

Roto Inside

Customer and partner information | Issue no. 54 | 12/2023



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New possibilities in Leinfelden-Echterdingen and Kalsdorf

Window and door system tests at Roto



Now also in Kalsdorf: durability tests in accordance with DIN EN 1191 for door systems made from any frame material

A recognised test laboratory for windows and doors for years: the ITC in Leinfelden-Echterdingen



Recognised expertise

The Roto ITCs are accredited for the following standardised tests in accordance with DIN EN ISO / IEC 17 025:

- Burglary tests and durability tests (ITC Leinfelden-Echterdingen and ITC Kalsdorf)
- Testing of airtightness/driving rain impermeability and wind resistance (ITC Leinfelden)
- Corrosion tests, material tests and handle tests (ITC Leinfelden)

■ **Service** For many years now, window and door manufacturers have been using the Roto International Technology Centre (ITC) in Leinfelden-Echterdingen to test their systems. The ITC Kalsdorf is now providing additional capacity.

After investing in expansion, two important door tests can now also be performed in Kalsdorf: durability tests in accordance with DIN EN 1191 and burglary tests in accordance with DIN EN 1627 to 1630. For these tests, the ITC Kalsdorf is accredited as an external provider of the ITC Leinfelden-Echterdingen in accordance with DIN EN ISO / IEC 17 025.

Neutral and compliant with standards

This accreditation and the evidence of procedures required for this ensure that tests are always performed correctly and neutrally in accordance with the applicable national and international standards, directives and guide-

lines. It is the highest award for a test facility in the private sector. The ITC at the Austrian Roto production site can also offer performance tests and quality tests on PVC, timber and aluminium door systems at short notice.

Door specialists in Kalsdorf

Both ITCs are able to test windows as well as doors, even though they specialise in different areas. The ITC in Leinfelden-Echterdingen mainly tests window systems and hardware, while Kalsdorf focuses on testing door systems. The reason why the Kalsdorf ITC specialises in this field is the Door production segment: more than 80% of all components for a Roto Door hinge side or a Roto Door lock are produced in the Austrian factory of Roto Fenster- und Türtechnologie. It therefore makes sense for the members of the Door product development team in Kalsdorf to use the ITC for their own tests on locking systems and hinges too.

Tested quality is our trademark

Roto continuously invests in quality assurance and in improving products and services. Before products come to market, they go through an extremely diverse series of load tests as part of prototype and development testing. With the ITC Leinfelden-Echterdingen and the ITC Kalsdorf, the company has two advanced and efficient test laboratories at its disposal. Mechanical and technological tests of windows, doors, hardware and metallic raw materials are performed using the latest equipment and devices.

Developing and testing with Roto

A market-ready window or door system quickly and reliably – Roto provides you with the best possible support, as test results and documents establish trust in the quality of your products worldwide. Designing, producing and testing building elements together with Roto is efficient and extremely likely to lead to success.



➤ **Mechanical technological testing of facade elements**

ftt.roto-frank.com/en/ITC

In conversation



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

Roto Inside: Mr Sander, around a year ago you announced the acquisition of the North American gasket specialist, Ultrafab Inc. Are you already seeing positive effects from this merger?

Marcus Sander: This has been the case right from the very beginning, because with the two gasket specialists Ultrafab and Deventer in the corporate group, we can offer our gasket expertise globally for all opening types and frame materials. Roto has established itself as one of the world's leading and largest system suppliers of architectural hardware and gaskets for windows and doors.

What's more, we combine decades of experience in the field of hardware technology with expertise in high-performance gaskets, thereby providing optimally coordinated components from one provider. This perfects the performance of our system solutions in terms of durability, safety, operability and tightness. All in all, we create the greatest possible benefit for our customers across the globe.

Roto Inside: During the Roto Trade Press Day in November, you described Roto Fenster- und Türtechnologie as "reliably the best partner". What is behind that statement?

Marcus Sander: As a manufacturer with an extensive product and service portfolio, Roto always aligns all of its business activities with the real needs of its customers. Our claim is that we are always the best, most reliable choice for our customers and partners.

Reliability is reflected, for example, in our consistently outstanding delivery service. Our customers can rely on the fact that they

will receive their delivery in perfect condition on the agreed date. We can achieve this because we have an active presence on all continents. With 18 production plants, Roto always manufactures regionally wherever the goods are needed and, thanks to its 31 logistics distribution centres, keeps delivery routes and times as short as possible to benefit the customer. Added to this is our worldwide sales network with over 30 sales sites. We also impress customers with our extensive consulting and service portfolio that provides real added value.

But the success of our company also lies in the strengths of our employees worldwide. That is why we continuously invest in education and further training within the corporation. This allows us to guarantee the consistently high performance of both our products and the company in the long term.

Roto Inside: Can you give us a specific practical example of what's on offer in the consulting and service portfolio?

Marcus Sander: The ongoing quality assurance and improvement of our products and services is a central issue for us, which is why I would like to go into more detail about our testing services at this point. Before our products come to market, they go through an extremely diverse series of load tests in our global test laboratories as part of prototype and development testing.

In addition, our customers can have their window and door systems tested and certified in our accredited test centres. We carry out all tests in accordance with the latest national and international standards and guidelines. Our Sales department plays a key role in this process, because the team works in collaboration with the customer to optimally coordinate the system components. This means that the customer has a direct contact person for issues relating to hardware, gaskets and testing.

Roto Inside: Which corporate tasks did you focus on this year?

Marcus Sander: We have focused strongly on further enhancing value for the customer in all areas of the business. This includes digitalisation measures such as the roll-out of a digital customer portal or the commissioning of a fully automated

outdoor transport train at our Leinfeldern premises. Similarly, further investment in terms of conserving resources has a direct benefit for the customer, since we are not only reducing our own carbon footprint but also that of our customers in the long term. For example, we are investing heavily in the expansion of photovoltaic installations at our sites around the world and have begun constructing a biomass heating plant at our premises in Kalsdorf, Austria. The aim is to continuously increase the generation and use of our own renewable energy within our corporate group.

Of course, there is also always a focus on expanding our product range. We are developing innovative hardware systems that make it easier to produce windows and doors. They are easy to handle, quick to install, can be flexibly integrated into any production process and are durable. This allows us to generate demonstrable benefits for the fabricator, the consumer and the environment.

Roto Inside: What can your customers look forward to in the coming year?

Marcus Sander: We are currently preparing for our appearance at the Fensterbau Frontale trade fair in Nuremberg. I am sure our customers are looking forward to intensive face-to-face discussions there, just as we are. Without wanting to give away too much, I can say that a visit to our stand in Hall 1, stand numbers 303 and 304 will be worth your while. We will be presenting innovations in the Tilt&Turn, Sliding and Door product groups and, of course, demonstrating our expertise in window and door gaskets.

Our clients have managed to hold their own this year. We will continue to do everything we can to work hand in hand with them as reliably their best partner in the coming year. I am very much looking forward to working on joint projects together, and would like to take this opportunity to thank you very much, on behalf of myself and our employees worldwide, for the great collaboration. We hope that 2024 will be yet another successful year for you all.

Roto surfaces

Corrosion resistance

■ **Quality** Anyone who installs premium windows and doors wants long-lasting quality. This comes as standard at Roto.

To meet our own high quality standards, alongside strict quality checks in development and production, we also rely on components of perfect quality.

The surface treatment of our hardware components is an essential part of this. Coordinated processes in development and production ensure the optimal surface treatment for hardware components.

In use worldwide

The particular challenge we face is that our hardware is used all over the world. This means that it has to withstand a range of different climatic conditions and environmental influences – whether it's in industrial urban areas with high pollution levels, in coastal regions where the air is very salty, or under the effect of specific vapours like chlorine in swimming pools or sulphur in cattle sheds.

Tailored to requirements

Roto components have a corrosion-resistant surface which permanently protects them against external influences and offers excellent durability and functionality. Thanks to the incredibly hard and abrasion-resistant Roto Sil Level 6 surface, even connection elements and sliding elements subject to high strain are effectively protected against corrosion.

Protection for all base materials

The surfaces of various different base materials are coated: steel, zinc die-cast, aluminium cast, aluminium and a variety of types of synthetic materials. Specially coordinated processes make it possible to perfectly adapt these materials to customer requirements.



SPC special surface

While Roto Sil as a standard surface already achieves class 5 in accordance with DIN EN 1670, the SPC special coating is used as part of a two-stage process for particularly harsh ambient conditions, for example in coastal areas or in swimming pools. This surface's resistance to chemicals is based on the binder matrix which also ensures the strength and stability of the coating. The chemical resistance and not the corrosion protection is usually the decisive factor in whether or not SPC is suitable for very specific ambient conditions.



➤ **Roto surfaces**

ftt.roto-frank.com/en/surfaces

Slimline design without offset outlines

Solid B butt hinges now for all frame materials

■ **Door** The success story of the new, attractive butt hinges from Roto, initially for PVC entrance doors, began around a year ago. Hinge versions which extend the application range to all frame materials have now been added to the Solid B portfolio.

All Solid B butt hinges share technical and aesthetic features with added value. For instance, no gaps are formed between the leaf hinge and frame hinge when adjusting the door because the adjustment mechanisms are integrated in the hinge roller. Offset outlines are prevented. The slimline appearance is retained.

This is the case for the two- and three-part butt hinges and regardless of whether a version for rebate- or overlap-screwed installation with a diameter of 18 or 22 mm is selected.

The product range has also been expanded by the addition of a new cover cap with long legs for doors with a fixed side section on the hinge side. This is an option for putting the finishing touches to the incredibly slimline design, as it completely conceals the mechanics.

For leaf weights up to 160 kg

The uniform design of all hinges and the extensive range of products make it possible to tailor the appearance of PVC, timber or aluminium doors with different weights to a property. Depending on the butt hinge version selected, the number of hinges and the properties of the chosen door profile, leaf weights of up to 80 kg, 120 kg or 160 kg are possible.

Installation made easy

New drilling jigs for fabricators of Solid B, aimed at making butt hinges preassembled on the left / right far easier to install, are being launched at the same time as the new hinge versions for timber and aluminium. Telescopic jigs and individual drilling jigs with an additional adapter for installing the frame and leaf separately are now also available. All holes are drilled with a standard diameter of 5 mm.

Adjustments without the need for unhinging

The continuous height, lateral and gasket compression adjustment can be achieved without unhinging the door, while the results can be visually inspected straight away. Linear 3D adjustment makes precise adaptation of the leaf in the frame particularly simple. 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. Large adjustment ranges make it easy to compensate for production and profile tolerances. They also ensure that the door works without any problems for many years.



Butt hinges 222 P and 322 P for PVC doors are certified to be compatible with RC 2 when a hinge retaining mechanism is used.



Butt hinges from the Solid B range are now also available for entrance doors made from timber or aluminium profiles with a 16 mm Euro-groove.

Hinge retaining mechanism for improved burglary protection

PVC doors equipped with the 222 P and 322 P butt hinges and a hinge retaining mechanism are compatible with RC 2. The test in accordance with SKG is in the preparation stage.

The corrosion protection of all 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 and DIN EN 1191 confirm the reliable durability of the door hinges.

Positive feedback from the market

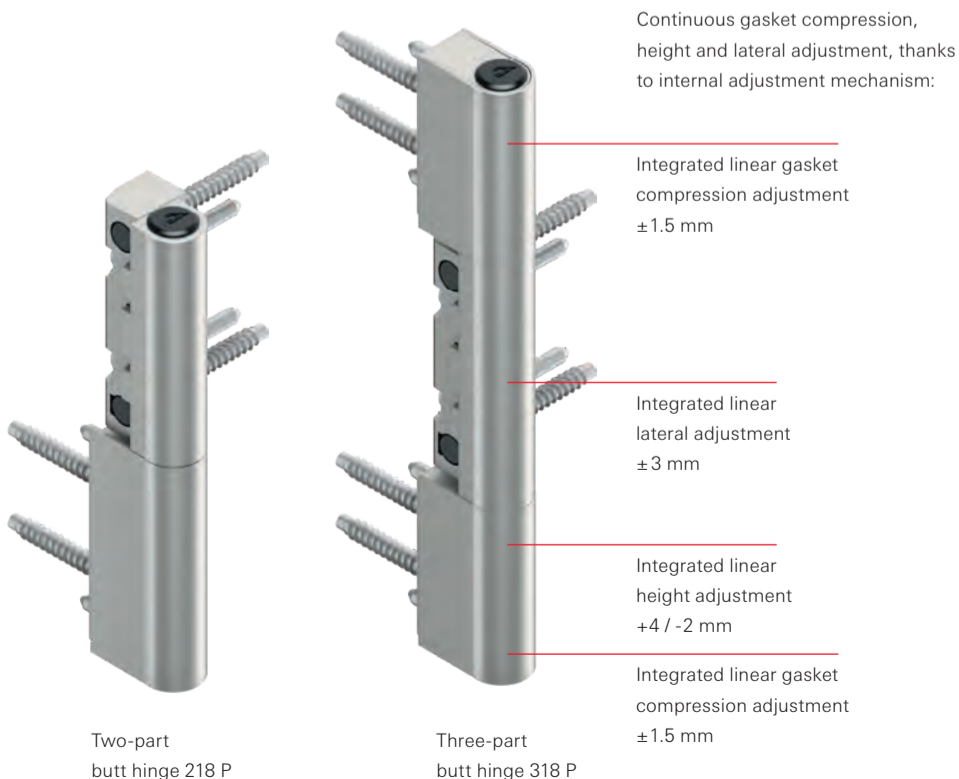
Over the past few months, manufacturers around the world have been impressed by the design and functionality of the numerous hinge versions for PVC main doors. For instance, Wulfran Fuzeaux, one of the managing directors at manufacturer 2MA2P (www.2ma2p.fr) in the French city of Saint-Nazaire, reports: "We were truly impressed by the large adjustment ranges and the slimline hinge design of Roto Solid B. Both aspects have been noticeably improved compared to the previous model, 150 R. The new butt hinge is an excellent fit for our premium aluminium doors, especially those with decorative glass panels."



➤ This is how rapid door adjustment works without unhinging the door

ftt.roto-frank.com/en/solid-b-installation (YouTube)

Two- and three-part butt hinges are available in numerous colours with a diameter of 18 or 22 mm for installation in the rebate or overlap.



Versatile use

■ **Customer testimonial** "The new Roto Solid B butt hinge is suitable for doors with panels which cover the leaf as well as for doors with recessed panels, making it incredibly versatile. This is a huge benefit for us, as it reduces the variety of different versions in storage and production logistics. The slimline shape of the hinge makes it an ideal fit for modern door designs. It's also good that Solid B is suitable for high loads. The door hinge can be adjusted using just one tool. This obviously saves time during installation." <https://zink-fenster.de/>

Theodor Zink (left) and Frederik Zink, Managing Partners at TH.ZINK GmbH Fenster und Türen. The image shows the Infinity 28.1 FLD door model in Irish Oak with partially matte glass.



➤ For further information on all Solid B door hinges

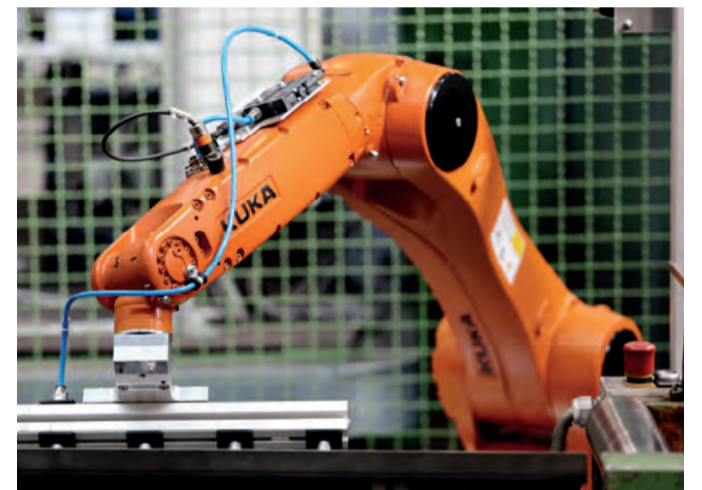
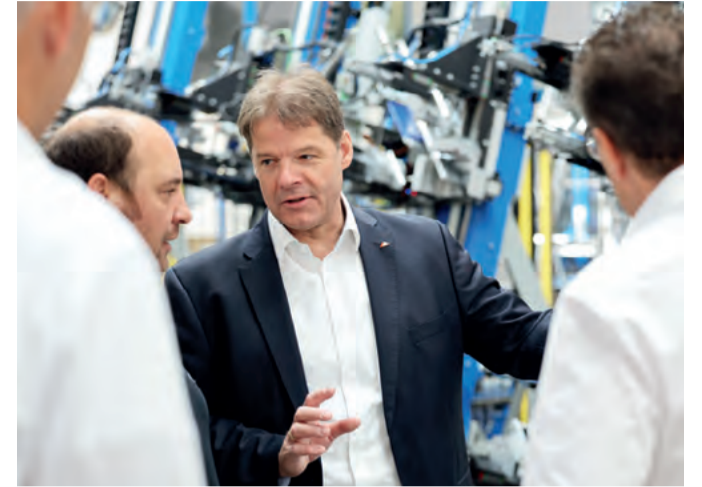
ftt.roto-frank.com/en/solid-b

A hot topic in window production

Production efficiency and automation



New systems will offer more benefits if processes have been optimised beforehand. Giving a consultation in the image below: Andreas Eberts, Head of Roto Lean Management and the Data Service at Roto Frank FTT Vertriebs-GmbH.



“Lean” production also means improving the flow of materials within the factory.

■ **Service** In economically challenging times, efficiency in production plays an important role in a window manufacturer’s success. Various factors determine whether new tools, a machining centre or an automatic hardware machine will actually improve efficiency.

Andreas Eberts, Head of Roto Lean Management and the Data Service at Roto Frank FTT Vertriebs-GmbH, describes what manufacturers must consider, in his experience, before investing in automation.

Roto Inside: Mr Eberts, what should window manufacturers bear in mind if they are considering automation?

Andreas Eberts: It’s important first of all to take a good look at how processes within the company should be structured to obtain maximum benefits from an additional automation step. For example, if new systems are being procured, that’s a good opportunity to implement other sensible optimisation measures. Ultimately what matters is establishing new, reliable processes and achieving high produc-

tion quality. There are many different factors when it comes to making production more efficient while improving employee satisfaction.

Roto Inside: In your opinion, when does it make sense to use machining centres and automatic hardware machines?

Andreas Eberts: It makes sense to use them if they can provide staff with the support they need and reduce their workload. These machines can produce greatly increased volumes and provide better quality assurance. If robots or automatic machines are planned in isolation and the production processes are not optimised alongside them, this will not achieve all of the possible improvements. Often, manufacturers are shocked to learn where new bottlenecks will occur if they don’t also adapt their processes. Something that is unfortunately frequently overlooked is that even quality improvements in article master data management and digital processes can hugely improve efficiency within the company. For instance, this can speed up ordering and internal parts logistics and prevent errors being made. This is why Roto has expanded its data service in recent years. We have received very positive feedback from customers.

Roto Inside: So the machining centre or automatic hardware machine alone do not ensure efficiency, rather the company has to become efficient by organising its production processes in a suitable way?

Andreas Eberts: Exactly. If the processes have been optimised, modern systems will provide real added value. This also applies to small collaborative robots, known as cobots, which can replace routine tasks or physically demanding manual work. We look into many different production technologies for window manufacturers so that we can discuss all conceivable solutions with customers.



Roto is also looking into the use of small collaborative robots, known as cobots, and how they can boost productivity in window production.

Good article master data and digitised processes can speed up ordering and internal parts logistics.

Roto Inside: Think about the most recent conversations you had with window manufacturers – what were they about?

Andreas Eberts: The shortage of skills and labour is currently a major issue for a great many companies. This is why the interest in automation is growing hugely right now. If window manufacturers aren’t able to recruit more workers, they have to use every possible means to avoid wasting working time. Sometimes suboptimal in-house transport of goods leads to inefficiency. If staff have to wait on hardware to complete assembly, this is a waste of time and money. The hardware master data is often not used optimally. A continuous flow of information from incoming orders to loading avoids errors and saves money. To put it in a nutshell, what matters is “lean” production. This means avoiding wasting all kinds of resources, improving the flow of materials within the factory, and sharing tasks evenly among employees.

Roto Inside: Does Roto recommend using automatic hardware machines – for Roto NX, for example?

Andreas Eberts: Roto is working on offering as many products as possible for fully automated production. Our Roto NX Tilt&Turn hardware is suitable for manual, semi-automated and fully automated processing. So no matter what measures a company wants to take to make production more efficient – Roto NX will be involved. It is and will remain the best Tilt&Turn hardware for window manufacturers, no matter the size of the company.



There are many different factors when it comes to making production more efficient while improving employee satisfaction.

The Roto NX modular hardware system

Tilt&Turn hinge sides for all frame materials

■ **Timber | PVC | Aluminium** The Roto NX Tilt&Turn hardware system for timber and PVC windows was launched in 2018. The new rebate corner hinge for aluminium profiles with a 16 mm Euro-groove now allows the hardware system to be used with all frame materials.

All hinge sides are presented on the next three pages: four fully concealed ones and four surface-mounted ones.

Identical components for multiple applications

Manufacturers who work with more than one frame material benefit from a number of identical components in the Roto NX modular hardware system. Systematically reducing the number of different items is the driving force in the product development of all hinge sides. This reduces the cost and complexity of storage, increases the processing reliability and ensures the most economical window production.

The disconnection of the faceplate and gearbox or lock casing in the EasyMix system with screw-free installation clearly embodies this development philosophy. All hinge sides are rapid to process and easy to adjust.

The advantages in detail

The same sash hardware is used with all frame materials, and the same E, P and V locking cams from Roto.

Night ventilation which is identical for all frame materials is integrated into all surface-mounted hinge sides. During the normal operating sequence on a Tilt&Turn window, the window handle runs through the night ventilation position automatically at a handle position of 135°, without this position having to be activated or released separately.

Always burglar inhibiting, regardless of format and sash weight

Whether it's large window formats or high sash weights – with Roto NX, manufacturers can produce in all frame materials in accordance with RC 2 or RC 3 and on automated assembly lines. The design of the four surface-mounted hinge sides stays the same. There is a selection of attractive surfaces and colours for all visible components.

Tilting before turning and secured tilt ventilation

Roto NX – TiltFirst protects people against risks that could result from a window being opened wide. The intelligent "tilt before turn" protective mechanism blocks complete opening of the window when the window handle is locked. At the same time, the tilted sash is arrested in the horizontal handle position. This function can be used with all frame materials and is also easy to retrofit at any time.

You can sleep soundly even when your windows on the ground floor are tilted: a window equipped with Roto NX TiltSafe gives you the security you need. This is because this window

Hinge sides at a glance

Concealed hinge sides

- Roto NX | Designo (HA 13) (for timber/PVC with 13 mm hardware axis)
- Roto NX | Designo (HA 9) (for timber with 9 mm hardware axis)
- Roto NX | Designo A16 (for aluminium with 16 mm hardware groove)
- Roto NX | Royal (for timber)

Surface-mounted hinge sides

- Roto NX | Hinge side P (for PVC, incl. integrated night ventilation)
- Roto NX | Hinge side T (for timber, incl. integrated night ventilation)
- Roto NX | Hinge side A16 (for aluminium with 16 mm hardware groove)
- Roto NX | Power Hinge (for timber with 9 and 13 mm hardware axis)



➤ **Economical, secure, convenient, design-oriented: overview of Roto NX**

ftt.roto-frank.com/en/nx

offers RC 2 burglary inhibition, even when the sash is tilted. This function is possible with all frame materials.

Anything goes

Frame material, format, weight, function, various resistance classes for burglary inhibition: as a window manufacturer, the Roto NX modu-

lar hardware system offers you almost limitless possibilities for windows and balcony doors – including for the automated stage of your production process. This is because Roto NX is suitable for every stage: manual, semi-automated and fully automated window production.



The V locking cam – a favourite of every window manufacturer

- It enables simple installation as it absorbs more rebate-clearance tolerances without the need for adjustment.
- Its robust design ensures consistent gasket compression and therefore permanently tightly sealed windows.
- It reliably makes burglary attempts more difficult, as the V locking cam engages behind the security striker across a large area.
- A marking helps to quickly identify the position of the gasket compression.
- The gasket compression is adjusted using a standard hex key.
- The position of the marking on the V locking cam helps to quickly identify the level of gasket compression that has been achieved.
- The V locking cam is also height adjustable: +1.5 mm and -0.8 mm.



The Roto NX modular hardware system

Tilt&Turn hinge sides in detail



Concealed hinge sides

- **Roto NX | Designo (HA 13)**
(for timber / PVC with 13 mm hardware axis)
- **Roto NX | Designo (HA 9)**
(for timber with 9 mm hardware axis)
- **Roto NX | Designo A16**
(for aluminium with 16 mm hardware groove)

No hinges visible from the outside, no cover caps – nothing spoils the appearance of the window. Only the window handle is visible. The maximum load for all three frame materials is a sash weight of 150 kg each.



Concealed hinge side Royal for timber windows

Its optimal turn-out curve makes this concealed hinge side ideal for renovating old buildings in particular. This is because they are often characterised by the window sash and reveal being very close together. The maximum load of the hinge side is 80 kg.



Surface-mounted hinge side Power Hinge for timber windows with integrated night ventilation

The hinge side was developed as heavy-duty hardware for Turn-Only and Tilt&Turn windows made from timber and for timber windows with an aluminium shell. The sash weight is a maximum of 200 kg for Tilt&Turn windows and up to 300 kg for Turn-Only windows. The sash tilt depth is limited to 80 mm. From a sash weight of 200 kg and above, a central hinge is also fitted.





Surface-mounted hinge side P for PVC windows with integrated night ventilation

The Roto NX stay bearing and pivot rest for PVC windows can support a sash weight of up to 130 kg, even in the standard version. The stay bearing is mounted flush with the sash overlap. This means that the Tilt&Turn window can be combined with other window types, such as fanlights.

Concealed screws on the stay bearing and the individual choice of colours for cover caps and surfaces ensure an attractive appearance.



Surface-mounted hinge side T for timber windows with integrated night ventilation

The hinge side is designed for sash weights of up to 150 kg as standard. It can therefore reliably support even large-format windows of up to 2800 mm in height and high glass weights. The hinge side is able to demonstrate its full capability in the renovation of old buildings, as well as in other applications, because it can even be used in special formats such as pitched windows and arched windows.



Surface-mounted hinge side A16 for aluminium windows with a 16 mm hardware groove and integrated night ventilation

With the Roto NX modular system, even aluminium windows with a sash weight of up to 150 kg can be processed economically and flexibly. Many of the same hardware components are used as for hinge side P for PVC profiles, reducing the time and effort involved in storage and simplifying processing. Hinge side A16 is also available for round windows and pitched windows, as well as balcony doors with a threshold.

An integrated bearing bush, among other features, makes the new rebate corner hinge durable. It prevents friction, and therefore wear, between the hinge roller and pivot bolt of the pivot rest.



Bochassy, France

Modern aluminium windows with Roto NX

■ **Aluminium** A window manufacturer in Avranches, a city in Normandy east of the famous island of Mont-Saint-Michel with its abbey, has been undergoing a change of image since the company was acquired by new owners in 2021. Find out why football plays a central role for the company in this conversation with CEO Aurélien Forest.

Be different, think different – Bochassy’s advertising also takes unusual paths.



Bochassy wants to win over window and door retailers who have a keen eye for design – by running premium showrooms, for instance. “We want to be unconventional and want to think out of the box,” is how Forest describes the identity of the new company owners. Efficient production, trend-conscious and contemporary design, robust processes and high-performing “teammates” – window and door manufacturers must meet these key requirements in order to be successful. Regarding the last point mentioned, Forest gives the following explanation: “We at Bochassy love football, and we look to what you can learn from successful teams when it comes to company management.”

Modern and eye-catching

In all decisions, you always consider the entire process, from window design to the end consumer. More than 30,000 elements – 80% made from aluminium, 20% made from PVC – were produced and sold by Bochassy’s around 80 employees in 2023. Forest is expecting even greater demand. After all:

“Good windows are better for people and for the environment.”

There is also huge demand for tightly sealed building elements for renovation in France. In this respect, Bochassy is part of a future-oriented industry. Industrial manufacture of “really good windows” of a consistent

Bochassy sees itself as a manufacturer of aluminum windows.



Custom-made solutions are the specialty of Bochassy.

quality – that is the vision that persuaded Forest to invest, together with two partners. Bochassy was founded in 2006. When it was handed over to them, it was simply a sound handicraft business. Now, the company is being modernised and industrialised. “This is how we want to lead it into a successful future.”

Design meets efficiency

Forest clearly underlines once again that Bochassy aims to be “unique” and to become a well-known brand manufacturer. Fresh marketing and a modern product design, but above all process-controlled industrial production, are intended to pave the way to this goal. The Roto NX modular hardware system is a perfect fit for this strategy. As soon as he joined the company, Forest recommended using this system and decided in favour of it.

Roto NX can always be efficiently processed – no matter which profile material is being worked with and how far production has already been automated. Forest expresses this as follows:

“Whatever step Bochassy takes in the direction of automation, Roto remains the right partner.”

Routine and quality

Bochassy uses 16 mm Euro-groove aluminium profiles. Roto NX is ideal for these, just like it is for PVC profile systems. The intention is for Bochassy to also change over to Roto NX for PVC window production in the coming spring. After all, Forest is convinced that being able to produce a wide variety of different window elements from different frame materials while having only a few components in stock makes the processes in a window factory lean and robust. Routine and experience on the part of the employees additionally guarantee premium-quality workmanship.

“A focused, well-trained team is always successful.”

This applies to the commercial world just as it applies to football.

Courage and creativity

Forest is an avowed fan of the football club Olympique Lyon. Damien Da Silva, centre-back at Olympique Lyon from 2018 to 2021, is a shareholder in and brand ambassador for Bochassy. It therefore comes as no surprise that the manufacturer’s website already conveys its passion for sport and record performances in football. You want to consistently be a champion, for example when it comes to customer satisfaction, and champions can learn most from other champions, emphasises the CEO. “Anyone who takes a look at what makes certain teams more successful than others will understand that the right focus, experience, courage and creativity will make you a champion.”

Ultimate efficiency

Roto NX and the new rebate corner hinge for aluminium windows are an expression of Roto’s clever focus. “The large number of identical parts for all frame materials reduces the complexity and adding just a few material-specific components like the new rebate corner hinge is all it takes to achieve optimal performance.” Pitched and round windows with and without a threshold can now also be produced incredibly easily and using Roto NX. People in Avranches appreciate this and enjoy the benefits.

A focus on trends

The demand for large elements could grow further in the near future, predicts Forest. New colour trends and increasing requirements for surface quality and the design of the visible hardware components have also become apparent. Bochassy observes such changes in demand carefully but without any worry.

“With Roto NX, we can flexibly implement any window trend.”

High corrosion protection (class 5) is also important for many of Bochassy’s customers: “France has a long Atlantic coast that is densely populated in some areas. Many windows with good protection against corrosion are therefore needed.” Roto NX’s ten-year performance warranty is an important selling point for French tradespeople. It fits well with the image of Bochassy and Roto as leaders when it comes to quality. “I am absolutely sure that our customers will also benefit from the changeover of our PVC window production to Roto NX,” concludes Forest, adding:

“Never change a winning team!”

On the road to success

So can you say that Roto has become part of the “Bochassy team”? Forest nods, saying: “We value the individuals involved, and we trust them. They share our hunger for success.” They have supported the changeover of aluminium window production to Roto NX professionally and enthusiastically. “Everything was complete after four or five months, the systems were running smoothly and our employees felt well-prepared.” There has also been positive feedback from customers following the changeover. Installing windows is easy, and they can be quickly adjusted once this step is complete. Satisfied customers, satisfied homeowners – in future Bochassy will continue to focus on setting new standards in the sector as a “service champion”. Roto is a valuable partner along this path.



From left to right: The founders of Bochassy, Miguel Correia and Damien Da Silva with CEO Aurélien Forest.



↗ **Roto NX: Always the right decision**

ftt.roto-frank.com/en/nx-video (YouTube)

Özpen Grup, Turkey

Winning new customers with competence

■ **PVC** Since 1992, Özpen Grup has been manufacturing PVC windows mainly for residential projects in the Istanbul region. Right from the outset, the hardware for all elements came from Roto. “Our customers know and appreciate that,” says Leyla Duman Önay. She is a managing partner in the company.

The company’s fitters have successfully completed their work on over 50 major construction sites in the years since the company was founded, enabling considerable company growth. “Because we dedicate ourselves with great care to each and every order, we are rewarded with a very high level of customer satisfaction,” explains Leyla Duman Önay. “I am convinced that this satisfaction will also carry us into the future.”

Balcony doors – more popular than ever

Over the years, the team has grown to 40 employees today. They manufacture windows and balcony doors with different opening types. Roto NX, Roto Patio Fold, Roto Patio Lift, Roto Patio Alversa – Özpen Grup installers routinely handle these hardware systems.

In the past three years, interest in large windows and sliding doors for private housing has also grown in Turkey. The coronavirus pandemic also had a not insignificant influence on this, as it restricted life to “one’s own four walls” for months at a time. But, even independent of such external influences, the merging of private indoor and outdoor spaces into an attractive living space is an ideal of many builders.

“Being at home, but still outdoors, makes you happy.”

Summer and winter gardens, large sliding and Fold&Slide systems in front of balconies and terraces are in demand. “These are elements that Özpen has been manufacturing for years and whose production we have mastered,” emphasises Leyla Duman Önay.

Safe and reliable ventilation

Transparency, daylight and views play a much bigger role for people since, during the pandemic, they experienced how beneficial it is to have a home flooded with light and fresh air. Accordingly, comfort components such as the integrated night ventilation of the Roto NX have also become interesting for more customers in the wake of the pandemic.

The apartments in Cennet Koru delight with spacious terraces and balconies.

With modern machines, Özpen Grup manufactures high-quality PVC windows.



Screwdriving robots ensure optimum torque during hardware installation.

“Awareness of the value of good ventilation has increased.”

Since the coronavirus pandemic, people have known what windows can do for their health.

Impressive quality

Project developers and construction companies who buy from Özpen Grup do so safe in the knowledge that all elements from the Beylikdüzü factory are equipped with Roto hardware. Only rarely do new customers ask for hardware solutions from other manufacturers, reports Leyla Duman Önay. “Since we are very familiar with Roto’s range, it is not difficult for us to make it clear that the corresponding sliding or Tilt&Turn hardware from our partner

With over 100,000 inhabitants, Atakent is the third largest district in Istanbul. Özpen Grup supplied PVC windows for residential buildings that have been built here in recent years.



Experienced employees work with great precision.

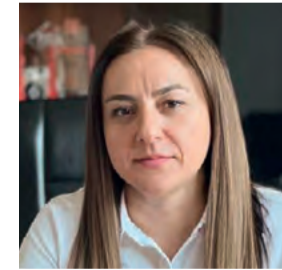
“We strive for 100% customer satisfaction.”

And, based on their observations, this is achieved in the vast majority of cases. For the first time since the company was founded, the manager is currently thinking about stepping up marketing efforts. “The economic situation is challenging for many people and businesses in Turkey. But we are optimistic that we can maintain our sales if we inform proactive about our performance.”

Looking beyond the borders

She explains that investors and private builders in Turkey will be approached at trade fairs and via social media. At the same time, Leyla Duman Önay would like to introduce the company to building material dealers and project developers in neighbouring countries. “There has actually always been so much to do in Turkey that we have not yet made any significant export efforts. But Özpen Grup has a lot to offer that should also be of interest to customers outside of our country.”

The fact that the Roto Group is a globally active industry partner with a wealth of experience at its side could be very helpful in this context. “We know that, over the long term, Roto hardware performs just as well in desert states as it does on coasts or in regions with polluted air. So we can also venture into projects in regions with extreme climates,” says Leyla Duman Önay happily. www.ozpengrup.com.tr



Leyla Duman Önay, Managing Partner, Özpen Grup



The residential real estate project Mavera Comfort in Başakşehir Istanbul was completed in 2023.



➔ **Roto Patio Alversa: Universal hardware with minimal installation effort**

ftt.roto-frank.com/en/alversa-video (YouTube)

Kohltech Windows & Entrance Systems, Canada

Three trusted partners – one goal



A two-panel hinged patio door and large-format casement window from Kohltech provide an illuminated living space and protect against heat loss, even during cold Canadian winters.

■ **PVC** For decades, Canadian manufacturer Kohltech Windows & Entrance Systems has produced market-leading quality windows and doors. Ultrafab has been a major business partner of the company since 1992, and Roto North America since 2007.

“We think and act as partners - that is the basis of our success,” emphasizes Carl Ballard, President and part of Kohltech for 27 years. He says it is important for his team to maintain reciprocal relationships with customers, but also with suppliers. Proof of this strategy’s success: Kohltech is named one of “Canada’s Best Managed Companies” in 2023.

Selected partners

As a supplier, Kohltech generally chooses companies that provide high quality products and delivery service, but also demonstrate flexibility and dedication, explains Ballard. “We expect great reliability, but also commitment from our partners.” Ultrafab and Roto bring both to their daily work.

Together for quality

He learned of Roto’s acquisition of Ultrafab Inc. late last year. “When news of the deal reached me, I was surprised at first,” he recalls of December 2022, but then he realized that this merger was good news for those who want to manufacture quality windows and doors, like Kohltech.

“The acquisition of Ultrafab by Roto is good news for the industry.”

Tightly sealed windows are easiest to manufacture when hardware and weatherseals are optimally matched. This coordination between Ultrafab, Roto and Kohltech, provides a good basis for the production of high-quality energy-saving windows that are both easy to operate and durable.

They must be tightly sealed

Ultrafab has consistently developed product-specific weatherseals for Kohltech that have increased the energy efficiency and ease of use of windows and doors, he said. Roto North America worked with Kohltech to develop a lockable X-Drive operator that is significantly more solid than most others available in the market. In this respect, Ultrafab, like Roto, is part of Kohltech’s success story.

“Proven technology with consistent quality – that is the future.”

Roto North America’s recently introduced heavy-duty hardware for Casement & Awning windows comes at just the right time, Ballard says: “People want large windows with a lot of transparency, and when we fit them with insulating glass, we need a hardware that is designed for heavy sashes.”

Since many elements from the Kohltech factory are installed on the Canadian east coast and are thus exposed to the salty air of the Atlantic, Roto’s high level of corrosion protection is also appreciated here: “We can only fabricate long-lasting products with components that are manufactured with high-quality raw materials and handled with care.” Confident of Roto’s high-quality hardware and dependability, Kohltech also utilizes hardware from Roto’s Tilt&Turn and sliding patio door lines.

Justin Coleman is one of Kohltech’s professionals who sling Roto Tilt&Turn hardware.



Demand remains secured

Even if the demand for windows and doors is slightly declining in North America, there is still an urgent need to build more energy-efficient housing. The demand for tightly sealed, well-insulating windows will therefore remain high in the medium term, and Roto and Ultrafab will continue to be important partners for Kohltech in the coming years.

“Together we reliably achieve our goals.”

The high technical expertise of both companies complements each other, he adds. “The entire value chain benefits when specialists like Kohltech, Roto and Ultrafab share their knowledge in a spirit of trust,” Ballard concludes. He remains enthusiastic about collaborating further with Ultrafab and Roto to ensure their mutual success.

www.kohltech.com



➔ Explore Roto’s vast range of casement products

ftt.roto-frank.com/en/casement-awning



Carl Ballard,
President of Kohltech
Windows & Entrance
Systems

New Roto Aluvision special corner drive

Full functionality and tight sealing for pitched windows

■ **Aluminium** Roto has developed a flexible special corner drive for aluminium pitched windows with acute or obtuse angles. This can be combined with Roto AL (surface-mounted hinge side) or Roto AL Designo (concealed hinge side) Tilt&Turn hardware. The Roto Object Business organises project-specific system tests.

Whether an architect-designed home or office building – multi-part window / facade elements often feature in a customised building design. In many cases, the plans call for pitched elements as well as rectangular windows. If these elements are designed as an opening element rather than fixed glazing, this gives rise to the question: which hardware tightly closes windows with obtuse and acute angles while ensuring the usual operating convenience?

Tightly sealed as standard

The functional safety and sealing of a pitched window must be in no way inferior to that of a rectangular window. At the same time, it's in the manufacturer's interest to produce pitched windows with familiar components and processes. Roto has now developed a solution for aluminium windows which makes it easier to economically produce tightly sealed pitched windows.

Easy to install at any profile depth

The new flexible corner drive for acute and obtuse angles is easy to push into the profile, where it is fixed in place with four piercing screws. It is designed to be used even in very slimline profiles. Like standard hardware, combining the new components with the Roto AL Tilt&Turn system, or Roto AL Designo for pitched windows, is proven to achieve tight sealing and guarantees functionality without limits: even sashes at an angle can be opened by turning or tilting. Project-specific tests with a trapezoidal window from Metra Building (www.metrabuilding.com), which Roto showcased at BAU in Munich, provided clear proof of this.

Locking points can be positioned all around the outside

Since the special corner drive is adapted to the shape of the window, locking points can be positioned all around the outside, just like on a standard window. This creates tight sealing and also makes an RC 2-compatible version possible. Roto tests pitch window systems for customers at one of the two International Technology Centres (ITC) at the factory sites of Leinfelden-Echterdingen (Germany) and Kalsdorf (Austria). Both accredited test laboratories can also provide support to Roto customers at short notice.

Hidden technology

When planning aluminium windows, most discerning designers want to avoid using visible hinges or functional elements on the window. With the Roto AL Designo concealed hardware in conjunction with the new special corner drive, every window manufacturer can offer a suitable solution with support from Roto.



Flexible special corner drive for the Roto AL and Roto AL Designo Tilt&Turn hardware product ranges for Tilt&Turn window elements with obtuse and acute angles

A window system with the new special corner drive and sash weights of up to 180 kg, a width of 735 mm to 1220 mm and a height of 1000 mm to 1610 mm has already been tested. Thanks to Roto Sil, all components subject to mechanical load have outstanding protection against wear and corrosion. Roto Sil meets the requirements of class 5 in accordance with DIN EN 1670, representing the highest level of corrosion protection.

The concealed Roto AL Designo and the surface-mounted Roto AL hinge side are available with a flexible corner drive in all electrolytically oxidised aluminium colours, to match the window handle on request.

Special solutions and testing by Roto

Manufacturers looking for Tilt&Turn hardware for aluminium pitched windows should get in touch with the Roto Object Business. The advisors in the team provide support to metal constructors, system suppliers, architects and inventors when it comes to designing and developing individual building elements. In consultation with the Aluvision designers, they make timely and reliable assessments of the technical feasibility of project-specific hardware and window solutions, even if these involve extremely complex requirements for functionality and operability.



➤ **Certainty in planning and implementing special aluminium solutions**

ftt.roto-frank.com/en/rob



At BAU 2023, Roto presented a trapezoidal window from Metra Building with the Roto AL Designo concealed Tilt&Turn hardware and the new flexible special corner drive.

Zach Carr builds a casement window with hardware from Roto Frank of America.



In the image below: high quality: casement windows from Kohltech with hardware from Roto and weather seals from Ultrafab.



Jim Adams inserts Ultrafab weather seals into vinyl profiles.



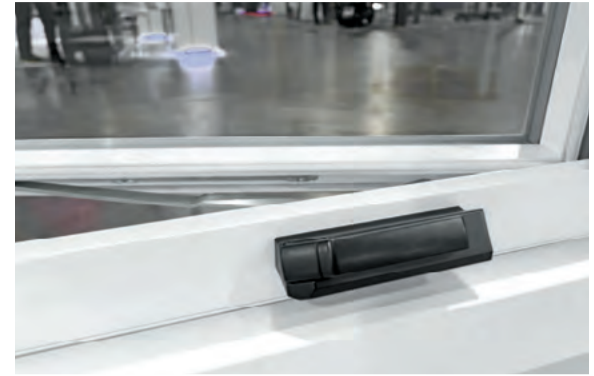
Since 1992, employees like Trish Wilson at Kohltech have been handling weather seals from Ultrafab.

Roto & Ultrafab united at GlassBuild 2023

Perfect match for windows and doors



A collaboration milestone: Roto and Ultrafab exhibit together at GlassBuild 2023 in Atlanta, USA.



Roto's X-DRIVE Heavy-Duty hardware system allows Casement window sashes to reach up to 200 lbs (91 kg), when used with all system components.



With the addition of multiple center fins, Ultrafab's TRI-FIN® weatherseals offer superior defense against air and water infiltration.

■ Company Roto and Ultrafab's joint exhibition at GlassBuild 2023 emphasized that window and door manufacturers receive the greatest benefits when hardware and seals are optimally matched.

Manufacturers benefit from expert guidance on hardware and seals, and from well-coordinated services. This has been the reality for some customers for years, as the example on page 10 of this issue shows. A few weeks ago, the two companies presented themselves to the North American industry for the first time as a joint venture.

High-performance hardware for tightly sealed windows and doors

Due to increasing climatic challenges, high-quality, tightly sealed windows and sliding doors are in high demand. Accordingly, the Roto Patio Inowa sliding door system with circumferential gaskets was one of the highlights for the visitors in Atlanta.

Visitors also showed an interest in the X-DRIVE Heavy-Duty hardware system for Casement Windows with a sash weight of up to 200 lbs (91 kg). This system includes the Heavy Duty Operator, a Supreme Hinge with limiter, and the LB08 multi-point locking system, which ensures uniform and high contact pressure of the window sash. The resulting wind and rain impermeability provides comfort and security for the end-user, particularly for those in harsh weather climates such as the Upper Midwestern United States. Casement & Awning Windows

are the fastest growing market segment in North America and are the second most used window opening type.

www.rotonorthamerica.com

Brush seals and Extruded gaskets

Ultrafab has been part of Roto Window and Door Technology since December 2022. At the largest tradeshow for fenestration industry in North America, the established supplier of sealing products presented, among other products, its ULTRA CELL® Micro-Cellular Foam Seals. They effectively reduce noise and eliminate dust, water, and air movement. Another highlight was the TRI-FIN® pile weatherseal. The seal has three integrated pliable barrier fins that improve air and water infiltration. With its solid polypropylene backing it inserts easily, saving time and reducing waste.

Unique value-adding services

Ultrafab produces the majority of their seals from raw materials, using in-house, proprietary manufacturing equipment. For optimum window and door manufacturing support, they also provide their customers with an insertion machine (see image above). The only equipment of its kind on the market; it can insert up to 6 ft (1,8 m) of pile per second, is programmable to a customer's needs, and can accommodate virtually any backing type.

www.ultrafab.com

Successful and Enlightening Trade Show

Alan DeMello, President and CEO of Ultrafab, summarized: "GlassBuild was a great way to



see our customers, expose them to the latest products and services, and get feedback on our performance as a supplier." President and CEO, Roto The Americas, Chris Dimou, highlighted the successful presentation of the connection between hardware and gaskets:

"GlassBuild provided us with a unique opportunity to showcase our combined portfolio, interact with customers face-to-face, and understand industry trends, opportunities, and challenges. It was an excellent way to demonstrate the value we can offer."



Alan J. DeMello,
President and CEO
of Ultrafab Inc.



Chris Dimou,
President and CEO
of Roto The Americas

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To improve the reading flow, only the male form is used in some parts of the text. Within the meaning of equal treatment, the corresponding terms apply neutrally to all genders.