

The frame for Innovations.



The TITAN hardware system:
efficient, convenient and trend-setting.

SIEGENIA AUBI®
SOLUTIONS INSIDE

WINDOW HARDWARE

DOOR HARDWARE

SLIDING DOOR HARDWARE

VENTILATION AND BUILDING TECHNOLOGY

If there was an innovation award
for window hardware,
TITAN would win gold!



Innovation has a long tradition with us.



Everyone knows how to open, tilt and lock a window. Far fewer know about the fact that this standard – which still applies today – is a SIEGENIA-AUBI development. Single-handed operation is certainly not the most exciting technical innovation of modern times. But one can definitely view it as being world-shattering, if millions of people worldwide operate their windows daily using our method.

Innovation has a long tradition with us, and this is now already in the fourth generation. Whether it's the Trial gear, sash lift, groove claw, 3D roller cam, 'Comfort' mushroom cam or hardware assembly on the pre-welded profile bars:

It is our goal to develop sustainable product innovations in the window and door hardware areas as well as ventilation and building technology in close cooperation with our customers and in line with market conditions. True to our company motto: Make windows and doors work, give rooms air and find the best solutions together with our partners. In order to consolidate and develop our position as the industry's

innovation leader, we disproportionately invest in research, development and process management. This way every employee can contribute ideally with both his qualifications and knowledge. Transparent structures and a living work culture create motivation to meet customer requirements time and again, and to find intelligent as well as flexible solutions. These solutions are analysed in complex process and test procedures for both suitability for daily use and reliability. In doing so, our quality demands for product development and serial production are well beyond the statutorily regulated guidelines.

The most recent example of the consistent innovation and quality leadership from SIEGENIA-AUBI is the TITAN hardware family that we would like to present to you on the following pages. The success of the series with TITAN iP and TITAN AF, shows us that it's always worthwhile to go down new avenues together with our customers.



THE FULLY DRILLED IN TRIAL ESPAGNO-
LETTE AS THE WINDOW'S MOTOR PRO-
VIDES RATIONALISATION POSSIBILITIES
AND IS A PERMANENTLY VALID STANDARD
RIGHT UP TO THE PRESENT DAY.



A perfect family.



Efficient and trend-setting.

These are the attributes that best describe our TITAN family. The innovative hardware system convinces with pretentious aesthetics, high functionality and fully developed comfort. Thanks to the minimum logistics and workflow streamlining, TITAN provides savings potential that open up clear competitive advantages to you as a fabricator.

The first offshoot in the TITAN family was TITAN iP. Since its introduction in 2004, it has revolutionised the market by facilitating hardware assembly on the pre-weld profile bars. TITAN iP is also the perfect answer to automation demands within the window fabricating industry. Furthermore, TITAN iP convinces with an abundance of future-oriented technologies in the areas of functionality, safety and convenience.

The innovation strength of TITAN iP was so strong that the wish was immediately expressed to also use these advantages, without having to abstain from using traditional production methods. That was the birth of TITAN AF. Now with this consistent expansion of the TITAN family, all outstanding product advantages and comfort features are available – also in conjunction with conventional installation techniques: from smooth-running 'Comfort' mushroom cams, optimised coupling location via the tolerance-insensitive stay hinge coupling, new frame components for low thresholds, right up to a reliable mishandling-device. From optimised stockkeeping to standardised packing dimensions of the components, right up to efficient fabrication. This all manifests: innovations are the window to the future. And this will be made with TITAN.





TITAN

iP

Harmonising cycle times by assembling pre-weld profile

Individual distribution of work processes in the entire production

Freely scaleable degree of automation right up to fully automated production

TITAN

AF

Conventional installation technology

Flexible integration into existing production processes

Minimum re-tooling time and expense

TITAN iP. Innovative hardware system for assembly on pre-weld profiles bars.



Innovative and revolutionary.

For SIEGENIA-AUBI, the window fabricator's business success is at the heart of everything we do. We designed TITAN iP based on these guidelines; the first hardware system worldwide that facilitates assembly on pre-weld profile bars. This revolutionised window production as the hardware installation is no longer bound to a fixed work station.

Individual hardware assembly concepts can be installed at any desired location in the window production: from the cutting station right up to the fitting table. This way the fitting can be initially decentralised and this results in being able to make optimal use of the idle periods at various other work

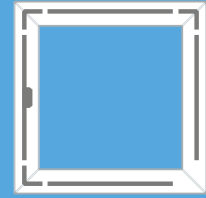
places. This leads to cycle time harmonisation within the workflows and increases productivity. This results in reducing the costs and competitiveness is increased. In a nutshell: TITAN iP optimises the profit situation.

The hardware installation with TITAN iP can be freely chosen; from completely manual to semi-automated, right up to fully automated. As a result TITAN iP provides economical advantages for all company-sizes. Due to the fact that TITAN iP is not committed to a particular type of machine technology, large investments can be avoided.

IDEALLY SUITED FOR RATIONALISATION OF
ALL COMPANY-SIZES.



TITAN AF. Conventional installation technology.



This is how innovative traditional can be!

Titan AF enables all fabricators that want to continue using the conventional hardware installation technique to benefit from all advantages of the TITAN series. These advantages are increased comfort for end-users as well as in fabrication and logistics.

The unique 'Comfort' mushroom cam automatically compensates for manufacturing-related tolerances, ensures smooth-running locking points and locks the window practically wear-free. A quality that guarantees sustainable function and the highest level of durability. Also the new strikers point the way in aesthetics and function. Installation with the patent pending 'click-on coupling feature' is quick and easy. Apart from

that, the clever system enables all window sizes to be upgraded with only a few additional components - from the basic security level right up to burglary resistance level 2 ('WK2').

Whether iP or AF: TITAN will also substantially tidy up your warehouse and make space for additional rationalisation effects. One can also take components from the new cardboard packaging while they are stacked on top of each other. The labour-intensive return of empties is no longer necessary thanks to the clever disposal system.

CONVENTIONAL INSTALLATION TECHNOLOGY
WITH ALL OF THE FAMILIAR INNOVATIVE
ADVANTAGES.



Due to the fact that
"Comfort mushroom cam"
sounds somehow awkward, just say:
"Yes, I do!"



**'Comfort' mushroom cam
with integrated height adjustment**



Minor detail, major effect.

The TITAN's 'Comfort' mushroom cam manifests the fact that huge progress can be made on a small scale. This incorporates enormous advantages within a tiny space for fabricators as well as for end-users:

- It ensures straightforward and absolutely precise installation with its infinitely variable height adjustment. It automatically compensates for clearance tolerances and with this, reduces adjustment work considerably in both the production and on site
- Automatic adaptation to changed general conditions, e.g. temperature fluctuations
- Guarantees an ideally adjusted and long-lasting locking system at all times
- Prevents costly and time-consuming complaints
- The 'Comfort' mushroom cam's gasket compression adjustment contributes additionally to individual adaptation to tolerances



System concept
Basic security up to burglary resistance level 2 ('WK2')

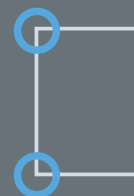


The TITAN family's system concept opens up new potential both in fabrication as well as in logistics:

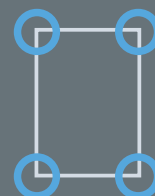
- More effective system design for general use of the 'Comfort' mushroom cams.
- Only a few extension components are required to transform a basic security level window into any burglary resistance level 1 ('WK1') or burglary resistance level 2 ('WK2') window; these components no longer need to be cropped
- A minimum quantity of components ensures lower storage costs
- We also develop solutions beyond burglary resistance level 2 ('WK2') with our customers



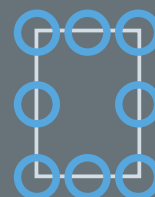
1 point
Basic security



2 point
Basic security



burglary resistance
level 1 ('WK1')



burglary resistance
level 2 ('WK2')



All round locking with burglar-inhibiting frame components



The TITAN family sets new trends in terms of safety and low wear and tear with a new striker generation, that is optimally matched to suit the 'Comfort' mushroom cams:

- An outstanding feature is the high-tensile material combination of PVC and steel that guarantees previously unachieved low wear and tear
- Effective manufacturing processes by means of the optional tilt lock bearing with identical component length and screw positions for the strikers
- Minimum number of components: non-handed tilt lock bearing with integrated sash lift ramp, standard and security striker, concealed center lock
- Also ideal for fully automated frame component installation on pre-weld profile bars
- Efficient upgrading up to burglary resistance level 2 ('WK2') with jig technology/programming and uniform striker locations; also on dummy-mullion windows and higher security levels
- Attractive aesthetics on standard and security strikers

Clamping of all fittings for automatic screw fixing



Whether TITAN iP or TITAN AF – the whole family can be automatically screw-fixed

- Reliable clamping of all hardware elements
- Ideal for manual, semi and fully automated installation
- Efficient installation
- Permanent securely positioned fittings
- Screw guide-hole down as far as the groove base
- Tolerance-insensitive clamping

Click-on coupling feature



Due to generally linking the components, only one screw per coupling location is used. The coupling location provides the following advantages in conjunction with the optimised screw guide-hole claws, high-precision fine serration and insertion bevels:

- Straightforward and secure insertion of the components
- Reduces installation time
- Burglary resistance level 1 ('WK1') and burglary resistance level 2 ('WK2') versions without additional cropping procedures
- Modular design, straightforward upgrading, same components

Stay



Whether for windows or balcony doors, the stay makes closing and tilting easier and more convenient, because:

- Larger tolerances thanks to the smaller stay thickness
- Large stay taper action for smooth running, effortless locking – also of very wide sashes
- Soft gliding into the tilt-mode with friction bushing
- Integrated anti-slam device in the tilt-mode
- High load-bearing capacity with minimum wear and tear thanks to high-quality plastic gliders
- Mishandling device in the tilt-mode prevents sash operating errors
- Improved ease of operation with standard built-in plastic gliders, that function as both a stop absorber and anti-slam device at the same time

Mishandling device



Prevent sash mishandling for once and for all – with the mishandling device versions for all window sizes and shapes:

- No tools required
- High level of functional safety
- Turn-Only and Tilt-Only sash mode at the same time is no longer possible
- Immediate effect
- Also suitable for retrofitting in windows already installed in buildings
- Total functionality in large air gap sections

Lever-operated slave sash gear



The new lever-operated slave sash gear sets standards in safety and convenience:

- The integrated displacement protection with blocking plates on the lever-operated slave sash gears prevent burglars opening the rebate lever; already integrated from the basic security level
- Aesthetically pleasing, functional and attachable lever extension guarantees effortless handling – also for large sashes and a high level of burglary resistance
- The same operating direction on both the active and inactive sash ensures identical grid dimensions and striker positions



Stay hinge



The stay hinge is installed by simply snapping it into place in the stay arm's slot and this enables being able to turn it to the required handed direction:

- No tools required
- Permanent secure connection
- Convenient stay hinge coupling ensures efficient, timesaving installation
- Ideal for logistics thanks to its non-handed, compact design
- The integrated turn restriction prevents the sash closing over while in the turn-mode, e.g. in the event of draught

Sash lift



The sash lift is not only an operating convenience detail, it also supports the durable functional safety:

- Also applicable on dummy mullion sashes
- Guarantees soft closing even after years of use
- Warrants the sash entering the frame softly
- Integration in all conceivable windows e.g. also arched or pitched windows
- The effect in the tilt-mode is also warranted as it is mounted on the bottom
- Optionally also with integrated mishandling device

Snapper



When closing over a door, the sash is pulled towards the snapper and with this, held in the closed position:

- The standard snapper has a particularly low wear and tear stop piece with an optimised point of entry curve as well as adjustable latching force
- The 'comfort' version of the snapper is equipped with a release function in the tilt-mode
- Standard striker is used as the frame component, ideal for installation time reduction as well as stockkeeping

Surface-mounted hinge side



The new surface-mounted hinge side TITAN captivates with its excellent design, a high level of security and numerous fabrication advantages:

- Excellent design
- Entry protection in the tilt-mode (top hinge pin cannot be pulled out)
- Equipped with plastic bearings for low maintenance
- Integrated turn restriction by means of polygon-shaped pin: this can be inserted in three positions
- All screws are concealed by the hinges
- Cover caps and coated versions available
- Flush with the overlap on the top and bottom
- The sash can be hinged in every opening position
- Applicable up to 100 kg and/or 130 kg with identical frame clearance
- Symmetrical drilling and screw-fixing pattern
- Pre-drilling on the pre-weld profile possible
- Integrated gasket bevel and bead
- Drill-in corner hinge with optional gasket compression adjustment



Concealed hinge side TITAN VV



Unostentatious, aesthetical and easy-to-install: The new hinge side with its fully concealed rotation points takes the trend towards aesthetically pretentious architectural concepts with slim profile designs and high light transmittance into account. In addition, the highly efficient installation principle provides perceptible time and cost advantages:



- Efficient in fabrication and installation with its reduction to merely four components
- The installation principle on site enables straightforward hinging of the sash by only one person
- Absorption and compensation of tolerances thanks to the slim and clever stay design
- Easily accessible 3D-adjustable hinge components
- Concealed hinge side technology does not require any longer cover caps
- Applicable even in 18 mm euro-rebate systems
- Ideal for commercial as well as for residential building projects
- Convinces with its high load-bearing capacity, ease of operation and durability
- Burglar-resistant security with its numerous tailored solutions for right up to burglary resistance level 2 ('WK2')



Technically perfected and
reliable solutions are always
successful.

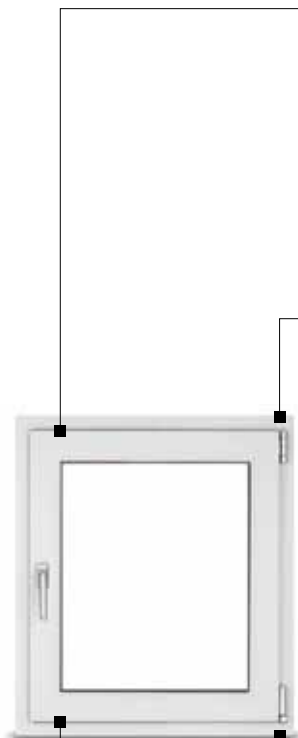


The FAVORIT: our hardware classic, tried and tested millions of times.

The FAVORIT is not only called this, it is in fact favoured the world over and has become our best-selling hardware system. It has been optimised and perfected over the years and is today the high quality and technically perfected hardware classic. The perfect all-rounder for large or small construction projects, for timber and PVC

windows and a real advantage for fabricators. FAVORIT facilitates low stockkeeping levels with its non-handed components that in addition, pool several functions.

The short installation times facilitate even more production efficiency that can be optimised further with preassembled sash lifters upon request.



Locking cam

- High level of security with the cylindrical locking cam or S-ES mushroom cam
- Use of high-quality materials
- High level of impermeability
- Gasket compression adjustment possible



Top pivot point

- Aesthetically pleasing, space-saving top hinge
- Also suitable for slimline frame profiles
- Stay hinge with PVC bush for minimum wear and tear



Bottom pivot point

- The corner hinge is pivoted on the bottom hinge pin with a PVC bush; low maintenance
- Integrated latching of the bottom hinge pin for secure positioning
- Ideal hinge adjustment without the spindle protruding at the side



Sash lift roller 'Inliner'

- Warrants the sash entering the frame meticulously and conveniently
- Preassembled or as a retrofit component
- Applicable on all window types and sizes

Whenever you need us:
We are there for you.



Partnership, that creates added value.

SIEGENIA-AUBI does not want short-term supply contracts with its customers, but rather long-term partnerships. What we understand by a partnership is a living relationship, that profits from the open exchange of questions and requests. What we understand by a successful partnership is the basis upon which one can create sustainable solutions together and eliminate problems. This is what we provide our expertise, experience and resources for.

The awards we have received document that we don't just have a great deal of expertise, experience and resources; but also in tested quality. For example the award for top-rate performance in the Ludwig Erhard Foundation competition, the prize for best employer from the Great Place to Work Institute, the Business Process Management Award and the Best Factory Prize from the Wirtschaftswoche magazine. And testing institutes are of the opinion that we have the best window test rig available in the industry.

We work consistently customer-oriented and offer services in line with demand. These range from product specific solutions right up to business tools. In doing so we differentiate between services that are a matter of course for us, and services where together with the customers, individual cross-process solutions are developed. We would like to briefly present a few examples.

Our support.

We support you with production optimisation. Product training sessions upgrade the professional competence of your workforce. Our test centre is always available to you for window tests. And naturally we are always there for you, if contrary to our expectations, you have a problem with one of our products.

Our services.

The services we provide our customers with are aimed completely towards their requirements and requests. For this purpose we offer our professional competence and pass on our experience. We compile a requirements analysis together. Based on this, we develop individual solutions that lead to the continuous improvement of products and processes. Within the framework of a customer conversion, we offer production optimisation that far exceeds 'normal' consultation. Our value stream analysis can detect waste. In the process, the window production is tracked from stockkeeping through the several production stages, right up to the finished product, taking all machinery, suppliers, people and raw materials involved in the process into account. And in our management training we don't just fob your employees with the usual 'consulting mush', but rather feed them with industry-specific insider knowledge.

Crystal-clear criteria for window hardware.

The QM 328 certification programme, developed by the Rosenheim Institute for Fenestration Technology ('ift') is currently the toughest test by far for Turn-Only and Tilt&Turn hardware. Apart from the durability test for Turn-Only hardware with 25,000 turn cycles, the hardware is also subjected to other tests, e.g. with additional loads or against a rebate hindrance. In addition, within the framework of its certification programme, the Rosenheim institute requires a comprehensive quality audit of the hardware manufacturer, continuous self-monitoring by means of a predefined Factory Production Control (FPC) as well as scheduled external-monitoring by an independent test laboratory.

ift Q-Cert for SIEGENIA-AUBI.

In order to receive the new certification, we have had all frame materials in the ift stipulated test series tested. The result: SIEGENIA-AUBI is the first hardware manufacturer worldwide that may bear the ift Q-Cert mark.

This ensures our customers not only a consistently high product quality, but also interchangeability of the tested hardware as specified in the certification regulations. This leads to substantial time saving and facilitates window fabricators with a faster and more cost-effective changeover to innovative new developments.



THE AWARDED TEST SEAL FROM THE ROSENHEIM
INSTITUTE FOR FENESTRATION TECHNOLOGY
GUARANTEES A CONSISTENTLY HIGH PRODUCT
QUALITY OF THE TESTED HARDWARE.



Would you like some more? Individual customer solutions.

With the TITAN family, SIEGENIA-AUBI has created the most flexible hardware series ever. This is not only illustrated in the many options and features that we have already presented you. This is also illustrated in the individual solutions that we have exclusively designed together with our customers for very specific challenges.

Solution 1

TITAN seals tight.

TITAN AF fulfils the requirements for flood protection windows ('HWD'). The customer's goal was to surpass the 'HWD' standard (that requires a window to be impervious after 24 hours of holding off against 0.5 m of water) to 0.8 m. And all this without a firmly sealed attachment pane; commonly used on 'HWD' windows up to now.

Solution 2

Strong and invisible.

The new security slider is also just as unique as it is innovative. With its reverse-action locking system, a mushroom head cam and 'slider' engaging in both sides of the same striker, making dislocating the sash from the frame impossible. This component made of high-tensile special alloy leads to a high level of burglary protection. It can be used on the top or bottom and in conjunction with standard strikers. This solution provides our customers with good argumentative support for the end customers.

Solution 3

Better ventilation.

The sash retaining device is a further example of an additional solution developed based on customer wishes. The problem: from an ecological and economic point of view, ventilating intensively with the window sash wide open is far more effective than tilt ventilating for hours.

However even light wind and draught slams the window sash closed. This is now prevented by the new sash retaining device. Without limiting the turn modus angle, the sash can be engaged and released. It can be retrofitted everywhere; also in conjunction with competitors' hardware – the sash component is self-instructing and clampable.

Solution 4

As secure as a safe.

We produce the concealed patented 'Tresorband' for another customer that withstands an enormous tractive force. This makes the window durable for a very long period of time and burglars have no chance.

Quality lies in the details.

Si-Line

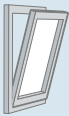


GLOBE



We have a handle on quality — this is characteristic of handles in the new GLOBE and BASIC series as well as the well-proven Si-Line. This quality results from the ideal combination of aesthetics, ergonomics, functionality and material. Furthermore, our handle product range convinces with long functional safety and an optional choice of colours from a corresponding range:

- Innovative design for modern architecture
- Lockable by means of push cylinder, Secustik or push-bottom device
- TBT handle for reliable child safety
- Night ventilation with additional 45° click-in position



We don't save on detail, so that your customers can save energy. For example: the summer/winter ventilation mode thanks to the energy saving stay. The small tilt opening-depth of the sash ensures a reduction of energy costs when in the winter ventilation mode. Retrofitting this on windows already installed in buildings and equipped with SIEGENIA-AUBI window hardware does not involve much time and expense.

The advantages at a glance:

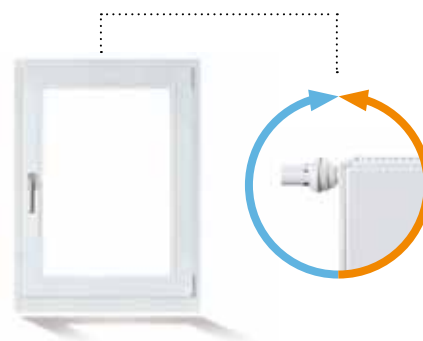
- Summer ventilation mode:
for the standard tilt position
- Winter ventilation mode:
for approx. 40 mm tilt position
- Activate the winter ventilation mode —
through a simple intervention —
without any tools
- Easy retrofitting
- Integrated anti-slam device

That much convenience can only be found in SIEGENIA-AUBI products.



'Comfort' mushroom cams.

The innovative locking system is now also used in the PORTAL hardware and in KfV door hardware – and with this, all the familiar Tilt&Turn advantages: smooth operation, automatic adjustment and minimum wear and tear.



AEROCONTROL.

The window opening and locking monitoring system can be combined with the TITAN hardware system. The opening status of all windows is available via the monitoring unit at all times. The AEROCONTROL system can also be connected up to radiators' thermostatic valves and extractor fans.



Radio sensor.

The wireless window monitoring system warns early on in the event of burglary, gas and fire. The TITAN window is equipped with a radio-controlled window transmitter that transmits all three hardware positions to the central unit. A high level of security is ensured in conjunction with the TITAN burglar-resistant hardware.



MH10 motorized handle.

Open and close windows at the push of a button. Your TITAN window tunes in to our MH10 motorized handle and substantially increases the ease of operation. The integrated automatic ventilation operation ensures good room climate.



SI-Motion hardware locking system.

The SI-Motion hardware locking drive unit enables automatic opening, closing and at the same time locking by means of a single chain drive. The new locking system combines the TITAN hardware series with the Ventic VCD and ACI chain drives. This new solution is suitable for Tilt-Only and Turn-Only windows made from all materials.



SIEGENIA-AUBI Ltd.
Hardware and ventilation technology
Richardson Way · Cross Point
Coventry CV2 2TA
United Kingdom

Telephone: +44 2476 62 20 00
Telefax: +44 2476 62 23 64
info-uk@siegenia-aubi.com
www.siegenia-aubi.com



SIEGENIA-AUBI worldwide:

Austria Telephone: +43 6225 8301
Benelux Telephone: +32 9281 1312
China Telephone: +86 10 8739 89-51/-52/-53
France Telephone: +33 38961 8131
Germany Telephone: +49 271 3931-0
Great Britain Telephone: +44 2476 622000
Hungary Telephone: +36 76 500810

Italy Telephone: +39 02 935 3601
Kazakhstan Telephone: +7 7272 2914033
Poland Telephone: +48 7744 77700
Russia Telephone: +7 495 7211762
South Korea Telephone: +82 31 7985590
Switzerland Telephone: +41 333 4610-10
Turkey Telephone: +90 272 2234862
Ukraine Telephone: +38 044 4637979

Contact your dealer: