



TROCAL[®]
That's my window.

TROCAL 88+.
The measure of all things.

The measure for modern building.

» Size is not a value in itself.



But it can provide the basis for a unique jump ahead in quality and boost to performance – just as with TROCAL 88+, the new profile generation for PVC-U windows.

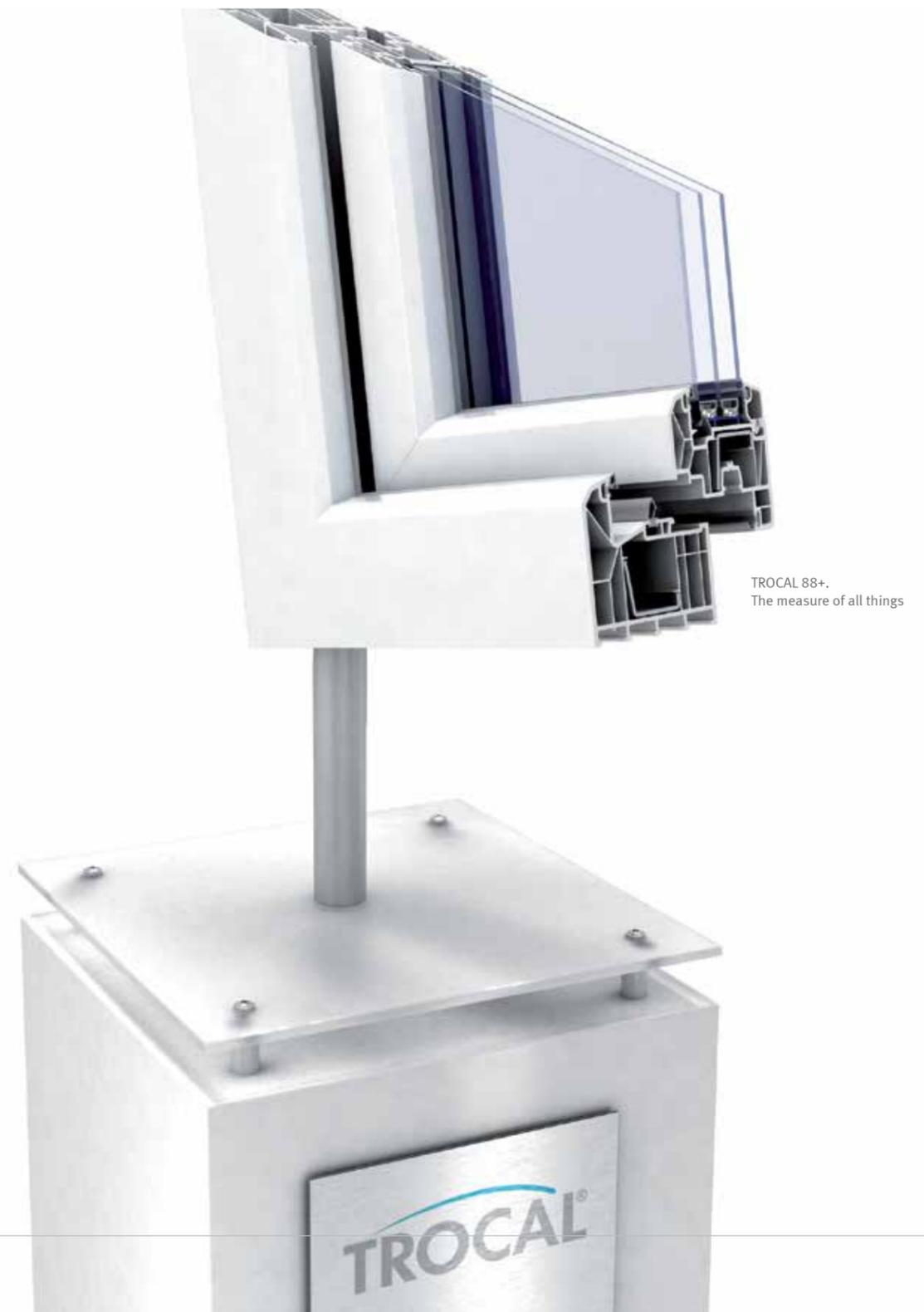
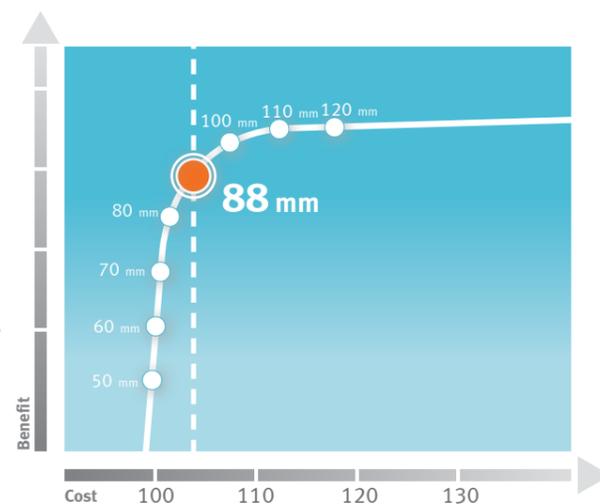
The optimal building depth of 88 mm for PVC-U window profiles means above all this: embarking into new dimensions of building. It is aligned to the design oriented demands of modern architects, the ideas of building owners appreciating the aesthetic, and the requirements of the future when windows will be expected to perform to the maximum possible extent.

TROCAL 88+ is the measure of all things for high demands and for a superiority that can scarcely be matched even by larger installation depths.

Improvements to physical properties via the window profile's installation depth come up against their efficiency and sustainability limits at the 88 mm threshold.

Effort: increase to production effort based on a 60 mm window system (= index 100).

Benefit: improvement to a window's physical properties generated by the installation depth of the PVC-U profile (here improvement to thermal insulation).



Technology and design at the highest level.



» TROCAL 88+ standard.

Our new premium window system TROCAL 88+ fulfils the requirements of aesthetics and quality oriented building owners who wish an elegant window design and expect functional properties that can provide the greatest possible level of comfortable living. This innovative system provides architects with an attractive range of design options for creative building.

» Enhanced thermal insulation with optimal thermal properties.

■ U_f value 1.0 W/(m²K).

■ Consistent six chamber technology carried not only by the profiles but on all functional levels. The chambers are dimensioned for the optimal thermal insulation.

■ Enhanced U_w values, less condensation, and greater surface temperatures for greater cosiness. Slender visible sight lines for plenty of incoming light.

■ Three sealing levels with thermo centre seal and innovative sash rebate gasket ensure good tightness against driving rain, the optimal windproof properties, and superior sound insulation.



» Reliable robustness and enormous structural integrity.

■ Windows secured in place through special dowel chambers in the weather protected section.

■ Low maintenance owing to arrangement of the window hardware in the weather protected section behind the thermo centre seal.

» Greater space and stability for sound insulation and security.

■ 88 mm system depth for maximised sound insulation.

■ Wide 24–54 mm glazing range for triple and special functional panes.

■ Backlocked and supported locking plates for excellent protection against forced entry.

The new window generation.



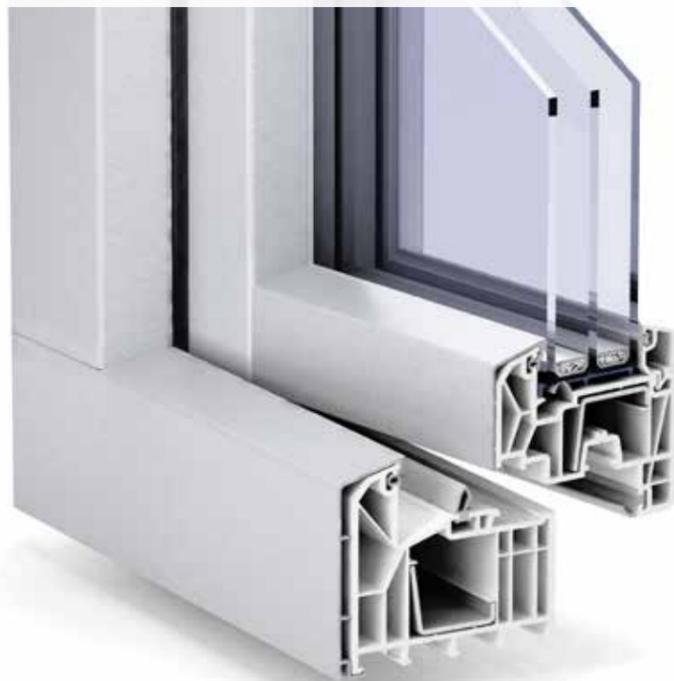
» Enhanced thermal insulation with optimal thermal properties.

- U_f value 1.1 W/(m²K).
- 88 mm / 93 mm installation depth in AluClip.
- extraordinary thermal insulation compared with aluminium windows.
- aluminium look on the outside, White PVC on the inside.
- high quality design based on classical butt joined aluminium panels.
- unlimited colour schemes and refining techniques available.



» TROCAL 88+ AluClip.

A new and unique window generation, an intelligent combination of aluminium and PVC-U advantages. On the outside, the aluminium panel offers limitless possibilities in colour design, whilst on the inside, PVC-U profiles ensure the optimal thermal insulation, reliable functionality, and low maintenance.



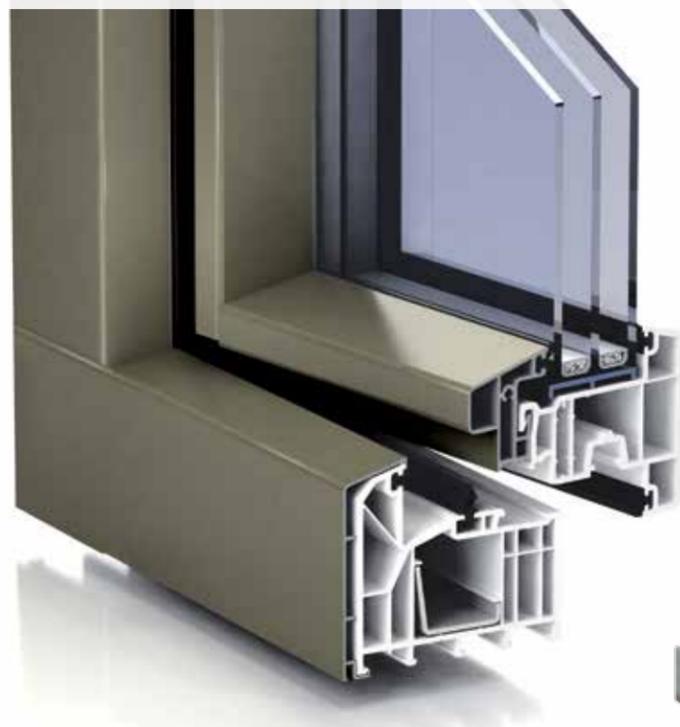
» Reliable robustness and enormous structural integrity.

- Windows secured in place through special dowel chambers in the weather protected section.
- Low maintenance owing to arrangement of the window hardware in the weather protected section behind the thermo centre seal.

» Greater space and stability for sound insulation and security.

- 88 mm / 93 mm AluClip system depth for maximised sound insulation.
- Wide 24–54 mm glazing range for triple and special functional panes.
- Backlocked and supported locking plates for excellent protection against forced entry.

The best of each.

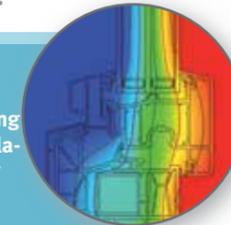


»» TROCAL 88+ AluFusion.

Besides the familiar functions of an aluminium cover, the special features include in addition the sliding connection between the functional aluminium and PVC-U sash profiles and the absent glazing bead. The aluminium enters into a unique bond with the PVC-U profile. The ceremony for the 2009 Austrian environment award "Daphne – Spirit of Environment" conferred the distinction of Excellent Project on TROCAL AluFusion.

»» Enhanced thermal insulation with optimal thermal properties.

- With a U_f value of 1.1 W/(m²K) TROCAL 88+ AluFusion is setting new standards in thermal insulation – in times of rising energy costs.
- Elegant aluminium design with offset or semi offset sash contour.



»» Enormous stability.

- The aluminium profile takes over the static functions, so steel reinforcement in the PVC-U profile is needed only in special cases.
- Full face window walls with facade look
- Hinged balcony doors up to 2.6 m (also in colour).
- Elements up to 3.5 m in height without coupling profiles, also for colour elements.



»» Superior sound insulation.

- The superior sound insulation properties of PVC-U profiles are enhanced even further with TROCAL 88+ AluFusion (sound R = 45 dB).

»» Unique design.

- Various window types of virtually any form in the colour of your choice – with TROCAL 88+ AluFusion there are no limits to your creativity.



Passive house windows in the modern design.



» Excellent thermal insulation values.

- Passivhaus certified by Dr Wolfgang Feist.
- Slender profile sight lines for the greatest possible passage of light and maximised extraction of solar energy.
- High rigidity and torsion resistance promoted by bonds transmitting forces between the window sash and glazing.
- Full face window walls – sashed doors up to 2.5 m high.
- Complete recyclability of materials separated in the inserted polystyrene thermal insulation parts.
- Double chamfer for elegant play of lines.



» TROCAL 88+ Passivhaus.

TROCAL 88+ Passivhaus heralds a new generation of PVC-U window profiles – with intelligent insulation technology, a large installation depth, and a slender profile sight line. Or put in other words: an elegant look, ideal proportions, and efficient solar gains. Never before could windows for passive houses be built with such beauty and perfection. From this day on extremely slender profile sight lines will be defining the visual appeal of a passive house – the dawn of a new era.

Zertifikat
Passivhaus geeignete Komponente
für kühl gemäßigtes Klima, gültig bis 31.10.2012

Kategorie: Fensterrahmen
Hersteller: profino, TROCAL Profilsysteme
Produkt: TROCAL 88+Flügelverschiebekonstruktion

Folgende Bauteilkriterien wurden für die Zuerkennung des Zertifikates geprüft:

Mit $U_{f,w} = 0,70 \text{ W/(m}^2\text{K)}$ und bei einem Fenstermaß von $1,23 \text{ m} \times 1,48 \text{ m}$ ergibt sich:

$U_{f,w} = 0,80 \text{ W/(m}^2\text{K)} \leq 0,80 \text{ W/(m}^2\text{K)}$

Einzelwert der Einbauelemente erfüllt das Fenster folgende Bedingung, vorausgesetzt der Einbau erfolgt wie im Detailbild angegeben bzw. freigelegt, gleich- oder höherwertig.

$U_{\text{Raumseite}} \leq 0,85 \text{ W/(m}^2\text{K)}$

Folgende Rahmenkennwerte wurden ermittelt:

	U-Wert W/(m ² K)	Breite mm	V _g m ³ /m ² K	U _g W/(m ² K)
Absandrahmen	0,76	135	0,000	0,78
Seitlichprofil	0,76	115	0,000	0,78

*Thermisch weniger hochwertige Absandrahmen, insbesondere solche aus Aluminium, führen zu höheren Wärmeverlusten am Gestänge und zu geringeren Teilgeräuschwerten.

Weitere Informationen siehe Detailblatt

www.passiv.de

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Dr. Wolfgang Feist
84209 Darmstadt
GERMANY

Passivhaus
Effizienzklasse

passivhaus
certified
component

passivhaus
certified
component

Passivhaus
geeinigte
Komponente
Dr. Wolfgang Feist

» Passive house windows in the modern design.

To date complex demands for extreme thermal insulation have been decisive factors in the appearance of window profiles, especially on the passive house. With ultra modern window technology, contemporary design, and a perfected underlying concept we have managed to harmonise extreme demands.

Residential door – systematically.



»» TROCAL 88+ residential door system.

You will experience the high quality of TROCAL residential doors in your daily routine. The particularly deep lock offset ("backset") of max 55 mm ensures the greatest level of comfort and ergonomics for every opening cycle.

+ »» Best thermal insulation values.

- The innovative multichamber profile system TROCAL 88+ exhibits outstanding thermal insulation properties and provides the space needed for high thermal insulation door panelling and functional glazing.

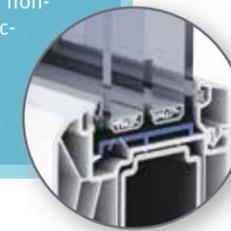
+ »» Barrier free building under DIN 18025 with enhanced sound insulation.

- The threshold system of the TROCAL 88+ door features a genuine second sealing level within a threshold height of only 20 mm. The threshold system is installed completely on a thermal break and so prevents condensation.



+ »» Stability and reliability in every detail.

- Stability in the form of perfectly designed reinforcement profiles and welded non-positive corner connections. Protection against forced entry can be configured to individual wishes and needs.



+ »» Unlimited design potential.

- The TROCAL double chamfer design lends the residential door its distinctive look. The DecoStyle colour programme provides wood grain and modern colour laminates. With its intelligent mix of PVC-U and aluminium TROCAL AluClip presents unlimited design potential.



The best decision for thermal insulation.



» TROCAL 88+ Passivhaus

Residential doors on the passive house level.

The innovative passive residential door system exhibits outstanding insulating properties. TROCAL places very great value not only on a perfected product technology, but also on an immaculate visual appeal. The characteristic feature of the system is intersash panelling that forms a bond transmitting forces between the residential door sash and the residential door panelling.



+ » Best thermal insulation values.

- The innovative multichamber profile system TROCAL 88+ exhibits outstanding thermal insulation properties and provides the space needed for high thermal insulation door panelling and functional glazing.



+ » Barrier free building under DIN 18025 with enhanced sound insulation.

- The certificated residential door features a threshold system with thermal break that exhibits a genuine, continuous second sealing level. This assures a high level of tightness, also against driving rain, in a threshold only 20 mm high.



+ » Stability and reliability in every detail.

- Stability in the form of perfectly designed reinforcement profiles and welded non-positive corner connections. Protection against forced entry can be configured to individual wishes and needs.

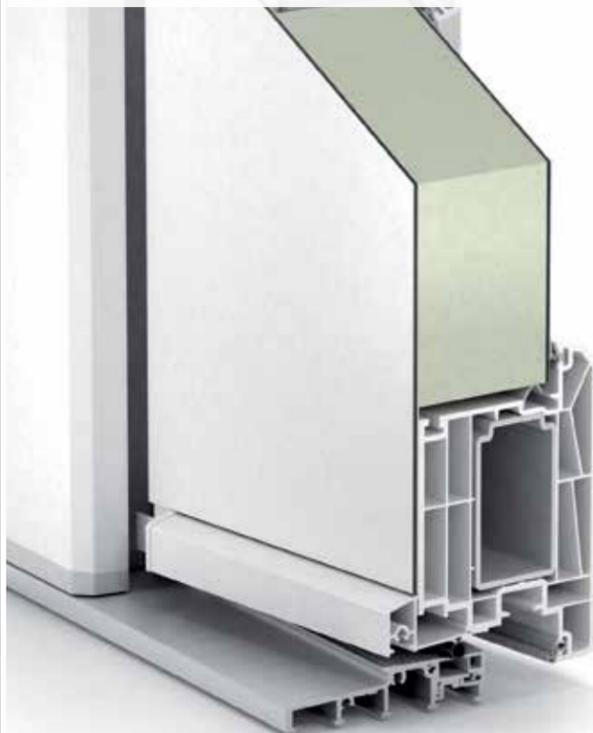


- » Passivhaus certified by Dr Wolfgang Feist.
- » U_d value 0,74 W/(m²K).
- » 88 mm installation depth.
- » Virtually unlimited design potential.
- » Intersash design.

Design & stability in a new dimension



In cooperation with: **RODENBERG** 
GESICHTER EINER TÜR



» TROCAL 88+ – Intersash door panelling.

The residential door system provides all that is needed for high quality, inward opening residential door systems, including the modern construction depth of 88 mm.



» Best thermal insulation values.

- Elegant and modern look.
- Perfected look on the inside as well – without glazing beads.
- Panelling up to 64 mm thick for outstanding thermal insulation, U_d value = $0.77 \text{ W}/(\text{m}^2\text{K})^*$
* calculated value as per DIN EN 10077-2 based on element size 1100 x 2100 mm
- Any position for push handles and glass panelling.
- Aluminium weather bar and rebate pads for tightness against driving rain.
- High strength from allround bonding.

Zum Patent
angemeldet

Patent EP 2 034 119 A2

flügelüberdeckende
Türfüllung



Following this trend of modern residential door panelling, the profine Group has developed and patented an innovative solution for attaching intersash door panelling (EP 2 034 119 A2). This intersash door panelling can be combined with the extensive panelling range provided by the exclusive partner Rodenberg for a multifaceted range of design variants.

Innovative ideas for a breath of fresh air.



»» TROCAL AirMatic 88+

The ventilation element with self-regulating air flow ensures that the passage of outdoor and indoor air is adequately metered for constant basic ventilation even when the windows are closed. And this without draughts and without appreciable energy losses. TROCAL AirMatic, installed in the upper, inside section of the centre seal system, is virtually invisible and therefore a tidy solution on all sides. When the wind pressure increases on the outside, the flaps close automatically, sealing the window. The system is also suitable for retrofitting in existing windows.



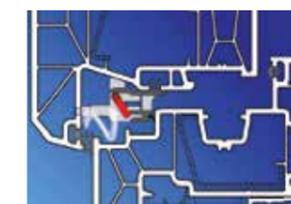
»» Air supply – systematically.

There are a large number of cases where the conventional ventilation methods are inadequate, e.g. when somebody is home only rarely. This also applies to weekend and holiday homes. Here the TROCAL ventilation system AirMatic provides for fresh air – also without active ventilation.

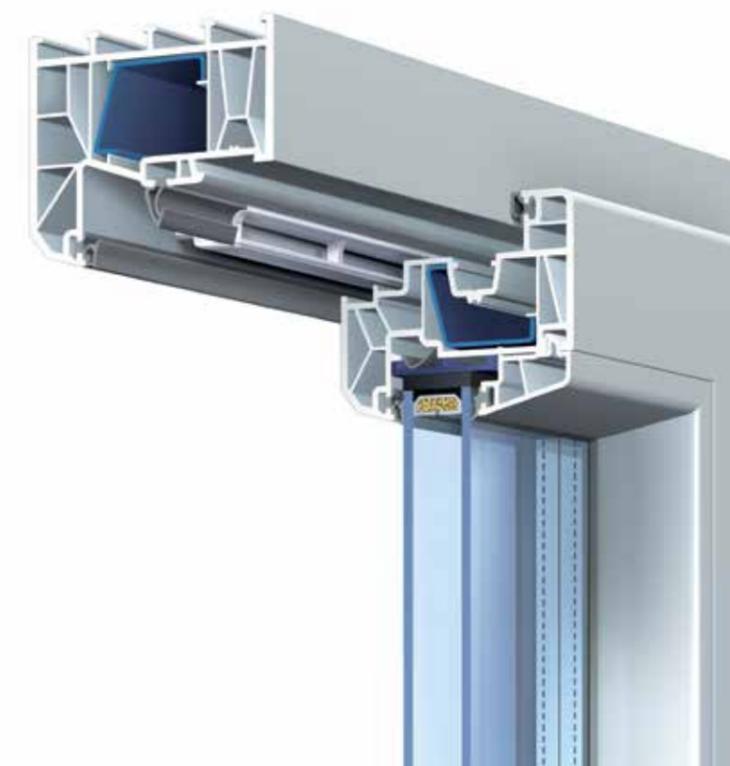
The TROCAL ventilation system AirMatic is the perfect solution for obtaining a healthy indoor climate at all times, even when the windows are closed. It is also ideal as a retrofit.



Open: air supply



Closed under wind action.



Freedom of design.

Wood grains – embossed surface



Mountain oak
similar to Delivery-No.
2052 090 – 167



Golden Oak
similar to Delivery-No.
2178 001 – 167



Black Cherry
similar to Delivery-No.
3202 001 – 167



Dark oak
similar to Delivery-No.
2140 005 – 167



Walnut
similar to Delivery-No.
2178 007 – 167



Cherry Blossom
similar to Delivery-No.
3214 008 – 195



Dark oak ST
similar to Delivery-No.
2140 006 – 167



Streaked douglas
similar to Delivery-No.
3152 009 – 167



Rustic Cherry
similar to Delivery-No.
3214 007 – 195



Dark oak FT-F1
similar to Delivery-No.
2052 089 – 167



Mountain pine
similar to Delivery-No.
3069 041 – 167



Irish Oak
similar to Delivery-No.
3211 005 – 148



Oak rustique
similar to Delivery-No.
3149 008 – 167



Oregon 4
similar to Delivery-No.
1192 001 – 167



Siena PR
similar to Delivery-No.
PR49233



Bog oak
similar to Delivery-No.
3167 004 – 167



Macore
similar to Delivery-No.
3162 002 – 167



Sapeli
similar to Delivery-No.
2065 021 – 167



Sierra
similar to Delivery-No.
2167 009 – 167

Metallic laminates



Metbrush Silver
similar to Delivery-No.
F 436-1002



Metbrush Platin
similar to Delivery-No.
F 436-1004



Metbrush Quartz grey
similar to Delivery-No.
F 436-1005



Metbrush Anthracite grey
similar to Delivery-No.
F 436-1006

Single colour laminates, smooth



Agate grey
similar to Delivery-No.
7038.05 – 083



Signal grey
similar to Delivery-No.
7004.05 – 083



Signal grey
similar to Delivery-No.
7015.05 – 083



Anthracite grey
similar to Delivery-No.
7016.05 – 083

Single colour laminates, embossed



White
similar to Delivery-No.
9152.05 – 168



Cream white
similar to Delivery-No.
1379.05 – 167



Agate grey
similar to Delivery-No.
7038.05 – 167



Grey
similar to Delivery-No.
7155.05 – 167



Concrete grey
similar to Delivery-No.
7023.05 – 167



Basalt grey
similar to Delivery-No.
7012.05 – 167



Quartz grey
similar to Delivery-No.
7039.05 – 167



Anthracite grey
similar to Delivery-No.
7016.05 – 167



Brown maroon
similar to Delivery-No.
8099.05 – 167



Chocolate brown
similar to Delivery-No.
8875.05 – 167



Black brown
similar to Delivery-No.
8518.05 – 167



Moss green
similar to Delivery-No.
6005.05 – 167



Dark green
similar to Delivery-No.
6125.05 – 167



Wine red
similar to Delivery-No.
3005.05 – 167



Dark red
similar to Delivery-No.
3081.05 – 167



Brilliant blue
similar to Delivery-No.
5007.05 – 167



Cobalt blue
similar to Delivery-No.
5013.05 – 167



Navy blue
similar to Delivery-No.
5150.05 – 167

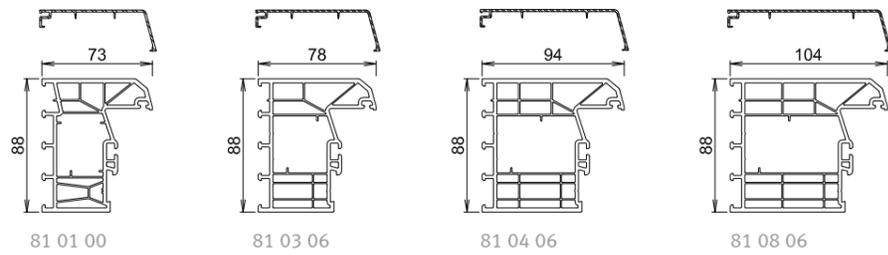


» Wide range of colours at a glance.

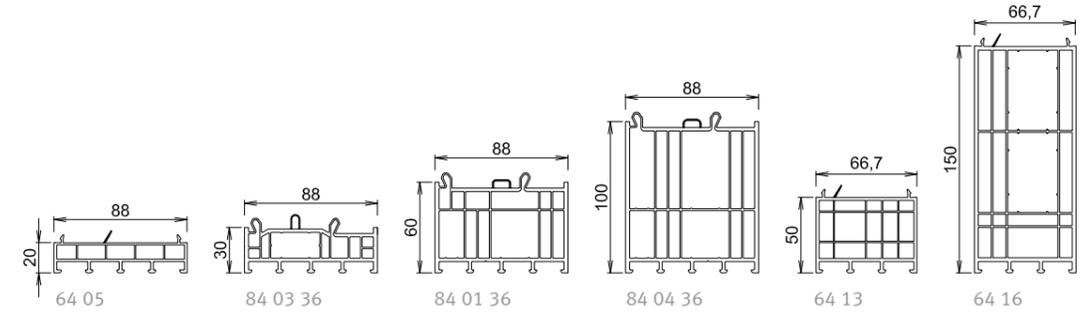
The TROCAL laminate system lends windows an all new look that harmonises elegantly with any architectural style. We can offer you a wide range of modern wood grain and colour laminates with either structured or smooth surfaces.

System survey.

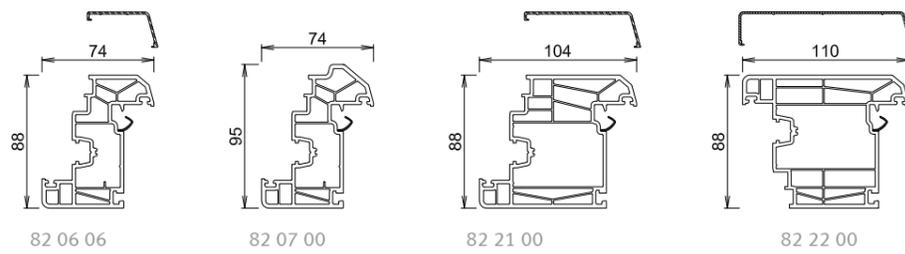
» Outer frames



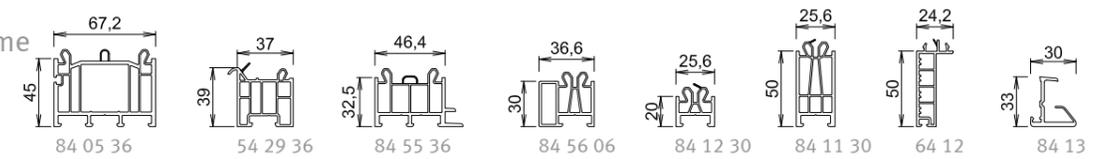
» Extensions



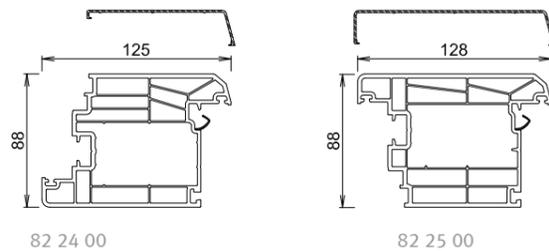
» Sash profiles



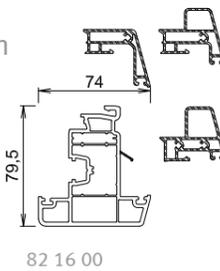
» Odd leg frame profiles



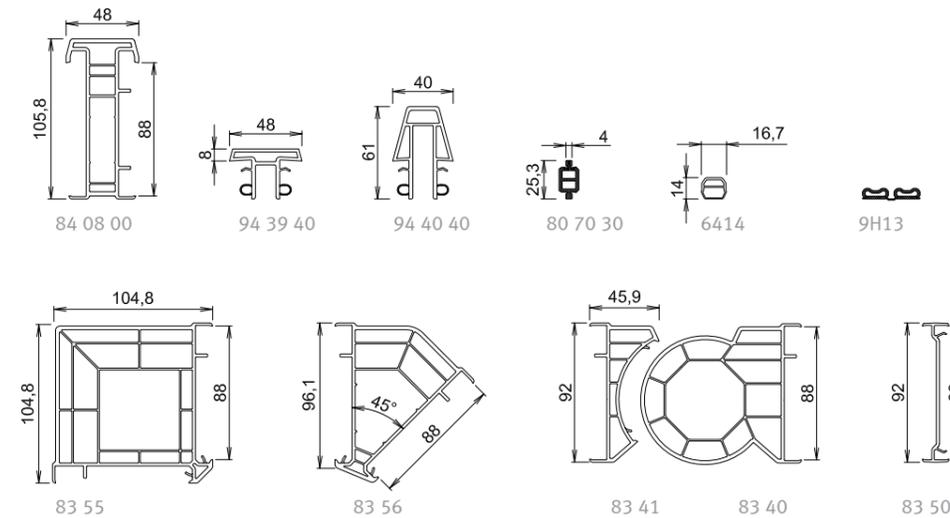
» Residential door sash



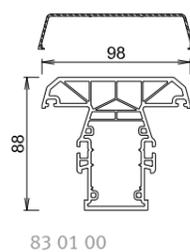
» AluFusion sashes



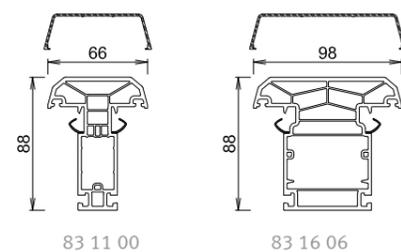
» Coupling profiles



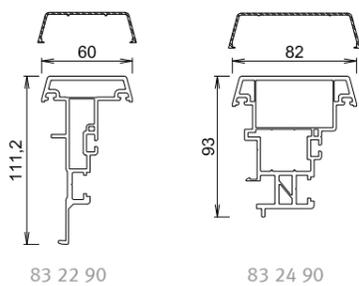
» Transoms/mullions



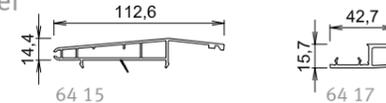
» Sash rails



» Floating mullion profile



» Roller shutter ancillaries



TROCAL 88+

* Expected, please request current delivery dates!

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profine GmbH

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