

A woman with her hair in a bun, wearing a black dress, is seen from the back and side, looking out a large window. Her hands are resting on the window frame. The window looks out onto a modern building with many windows.

**TROCAL**<sup>®</sup>  
That's my window.

$U_w$  up to  
**0.76**  
 $W/(m^2K)$

**TROCAL 76.**  
Discover modern living!



TROCAL is a pioneering window manufacturer. It was the first company to mass manufacture plastic windows over 50 years ago. Since then, TROCAL has been an innovation leader in window technology. It continuously sets new standards with its innovative, elegant designs and new technologies.

TROCAL's biggest advancement to date in know-how and technology is incorporated in its new generation of windows. TROCAL 76 ideally unites optimised insulation properties, generous dimensions for large window surfaces and timelessly elegant design. TROCAL 76 satisfies present and future requirements of prestigious architecture.

# Pioneers think ahead: TROCAL.

## » Redefining living environments. TROCAL 76.

TROCAL 76 helps you to fulfil your dream of a light-flooded living environment. It has a new, innovative system technology which delivers high static stability in windows that have large glass surfaces or modern functional glazing.

Not only does it create a light-filled environment, it also makes optimum use of sunlight incidence to reduce heating costs, even when the weather outside is cold.

TROCAL 76 helps building owners and architects to create a more beautiful, inviting and sunnier environment in both new builds and home renovations.



- Intelligent profile design for optimised window stability.
- Narrow profiles enlarge the surface area and maximise light incidence.
- Higher solar energy gains additionally reduce heating costs.





## » Low energy homes need intelligent solutions. TROCAL 76.

TROCAL 76 is a window system with state-of-the-art heat insulation properties developed by engineers and technical experts. As a result, saving energy and heating costs has never been this simple or convenient.

TROCAL 76 enables the installation of insulating triple glazing and special functional glazing with thicknesses of up to 48 mm. This prevents heating energy being lost through the glass, and the large glass surfaces allow the sun's heat to enter the room.

TROCAL 76 plastic windows are perfectly insulated by a special chamber construction and state-of-the-art sealing systems. In the proEnergyTec version with AluClip Pro or in the glued version, the reinforcement chambers are foam filled. This further improves the window's heat insulation properties.

- High heat insulating double seal system with a 76 mm construction depth.
- Wide range of glazing options up to 48mm, from triple glazing to special functional glazing.
- State-of-the-art adhesive technology.
- Use of solar energy gains.
- proEnergyTec can be used in the frame and sash.



# Feel at home with TROC AL 76.



## » Excellent sound insulation.

Sound insulation is essential to health and well-being in a modern living environment. With TROCAL 76, noise that can be harmful to health stays outside.

The innovative profile sealing technology, plus sound insulating glazing, ensures a peaceful and quiet living environment, even on busy roads, near to airports, railways or industrial estates.



- Innovative seals for optimised sound insulation.
- Optional installation of needs-oriented noise reducing glazing.



## » Reliable protection against intruders.

TROCAL 76 protects your windows, balcony and patio doors against burglaries. The innovative window system is designed for use with intruder prevention fittings and safety glass.

As a result, burglars are deterred by the security measures and your home remains safe.

- Designed for anti-burglary fittings.
- For windows up to resistance class RC 2 (WK 2).





### Optimum heat insulation.

The insulating chambers and the foam-filled proEnergyTec version guarantee excellent heat insulation.



### Individual design.

Narrow profiles allow for large transparent glass surfaces. There is also a comprehensive selection of foils and combinations of coated aluminium for individual design.



### Effective noise protection.

In combination with high quality functional glazing, the TROCAL 76 system delivers optimum noise protection.



### Excellent intrusion protection.

The window profiles are designed for use of special safety fittings and additional burglary-protection measures.



### Perfect seal tightness.

The innovative seal levels keep out draughts, dust and rain, and ensure a pleasant indoor climate.



### Convenient operation.

Optimised for modern fittings, all opening types are possible for simple everyday opening and closing.



### Simple care.

The high quality surfaces are weather resistant and easy to clean.



### Long-term value.

High quality, first-rate eco-friendly plastics and lasting convenience of operation permanently add to the value of your property.



### High stability.

Optimally dimensioned steel reinforcements provide perfect window statics. Adhesive-fitted glazing includes the three components of »sash - adhesive - glass« in a composite structure. With AluClip Pro, the aluminium facing shell assumes the static function.



### 76 mm.

The window profile's low construction depth doesn't just enhance the appearance of a new building, it is also perfect for renovation projects with complex architectural and energy-related requirements.

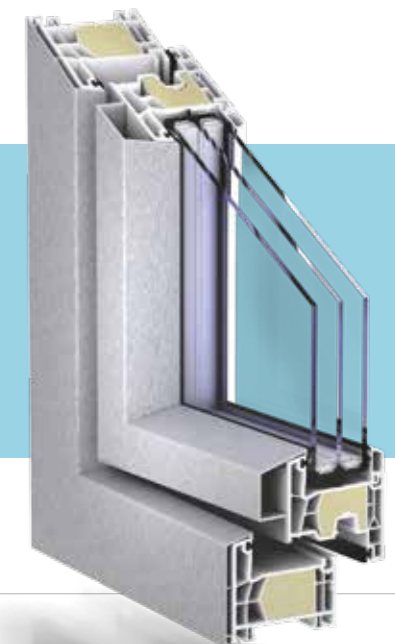


### Optional ventilation.

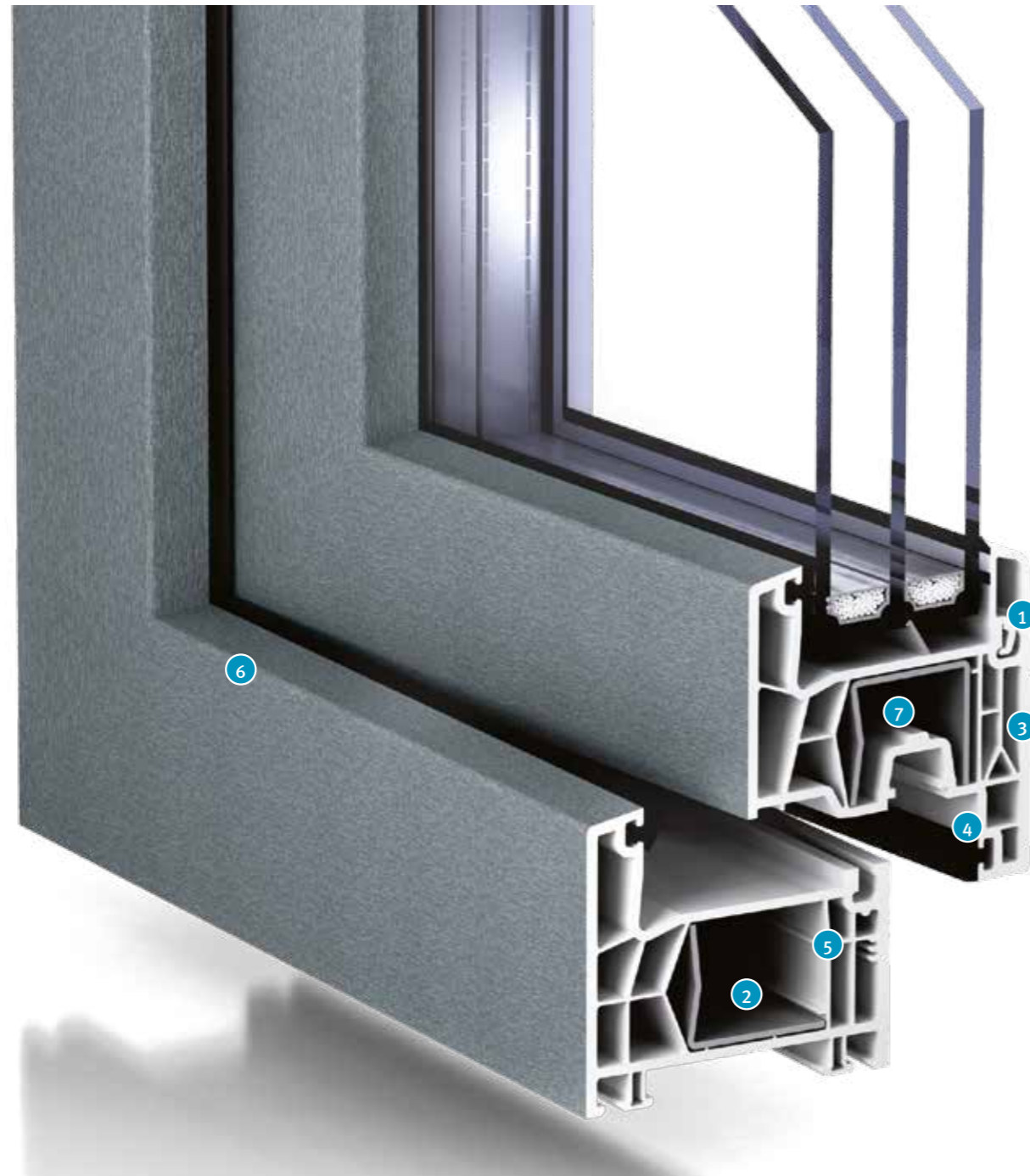
The use of optionally integrated ventilation systems ensures an optimum indoor climate and prevents mould from forming.

» One system. Many advantages. TROCAL 76.

A modern plastic window system has to satisfy many requirements of design, function, construction physics and insulation, and it also has to be eco-friendly and durable. TROCAL 76 offers all the advantages of modern windows.



# Advanced technology. TROCAL 76.



## 1 High heat insulation value.

With standard windows, TROCAL 76 already achieves an excellent heat insulation value of  $U_f = 1.1 \text{ W}/(\text{m}^2\text{K})$ .



## 2 High dimensional stability.

The centrally arranged steel reinforcement ensures maximum dimensional stability. Special supports keep the steel reinforcement in the right position.



## 3 State-of-the-art chamber design.

The chambers are designed on the basis of the most modern calculation methods to ensure high heat and sound insulating properties, plus optimum profile stability and the strength to hold heavy glazing.



## 4 Reliable function.

Connection of the load-bearing parts with several profile walls and additional thickening with special screw pins in the main load bearing zones.



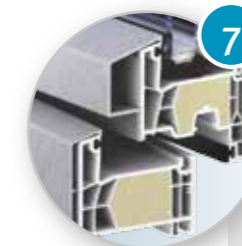
## 5 Versatile and clean installation.

TROCAL 76 windows are suitable for all current installation situations. Screws can be inserted through the steel, through a dowel chamber adapter or with the help of an anchor for variable, fast and clean installation.



## 6 Design options.

The TROCAL 76 system offers numerous customisation options, such as a range of foil colours or modern aluminium casing shells which can be coated in all RAL colours or with special effect coatings.



## 7 proEnergyTec.

This technology achieves the highest possible heat insulation values. The reinforcement chambers are filled with foam, which eliminates the need for steel reinforcement inside the sash and/or frame.

Technology leader TROCAL ensures extremely high standards of window system technology and the new TROCAL 76 window generation meets them in every respect. The design is so innovative that despite the relatively narrow window profile, triple glazing with modern insulation glass is possible. The diverse installation options ensure that replacing existing windows with TROCAL 76 is a quick and clean process.

One of TROCAL 76's biggest advantages is its versatility. It is based on a universal modular system, which means that TROCAL 76 offers maximum flexibility for the realisation of individual requirements and convincing value for money.



# Fresh air automatically. TROCAL 76.



## » REGEL-air® 76.

Correct, regular airing is becoming more important than ever, especially in face of the growing effectiveness provided by insulation in living space. When there is too little ventilation the relative air humidity rises constantly, quickly giving rise to a damp indoor climate that promotes the growth of mould.

For this reason it is important that a healthy balance is reached between a sensible ventilation behaviour and the minimum heat loss. This safeguards on the one hand sustainable energy consumption, on the other the integrity of the building fabric that would otherwise suffer from the effects of moisture. REGEL-air® 76 from TROCAL is your ventilation solution that provides a uniform supply of fresh air. REGEL-air® 76 is therefore also ideal for those who spend only some of the time in the building, for instance their weekend or holiday home.

- Constant, uniform supply of fresh air.
- Minimises high air humidity and the risk of mould.
- Simple retrofit.
- Concealed in the outer frame rebate, so invisible from the inside and outside when the window is closed.
- Easy to clean.
- Tested sound insulation up to 43 dB (STC 4)
- Tightness against driving rain and air passage in accordance with DIN and EU standards.
- DIN 1946-6 ventilation.

### Flexible installation options.

Fitted with a double-stage wind pressure regulator, REGEL-air® 76 contributes to a healthy living climate inside closed windows and is easy to clean.

The new REGEL-air® 76 fan features an innovative return spring and does not need a power supply. It can be installed either horizontally over the window or vertically next to it. The system is therefore ideal as a retrofit.

Fan installation	Test values in dB*			Air flow rate in m³/h				
	A	B	C	2 Pa	4 Pa	5 Pa	7 Pa	8 Pa
REGEL-air®								
1 along the horizontal top 1 along the vertical side	39	43	43	3	4	5	5	6
2 along the horizontal top 1 along the vertical side	38	42	43	3	4	5	6	7
2 along the horizontal top 2 along the vertical side	38	42	42	4	5	6	7	8

\* Pane structure: A) 6/16/4/14/4 (36–37 dB), B) 8 CSG SI/12/6/12/8 CSG SI (45 dB), C) 12 CSG SI/20/8/20 CSG SI (48 dB)





## » Passive house.

Want to do a lot for the environment, yet save costs without sacrificing convenience and design? A passive house with TROCAL 76 makes this possible. When fitted with the upgrade technologies AluClip Pro and proEnergyTec, the modern window system exhibits a thermal insulation value  $U_f$  of  $0.93 \text{ W}/(\text{m}^2\text{K})$ , fulfilling the high energy saving requirements for passive houses. Yet TROCAL 76 with AluClip Pro and proEnergyTec can offer a lot more besides.

# Thinking of the future. TROCAL 76.



- Passive house compatible.
- Outstanding thermal insulation value of  $U_f = 0.93 \text{ W}/(\text{m}^2\text{K})$ .
- Elegant aluminium design in all RAL colours.
- Fully recyclable.
- High stability with aluminium – no stability needed in the sash.

### AluClip Pro.

TROCAL 76 AluClip Pro gives you the best of two worlds: PVC-U and aluminium in the one innovative system. PVC-U provides the optimal thermal and sound insulation in addition to functional reliability. Aluminium presents a convincing elegance, the best weather resistance, high stability, and a wide range of colours. Yet another advantage – The aluminium takes over the load bearing functions, so no steel reinforcements are needed in the window sash.

### proEnergyTec.

The reinforcing chambers in the sash and frame can be filled with proEnergyTec foam. This technology achieves the highest thermal insulation values and can be recycled easily at a later date. The values are so good that TROCAL 76 with AluClip Pro and proEnergyTec fulfils passive house requirements.

### Passive house.

The concept behind a passive house works only with a refined thermal insulation that limits the annual heating needs to 15 kWh per square metre of living space. This allows a building to be heated alone from passive energy sources without the need for a separate heating system. One of the most important components here is the window system. The slender profile sight lines presented by TROCAL 76 with the aluminium cover not only allow a modern design with large glazed areas, but also increase solar gains.

# Life's getting more beautiful. TROCAL 76.

## » Huge design potential.

Developers, architects, and planners will be thrilled by the possibilities of TROCAL 76 – for both new buildings and renovations.

The colour, shape, and surface patterns of TROCAL 76 give rise to countless individual variations, lending the facade an unmistakable character. You decide whether the windows are to harmonise with the whole or set specific accents.



### Classical white.

Timeless white of enduring beauty because the quality PVC-U of TROCAL 76 is extremely weather resistant, retaining its smooth, glossy surface. It is also easy to clean.



### Plain colour laminations.

This lamination brings colour into play. The surface is extremely weather resistant and easy to clean.



### Wood grain laminations.

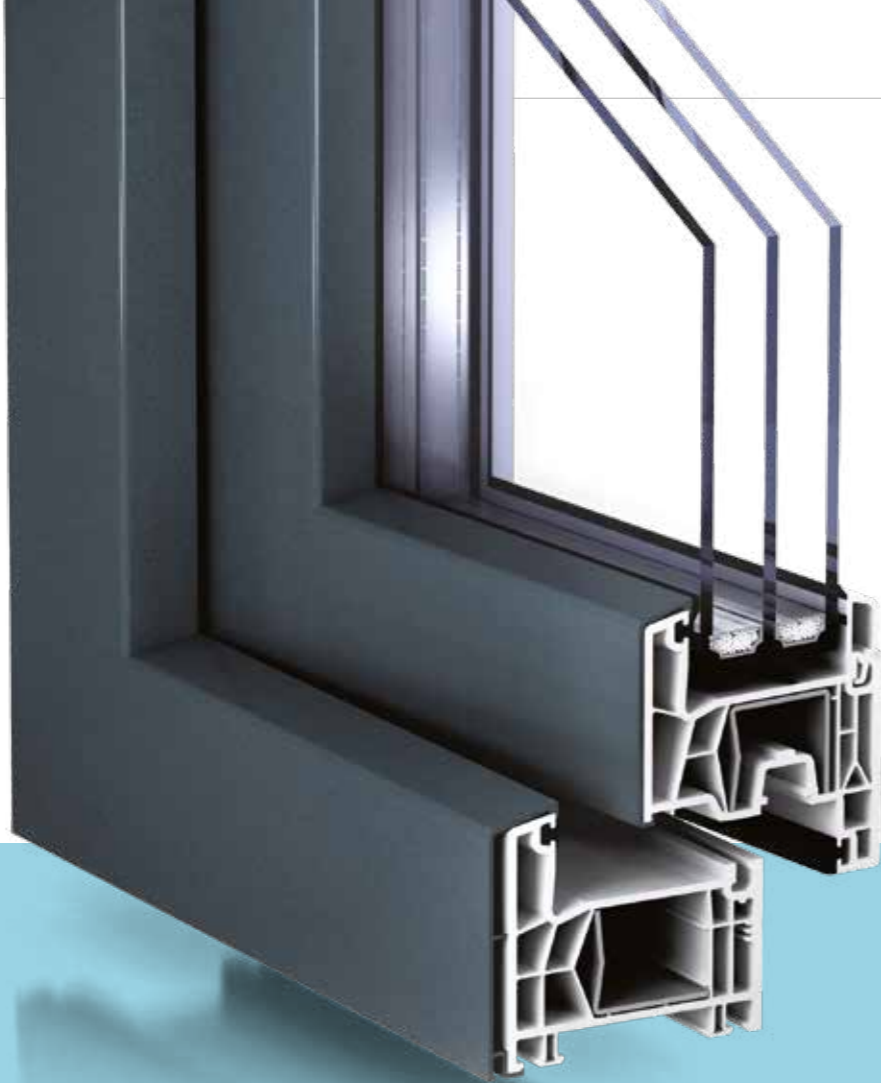
The wood grain lamination unites the natural look with the advantages of robust PVC-U. The regular paintwork usual for wooden profiles is no longer necessary, and your house receives an accentuated farmhouse style.

pro **Cover** Tec  
protected *by colour*

### proCoverTec.

This new, unique, and innovative surface finish combines function with longevity and aesthetics. The proCoverTec surface is extremely tight and homogeneous, and its satin look lends your window profiles a quality look with a slightly textured, pleasant feel. It offers the optimal protection for your window profiles and greatly minimises dirt deposits. Choose from our unmistakable range of 22 timeless colours! You can choose between single sided and full cover.





Aluminium is weatherproof and retains its value. It has a fascinating timeless elegance, offers a wide variety of design options and provides very high stability. Unlike plastic, aluminium can also deliver optimum heat and sound insulation. With TROCAL 76, you get both: aluminium and plastic.

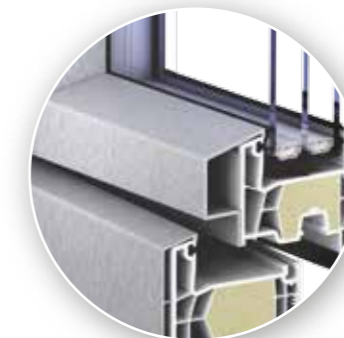
In other words, you get the advantages of both materials in one innovative system. The TROCAL 76 AluClip Pro version is special. It has proEnergyTec technology to further enhance its heat insulation properties.

# Aesthetics is more than a trend. TROCAL 76.



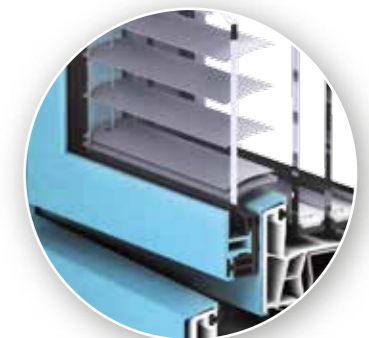
### AluClip.

The aluminium facing shell for TROCAL 76 gives you the best of both worlds: elegant aluminium design in a practically unlimited range of colours, plus the optimum insulation values of a modern plastic profile system.



### AluClip Pro.

The AluClip Pro has an aluminium profile connected to a plastic profile. The aluminium performs the static function so no steel reinforcement is necessary inside the window sash. The reinforcement chamber is filled with proEnergyTec foam. The additionally insulated profiles guarantee extraordinarily high heat insulation.



### AddOn.

The aluminium interconnecting frame not only boasts modern design, it also has an optional integrated privacy and sun protection elements. The additional glass pane also improves its heat and noise insulation properties.



## » These doors open up new perspectives. TROCAL 76.

TROCAL 76 is our most innovative profile system. Not just for windows, but also for high quality house, balcony, patio or parallel slide-and-tilt doors.

A perfectly coordinated system like this gives your home a consistent and harmonious appearance. The TROCAL 76 doors also deliver excellent heat and sound insulation properties. They are weather and impact rain-proof, and integrate state-of-the-art anti-burglary features.

You can choose between modern functional glazing with a wide range of surface textures and colours, glazing with LED effects or motifs, or you can incorporate glazing products from the comprehensive ready-to-use programmes of reputed manufacturers.



- Front doors, balcony and patio doors, parallel slide-and-tilt doors.
- Perfect rain and wind protection.
- High heat insulation as a result of the thermally separated threshold.
- Maximum sash sizes:  
single sash door 1200 x 2400 mm  
secondary sash door 1000 x 2400 mm
- Excellent intrusion protection – up to resistance class RC 2 (WK 2).
- Excellent tightness as a result of the double threshold seal.
- Use of special functional glazing or conventional panels.



**greenline** 

## » Sustainability pioneer. TROCAL 76.

TROCAL has always been committed to protecting the environment and conserving natural resources. The new TROCAL 76 window generation consistently reflects the principle of sustainability.

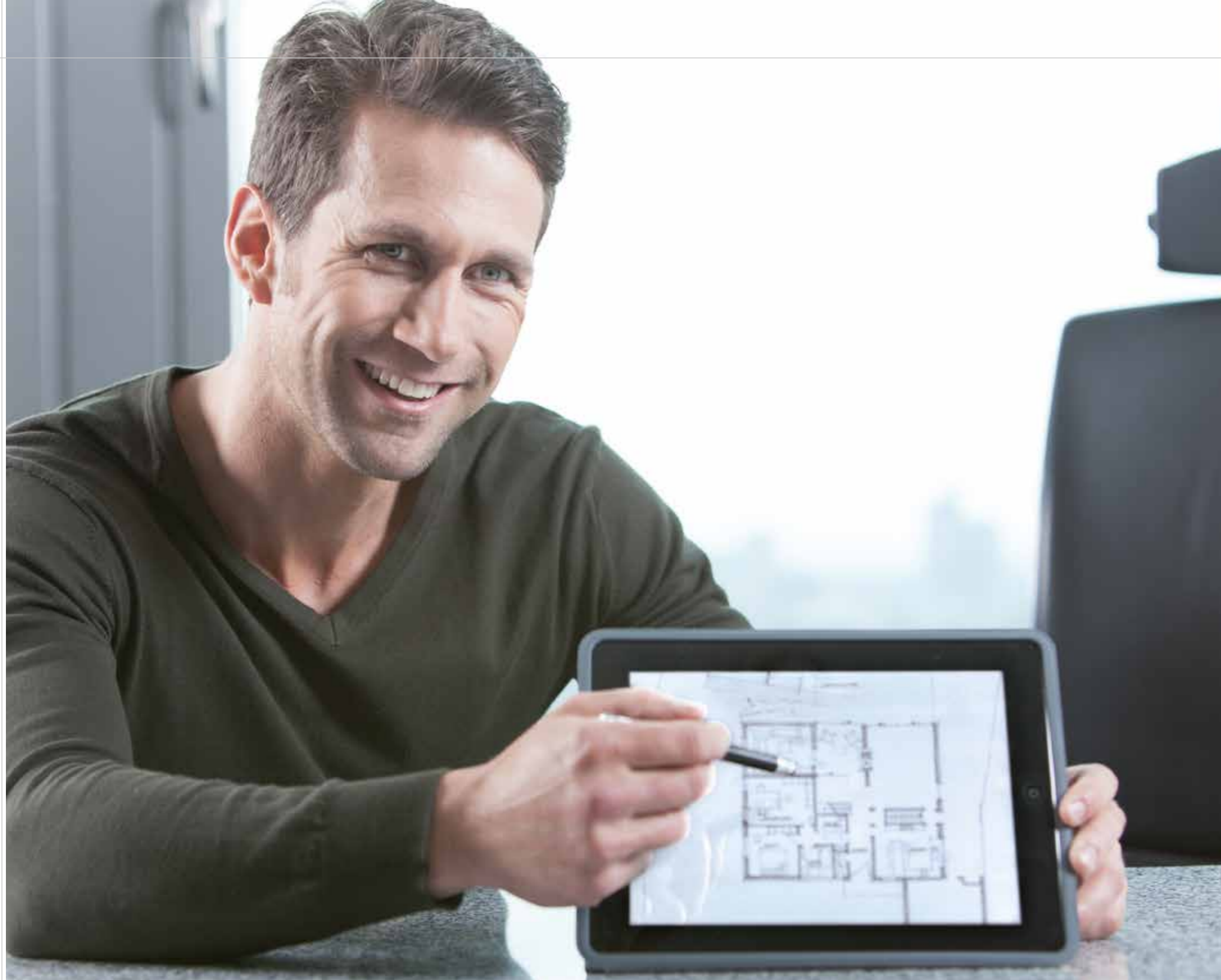
To conserve valuable resources, the new profiles have been designed for optimised use of materials without compromising on function

or insulation properties. No lead is used in the plastics as a stabiliser. Instead, an eco-friendly calcium-zinc based stabiliser is used. These plastics all have the greenline label.

At the end of the window's lifecycle, the sustainability principle continues to apply, and the plastics are intelligently recycled for use

in the production of new profiles. When the proEnergyTec profiles are filled with a foam, only green propellants are used. During the recycling process, the foam and PVC can be cleanly separated from each other.

- Optimised and resource conserving use of materials.
- Eco-friendly, lead-free stabilisers with the greenline label.
- Professional recycling.
- High contribution to CO<sub>2</sub> reduction – as a result of excellent heat insulation you use less heating energy, which considerably reduces your impact on the environment.



An investment in new windows should enhance the long-term value of your property. By opting for TROCAL 76, you are guaranteed highest quality that pays off in the long term.

You are choosing elegant design distinguished by its timeless elegance and aesthetic appeal. In short, with TROCAL 76, you're thinking about the next generation.

- Impressive cost and energy savings as a result of optimised heat insulation.
- Enhanced quality of life through perfect sound insulation.
- More security through integratable intruder protection features.
- Easy-care, robust and weatherproof surfaces.
- Retains value due to durability and excellent quality.
- State-of-the-art technology for excellent ease of operation and reliable function.

# A wise future investment. TROCAL 76.

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**TROCAL®**  
That's my window.