

Roto Inside

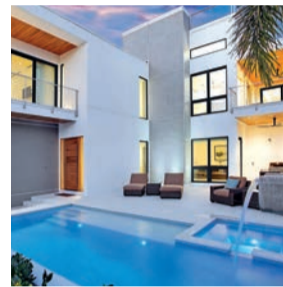
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Roto NX TiltSafe
**Reliably secure: ventilation
by means of tilted windows**

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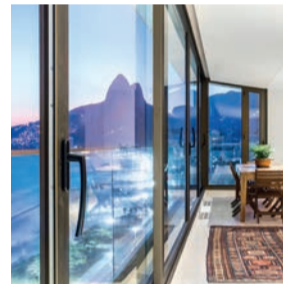
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Roto FTT #godigital
**For a successful
value chain**

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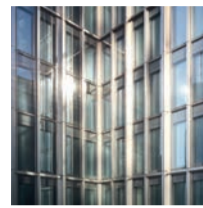
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After taking your morning shower, do you ventilate your home during the day even when nobody is there? Roto NX TiltSafe reliably reduces the risk of a break-in through a tilted window thanks to the burglary inhibition in accordance with RC 2.

Roto NX TiltSafe

Reliably secure: ventilation by means of tilted windows

■ **Tilt&Turn** High air humidity in a home can cause mould growth, for example on cold external walls. What's the solution? Ventilation, ventilation, ventilation. However, the recommended method of forced ventilation with windows wide open is not possible in all circumstances. This is why many people prefer continuous ventilation with the windows tilted. But what does that mean for burglary protection?

Tilting a window to ensure a consistently high air exchange rate helps to gradually reduce air humidity, for example in the bathroom after taking a shower. But most people have learned that burglars see a tilted window as an obvious invitation. It is window manufacturers who shed light on this subject and let homeowners know about a modern hardware solution that resolves this dilemma.

Tested and proven many times over

The Roto NX TiltSafe hardware system with security strikers designed specially for windows in the tilt position ensures greater burglary protection when no one is at home. Three of them are easy to combine with

proven components like mushroom locking cams and standard security strikers, drilling protection and a lockable handle with 100 Nm. Only one additional component needs to be stocked as, regardless of the position in the rebate, three of the same security strikers are installed for the tilt position. This makes mixing up components impossible.

A window tilted up to 65 mm wide now offers RC 2 burglary inhibition. Occupants can therefore leave their home with the windows tilted, safe in the knowledge that it is secure. When the windows are closed, the vast majority of window systems tested and equipped with Roto NX TiltSafe even meets the requirements of RC 3.

Concealed: security strikers in the window rebate

Beneficial to the interior design: the three additional security strikers for the tilt position (image on the right) cannot be seen inside the room. Burglary protection without surface-mounted components – this is what the Roto NX TiltSafe system represents. The window is turned and tilted in the same way as other standard Tilt&Turn windows.

Anyone who tries to gain entry through a tilted window from outside will, however, see from their first look into the gap that there is a solid additional mechanical securing device that makes break-in attempts almost futile.



Ventilation without compromising on security, day and night

If a window is secured with the Roto NX TiltSafe hardware system, homeowners can be safe in the knowledge that their home is protected against unwanted guests. On the subject of ventilation, homeowners can sleep in peace knowing that all tilted windows and balcony doors are equipped with this hardware system, which has now proven itself many times over.

The Roto NX TiltSafe system is available for all frame materials. Whether the element is made from PVC, timber or aluminium – reliable security with tilted windows is guaranteed!



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

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

In conversation



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

Roto Inside: Mr Sander, looking back at the past year, how have things gone for Roto Fenster- und Türtechnologie?

Marcus Sander: I do not want to limit the answer to just this year, because for three consecutive years now we have managed to successfully continue on our path of developing the product range and the company despite increasingly difficult conditions. In addition to the digitalisation of our business processes, the dedication and flexibility of our global sales teams and employees have contributed significantly to this.

Roto Inside: How did your company meet these challenges, and what was the result at the end of the year?

Marcus Sander: All in all, the past year has called for extremely agile resource management, combined with highly prudent business activity and, in many cases, a rapid response. As a result, we were again able to increase benefits for the customer internationally in real terms and close 2022 with a positive result.

Our excellent delivery reliability and the quality of our products were decisive factors in this. In doing so, we have met our customers' most important criteria and gained new customers worldwide and, therefore, further market shares. This confirms that we have successfully met the challenges with the right instruments.

Roto Inside: Can you describe these instruments of success in concrete terms?

Marcus Sander: Worldwide, we produce and store our goods as close to the customer as possible to ensure the best possible delivery reliability. We manage our production volumes and inventories centrally whilst permanently monitoring evolving demand across the world. Theoretically possible bottlenecks on a continent are detected and managed using a very sensitive early warning system. When a customer order is registered by a sales company, our global production and logistic network knows shortly after which components will be required when and where. This is made possible thanks to the group-wide digitalisation of our business processes.

The smart modular structure of our product range contributes to our fast delivery speed. This means we can preproduce every component that is designed for use with a variety of building elements and keep them available in our 26 worldwide logistics distribution centres.

Roto Inside: Are there any particular achievements you would like to highlight?

Marcus Sander: This year, too, our products were qualitatively superior, with excellent availability. This enabled us to acquire renowned new customers across the world. In particular I am very pleased about the global success of our Roto Patio Inowa sliding hardware as it confirms that there is great future potential for this opening type.

Thanks to its vast range of functions, our influential "Roto NX" Tilt&Turn range continues to help window manufacturers to respond flexibly to their customers' requirements and ensure that their manufacturing remains cost-effective. In the field of door technology, too, with products such as our Solid C concealed door hinge, we have shown ourselves to be an excellent choice as a premium partner across the full range of building element manufacturers.

Roto Inside: The company is certainly pursuing ambitious goals for next year too ...

Marcus Sander: We will be working intensively on further developing our product ranges in order to offer maximum benefit to the customer. Furthermore, high delivery reliability

remains our customers' most important requirement, and we will do everything we can to maintain this at a consistently high level in the long term. We are aided in this thanks to the flexible deployment of personnel and machine capacity, our multi-level procurement, our professional supply chain management and the digitalisation of all processes.

We already supply and support customers in more than 100 countries worldwide and would like to acquire further customers globally. This brings with it a high degree of complexity. At the same time, we have to act flexibly in the face of a multitude of political and economic conditions in the markets. We are well equipped for both thanks to the operational measures already mentioned, but also thanks to the successful strategic acquisitions we have made in past years and the continuous investments in our 15 factories.

Climate-friendly production will continue to have a strong influence on our business decisions in the coming year. For example, we will continue to promote the use of renewable energies at our sites. Thanks to these measures, we are not only reducing our own carbon footprint but also that of our customers in the long term.

Roto Inside: FTT will be participating in the "BAU" trade fair. What can attendees expect in Munich?

Marcus Sander: We will provide our visitors with information about our entire product portfolio at our significantly enlarged stand area. One very exciting thing is that our virtual Roto City will be transferred to the physical exhibition stand. Conversely, those who cannot make it to the trade fair in person can catch up on their tour of the stand at any time – again, virtually in the Roto City.

At this point I would like to take the opportunity, also on behalf of our staff around the world, to thank all of our customers and market partners most sincerely for their cooperation this year and for their trust in us. We will continue to do everything we can to support you as best we can next year, too. I wish you, your staff and your families a happy New Year. We hope that 2023 will be yet another successful year for you all!

Roto Fermax, Brazil

60 million roller units

The staff at the factory in Colombo came together in May of this year to celebrate the 60 millionth roller unit, which represents a huge achievement for the team after Fermax was integrated into the Roto Group.



View of the Roto Fermax production facility in Colombo, Brazil.

Aluminium The Brazilian hardware production company Fermax joined the Roto Group in 2013. Since then, the company's customers have benefited from the proven strengths of Fermax products and the innovativeness of Roto Window and Door Technology. This year, there was a good reason to celebrate.

In May, the factory in Colombo achieved the production benchmark of the 60 millionth roller unit for a type of sliding hardware that is very successful in Latin America. Marlon Amarante Neves, Roto Window and Door Technology Country Manager for Brazil, describes this as "a special event for us."



Dr Stefan Thiemermann (centre), Production Director at Roto FTT, congratulated the team on the outstanding development of the factory in Colombo. Also featured in the image with him are (on the left) Wilson Cucchiarato, Head of Customers, Markets & Innovation at Roto Fermax, and (on the right) Marlon A. Neves, Country Manager for Brazil at Roto FTT.

Growth in the aluminium segment

Neves emphasises that "this huge quantity represents a major achievement that we have all played a part in over the course of ten years – customers, staff and suppliers alike." Fermax began producing hardware for aluminium windows around the turn of the millennium. This segment has "greatly increased" since the company's integration into the Roto Group.

The design engineers in Colombo collaborated with their colleagues in Europe and specialists in Roto Aluvision Sales to develop a product range that is "german made" through and through, although its components are produced in Brazil. "With a team of developers focused

on Latin America and the customer requirements there, Roto Fermax has become one of this region's leading hardware suppliers in the aluminium window segment," explains Wilson Cucchiarato Jr., Head of Customers, Markets & Innovation at Roto Fermax.

The roller unit, the 60 millionth unit of which was sold in May of this year, is now available for over 35 profile systems common in Latin America and has also been tested in accordance with DIN EN 13126-15 - 2019-07. Its surface fulfils the requirements of class 5 in accordance with DIN EN 1670 and its continuous functional safety has been proven over 20,000 cycles.

Long-term outlook

Neves explains that Roto Fermax consistently gears its product and range development towards customer requirements. The consistently high product quality thanks to stable processes in the factory also helps to achieve success, while the company exceeds in ensuring reliable deliveries and offering a good service.

"We are fully committed to working in the same way as the teams within the Roto Group around the world: a close relationship with customers, based on a clear value structure, products and services that offer exceptional customer benefits and in the spirit of German engineering skills. As a result, we will be able to continue developing and offering top-class solutions in future, which create true added value in Latin America."



>Welcome to Roto Fermax in Brazil

www.rotofermax.com.br

Perfect in the corners

Master Corner sealing profile with patented technology

■ **Accessories** Reduced performance in window corners is a thing of the past! Thanks to patented Master Corner technology. The closing characteristics, which are the same all around the circumference, with optimal sealing function and the neat appearance of Master Corner are now setting new standards, states Jürgen Daub. His responsibilities include Research & Development at Deventer.

Manufacturers of PVC and aluminium windows are well aware of the problems that can occur when processing sealing profiles. The properties of even the very best gaskets deteriorate if they roll up in the corner. If extrusion-joined sealing profiles react to the welding temperature in a different way to the window profile, this produces "weld beads" in the corners. They act like spacers. At the same time, hardened profiles do not seal as tightly, because they are more difficult to press onto the window profile. This often results in complaints from end users.

We've (still) got our work cut out for us

Daub explains that all of this is common knowledge in the industry and many system manufacturers have therefore tried out different approaches in their attempts to improve corner formation. However, most sealing profiles still have different, usually poorer, performance characteristics in the four corners of a window or balcony door than in the rest of the frame. "This may be caused by a welding process or be related to the bending behaviour of a sealing profile and its geometry," explains Daub.

Comfort and sealing redefined

Daub is confident that "window manufacturers who prioritise sustainability and operating convenience rate TPE sealing profiles highly and draw these in themselves." He goes on to explain that "if these manufacturers choose the patented Master Corner version of a profile in future, they are guaranteed to achieve an unprecedented level of comfort and sealing." PVC and aluminium window manufacturers alike could benefit from this innovation.

The devil is in the details

The special features of a Master Corner profile geometry are striking: a hard profile leg at an angle prevents the sealing profile from rolling up in the corner. The profile leg prevents the outer edges in the bend from turning towards the centre of the profile. A combination of rigid and flexible TPE also minimises rolling up on the inside.

Additionally, the profile foot has a slideway coating. This makes it easy to insert, even into aluminium profiles, without any aids. Other advantages when processing are obvious: "Master Corner is simply guided around the corner and doesn't require any special machining steps. No cutting, no welding," explains Daub. "This saves time and therefore costs, and also prevents the gasket from hardening in the corner under the effect of heat."

Preventing premature wear

Daub admits that Deventer's dedication to developing Master Corner is due in no small part to the fact that the company is part of Roto Window and Door Technology:



Perfect in the corners: Master Corner – the TPE profile with patented new technology for closing characteristics that are the same all around the circumference, with optimal sealing function and a neat appearance.



"The gasket's perfect corner formation reduces the load on the window hardware and extends its service life."

After all, premature wear can occur, especially on the espagnolette, if users have to exert force and pressure on the handle to close the window. "A high operating force is always an indication of a high load on hardware component," underlines Daub, "and – provided that the hardware is adjusted correctly – this evidently also means that the sealing profile has suboptimal properties."

Compact and flexible

Daub once again summarises the properties of the innovation: the Master Corner sealing profile is as compact as it is flexible. This ensures that the outer radius of the applied sealing profile is much smaller in the corner than with most other gaskets. At the same time, the combination of materials reduces the risk of the gasket having no or insufficient contact in the area of the corner and overlap. "Thanks to the material and profile geometry, a window with a Master Corner gasket has almost the same performance values in the corner as at any other point on the frame."

Performance that doesn't cost extra

An important question to end with: is the added value offered by the geometry and

Deventer Master Corner

- Compact TPE sealing profile with patented profile geometry
- Gasket does not roll up in the frame corner
- Securely positioned, even in the frame corner
- Same sealing effect at any point on the window
- Simple and rapid installation without tools or aids
- For effortless operating convenience
- For tightly sealed window systems
- Also available in light colours

properties also reflected in the price of a Master Corner sealing profile? "No, users don't have to pay extra to benefit from this smart design. We are working on offering a Master Corner version of as many customer-specific sealing profiles as possible in future." Deventer will now be able to produce a compatible TPE gasket with the aforementioned features and strengths in terms of installation geometry and installation distance between sash and frame for any PVC and aluminium window manufacturer.

Deventer will therefore boast a unique selling proposition, in addition to the familiar strengths of TPE gaskets, such as durability, recyclability, top-rate retraction and sealing properties. A Master Corner sealing profile can also be produced in light colours on request.



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



Roto Patio Inowa

Embodiment of versatility up to a sash weight of 400 kg

■ **Timber | PVC | Aluminium** As a sliding system for small windows and extra-large sliding doors, Roto Patio Inowa opens up a whole universe full of possible applications for many building types around the world – from tiny houses and detached homes, through to multistorey residential, commercial and industrial buildings, and even high-rise buildings that reach up into the clouds.

Roto Patio Inowa is positioned as a separate product segment between Lift&Slide and Parallel Sliding systems. Its most striking operating feature is that the sliding sash is not lifted during opening, no matter the weight class. Turn the lever handle, open the sash – and you're done! Inowa therefore creates an effortless sliding transition between the interior and exterior. To let as much light into rooms as possible, the concealed hardware technology also enables particularly slimline frame profiles to be produced.

From little to large

With its two versions – Patio Inowa | 200 and Patio Inowa | 400 – the “smart one” in the Patio range makes a variety of formats and sash weights possible: from a sliding window behind a kitchen unit and a sliding door in a hotel room, through to huge sliding elements in premium residential buildings and high-rise residential buildings. Up to 3 metres wide and 3.6 metres tall. 3:1 formats can also be produced.

No matter the format, users of an Inowa sliding system always enjoy the same comfort and design features. Concealed technology, elegant components and subtle cover caps meet the aesthetic requirements of any architectural style.



1000 sliding systems equipped with Roto Patio Inowa are installed in the "One Park Drive" residential, office and retail tower in the Canary Wharf area of London.



Extra performance – not only at height

The sliding system can be installed such that it runs inward or outward. This means that Inowa can be used on higher floors without any issues. If the sliding sash runs outward, it will also be pressed against the circumferential gasket due to the wind load, naturally enhancing the already remarkable sealing closure of the element.

Gentle giants

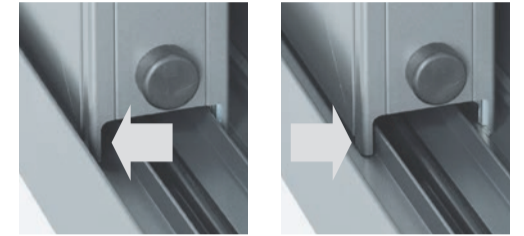
Three different Soft functions are available, which offer maximum convenience when operating any Inowa sliding element. They also protect the sliding elements and minimise potential injury risks.

The SoftClose and SoftOpen functions, which can be combined, brake the sash just before its final position and then gently pull it into the locking position or its open final position.

The SoftStop function is perfect for very large and heavy elements with a sash weight of more than 200 kg. This function helps ensure damped sliding of the sash and also brakes it, but does not automatically pull it shut or close it. SoftStop also assists users by reducing the force required to close the sash. This allows users to guide and close even a heavy sash with control.

Easy to handle

The innovative closing movement perpendicular to the frame profile does away with the need to lift the sliding sash. The elements are extremely easy to slide because their entire structure is mounted on rollers – while the combination of premium materials prevents annoying scraping noises. The smooth-running rollers also enable practically effortless and frictionless opening, sliding and closing, no matter the sash weight. Ease of handling is improved thanks to the simple handle operation. All equipment variants work reliably and with no issues in a temperature range of between +80 °C and -20 °C. The flexibility when choosing the frame material allows plenty of freedom for external facades and for interior design.



Ultimate efficiency

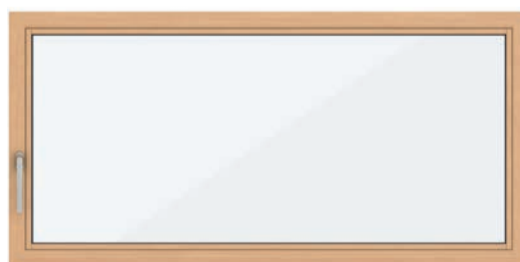
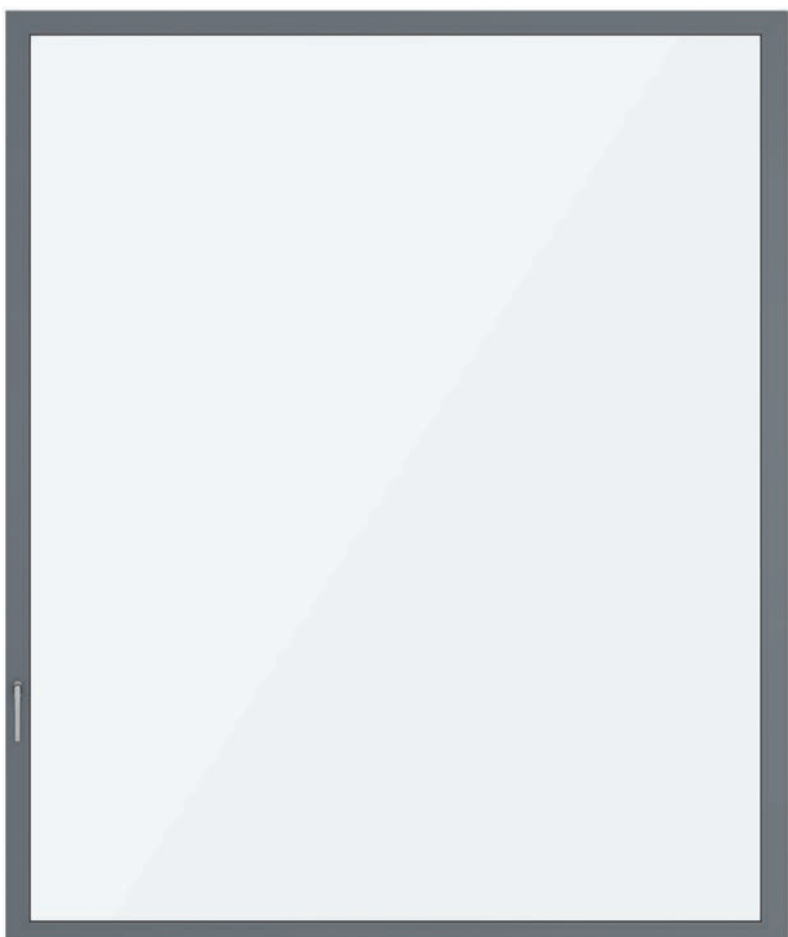
Roto Patio Inowa is very easy to integrate into the production process. This is because the number of screws required in all Inowa assemblies has been minimised. This means that the control unit, centre closer and roller unit are very fast to install. What's more, sophisticated aids such as drilling jigs are available and the centre fixing is released simply by screwing the components into the element. This saves a lot of time.

The height adjustment integrated into the roller unit of Roto Patio Inowa | 400 is an especially practical feature, as it makes the adjustment that is required for large formats easy to perform.

The storage and logistics expenditure is noticeably reduced thanks to the use of compatible "Roto NX" and "Roto AL" Tilt&Turn hardware. A tilt protection device increases the aspect ratio to 3:1.



Roto Patio Inowa | 400:
roller unit





Roto Patio Inowa: One system. Two versions.

The product segment is split into the versions Patio Inowa | 200 and Patio Inowa | 400. They both share the same functional principle, whereby the sliding sash is retracted perpendicular to the frame profile when closing. Both versions feature Soft functions. Thanks to the construction of both versions on roller bearings, there is no need to lift the sash.

The difference ...

is in the various element sizes and sash weights. Patio Inowa | 200 is used for sash formats up to dimensions of 2000 x 2500 mm and a sash weight of up to 200 kg, Patio Inowa | 400 up to dimensions of 3000 x 3600 mm and a sash weight of up to 400 kg. This results in the differing concept of the roller units – which is, however, always a construction on roller bearings – as well as modified control units and centre closers.

The key operational characteristics shared by ...

both versions of the sliding system and thus all format sizes are the special closing movement of the sash perpendicular to the frame profile, the circumferential gasket and the active locking points in the mullion controlled via lever handle.

Always tightly sealed

The circumferential lockings ensure an even, high gasket compression. The sealing ensured by the sliding elements can be flexibly reinforced even further via individually extendable

locking points, especially in high-rise buildings. The hardware technology meets the requirements of air permeability class 4 (DIN EN 1026 / 12207) and driving rain impermeability class 9A (DIN EN 1027 / 12208).

The proven sealing closure also provides optimum insulation, which in turn reduces heating or cooling costs, depending on the time of year. A further advantage is the noise and sound insulation, which is particularly important for buildings located close to roads or airports.

Reliable burglar inhibition

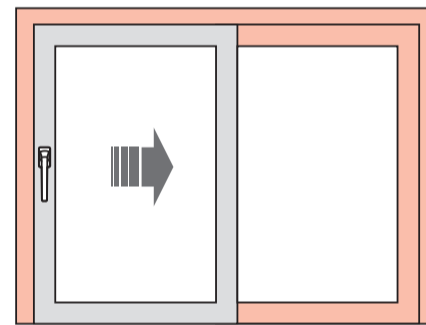
Even in the basic security configuration, the circumferential hardware with active locking points including the mullion is standard. What's more, each element can be equipped to offer reliable burglar inhibition in accordance with resistance class RC 2.

The scope of delivery for RC 2 includes: V locking cams, anti-pushback function in the mullion and lockable handle with drilling protection. The opening and locking status can also be monitored by wired MVS contact elements.

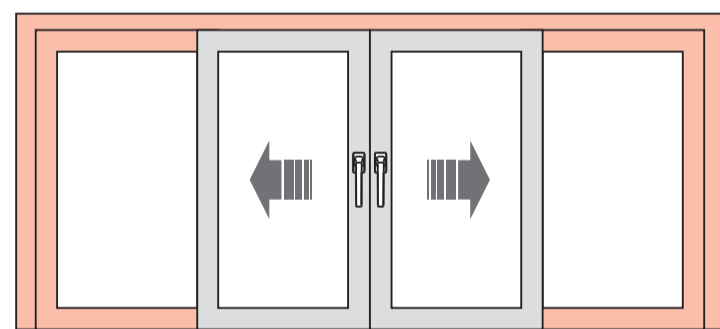
Three application diagrams

The system boasts maximum flexibility – no matter the format – including when it comes to the possible arrangement of the sash elements. Inowa can be designed to run inward or outward with one or two sliding sashes. The sashes can be placed either in the centre or at the side.

Inowa diagram A: 1 sliding sash running inward on the left or right, 1 fixed glazing element



Inowa diagram C: 2 sliding sashes running inward in the centre, 1 fixed glazing element on the left and 1 on the right



Inowa diagram K: 1 sliding sash running inward on the left and 1 on the right, 2 fixed glazing elements in the centre



➤ For more information about the intelligent hardware with concealed technology for tightly sealed sliding doors

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



	Roto Patio Inowa 200	Roto Patio Inowa 400
Sash (rebate) width	Max. 2000 mm	Max. 3000 mm
Sash (rebate) height	Max. 2500 mm	Max. 3600 mm
Sash weight	Max. 200 kg	Max. 400 kg
	Timber / aluminium: max. 250 kg	
Retracting distance	8 mm	8 mm
Security	RC 2 / RC 2 N	RC 2 / RC 2 N
Sash arrangement	Diagrams A, C and K	Diagrams A, C and K
Profiles	Running inward and outward	Running inward and outward



Sheer aesthetics in both weight classes

Thanks to its fully concealed technology, Patio Inowa has attracted the attention of numerous planning engineers and window manufacturers as an extremely aesthetic system.

Tightly sealed sliding windows and doors can be produced in the same design as Tilt&Turn windows or balcony doors. The hardware components neither protrude into the opening nor are they visible on the sash.

Elegant yet robust components and the proven Roto handle design give sliding elements a harmonious appearance, even when they are open – with a limitless variety of formats in every weight class.

Whether on a window or an outside sliding door – for a uniform appearance, any construction project can be equipped with identical handles up to a length of 200 mm.

Thanks to the circumferential gasket and the active control of the locking points, all sash elements are absolutely sealed in all weight classes of Roto Patio Inowa – even in bad weather conditions with storms and heavy rain.



Inowa: innovation | no water | no air

Remim, Turkey

Good architecture requires good windows

■ **PVC** When it comes to design planning for new residential or office buildings, Ayhan Uğuz is already on hand to help his clients. In 2003, the qualified architect founded a company that specialises in the production of high-quality building elements. He and his design partner Dilek Tanalp are highly sought-after specialists.

Uğuz explains that, during his studies at Selçuk University, he already understood that high-quality windows and doors are not only crucial in enhancing a building's appearance, but also for the quality of life of its inhabitants. Through his work at that time for a window manufacturer with plenty of client contact, however, he came to realise that this belief was not at all widely shared.

In his opinion, due to a lack of detailed knowledge, too many architects and construction companies were provisioning for and purchasing overly simple elements. He felt that the technological and functional possibilities that are offered by high-quality hardware, profile systems and glazing were simply not being exploited. From this, he came to a noteworthy conclusion:

“High-quality windows can only be sold by a good designer.”

Taking production and installation into his own hands

In 2003, Uğuz ultimately founded his own window factory with an associated architectural firm in Antalya. Word quickly spread among construction companies in the region that his designs and the “Remim” brand windows were guaranteed to leave customers satisfied, even in the luxury segment. From the outset, the entrepreneur not only oversaw the manufacturing, but also the proper installation of the windows at construction sites. “If incorrectly fitted, even the best window can cause a great deal of problems. That’s something that I didn’t want to risk.”

Production takes place in Remim’s own factory using partially automated systems. This makes it possible for the relatively small team of around 25 employees to process all the orders. By comparison, around 35 people are employed for installation work. Today, in addition to windows, balcony doors and sliding elements, the company also supplies and installs modern darkening and shading systems, conservatories, fixed glazing and facades made from aluminium as well as fire protection doors and glass interior doors.

An eye for detail

Since 2017, Uğuz has been supported in matters of design and project management by Dilek Tanalp, who initially worked in the window trading business as an interior designer at Remim, among other companies, and thus became well acquainted with the company. With their architectural background, there’s no doubt that the pair have a very keen eye for details and the ways in which a design can be enhanced. “We provide suggestions on how to design windows and discuss the ways in which the proportions of rooms and buildings can potentially be improved. It’s something that our customers value, and it’s precisely why many of them approach Remim for their requirements.”



As the head architect and project manager, Dilek Tanalp has been supporting company founder Ayhan Uğuz since 2017.



Convincing quality

Ayhan Uğuz believes that there’s another reason behind the high level of interest in his company’s products: From the very beginning, the business only worked with components from European premium brands such as Roto. In his view, it’s likely because of this that so many construction companies have remained regular customers to this day. In the 20 years since the company was founded, there have been practically no complaints. Maintenance and readjustment work is completed quickly and Remim retains its status as a valued service partner.

A sliding system with added value

This year, the production of Tilt&Turn elements at Remim has been successfully converted to the Roto NX. Uğuz and Tanalp are now looking to work with the Patio Inowa. “We’ve been equipping sliding doors with the Patio Alversa system for many years now, but we definitely see potential in using the high-density Inowa system,” explains Uğuz. He intends to acquaint his customers with the innovative closing movement of the Patio Inowa – particularly for places where sound insulation is of considerable importance, or where space-saving sliding windows may be an ideal solution. This is in addition to the fact that the hardware is now also available in a variant up to 400 kg, the kind of sash weight that can be frequently found in private villas.

“Large sliding elements are characteristic of modern living.”

He is generally always very interested in the new solutions produced by his industry partners and greatly appreciates it when they develop innovative product concepts. “We need partners like Roto, whose systems can expand our freedom to design. After all, we want to continue winning customers over well into the future as a designer and manufacturer of particularly special building elements.”

Over the almost 20 years since the company was founded, Remim has continually developed alongside its customers, notes Uğuz in summary. “Today, I would say that all component designs for which transparency is a key focus are in good hands with us. We create the perfect view, the ideal transition between the interior and the exterior.”

Setting sights on Germany

In the coming years, the entrepreneur expects that changing conditions will make it harder to do business in Turkey. The enormous increase in material prices and high inflation are limiting the scope for new constructions in the lower and middle segments of the market. Remim

This building complex with a total of 313 luxury apartments was developed in the popular Konyaalti residential district of Antalya in 2018. Remim designed, produced and fitted over 2250 Tilt&Turn windows and more than 700 sliding systems equipped with Roto Patio Alversa.

admittedly remains a very attractive partner for builders in the luxury segment, but with overall demand shrinking here as well, the competitive pressure will naturally also increase.

Uğuz wouldn’t be a true entrepreneur if he hadn’t already made a plan for this situation: “We’ve set up a subsidiary in Germany. With our new office in Monheim, which is situated between Düsseldorf and Cologne, we are aiming to establish ourselves in this economically strong region as a specialist designer and manufacturer of high-quality building elements. Since we only work with branded products that are highly regarded in Germany – basically without exception – we are considered a reliable partner for builders there as well, I’m sure of it.” And ultimately, there’s one other thing that Uğuz is certain of: Good designs are needed everywhere. Nevertheless, production will continue to take place in Antalya. This is where the company has its roots, after all, and Uğuz values his workforce as a dedicated community that knows exactly what needs to be done to ensure that Remim can continue to deliver high-quality products and services. www.remim.com.tr

Remim’s production premises are located in an industrial area on the outskirts of Antalya



➤ For comprehensive information on the Roto Patio Alversa Parallel Sliding and Tilt&Slide system, visit:

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



Roto hardware technology – for greater design freedom. Roto Frank Ltd.Şti. gave a presentation to members of the Istanbul Chamber of Architects: like at a trade fair stand, a number of window solutions were showcased before and after the speech.

Turkey: Expert advice in demand

Focusing on architects

■ **In high demand** Gökçe Şenkal Baycın, part of the Roto team for eight years and now Managing Director of Roto Frank Near East, reports on a trend she is witnessing in Turkey, which may prove a great example for many other countries and markets too.

“During the pandemic, people started seeing their homes in a new light. Private life, working from home, relaxing, entertaining – with our homes doing so many jobs, we all long for perfect surroundings more than ever. As such, architects are back in popular demand as specialist advisers – including when it comes to choosing the right windows.

Proactive communication

Many designers like to recommend specific products to their clients. We are noticing that they have recently become very interested in the functionality of modern windows and doors. By keeping them well informed, we are preparing the market for our customers. Through presentations at events held by the Turkish Chamber of Architects or at universities, we are laying the foundations for a tangible, project-specific exchange of ideas.

Sharing knowledge

In our experience, window manufacturers who take the time to advise architects and maintain contact with them, sell particularly

high-quality building elements. In this regard, Roto can provide support as a flexible, service-focused partner in hardware technology. Above all, when it comes to quality, sustainability and innovations, we have an excellent reputation with designers. By sharing knowledge and working together to produce forward-thinking solutions, we can ensure better windows and better architecture. We are very confident of that here at Roto.”

Pictured from left to right: Gökçe Şenkal Baycın, Managing Director of Roto Frank Middle East, Yusuf Arabacı, Roto Marketing Product Manager, Prof. Dr. Rifat Çelebi, Architect, Esin Köymen, President of the Istanbul Chamber of Architects



Roto North America

New multi-point locking system for hinged patio doors

■ **Door** Roto North America is proud to introduce the new HPD1 to our existing portfolio of swing patio door hardware. With this hinged patio door locking system, our customers can enjoy optimal performance, security, functionality, and durability.

This locking system supports taller doors between 6' and 10' in height and comes with 35 or 45 mm backsets, a 1" deadbolt and a reversible mishandling device to prevent damage to the door frame. A 60 mm backset is currently under development and will be launched soon.

Additional locking points

For enhanced security, the HPD1 offers three kinds of active locking points: 3-point tongues, 3-point shootbolts, with a 20 mm shootbolt throw, and 5-point tongues and shootbolts combination.

Roto North America had all three variants of the new HPD1 tested and classified in accordance with AAMA 1304-02, a voluntary specification for determining forced entry resistance of side-hinged door systems.

Proven quality

HPD1 components are made with 304 stainless steel for increased corrosion resistance. In addition, the faceplate has passed 3,000 hours of salt spray testing in accordance with ASTM B117, making the HPD1 hinged patio door multi-point locking system ideal for coastal areas.

Both active and inactive functions have also been certified to AAMA 909-13, ensuring peak cyclic and torque performance.

Easy and secure assembly

If a top extension is necessary, it can be easily attached by inserting our connection clip between the faceplate and drive rail. The connection clip ensures the drive rail will not become

disconnected from the coupler when the top extension is added. The cover plate has also been redesigned with an additional screw and overlaps to ensure increased stability and prevent rotation.

Variety of options

In addition to the HPD1, Roto North America already offers a wide range of hinges, handles

and cylinders for swing doors. Additional hardware components in diverse designs are to follow, explains Chris Dimou, President & CEO of Roto The Americas. “Our overall goal is to provide quality performance, optimal functionality, aesthetically pleasing designs, and a range of options that meet our customers’ needs.” www.rotonorthamerica.com



Suitable for coastal areas: HPD1 – the new stainless steel multi-point locking system for the North American market.



Chris Dimou,
President & CEO
Roto The Americas,
Director of International
Markets, Door & Door
Innovation

Available now:
HPD1 with 35 or
45 mm backsets.



➤ **Roto HPD1 multi-point locking system**

<https://rotonorthamerica.com/roto-hpd1/>

Hurricane impact resistant windows for buildings of any style – this is what the eight brands of the PGT Innovations group stand for.



PGT Innovations™, Florida, USA

For a safe home

■ **PVC** In many regions of the world, people depend on buildings to provide them with reliable protection even during severe storms and hurricanes. The professionals at PGT Innovations know this. That's why they produce impact-resistant windows and doors in a wide variety of styles through their family of brands.

The company's headquarters are located in N. Venice, Florida. Casey Pope, Global Product Director, arrived here in 2019 with many years of industry experience under his belt. He chose to join PGT Innovations (PGTI) because of the company's "incredibly attractive culture." PGTI is the largest producer of impact-resistant windows and doors in the United States and has an atmosphere that inspires innovation and customer focus, he says.

Quality-tested Impact-resistant windows

The organization includes eight brands that all enjoy an excellent reputation among architects, contractors, and homeowners. In North America, as well as in the Caribbean, people value PGTI's expertise and breadth of product from their industry-leading brands. "Safety and good design don't have to get in the way of each other," Casey Pope emphasizes. The company's windows are the best proof of that. Whether it's a single-family home or an apartment building, an office, or a public facility - PGTI's brands offer an optimal solution for every building and every room. Their products are designed to meet some of the most stringent performance standards including hurricane impact requirements of the "Miami-Dade NOA", i.e. the highest

requirements for impact-resistant windows in the USA, while also maintaining a clean, contemporary aesthetic.

Sensitive to their own responsibility

PGTI prides itself on being a long-standing leader in providing quality, innovative products to the market," explains Casey Pope. That's why great emphasis is placed on initial employee training and ongoing communication, he says: "All of our team members who build our impact-resistant products know that we have a great responsibility. We take great pride and care in the manufacturing process, understanding that this product is going into someone's home. We have to work together

to deliver on the promise that our products provide protection." Awareness of this responsibility and a strong commitment to the team and their common goal are therefore a priority throughout the company, he said. In addition to the exceptionally broad product portfolio of the eight brands, the attitude of the people towards their work at PGTI is a foundational pillar of the company's culture, he said.

Demand continues to grow

Production processes at PGTI's plants are regularly optimized, as the company continuously prepares for growth, Pope continues. Our commitment around quality product, on time delivery, and innovation to the marketplace is one we take very seriously. We continue to invest in growth and seek out vendor partners to help honor those commitments. Like other manufacturers, we have seen some procurement issues in the North American industry in general that have impacted our production, he said. "Roto North America has been able to help us a lot in these challenging situations and we appreciate that greatly."

Interview: Casey Pope, PGT Innovations™

Research and grow together

Casey Pope has encountered Roto a few times in his many years working in the industry. He told Roto Inside in a short interview his experiences with the brand and the people in Roto North America's team.



Also suitable for heavy sashes: the Sweep Lock from Roto

Roto Inside: Casey, what fascinates you about the industry, about your work?

Casey Pope: The most interesting part to me about working with PGT Innovations in the fenestration industry is our ability to have a lasting impact on a homeowner's life in their day to day, while also being able to help add value at many different levels of the business cycle. Our goals here at PGT Innovations are to help drive innovation, provide quality of lifestyle solutions for property owners, and develop the next generation of PGTI product families.

inspiration in Roto's products, and I like that. Also, our products are heavier than standard windows and doors and, as a result, require certain hardware that is capable of supporting the weight. Additionally, our brand reputation requires that our products meet a certain level of quality and longevity. Roto's Sweep Lock hardware meets these goals perfectly and works trouble-free despite the heavy weight of our impact-resistant windows.

Roto Inside: What do you like about working with Roto?

Casey Pope: Roto North America operates on similar principles as we do at PGTI. At Roto, you can feel the passion for making things work well and constantly improving products, services, and business relationships. This is probably why PGTI and Roto have been working together since 2014. Since then, we've collaborated with Roto on a manufacturing project to create a Sash Lock that incorporated the PGTI logo. The quality of service at Roto has never wavered over the years. If we need technical support, it is available immediately, and we can grow together as partners. Personally, I also think you can see a little bit of the European

Roto Inside: What makes for successful product development?

Casey Pope: You have to be very close to the customer so that you can identify their wishes and requirements. Only then can a market-shaping product innovation be achieved and be successful, like our hung



Customized Sash Lock for PGT Innovations

window Sweep Locks. This is because Roto, like us, takes pride in delivering consistently high product quality. Quality is a central feature of this product and the brand promise of all our PGTI brands.

Roto Inside: How important is the hardware to the quality of a window?

Casey Pope: I think hardware plays a very important role for the buyer, although they might not know it. The hardware is a significant point of contact between the user and the window. Good hardware is hardly noticed because it works beautifully and is integrated into the design of the window. If the hardware is too difficult to operate, it is perceived as poor quality and the window as a whole is rated worse.

The hardware must be intuitive to operate and give the user the feeling that it is robust, functional, and reliable. To achieve this, the surface must also be durable and aesthetically pleasing. The actual quality of the hardware can have a big impact on the end user's perceived quality of a window, and its ease of installation and operation can have a big impact on installer satisfaction.

Roto Inside: What makes RNA different from other hardware manufacturers?

Casey Pope: I think what makes Roto stand out from other hardware manufacturers is the thoughtful design that the company brings with some European influence. There's a

sense of continuous improvement that Roto brings to a somewhat stagnant field, but the thing that stands out the most are the partnership qualities that Roto displays and its business practices.

My expectation of a hardware manufacturer is simple in the transactional sense – just to manufacture quality product and deliver what's ordered. My expectation of a partner, however, includes collaboration on unique or innovative designs and sharing resources where trend data, analytics, and usage is concerned. It involves investing together for the advancement of both business and we've done that with Roto.

The team at Roto is helpful when it comes to tackling technical issues, thoughtful and engaging when it comes to new design, and has demonstrated top level consistency as a supplier. Their checks all the boxes in terms of overall premium aesthetic, smooth operation, and long-term quality and durability.



Casey Pope, Global Product Director, PGT Innovations™

Tera Metais, Brazil

For premium aluminium windows: Aura and Roto

■ **Aluminium** Brazilian aluminium specialist Tera Metais has been producing profile systems for facades and windows since the mid-1980s. In 2015, it launched the “Aura” system for premium windows. Since then, the company has worked with Roto to constantly redefine the meaning of industry-leading quality, explains Head of Marketing and Sales Michael Harald Eiding.

Certified network partners process the thermally separated Aura aluminium profiles that are manufactured in Itatiba, São Paulo. They have been trained in how to transform them into custom-made elements with insulating glazing, hardware technology from Roto and modern sealing profiles. Aura elements have since passed important tests in Brazil, Europe and the USA. Eiding describes the motivation of the initiators of the project: “High-performance windows and doors from Brazil, for Brazil – that was our objective at the start.” Seven years on, the company is now planning to expand outside the country.

“There is a demand for a system like Aura in many countries.”

Since windows which protect against noise usually provide good insulation too, the Aura system can also help to achieve objectives relating to the environment. After all, tightly sealed windows and doors also play a role in reducing energy consumption.

Demonstrating variety

In a number of showrooms, both the network partners and Tera Metais itself showcase the variety of windows and doors that can be produced with the Aura system. Architects and builders alike appreciate the sound technical advice they can obtain there from experts. The team behind the development of Aura is committed to looking for solutions, often in collaboration with Roto, whenever an entirely new

design is needed. The wide range and wealth of experience provided by their partner, Roto, prove to be invaluable during this process.

Michael Harald Eiding himself is constantly amazed at how the Aura team and Roto spur each other on. Together, both companies want to show that there are almost no limits for premium window systems. Almost any format, opening type and unusual function is achieved by an optimum interaction between profile, hardware and gasket.

“Roto offers the perfect hardware for any building element.”

Around 8000 elements per year have since been produced by the network partners using the Aura system and Roto hardware. The demand for Lift&Slide and Fold&Slide systems with Roto Patio Lift or Roto Patio Fold is particularly high. Eiding explains the focus of the collaboration: “In Brazil, builders traditionally prefer elements that are opened by sliding.” However, there are installation situations where Aura advisers recommend using Tilt&Turn windows and Top-Hung windows. The demand for these is also gradually growing.



An inside look at production at Brazilian aluminium specialist Tera Metais

Sustainable construction

The manager is certain that the demand for modern aluminium building elements will grow as investors and builders more frequently want high-quality and sustainable constructions. The timeless design and low maintenance requirements of the Aura system help ensure that windows and doors retain their value in the long term. “Large, international investors in particular want their properties to receive

a good sustainability rating. Many of them prefer aluminium as a window material because it is robust and can be recycled.”

Proactive advice and design

To ensure that windows in Brazil continue to work properly over many years and decades, system manufacturers like Tera Metais must attribute great importance to corrosion protection, explains Eiding. “Along the Brazilian coastline in particular, many people are aware of how quickly problematic faults can develop if the window, and especially the hardware, becomes corroded.” The Aura system and the hardware from Roto are also impressive in this context. Proactive consultation relating to corrosion protection therefore forms part of every customer meeting in the showroom.



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

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

Roto Patio Lift ensures that this Lift&Slide system with its large, heavy sashes functions reliably.



Turning, sliding, folding – the Aura system from Tera Metais helps to produce custom building elements.



The team of Aura designers and design engineers in Itatiba, São Paulo, are just as proactive as the Aura network partners when providing consultation. “We always want to be a pioneer in this technology, so we can’t rest on our laurels,” Eiding grins. Together with technology partner Roto, the company is currently planning to launch a new generation of sliding hardware based on the Aura system, with ball bearing roller units that could further improve operating convenience. Eiding believes that “Roto has developed many extremely interesting hardware solutions in this sector over the past few years.”

“And since we are sticking to our aim of being one of the first system suppliers in South America to implement improvements, we are not running out of subjects to talk about. With Roto, we have a committed and reliable partner by our side for dealing with new requirements emerging from the market. We experience this as powerful momentum that we don’t want to miss out on.”

www.terametais.com.br



Michael Harald Eiding, Head of Marketing and Sales for the Aura system at Tera Metais

Fold&Slide systems with Roto Patio Fold open up a room to its full width.



➤ **Roto Patio Fold: premium hardware for large-scale Fold&Slide systems**

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

Roto Aluvision

Hardware solutions for transom / mullion facades

■ **Aluminium** Ensuring that opening elements in a transom / mullion facade work properly can become a major challenge for the manufacturer, depending on the facade design. Roto offers a constantly growing number of innovative hardware solutions for building elements which guarantee functional safety and convenience, even in freeform facades.

Advisers from the Roto Object Business support modern metal and facade construction with Roto Aluvision product developers on the basis of intense dialogue with architects, specialist planning engineers, system suppliers and facade manufacturers. Requirements for a building element and the hardware solution are examined, ideal solutions are individually configured or new hardware components are even created.

In the foreground is the "Marienturm" in Frankfurt am Main, which was built based on a design created by Berlin architects Thomas Müller and Ivan Reimann. Facade construction: FKN Fassaden.



FKN used four versions of the Roto AL Designo hardware for the Marienturm's Turn-Only balcony doors with a sash weight of up to 180 kg.

From an individual product to the standard range

Many of the components that were originally newly created for an individual property are now part of the Roto standard product range, including some innovative hardware solutions for ventilation flaps in transom / mullion facades.

Roto helps to complete projects on time by offering various services such as the rapid production of samples of components by means of 3D printing. In the Roto ITC, the company's own, certified test centre in Leinfelden known as the "International Technology Centre", element and hardware tests are performed in compliance with national and international standards.

Intelligent hardware solutions for ventilation flaps

The demand for hardware for inward opening ventilation flaps is growing dynamically, especially in aluminium facade construction. These are generally manufactured with sash widths

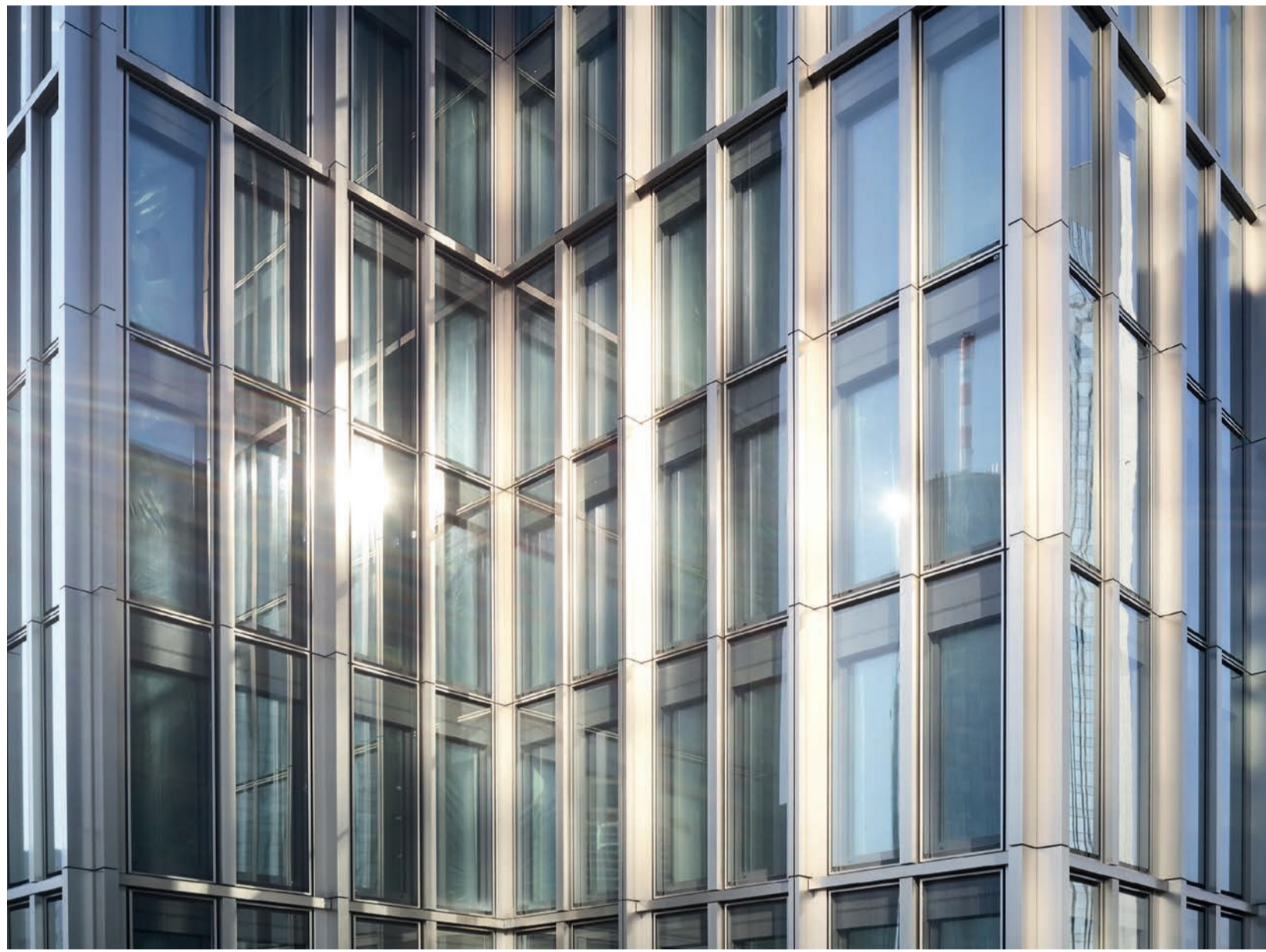


Image: Pecan Development GmbH

of 170 mm to a maximum of 300 mm. The installation space in which the hardware, which often has complex functions and many components, has to be placed is therefore very limited. Roto has nevertheless developed numerous sophisticated solutions, including some based on the Roto AL Designo concealed Tilt&Turn hardware.

For instance, the travel and opening angle of a special hinge side based on AL Designo was

restricted in such a way that the ventilation flap virtually includes an integrated opening restrictor. A separate assembly for opening restriction with very short turn restrictor rods was also specially developed for a property.

Tightly sealed ventilation flaps are created using active locking points on the hinge side. Roto has therefore developed a special corner drive specifically for ventilation flaps. This makes it possible to produce RC-compatible

elements, even where space is limited in the rebate of narrow sashes, while counteracting sash warpage.

Scissor stays for outward and inward opening building elements

Products like the Roto FS Kempton friction stays and the Roto PS Aintree parallel projecting scissor stays ensure operating convenience when using ventilation flaps and outward opening windows in transom / mullion facades.

Roto FS Kempton friction stays

Certified and recognised quality – worldwide

■ **Outward Opening** Friction stays from the FS Kempton range play a valuable part in ensuring operating convenience and security in outward opening windows. Independent institutes confirm that they meet the requirements of the most important global standards.

Operating convenience, even with heavy sashes

The range also makes it possible to produce user-friendly windows, even for heavy glazing. The opening movement always stays harmonious until the sash reaches its final position. Details such as optimised run-up blocks, upstands and adapted kinematics make the friction stays easy to install and operate.

In the summer of 2022, the current product range was tested in accordance with American standard AAMA 904 and added to the "AAMA Verified Component List". In Europe and China, all important tests were already complete by this point. According to these results, friction stays from the FS Kempton range fulfil the most stringent requirements in accordance with European standards DIN EN 13126-6 and DIN EN 1670, as well as Chinese standard JG/T 127.

For all common profile systems and materials

Product Manager Matthias Kosog explains that "the friction stays are a good example of the excellent performance in the Roto Outward Opening product segment." By combining these friction stays with one of the various locking solutions from the range, window manufacturers can offer complete hardware solutions with a consistently high quality, which would be fully guaranteed by Roto. FS Kempton friction stays and Roto locking solutions are available for all common profile systems and materials.

Entire spectrum of standard sash widths and heights

Thanks to particularly careful grading, the FS Kempton range covers without any gaps the entire spectrum of sash widths and heights in which Top-Hung and Side-Hung aluminium windows are typically produced. Choosing the compatible friction stay is easy, as the assignment to the sash dimensions is clear. All scissor stays are marked so that they can be clearly identified at all times during window production and maintenance.



Roto friction stays for Top-Hung windows up to a permitted weight of 180 kg. The image shows a 24" scissor stay.



Scissor stays in sizes from 8" to 16" are available for Side-Hung windows. The image shows a 16" scissor stay.



PS Aintree parallel projecting scissor stays ensure an all-round opening for outward opening windows. This achieves outstanding natural ventilation. At the same time, the scissor stays make the window sash noticeably more comfortable to use, as it can be opened outwards in a controlled manner and closed again using a gentle pushing or pulling movement.

Integrated friction stays from the FS Kempton range limit the possible opening angle of the window, whilst also ensuring that the sash can be held open at any angle. Windows with Roto friction stays boast very high joint impermeability, especially when strong wind forces impact on the window.

The corrosion resistance of all Roto scissor stays corresponds to class 5 in accordance with DIN EN 13126-6. They are made from rounded-off, austenitic stainless steel 1.4301 (AISI 304) of the kind used in medical instruments.



Special hinge side based on Roto AL Designo with restricted travel and opening angle



The ventilation flaps in the Marienurm were equipped with parallel projecting scissor stays from the Roto PS Aintree range.



➤ **Roto FS Kempton: stainless-steel friction stays**

www.roto-frank.com/en/fs-kempton

Consistently high quality: friction stays and locking solutions from Roto



➤ **For comprehensive information about scissor stay and locking solutions for outward opening building elements**

www.roto-frank.com/en/outward-opening



Slimline design without offset outlines: the new butt hinges for PVC doors in the Roto Solid B range

Subtly elegant: rebate-screwed in two parts – for the most common hardware grooves of 16, 20 or 24 mm. This version is especially suited to doors with panels filling the leaf on both sides. An optional third fixing screw provides additional stability if necessary.



Maximum sealing: overlap-screwed in two parts – a hinge version for the most common overlap areas. This means that no air gets inside, even in strong winds.

Installation variants for different applications

Roto Solid B meets the most diverse architectural demands

■ **PVC Roto is again expanding its Solid B product range, now with the addition of extremely attractive butt hinges for PVC doors. The eight different versions share many technical and aesthetic features, which make the Solid B portfolio especially appealing to manufacturers who produce a wide range and very design-led doors.**

The new universal product concept of the 218 P, 318 P, 222 P and 322 P butt hinges makes them a pioneering solution in terms of their functionality and aesthetics. All adjustment mechanisms are integrated in the hinge roller. No gap is formed between the leaf hinge and frame hinge. All versions are

processed in the same way, meaning that employees in production soon get used to the routine and reliability.

Linear adjustment without unhinging
Linear 3D adjustment makes precise adaptation of the door leaf in the door frame particularly simple. The continuous height, lateral and gasket compression adjustment can be achieved without unhinging the door, while the results can be visually inspected straight away. This is the case for the two- and three-part butt hinges and regardless of whether the version for rebate- or overlap-screwed installation is selected. Offset outlines are prevented at all times during adjustment. The slimline appearance of the hinges is retained.

Continuous lateral adjustment is possible in a range of ± 3 mm, height adjustment from -2 mm to $+4$ mm. The gasket compression can be adapted with exceptional flexibility. It can be adjusted in a range of ± 1.5 mm, making installation much simpler. All adjustments are easy to make with a size 4 hex key.

Uniform design for light and heavy leaves

The uniform design of all hinges opens up the option to tailor the appearance of doors with different weights to a property. Depending on the butt hinge version selected, the number of hinges and the properties of the door profile selected, sash weights of up to 80 kg, 120 kg or even 160 kg are possible.

The slimline butt hinges are also especially suited to doors with panels overlapping the leaf on both sides. They help achieve a puristic door design. Doors from burglary protection class RC 2 can be produced with all versions. The certification for SKG** burglary inhibition is in the pipeline.

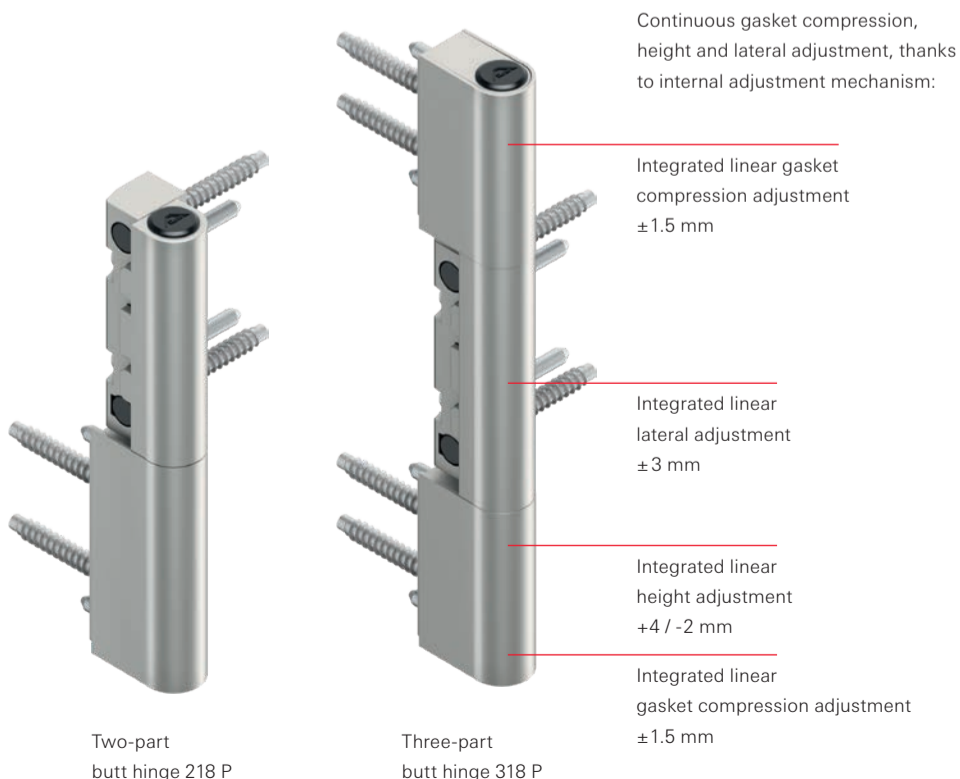
Best functional safety and surface quality

As is typical of Roto, the corrosion protection of the butt hinges conforms to DIN EN 1670 class 5, therefore meeting the most stringent requirements. The 200,000 opening cycles achieved in accordance with DIN EN 1935 confirm the reliable durability of the butt hinges.

Tom Vermeulen, Head of Sales Door & Door Innovation, looks forward to the dialogue with door manufacturers and the opportunities that working with this range of butt hinges opens up for them: "Through the focused dedication of our Door designers, we have now been able to close gaps in the Solid B range. At the same time, we have created an impressive product concept which reduces the complexity involved in producing PVC main doors. We are certain that the new range of butt hinges offers precisely what's needed to make production and installation simpler and more reliable."



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



➤ Overview of the Roto Solid door hinge range

www.roto-frank.com/en/solid

Roto FTT #godigital

For a successful value chain

■ **Company** Our customers' expectations are clear – they want windows and doors of the best quality, delivered in just a few days, on a date coordinated with the building process. That's practically impossible without digital exchange of information in real time and digitalisation of processes in the value chain of the companies.



Welcome to the virtual "Roto City", which showcases the Roto FTT product portfolio being used in buildings.

Roto is therefore consistently promoting digital networking with customers and market partners, as well as the digitalisation of its own corporate processes. A newly established "Innovation Lab" continuously evaluates the opportunities offered by using the latest digital tools. Innovative approaches to digitalisation are trialled, and benefits and added value are discussed in this creative hub. If using a tool will increase efficiency at Roto or in the factories of window and door manufacturers, its introduction will be accelerated.

Digitalisation of production

Many digitalisation projects in Roto factories are aimed at enabling machines, tools and vehicles to optimise their performance autonomously. This involves adapting a process in a matter of seconds if conditions in the system or with the material replenishment change. For customers, using an AI-based control system in production plants, for example, means that product quality and delivery reliability are maintained even if material flows or the energy supply fluctuate. Building element manufacturers who are working on digitising their own processes will find expert contacts at Roto.

Recognised service quality

IT specialists who are familiar with all software systems commonly used in the industry work in the Roto data service. As a window manufacturer's partners, they provide advice on the potential next steps for digitalisation in the company when switching to Roto hardware technology. The collaboration between the Roto data service and the advisers from Roto Lean Management often increases efficiency in building element production.

Proven: digital hardware planning

The Roto Con Orders hardware configurator has been established for years now. The range impresses with its incredibly simple, intuitive operation and is being extended with the addition of new functions. The configurator's database is always up to date, which means that mistakes in plans and orders are virtually impossible. An increasing number of window manufacturers have since created interfaces that can be used to automatically process data for a plan from Roto Con Orders to convert it into parts lists and orders in their own system.

Order via app

The Roto Mobile Orders (RMO) app was developed to make the process of placing follow-up orders with Roto faster and more reliable for manufacturers. The item barcode of the



Many digitalisation projects are aimed at enabling machines, tools and vehicles in the 15 production plants of Roto FTT to optimise their performance autonomously.

required components on the shelf in the warehouse or on the Roto box is simply scanned using a smartphone and the quantity needed of the missing product is ordered with the tap of your finger. The recorded data can then be checked for a final time using the shopping basket function. The order confirmation is automatically e-mailed to a defined recipient in the company.

Fully automatic data exchange

A growing number of building element manufacturers are submitting their orders directly to the Roto SAP system via a secure data line. Orders are received and handled 24 hours a day thanks to EDI (electronic data interchange). If the Roto SAP system identifies special parts, it immediately initiates all of the processes required to manufacture them. This quantifiably reduces delivery times.

Partners connected via EDI can complete the entire data exchange process with Roto fully automatically on request. The SAP system can, for example, automatically send an order confirmation, dispatch notification, invoice or some other important documents to the partner's data management system. The scope of the digital service is coordinated and implemented with each customer on an individual basis.

Time and place don't matter

In 2020, during the first few months of the coronavirus pandemic, an interactive platform for product consultation was brought to life – the Roto City. Each building in this "city" acts like a gateway to a "marketplace for system solutions". Nowadays, the digital meeting point is not only popular with window and door manufacturers, but also among architects thanks to the very efficient property-specific consultation.



As a team

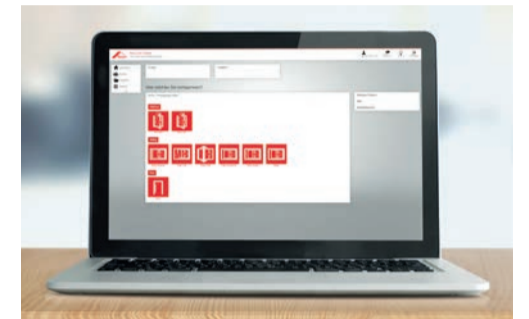
Making rapid progress on digitising the value chain brings benefits for everyone involved. But anyone who chooses this approach must get their employees on board with the benefits of digitalisation and promote open, active participation. This is because even if the processes within and between companies become increasingly efficient, we still rely on people to gauge the mood among customers. Delivery accuracy and product quality are of crucial importance, but they will serve no purpose in a digitalised world if companies aren't open to customers' requirements and suggestions.

This is why, as part of the Future Work project, Roto is working on developing a shared understanding and standardised framework conditions throughout the company for working with current and future digital tools. Employees are trained in using the digital tools that are available in their specific working environment.



Driverless transport systems replenish semi-finished products for workstations in production.

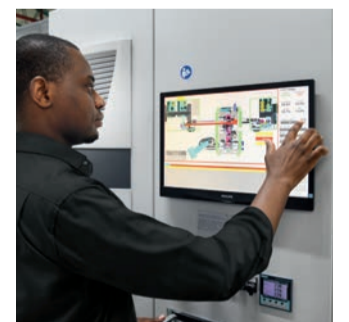
Wherever they are, Roto Sales employees can provide data for the customer meeting via the iOS app.



Planning a hardware configuration using Roto Con Orders: easy and reliable for building elements of all opening types, anytime and anywhere.

Digitalisation: sharing knowledge – supporting customers

CEO Marcus Sander is convinced that "Roto is definitely one of the companies who have already reached a very advanced stage with their digitalisation efforts. But we're not just interested in becoming more and more digital within our own company. Helping customers to increase their efficiency using digital processes is at least equally important to us. The many specialists in our ranks are looking forward to sharing their knowledge."



Roto production and packaging systems report wear and developing faults detected by sensors.

Up-to-date data about the order status and machine capacity utilisation forms the basis of the daily shopfloor meetings in Roto factories.

Three decades of Roto hardware technology in Poland

Growing together, celebrating success together

■ **Company** In 1992, Roto decided to take collaboration with window manufacturers in Poland to the next level by setting up a subsidiary there. Joanna Skalbaniok describes a unique success story, shaped by trust and continuity. At the start of 2022, Skalbaniok took over the role of Business Area Manager for Northeastern Europe from Barbara Ahlers, who managed Roto Frank Okucia Budowlane since it was founded in 1995.



“30 lat Roto w Polsce” – 30 years of Roto in Poland: Around a dozen customers celebrated the anniversary by throwing big staff parties.

Roto Inside: Ms Skalbaniok, your first year as business area manager coincided with the 30th anniversary of Roto’s market entry in Poland. Is there any better way to start a new role?

Skalbaniok: It’s hard to believe. I had the opportunity to see first-hand how close the many long-standing Roto employees are to their business partners on the customer side. They are bound by a shared history.

Roto Inside: Around a dozen customers celebrated the anniversary by throwing big staff parties. Is this also an expression of the philosophy of being “close to the customer”?

Skalbaniok: Roto does indeed maintain incredibly close links with manufacturers and, needless to say, after working together



for decades, you get to know a lot of employees from customers’ businesses personally.

The Roto Lean Management service has been available since 2006. As part of this service, advisers assist with varied process optimisation measures in our customers’ production procedures. You can’t get much closer to the customer than that.

Roto Inside: Looking back at the period since the turn of the millennium, what product developments and service offers from Roto have in your opinion received the strongest response from the industry?

Skalbaniok: Roto has always been trend-led and innovative yet aware of the importance of high quality. This has led the brand to acquire an excellent reputation in Northeastern Europe. What’s more, there was always a need for certain software tools that Roto provided, for example.

Since 2015, we have been making our customers an important promise as part of the “Logistic Excellence” project: frequently required items are delivered within 48 hours. We are able to do this because our warehouse in Warsaw now has large quantities of 6000 out of these 8000 common items in stock. This is based on a digitalised production and procurement process that Roto has set up around the world. Over the past two years, I have seen how beneficial a high level of delivery reliability is to many customers.



■ “Roto represents high-quality products, but also modern service. We are happy to be taking important steps towards digitising the industry together with this partner. The Roto City saves you the need to travel, for example, and offers you an in-depth consultation tailored to your needs. 30 years of Roto in Poland – it’s the story of an innovator we can trust.”

Michał Marcinowski,
Head of Product Development,
Aluprof SA,
www.aluprof.eu/de

Roto Inside: In addition to ensuring delivery capability, are there other challenges that you are focusing on together with your customers?

Skalbaniok: The transformation that the industry must undergo to meet its objective of climate neutrality is something that we are all working on. Hardware and sealing profile technology that makes building elements even more energy efficient and reduces heat loss, accessories like Roto Eifel thresholds – the market needs all of this right now.

Personally, I’m truly very optimistic when it comes to the performance capability of Roto and Northeastern European manufacturers. You can achieve anything when you work together with partners you trust.



Joanna Skalbaniok,
Business Area Manager
for Northeastern
Europe, Roto Frank
Okucia Budowlane

Roto Frank Okucia Budowlane

Roto founded the first branch for the sale of hardware technology on the Polish market in 1992 in Warsaw, with just two specialists at first. The number of employees rose rapidly. A dedicated distribution centre for Poland became necessary. In June 2000, Roto celebrated the official inauguration of a specially constructed company building. In 2001, the team in Warsaw took over management of the sales region in Northeastern Europe. Since then, Roto Frank Okucia Budowlane Sp. z o.o. has served customers in the Baltic states and in some Eastern European countries. Nowadays the company has almost 100 members of staff.



➤ **Roto – your reliable hardware supplier and service partner**

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