

Together for better

MasterLine[®]

Innovative solutions for
windows and doors



Reynaers
Aluminium

Windows.
Doors.
Curtain Walls.

Together for better

www.reynaers.com

MasterLine 8[®]

Innovative solutions for everyone

Eleven Business Center, Vilnius, Lithuania, project: Unifectus, fot.: Evaldas Lasys

Intelligent. Efficient. Robust.

Versatile, intelligent solutions

Low cost

- Slim construction for maximum light in the room
- Possibility to construct windows up to 2.8 m high and doors up to 3 m high
- Design of door and window sashes up to 200 kg
- Possibility of further improving performance even after installation
- Possibility of free composition of the frame + leaf system without deterioration of the system parameters
- New sash opening options
- Compatibility with other Reynaers Aluminium systems
- Large window sizes even for the smallest profile cross-sections
- Improved production optimisation by using the same accessories across the MasterLine platform

Solutions adapted to meet the requirements of different projects

Masterline is a flexible and reliable window and door system. The unique MasterLine concept comprises four design variants, each of which is distinguished by its appearance and character. The reinforced profiles make it possible to create very large window and door sashes, while the variety of solutions and opening types allows the system to match any design and architectural style.

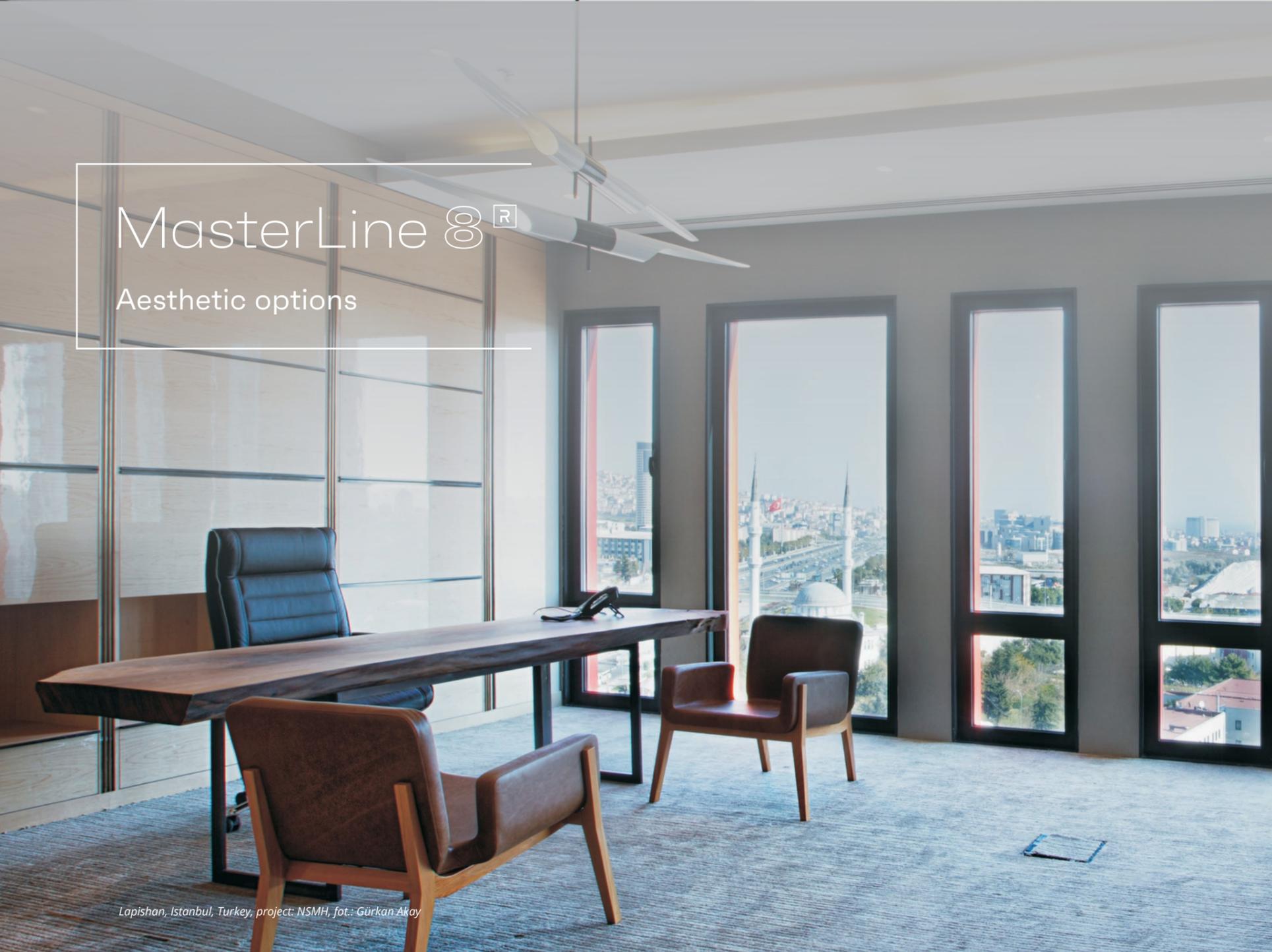
Performance characteristics

MasterLine 8 Windows	Value	Class	According to the standard
Watertightness	1650 Pa	E1650	PN-EN 12208
Airtightness	600 Pa	4	PN-EN 12207
Wind load resistance	2000 Pa	C5	PN-EN 12210

This is made possible by the intelligent design of the aluminium profile cross-sections, the increased central seal rebate and the new shape of the acoustic seal.

MasterLine 8 [®] R

Aesthetic options



Lapishan, Istanbul, Turkey, project: NSMH, fot.: Gürkan Akay

Customised design

MasterLine 8 profiles are available in 4 aesthetic variants, making them easy to match with any style of architecture.

Functional

A modern, simple and versatile variant. Sash flush with the frame.

Deco

A modern variant with refined details. The sash is set back from the frame, chamfered edge on frame, crossbar and sash.

Renaissance

Profiles with a form reminiscent of classic wooden window frames. The sash is set back in relation to the frame.

Hidden Vent

The outside window frame completely conceals the sash profile. From the outside, the sash is invisible and looks the same as the unopened element, making it possible to create an aesthetically uniform façade.

In addition to its excellent insulation performance, MasterLine 8 is well suited to the construction of large window sashes, using narrow but sufficiently rigid profiles to support glazing weights of up to 200 kg. As a result, a large amount of sunlight can pass through the windows.



Functional



Renaissance

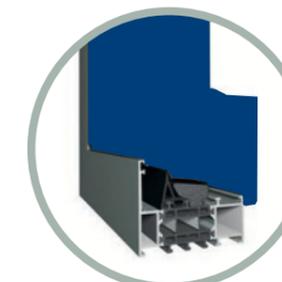


Deco

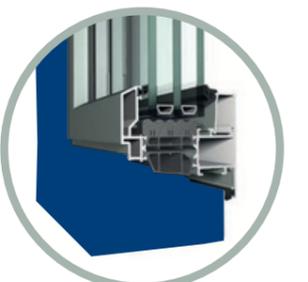


Hidden Vent

Possibility of any combination of aesthetic variants without any deterioration in performance



Frame Functional variant



Deco/Renaissance Vent

MasterLine 8^R

Energy efficiency



House in Brugge, Belgium, project: Johan Louagie, fot.: Debbie De Brauwer

Passive house certification

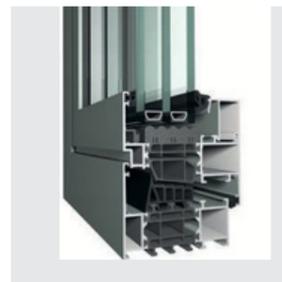
MasterLine solutions offer different levels of thermal insulation, also meeting the very high requirements of energy-efficient and even passive construction. The different insulation levels are made possible by the use of modern materials.

The innovation of the MasterLine system lies in the fact that when increasing the level of thermal insulation, the installation depth does not increase. The **High Insulation+** variant uses **innovative thermal breaks**, made from noryl, a low-emitting material, thereby improving thermal insulation by reflecting and retaining heat.

MasterLine 8 panel doors are certified by the renowned Passive House Institute. The certification increases confidence in Reynaers Aluminium as a manufacturer of sustainable aluminium systems for energy-efficient buildings.



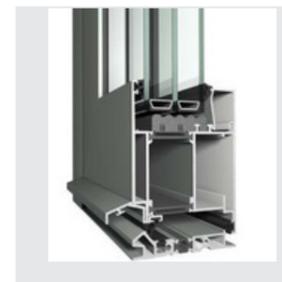
Standard



HI



HI+



HI



HI+

MasterLine 8 ^R

Unique solutions



Solutions tailored to the requirements of different projects

MasterLine 8 features a number of unique solutions, tailored to architectural trends and user needs. We are talking about: **ventilation vent, patio doors, pivot doors, including variants with spectacular dimensions, SoftTone soundproof window.**

Solutions tailored to the requirements of different projects

MasterLine 8 profiles can be combined with other Reynaers Aluminium systems, including curtain walls, sunshades or RB Glass balustrading. MasterLine 8 is fully compatible with the new MasterPatio lift-and-slide door system, providing completely new design possibilities when realising single-storey glazed facades.



Balcony doors MasterLine 8

- High-quality door with a low threshold of 20 mm
- Available in single or double leaf versions
- Can be opened inwards and outwards
- Three thermal insulation levels - for different building classes - from standard to passive.
- A range of opening mechanisms and different handle designs

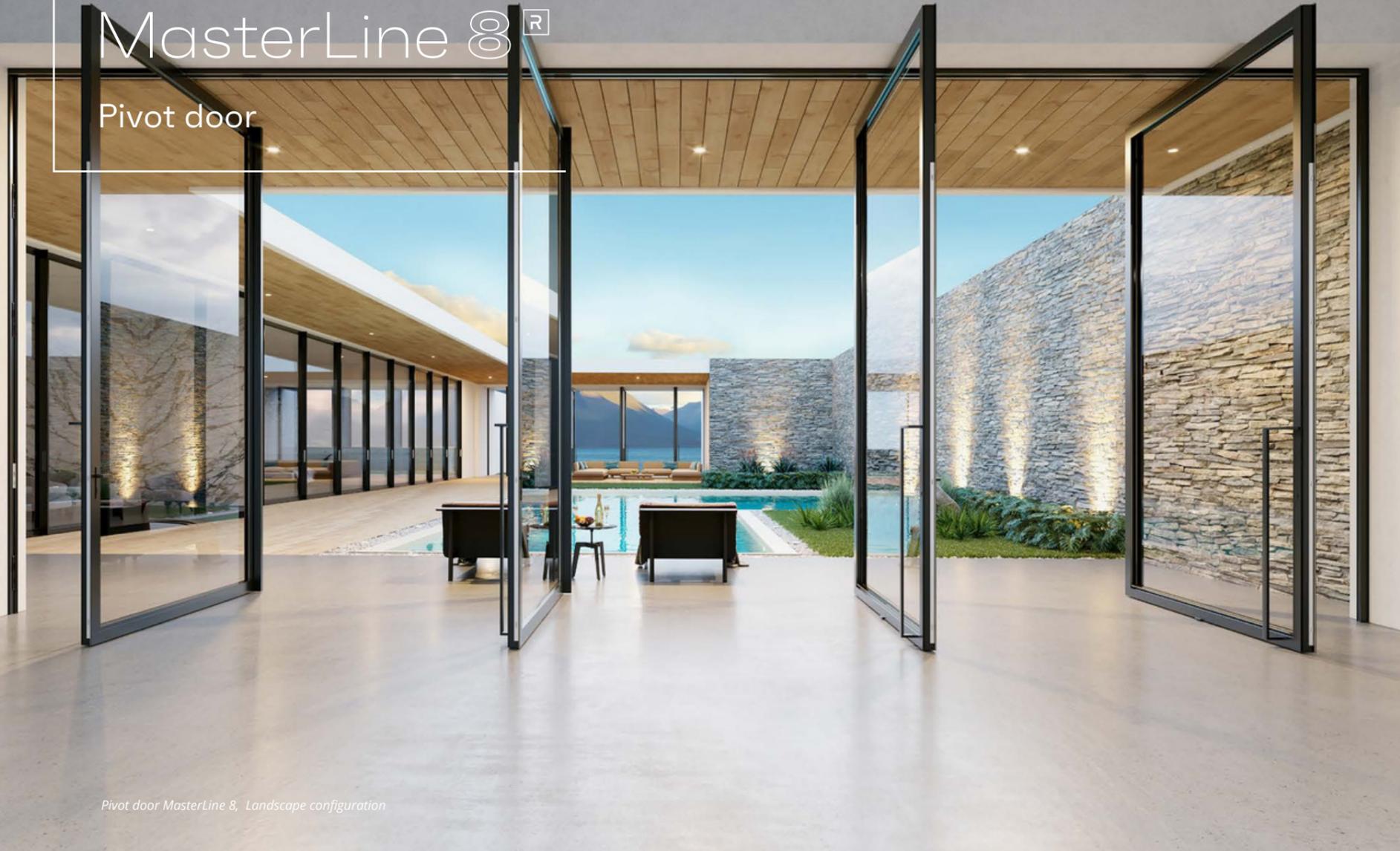


Ventilation window MasterLine 8

- Unique solution - frames and monolithic sash profiles
- Safety window sashes in fixed width (185 or 250 mm)
- Concealed or visible hinges
- Simple profile processing and well-matched accessories ensure easy installation
- Very high water- and thermal insulation parameter

MasterLine 8^R

Pivot door



Pivot door MasterLine 8, Landscape configuration

Even larger sizes. Unique architectural solutions

The pivot door, the so-called MasterLine 8 Pivot door, is a unique alternative to a standard entrance door or patio door. The pivot axis of the sash is offset from the frame and, as a result, the door opens and closes easily even with a very large size and weight. A MasterLine 8 Pivot door leaf can weigh up to 500 kg (200 kg in the Residential variant). MasterLine 8 Pivot doors guarantee very good air-tightness and thermal insulation.

MasterLine 8 Pivot doors allow for the construction of very tall and wide entrance doors - the maximum dimensions in the XL variant are as much as 2.5x4 m. A unique option is to create spectacular constructions from interconnected single XL leaves - the Landscape configuration.

MasterLine 8 XL Pivot door

Thanks to a combination of advantages, Pivot doors offer possibilities that no other product on the market offers. They combine the following features:

- Very large dimensions, max. **2.5x4 m**
- Narrow profiles 40 mm
- Thermal insulation
- Flat threshold
- Convenient operation - fully automatic locking and locking in 90° open position

The MasterLine 8 XL Pivot door is tested by both European as well as US standards.



MasterLine 8 XL

Pivot Door MasterLine 8

- Possibility of creating structures of very large dimensions, two variants: Residential (max. dimensions 1,7x3 m) and XL (2,5x4 m)
- High thermal isolation: **Uf ≥ 1,5W/m²K** for HI+ variant
- High parameters AWW **4/C3/4A (150Pa)**
- Burglary-resistant class **RC2/WK2**
- Doors available with glass or panel infill
- Possibility to combine several single XL leaves in a Landscape configuration

MasterPatio[®]

Lift&Slide Doors



More than Lift&Slide Door

MasterPatio combines minimalist design and functionality with excellent thermal insulation and solutions that increase production efficiency and ease installation. MasterPatio is compatible with the MasterLine window and door platform and offers countless design possibilities.

MasterPatio supports the creativity of architects and facilitates the work of manufacturers. The system is designed so that homeowners feel that their home opens up to space. And all this with extraordinary attention to the aesthetics of the construction, while maintaining complete comfort and combined with excellent technical performance, such as thermal insulation at passive building level. Visible construction lines are minimised, the frame can be concealed, and additional elements such as locks, catches and seals are hidden or installed in the profiles.

The combination of the system's large structural dimensions and functionality with the variety of MasterLine solutions, makes MasterPatio an exceptionally wide range of applications. It is more than just a lift-and-slide door system - it is a solution that offers the possibility of creating a single tier glazed façade with sliding doors in various buildings.



Compatibility with MasterLine 8

MasterPatio is fully compatible with MasterLine 8. Whenever possible, **the same dimensions have been kept for both systems** to facilitate efficient construction and ensure their **aesthetic consistency**. MasterPatio combines many components and solutions with MasterLine. As a result, the manufacturer does not need to significantly increase its inventory. No special preparation is required before working with MasterPatio either, as the system is largely based on concepts already developed and known from MasterLine.



Masterpatio

- Max door leaf dimensions **3 x 3,6 m**
- Maximum weight of sliding leaf **500 kg**
- Thermal insulation: **Uw from 0,75 W/m²K**
- High **AWW** performance, can be used in tall buildings
- Burglary resistance **RC2**

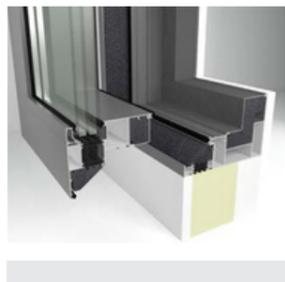
SoftTone MasterLine 8[®] Window



Revolution in building design

MasterLine 8 SoftTone[®] is a sustainable architectural solution that allows natural ventilation and cooling of rooms where noise usually gets in the way - near a major road, airport, railway or train station. The parallel opening window allows efficient ventilation, while SoftTone[®] elements reduce disruptive noise. This means that even in the middle of a large city, you can enjoy a peaceful place to live and work. MasterLine 8 SoftTone[®] is a sustainable solution and creates alternative to mechanical ventilation and air conditioning systems.

SoftTone[®] is the result of a collaboration between Arup - which developed the S.A.F.E. technology - and **Reynaers Aluminium**, which implemented this technology in façade solutions. Theoretical and practical knowledge has resulted in a sustainable product that enhances the possibilities and benefits architects, fabricators and end users.



MasterLine 8 SoftTone Window

A sustainable architectural solution for use in buildings located in noisy areas **53-60 dB**

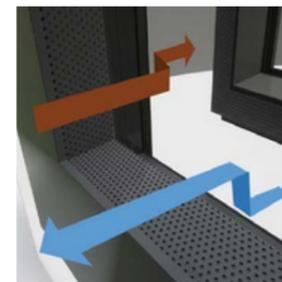
Reduces the noise level in relation to the sound level outside by max. **42dB**

Maximum window dimensions **1,7x2,6 m**

Allows effective natural ventilation without the need for air conditioning

Despite its soundproofing solutions, it does not differ in appearance from the standard windows

High thermal insulation: **Uf ≥1,4W/m²K** i high AWW parameters



Effective ventilation

A parallel sliding window is more effective for ventilation and cooling than a conventionally opened window. Without changing the opening range, it is possible to achieve more open space and, due to the chimney effect, better air circulation in the room.

MasterLine 8^R

Brilliant technical specifications

Campus Reynaers, Duffel, Belgium, project: Jaspers-Eyers Architects, fot. Georges De Kinder

Parameters

Energy

 Thermal insulation of windows ⁽¹⁾ EN ISO 10077-2	Uf value from 0.9 W/m ² K depending on frame/sash combination and glass thickness
 Thermal insulation of doors ⁽¹⁾ EN ISO 10077-2	Uf value from 1.3 W/m ² K depending on frame/sash combination and glass thickness

Comfort

 Acoustic insulation of windows ⁽²⁾ EN ISO 140-3; EN ISO 717-1	Rw(C;Ctr) = 50 (-1;-2) dB, Hidden Vent: Rw(C;Ctr) = 49 (-1;-5) dB, depending on glazing type
 Acoustic insulation of doors ⁽²⁾ EN ISO 140-3; EN ISO 717-1	Rw(C;Ctr) = 43 (-2;-4) dB, depending on glazing type
 Air permeability of windows and doors max. test pressure ⁽³⁾ EN 1026; EN 12207	4 (600 Pa)
 Watertightness of windows ⁽⁴⁾ EN 1027; EN 12208	E1650 (1650 Pa)
 Watertightness of doors ⁽⁴⁾ EN 1027; EN 12208	E1200 (1200 Pa)
 Wind load resistance of windows max. test pressure ⁽⁵⁾ EN 12211; EN 12210	5 (2000 Pa)
 Wind load resistance of the windows frame deformation ⁽⁵⁾ EN 12211; EN 12210	C (≤ 1/300)
 Wind load resistance of doors max. test pressure ⁽⁵⁾ EN 12211; EN 12210	3 (1200 Pa)
 Wind load resistance of the doors frame deformation ⁽⁵⁾ EN 12211; EN 12210	C (≤ 1/300)

Safety

 Burglary resistance ⁽⁶⁾ EN 1627 - 1630	RC 3
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The table shows the possible classes and values. The values indicated in the grey boxes refer to the system.

(1) The Uf-factor shows the degree of heat transmission. The lower the Uf-factor, the better the thermal insulation of the partition. Total U-factor for window might differ depending on size and glazing type.

(2) The sound insulation index (Rw) indicates the noise reduction value of the partition.

(3) The air permeability test determines the amount of air that will pass through a closed window at a given pressure.

(4) The watertightness test requires the application of evenly distributed water pressure with increasing air pressure until the water penetrates the partition.

(5) Wind load resistance describes the resistance of structural elements and is tested by applying increasing pressure so as to simulate the force of the wind. There are five levels of wind load resistance (classes 1 to 5) and three wind load zones (A, B, C). The higher the value, the better the performance.

(6) Burglary resistance is tested by applying dynamic loads and simulated burglary attempts with specific tools.

Technical characteristic

		Window			Door		
		Functional	Renaissance	Deco	Hidden Vent	Balcony doors	Door
Min. visible width (opening inwards)	Frame	53mm	53mm	53mm	80mm	60mm	68.5mm
	Leaf	37mm	87mm	37mm	-	37mm	78.5mm
Min. visible width (opening outwards)	Frame	20mm	20mm	20mm	n.a.	27mm	42.5mm
	Leaf	96mm	118mm	118mm	n.a.	118mm	104.5mm
Min. apparent width of T-section profile		80mm	80mm	80mm	107mm	80mm	80mm
Overall installation depth	Frame	77mm	87mm	87mm	77mm	77mm	77mm
	Leaf	87mm	87mm		80mm	87mm	77mm
Overlap height		27mm					
Glazing thickness	Frame	up to 62mm					
	Leaf	up to 72mm	up to 62mm	up to 62mm	up to 65mm	up to 72mm	up to 62mm
Glazing method		glazing pads neutral silicones					
Thermal insulation		Glass-fibre reinforced polyamide strips					
		HI+ version - Glass-fibre reinforced noryl strips 40 or 37.8mm depending on the profile					32 mm

MasterLine 10^R

Designed for passive houses



Dom w Belgii, projekt: AC + T, fot.: Louis Jangeneelen

Everything You want!

MasterLine 10 get everything you need. The system is an extension of the MasterLine platform and uses many of the elements used in MasterLine 8. It combines the best of all worlds: unlimited design freedom with superior comfort and the best, uncompromising insulation properties.

The MasterLine 10 range is unique in its versatility: a full range of profiles and frames, connecting profiles for sliding systems and curtain walls, and the design freedom offered by the profile design variants: Functional, Deco and Renaissance.

Thanks to the use of an innovative thermal break, an exceptional level of thermal insulation has been achieved. Windows and doors on MasterLine 10 window profiles are Passive House certified.



MasterLine 10 Windows

High level of thermal insulation: **Uf of 0,74 W/m²K**

Passive House certified

3 design variants to choose from

Maximum daylight penetration

Burglar-resistant **RC3** classification

Maximum dimensions **1.2 x 2.8 m**



Balcony doors MasterLine 10

Very high levels of thermal insulation: **Uf from 0.79 W/m²K**

Passive House certification

Minimalist design: the Functional variant

Provides maximum daylight

Maximum dimensions **1.4x3 m**

MasterLine 10^R

Perfect technical parameters

Dom w Stavelot, Belgia, projekt: Crahay & Jammaigne Architects, fot.: Laurent Brandajs

Technical characteristic

		Windows			Doors	Balcony doors
		Functional	Reneasnce	Deco		
Min. visible width (opening inwards)	Frame	60 mm	60 mm	60 mm	83,5 mm	60 mm
	Leaf	37 mm	37 mm	37 mm	71,5 mm	37 mm
Min. visible width (opening outwards)	Frame	27 mm	27 mm	27 mm	44,5 mm	27 mm
	Leaf	118 mm	118 mm	118 mm	110,5 mm	118 mm
Min. visible width (window-door, opening inwards)	Frame		60 mm		27 mm	
	Leaf		67 mm		140 mm	
Min. apparent width of T-section profile		87 mm	87 mm	87 mm	87 mm	87 mm
Overall installation depth	Frame	97 mm	107 mm	107 mm	97 mm	97 mm
	Leaf	107 mm	107 mm	107 mm	97 mm	107 mm
Overlap height		27 mm	27 mm	27 mm	27 mm	27 mm
Glazing thickness	Frame	78 mm	78 mm	78 mm	up to 78 mm	78 mm
	Leaf	up to 88 mm	up to 78 mm	up to 78 mm	78 mm	88 mm
Glazing method		Dry glazing, EPDM glazing gasket				

Parameters

 Thermal insulation of windows ⁽¹⁾ EN ISO 10077-2	Uf value from 0,89 W/m ² K depending on frame/sash combinatin and glass thickness
 Thermal insulation of doors ⁽¹⁾ EN ISO 10077-2	Uf value from 0,89 W/m ² K depending on frame/sash combinatin and glass thickness

Comfor

 Acoustic insulation of windows ⁽²⁾ EN ISO 140-3; EN ISO 717-1	Rw(C;Ctr) = 47 (-1;-3) dB / 50 (-1;-2) dB, depending on glazing type
 Air permeability of windows ⁽³⁾ max. test pressure EN 1026; EN 12207	4 (600 Pa)
 Air permeability of doors ⁽³⁾ max. test pressure EN 1026; EN 12207	4 (600 Pa)
 Watertightness of windows ⁽⁴⁾ EN 1027; EN 12208	E900 (900 Pa)
 Watertightness of doors ⁽⁴⁾ EN 1027; EN 12208	9A (600 Pa)
 Wind load resistance of windows ⁽⁵⁾ max. test pressure	5 (2000 Pa)
 Wind load resistance of windows ⁽⁵⁾ frame deformation	C3 (1200 Pa)
 Wind load resistance of doors ⁽⁵⁾ max. test pressure	C3 (1200 Pa)
 Wind load resistance of doors ⁽⁵⁾ frame deformation	46 (-1;-4) dB

Safety

 Burglary resistance of windows ⁽⁶⁾ EN 1627 - 1630	RC 3
 Burlary resistance of doors ⁽⁶⁾ EN 1627 - 1630	RC3 / WK3

The table shows the possible classes and values. The values indicated in the grey boxes refer to the system.

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(2) The sound insulation index (Rw) indicates the noise reduction value of the partition.

(3) The air permeability test determines the amount of air that will pass through a closed window at a given pressure.

(4) The watertightness test requires the application of evenly distributed water pressure with increasing air pressure until the water penetrates the partition.

(5) Wind load resistance describes the resistance of structural elements and is tested by applying increasing pressure so as to simulate the force of the wind. There are five levels of wind load resistance (classes 1 to 5) and three wind load zones (A, B, C). The higher the value, the better the performance.

(6) Burglary resistance is tested by applying dynamic loads and simulated burglary attempts with specific tools.

REYNAERS ALUMINIUM

Reynaers Aluminium is a leading European specialist offering innovative, environmentally friendly and energy-efficient aluminium systems for windows, doors, curtain walls, sliding systems, sunshades and conservatories. Our systems meet the most stringent requirements for comfort, safety, aesthetics and energy efficiency.

Reynaers Aluminium is an innovative company, committed to continuous product development. The latest solutions are developed, tested and presented at the modern Reynaers Aluminium Campus in Duffel, Belgium. The Polish branch is the logistics centre for Poland, but also for the countries of the region: Lithuania, Latvia, Estonia, the Czech Republic, Slovakia and Hungary. Reynaers Aluminium is not only a supplier, but also a partner for architects, manufacturers,

installation companies, project managers, investors and end users.

Read more:

