

Roto Inside

Customer and partner information | Issue no. 50 | 07/2022

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Roto Safe H | H650
**For greater comfort
and safety**

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Roto Glas-Tec
**Certified quality
for reliable glazing**

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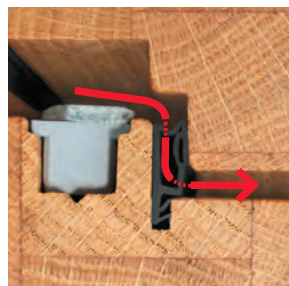
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Diffusion-open Deventer
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Letting windows breathe

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Versatile. Durable. Economical.
**Roto Patio Lift – now also
for PVC Lift&Slide systems**

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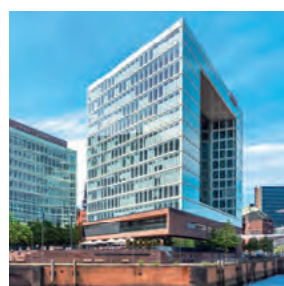
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**Working together,
growing together**

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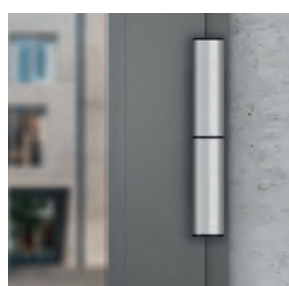
Efficient and easy to install
**Roto AL Designo STS:
concealed hardware to meet
the highest standards**

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German made
**At home anywhere
in the world**

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New in the Roto Solid B range
**Slim butt hinges with
integrated adjustment
mechanism**

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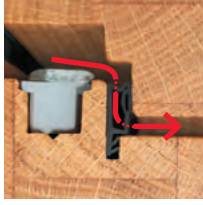


ELA opening restrictor for
Turn-Only windows
**Certified as a retainer with
Roto AL and Roto AL Designo**

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■ **Seals**
Deventer
Patented diffusion-open
gasket lets windows
breathe

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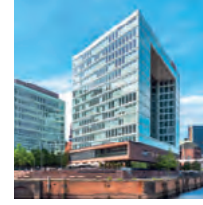
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■ **Door**
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■ **Aluvision**
**At home anywhere
in the world**
Perfect advice with reliable
tailored hardware systems

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Suitable for doors with a sash height of up to 3000 mm: the Roto Safe H | H650 lever handle-operated multipoint locking system

Roto Safe H | H650

For greater comfort and safety

■ **Door** The Roto Safe range includes **key- or lever handle-operated, mechanical-automatic multipoint lockings and electromechanical versions. The portfolio is continuously being adapted in line with changing market requirements. With this in mind, a range of lever handle-operated door locks has recently been improved once again.**

Roto Safe H650, the new version of the multipoint locking system, which is ideal for main, apartment and back doors made from all frame materials, meets high standards of functional safety. The further developed main lock is the primary focus here. It ensures greater reliability, security, stability, operating convenience and ease of installation.

Robust and weather-resistant

The maximum lever handle force, which has been increased from 15 kg to 20 kg, is of crucial importance here. Firstly, this ensures that the main lock continues to function at a high level in the long term. Secondly, this makes it robust and resistant to changing weather conditions. Roto is the only manufacturer to offer a lock with a maximum permitted lever handle force of this magnitude. The operating convenience has also been improved thanks to the increased efficiency.

The corrosion resistance of the Roto Safe H650 achieves class 3 in accordance with EN 1670 – this feature is also crucial for external doors in regions with extreme weather conditions. All surfaces of the hardware are scratch-resistant and impress with a high-quality appearance in the long term.

Roto backs up the system's quality and performance promises with a ten-year performance warranty for the multipoint locking system, including the main lock and all other components.

Individually scalable burglary protection

The additional locking versions available for the Roto Safe H650 system make it possible to create locking solutions entirely based on a customer's individual security requirements. E and V cams offer basic security functions. Combination lockings with power wedge and bolt meet the demand for increased burglary

inhibition. Using them makes the multipoint locking compatible with RC 2 or even RC 3, depending on the system. Roto Safe H650 with combination lockings has already received SKG** certification.

Easy to install and couple

The noticeably simpler coupling with the Roto NX Tilt&Turn hardware ensures fast, straightforward installation. With E and V cams, the Roto Safe H650 multipoint locking is available in a three-part version for maximum flexibility in production. The sound-absorbing whisper latch can be turned around when installed. It can easily be pulled forwards to remove it if required, making simple conversion possible.

The new Roto Safe H650 multipoint locking therefore guarantees true added value in many regards for door manufacturers and end users alike.



Reliably functioning in any weather conditions: the main lock of the Roto Safe H | H650 with maximum lever handle force of 20 kg. The sound-absorbing whisper latch can be turned around when installed.



➤ **Overview of the Roto Safe door lock range**

www.roto-frank.com/en/safe

In conversation



An interview with Marcus Sander, CEO of Roto Frank Fenster- und Türtechnologie GmbH

Roto Inside: Mr Sander, how do you think the first few months of this year have gone?

Marcus Sander: We got this year off to a very good start. The first quarter was positive from an economic standpoint. However, we have been experiencing dramatically spiralling transport, raw material and energy prices for a few months now. This have left the European and the world economy in a challenging situation on the whole due to factors such inflation, goods shortages and supply flow problems.

Roto Inside: How is Roto Fenster- und Türtechnologie responding?

Marcus Sander: We are keeping a very close eye on the situation. Our customers are in the same boat as us – despite the challenges that have been persisting for months, we have managed to achieve excellent performance. Our delivery capability remains at a consistently high level. This is appreciated on the markets.

Roto Inside: How do you maintain your delivery performance?

Marcus Sander: We can rely on our globally networked production structure and timely, multi-stage material stockpiling system. In this context, we are also actively addressing aspects of procurement which relate to risk management. The question is: How can we strike a balance between local and global when it comes to ensuring we have a secure supply of goods to purchase in the long term? Finding the correct answer to this question has a direct impact on our delivery capability. Our production model is of critical importance here. It follows Lean principles and ensures the greatest possible flexibility. Our 15 production plants mean that we can produce goods

where they are needed. Emerging developments are incorporated immediately into our material, production and product availability planning. To sum it up, our delivery performance is the result of our operational excellence, paired with the opportunities and possibilities that have been unlocked by digitalisation. Sales, Logistics, Procurement and Production form a unit and use a diverse range of instruments such as our CRM system. There is also close and regular communication between all persons involved. Customer requirements are always our top priority.

Roto Inside: Can you predict how the next few months will shape up?

Marcus Sander: I’m neither able nor willing to give predictions. But what I can do instead is make a promise to our customers: We produce high-performance functional hardware technology and implement perfect business processes in terms of quality, cost, time and sustainability. At the same time, we achieve this through trust in our company’s performance and prove our viability as a reliable partner.

Roto Inside: What does this mean in specific terms for hardware solutions, by way of example?

Marcus Sander: Our window and door technology is positioned in the context of urban living spaces – smart, reliable, convenient to use and universally available. One example of this is the modular principle behind our Roto NX Tilt&Turn hardware system, whereby fewer parts are used. Not only does this help make our customers’ production processes as economical as possible, more than anything else it opens up many different possibilities for format, security equipment, operating convenience and user comfort in all building types. The same is true of our sliding solutions and Door products.

Roto Inside: How do your customers find out about product-related topics?

Marcus Sander: We use the Roto City to provide this type of information, among other tools. For over a year now, our Sales department has been using this digital communication platform to present our products virtually. The feedback we have received from customers indicates that they also want customer visits and hybrid event concepts. And it goes without saying that, alongside our social media channels and traditional press work, we also use our customer magazine for this purpose.

Roto Inside: Can you give us an insight into the future plans for the company?

Marcus Sander: To further expand our capacity, we are investing in product manufacture and logistics around the world, with a focus on North America, Europe and Asia. This allows us to maintain our delivery performance at a consistently high level. Quality is our top priority when it comes to product manufacture. Our zero-defects concept and the associated product excellence are critically important here. Digitalisation is taking on a greater role in this context through KI-based monitoring and measurement methods.

Roto Inside: You said that you will implement perfect business processes in terms of sustainability too. Could you explain this in more detail?

Marcus Sander: In specific terms, expanding our capacity means growing our production infrastructure. Greater capacity and more space requires more supply resources. We’re planning to use sustainably produced energy from the outset here. This reflects what we’re already doing in practice. For example, we have been using waste heat and solar energy in our production processes for years, are planting vegetation on the roofs of our production facilities, have been operating our own hydro-electric facilities for decades and use eco-friendly packaging for our goods. The issue of sustainability is of great significance to us. We will continue to take consistent action and invest in this field.

Roto Inside: Those are ambitious plans. You get a big thumbs up from our editorial team in our 50th issue of Roto Inside. An important anniversary!

Marcus Sander: Thank you. We look forward to providing our customers with continued support. Part of this involves keeping them up to date – through Roto Inside.



↗ **Digitalisation: topics, objectives and people behind the projects**

www.roto-frank.com/en/digitalization

Wilhelm Frank Foundation (WFS)

Promoting global exchange and networking

■ **Company** By establishing the Wilhelm Frank Foundation in 2020, the descendants of company founder Wilhelm Frank are aiming to promote intercultural exchange and international understanding. With the new foundation and the Elfriede Frank Foundation, established back in 1991, the families who own the company have launched two foundation projects.

Wilhelm Frank, expert and inventor of the first Tilt&Turn hardware to be industrially produced, had deep roots in his home of Baden-Württemberg, yet was renowned for being very open-minded. The Wilhelm Frank Foundation unites these two values under his name and sees itself as a platform for exchanging local experiences and knowledge at global level.



Elfriede and Wilhelm Frank

Elfriede Frank Foundation
In what is now its 31st year, the Elfriede Frank Foundation in Leinfelden-Echterdingen provides rapid, unbureaucratic assistance to people in need. The co-founder of Roto Frank, who was committed to social issues throughout her life, expressed her strong connection to the community with the Foundation. The Foundation makes donations to families, individuals and charitable organisations every year.



↗ **An insight into the foundation and the winning entries in the competition “Open windows – What windows tell about my country”**

www.roto-frank.com/en/wfs



“Enable exchange. Realise ideas” – this is the motto of the Wilhelm Frank Foundation, established in 2020.

WFS Competition 2021
Last year, the WFS invited young Roto Frank employees and young people aged between 18 and 35 from outside the company around the world to explore the topic of “Open windows – What windows tell about my country”. COVID-19 made the internationally acclaimed competition very relevant. This is because the global pandemic made the significance of windows as an important connection between inside and outside very clear to many people.

The scope of the 20 entries received from the 28 participants ranged from regional stories about country-specific cultures through to draft ideas of possible future functions of a window. The winners of the two main prizes were from Poland and Germany. Participants from Brazil, Germany, Kazakhstan, Nepal and Hungary received recognition prizes.

Prof. Dr Isolde Geissler-Frank and Alexander Frank founded the Wilhelm Frank Foundation in 2020.



Diffusion-open Deventer gasket patented

Letting windows breathe

■ **Accessories** In 2009, the ift set out a key fundamental rule for constructing a window with optimal structural physics: “The central gasket must be more diffusion-open than the overlap gasket on the room side.”

It’s indisputable that these rule makes sense. But it’s remarkable, to say the least, that this issue had been largely ignored until that point.

Research project funded by ZIM

However, Deventer recognised the importance of this exact fundamental rule and launched a comprehensive research project back in 2014. This project, due to being highly relevant, received funding from the “Central Innovation Programme for Small and Medium-Sized Businesses” (ZIM) initiative. ZIM is a funding programme run by the German Federal Ministry for Economic Affairs and Climate Action.

Supported by:



on the basis of a decision by the German Bundestag

Revolution in the fenestration industry

Jürgen Daub explains that “we’re really proud that we managed to get our sealing profile ready for series production. This enables window manufacturers to comply with the ift’s requirement, which was first laid down over ten years ago.” His responsibilities include Research & Development at Deventer.

Used as a central gasket, the new diffusion-open sealing profile improves moisture removal in the hardware rebate in such a way that it can be described as a “true revolution in the fenestration industry”. Daub explains that mould growth in the rebate could be a thing of the past if the new profile type gains traction as a central gasket.

He describes a known issue: “Whenever mould growth is discovered, there is almost always a dispute about user behaviour and ventilation.” Daub continues, “of course, users don’t believe they are responsible for this. They are backed up by judicial decisions which state that it’s not reasonable to expect working people to ventilate rooms five times a day.” Legal proceedings imply ever more frequently that the building’s structure has to be checked in each individual situation. “This is intended to discover any issues with the building that could cause mould growth, which is difficult and laborious, as anyone working in this field knows.” In times when facades are being retrofitted with insulation, which entails an increased risk of condensation forming in the window, proceedings against landlords and window manufacturers could become more frequent and complex.

So tightly sealed – so cold

Daub explains why the risk for window manufacturers is increasing: “Well-insulated homes without an automatic ventilation system have a problem: if there is a large temperature difference between inside and outside, moisture is drawn from the room air and forms condensate on the coldest barrier of the building envelope. Nowadays, this is often in the window rebate.” The ift and many people working in the field were aware of this as far back as 2009. But it wasn’t easy to find a solution to this problem.

The key question

How does a sealing profile have to be designed so that a window is as tightly sealed as necessary yet so that moisture can diffuse as soon as the air humidity outside the building is lower than in the rebate? “Deventer found the response to this question while working on the research project,” reports Daub.

“Our patented solution is here. Now we have to bring it to market together.”

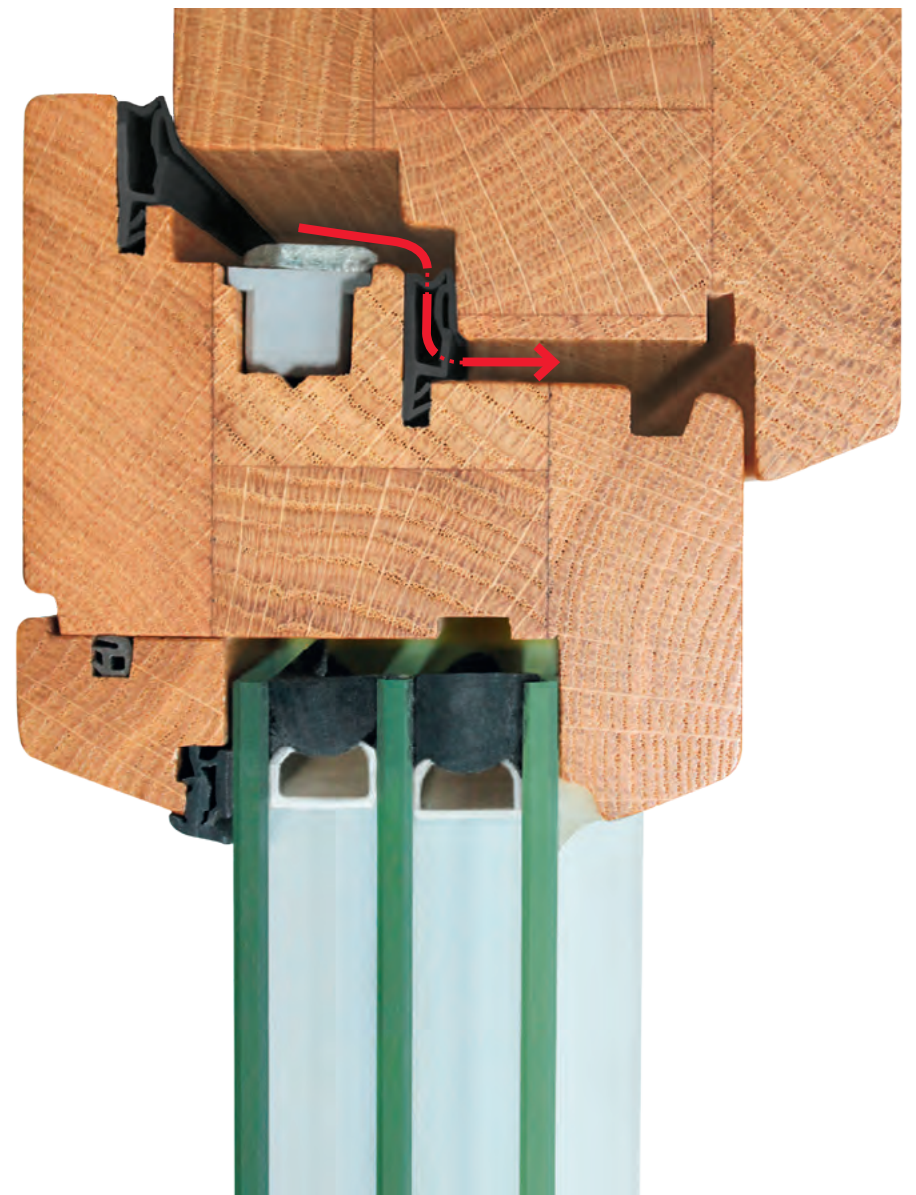


Illustration of the function: inside more tightly sealed than outside. The dashed line marks the diffusion-open areas of the gasket.

The “critical moisture value”

Mould can form when the air humidity on a surface is around 80% or more for three days. “After this time, fruiting bodies are formed, which look like a black bloom.” There is therefore a “critical moisture value”, as Daub explains.

This is why Deventer simulated the effect of the seasons, temperature variation and moisture formation in various window profiles using different gaskets on climate difference test rigs at the Fraunhofer Institute in Stuttgart. The result – with an innovative new, specially processed gasket, it was possible to reduce the amount of moisture in the hardware rebate by up to 12%. It’s no exaggeration to say that this changes everything.

Faster drying thanks to diffusion-capable gasket

“We had to ensure that our new gasket would keep the air humidity in the window rebate below 80% at all times if possible. This is the case when it’s possible for the moisture in the rebate to dry at all times, except for very wet weather conditions.” The company was therefore looking for a type of central gasket that enables rebate ventilation provided that the natural requirements for diffusion are met.

The challenge then was to find a version capable of diffusion without compromising on resistance to rain, wind and sound. Daub is pleased that “our research project achieved the best conceivable outcome, as we definitively specified the properties of the sealing profile and managed to prove its effectiveness in a laboratory.” The innovation that was developed has since been protected by a patent and presented to a select few window manufacturers.

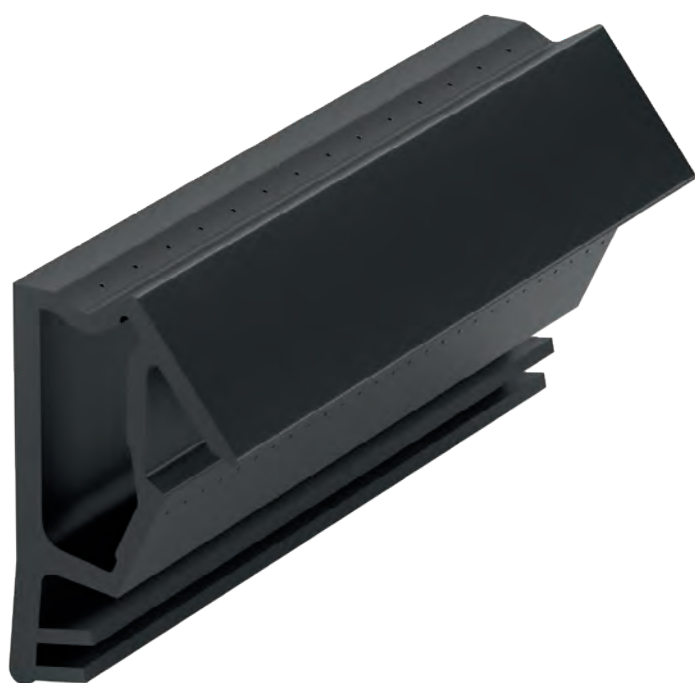
Deventer is able to produce this innovative new TPE sealing profile but must first procure high-quality tools and systems so it can reliably deliver the volumes required by large manufacturers. “This investment will pay off for the entire industry, if the demand is there. If window manufacturers have the confidence to explain to customers that they will have to pay a little bit more for this real added value, Deventer is ready to take on the role as a reliable supplier to them.”

Greater reliability for old and new buildings

Manufacturers who want to protect their customers and end users from unpleasant discussions about “black spots” in windows should, in future, equip their windows with a central gasket that is actually capable of diffusion. To conclude, Daub highlights the fact that “in future, most windows will continue to be installed when renovating buildings which are not adequately ventilated by an automatic ventilation system. It is therefore wise for our industry to use optimal components to manufacture building elements which allow end users to live and ventilate in a way that suits their lifestyle.” It’s also indisputable that the use of windows which are correctly sealed with regard to structural physics is recommended in new buildings too.



Jürgen Daub,
Head of Application
Technology,
Research and
Development,
Deventer GmbH



Deventer sealing profile developed specially to provide a diffusion function.

Versatile. Durable. Economical.

Roto Patio Lift – now also for PVC Lift&Slide systems

■ **Aluminium | PVC** The Lift&Slide hardware with the name Roto Patio Lift has been an indispensable all-rounder in the aluminium fenestration industry for a long time now. Manufacturers of PVC building elements are now also able to benefit from its strengths. It offers vast improvements in comfort, appearance and burglary protection in all systems with a sash weight of up to 400 kg.



Large glass surfaces and building elements let a lot of light and fresh air into living areas if they can be easily opened using modern hardware technology. The Lift&Slide hardware with the name Patio Lift offers excellent operating convenience. Fabricators benefit from this versatile hardware of the best Roto quality in many ways at once.

For aluminium and PVC standard and Slim profiles

Patio Lift is suitable for many standard and Slim profiles. Using round connecting rods has now been made even simpler thanks to a modified mount on the clever 2-in-1 roller unit. Versions for groove widths of 16, 18 and 22 mm are now available for aluminium and PVC profiles. Patio Lift is always intuitive, simple and quick to process. The Lift&Slide hardware offers certified security in systems with a sash width of up to 3000 mm and a sash height of up to 3100 mm.

Smooth operation, even with heavy elements

Even in high weight classes up to 400 kg, the hardware impresses thanks to its high-quality

roller unit technology which ensures exceptionally smooth operation and ease of use. The central components of the roller units are made from stainless steel and the ball bearing rollers are made from innovative, especially high-quality PVC. This gives the hardware maximum durability.

Extensive range of accessories

By integrating optional components from the extensive Patio Lift product range, Lift&Slide systems can be precisely tailored to the customers' requests and needs. Simply using drilling protection, an anti-jemmy device and a lockable handle makes this hardware compatible with RC 2. The door espagnolettes are prepared for mounting profile cylinders as standard.

A locking pin for night ventilation makes it possible to ventilate the room without draughts. Dampers already integrated in the espagnolette as standard offer protection in the event of rebound of the handle and ensure greater safety when operating heavy sashes weighing more than 300 kg. At the same time, they improve ease of assembly in production.



High-quality roller unit technology ensures outstanding running properties, extremely quiet operation and maximum durability of the hardware. The photo shows the 200 Slim roller unit.



➤ **Roto Patio Lift: hardware for versatile use in Lift&Slide systems**

www.roto-frank.com/en/patio-lift



So simple, so elegant

Not only does the look of the window rebate impress customers with the highest aesthetic standards; the optionally available DesignLocking espagnolette ensures a premium appearance and greater comfort. The locking cam is located on the espagnolette side and does not protrude into the access area. The DesignLocking strikers are integrated in the frame for a flush, attractive appearance.



All DesignLocking strikers are integrated in the frame for a flush, attractive appearance.

Corrosion protection class 5 and higher

Even the standard version of Patio Lift offers long-lasting quality, as this hardware complies with corrosion protection class 5 in accordance with DIN EN 1670 and achieves durability class H3 in accordance with EN 13126. “Stainless steel Plus” roller units are available for regions with more stringent corrosion protection requirements. These ensure that the system functions correctly in the long term, even in coastal areas. A salt spray test over 1000 hours verifiably confirmed this.

Uniform design throughout the whole home

If uniform design is important to a customer, not just for profiles but for all window handles in their home, the Roto Line range easily meets all of their requirements. The Patio Lift modular system includes recessed grips tailored to the design of this handle line and large handles for conveniently operating even very tall and wide Lift&Slide elements.

Fabian Maier, responsible for the market launch of the latest innovations in the Patio Lift product range, emphasises that “the ‘Patio Lift’ Lift&Slide system is now even more versatile for use in a wider variety of applications. Whether the systems are slimline and lightweight or wide, tall and heavy, whether the profiles are standard or Slim, made from aluminium or PVC – Patio Lift brings operating convenience, an attractive design and security into every home.”



Round and flat connecting rods can be mounted on the roller units for the 300 kg and 400 kg standard versions.

Version	Permitted for the following sash weights in kg				Roller unit installation space		Corrosion protection roller unit		Espagnolette versions		Dampers
	Max. 150	>150–200	>200–300	>300–400	Groove depth in mm	Groove width in mm	Basic	Plus	Basic Locking	Design Locking	Integrated in the espagnolette
150 Slim					30	16					
150 Slim					30	18 / 22					
200 Slim					30	16					
200 Slim					30	18 / 22					
300					42	22					
400 Slim					30	18 / 22					
400					42	22					

More versatile than ever: the Patio Lift hardware product range from Roto for Lift&Slide systems made up of aluminium and PVC profiles



Roto AL Designo STS – the fully concealed hardware with new installation technology and the very best protection against corrosion: a building element equipped with this Tilt&Turn hardware continues to function reliably in the long term, even in buildings less than 100 metres away from the sea.

Efficient and easy to install

Roto AL Designo STS: concealed hardware to meet the highest standards

■ **Aluminium** Concealed hardware is popular for aluminium elements too. With Roto AL Designo STS, a version is now available that meets even the highest standards of design and corrosion protection. What's more, this new Tilt&Turn hardware is especially simple, reliable and fast to process thanks to its installation technology.

The turning curve of the new Tilt&Turn hardware prevents collisions when opening a window sash or a ventilation flap, even with little clearance. The new Roto AL Designo STS remains concealed, even in very narrow profiles. Moreover, it can be used in flush systems.

It therefore complements the Roto AL Designo product range as hardware for very high aesthetic standards. But Roto AL Designo STS isn't just attractive from a design point of view; the hardware offers tangible advantages for processors, too.

Faster and simpler with mounting wedges
The mounting concept for sash stays and pivot rests using mounting wedges makes installation faster and simpler. No punched hole, which would potentially need to be predrilled, needs to be made in the groove base. The installer simply drives in a mounting wedge. This fixes the sash stay and pivot rest in place.

Matthias Nagat, Head of Aluvision Range Marketing and Product Adaptation, is convinced: "This type of especially simple and fast installation, as well as the wide range of applications of Roto AL Designo STS, contributed to its phenomenal success in Asia." The number of aluminium element manufacturers who switched over to the new concealed hardware surpassed expectations in just a short space of time.

Impressive quality which can be heard
Even inexperienced users will be able to recognise the redesigned scissor stay guide as a quality feature. A modified spring clip takes any potential play out of the system. A newly developed damping element prevents metallic contact between components. This reduces noticeable noises during operation. Nagat thinks that this high product quality can truly be "heard".



Roto AL Designo STS sash stay 370

and 2700 mm tall with a sash weight of up to 80 kg. The element's maximum opening angle is 100°. The new hinge side is compatible with all locking versions from the Roto AL modular hardware system.

The sash has a tilt depth of 130 or 150 mm as standard, depending on the sash stay selected. A tilt depth restrictor that is compatible with the sash stay can be used to limit the tilt depth to 100 mm. It can also be combined with various Roto opening restrictors.

Shooting star in profiles with groove version V.01
Nagat reports that planning engineers and manufacturers from other parts of the world are increasingly focusing on Roto AL Designo STS at the moment. Interest is growing wherever manufacturers of aluminium elements are faced with similar requirements.

"It is essential that a system supplier or a manufacturer is working with profiles with the suitable frame groove V.01 and that the planned elements don't weigh more than 80 kg. If these requirements are met, Roto AL Designo STS truly has a lot to offer, making it a very attractive hardware solution for modern aluminium elements in terms of cost-efficiency and appearance." Roto has invested in additional production capacity for the new concealed hardware, meaning that global delivery is now beginning.


"Roto AL Designo STS is probably the quietest concealed hardware that you can buy right now."

Best protection against corrosion
The Roto AL Designo STS punched components made from stainless steel make it the right choice, even for regions where hardware and windows are exposed to extreme weather conditions and exceptional loads, such as CO₂ or sulphuric gases. A building element equipped with this Tilt&Turn hardware continues to function reliably in the long term, even in buildings less than 100 metres away from the sea. The same applies to areas with high levels of emissions from exhaust air systems in heavy industry or the chemical industry.

Windows and ventilation flaps up to 80 kg
The new version of Roto AL Designo is suitable for aluminium elements up to 1300 mm wide



Roto AL Designo STS pivot rest



➤ **Installation video for Roto AL Designo STS**

www.roto-frank.com/al-designo-sts



Matthias Nagat,
Head of Aluvision
Range Marketing and
Product Adaptation,
Roto Frank Fenster-
und Türtechnologie
GmbH

New in the Roto Solid B range

Slim butt hinges with integrated adjustment mechanism

■ **Door** The Roto Solid B product range now also includes an additional clamp hinge version with the look of a butt hinge for aluminium main, back and balcony doors. They impress with new installation and adjustment features. And if that wasn't enough, to top it off, the new generation of hinges is good for the design of the main door.

Two versions with a narrow diameter of just 24 mm are available in the form of the Roto Solid B | 224 A two-part hinge and the Roto Solid B | 324 A three-part hinge.

	Version	Length	Sash weight	Opening angle
Roto Solid B 224 A	Two-part	155 mm	Max. 120 kg	Max. 180°
Roto Solid B 324 A	Three-part	223 mm	Max. 160 kg	Max. 180°

Both hinge types are easy to insert into the door profile and screwed in place immediately with a hexalobular socket screw. Preassembled, system-specific clamping blocks do away with the need for profile machining. The hinge is fixed in place simply with a 90° turn. The clamping block also turns. This saves time and money.

Simplified installation and adjustment

The new hinges make a door simpler to install and adjust because all adjustment mechanisms are housed inside the roller. This means that integrated, continuous height and lateral adjustment is possible when the door is closed. There is no need to unhinge the door, as the adjustment movement is visible. It is also not necessary to undo the fixing or clamping screws in the baseplate to adjust the hinges. Continuous lateral adjustment is possible from -2.2 mm to +2.2 mm, and height adjustment from -1 mm to +5 mm. The gasket compression can be adapted from 0 mm to -1.0 mm.

Good for the design

The Solid B butt hinges seamlessly blend into the design of premium aluminium doors. The internal adjustment mechanism prevents both gap formation and offset outlines. Regardless of the adjustment, the appearance is always the same, maintaining the sleek look of the butt hinge. Roto offers powder-coated hinges as well as hinges with different anodised surfaces.

Corrosion protection and durability in accordance with DIN

High-quality materials such as extruded aluminium and galvanised steel also ensure perfect product quality and corrosion protection in accordance with DIN EN 1670: class 5. The 200,000 opening cycles achieved in accordance with DIN EN 1935 confirm the reliable durability of the new butt hinges. A high-quality, self-lubricating synthetic bush means low maintenance over a long service life.

Suitable for RC 2 and RC 3

Both hinge types are suitable for doors in burglary protection class RC 2 and, depending on the version, also for those in class RC 3. The test for SKG** burglary inhibition is in the pipeline.

Tom Vermeulen, Head of Sales Door & Door Innovation, reports promising feedback from the market: "System suppliers immediately recognised that incorporating the new butt hinges into their range can offer benefits to their customers, and have identified which benefits these are. My team is therefore optimistic that we will be able to support many users in 2022." The Roto Door sales team is prepared to assist door manufacturers with switching over to Roto Solid B.



Tom Vermeulen,
Head of Sales Door & Door Innovation
Roto Frank Fenster- und Türtechnologie GmbH

Butt hinges in two versions for aluminium main, back and balcony doors: continuous height and lateral adjustment when closed; internal adjustment mechanism prevents gap formation and offset outlines, fast and simple installation thanks to preassembled clamping blocks:



Roto Solid B | 224 A: two-part butt hinge up to a sash weight of 120 kg



Roto Solid B | 324 A: three-part butt hinge up to a sash weight of 160 kg



↗ Overview of the Roto Solid door hinge range

www.roto-frank.com/en/solid



Roto Glas-Tec

Certified quality for reliable glazing

■ **Accessories** In 2008, the European market leader for glazing blocks, Gluske-BKV, was integrated into the Roto Group. Since then, the name Roto Glas-Tec has been a byword for quality and reliability in window production. This is ensured by consistently high product quality, as well as a close relationship with customers and all-encompassing services.

They are perhaps the most underrated components in windows' entire structure: glazing blocks. As the only connection between the frame and glass edge, they play a pivotal role, as they divert the load of the glass weight into the frame, ensure that the element functions correctly in the long term and hold the glazing securely in place.

Roto Glas-Tec offers glazing blocks for almost any design and requirement.



Decisive performance factors

The quality of the glazing blocks depends on their construction as well as the quality of the raw materials and production systems used. Inferior synthetic material that is not optimally processed will begin to show signs of wear more quickly. Chemical decomposition processes often occur if the material of the glazing accessories is not compatible with the edge composite sealing compound of the insulating glass. Both of these factors reduce a window's service life and can cause serious damage. In an increasing number of countries, users are refusing to accept this type of damage without complaint.

The custom solution for every building element

Only glazing blocks from producers who guarantee a consistently high level of quality are able to meet the expectations of a window manufacturer and their customers. Roto Glas-Tec is a particularly extensive range of products and accessories for the safe, correct glazing of windows and balcony doors. The glazing blocks in the range ensure that building elements with different frame designs, glass thicknesses and support conditions function correctly and have a long service life. Ift Rosenheim verified the pressure resistance of the entire product range as set down in Technical Guidelines (TR) 3 of the Glazier Trades.

Strong glazing blocks – robust windows

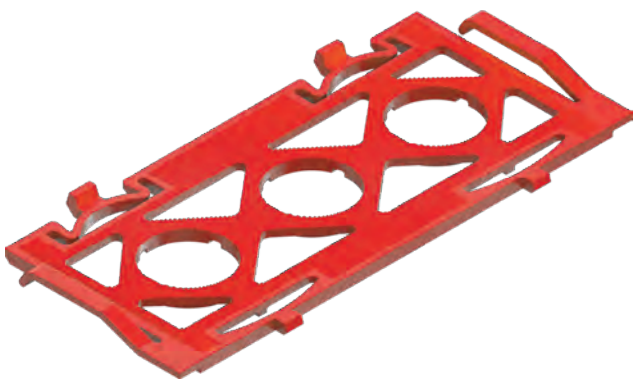
All glazing blocks from the Roto Glas-Tec range are ageing-resistant and temperature-resistant, stable under continuous pressure, compatible with many edge sealing compounds, and impress with a high load-bearing capacity.

Depending on the requirement, Roto recommends glazing blocks with an integrated ventilation channel and different profile leg systems. Glazing blocks overcome the challenges posed by very heavy glass or delicate special glass with a flexible glass supporting surface and, if necessary, an additional stainless-steel insert.

Clampable compensating blocks

Profile-related compensating blocks constitute another element of efficient glazing methods. They create the indispensable base for tested block material, ensure a level supporting surface, help with ventilating the rebate area and with load transfer, and can be clamped in the rebate area. Glazing tools complete the range of accessories.

A profile-related, clampable compensating block as a level supporting surface for glazing blocks helps with ventilating the rebate and transferring loads.



Test service for material compatibility

Alongside project-specific advice and the highly regarded 32-page reference work entitled "Glazing Guide", Roto offers users of the Glas-Tec range an important test service: edge composite sealing compounds and laminated safety glass films are tested for their compatibility with certain glazing blocks according to ift regulations in an in-house laboratory. Using incompatible materials may cause damage to window sashes, glazing and sometimes even the entire structure. A test offers protection against liability-relevant risks.



➤ **Roto Glas-Tec: customised solutions for safe glazing**

www.roto-frank.com/en/glas-tec

Visual Fenster AG, Switzerland

Lift&Slide systems in a class of their own

■ **PVC** The three partners of Visual Fenster AG, a new company founded in 2020 in Switzerland, have known each other for almost three decades. They want to secure a permanent position in their country's construction industry by selling Lift&Slide systems that are in a class of their own. Production began in Easter 2021.

In their careers, Roland Sax, Muhamet Krasniqi and Burim Kastrati without exception are dedicated to the production, sale and installation of building elements. When they founded Visual Fenster AG, based in St. Gallen, they therefore knew exactly what they needed to offer in order for their production operations to be profitable in Switzerland, for Switzerland.

Muhamet Krasniqi, Burim Kastrati and Roland Sax,
Partners at Visual Fenster AG
(from left to right)



Opportunity recognised and utilised

A massive change in the supplier structure in Switzerland motivated the experienced window professionals to establish their company: "Architects and investors were losing an increasing number of manufacturers who were ceasing to operate due to a lack of profitability. However, they still wanted to buy from Swiss companies and were looking for direct service from a producer." This created a gap in the market, which Visual Fenster was able to serve with an economically optimised production process and small, very flexible systems.

Sliding systems better than ever

Lift&Slide systems in particular are very popular in Switzerland. Sax knows the reason why: "In a country where more people live in a flat rather than a house that they own, it is entirely logical that space-saving sliding has become the preferred opening type." He adds that the quality of sliding systems is impressive nowadays. "The good systems are intuitive to use and are really tightly sealed."

To be able to produce not only good but premium-quality Lift&Slide systems, Visual Fenster examined the ranges offered by various profile and hardware manufacturers in detail. "The decision to finally build our own factory together was, of course, a clear signal to potential suppliers of who they were dealing with," Sax smiles as he remembers. "With the three guys from Visual Fenster, suppliers benefit firstly from a total of 80 years of industry experience and secondly from businessmen who only want the best." In the end, the decision was made to go with two partners who stood out through their economic robustness, impressive product quality and impressive commitment.

Swiss pioneer with VEKAMOTION and Roto Patio Lift

Sax is pleased that "being thorough when making our choice has truly paid off." From April to December 2021 alone, the team – which is still small – has sold, produced and installed around 500 VEKAMOTION



Visual Fenster specialises in large Lift&Slide systems.

Video showing Roto Patio Lift



For work you enjoy and efficient production: modern technology to make your life easier.

Lift&Slide systems with the Roto Patio Lift hardware. "We even produce more efficiently than manufacturers who only build a few Lift&Slide systems occasionally." Our colleagues recognise this and are buying more of our systems. We have already worked out an excellent division of labour with some of them." Sax reports that, when architects ask for aluminium or timber elements, he is happy to recommend quality-focused manufacturers who buy PVC or PVC / aluminium building elements from Visual Fenster in return.

Well-equipped for producing large formats

"It's no secret that our growth targets for the next few years are closely linked with the VEKAMOTION Lift&Slide system in particular." Visual Fenster chose the profile system and hardware so that an element would be stable and really easy to move, even with very large and heavy glazing.

Roto in demand as a full-range supplier

Sax describes how the three partners were enthusiastic when they identified Roto "as an optimal hardware supplier", adding:

"As soon as you see it, you know – Roto Patio Lift represents true quality."

The complaints handling process is very laborious and expensive for sliding systems in particular, which is why, for manufacturers, it is a good idea to choose extremely reliable components and systems.



Visual Fenster relies on flexible application engineering.

The new company Visual Fenster was also enthused by Roto as a true full-range supplier. "No matter what we're looking for, we'll find what we need in Roto's range, whether just in a few sets or even as a unique special solution." Whether it's Roto NX Tilt&Turn hardware for floating-mullion windows, security strikers and V cams for increased burglary protection or electronic main door locks – Visual Fenster can focus on a single partner and hardware supplier.

Inspiration guaranteed

Roto customer adviser Josef Lötscher is now discussing the use of Patio Inowa sliding systems with the three Swiss businessmen. "I'm certain that Visual Fenster will very soon have a use for this intelligent hardware." Sax nods and adds: "We have a greater interest in hard-

ware technology than others, and Patio Inowa has a lot to offer. Our good experience with Roto in the spring of 2021 also gave us the motivation to move forwards together."

Strong services right from the outset

Ultimately only a few weeks passed between the establishment of Visual Fenster AG and the start of production, during which time Roto had to take charge of preparing the article master data for the systems and automatic machines that had just been chosen. "And it went well because we were working with qualified and very dedicated people in Switzerland and in Leinfelden," believes Sax.

"That's how a partnership offers true added value."

Roto also succeeded in maintaining the delivery performance at a high level for almost all of the past year. "It's very important to us that our staff don't experience any unnecessary stress, for example because primary material is missing," emphasises Sax. "This is just as important when it comes to equipping our workplaces with the things that make our trade easier. Modern technology and good suppliers are required for what we want to achieve on a daily basis. In this regard, Roto supports our whole team."

www.visualfenster.ch



On-site support for the launch in April 2021: Roto specialist adviser Josef Lötscher, centre of photo.

Aradas UAB, Lithuania

A strong base in Scandinavia

■ **PVC** Young, social, confident and extremely focussed to customer service – this is how Lithuanian company Aradas describes itself. Founded in 2008, it has grown to become one of the largest manufacturers of PVC windows in the country in less than 15 years. Roto Inside spoke to CEO Ugnius Adomaitis.

From the very beginning, we started with state-of-the-art technology and comprehensive expertise, explains the 36-year-old businessman. Not to mention suppliers that the company deliberately chose from amongst Europe’s recognised brand-name manufacturers. “In the next step, we focussed on ensuring that we offer our target customers in Scandinavia first-class service,” reflects Adomaitis. Our dedicated team continues to make sure that our “strong base in Scandinavia” can keep expanding and developing.

Aradas exports 95% of its annual production, primarily to Norway, Denmark, Sweden and Iceland. Selected specialist dealers are responsible for supply. The manufacturer has new products tested and certified by independent institutes in Norway, Denmark, Sweden and Germany. “Put simply, we have to eliminate any doubt about whether we supply top-quality building elements,” Adomaitis says emphatically. He therefore also advertises strongly using the excellent reputation of his suppliers.

Doubling production capacity

The new, second Aradas factory is intended to start operating in 2023. The company has

invested around three million euro in a new hall and, once again, cutting-edge machinery. This will result the creation of around 40 additional jobs. “This also represents a huge leap forwards for us. Across both factories combined, we will be able to produce twice as many elements as we can today,” says the CEO excitedly. For him, it goes without saying that the second factory will also only work with the “best possible raw materials”. This includes hardware technology from Roto:

“Roto NX and the Designo hinge side are leading the way in terms of quality and function.”

In 2021, Aradas produced 35,000 windows, as well as 6000 balcony doors and main doors. This helped the company to achieve annual turnover of €11.5 million. By 2024 at the latest, this number should reach €18 million. This growth can continue to be generated primarily by PVC windows.

Making a market entrance in the Netherlands

In Sweden, Denmark and Iceland, demand for PVC windows has grown, albeit at the expense of timber windows, Adomaitis reports. However, he also sees potential for the company’s own range in the Netherlands. “This is why we are taking the leap and entering this market this year.” He has noticed that builders in



In Alytus, the new Aradas factory is taking shape. Mayor Nerijus Česiulis (left) and Ugnius Adomaitis (right), CEO and shareholder at Aradas UAB, are thrilled to see that construction is under way.

Scandinavia and the Benelux nations have similar taste in design features when it comes to windows. “Narrow profile views, windows in white, silver-grey and anthracite, as well as a minimalist hardware design.”

The CEO therefore has an optimistic outlook on the future of ARADAS on the Dutch market. “We are very excited to establish strong partnerships with dealers and carpenters in this country as well,” he explains. Currently, all signs indicate that the processes the company has optimised over the past 15 years of working with customers in Scandinavia will also be well-received in the Netherlands.

Growing trust

At the moment, 36% of all the windows made by Aradas are Tilt&Turn windows and this number is set to continue growing. Traditionally, the primary window designs in Scandinavia have been outward opening Top-Swing and Side-Hung windows. Gradually, however, word has spread that inward opening Tilt&Turn windows can also be extremely well-sealed – at least, that is what Adomaitis has seen happening. Roto and Aradas have both had a hand in this development. “The fact that we only offer Tilt&Turn windows with Roto hardware technology means that our dealers provide their customers with top-quality elements.”

At the start of 2022, the production facility in Alytus will be converted to produce Roto NX. The CEO is full of praise for how well Roto has prepared and advised the company throughout this process. Aradas has been given all the support and the Roto team has worked proactively, always placing the customer at the heart of its work. “We are now working with Roto NX and the Designo hinge side, which means we are optimally positioned on all markets for inward opening Tilt&Turn windows.”

In 2021, Aradas produced 35,000 windows, as well as 6000 balcony doors and main doors.



Increased rationalisation potential

On the production side of things, the company has been making good use of the potential for rationalisation that Roto NX has opened up. “For instance, we have been able to reduce our inventory in the production warehouse and, at the same time, produce windows with greater sash weights easily as standard products. Both developments represent real added value for us.” Adomaitis’ team also values the high-quality services, reliability and delivery accuracy provided by Roto. “We all feel that Roto has made a significant contribution to our process reliability.”

The Roto brand and, above all, the Tilt&Turn hardware from this partner have an outstanding reputation throughout Europe. “No matter how long it takes, we will strive to ensure that the Aradas brand name is synonymous with the same high quality,” he says, setting out one of the company’s goals. “That would be satisfying proof that we have done plenty of things right.” www.aradas.lt



Ugnius Adomaitis, CEO and shareholder at Aradas UAB



As a company, Aradas exports 95% of its annual production, most of which is delivered to Norway, Denmark, Sweden and Iceland. Almost 40% of all the windows made by Aradas are already Tilt&Turn windows and this number is set to continue growing.





➤ **Economical, safe, convenient, design-oriented: Roto NX at a glance**

www.roto-frank.com/en/roto-nx

ECN, Vietnam

Working together, growing together



For more than 16 years, the ECN team around General Manager Hoang Tien Manh (image centre) has been a constant in the Vietnamese construction industry.

■ **Company** Roto Window & Door Technology entered the Vietnamese market in the late 1990s and has shown promising growth since 2005. With the steady development in the following years, the representative office in Hanoi was established in 2010.

The aim was to better support local customers and grow together with Vietnam's emerging economy. In the 2010s, the market had not yet recovered from the two major crises. Budgets were cut for many construction projects. Due to the long trade tradition and favourable customs duties, it was easy for investors to source building products from China. The market became increasingly competitive with numerous competitors from Europe and America.

Nevertheless, the Roto team in Vietnam managed to establish a solid base in terms of technical support and delivery service. In the following years, Roto Vietnam gained a significant market share for high-quality hardware technology and at the same time built up a close relationship with fabricators. The hardware is used in windows and doors made of PVC and aluminium.

Partnership at eye level

A proverb says: "If you want to go fast, go alone. If you want to go far, go together." After expanding its business network in 2013, Roto Vietnam found in ECN a distributor with extensive knowledge of the local market. At that time, ECN had already been in the industry for more than 8 years. The company's core discipline: exploring business opportunities, especially in the window industry.

The extensive knowledge of the Vietnamese construction industry contributed significantly to ECN's successful business development in the construction business. "Just like Roto, we want to provide window and door customers with durable, reliable solutions. So why not work together and support each other in the best possible way?" is how the ECN management team describes their motivation for the partnership.

Firmly established in Vietnam

ECN has contributed significantly to the rapid development of the Roto brand in Vietnam. Nghia Le describes his company's mission:



"We introduce Roto to architects, developers, fabricators and leading property owners." In this way, ECN can access more business contacts every year and continue winning direct or indirect customers to use Roto products. In Vietnam, Roto is now established as a high-end brand with effective solutions and professional services, the ECN Sales Manager summarises his team's success.

Building hardware technology at your fingertips

It is the positive user experience that defines the value of a product. That is why the first Roto showroom was opened in Hanoi at the beginning of 2019. "Of course, we also want to talk directly to our customers ourselves, learn about their needs and understand what matters most to them. In this way, we can continue to optimise our products and services. Our goal is to make our customers and potential new customers feel safe when using Roto products," Roto Chief Representative and Regional Manager Phan Hong Duong describes his team's task. Several marketing campaigns had drawn the attention of homeowners to high-quality building elements in combination with Roto hardware technology. They would either contact Roto directly or pass on their desire for Roto solutions to their contractor.

Shared success firmly in sight

ECN and Roto work side by side for mutual success. Project examples range from the customer hotline to events and workshops with fabricators and architects. The presence in social media also plays an important role in raising awareness, especially in Asia. Here, according to the Chief Representative, Roto has "an impressive number of followers compared to other brands in the same category".



Regular working meetings are an integral part of the partnership between ECN, Vietnam, and Roto. The joint project spectrum ranges from the customer hotline to events and workshops with Roto hardware technology processors and architects.



The Roto showroom opened in Hanoi at the beginning of 2019 shows the full diversity of hardware technology.



considerable number of end users. "Our team and our customers are enthusiastic about the quality of Roto hardware technology, which is clearly different from other products on the market and contributes significantly to feeling good at home. We have received good feedback from our sales representatives across the country," comments Hoang Tien Manh, ECN General Manager.

"Higher standards, better values"

This ECN slogan explains well what the market needs. "We care about the community in which we live. That is why we not only value good products and business. It is also important to us that we work with trusted partners like Roto, with whom we share a common vision," says ECN Director Nguyen Trong Dung.

"Golden" future

Currently, Vietnam is in the "golden population structure" phase with around 54 million people of working age. This phase began in 2006 and will last until 2034. It is characterised by a booming economy and a growing number of wealthy households. Both companies, Roto and ECN, want to raise awareness for quality of life and the value of advanced technology. Both are well received by the young generation in Vietnam.

www.econtec.vn



Nghia Le,
ECN Sales Manager



Phan Hong Duong,
Roto Chief Representative and
Regional Manager
Roto Fenster- und
Türtechnologie
Vietnam

German made

At home anywhere in the world

■ **Aluminium** Around the world, the name Roto is a byword for innovative, tailored and reliable hardware systems which create added value for windows and doors. Four renowned manufacturers of aluminium facades and windows enjoy using the Roto Aluvision hardware product range and appreciate the support they receive from the Roto Object Business.



■ **France** With a building height of 170 m (200 m up to the top of the mast), France’s third-tallest skyscraper offers spectacular views of Lyon. The facade, Turn-Only windows and balcony doors of the “Tour Incity” office building are equipped with the Roto AL Designo fully concealed hardware. The building elements were constructed by Permasteelisa in Vittorio Veneto (Italy). (Photo above)

To complete their facade design and to prepare offers properly and quickly, architects and facade or window manufacturers need reliable statements about the planned window solutions at an early stage. This is why the experts from the Roto Object Business ensure that any outstanding issues are specifically addressed as quickly as possible. As a result, they make binding statements about technical feasibility and demonstrate alternatives for different demands.

Visualisation with prototypes

Visualising a hardware solution based on a prototype makes discussing possible optimisations simpler for the product that is later manufactured in series production, and accelerates the design process. For this purpose, the experts from the Roto Object Business produce samples of components by means of 3D printing. Requests for customised colours can also be realistically reproduced.

Tested and certified

In the Roto ITC, the company’s own, certified test centre in Leinfelden known as the “International Technology Centre”, window and hardware tests are performed for individual project solutions in compliance with national and international standards, in the proper manner. This also lays the foundations for tailored warranty extensions.

Training – logistics – information

The window manufacturer’s employees are trained during the initial production steps. In production, the flow of material and goods is adapted to the specific requirements of the relevant project. These services are also part of what the Roto Object Business offers. A customised logistics concept ensures short delivery times and on-time delivery during the production phase. Customer-specific labels and packaging help streamline processes and ensure reliability in the design process. Window manufacturers, facility management and builders are provided with a reference work to assist them with all hardware-related information about the property.

Since the expansion of the Roto Object Business in 2014, the specialists from this team have been providing their services for projects on all of the world’s continents. “Nowadays, it is therefore beyond dispute that Roto can be considered a highly respected and valued partner of many aluminium facade specialists around the globe,” reports Jordi Nadal, Head of Aluvision Sales.



Jordi Nadal,
Head of Aluvision
Sales, Roto Frank
Fenster- und Tür-
technologie GmbH

■ **Germany** The “SkyLoop” building was constructed in Stuttgart Airport City. Ed. Züblin AG, together with the FKN Group and profile developers HUECK and Roto, developed the facades which have a surface area of 20,000 m². The window elements are just 365 mm wide. All Roto AL Designo hardware components and an opening restrictor have been adapted accordingly. (Photo on the right)

■ **Italy** Living in a vertical forest – all this at the heart of Milan: the “Torre E” residential tower in the “Bosco Verticale” is 110 m tall and has 26 floors, while the “Torre D” residential tower reaches a height of 76 m and has 18 floors. Metra Aluminium Inc. (Brescia, Italy) equipped all windows and balcony doors, including those with a sash height of up to 3000 mm and a weight of up to 300 kg with Tilt&Turn hardware from the Roto AL range. (Photo on the right)

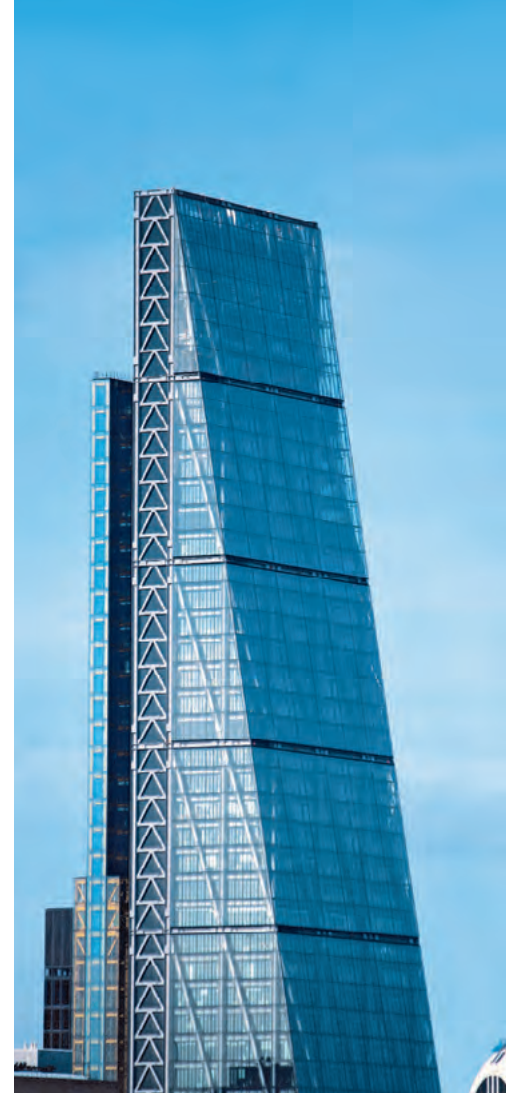


■ **Mexico** At 279 metres tall, the “Koi-Tower” in Monterrey with its 64 floors is the tallest skyscraper in Mexico and the third tallest in Latin America. The manufacturer, Aviso de Privacidad (Mexico City, Mexico), used the Roto FS Kempton friction stay for the outward opening windows. The manufacturer’s sliding systems were equipped with the Patio Inowa tightly sealed hardware. (Photo below)





■ **Germany** “Ericus-Contor” in Hamburg makes optimal use of a special plot of land with an oblique layout and unusual corners. The recess in facade, which acts as a window to the inner courtyard, is an eye-catching feature. WICONA / Hydro Building Systems Germany GmbH (Ulm, Germany) produced the facade and the ceiling-height aluminium Turn-Only sashes. Roto supplied hardware with integrated cleaning and maintenance functions, adapted to the profile system groove. (Photo below)



■ **United Kingdom** “The Leadenhall Building” in London, with its 48 floors, is nicknamed “The Cheesegrater”. The facade of the 225-metre-tall building slopes inwards by 10°. Yuanda Europe Ltd. (Basel, Switzerland) constructed the facade and windows. Roto helped with planning hardware for sashes up to 220 kg based on Roto AL. Concealed gas pressure springs assist with opening and locking the sash. A flush-encased gearbox with square pin and special escutcheon is used for emergency unlocking from the outside, for example for the fire service. (Photo above)



■ **United Kingdom** The Council on Tall Buildings and Urban Habitat (CTBUH) gave the “Best Tall Building” award to the “Newfoundland Tower”. CTBUH is a non-profit organisation made up of members who are interested in the future of cities (<https://www.ctbuh.org/>). Hydro Building Systems Germany GmbH (Ulm, Germany) produced 700 tightly sealed sliding systems for this property with the Roto Patio Inowa user-friendly, concealed hardware. (Photo above)

■ **United Kingdom** The “One Park Drive” residential, office and retail tower with its 57 floors is the “signature building” of the new 23-acre “Wood Wharf” site in the Canary Wharf area of London. Schüco International KG (Bielefeld, Germany) supplied components including 1000 tightly sealed sliding systems equipped with Roto Patio Inowa. (Photo above)



■ **United Kingdom** “The Zig Zag Building” for residential and commercial use was constructed in the heart of London, near the Houses of Parliament and Buckingham Palace. For German window manufacturer Josef Gartner GmbH from Gundelfingen, Roto developed special hardware based on AL for horizontally split sashes with concealed and integrated special locking for increased rebate clearance. (Photo above)



➤ **Roto Object Business: certainty in planning and implementing special aluminium solutions**

www.roto-frank.com/en/rob

50 issues of Roto Inside

A window to the world

■ **Company** The first issue of Roto Inside was published in 2006, instigated by Dr Eckhard Keill, who managed Roto Frank AG from 2005 to 2019 in his role as chairman of the board of directors. 14 reader reactions gathered for the 50th issue reflect the benefits that the customer magazine generates around the world. We would like to thank all of our readers for their growing interest over the years!

The current sole director of Roto Frank Holding AG sees Roto Inside as an expression of the company's focus on customers and the continuity that is typical of Roto. Dr Keill addresses readers and project managers in his adjacent welcome message.



The first edition of Roto Inside was published in February 2006.



➤ **Customer reports from practice**

www.roto-frank.com/en/references



Dr Eckhard Keill,
Sole Director,
Roto Frank Holding AG

In my first few months at Roto, I met customers on three continents and in many different countries. Everyone was full of curiosity wherever I went. They asked for news from the Roto organisation but also about which windows and doors are successful elsewhere. My impression is that people prefer Roto as a partner not least because the company acquires its expertise from collaborating with window and door manufacturers from almost everywhere in the world.

Based on this experience, I think that enabling knowledge to be regularly shared beyond borders and across seas is a service that generates real value. This is how the plan came about to publish a magazine showcasing manufacturers as well as window and door systems from different countries and cultures.

The readers played a major role in making the aforementioned magazine, “Roto Inside”, a success in the years that followed. Many of them have since contributed to an issue themselves and showcased their own company and their ideas. We owe them our heartfelt thanks for this.

Experiencing Roto “inside”

Besides showcasing successful partners and modern building elements, the magazine also always offers up-to-date information about the wide range of products available from companies that form part of Roto FTT, sometimes in great technical detail. Hardware, locks, glazing methods and sealing profiles – this is what Roto FTT represents and what Roto Inside provides information about. Incidentally, the magazine is available in up to 12 languages. It offers comprehensive details at

an early stage. This means that it also helps provide Roto customers with technical support.

We repeatedly see how the magazine is read very thoroughly, leading to follow-up questions. The sales team is more than happy to answer any follow-up questions. Roto proves itself to be a reliable partner with a long-term vision in the close interaction it maintains between communication and customer service.

Digitally connected communication and information
It has, in fact, already been over 15 years since the multi-person editorial team started to cultivate close links with national Roto companies. With the team’s active support, almost 300 reports have since been produced about customers in almost 50 countries.

Many members of the editorial team who are now in charge have been with us since back in 2006. I would also like to thank them from the bottom of my heart for their commitment and their inexhaustible openness to change. Not only have they created 50 issues of an outstanding magazine, they have also continuously modernised it along the way.

In addition to the printed format, Roto Inside has been reaching many readers through digital channels for some time now. This multiplied the magazine’s number of readers all at once. We began with a print run of 12,000 issues. It is now estimated that the magazine in PDF format now reaches three times this number of readers around the world. QR codes with links to supplementary documents or videos on the Roto websites offer further benefits for users. And this shows where we’re headed on this journey.

One click takes you into the world of Roto Inside, while the next one takes you to Roto City and another one takes you to product information or an installation video. We will focus on digital links in the world of Roto Window and Door Technology over the next few years, as this is what will create added value. Digitalisation is progressing, unlocking exciting opportunities for knowledge transfer. Let’s work together to create and benefit from these opportunities!



■ **Poland** “Roto Inside regularly features among the trade press that I read. The magazine contains a wealth of knowledge about new solutions and news, for example from trade fairs. The features on companies and their working methods are a real hit in the extremely dynamic times that we live in. I would like to congratulate the team on its anniversary and wish everyone involved all the best for designing the next fifty issues and beyond.”

Justyna Wnęk, Brand Manager, Petecki Enterprises Sp. z o.o.
www.petecki.eu

■ **Italy** “What’s our situation like? What’s the situation like on the Italian market? How do other window manufacturers overcome certain challenges? These are questions that we are constantly deliberating. Of course we read Roto Inside to find out all we need to know about products. But it’s also interesting to learn about developments in the various markets that are reported on. I like the magazine. The reports are easy to understand and the graphics are high-quality. The ability to immediately access further information on the Roto website by clicking on a link in the PDF on-screen is a practical feature. Digital linking of information will become increasingly important in future.”

Andrea Baggio, Head of Sales, I.S.I. Srl Industria Serramenti Italiana
www.isi-italia.it



■ **Australia** “About eight years ago I held a Roto Inside in my hands for the first time. Since then I have been reading it regularly online. It is important for me to learn which windows and fittings are successful in other parts of the world and why. This often gives me an idea of which products, manufacturers and markets could develop and how. When we ourselves were featured in the magazine in 2020, it pleased our customers and employees alike.”

Shane McDuff, Managing Director, Fenestration Solutions Australia
www.fsa-us.com.au



■ **Qatar** “Three times a year, we are notified that a new issue of Roto Inside has been published. We then read it on the computer and see what there is to know about new products. We are also interested in windows and doors from other manufacturers that are equipped with Roto hardware and showcased in the magazine. I have in fact been a regular reader for six years now. I will continue to keep up to date with every issue in future. This magazine is a real success!”

Shajahan Koothanallur, Executive Manager,
Al Ikhtyaar German UPVC Windows & Doors
www.alikhtyaar.com



■ **Italy** “50 issues of Roto Inside have been published already? I’ve definitely read most of them. I’ve been a regular reader since 2010. Since I can access the PDF digitally as soon as it’s released, I take the opportunity to see what’s new on the computer. Information about products is what’s most important to me. What do I want for the future? For Roto to continue making this magazine.”

Walter Wolf,
Managing Director, Wolf Fenster AG
www.wolf-fenster.it



■ **Vietnam** “We got to know Roto Inside about three years ago during a visit to the Roto show-room in Hanoi. We like the mix of topics, but of course we would like to see more reports from Asia. After all: Roto is active worldwide. The detailed product presentations and stories about window manufacturers and reference projects from other countries are always interesting for us, too.”

Nghia Le,
Sales Manager ECN
www.econtec.vn



■ **Israel** “A few years ago, we became the first aluminium system supplier to use the Roto Patio Inowa smart sliding hardware. Roto Inside wrote a report about this and we distributed the issue containing this feature to our most important customers for information. This played a huge role in cultivating a good reputation and boosted sales of the new Extal sliding system. Roto Inside isn’t only valuable for the people whose companies are showcased in an issue; as a reader, you find useful information in every issue. When aluminium elements are featured, I pay very close attention.”

Ilan Gour,
CEO of Extal Ltd.
www.extal.com



■ **Germany** “The sales team at Ventana Deutschland has been reading Roto Inside since the very first issue. The magazine encourages us to think outside the box and helps us to predict what’s going to happen next. For example, the requirements for a building’s standard of energy efficiency are a challenge for us all. It’s good that this topic comes up frequently in Roto Inside and hardware such as Patio Inowa can help us produce tightly sealed elements.”

Stefan Herbers, Head of Product Management,
Ventana Deutschland GmbH & Co. KG
www.ventana-deutschland.de



■ **Austria** “Roto Inside? This magazine is so sought-after at our company that not every issue reaches my desk. But when I manage to get my hands on one, I’m always very interested to read it. Fascinating reports and information about significant product innovations – I’ve been following Roto Inside for years.”

Mag. (FH) Ing. Roland Farka,
Managing Director, FARKALUX
Fenster- & Elementbau GmbH
<https://farkalux.at>

■ **Estonia** “Roto Inside always makes for an interesting read. As a reader, I learn a lot about current developments at Roto and about the company’s strategic projects and plans for the future. I also find it interesting when other window manufacturers discuss their market cultivation activities and their services, or how they gauge their success. Viking Window was obviously also pleased when its new products were announced internationally in a report in Roto Inside.”

Ragnar Nikkolo, Head of Development, Viking Window AS
www.viking.ee



■ **Poland** “In every issue of Roto Inside, I find something interesting about aluminium solutions, but also about PVC and timber windows. I’m particularly interested in the major case study properties with individual special solutions and new products. But articles about different companies from all over the world also appeal to me. About how they establish themselves on the market. Congratulations on the anniversary! I’m looking forward to future issues.”

Artur Blukacz, Director of Research
and Development, Yawal SA
www.yawal.com

■ **Spain** “We’ve been selling Roto hardware technology for 25 years now, so I’ve been familiar with Roto Inside since the very first issue. A lot has changed over these 25 years. Basic aluminium windows used to dominate the Spanish market. Since building regulations were amended, people are now opting for premium PVC windows and quality hardware from Roto. We’re obviously very happy about this. Patricia Fraile and Jose Luis Ramiro – the next generation of entrepreneurs – also use the Roto magazine in the same way that I do as an important source of information about products that we can offer in future. We also learn a lot about the development of international markets when reading the magazine. My only complaint is that Roto Inside is published just three times a year!”

Ruperto Fraile (centre), Managing Director, Accesorios Alu y Pvc
www.aluypvc.es



■ **Great Britain** “We’ve received ‘Roto Inside’ for many years and regularly receive the digital and hard copies which are great for sharing with our colleagues. The magazine is a great resource to make sure I’m up to date with everything going on in the world of Roto. Product launches and developments are of particular interest, but reading success stories in other regions is also appealing. We have been featured in the magazine previously and it’s great to have our work recognised across the Roto organisation.”

Julie Warner,
Product Manager Carl F Groupco
www.carlfgroupco.co.uk



■ **Italy** “When a new issue of Roto Inside is released, I take a look at it on the computer and see what information is useful for our organisation. In particular, I share information about new products, their technical features and the benefits for customers. This allows the relevant colleagues to consider what we can get out of the new products for ourselves and our customers. Always one step ahead – that’s the claim we would like to live up to with Roto.”

Cornelio Civera, Managing Director,
CFG Serramenti Srl
www.cfgserramenti.com



ELA opening restrictor for Turn-Only windows

Certified as a retainer with Roto AL and Roto AL Designo

■ **Aluminium** The ELA special opening restrictor with a maximum opening width of 89 mm, which locks in the end position and is controlled by the handle, can be used as a “retainer for the safety of children”.

Manufacturers of aluminium windows who work with Roto AL or Roto AL Designo hardware product ranges can rely on various Roto opening restrictors. According to a test passed at the Institute for Window Technology (ift), the ELA special opening restrictor, which locks in the end position and is controlled by the handle, even meets the requirements of class 5/7 in accordance with DIN EN 13126-5. It can therefore be used up to a maximum opening width of 89 mm as a “retainer for the safety of children”. Generally speaking, however, an opening width that meets the customer’s individual specifications can be chosen. The ELA opening restrictor is available in screw-in and clampable versions.

Highest performance class

Nachweis:
Baubeschläge, Beschläge für Fenster und Fenstertüren
gemäß EN 13126-5:2011+A1:2014

Prüfbericht:
Nr. 20-205102-PR02
(PB+KB-G05-03-04-G1)

Auftraggeber:
Roto Frank Fenster- und Türtechnologie GmbH
Wilhelm-Frank-Platz 1
70771 Leinfelden-Echterdingen
Deutschland

Prüfstelle:
ift
ROSENHEIM

Prüfung:
Öffnungsbegrenzer für Fenster und Fenstertüren
Öffnungsbegrenzer ELA

Leistungswerte (Prüfbedingung):
Flügelmaß B x H: 1200 mm x 2300 mm
Nennverstellhöhe Aluminium
Flügelgewicht: 200 kg
Bewegliche Drehschlag: Roto AL / DF 300 kg
Öffnungsposition: 2x Gel - CLA100 - RU
Baugruppe:
Scharenführung DIN-R unten kpl. 863019
Scharenführung DIN-R oben kpl. 863028
Zwischenscharen V 01 kpl. 120039
Halterfeder für Arm 730326
Halterfeder für Arm 730326 (versteckt)
Halterfeder für Arm 730326 (versteckt)

Prüfung:
Prüfung mit 2 Öffnungsbegrenzern.

Klassifizierung gemäß EN 13126-5:2011+A1:2014

Ge- samte Kategorie	Öffnungs- breite (mm)	Flügel- gewicht (kg)	Ge- samte Kategorie	Öffnungs- breite (mm)	Flügel- gewicht (kg)	Prüf- ergebnis
5	200	0	3/2	5	57	1200/2300

ift Rosenheim
17.11.2021

Konrad Gammert, Dipl.-Ing. (FH)
Prüfingenieur

Stefan Hübner
Prüfingenieur



ELA special opening restrictor which locks in the end position and is controlled by the handle.



The ELA special opening restrictor meets the requirements of class 5/7 in accordance with DIN EN 13126-5.

Two Turn-Only windows in the RAL format 1200 x 2300 mm with a sash weight of 200 kg have been tested by the ift. One of the two elements was equipped with one ELA opening restrictor horizontally at the bottom. It achieved usability class 3/2. The second element had two opening restrictors – one at the top and one at the bottom. It achieved usability class 3/3.

Both windows met the requirements of class 5/7. The ift also verified durability class 5 (25,000 actuation cycles, 3750 locking and release cycles). The corrosion resistance of all hardware components achieves the highest class under the standard – class 5.

Controlled by the handle and intuitive to operate
The ELA opening restrictor is controlled by the window handle. By using the proven Roto Tilt-First technology, a user is only able to open the sash as far as the defined end stop position.

The sash is locked by moving the handle from the 90° position back into the 0° locked position. In the locked position, the sash is protected against slamming shut in windy and draughty conditions. The locking is released by turning the handle back to the 90° position.

Full unlocking is only possible after the locked handle has been released: users of the key can turn the handle to the 180° position and therefore release the opening restrictor to open the element fully for cleaning purposes.

Technical consultation from the Roto Object Business
The opening width of a Turn-Only window can usually be individually selected. Aluminium window manufacturers and specialist planners should seek advice on this topic from Roto Object Business specialists.

Roto develops an individual hardware configuration depending on the required window width and depth. It is assessed for its technical feasibility, adapted to the specific property and visualised in model form upon request.

If an order is placed, the fabricator receives an installation drawing that is specifically tailored to this application. It is recommended that you involve the Roto Object Business in the planning process at the earliest possible stage.



➤ **Roto AL: universal hardware for aluminium windows and balcony doors**

www.roto-frank.com/en/roto-al

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