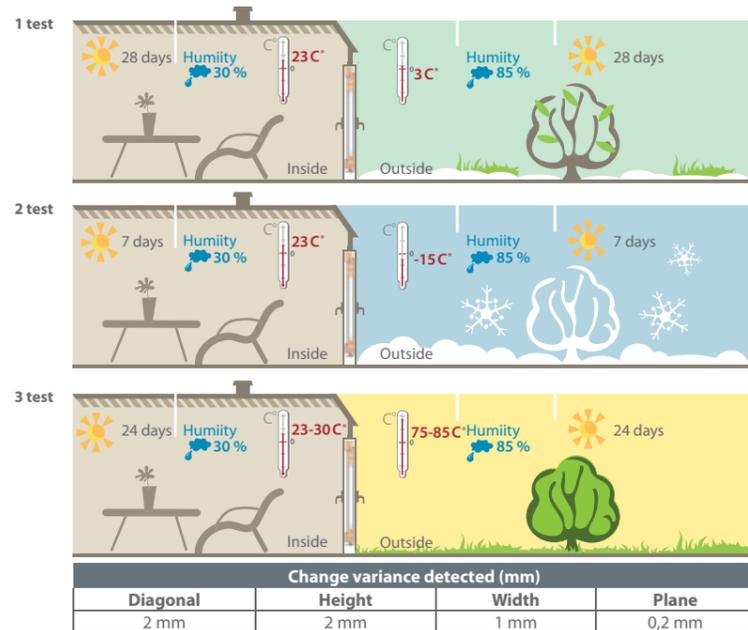
MEGRAME entry doors allow you to turn your personal vision into reality, opening the world of possibilities, where design options are endless. We offer two types of entrance doors – classic and flush doors. All our doors are supplied as complete door sets, with or without ironmongery, and factory finished. Our high quality external doors are thermally efficient, attractively designed, low maintenance. We also supply a wide range of glazed and panelled timber and alu-clad doors.

The flush doors have more design possibilities than classic doors – the styles vary from modern to classic. They are especially firm, stable, resistant to climate effects. The flush doors will not warp or deform because of their special construction. This is very important when the doors are opening directly into the living space.

The main advantage of the classic doors is the price – they are almost half the price of the flush doors but they are also resistant to temperature changes and have very good thermal and acoustic

characteristics. We recommend classic doors in houses where there is no direct contact between the outside and the living area. Door panels used by MEGRAMA meet the European requirements of the highest tolerance class 4 of DIN EN 1530 standard. This is confirmed by tests carried out by independent laboratories. Three tests were conducted – the door panel was left for different periods of time in different exterior and interior humidity and temperature conditions. After all three tests only minimal warping of door panes was detected.

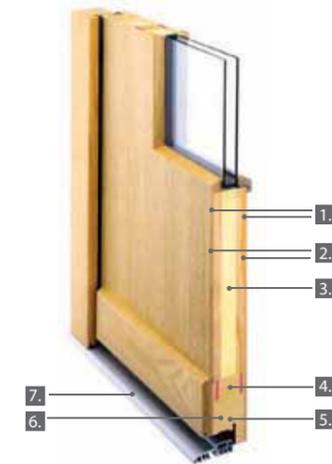
Three tests are conducted with a single panel:



Security of the entrance door is one of the most important door characteristics. Both types of our doors are very secure – you can choose from the standard multi-point locking mechanisms or even more secure other locking mechanisms: electronic locks, fingerprint detectors, etc.

ADVANTAGES OF FLUSH DOOR CONSTRUCTION

- Both outside covering layers of the door panel are covered with five layers of moisture resistant, laminated veneer. Due to different layers these doors are resistant to external environmental effects.
- Stable inner laminated timber cores do not allow door deformation.
- The polyurethane foam core construction ensures exceptional thermal performance and sound insulation.
- A steel sash stabilisation system is integrated into the door panel through the whole perimeter of the blank and in ensures the reliability and it stability of the doors.
- Four-sided hardwood frames surround the door panel making it exceptionally reliable and durable. The hardwood protects the hinge and lock systems mounted in the door blank, offering a secure fastening location for the hardware.



- The highest quality 100% silicone gaskets are elastic, resistant to temperature fluctuations and ensure especially good tightness and heat and noise insulation.
- The new aluminium threshold has a special plastic insert that insulates against the cold and increases stability. The combination of hard plastic and aluminium ensures the durability of the threshold.

Because of a special construction exceptional thermal performance and sound isolation will stay the same as the first day.



Classic entrance doors – OUTWARD or INWARD OPENING

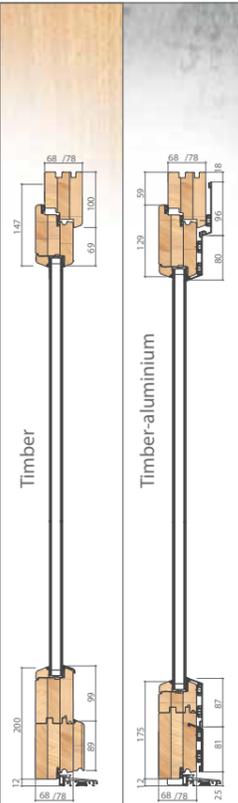
MEGRAME Classic entrance doors are not affected by climate changes, door panels are resistant to deformation and cracking, the doors have very good thermal and acoustic characteristics.

Accessories and options:

- Handle and lock options 67 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.
- Overhead door closers 71 p.
- Threshold selection 63 p.

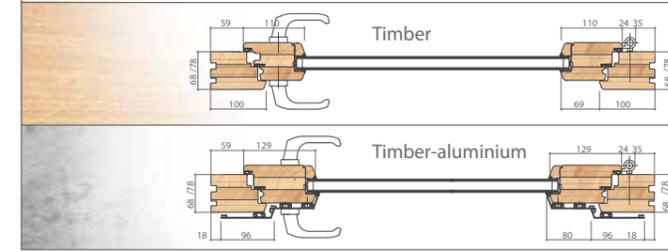
Opening types:
onward opening,
outward opening.

-  Profile width: 68 mm or 78 mm.
-  Double or triple glazed, filled with panels. Internal glazing for enhanced security.
-  Finger-joint or solid wood available.
-  Heat conductivity up to $U=1.3 \text{ W/m}^2\text{K}$.
-  Sound insulation from 32 dB (depends on the glass unit).
-  **ALU** Option – with aluminium cladding.
-  Standard lock system or enhanced security lock system.

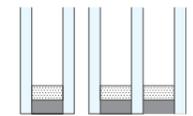


Sash measurements*		
Width, mm	Height, mm	Weight
500–1100	1910–2450	Up to 150 kg

* Non-standard sizes available.



Glass unit
Glass unit options:
68 mm from 6 mm up to 32 mm.
78 mm from 6 mm up to 42 mm.



DESIGN OPTIONS



Classic entrance door
Euro
Euro^{ALU}

Classic entrance door
Euro
Euro^{ALU}

Flush entrance doors – OUTWARD or INWARD OPENING

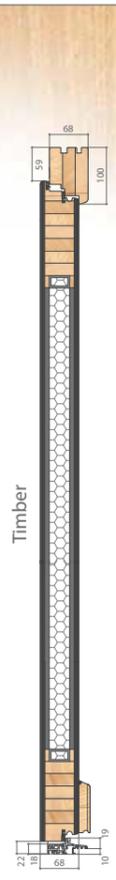
MEGRAME manufactures a new generation of flush entrance doors that are especially resistant to temperature fluctuations and humidity. They are very strong and are also resistant to deformation.

Accessories and options:

- Handle and lock options 67 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.
- Overhead door closers 71 p.
- Threshold selection 65 p.

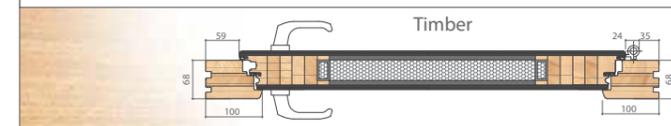
Opening types:
inward opening,
outward opening.

-  Profile width: 68 mm.
-  Double or triple glazed, filled with panels. Internal glazing for enhanced security.
-  Finger-joint or solid wood available.
-  Heat conductivity up to $U=1.2 \text{ W/m}^2\text{K}$.
-  Sound insulation from 32 dB (acoustic doors available).
-  Standard lock system or enhanced security lock system.

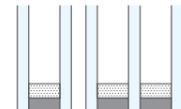


Sash measurements*		
Width, mm	Height, mm	Weight
850–1240	2030–2600	Up to 150 kg

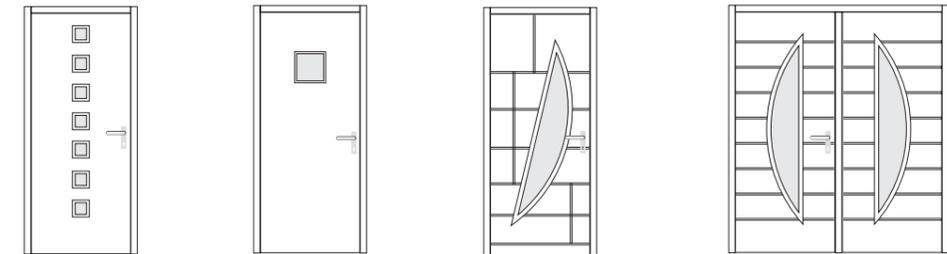
* Non-standard sizes available.



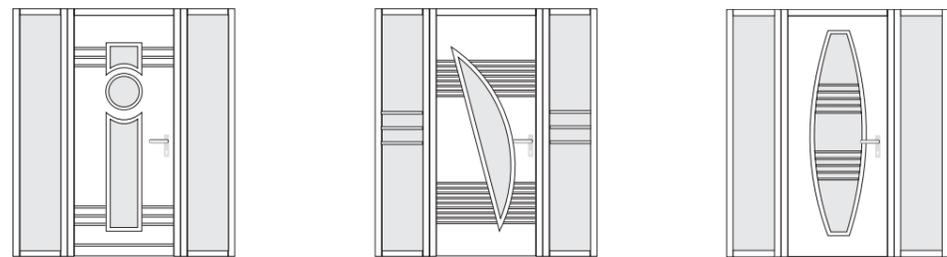
Glass unit Glass unit options:
from 6mm up to 32mm.



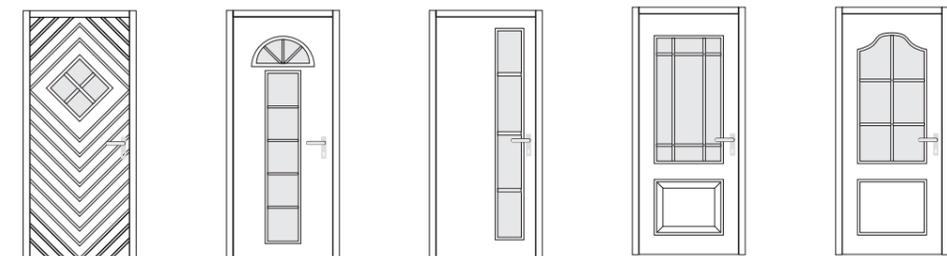
DESIGN OPTIONS



001-04 001-18 001-41 001-51



001-54 001-55 001-57



001-62 001-64 001-65 001-70 001-71



Nordic / Nordic^{ALU}

This type of window is especially popular in the United Kingdom, Ireland and Scandinavia. The casement window provides better protection against wind and rain which push the frame tight against the jamb thus improving the insulation.

Casement windows open outwards for light, fresh air and side breezes. The windows' are made of triple-layered glue-laminated timber. NORDIC windows are manufactured from 68 mm wide profile. Operable sashes can be double or triple glazed with units up to 32 mm wide and fixed parts with units up to 44 mm.

ENERGY EFFICIENCY

NORDIC windows have good thermal values and sound insulation. The heat conductivity coefficient of a standard double glazed window filled with argon is 1.5 W/m²K. The same window when triple glazed reaches a U value of 1.1 W/m²K or even better (depending on the glass chosen). The vents can be installed in the sash or frame of our NORDIC windows.

SECURITY

All operable windows in this series are internally beaded, improving security because it means the glass cannot be removed from the outside. Enhanced security NORDIC windows were tested and certified according to BS 7950. Window restrictors are available to restrict opening of windows for child safety.

SOUND INSULATION

The products of this line can reach acoustic values up to Rw – 45 dB and are perfectly suitable for high noise suppression requirements.

DOORS

EURO series classical and flush exterior doors can be adapted to NORDIC using a special adapter. All doors are assembled with an exceptionally low 20 mm threshold which is adaptable for disabled people.

OPTIONAL ALUMINIUM CLADDING

The optional aluminium cladding greatly improves the life span of the product and reduces maintenance costs. Aluminium clad Nordic windows and doors are highly durable need low maintenance and are ideal for places in harsh environments, high-rise apartments, or where access to the windows is impaired.

COLOURS

The finishing materials we use are environmentally friendly water-based surface coatings – covering paints and transparent lacquers. The wide choice of lacquers and the RAL palette of paints allows us to obtain the desired colour effect and to retain the natural beauty and warmth of wood.

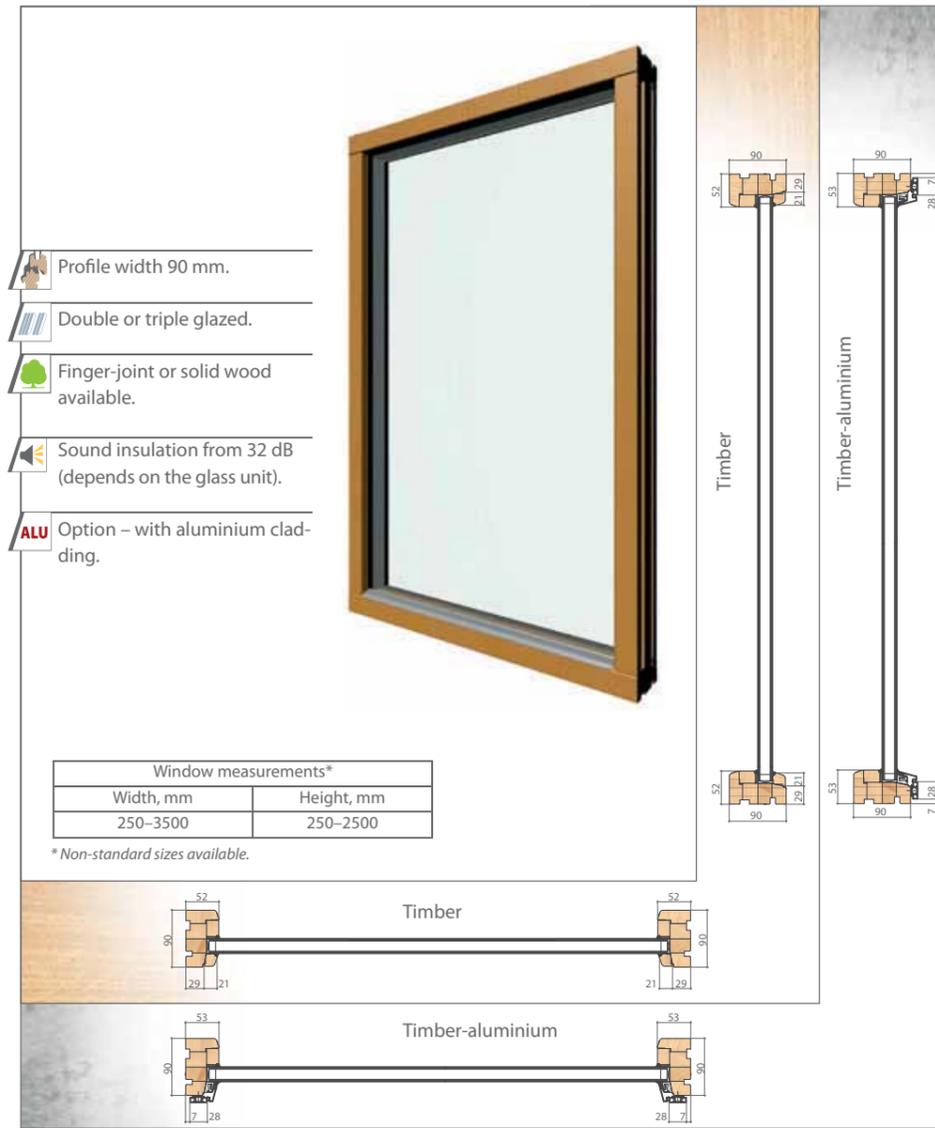
Nordic
Nordic^{ALU}

Fixed windows

The fixed windows can be coupled with all other NORDIC series window or door types. This allows large composite sections to be built.

Accessories and options:

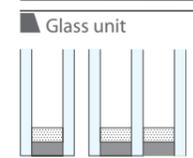
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Mullions and transoms, coupling, cills 57 p.



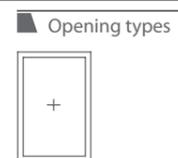
- Profile width 90 mm.
- Double or triple glazed.
- Finger-joint or solid wood available.
- Sound insulation from 32 dB (depends on the glass unit).
- ALU** Option – with aluminium cladding.

Window measurements*	
Width, mm	Height, mm
250–3500	250–2500

* Non-standard sizes available.



Glass unit options: from 6 mm up to 44 mm.



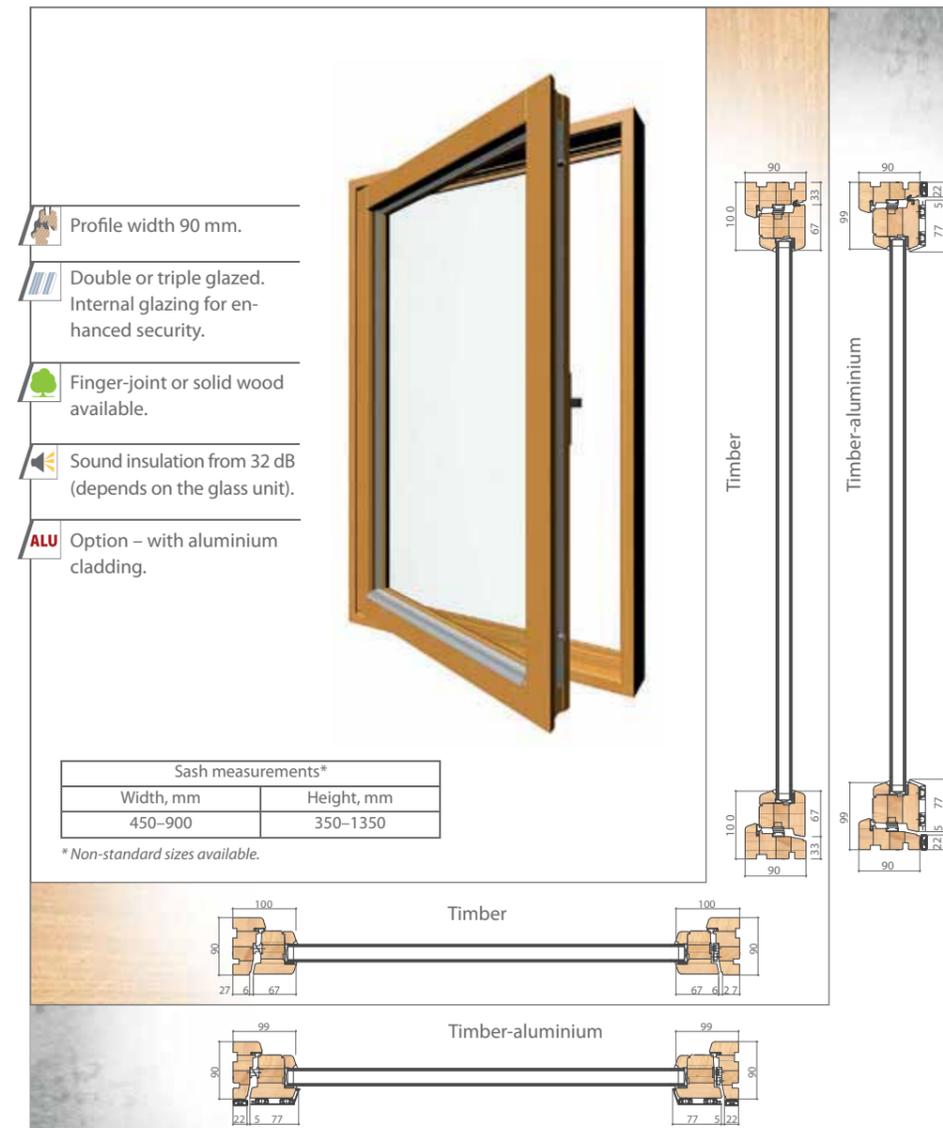
Opening types

Side hung windows

The side hung opening windows can be coupled with all other NORDIC window types. The standard sash can open up to 60° and can be held open in any random ventilation position by an adjustable friction stay. Egress hinges are available that allow to open the window 90° with Easy Clean option.

Accessories and options:

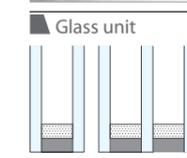
- Handle options 67 p.
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Insect screens 74 p.
- Mullions and transoms, coupling, cills 57 p.



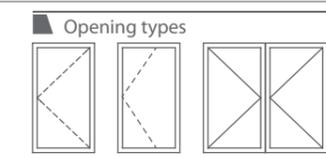
- Profile width 90 mm.
- Double or triple glazed. Internal glazing for enhanced security.
- Finger-joint or solid wood available.
- Sound insulation from 32 dB (depends on the glass unit).
- ALU** Option – with aluminium cladding.

Sash measurements*	
Width, mm	Height, mm
450–900	350–1350

* Non-standard sizes available.



Glass unit options: from 6 mm up to 32 mm.



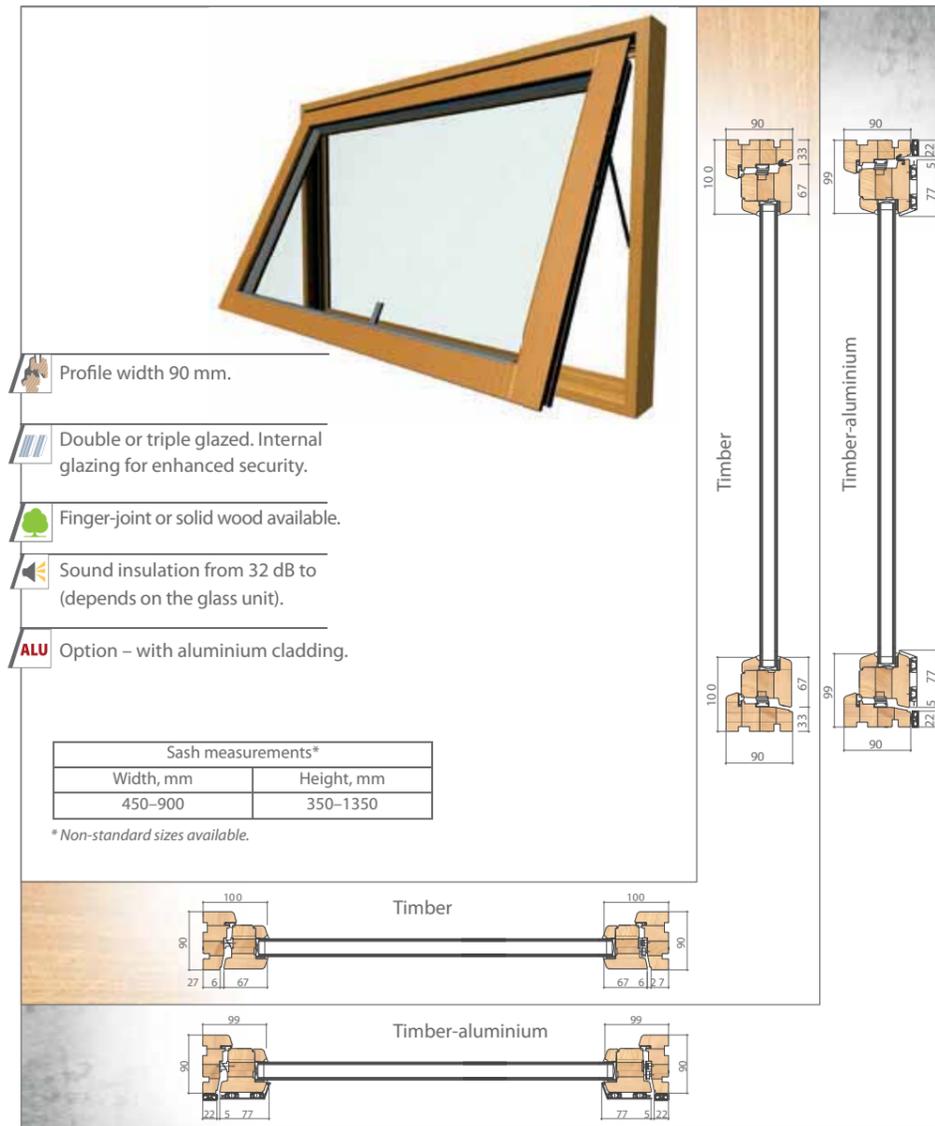
Opening types

Top hung

The top hung window is ideal for single-storey buildings, balconies or where external cleaning is possible. The top hung windows can be coupled with all other NORDIC window types. The sash is outward opening, and provides a ventilation gap. The balance arm has built-in friction brakes allowing random ventilation positions. Top-hung windows can be fitted fairly high in the wall because of the location of the handle at the bottom of the sash.

Accessories and options:

- Handle options 67 p.
- Vents and insect screens 73 p.
- Glazing bars 55 p.
- Insect screens 74 p.
- Mullions and transoms, coupling, cills 57 p.

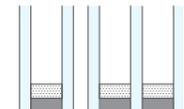


- Profile width 90 mm.
- Double or triple glazed. Internal glazing for enhanced security.
- Finger-joint or solid wood available.
- Sound insulation from 32 dB to (depends on the glass unit).
- Option – with aluminium cladding.

Sash measurements*	
Width, mm	Height, mm
450-900	350-1350

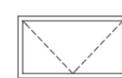
* Non-standard sizes available.

Glass unit



Glass unit options: from 6 mm up to 32 mm.

Opening types

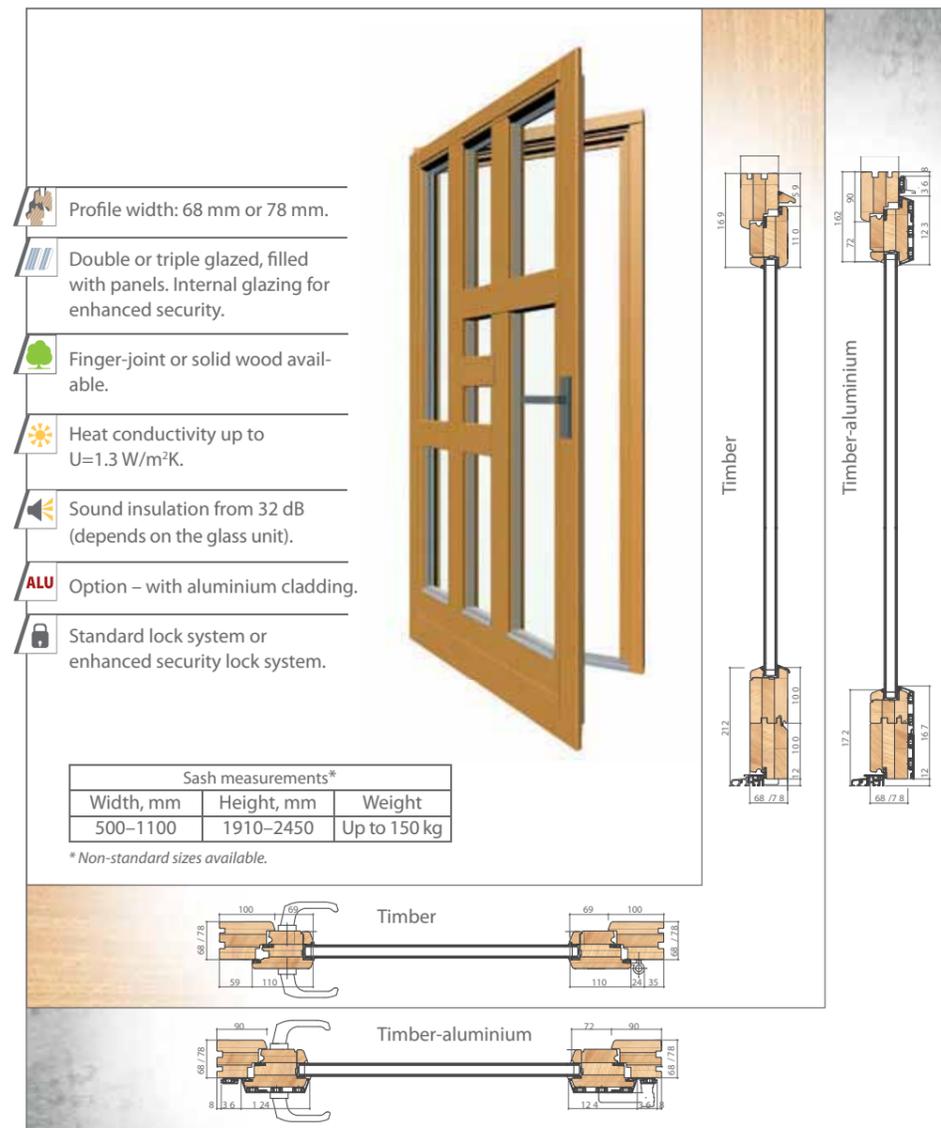


Classic entrance doors – OUTWARD or INWARD OPENING

Our standard EURO doors are fitted with all NORDIC line products using special profile for assembling.

Accessories and options:

- Handle options 67 p.
- Design elements 63 p.
- Mullions and transoms, coupling, cills 57 p.
- Overhead Door Closers 71 p.
- Threshold selection 65 p.

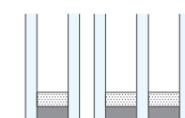


- Profile width: 68 mm or 78 mm.
- Double or triple glazed, filled with panels. Internal glazing for enhanced security.
- Finger-joint or solid wood available.
- Heat conductivity up to $U=1.3 \text{ W/m}^2\text{K}$.
- Sound insulation from 32 dB (depends on the glass unit).
- Option – with aluminium cladding.
- Standard lock system or enhanced security lock system.

Sash measurements*		
Width, mm	Height, mm	Weight
500-1100	1910-2450	Up to 150 kg

* Non-standard sizes available.

Glass unit



Glass unit options: 68 mm from 6 mm up to 32 mm. 78 mm from 6 mm up to 42 mm.

Proposed design options 31 p.
Assembly with Nordic windows 59 p.

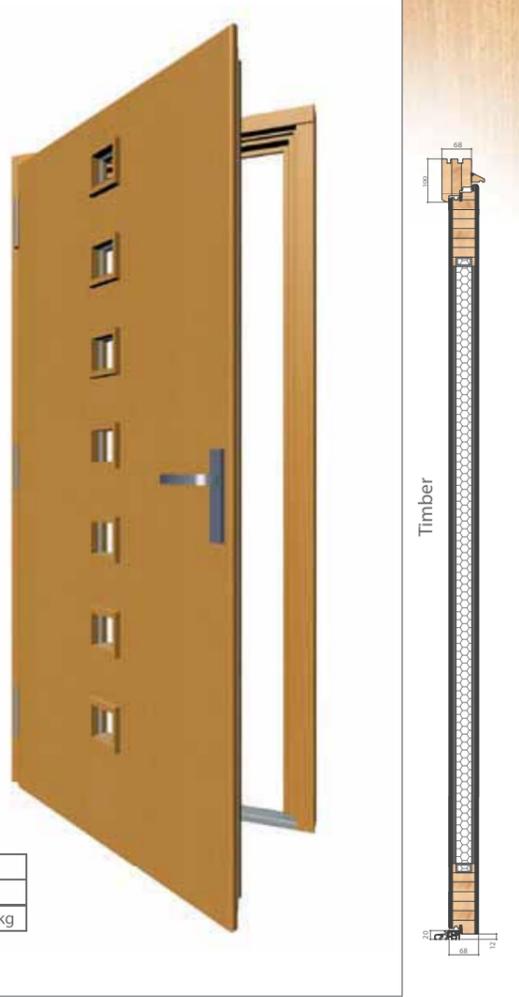
Flush entrance doors – OUTWARD or INWARD OPENING

Our standard EURO doors are fitted with all NORDIC line products using special profile for assembling.

Accessories and options:

Handle options	67 p.
Design elements	63 p.
Mullions and transoms, coupling, cills	57 p.
Overhead Door Closers	71 p.
Threshold selection	65 p.

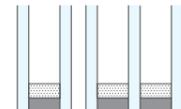
-  Profile width: 68 mm.
-  Double or triple glazed, filled with panels. Internal glazing for enhanced security.
-  Finger-joint or solid wood available.
-  Heat conductivity up to $U=1.2 \text{ W/m}^2\text{K}$.
-  Sound insulation from 32 dB (acoustic doors available).
-  Standard lock system or enhanced security lock system.



Sash measurements*		
Width, mm	Height, mm	Weight
850–1240	2030–2600	Up to 150 kg

* Non-standard sizes available.

Glass unit



Glass unit options:
from 6 mm up to 32 mm.

Proposed design options 33 p.
Assembly with Nordic windows..... 59 p.





Novus

NOVUS is an innovative glazed timber-aluminium curtain wall system. Slim uniform profile lines allow maximum light to enter the building. This system has very good thermal values and sound insulation. The heat conductivity coefficient up to $0.73 \text{ W/m}^2\text{K}$ can be reached.

All the requirements for curtain wall construction are achievable with this system. Exposed timber on the inside creates a comfortable ambiance. On the outside the aluminium profiles protect the timber structure against all climatic effects. The system is of the highest technical quality and easy to install.

The curtain wall elements are not openable but openable units from other lines can be integrated into our NOVUS curtain wall system – windows, doors, lift & slide, tilt & slide doors, folding doors.

Timber frames can be finished with paints or transparent lacquers. A wide palette of lacquers and the RAL palette of paints allows us to obtain the desired colour effect whilst preserving the natural beauty and warmth of timber. Exterior aluminium profiles can be painted with any colour from the RAL or NCS colour palettes.

The glazing system of NOVUS curtain wall system:

- laminated wood supporting construction of the curtain-wall is on the inside of the building; it also can be a decoration of the interior;
- the weight of glass unit is held by special fixing elements joined with the main frame;
- aluminium profile presses glass unit to the frame from the outside. Such construction allows elegant, modern, natural and cosy interior and exterior to be created.

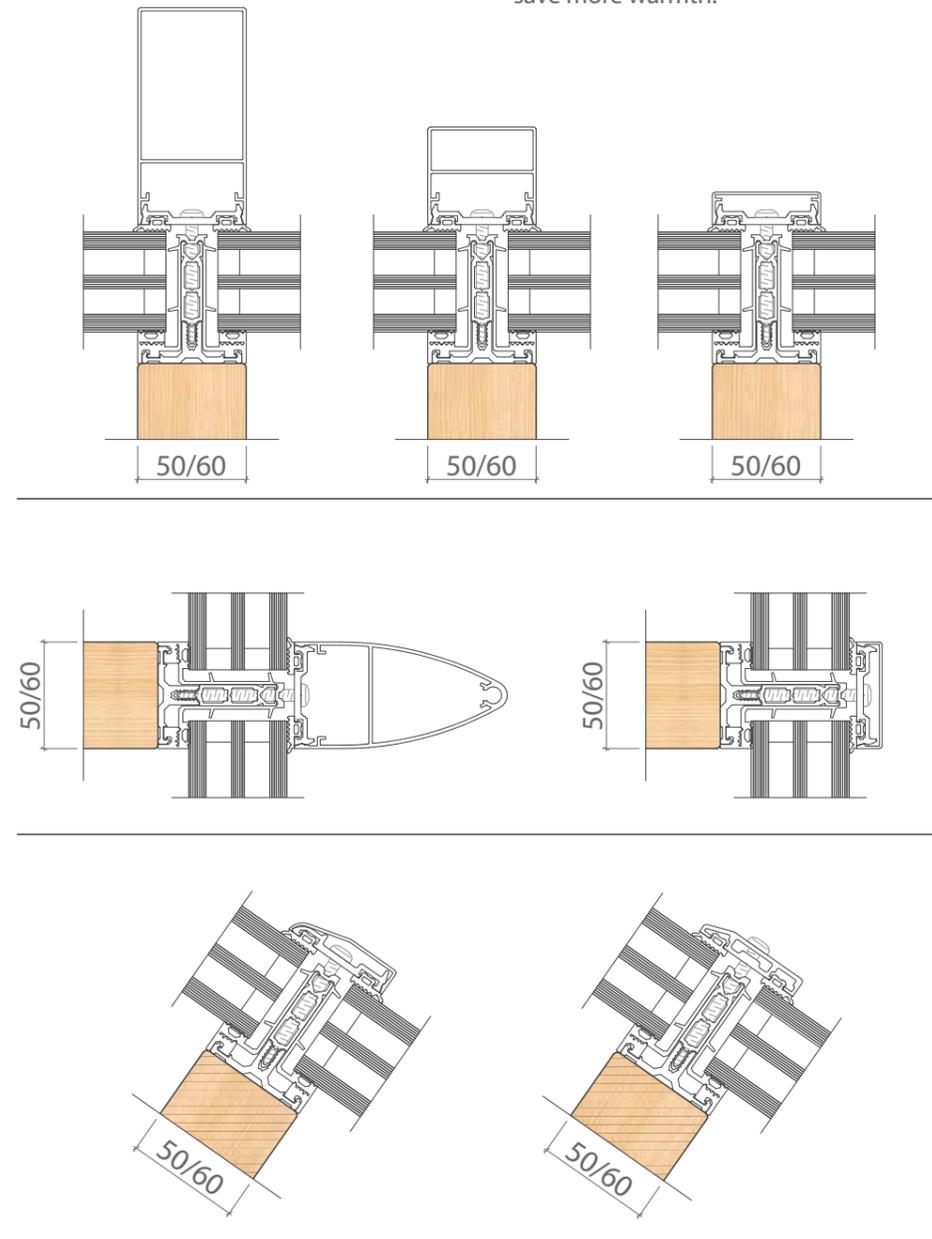


Novus

Components of the facade:

- 50, 60 mm laminated timber frame made from selected timber – pine, larch, oak, mahogany etc.;
- 24 – 48 mm wide glass unit, selected according to the curtain wall construction;

- aluminium profile that supports the glass unit from the outside is resistant to temperature fluctuations and has a long lasting colour;
- there is a possibility to insert warm edge spacers to the glass unit in order to prevent pane edges from misting up and to save more warmth.



Components of the facade

Novus





Sash windows

Our high performance sash windows are based on original designs, incorporating the latest technology to deliver highest quality windows. With hermetically sealed double glazed units and a system of draught seals our sash windows are much more energy efficient. Security of windows is very important as well – the glass unit is beaded internally and sash locks and restrictors are fitted for night ventilation.

Our innovative and high performance sash windows can be used for both new buildings and renovations. Sash windows can be decorated by Georgian glazing bars, which may be applied on the glass unit or fitted between the glass panes.

Opening options:

- **Standard sliding sashes**

Two types are available – with weights or a modern system with spring balance. The modern system uses a spring balance to assist in lifting the sash weight instead of the pulley and weights. The new system benefits from a lighter overall window weight thus making it easier to install, maintain and less susceptible to damage.

- **Inward tilting sashes for cleaning**

These windows operate the same way as standard sliding sashes, but have the added benefit of allowing both the top and the bottom sash to be tilted inward to enable the cleaning of the window exterior. This has long been one of the shortcomings of traditional sash windows.

- **General characteristics & benefits:**

- Made of laminated finger-joint or solid pine or timber of your choice.
- Full range of glazing options.
- Wide range of lacquer and paint colours.
- Customised sizes and designs.
- A wide selection of accessories.





Finishing

MEGRAME manufactures factory finished fully-functional and high quality timber products that have the convenience and durability provided by modern finishing technology with the excellence produced by highly skilled craftsmen.

The quality finish of MEGRAE timber windows is obtained using highest quality ecological water-based paints and stains. The finishing coat is elastic and moves with the wood as well as letting the wood to breathe. It is water-soluble, moisture resistant and fast drying finish with a long-term UV protection.

A wide variety of paints and lacquers are available to meet our customers' requirements. All of our paints and lacquers are environmentally friendly, ecologically clean and harmless to the environment.

These finishes were chosen for their ability to show the warmth and beauty of the quality timber used to make our products and to protect the environment for future generations.

Available combinations of window colour:

- lacquer both sides;
- lacquer one side and RAL colour on the other side;
- RAL colour both sides;
- different RAL colours on each side.





Glazing options

Today's glazing solutions offer an incredible potential to create environments that are comfortable, cost-effective and sustainable.

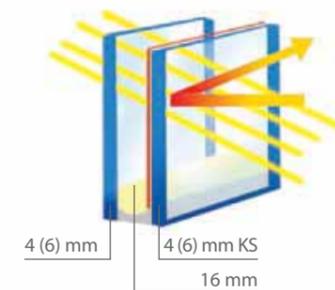
MEGRAME offers a range of glass units with performance characteristics that make it possible to specify the amount of sunlight, heat or sound that enters a room and how much heat remains. Energy efficient glass (Low-E) with metal oxides coating reflects from 40 % to 70 % of the heat that is normally transmitted through clear glass, while allowing the full amount of light to pass through. In order to improve thermal characteristics of the glass unit there is a possibility to insert warm edge spacers.

ENERGY SAVING GLASS UNITS



$U=1,1 \text{ W/m}^2\text{K}$ $R\leq 36 \text{ dB}$

Low-E glass with non-toxic argon gas added offers a 20% improvement over regular insulated glass in reducing heat transmission. This means extra comfort and energy savings, also noting that 2/3 of all ultraviolet rays are blocked so in turn protecting the furniture and fabrics from fading.



SOLAR CONTROL

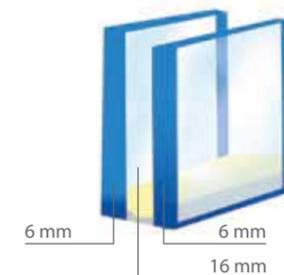


$U=1,1 \text{ W/m}^2\text{K}$ $R\leq 33 \text{ dB}$

Solar factor up to 18 %.

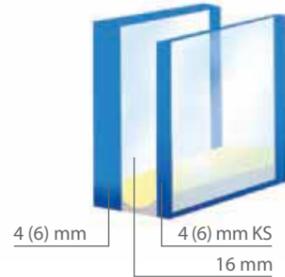
Solar control glass is used for reducing heat and/or light gain. There are several types of solar control glass:

- reflective;
- anti-sun;
- solar E.





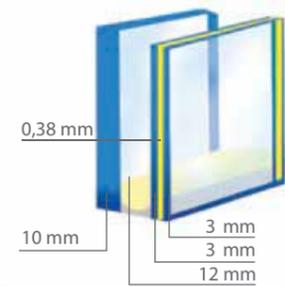
NOISE REDUCTION



There are two main ways to control the noise coming from the outside.

1. One thicker glass pane (6, 8, 10, 12 mm) and a wider space between glass panes.

$U \leq 1,1 \text{ W/m}^2\text{K}$ $R \leq 38 \text{ dB}$

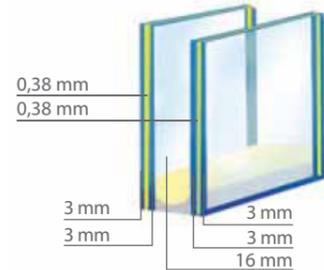


2. One thicker glass pane (6, 8, 10, 12 mm) and another of laminated glass (triplex).

$U \leq 1,1 \text{ W/m}^2\text{K}$ $R \leq 40-50 \text{ dB}$



SAFETY



SAFETY glass reduces the risk of personal injuries. Our SAFETY glass units can be made of tempered and laminated glass.

For best use of SAFETY glass we recommend a combination of the two types:

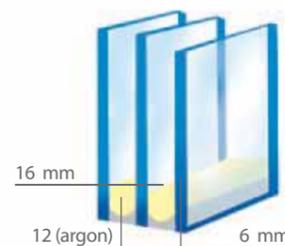
- tempered on the outside,
- laminated on the inside.



FIRE RESISTANT

A range of fire-resistant glass types is available offering increasing levels of protection, which is measured in defined time periods (30, 60, 90, 120 and 180 minutes) and in terms of Integrity and Insulation or Integrity only as designated by the European Standards.

TRIPLE GLASS UNITS



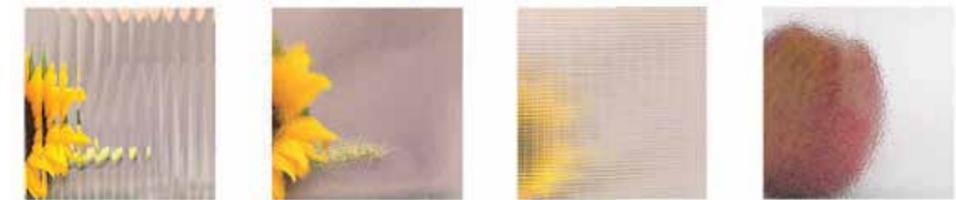
In order to increase energy efficiency and noise reduction a triple pane glass unit can be used. We offer different triple glass units with argon filled cavities. Triple pane glass unit can reach U value up to 0,5 W/m²K.

OBSCURE GLASS

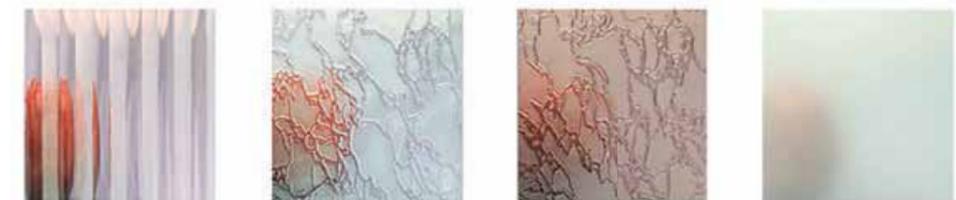
You can choose not only the shape and the style of your windows and doors but also the glass texture – obscure glass patterns give you both privacy and beauty whilst still allowing light into your home. We can produce reliable glass units from any of our available obscure glass samples.



Type Nr. 1 (thickness 4 mm) **Type Nr. 2** (thickness 4 mm) **Type Nr. 3** (thickness 4 mm) **Type Nr. 4** (thickness 4 mm)



Type Nr. 5 (thickness 4 mm) **Type Nr. 6** (thickness 4 mm) **Type Nr. 7** (thickness 4 mm) **Type Nr. 8** (thickness 4 mm)



Type Nr. 9 (thickness 4 mm) **Type Nr. 10** (thickness 4 mm) **Type Nr. 11** (thickness 4 mm) **Frosted glass** (thickness 4 mm)

Different types and thickness of glass:

Type of glass	Thickness (mm)
Clear glass	4, 6, 8, 10
Laminated glass	Two 3 mm (4 mm, 5 mm, 6 mm) peaces of glass, 0.38 mm film
Low-E glass KS	4, 6, 8, 10
Obscure glass	4
Fire resistan glass	6, 7 and more



Glazing Bars

Vertical and horizontal glazing bars can be used to continue a uniform pattern where mullions or transoms have been used, or to create a Georgian style window by using a cross within each unit of glazing.

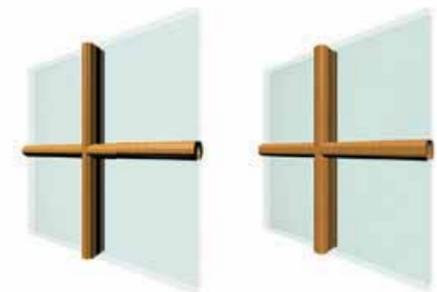


Applied timber glazing bars:

width – 25 mm,

height – 12 mm,

colour – as requested.

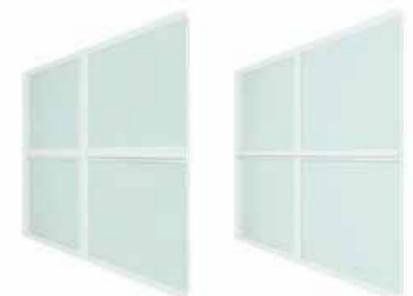


4A – contoured

4B – standard

Glazing bars inside glass units – aluminium bars mounted between glass.

Applied glazing bars are also available for aluminium clad timber windows.



4C

4B



4E

Glazing Bars		
Width, mm	Height, mm	Colours
18 or 25	8	white, brown, white/brown

Glazing Bars		
Width, mm	Height, mm	Colours
7,5	5,6	gold, silver

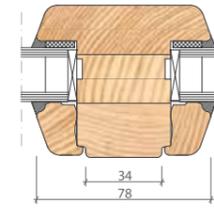


Mullions and transoms, corner posts, cills

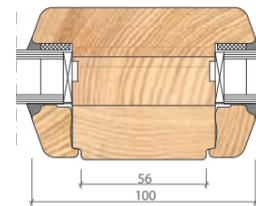
EURO and NORDIC mullions and transoms



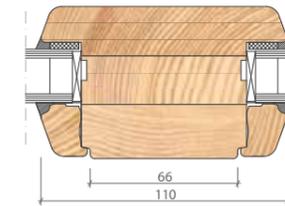
Type 55



Type 78

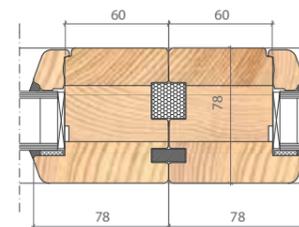


Type 100

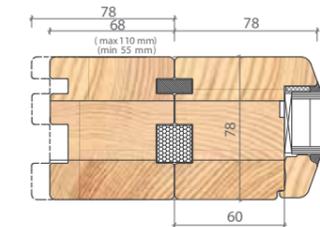


Type 110

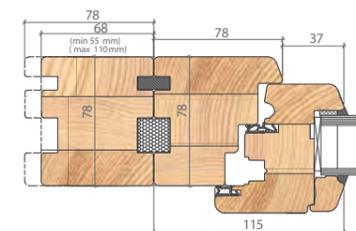
EURO window assemblies



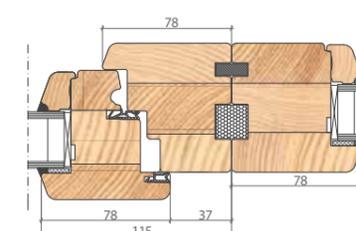
1



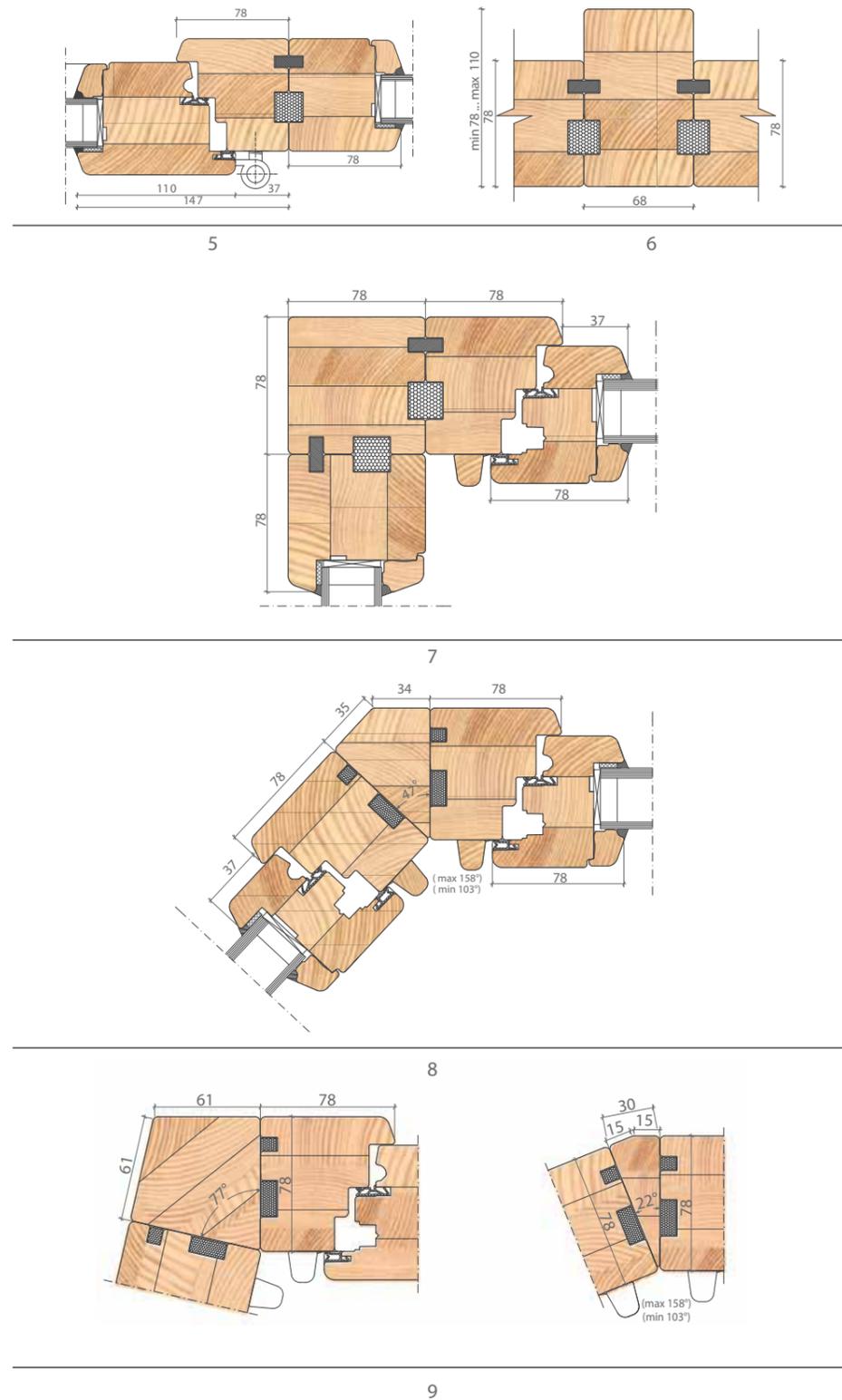
2



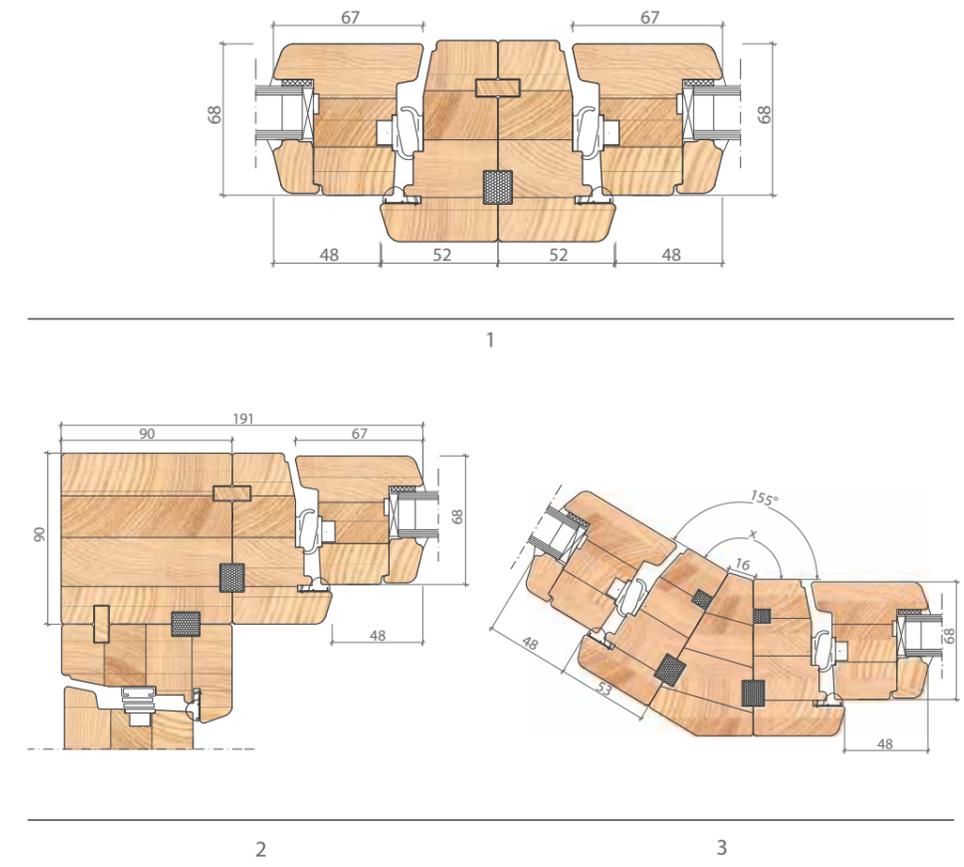
3



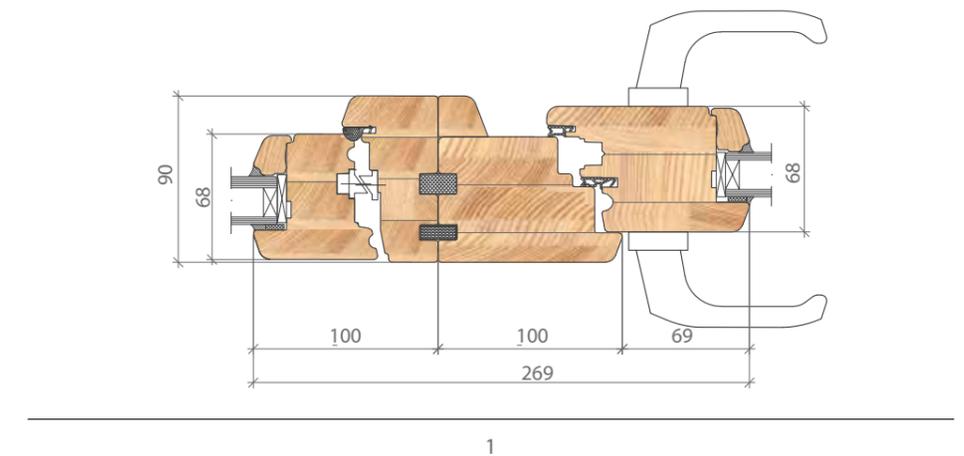
3



NORDIC window assemblies



EURO door assembly with NORDIC windows



CILLS

Internal cills

Laminated timber internal cills – solid and finger-joint wood possible.



External cills

Made of tin plate



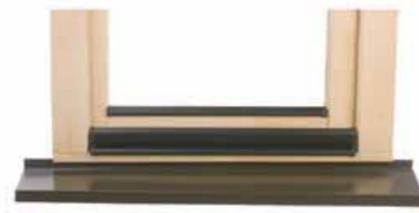
Tin color



Grey



White



Brown

Made of aluminium



Any RAL colour, anodised, with end-covers (example in the picture – brown colour).

ALUMINIUM DRIP RAILS

Colours available: white, brown, silver, any RAL colour upon request.



White



Any RAL colour upon request



Brown

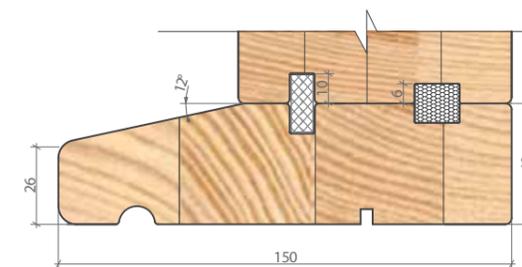


Silver

GASKETS

Colours available: white, brown, sand.

NORDIC external timber cills





Design elements

PANEL TYPES



Panel types No. 1, 2, 3, 4, 5 and 6 can be assembled with glass units.

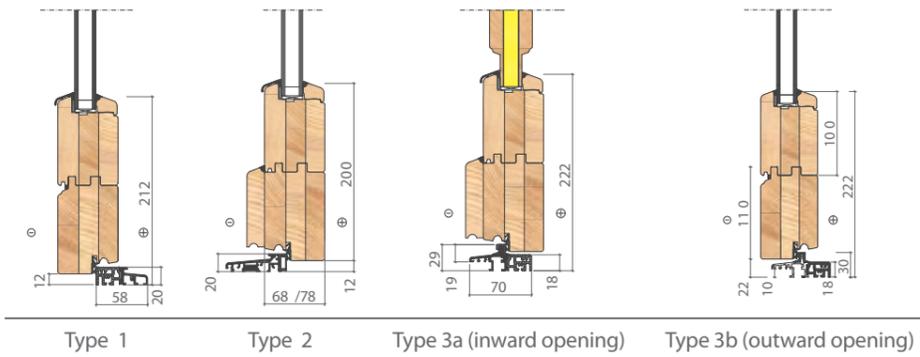
Type	Panel
0 type	24 mm flat panel
1 type	34 mm flat panel
2 type	34 mm grooved panel
3 type	34 mm raised panel
4 type	34 mm grooved raised panel
5 type	46 mm raised panel
6 type	46 mm grooved raised panel
7 type	solid timber raised element glued on flat panel
8 type	solid timber raised element with cut corners glued on flat panel

Glazing beads
10 – Standard
11 – Old town
12 – Type A
13 – Type B
14 – Type C
Elements
15 – Round
16 – Pyramid
17 – Cube

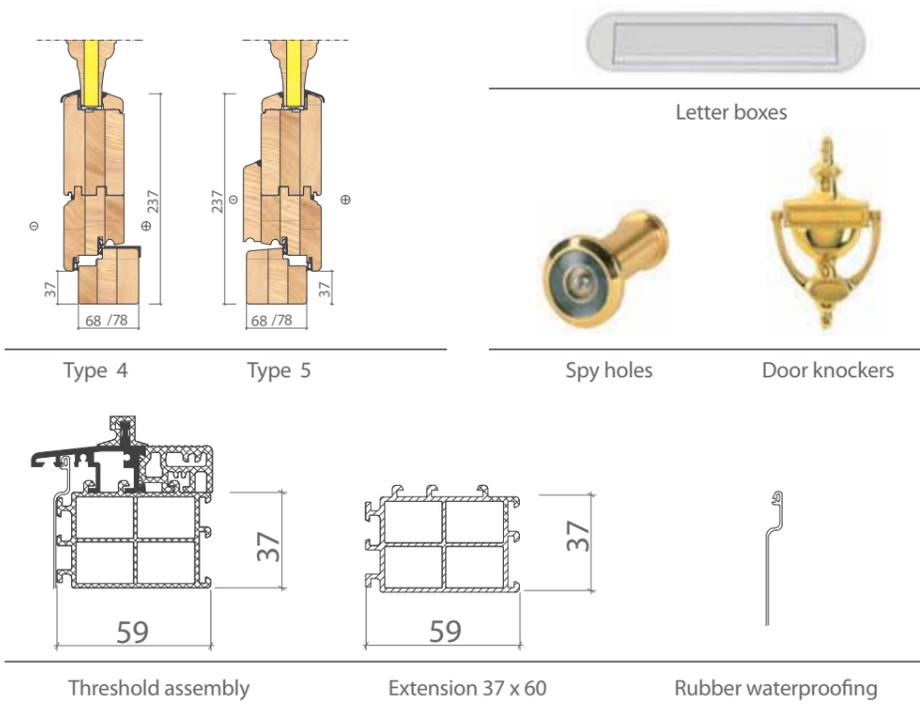


Thresholds and accessories for entrance doors

THRESHOLDS FOR ENTRANCE DOORS



DOOR ACCESSORIES





Handles and locks

EURO WINDOW, TERRACE, FOLDING DOOR HANDLES

Colours of Standard handles: white, brown, mat chrome, nickel satin, bronze, gold, chrome, stainless steel, antique brass, copper, antique copper.



COLOURS OF LOCKABLE HANDLES: white, brown, mat chrome, nickel satin, bronze, gold, polished chrome, antique brass, antique copper.



EURO WINDOW HINGE COVERS

Colours: brown, white, mat chrome, nickel satin, bronze, gold, mat gold.



TILT & SLIDE DOOR HANDLES

standard – mat chrome, white, brown, bronze;

lockable – mat chrome, white, brown.

Standard

Lockable

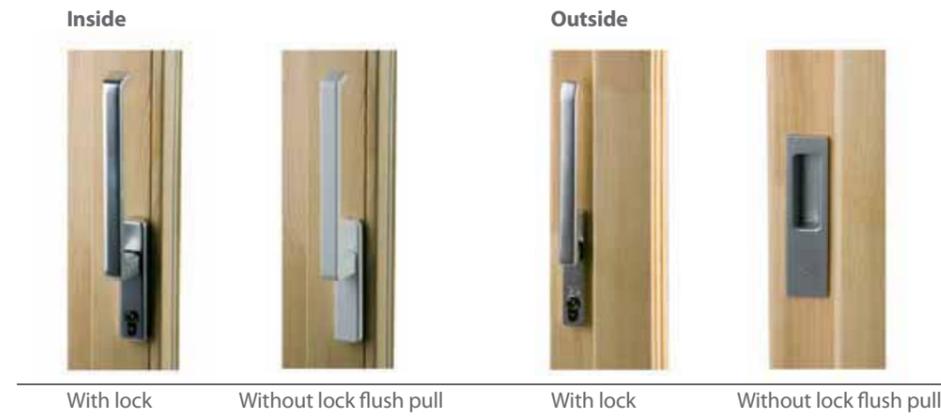


LIFT & SLIDE DOOR HANDLES

INSIDE with or without lock: white, brown, mat chrome, nickel satin, bronze.

OUTSIDE – with lock: white, brown, mat chrome, nickel satin, bronze.

Without lock flush pull: brown, mat chrome.



PULL HANDLES FOR TERRACE DOORS

Colours: white, brown, mat chrome, nickel satin.



VENTUS HANDLES

Colours: white and mat chrome.



NORDIC WINDOW HANDLES

Colours: white, brown, chrome, bronze, stainless steel colour.



EURO AND NORDIC DOOR HANDLES

Standard handle colours: white, brown, mat chrome, nickel satin, bronze, chrome, gold, copper, antique copper, antique brass.



Pull handle colours: white, brown, mat chrome, nickel satin.



We can offer different classic and modern design handles upon request:
Classic door handle
"Secure by design" door handle



Classic door handle



"Secure by design" door handle

EURO AND NORDIC DOOR HINGE COVERS:

Colours: brown, white, mat chrome, nickel satin, bronze, chrome, gold, mat gold and antique brass architectural cover.



Mat chrome

Antique brass

COLOURS AVAILABLE*



White



Brown



Mat chrome



Nickel satin



Bronze



Gold



Antique brass



Stainless steel



Polished chrome



Copper



Antique copper

*Colours may appear different in reality.

DOOR CYLINDERS –

standard, with thumb turn.



Standard



With thumb turn

LOCKS

For our EURO and NORDIC entrance doors we can offer standard and security locks.



OVERHEAD DOOR CLOSERS

Used for standard and fire/smoke protection doors.

Overhead door closer with:

- stepless closing power adjustment;
- thermatic valve and safety valve to prevent overloading;
- serrated closer axle, which can be extended by insertion of extension pieces;
- mounting plate and cover.



Options:

Hold-open arm, on/off switchable; mechanical or electromechanical hold-open.

ELECTRICAL WINDOW DRIVES

Megrame offers electrical spindle or chain window drives, that provide elegant solutions for the direct opening of windows for ventilation that are out of reach, located in high places and where manual opening is not possible.



Main advantages:

- controlled ventilation of the premises;
- fast and easy assembly of the drive;
- variable stroke adjustment;
- controlled closing force.



Vents, insect screens and other accessories

As MEGRAME windows are extremely air-tight it is necessary to control the room ventilation. Homes which are poorly ventilated can have high levels of biological contaminants arising from mould growth on damp surfaces. This poor air quality adds to the general discomfort of living in such housing conditions, particularly for those with allergic conditions.

MEGRAME offers three types of vents for your windows:

- Glazed-in window vent;
- Trickle vent;
- Acoustic vent.

GLAZED-IN WINDOW VENT

Revolving glazed in vent that is thermally broken by polyamide profiles strengthened with fibre glass. It contains a continuous adjustable sealing cylinder and an Airclip that can easily be detached for simple cleaning. The revolving cylinder can easily be removed from the housing, without having to remove the vent from the window.

This vent can be any RAL colour.

Inside



Outside



TRICKLE VENT

Trickle vents can be fixed to the frame or sash. Available 2500, 4000 or 8000 mm².

Characteristics:

- made of aluminium or plastic;
- original design;
- regulated air flow;
- colours available: brown, white, silver or any RAL colour upon request.

Inside



Silver

Outside



Silver

ACOUSTIC VENTS

MEGRAME also offers acoustic vents, that help to preserve sound quality through acoustically transparent venting systems.

INSECT SCREENS

Protect yourself from insects comfortably and ecologically with insect screens. They are available as simple tension frames, hinged frames and hinged doors, all the way to sliding systems or roller blinds. They are matched to the design of the structure and custom made.

Options:

- fixed net;
- hinged frames for windows;
- hinged frames for hinged doors;
- roller screens.

