



Window and Door Technology



Roto Frank
Window and Door Technology GmbH

Wilhelm-Frank-Platz 1
70771 Leinfelden-Echterdingen
Germany

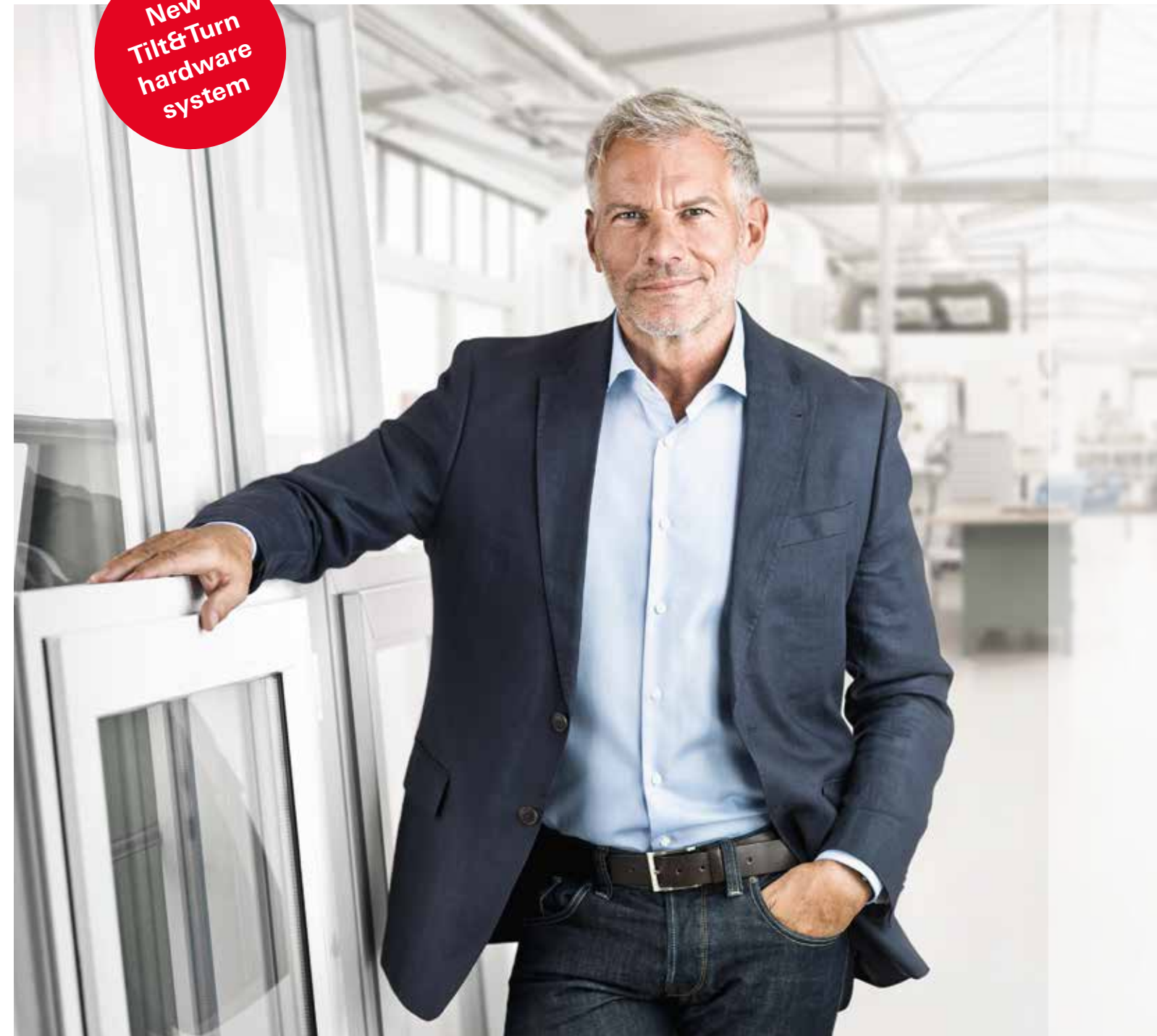
Phone +49 711 7598 0
Fax +49 711 7598 253
info@roto-frank.com

www.roto-frank.com

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Roto NX: Always the right decision

New
Tilt&Turn
hardware
system



From a single source: Optimum hardware systems to meet all challenges:

Roto Tilt&Turn | The Tilt&Turn hardware system for windows and balcony doors

Roto Sliding | Hardware systems for large sliding windows and doors

Roto Door | Matching hardware technology "everything about doors"

Roto Equipment | Additional technology for windows and doors



Roto NX

The safe investment

Market intuition meets innovation

The number one. As the inventor of the first industrially produced Tilt&Turn hardware, Roto recognised what the window market requires above all. With approximately half a billion Turn-Only / Tilt&Turn sets sold, it's not for nothing that Roto is now the global market leader. The modular design of our Roto NT hardware system offers fabricators maximum flexibility combined with long-term functional safety. As a result, our Tilt&Turn hardware has been the perfect basis for custom-designed, secure and reliable windows and balcony doors for many years. But the world is changing, as are the requirements placed on windows and the way in which they are manufactured. We carefully examined the trends of tomorrow and prepared the Tilt&Turn hardware for the future.

Now even better. Roto wouldn't be Roto if we didn't continuously improve. Roto has continuously developed the Tilt&Turn hardware across several product generations and, as a technological leader, has provided new impetus in the window and door market time and again for decades. We consistently focus on the needs of the market and our customers. With Roto NX, we are now taking the next step and offering a new Tilt&Turn hardware system based on the proven Roto NT – with new features and functions that make the system a safe investment for the future. We retained what worked well and improved on many aspects. With Roto NX, we are presenting a future-proof hardware system that reflects the reliable market intuition and innovation of the global brand Roto and contributes to the success of our customers in the long term.

The new Roto NX hardware system seamlessly links to the success story of its predecessor and provides window manufacturers and retailers with the solution for the future.



Roto NX

Inspired by our customers

Intelligent responses to new requirements

New performance, new possibilities

Smart home, burglary protection, comfort requirements, sound insulation, energy efficiency – these are the topics that are preoccupying the sector. Sometimes this requires ambitious ideas, such as our TiltSafe window (burglary inhibition in tilt mode in accordance with RC 2). But sometimes even small changes can have a big impact. As a result of innovative further developments to individual components and assemblies, we were able to decisively improve our Tilt&Turn hardware again and prepare it for new challenges. For instance, Roto NX now makes it possible to cater to the trend for modern windows with ever larger glass surfaces. The focus on the benefits is always on efficiency, security, comfort and design.

The safe choice – in every aspect

Roto NX provides tangible benefits: minimum production and installation effort, cost and time saving on storage and logistics, increased functional safety and therefore ultimately also fewer service calls. In addition, not only window manufacturers enjoy economical benefits with Roto NX, but end consumers too thanks to optimised functionality and groundbreaking innovations, for example due to increased protection against burglary, improved design and higher room comfort and operating convenience. This means that Roto is the safe choice for everyone. And it also makes Roto NX the best Roto hardware system of all time – from the global market leader for all window manufacturers and installation companies, builders and property owners across the globe.

Efficiency

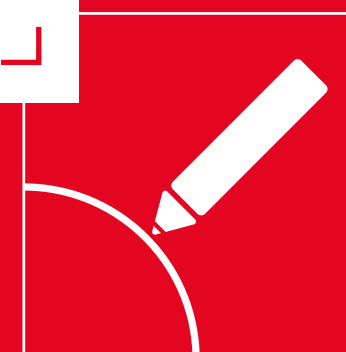
Roto NX stands for a high level of efficiency. The system guarantees simple and fast assembly during production and installation and reduces the storage and logistics expenditure. This saves time and money. In addition, Roto NX ensures a high product quality and long-term functionality. This all makes Roto a reliable partner – now and in the future.

Security

Roto NX stands for a high level of security. The new TiltSafe components offer advanced burglary protection – now even in tilt mode (burglary inhibition in accordance with RC 2). Working with the hardware itself is also becoming safer and permits higher loads even in the standard version, for example. The product quality and the breadth and depth of the range additionally ensure maximum reliability and decision making certainty.



Always
the right
decision



Comfort

Roto NX stands for increased comfort. The system impresses with a high level of operating convenience, simple handling and ideal functionality. Roto NX also improves the living comfort – for example by optimised ventilation properties for a balanced room climate or through incorporation into the home automation.

Design

Roto NX stands for contemporary design and ensures an attractive appearance from all angles, for example due to elegant cover caps, sophisticated powder coatings and concealed screws on the hinge side. In addition, the system allows a modern room design with large glass surfaces thanks to its high loads.



Roto NX

Something to
be proud of

The most important innovations at a glance

01 Hinge side P for PVC windows and hinge side T for timber windows with integrated night ventilation

Many advantages and heavy weights: the new Roto NX stay bearings and pivot rests for PVC windows support weights of up to 150 kg.

02 TiltSafe window – burglary inhibition in tilt mode in accordance with RC 2

Offers excellent protection against burglary during tilt ventilation – while ensuring a high air exchange rate.

03 High backset espagnolette in the EasyMix system

Simply great. Extra simple: floating-mullion rod and gearbox – to allow for separate ordering and custom configuration.

04 Plus lever-operated espagnolette – extra efficiency

Safe production and fast installation with just one jig for both sashes.

05 Lifting mishandling device, increased reliability and flexibility

A new level of long-term functionality, impressive because the robust spring is easy to access.

06 Mechanical balcony door bullet catch – optimum properties

High retaining force and improved run-in characteristics with minimum installation effort.

07 V locking cam – for simple adjustment without the need for special tools

Improved adjustment options for precise adjustment and adaptation of sash and frame.

Maximum protection and excellent durability thanks to the further developed Roto Sil Level 6 surface

The new, more robust surface protects connection and sliding elements under high stress. This means that the entire Tilt&Turn hardware system even exceeds the requirements of the highest corrosion protection class (class 5).

Roto NX

Targeted
innovations –
Great results

Further developed surface: Roto Sil Level 6

A high-quality cathodic corrosion protection system results in an especially durable surface, therefore ensuring maximum reliability.

1

Hinge side P for PVC windows with integrated night ventilation
Hinge side T for timber windows with integrated night ventilation (not shown)

- | | | |
|-------------------------------------|----------------|--------------|
| 1 Stay bearing and stay-bearing pin | 2 Pivot rest | 4 Stay arm |
| | 3 Corner hinge | 5 Stay guide |

2

TiltSafe window (in tilt mode in accordance with RC 2)

2.1 Manually operated

- 6 Security striker for tilt ventilation

2.2 Electrically driven

- 6 Security striker for tilt ventilation combined with Roto E-Tec Drive (not shown)

3

High backset espagnolette

- 7 Floating mullion
8 Gearbox
9 Lock casing

4

Plus lever-operated espagnolette

- 10 Espagnolette with one-part connecting rod

5

Lifting mishandling device

- 11 Lifting mishandling device sash component
12 Lifting mishandling device frame component

6

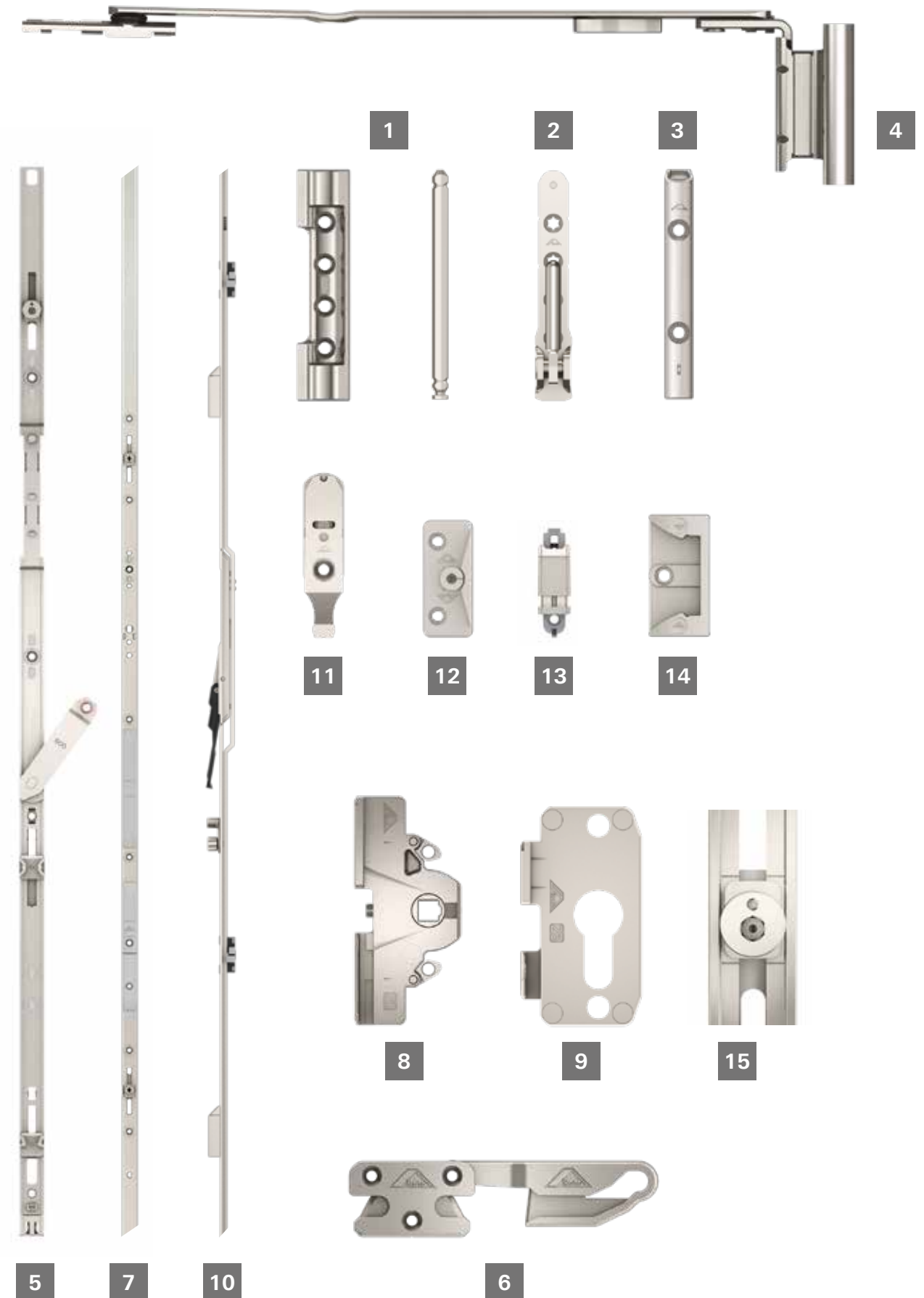
Mechanical balcony door bullet catch

- 13 Bullet-catch sash component
14 Bullet-catch frame component

7

V locking cam

- 15 Security locking cam



1 Hinge side **P** for PVC windows with integrated night ventilation

High level of efficiency thanks to fast processing in production, simple adjustment during installation and low storage and logistics expenditure due to the reduced number of items

- The hinge sides (stay bearing and pivot rest) are combined on one hinge side up to 130 kg for a sash weight of 100 and 130 kg
- Standardised drilling and screw pattern: no additional screw fixing for 130 kg
- Stay bearing, pivot rest and stay guide can be used on the left and right
- Night ventilation integrated in the sash stay renders an additional frame component unnecessary

Increased comfort due to improved room climate and simplified handling

- Night ventilation integrated in the sash stay as standard to provide an additional ventilation function for increased living comfort
- Intuitive operation: sash in night ventilation function automatically at a handle position of 135°
- High level of operating convenience with effortless closing movement thanks to the staged taper action (s-shaped link)

Increased security due to efficient components

- Hinge side (stay bearing and pivot rest) for a sash weight of 130 kg and 150 kg for large, modern windows with a high glass weight
- Added security due to a sash weight of 130 kg even in the standard version

Contemporary design for a harmonious overall impression and greater design freedom

- Concealed screws for an attractive appearance of the stay bearing from all angles
- Stay bearing is flush with the overlap of the sash: more possible combinations with different window types (for example fanlights)
- Custom design options thanks to large colour selection for cover caps and powder-coated surfaces (new: titanium powder coating for the hinge side)





1 Hinge side T for timber windows with integrated night ventilation

Roto offers the perfect solution for working with timber windows, too: the new hinge side T for timber windows is designed for a sash weight of up to 150 kg – for modern, large-scale window designs. Just like the new hinge side P for PVC windows, our hinge side T for timber windows also impresses with clear advantages in terms of efficiency, security, comfort and design.



Stay bearing

A brief overview of the most important advantages

- **Simple and economical workmanship**
Stay bearing and stay guide can be used on the left and right
- **Increased security as a result of efficient components**
Designed for large windows with a sash weight of up to 150kg
- **Increased comfort due to improved room climate**
Integrated night ventilation in the standard version for optimum ventilation
- **Contemporary design and perfect appearance right down to the last detail**
Concealed screws, cover caps with an optimised shape and powder-coated surfaces in numerous colour variants (new: titanium powder coating)

The most important innovations at a glance

2 TiltSafe window

(Burglary inhibition in tilt mode in accordance with RC 2)



Ventilate without worrying and sleep more easily: Roto NX is putting an end to risky security gaps associated with tilted windows. The innovative TiltSafe window from Roto with burglary inhibition in tilt mode in accordance with RC 2 makes it possible – with security strikers specially designed for burglar-inhibiting tilt ventilation. The Roto TiltSafe window is available in two versions: as a conventional, manually operated variant as well as an electrically controlled design in conjunction with the Roto E-Tec Drive drive unit.

Increased security thanks to improved burglary protection

- Burglary inhibition in accordance with RC 2 due to three identical steel security strikers for tilt ventilation (in conjunction with security locking cams and a lockable handle)



Security striker for tilt ventilation

Increased comfort and improved room climate

- Familiar simple operation without limitations
- Tilt depth of up to 65 mm in manual and electric versions for a high air exchange rate
- Convenient incorporation of TiltSafe windows into the home automation by means of an electric drive called the Roto E-Tec Drive



Roto E-Tec Drive



4 Plus lever-operated espagnolette

Economical due to fast, effortless installation

- Uniform position of the strikers in the first opening and second opening sash as a result of the synchronous movement of the connecting rod and lever – just one jig for both sashes
- Fast cropping and installation in the sash because it is delivered in the open position

Increased comfort due to improved operation

- Simple operation and reduced risk of injury since the lever does not protrude in the opening position (virtually 180°)

| Plus lever-operated espagnolette



3 High backset espagnolette (EasyMix system)



| Floating mullion | Lock casing | Gearbox

High level of efficiency thanks to minimised storage and logistics costs and simple and fast installation

- Floating mullion and gearbox / lock casing are disconnected from a backset of 25 mm and above for a configuration in line with requirements and a clear reduction in the number of items to be stockpiled
- Floating mullion and gearbox / lock casing are connected without screws by conveniently clipping them in (EasyMix system)



5 Lifting mishandling device



Lifting mishandling device sash component

Flexible installation and long-term functionality

- Fast correction in the event of incorrect release due to adaptable spring (left / right)
- Robust spring mechanism for a high level of durability
- No special screws required

Lifting mishandling device frame component

6 Mechanical balcony door bullet catch



Bullet-catch sash component

Fast adjustment and high level of durability

- Optimum positioning of frame and sash in relation to each other due to height adjustment of up to 7 mm on the sash component
- Stable spring structure for long-term functional safety

Increased comfort thanks to optimised shaping

- Optimised shaping of frame component and sash component for improved run-in characteristics and a high retaining force



Bullet-catch frame component



7 V locking cam



Marking for height and gasket compression adjustment

Adjustment using hex key (4 mm)

V cam (security locking cam)

In addition to the V cam, P and E locking cams can also be used like usual.

Economical due to time- and cost-efficient adjustment possibilities

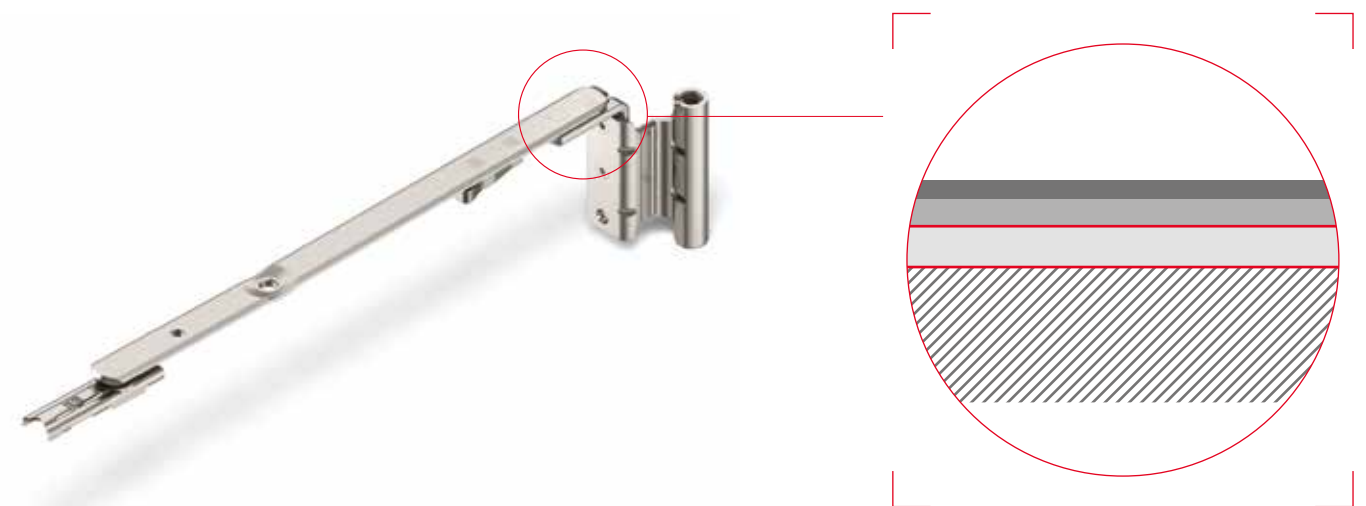
- Optimised rebate-clearance tolerance range: improved adjustment options for precise adjustment and adaptation of sash and frame
- For simplified adjustment: marking for indicating the gasket compression adjustment
- No special tools required: gasket compression is adjusted using conventional hex key (4 mm)
- Use in corner drive, espagnolette, centre lock and stay guide
- Maximum corrosion resistance thanks to the further developed Roto Sil Level 6 surface

For a modern way of living and well-being: Roto NX combines the highest standards of quality, functionality and appearance.

Roto NX

Durable
thanks to Roto
Sil Level 6

Maximum surface protection



Surface structure of a connection element

- Optical seal
- Chromium VI-free passivation
- Corrosion protection system with microcrystalline structure
- /// Base material: steel

Better than very good: the further developed Roto Sil Level 6 surface protects connection and sliding elements under extreme stress in particular. This means that the entire Tilt&Turn hardware system even exceeds the requirements of the highest corrosion protection class (class 5). The special microcrystalline structure makes the coating incredibly tough and therefore particularly durable. This pays off in multiple ways when it comes to efficiency, security and comfort.



Roto Sil Level 6 enables lasting functional safety in moving parts subject to severe wear.

Roto Sil Level 6: worry-free throughout generations

Anyone who installs windows and doors wants long-lasting quality. This is why we have made Roto NX hardware even tougher. We use a special electroplating process to coat the surfaces of parts under extreme stress with corrosion protection featuring a microcrystalline structure. This makes the surface extraordinarily strong and sets new standards in hardware technology: even sensitive components such as rivets or sliding elements are provided with lasting protection against corrosion for the first time. And only when all components are equally robust can the hardware and window remain functional in the long term. This will keep you worry-free for generations.

Roto NX

Always
the right
decision

The new **Roto NX Tilt&Turn hardware system** is based on the classic Roto NT which has been tried and tested millions of times. This means that one thing is certain: **what was good in the past will remain good in the future!** For example, the usual high application variety, the custom adaptation options for different security requirements, Roto Sil Level 6 for outstanding corrosion resistance, **ten-year warranty** for the functionality of our hardware, and much more. We **systematically further developed** anything that

required improvement in terms of efficiency, security, comfort and design – for even more functionality, quality, attractiveness and reliability. This means that Roto NX is the intelligent response to the requirements of our time – and provides window manufacturers and retailers with **the safest possible investment**. In short: Roto NX is the ideal solution for everyone who wants to produce high-quality and reliable windows economically. **Now and in the future.**

Roto NX

The Tilt&Turn hardware system for windows and balcony doors shaping the industry once again

Roto: World Champion in Window and Door Technology

The Window and Door Technology Division is the global market leader for Tilt&Turn hardware. This position manifests itself through a completely interconnected product portfolio of fully concealed, resilient hardware product ranges, up to smart sliding systems, (electro) mechanical multipoint locking systems and electric ventilation alternatives, right through to glazing packers

and sealing profiles. Around 3700 employees in 15 production plants, 26 sales companies and 29 logistics distribution centres ensure global availability and proactive service. From production to the end customer, our services represent the highest standards in comfort, security, reliability and efficiency.

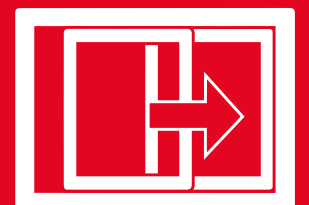
Tilt&Turn

Tilt&Turn hardware systems for windows and balcony doors



Sliding

Hardware systems for large sliding windows and doors



Our system
solutions and
services



Door

Matching hardware technology for doors



Equipment

Additional technology for windows and doors



Services

On-site all over the world