

Profile  
Systems 

  
**Kömmerling®**  
TODAY FOR TOMORROW



KÖMMERLING 76

# Specification Guide



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For more information  
[www.kommerling.ie](http://www.kommerling.ie)



# ABOUT KÖMMERLING

**Founded in 1897 by Karl Kömmerling, Kömmerling has evolved from a humble manufacturer of adhesives and synthetic rubber into a beacon of innovation in the uPVC products industry. Today, it stands as a premium brand within the Profine Group, renowned for its commitment to quality and excellence across the globe.**

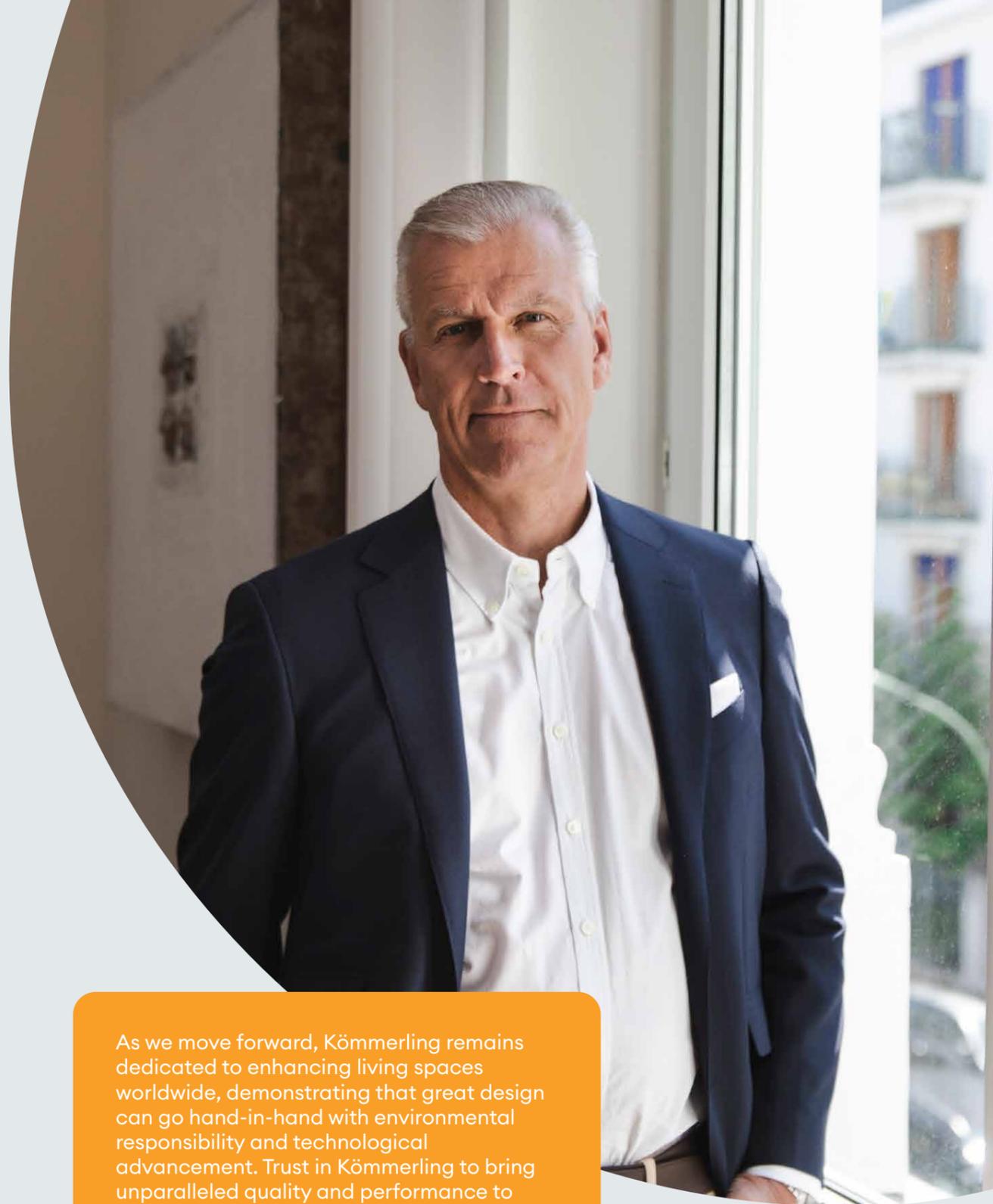
As a leader with a century-spanning legacy, Kömmerling enjoys an unrivalled reputation in the window and door market, offering products that are synonymous with innovation, durability, and aesthetic appeal. The brand's journey through the years has been marked by significant milestones—from starting uPVC roller shutter manufacturing in 1957 to entering the high-quality uPVC window profile market a decade later.

Kömmerling's commitment to excellence is evident in every product, especially highlighted in the KÖMMERLING 76 window system. This system represents the culmination of decades of research and development, incorporating advanced technologies, state-of-the-art CAD and 3D computer modelling, and rigorous testing.

Designed to meet premium demands, Kömmerling products not only stand out for their aesthetic qualities but also excel in technical performance and physical durability, requiring minimal maintenance while offering extended longevity.

With products delivered to around 50 countries worldwide, Kömmerling is not just a choice, it's a global standard for architects and builders seeking the best in uPVC solutions. The brand's commitment to sustainability and innovation continues to set benchmarks in the industry, ensuring that every product from the Kömmerling line meets the highest energy efficiency standards and environmental stewardship.

As we move forward, Kömmerling remains dedicated to enhancing living spaces worldwide, demonstrating that great design can go hand-in-hand with environmental responsibility and technological advancement. Trust in Kömmerling to bring unparalleled quality and performance to your projects, backed by over a century of expertise and a profound understanding of architectural needs.



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# PROFILE SYSTEMS

World-class Window & Door Brands  
Since 1978

**Established in 1978, Profile Systems has grown to become Ireland's leading supplier and exclusive distributor of world-class uPVC and Aluminium window and door brands.**

With a commitment to excellence and sustainability, we operate from a modern, purpose-built facility in Co. Kildare, strategically located off the M7 to efficiently serve the largest network of window and door installers across Ireland. Our extensive stockholding capabilities and first-class service ensure that we meet our customers' needs promptly and effectively.



At Profile Systems, we uphold the highest standards of responsible business practices, focusing on energy conservation and environmental protection. For over 25 years, we have been the proud exclusive distributor of the Kömmerling brand, building a robust network of experienced fabricators proficient in designing and installing Kömmerling's top-quality systems.

We take pride in fostering durable and loyal relationships with our customers, suppliers, and team members, reflecting our dedication to excellence in the window and door industry.



# KÖMMERLING

## Windows that won't cost the Earth

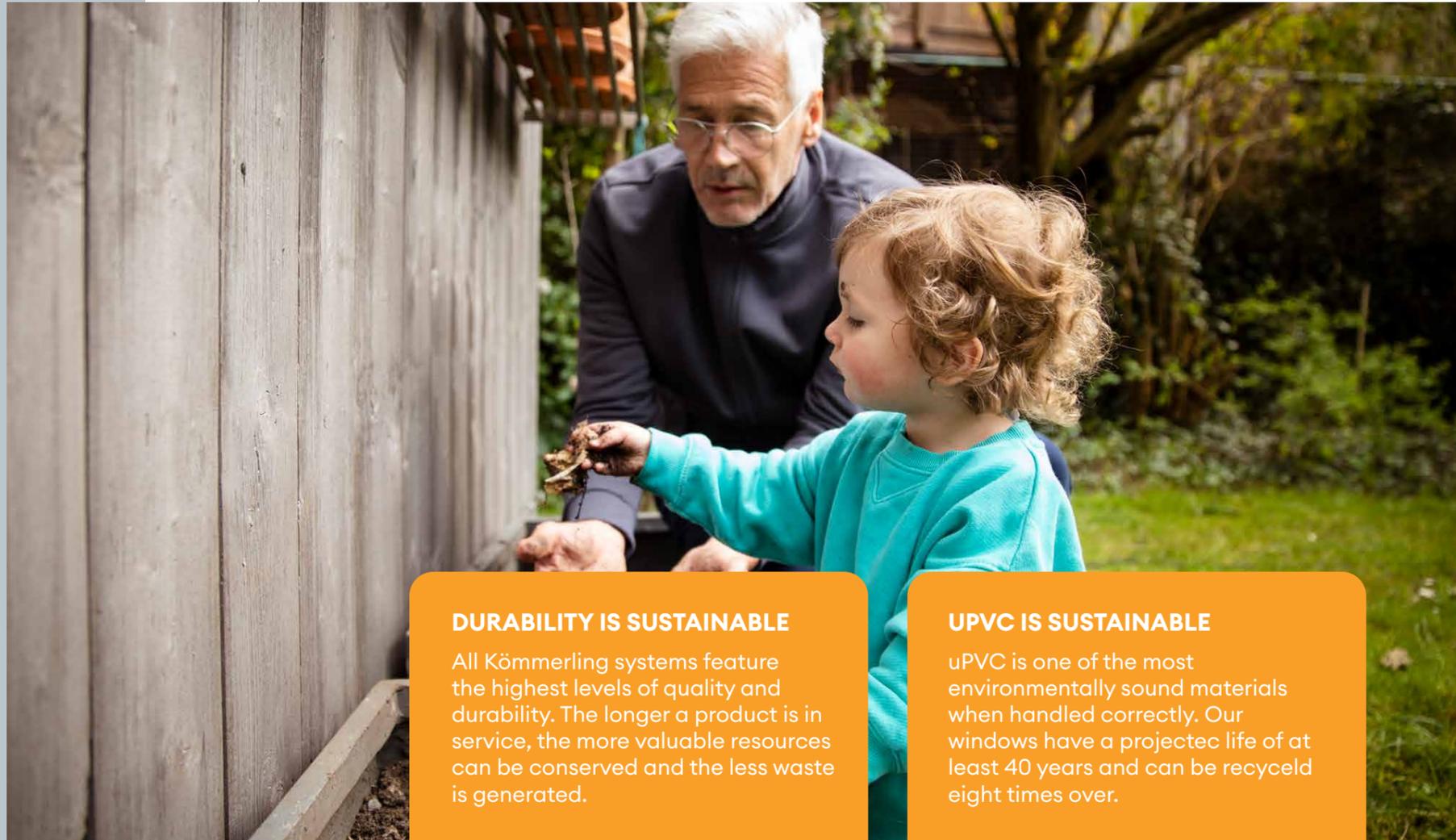
At Kömmerling, sustainability is not just a policy; it's a core part of their product development and lifecycle management. For nearly two decades, their Greenline initiative has led the industry by replacing toxic lead-based stabilisers in virgin uPVC with eco-friendly calcium-zinc alternatives, preventing approximately 6,500 tonnes of lead from entering the environment annually. This is equivalent to over 160 lorry loads each year, demonstrating their commitment to a healthier planet.

Their products are designed with longevity in mind. Kömmerling systems are recognised for their exceptional durability, which extends their service life and significantly reduces environmental impact. With a projected lifespan of at least 40 years, their uPVC windows can be recycled up to eight times, illustrating their commitment to resource conservation and waste reduction.

Kömmerling also leads the creation of closed material loops. At the end of their lifecycle, their products are meticulously recycled, ensuring that they do not harm the environment. Their innovative Kömmerling ReFrame is the first window profile made entirely of recycled uPVC, maintaining the same high-quality features as traditional profiles, including outstanding thermal insulation.

Their commitment to sustainability is further underscored by numerous certifications and initiatives. Kömmerling is a proud participant in VinylPlus®, which awards the VinylPlus® Product Label to PVC building products that meet high sustainability standards. As a founding member of Rewindo, the window recycling initiative, we guarantee the re-utilisation of old uPVC windows, maintaining a closed recycling loop. Additionally, their windows are EPD verified for insulating glazing, ensuring compliance with ISO 14025 and EN 15804 standards. For projects requiring fossil-free materials, their windows meet the rigorous RSB standard (Roundtable on Sustainable Biomaterials), certifying the sustainability of their bio-attributed PVC from raw material to finished profile.

Through these measures, Kömmerling stands at the forefront of sustainable building solutions, dedicated to reducing their ecological footprint while providing products that meet the highest standards of quality and environmental responsibility.



### DURABILITY IS SUSTAINABLE

All Kömmerling systems feature the highest levels of quality and durability. The longer a product is in service, the more valuable resources can be conserved and the less waste is generated.

### UPVC IS SUSTAINABLE

uPVC is one of the most environmentally sound materials when handled correctly. Our windows have a projected life of at least 40 years and can be recycled eight times over.

### MATERIAL LOOPS ARE SUSTAINABLE

Our focus is on closing material loops. We make sure that our products are sent for recycling at the end of their life cycle and don't harm the environment. New high-quality products then contain a high percentage of this recycle.

### MADE FROM 100% RECYCLED MATERIAL

Kömmerling ReFrame is the first window profile made out of 100 per cent recycled uPVC. The winner of multiple international awards, this product has a refined surface and elements with the same properties as conventional uPVC windows, such as outstanding thermal insulation properties.

# SUSTAINABILITY WITH KÖMMERLING 76

The future of building components is sustainable. Kömmerring is leading the way by drastically reducing CO2 emissions through the use of bio-attributed PVC and recycled materials.

## INNOVATIVE MATERIAL

> Kömmerring's bio-attributed PVC replaces fossil raw materials with renewable alternatives, using ethylene based on pine oil, a byproduct of paper production from sustainable Finnish forestry.

## ENVIRONMENTAL IMPACT

> This advancement allows for up to a 90% reduction in CO2 emissions compared to conventional PVC, saving 2kg of CO2 per kg of material used.

## QUALITY AND PERFORMANCE

> The bio-attributed PVC is chemically identical to traditional PVC, ensuring the same high-quality performance and specifications.

## RECYCLABILITY

> The material is 100% recyclable, contributing to a sustainable cycle for synthetic materials.

## CERTIFIED SUSTAINABILITY

> The entire supply chain, from pine oil extraction to the finished PVC profile, meets the strictest RSB standards.

By choosing Kömmerring 76 window profiles, you can significantly contribute to reducing the carbon footprint of their projects, promoting a sustainable future without compromising on quality or performance.



Window profiles based on pine oil instead of crude oil

Bio-attributed PVC is a new development in which fossil raw materials are 100% replaced by a renewable alternative, i.e. second generation feedstock which does not compete with food chains.

Bio attributed PVC is made of ethylene, a raw material which is based pine oil, not crude oil. This oil is a waste product from paper production and the wood for it comes from a sustainable Finnish forestry.



Eco friendly stabilisers

Kömmerring has replaced lead with eco friendly calcium and zinc for its stabilisers – the first manufacturer to do so on the entire sector. Its consistent commitment to sustainability makes Kömmerring 88 a safe investment in the future.



# PASSIVE HOUSE

## What is a passive house?

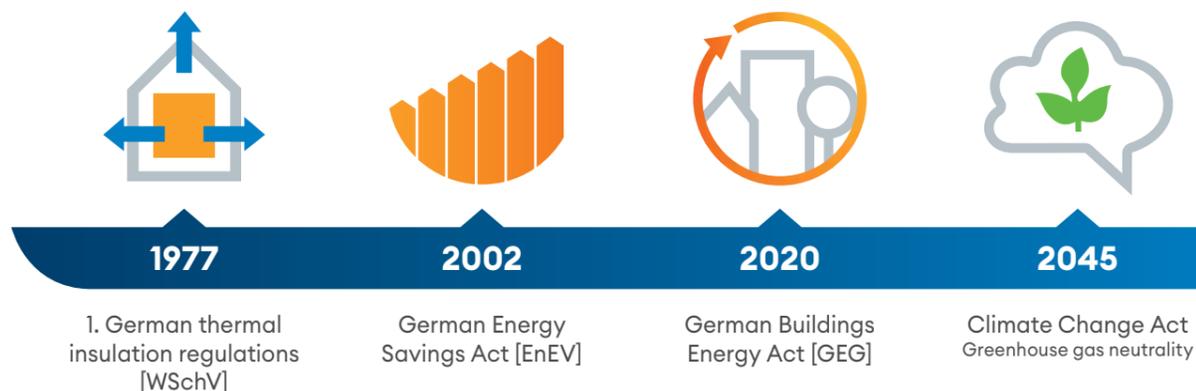
Energy saving designs are growing in importance. Today, the passive house is considered objectively to be the most energy efficient form of building: Every year, it consumes no more than 15 kWh of heating energy per square metre of living space, corresponding to 1.5 litres of fuel oil. In other words, it consumes 90% less heating energy than a conventional existing building, and 75% less than an average new building. This high energy efficiency is made possible by the combination of the windows' refined multi-chamber design, airtight construction, triple glazing, controlled ventilation with heat recovery, as well as the passive use of solar irradiation – conventional heating is no longer necessary.

By supplying fresh air regularly at pleasant temperatures, the passive house generates a cosy living climate. And there are virtually no limits to its architectural design as well, including the windows. Unlike earlier, when their design was restricted and the profile sight line presented a chunky appearance, today's intelligent designs with slender profiles and a high percentage of glazed areas give rise to individual design possibilities and more thermal energy gains.

“Passive house” is a clearly defined standard with clearly defined limits. Manufacturers must verify these values for the passive house standard by having their products certified as “passive house compatible components”. The key certification bodies for passive house windows and the passive house institute Dr. Feist and the window technologies institute ift Rosenheim. What are the differences between the certificates from these institutes? What do they have in common?

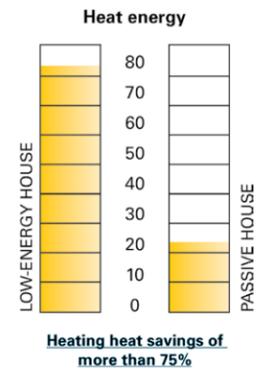
The institute Dr. Feist published its passive house guideline as early as 1992. The ift guideline WA-15/2 was issued in 2011. Both institutes calculate the thermal insulation value for the window frame ( $U_f$  value) according to the requirements under DIN EN ISO 10077-2, but with different software. ift not only calculates, but also measures this value using the hot box method. This involves testing the window installed between two chambers kept at different temperatures. The measured value generally approximates better the field conditions than the calculations, which necessarily involve a safety margin. Dr. Feist includes the whole building in its calculations, whereas ift analyses only the window itself.

## Milestones in sustainability and energy efficiency:



All in all, however, it is the following that counts: Both institutes assume a total heat transfer coefficient (total  $U_w$  value) of max 0.8 for their certification of windows and glass facades. Hence, the one or other certificate verifies the passive house suitability of windows, and is therefore a reliable source for window makers, architects, and developers.

The correct advice and the proper installation of windows are crucial to the efficiency of a passive house. So please contact your qualified specialised window maker near you for all questions about this



## PHI-Darmstadt in comparison to IFT-Rosenheim Considerations for the window



- > Passive House guideline established in 1992
- > For determination  $U_f$ -Value only calculation according to DIN EN ISO 10077-2 is accepted
- > Calculate by Physibel Bisco of flixo in accordance to DIN EN ISO 10077-2
- > Complete Residential Building investigated
- >  $U_w$ -Value 0.8 W/(m<sup>2</sup>K);  $U_w$  installed 0.85 W/(m<sup>2</sup>K)
- >  $U_g$ -Value 0.7 W/(m<sup>2</sup>K), including warm edge system

- > Passive House guideline WA/15 established in 2010
- > For determination  $U_f$ -Value only calculation and Hotbox-Testing according to DIN EN 12412-2 is accepted ( $U_f$ -Value by Hotbox-Result normally better or rather lower than calculating by DIN EN ISO 10077-2)
- > If calculated we use Software flixo in accordance to DIN EN ISO 10077-2
- > Only Residential Window investigated
- >  $U_w$ -Value 0.8 W/(m<sup>2</sup>K);  $U_w$  installed 0.85 W/(m<sup>2</sup>K)
- >  $U_g$ -Value 0.6 W/(m<sup>2</sup>K) (necessary to achieve  $U_w$  0.8), including warm edge system

# ACOUSTIC PERFORMANCE

Improve sound insulation in your home

Good health and a high quality of life are something we all aspire to. Avoiding noise in your home helps to safeguard your physical and mental well-being. After all, excessive noise can lead to illness and cause psychological stress for you and your family. That is particularly true if you live near roads with heavy traffic, railways or in close vicinity to airports.

**Sound reduction index according to ISO 10140 - 2**  
 Laboratory measurements of airborne sound insulation of building components  
 Client: profline GmbH  
 Kömmerling Kunststoff, 66954 Pirmasens (Germany)  
 Product designation: KBE 76 AD, KÖMMERLING 76 AD, TROCAL 76 AD  
 Test date: 23 September 2017  
 Test surface S: 1,25 m x 1,50 m = 1,88 m²  
 Test rig: as per EN ISO 10140-5  
 Partition wall: Double leaf concrete wall, insert frame  
 Test noise: pink noise  
 Volume of test rooms: V<sub>1</sub> = 124 m³, V<sub>2</sub> = 457 m³  
 Maximum sound reduction index: R<sub>w</sub> = 47 dB (related to test area)  
 Mounting conditions: Element bolt-mounted in test opening and fixed by wedges. Connecting joints filled with foam and sealed with plastic sealants on both sides.  
 Climate in test rooms: 20 °C / 55 % RH  
 Standard: EN ISO 10140-5:2010

f in Hz	R in dB
50	36.5
63	29.2
80	29.2
100	34.8
125	37.3
160	39.8
200	38.4
250	42.4
315	42.6
400	43.5
500	45.1
630	46.8
800	47.6
1000	48.0
1250	48.7
1600	48.5
2000	47.9
2500	48.3
3150	48.1
4000	48.4
5000	51.4

Rating according to EN ISO 717-1 (in third octave bands):  
 R<sub>w</sub> (C; C<sub>50</sub>) = 47 (0; -2) dB  
 C<sub>50</sub> class = -1 dB; C<sub>50</sub> class = 0 dB; C<sub>50</sub> class = 0 dB  
 C<sub>50</sub> class = -5 dB; C<sub>50</sub> class = -2 dB; C<sub>50</sub> class = -2 dB

## Sound reduction index:

Noise in decibels:	Level of traffic:	Distance of house from road:
25 – 29 dB	Residential street with 10 – 50 cars per hour	> 35 m
30 – 34 dB	Residential street with 10 – 50 cars per hour	26 – 35 m
35 – 39 dB	Residential street with 50 – 200 cars per hour	26 – 35 m
40 – 44 dB	Main road with 1,000 – 3,000 cars per hour	100 – 300 m
45 – 49 dB	Main road with 1,000 – 3,000 cars per hour	36 – 100 m
> 50 dB	Main road with 3,000 – 5,000 cars per hour	< 100 m

Source: profline

The **sound reduction index** describes how good an individual building unit blocks noise from outside. Example: Windows with a sound reduction index of 40 decibels reduce noise levels transmitted through them by 40 decibels.

## Enjoy the silence and your well-being

Optimal quality of life includes a quiet, low-noise environment - you probably experience it yourself every day. Windows from Kömmerling 76 centre seal series support you in creating this perfect relaxing environment thanks to innovative sealing technology for the profiles and sound-insulating glass. This way, you can transform your home into an oasis of calm, even when the traffic is roaring by outside.



# SPECIFICATION SUPPORT

The Specification of the Kömmerling systems are supported by the team at Profile Systems.



<https://www.kommerling.ie/get-in-touch/>



# KÖMMERLING - PIONEERING THE FUTURE OF WINDOWS AND DOORS

By choosing Kömmerling, architects in Ireland can trust in their legacy of quality and innovation to provide window and door solutions that are not only aesthetically pleasing but also at the forefront of environmental and technical advancements.



## INNOVATIVE MATERIALS AND DESIGN



Kömmerling sets the standard for future building solutions using advanced uPVC, enhanced with eco-friendly calcium-zinc stabilisers instead of traditional lead-based ones. This innovative approach not only ensures durability and excellent thermal efficiency but also supports sustainable construction practices.

Kömmerling's profiles, designed with a focus on sleek, modern aesthetics, offer a variety of colours and finishes that align with traditional and contemporary architectural demands. These design options, coupled with slim sightlines and expansive glass areas, maximise natural light and meet the aesthetic needs of today's architectural trends.

## ENERGY EFFICIENCY AND ENVIRONMENTAL STEWARDSHIP



At the core of Kömmerling's product philosophy is a commitment to energy conservation. Their multi-chamber window and door systems are meticulously engineered to provide superior insulation, reducing energy costs and enhancing indoor comfort. Kömmerling's Greenline initiative exemplifies their dedication to environmental responsibility, promoting the use of recyclable materials and minimising ecological impact throughout the product lifecycle.

## ADVANCED PERFORMANCE



Features Kömmerling windows and doors incorporate cutting-edge features tailored to the specific climatic and security requirements of the Irish market. From enhanced burglary resistance to superior weatherproofing and noise reduction capabilities, their products ensure safety, tranquillity, and resilience against harsh weather conditions.

## CERTIFICATIONS AND COMPLIANCE



Kömmerling's commitment to quality is reflected in their adherence to stringent national and international standards. Their products are not only EPD verified but also carry the VinylPlus® Product Label, underscoring their dedication to sustainable production practices. These certifications assure architects and clients of their product's compliance with the highest industry standards for environmental and construction excellence.

## GLOBAL EXPERTISE, LOCAL IMPACT



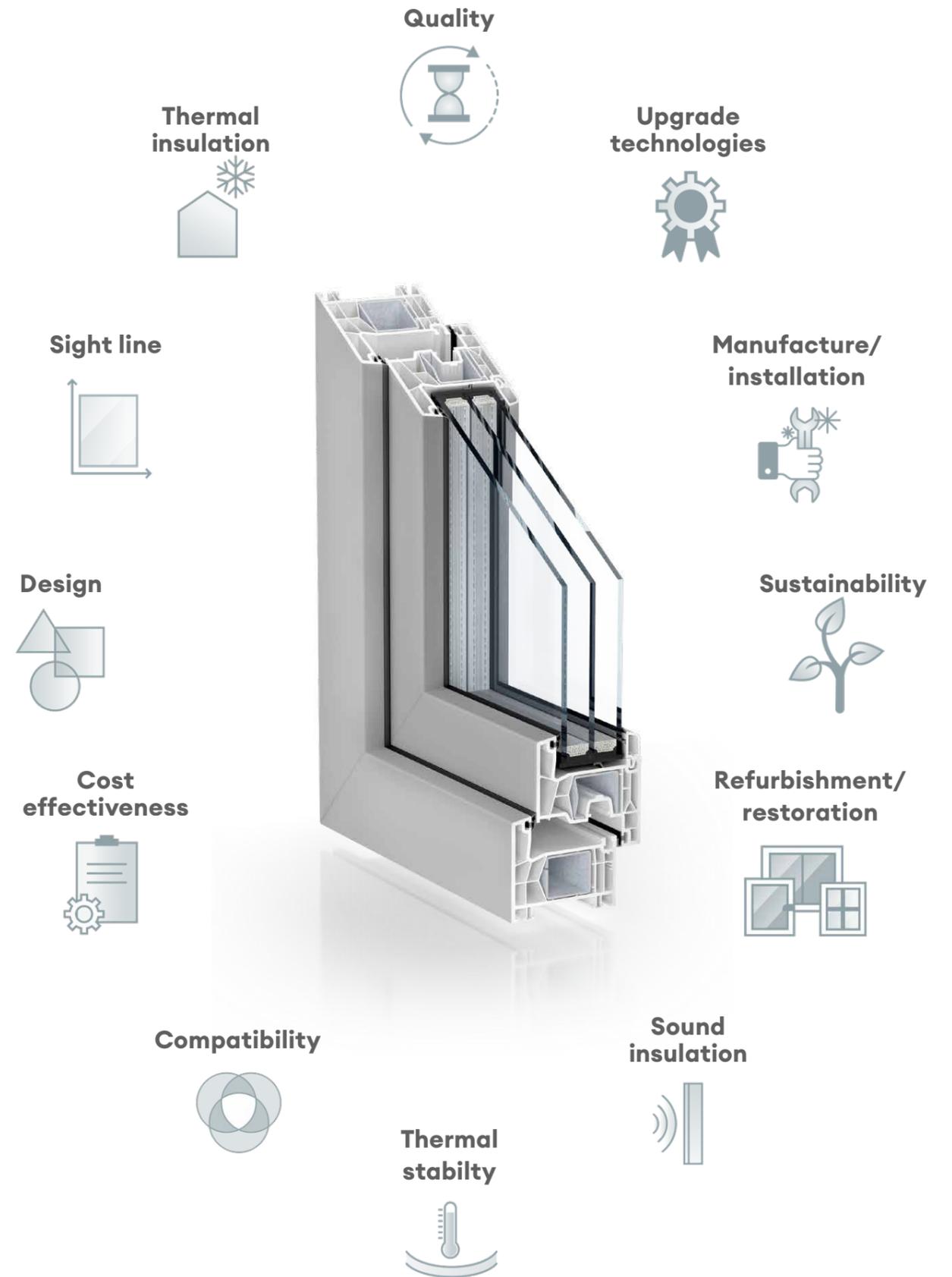
With over a century of innovation, Kömmerling has established a formidable presence in the global market. Their extensive experience enables us to offer solutions that are both globally inspired and locally applicable, ensuring that each project achieves its unique vision with the highest level of craftsmanship and functional performance.



# THE WINDOW THAT CAN SIMPLY DO MORE

Kömmerling 76 double seal for future-proof perspectives

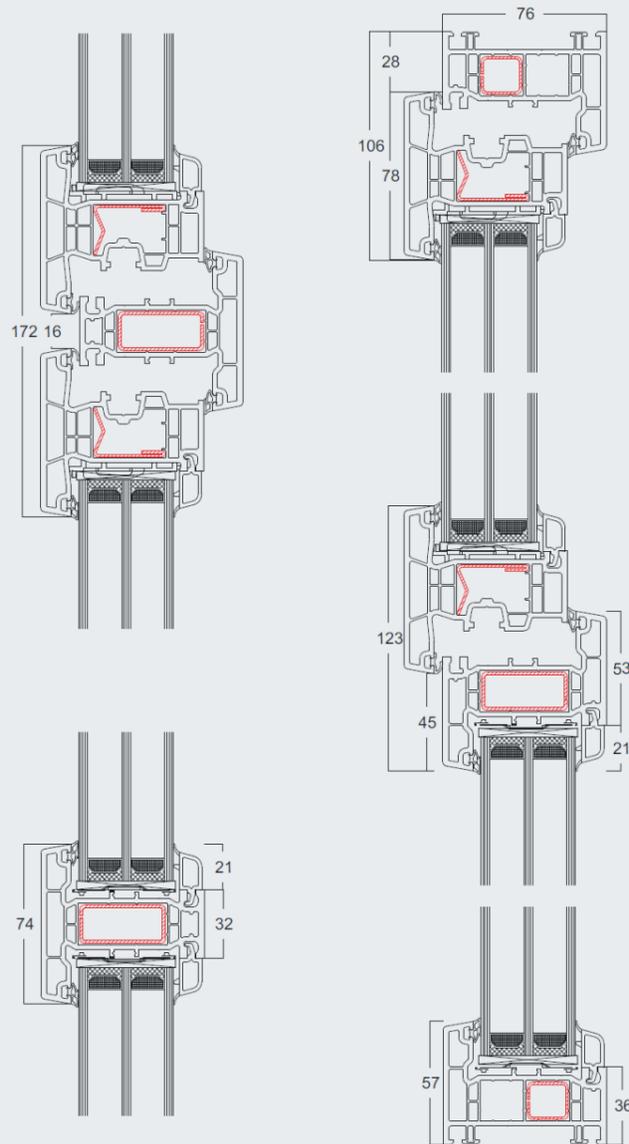
Kömmerling 76 double seal windows and doors mean that you are thinking about tomorrow today. They are true all-rounders and geared towards sustainability. These window solutions have excellent features and are carefully considered down to the smallest detail. Their excellent insulation values mean that the windows not only create a feel-good climate for you, but also for nature – because they even conserve resources. And, thanks to their top quality and innovative technologies, Kömmerling 76 double seal windows and doors can withstand a lot and are particularly robust. In short, they offer comfort, environmental protection and value retention all in one.



# 76 STD CASEMENT WINDOW SYSTEM

## HIGHLIGHTS

- > Open out window system
- > Glazing thickness options, 28-50mm
- > Frame sizes 57, 67 and 85mm
- > Transom/Mullion sizes 74, 84 and 110mm
- > Profile range can be constructed to form fixed and opening lights
- > Optional centre seal available for 57mm frame to help with thermal performance
- > Max top hung size 1200x1400mm
- > Max side hung size 900x1600mm
- > Full range of ancillary profiles available to accommodate a range of installations



**Super strength profiles = large panel sizes**  
Max top hung size 1200x1400mm, max side hung size 900x1600mm.

**Thermal insulation value**  
 $U_f = 0.79 \text{ W}/(\text{m}^2\text{K})$

**Weight reduction**  
Weights approx. 25% less compared to sashes with steel.

**Standardised manufacture**  
No additional steps required.

**Sustainability**  
Intelligent recycling process. All of the materials are reused.

$U_w$   
**1.2**  
 $\text{W}/\text{m}^2\text{K}$   
double glaze

$U_w$   
**0.79**  
 $\text{W}/\text{m}^2\text{K}$   
triple glaze

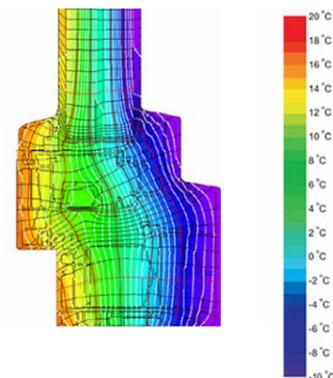
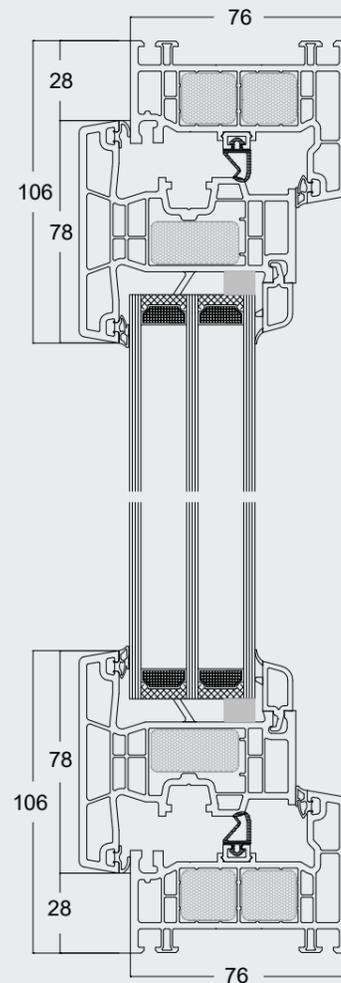


Performance details:	
Wind load	Class C4
Air	Class 4
Water	Class 9A
Acoustic	Rw up to 45dB (depending on glass used)
U value	1.2 W/m <sup>2</sup> K double glazed and 0.79 W/m <sup>2</sup> K triple glazed

# 76 CASEMENT - PASSIVE HOUSE

## HIGHLIGHTS

- > Open out window system
- > Glazing thickness options, 28-50mm
- > Frame sizes 57, 67 and 85mm
- > Transom/Mullion sizes 74, 84 and 110mm
- > Profile range can be constructed to form fixed and opening lights
- > Optional centre seal available for 57mm frame to help with thermal performance
- > Max top hung size 1200x1400mm
- > Max side hung size 900x1600mm
- > Full range of ancillary profiles available to accommodate a range of installations



**Super strength profiles = large panel sizes**  
Max top hung size 1200x1400mm, max side hung size 900x1600mm.

**Thermal insulation value**  
 $U_w = 0,77 \text{ W/m}^2\text{K}$

**Weight reduction**  
Weighs approx. 25% less compared to sashes with steel.

**Standardised manufacture**  
No additional steps required.

**Sustainability**

$U_w$   
**0.77**  
 $\text{W/m}^2\text{K}$   
triple glaze

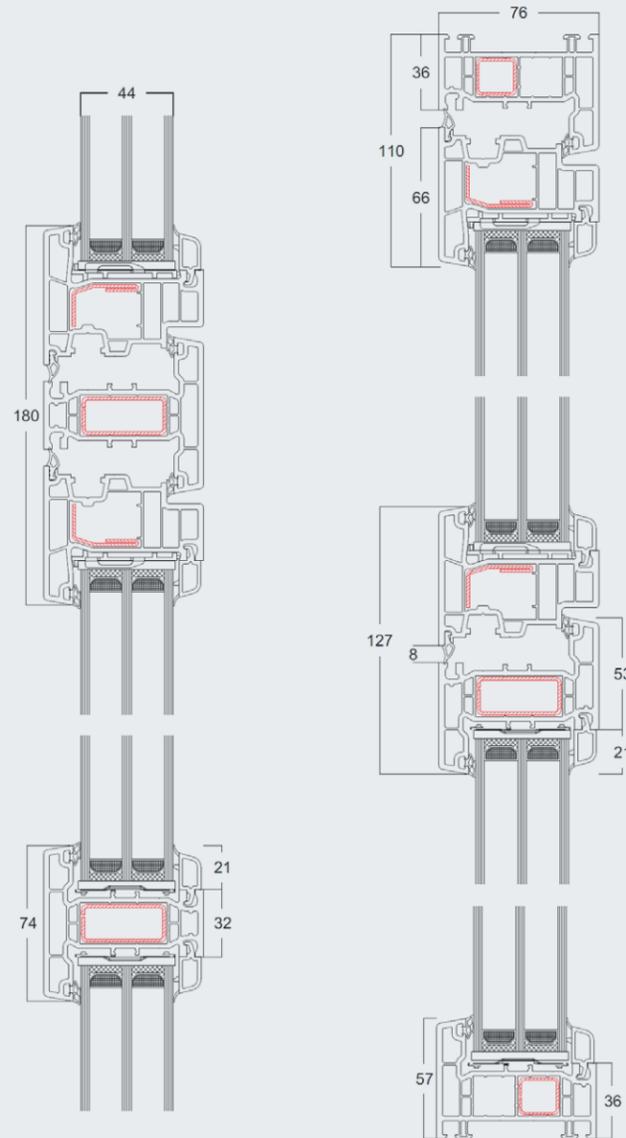


Performance details:	
Wind load	Class C5
Air	Class 4
Water	Class 9A
Acoustic	Rw up to 45dB (depending on glass used)
U value	0.77 W/m²K triple glazed

# 76 FLUSH CASEMENT WINDOW SYSTEM

## HIGHLIGHTS

- > Open out window system
- > Glazing thickness options, 28-50mm
- > Frame sizes 57, 67 and 85mm
- > Transom/Mullion sizes 74, 84 and 110mm
- > Profile range can be constructed to form
  - > fixed and opening lights
- > Optional centre seal available for 57mm frame to help with thermal performance
- > Sash is flush both internally and externally
- > Max top hung size 1200x1400mm
- > Max side hung size 900x1600mm
- > Full range of ancillary profiles available to accommodate a range of installations



**Super strength profiles = large panel sizes**  
 Max top hung size 1200x1400mm, max side hung size 900x1600mm.



**Thermal insulation value**  
 $U_f = 0.79 \text{ W}/(\text{m}^2\text{K})$



**Weight reduction**  
 Weighs approx. 25% less compared to sashes with steel.



**Standardised manufacture**  
 No additional steps required.



**Sustainability**  
 Intelligent recycling process. All of the materials are reused.

$U_w$   
**1.2**  
 $\text{W}/\text{m}^2\text{K}$   
 double glaze

$U_w$   
**0.79**  
 $\text{W}/\text{m}^2\text{K}$   
 triple glaze

### Performance details:

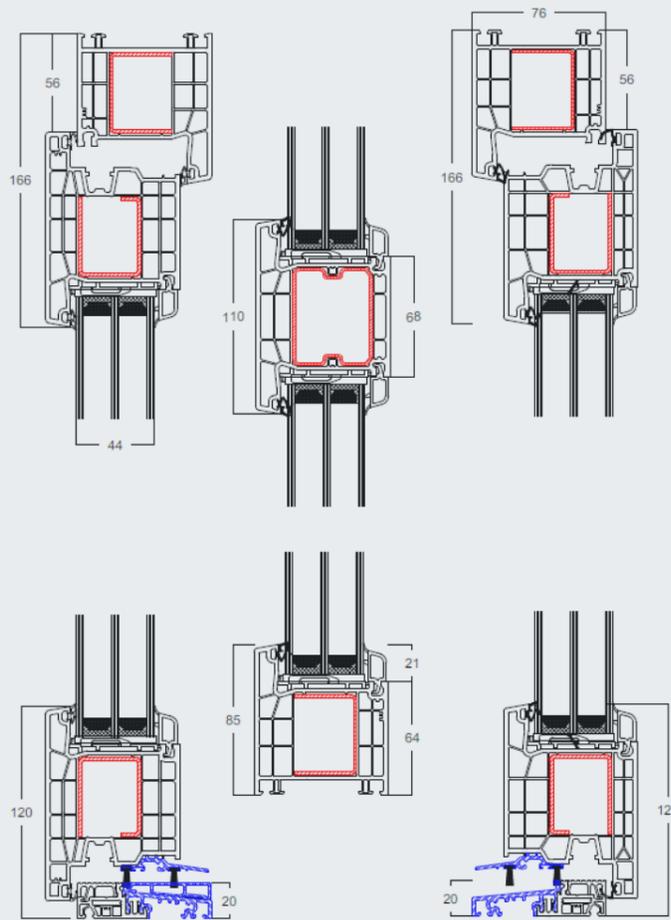
Wind load	Class C3
Air	Class 2
Water	Class 3A
Acoustic	Rw up to 45dB (depending on glass used)
U value	1.2 $\text{W}/\text{m}^2\text{K}$ double glazed and 0.79 $\text{W}/\text{m}^2\text{K}$ triple glazed



# 76 SINGLE DOOR SYSTEM

## HIGHLIGHTS

- > Open in or open out options
- > Glazing thickness options, 28-50mm
- > Frame sizes 57, 67 and 85mm
- > Transom/Mullion sizes 74, 84 and 110mm
- > Profile range can be constructed to form fixed and opening lights
- > Sash corner cleat can be used for extra durability
- > Max height 2500mm
- > Max width 1200mm
- > Low aluminium threshold available
- > Full range of ancillary profiles available to accommodate a range of installations



**Super strength profiles = large panel sizes**  
Max height 2500mm, max width 1200mm.

**Thermal insulation value**  
 $U_f = 0.79 \text{ W}/(\text{m}^2\text{K})$

**Weight reduction**  
Weighs approx. 25% less compared to sashes with steel.

**Standardised manufacture**  
No additional steps required.

**Sustainability**  
Intelligent recycling process. All of the materials are reused.

**U<sub>w</sub> 1.2 W/m<sup>2</sup>K double glaze**

**U<sub>w</sub> 0.83 W/m<sup>2</sup>K triple glaze**

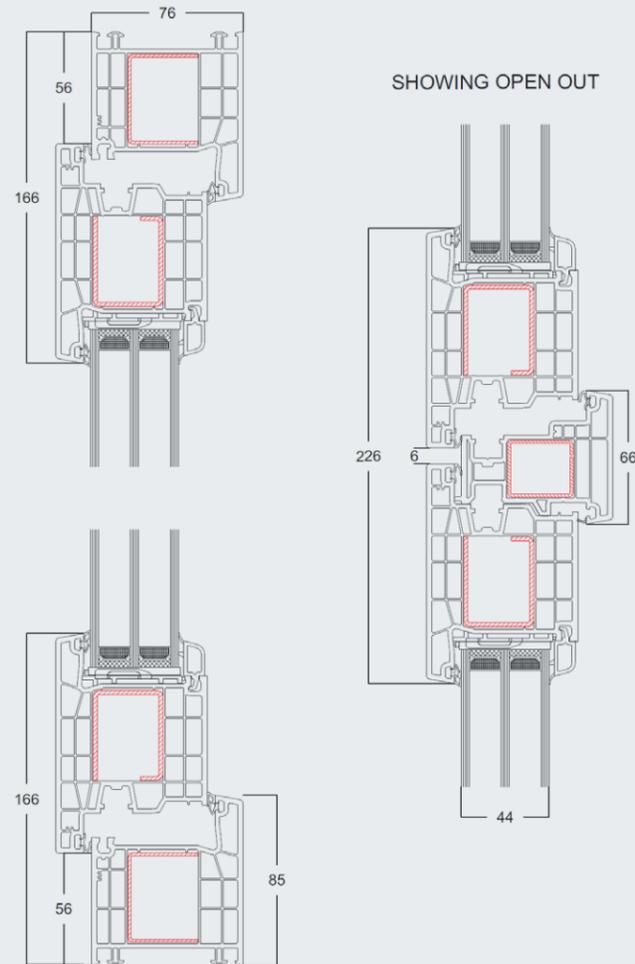


Performance details:	
Wind load	Class C5/B5
Air	Class 4
Water	Class 9A
Acoustic	Rw up to 45dB (depending on glass used)
U value	1.2 W/m <sup>2</sup> K double glazed and 0.83 W/m <sup>2</sup> K triple glazed

# 76 DOUBLE DOOR SYSTEM

## HIGHLIGHTS

- > Open in or open out options
- > Glazing thickness options, 28-50mm
- > Frame sizes 57, 67 and 85mm
- > Transom/Mullion sizes 74, 84 and 110mm
- > Profile range can be constructed to form fixed and opening lights
- > Sash corner cleat can be used for extra durability
- > Max height 2500mm
- > Max width 1100mm
- > Low aluminium threshold available
- > Full range of ancillary profiles available to accommodate a range of installations



**Super strength profiles = large panel sizes**  
Max height 2500mm, max width 1100mm.

**Thermal insulation value**  
 $U_f = 0.79 \text{ W}/(\text{m}^2\text{K})$

**Weight reduction**  
Weighs approx. 25% less compared to sashes with steel.

**Standardised manufacture**  
No additional steps required.

**Sustainability**  
Intelligent recycling process. All of the materials are reused.

$U_w$   
**1.2**  
 $\text{W}/\text{m}^2\text{K}$   
double glaze

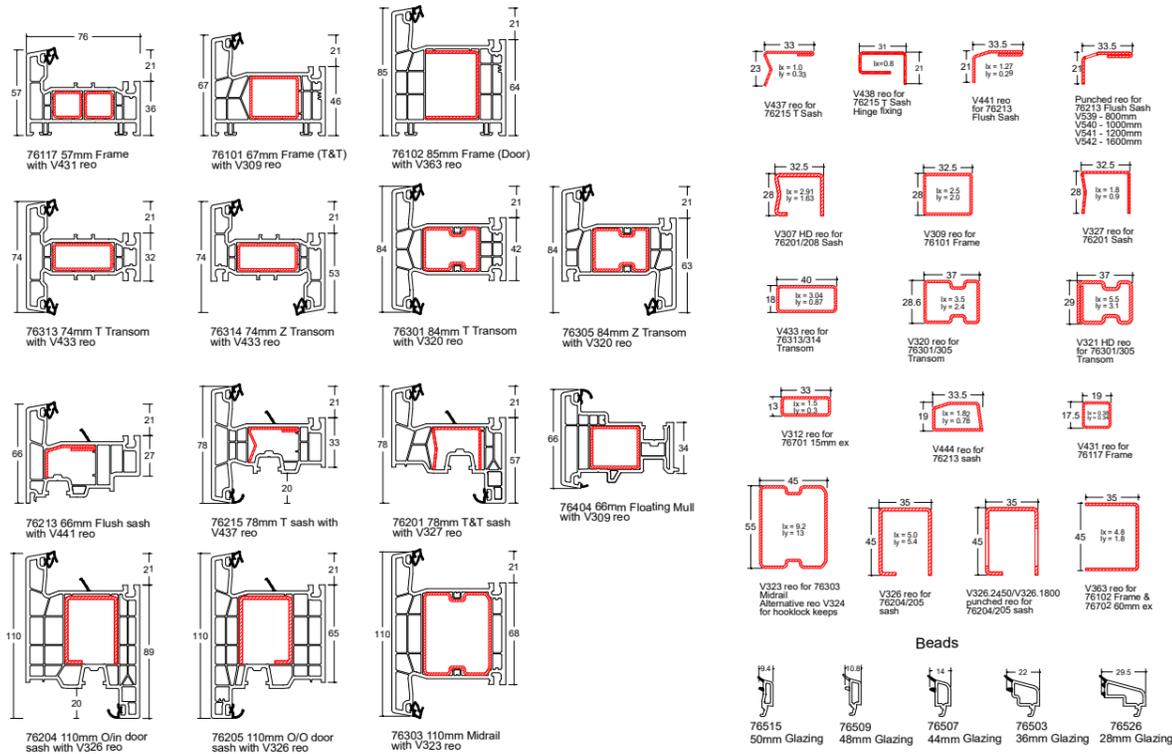
$U_w$   
**0.82**  
 $\text{W}/\text{m}^2\text{K}$   
triple glaze



Performance details:	
Wind load	Class C5/B5
Air	Class 4
Water	Class 9A
Acoustic	Rw up to 45dB (depending on glass used)
U value	1.2 W/m <sup>2</sup> K double glazed and 0.82 W/m <sup>2</sup> K triple glazed



# CHARTS



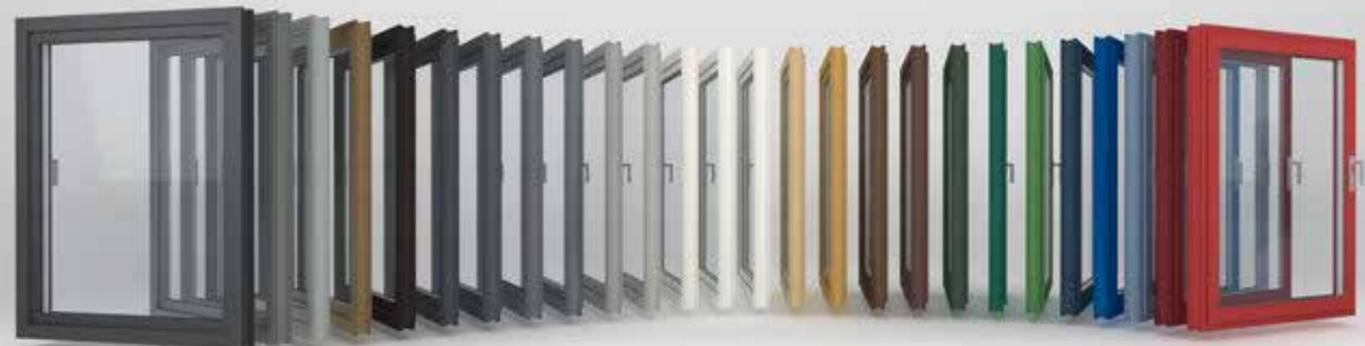
# COLOUR RANGE

- > Dual colour options
- > Standard Colour - 80 no.
- > Project specific Colours extensive range available of RAL references
- > Four base profile options. (White/Brown/Grey/Cream)
- > Smooth and grain foil options
- > Metallic Finishes (Available on request)



**FIND YOUR PERFECT COLOUR AND FINISH THE CHOICE IS YOURS**

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