



TROCAL[®]
That's my window.

The future is here.
TROCAL 88.



Always one idea ah ead: TROCAL.

TROCAL was the first company to mass manufacture PVC windows over 50 years ago. Ever since then it has been driving innovations in the window industry: from technology to design.

Even the most recent development sets a new benchmark. TROCAL 88 is the window of the future. It offers a unique combination of insulating properties, freedom of design and cost effectiveness. Look forward to living in the future – with TROCAL 88.



» “This is how I want to live in the future.”

Relaxed, energy efficient and smart: TROCAL 88.

Our lives will change in the future. New, green mobility solutions will be introduced. The digital transformation, cloud computing and smart factories will create new work processes. And we will have smart homes that are more secure and energy efficient.

But our comfort in the future world will depend on more than just computer technology. TROCAL conducted detailed research into windows, as a structural component of buildings, to ascertain how they need to be modified to meet future needs. Our engineers left no stone unturned, implemented extensive tests and came up with an innovative solution: TROCAL 88 – the window of the future.





» “Modern architecture needs new approaches.”

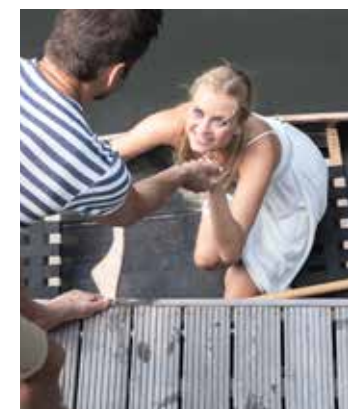
TROCAL 88 creates new living environments.

Light is a key contributor to our well-being. It's essential to our survival. The architectural community has channelled this insight into light-filled and welcoming homes and workspaces with large windows.

Due to their size, these windows need ultra-modern profiles with innovative technology to deliver the necessary static stability,

and modern functional glazing with in-built soundproofing properties that satisfy the highest energy-related requirements.

TROCAL 88 is a premium window and door system that satisfies all the above requirements. It is designed with impressive technological features that satisfy both present day and future standards. This is a window system for light-filled spaces and the perfect outlook in the future world.



- Premium window and residential door system with 88 mm installation depth.
- High-insulating 7-chamber design with centre gasket.
- Elegant, linear design for ultra-modern triple glazing or functional glass panes up to 58 mm thick.



» “I want to know what the future holds.”

Construct future-safe buildings with TROCAL 88.

TROCAL 88 is a window and door system that already satisfies future requirements. In short, it delivers maximum future security. TROCAL 88's energy efficiency and sound insulation values are already significantly better than comparable systems.

This ultra-modern window and door system is also built to exacting quality standards to ensure it is durable and extremely easy to care for. So you can enjoy your new windows for a long time to come. Give yourself and your family a great future with the perfect window: TROCAL 88.





- Passive house certified in accordance with ift directive WA-15/2.
- Excellent heat insulation values:
 U_f value = $0.5 \text{ W}/(\text{m}^2\text{K})$ in the standard product
 U_w value up to $0.72 \text{ W}/(\text{m}^2\text{K})$.
- Wide range of glazing options up to 58 mm thick, from triple glazing to special functional glazing.
- Foils in wood texture, plain and metallic colours or classic white.

Smart and simple energy savings.

TROCAL standard windows are passive house compatible.

Passive houses only work with sophisticated heat insulation that reduces annual heating requirements to 15 kWh per square metre living area. Even the standard version of TROCAL 88 with functional glazing meets the high heat insulation requirements for passive houses. It enables everyone to make a valuable yet affordable contribution to reducing CO₂ levels.

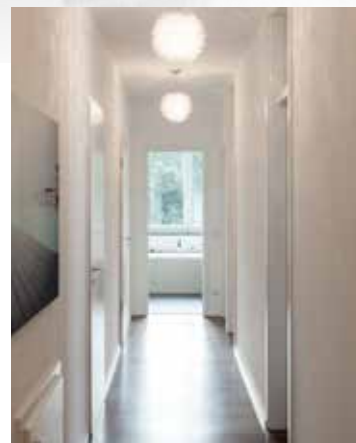


» “The details make the difference.”



The smaller the value the better the window’s insulating properties are.

It’s often the small details that make the biggest difference. Especially in the case of a window’s U_f value. The lower the value, the better. And the numbers behind the decimal point also count. They may only be tenths or hundredths, but they are still important. TROCAL 88 delivers impressive energy and heating cost savings. The unique proposition: TROCAL 88 achieves these savings with maximum sash and window pane dimensions because unlike other systems, TROCAL 88 doesn’t have to reduce steel reinforcement components to improve heat insulation performance. It’s a unique design advantage.



- U_f value standard product: 0.95 W/(m²K)
White and coloured windows are passive house compatible even in the standard versions. And they are steel reinforced for maximum sash sizes.
- U_f value with insulating parts: 0.88 W/(m²K)
Even higher heat insulation values can be achieved with inserted insulating parts.
- U_f value with proStratoTec: 0.79 W/(m²K)
Improved insulation value due to absence of steel.



» “TROCAL 88 is high-tech.”

All these things are inside the window of the future.

TROCAL 88 incorporates the latest technology based on extensive research and development activities. It has a number of groundbreaking innovative features.

One is the universal modular concept. It allows you to inexpensively compile your own personal TROCAL 88 window to reflect your personal requirements and preferences, from design to insulation properties. And, thanks to smart installation methods, your window company can install TROCAL 88 windows safely and cleanly. Finally, coordinated connectors and profiles for inside and outside window sills guarantee perfect results.





» “I can relax when it’s quiet.”

Soundproofing with TROCAL 88.

Enjoy peace and quiet with TROCAL 88. The high level of soundproofing excludes annoying noises, even when the building is located on a busy street. This is achieved with a 7-chamber design and a large reinforcement chamber in the profile, innovative seal technology, soundproof glazing and professional installation.

- Soundproofing glass with a thickness of up to 58 mm can be used
- Satisfies the highest soundproofing requirements.



» “Technology has to provide me with security.”

Burglary protection with TROCAL 88.

Burglary figures continue to rise dramatically. TROCAL 88 has anti-burglary fittings for the effective protection of you and your family. The system is designed for simple and cost-effective adaptation to your individual security needs.



- For windows up to resistance class RC 3 (WK 3).
- Designed for anti-burglary fittings.



» Your benefits with TROCAL 88.

“It deserves to be called the window of the future.”



Optimum heat insulation.

TROCAL standard windows are passive house compatible.



Long-term value.

Durable quality and eco-friendly PVCs sustainably enhance your property's value.



Individual design.

Streamlined and linear profiles in a wide range of colours with plain coloured, metallic, wood texture or aluminium covers.



High stability.

Optimally dimensioned steel reinforcements provide perfect window statics. With AluClip Pro the aluminium cover performs the function of steel reinforcements.



Effective soundproofing.

Excellent noise protection with high quality functional glass panes.



88 mm.

Perfect for new buildings and for buildings with sophisticated architecture or energy concepts.



Excellent burglary protection.

Perfect for incorporation of security fittings and anti-burglary features.



Optional ventilation.

TROCAL has an optimised ventilation programme to ensure the perfect indoor climate.



Perfectly sealed.

3 seal levels and the innovative rebate gaskets keep draughts, dust and rain out, and deliver optimum heat insulation.



Convenient operation.

Designed to incorporate the very latest fittings technology for easy opening and closing. Concealed fittings are also possible to meet the highest requirements of aesthetics.



More flexibility.

TROCAL 88 is the complete window and door system based on a modular concept and efficient upgrade technologies, so it can be flexibly adapted to your requirements.



Simple care.

Easy-to-clean, high quality surfaces.



TROCAL 88 innovations.



1 High functional reliability.

The maximum-dimensioned steel reinforcements guarantee high functional reliability and enable the windows to be used for window walls and wing doors of up to 2.5 m in height.



2 Perfect multi-chamber design.

The profile geometries are designed with optimum isothermal characteristics, calculated with the latest methods, for outstanding heat insulation and soundproofing values and optimum profile stability.



3 Glazing options.

The deep glass rebate permits the use of triple glazing, special functional glass or balustrade panels up to 58 mm thick.



4 Seals.

The three seal levels – with a centre gasket – and the innovative sash rebate seal guarantee excellent protection against impact rain, optimum windproofing and outstanding soundproofing.



5 Professional installation.

The windows can be installed with steel dowel pins, classic mounting anchors or with a dowel chamber and a special patented dowel adapter.



6 Securely mounted fittings.

The load bearing parts with several profile walls and additional thickening are connected with special screw pins in the main load bearing zones.



Inserted insulating parts.

The heat insulation values satisfy passive house requirements and can be further enhanced with additional insulating parts – without any detrimental effect on the statics for large sashes and glass surfaces.



You can't see the technology inside a window just by looking at it. To reveal it, you have to look inside the profile. TROCAL 88's technology is the most advanced window technology available. It has an innovative multi-chamber design, three seal levels and optimised stability are just a few impressive examples of the innovative features incorporated in the new system.



“Where can I find innovative doors?”

» TROCAL 88 doors with pioneering designs.

The TROCAL 88 range also includes front doors, side doors, balcony and patio doors and parallel side-and-tilt doors. It's a one-stop opportunity to harmonise design and technology.

The TROCAL 88 residential doors add a distinctive feature to your home and offers maximum burglary protection for your safety and security. Diverse surface, colour, decorative and functional glazing options, door panels and additional features ensure that future guests will always feel welcome when they walk through a TROCAL 88 door.



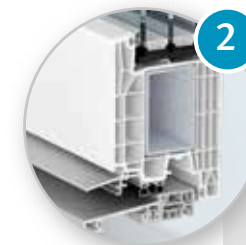
The modern TROCAL 88 door range.



1

Attractive design.

Linear, recessed design with the perfect profile proportions.



2

Perfect multi-chamber design.

The profile geometries are designed with optimum isothermal characteristics, calculated with the latest methods, for outstanding heat insulation and soundproofing values and optimum profile stability.



3

High functional reliability.

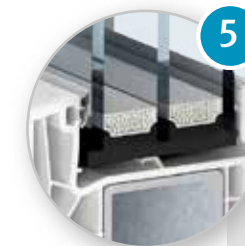
The maximally dimensioned steel reinforcements and welded corner connectors guarantee reliable function and higher static stability.



4

Seals.

Double seals and barrier-free thresholds with thermal break ensure a perfectly tight fit.



5

Glazing options.

The deep glass rebate permits the use of triple glazing, special functional glass or door panels up to 58 mm thick.



6

For extreme installation situations.

Aluminium weather boards and a rebate pad set provide additional protection against driving rain.



7

Professional connection.

The threshold connectors ensure perfect fit and a tight seal between the frame and the threshold.



Variability.

The inward and outward opening residential door system is optionally available with aluminium covers.

Details of the TROCAL 88 door range.

TROCAL 88 door systems incorporate many special technical features. They guarantee high security, excellent heat insulation, outstanding soundproofing and very stable statics. A TROCAL 88 door is always the right decision.



» “This is the best room climate we’ve ever had.” Automatic fresh air supply for controlled air exchange.

Buildings will be highly insulated in the future so that they use less energy and protect the climate. But when you have a highly insulated living environment, you need the right ventilation to sustain the perfect air moisture level balance and prevent mould from forming. At the same time, the ventilation has to minimise heat losses. TROCAL ventilation systems offer you an intelligent, fully automatic ventilation solution from TROCAL.

The ventilation mechanism is concealed in the frame rebate where it is barely visible, yet extremely effective. It ensures controlled air exchange without the need for manual ventilation or a power source.



The ventilation systems from TROCAL also have an automatic wind pressure adjustment and of course meet the requirements of the the Energy Saving Ordinance (EnEV) as well as DIN and EU standards for driving rain tightness, noise protection and the living space ventilation.

- Intelligent, self-regulating ventilation system without power source.
- Minimises air moisture levels to reduce the risk of mould forming.
- Promotes controlled air exchange.
- Ventilation grilles prevent insects getting inside.
- Conforms to the German Energy Conservation Ordinance requirements (EnEV).
- Impact rainproofness and air penetration compliant with DIN and EU standards.



TROCAL 88 offers you many different design options.



» “I like colour in my life.”

In the future, there will be a vast diversity of architectural styles. Aesthetic lines and exclusive-looking materials – plus the new window systems – permit the incorporation of both modern and classic features to give each building its own unique character. There are many fascinating surfaces available for both white and coloured window profiles. The entire laminate colour range offers a choice between wood textures, plain or metallic colours on the outside –with neutral white on the inside – or foil on both sides.



» PVC and aluminium combinations with TROCAL 88.

If you prefer the look of aluminium but don't want to do without the excellent heat insulation and soundproofing properties of PVC, we've got just the thing for you! TROCAL 88 unites the advantages of both materials. AluClip, AluClip Pro and AddOn are the three innovative material combination options.



AluClip.

The aluminium cover combines elegant aluminium design with an almost unlimited choice of colours and the optimum heat insulating values of the modern TROCAL 88 PVC profile system.



AluClip Pro.

The functional aluminium cover AluClip Pro performs the static function that is usually achieved with a steel reinforcement inside the sash profile. So, with AluClip Pro, you don't need that steel reinforcement. This also improves the window's heat insulation properties.



AddOn.

The AddOn aluminium compound sash has a modern design with optional shutter system and sunshade. This provides maximum integrated comfort and convenience, and the additional glass pane improves heat insulation and soundproofing.



Classic white.



Plain coloured.



Wood textures.



Metallic colours.



» Environmental protection and sustainability with TROCAL 88.

TROCAL 88 has such an advanced design that with optimal material use it achieves maximum insulation values and functions very reliably.

Also, absolutely no lead has been used to stabilise the plastic. Instead, an environmentally friendly calcium-zinc based stabiliser has been used. And, on the subject of recycling: at the end of the product lifecycle, we make components for new windows from old ones. This recycling initiative ensures a sustainable closed-loop material cycle.



- Make a personal contribution to reducing CO₂ emissions with products that deliver passive house heat insulation in the standard version.
- Optimised and resource conserving use of materials.
- Eco-friendly, lead-free stabilisers with the greenline label.
- Closed material loop through professional recycling.

“The future needs people who think ahead.”

profine GmbH

TROCAL Profilsysteme

53839 Troisdorf

Germany

Phone: +49 2241 9953-0

Fax: +49 2241 9953-3561

Internet: www.trocal-profile.de

E-mail: info@trocal-profile.de



TROCAL®

That's my window.