









Securing technology for you

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Publisher

Gretsch-Unitas GmbH Baubeschläge Johann-Maus-Str. 3 I 71254 Ditzingen, Germany Tel. + 49 7156 301-0 I Fax + 49 7156 301-293 www.g-u.com Hardware for windows and balcony-doors must do so much more than just function correctly. Only those who also actively acknowledge the importance of aesthetic design, ease of installation and efficient warehouse storage can really deliver an efficient solution. This is why window manufacturers rely on the Gretsch-Unitas group: as one of the leading international providers of window and door technology as well as automatic entrance door and building management systems, we are also the competent partner for Tilt&Turn hardware. The basis is the 100-year history of our family-owned company which has always been intrinsically linked with technical progress, reliability and efficiency. With our Tilt&Turn hardware range we provide an aesthetically attractive, universally applicable, complete solution. In order to live up to our guiding principle "Securing technology for you", we combine first-class products with first-class services which we would like to present in this brochure.



The Gretsch-Unitas group: a traditional family-owned company for more than 100 years

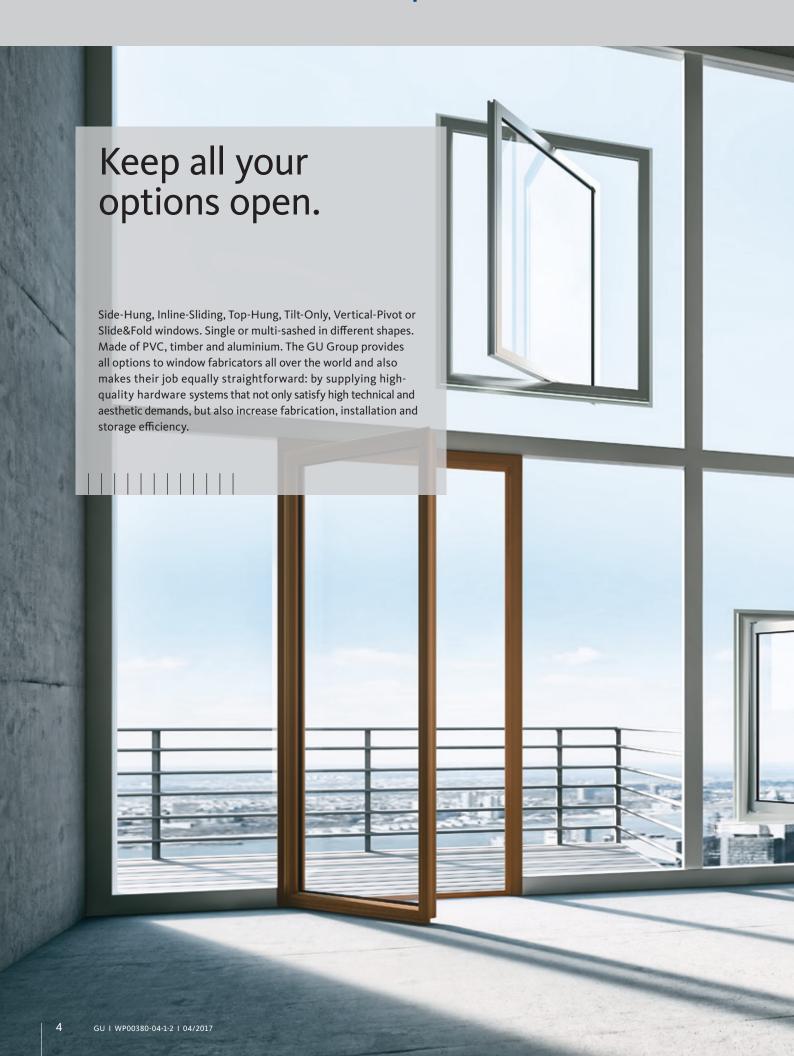








The hardware world of the GU Group







For universal use: the UNI-JET central locking system

GU





One solution fits all - the central locking system principle

With the central locking system, the GU Group supplies a hardware system which can be used universally for all window shapes, whether for PVC, timber or aluminium windows with a 16 mm sash groove: from Tilt&Turn windows to Horizontal-Pivot and Vertical-Pivot windows through to Tilt&Slide and Fold&Slide balcony-doors. Special shapes, such as round-arched, basket-arched and pointed-arched windows are possible using a small number of additional components.

Efficient storage, manufacturing and installation

As the central locking system can be used universally, different hardware systems are no longer required during manufacturing: this reduces the expenditure for storage and reordering and simplifies installation. As the system requires comparatively few hardware components, which can be flexibly used in different opening types, this not only guarantees easy installation but also reduces the number of individual components to a minimum.

Integrated security benefits

In addition to opening and closing conveniently, window hardware is also required to satisfy another important criterion – burglar resistance. The design of the central locking system is always the same irrespective of the required security – from basic security through to the tested burglary resistance classes RC1N, RC2N and RC2. The configuration of burglar resistance classes is determined most importantly by the selection of different strikers.



LOCKING SYSTEM PRINCIPLE One solution for all window types and materials. Special central locking systems are only required for the Lift&Slide systems and with ALU-JET AK 8.



Tilt&Turn window



Horizontal-Pivot window



Vertical-Pivot window



Tilt&Slide window / balcony-door



Parallel-Slide window / balcony-door



Fold&Slide window / balcony-door

Well thought out down to the last detail: the UNI-JET central locking system



From automatic cams through to anti-slam devices

Ingenious technical solutions that can be combined to form an intelligent system: all components of the central locking system are precisely coordinated and have been developed with the aim of simplifying manufacturing, installation and operation.



Cleverle

The Cleverle automatic cam compensates for clearances of between 8.5 and 15 mm in conjunction with the standard striker, simplifying installation and maintenance.



Clip connection

The drive-gear and stay-guide's connection is implemented both safely and practically, thanks to the clip-in function.



Linear, automated-machinery compatible connection

Build windows cost-effectively: the linear connection simplifies automated-machinery fabrication.



Straight(forward) cropping

Easily crop drive-gears and stayguides to the required length – no special staggered punching machinery required: also ideally suited for subsequent cutting on site.

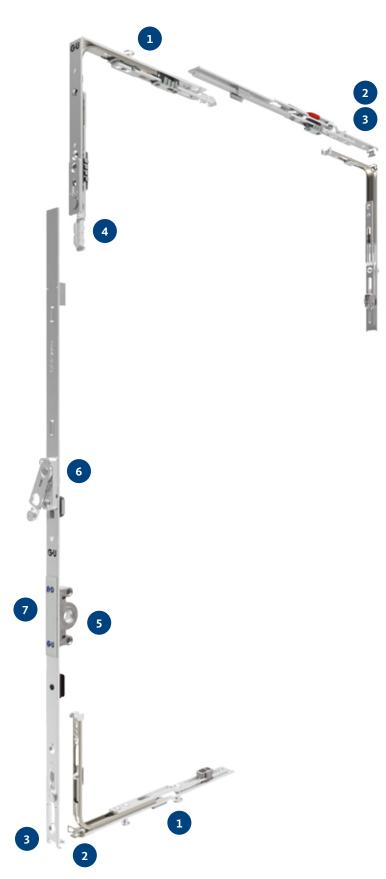


Fixed handle height drive-gear

Ideal for modular connections: the fixed handle height drive-gear can be cropped by 160 mm to accommodate other hardware components.









Sash lifter The sash lif

The sash lifter gently lifts the sash into the locked position. The sash lifter gently lifts the sash into the closed position, supporting user-friendly operation and preventing mishandling.



Logo clip

The logo clip is suitable for the application of CE and RC2 markings or fabricator logos and addresses.



Magnetic contact

Various components incorporating magnets are available for opening & locking monitoring up to VdS grade C.



Standard ferGUard*silver surface sealing

Enduring high-quality aesthetics: ferGUard*silver is highly resistant to corrosion as verified by the results of standardised salt spray tests.



faceGUard – surface treatment for the highest demands

The surface treatment for protection against aggressive climatic conditions, e.g. in coastal regions. Meets the requirements of the stringent salt spray test for up to 1500 hours.



Flat packaging

UNI-JET is supplied in ergonomic flat packaging which makes installation easier and saves warehouse space.

The face-fixed UNI-JET hinge-sides













The face-fixed UNI-JET D, UNI-JET M, UNI-JET S and UNI-JET C hinge-sides

Aesthetics and slimline features in window design are becoming more and more important. The technical demands are also increasing: the emergence of trends such as triple glazing and floor-to-ceiling windows mean that greater sash weights are required. With UNI-JET, the GU Group provides a range of hingesides that satisfies these design and technology expectations – irrespective of whether for PVC, timber or aluminium windows.

Tried-and-tested technology with an appealing look

The UNI-JET hinge-side is convincing due to its cohesive elegant design which blends harmoniously with modern window frames: the high-quality surface in white paint or silver aesthetics has no visible screws or pins, which means cover caps are no longer required. Additional colours are available on request or choose from the wide range of cover caps available.

The lasting effective solution

The UNI-JET can carry sash weights up to 200 kg and floor-to-ceiling sashes up to a height of 2800 mm – without requiring any additional components and with identical visual appearance. Ease of movement when opening and closing is also ensured up to the safety class RC3. The hardware functions are guaranteed for 10 years, ensuring their long term reliability.

Easy handling in production

The entire UNI-JET hardware range is designed for easy, efficient and machine-compatible fabrication. Symmetrical components, hole and screw patterns make hardware installation easy. Flat packagings and a reduced number of components save warehouse space.

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Pro	duct	ove	rview	,

Description	PVC	Timber		Aluminium	
Tilt&Turn hardware	UNI-JET D	UNI-JET M	UNI-JET S	UNI-JET D	UNI-JET C
Description	D = drilled	M = milled	S = screwed	D = drilled	C = clamped
Sash rebate width (mm)	280 - 1600	280 - 1700	280 - 1600	280 - 1600	280 - 1600
Sash rebate height (mm)	280 – 2800	280 – 2800	280 – 2800	280 – 2800	280 – 2800
Tested hardware load- bearing capacity (kg)	150	200	130	100	130
Page	16	18	18	22	21

The concealed UNI-JET hinge-sides













The concealed UNI-JET SCF and UNI-JET CC hinge-sides

The GU Group provides a wide range of concealed hinge-sides for PVC, timber and aluminium windows in order to meet high design expectations and extend the scope of window design and manufacturing freedom. The fully concealed hinges make the window profiles a visual highlight.

No compromises on design and functionality

The UNI-JET SCF hinge-side for PVC and timber windows (with/without overlap or with CONTURA-compatible profile) and the UNI-JET CC hinge-side for aluminium windows emphasise clear architectural lines and offer the same degree of safety and functionality as the face-fixed hinge-sides from the GU Group.

The invisible load carrier

Sash weights up to 160 kg, floor-to-ceiling sashes up to 2800 mm and ease of operation, also in safety classes up to RC2 – the concealed hinge-sides have been found to perfectly satisfy all of the above when subjected to 15,000 test cycles. The option of a barrier-free version provides an additional benefit.

More installation efficiency

With concealed hinge-sides, the sashes are hinged parallel to the frame. This allows for one-man installation. Space-saving packaging and a reduced number of components also reduce storage overheads.

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	Description	PVC	Timber
- 1			

Tilt&Turn hardware	UNI-JET SCF	UNI-JET SCF	UNI-JET CC
Description	S = screwed C = concealed F = flush	S = screwed C = concealed F = flush	C = clamped C = concealed
Sash rebate width (mm)	390 – 1400	390 – 1400	390 – 1400
Sash rebate height (mm)	350 – 2800	350 – 2800	350 – 2800
Tested hardware load-bearing capacity (kg)	160*	160*	130
Page	17	18	23

^{* 160} kg with optional load-absorption set

Product overview

For all stated weights and dimensions, please refer to our application diagrams. For more information: www.g-u.com

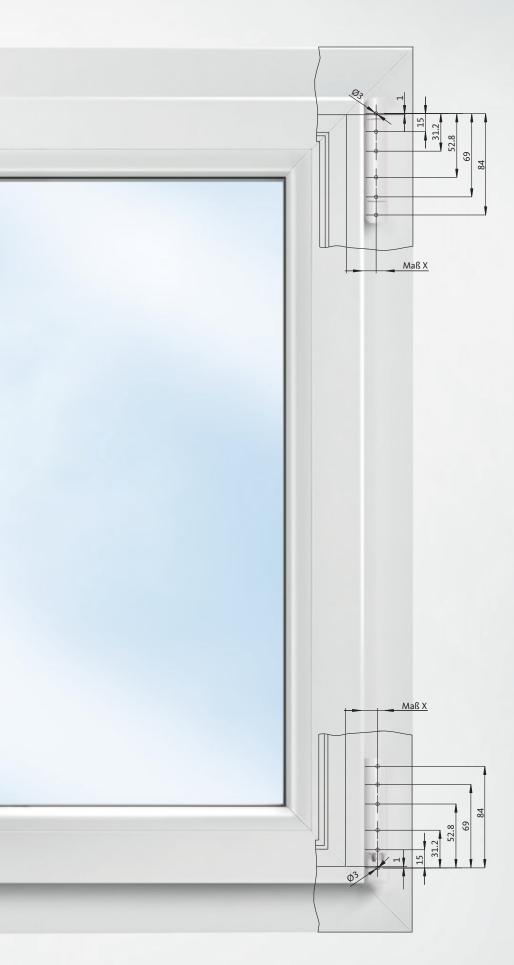
Aluminium

The UNI-JET Tilt&Turn hardware range

The full product range.

PVC, timber or aluminium; face-fixed or concealed hinge-side: each window places specific demands on the hardware. The UNI-JET Tilt&Turn hardware range thankfully offers the right solution for all windows and balcony-doors – aesthetically pleasing, high-quality and easy to manufacture.







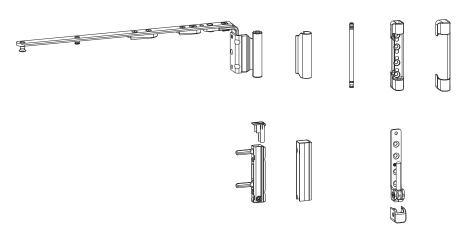
Drilling jig for pivot-rest and stay-bearingPerfect positioning of each hinge-side: the symmetrical solid drilling template makes installation easier and prevents installation errors.



Drilling-jig for drill-in hinge
The solid drilling jig with funnelshaped drill bushings of hardened
steel allows the sash to be predrilled efficiently and precisely.

The face-fixed hardware system for PVC







UNI-JET D

The UNI-JET D hinge-side is available for PVC windows and balcony-doors either with a rebate corner-hinge or drill-in hinge. The strikers are perfectly adapted to the particular profile system and ensure the window elements work reliably.

Design benefits

- Cohesive elegant design
- High-quality surface available from stock in white and silver, additional colours available on request
- Cover caps available in a large selection of colours

Easy handling

- Assembly-friendly pin safeguard in the stay-bearing
- Convenient, three-dimensional hardware adjustment
- Easy adjustment without having to remove anything: flexible cap on the bottom drill-in hinge or rebate corner-hinge
- Stay bearing pin can be conveniently removed using the GU pull-handle or the GU adjustment tool, or a standard slotted screwdriver

Possible applications

- Load-bearing capacity of hardware tested up to 150 kg
- Barrier-free version with higher positioned rebate corner-hinges for balcony and patio doors with threshold



Rebate corner-hinge



Flexible cap



Drill-in hinge

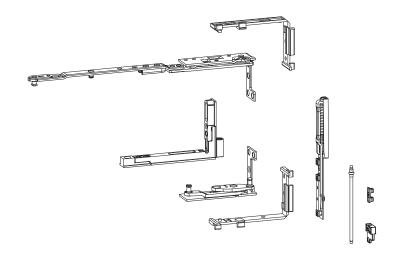


Stay-bearing and pivot-rest

Product overview							
Description	Clearance [mm]	Axis [mm]	Sash overlap width [mm]	Tested hardware load-bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]	Version of pivot-rest with positioning pin [mm]
UNI-JET D	12	9/13	18/20/22	150	1600	2800	3 mm and 6 mm Ø in diff. lengths

The concealed hardware system for PVC







UNI-JET SCF

The PVC hardware for windows and balcony-doors with fully concealed pivot-rests and stay-arms satisfies the most stringent demands in terms of design, user friendliness and ease of installation.

Design benefits

- The new inward-moving turning-curve allows for greater design freedom
- No visible hardware components also suitable for use in flush windows



- No window drilling required
- One-man installation possible thanks to the parallel sash hinging
- No damage to components when plastering, as they are situated in the rebate area

Possible applications

- Also with triple sashed "Swiss windows"
- Hardware load-bearing capacity tested up to 130 kg, with load-absorption set up to 160 kg
- Opening angle up to 90°
- Tested resistance classes



Interior view



Stay-arm



The new UNI-JET SCF with new inward-moving turning-curve



Pivot-rest

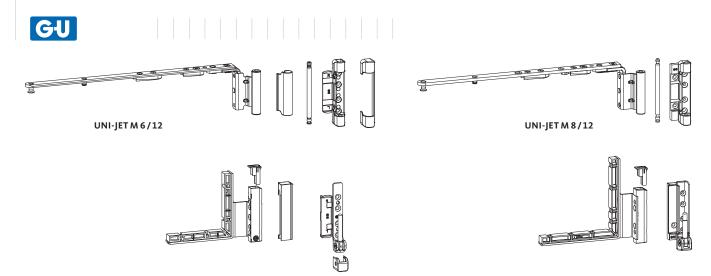
Product overview

Description	Clearance [mm]	Axis [mm]	Sash overlap width [mm]	Tested hardware load- bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]	
UNI-JET SCF	12	9/13	max. 22	130	1400	2800	
UNI-JET SCF	12	9/13	max. 22	160*	1400	2800	

^{* 160} kg with optional load-absorption set

For all stated weights and dimensions, please refer to our application diagrams. For more information: www.g-u.com

The face-fixed hardware systems for timber



UNI-JET M and UNI-JET S

For timber windows and balcony-doors, UNI-JET M and UNI-JET S offer a wide range of hinge-side versions from 1 x \emptyset 34mm and 2 x \emptyset 34mm drill-hole through to the screw-on type pivot-rest and stay bearings.

Design benefits

- Cohesive elegant design
- High-quality surface available from stock in white and silver, additional colours available on request
- Cover caps available in a large selection of colours

Easy handling

- Assembly-friendly pin safeguard in the stay-bearing
- Convenient three-dimensional hardware adjustment
- Easy adjustment without having to remove anything: flexible cap on the bottom rebate corner-hinge
- Stay bearing pin can be conveniently removed using the GU pull-handle or the GU adjustment tool, or a standard slotted screwdriver

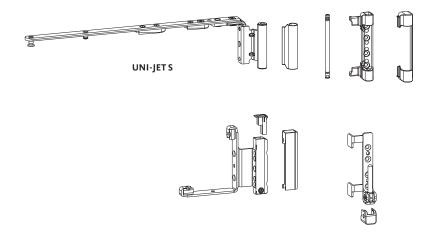
Possible applications

- Sash rebate up to 1700 mm wide and 2800 mm high
- Maximum hardware load-bearing capacity is 200 kg due to solid rebate corner-hinges for heavy weights with identical aesthetics as with the standard hinge-side version
- Barrier-free version with higher positioned rebate cornerhinges for balcony and patio doors with threshold
- All versions are also available as Tilt-First system
- Rebate corner-hinges available with or without turn-brake (turn restriction)

Product overview

Description	Clearance [mm]	Axis [mm]	Sash overlap width [mm]	Tested hardware load- bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]	
UNI-JET M20/12	12	9	18/20	130	1600	2800	
UNI-JET M6/12	12	9/13	18/20	130	1600	2800	
UNI-JET M6/4	4	9/13	15/18	130	1600	2800	
UNI-JET M6/150	12	9/13	18/20	150	1600	2800	
UNI-JET M8/12	12	9/13	18/20	200	1700	2800	
UNI-JET S	12	9/13	18/20	130	1600	2800	













Stay-bearing M6/12



Flexible cap



Stay-bearing S



Milling pattern UNI-JET M8/12



Milling pattern UNI-JET M6/12

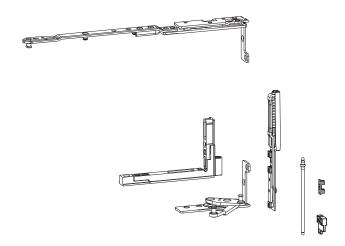


Milling pattern UNI-JET M20/12



UNI-JET S installed

The concealed hardware system for timber





UNI-JET SCF

No compromising on window design and function: with its fully concealed pivot-rests and stay-arms, the new UNI-JET SCF hardware lives up to the highest demands. The hardware is universally usable for timber windows with sash overlap, with CONTURA-compatible profile, and for flush timber windows.

Design benefits

- The new turning-curve provides 5 mm free space on the frame, thus allowing for more design freedom
- No hardware components visible

Easy handling

- No milling work necessary on the window
- One-man installation possible thanks to the parallel sash hinging
- No damage to components when plastering, as they are situated in the rebate area

Possible applications

- Also with triple sashed "Swiss windows"
- Hardware load-bearing capacity tested up to 130 kg, with load-absorption set up to 160 kg
- Opening angle up to 90°



Flush appearance with 5 mm shadow gap for windows with sash overlap



Pivot-rest



Timber window with CONTURAcompatible profile with 5 mm circumferential shadow gap



Windows with overlap allow for larger glass areas due to narrower frames

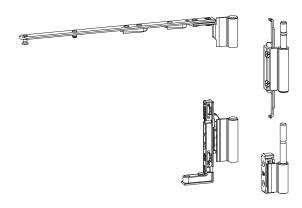
Product overview

Troduct over view								
Description	Clearance [mm]	Axis [mm]	Sash overlap width [mm]	Tested hardware load- bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]		
UNI-JET SCF	12	9/13	max. 22	130	1400	2800		
UNI-JET SCF	12	9/13	max. 22	160*	1400	2800		

^{* 160} kg with optional load-absorption set

The face-fixed hardware systems for aluminium







UNI-JET C

With UNI-JET C for aluminium windows with 16 mm sash hardware groove, the GU Group makes it possible to create a harmonious overall image of both the hardware system and window. The hardware components are clamped to the frame.

Design benefits

- Coherent aesthetically appealing design using an aluminium profile hinge flush with the sash overlap
- High-quality surface finish in anodised silver, white or black available from stock, an uncoated version is also available for project-related coating

Easy handling

- Fabricator-friendly clamp fastening of the sash corner-hinge in the rear-cut hardware groove
- Convenient three-dimensional hardware adjustment

Possible applications

- Sash rebate up to 1600 mm wide and 2800 mm high
- Hardware load-bearing capacity tested up to 130 kg



UNI-JET C

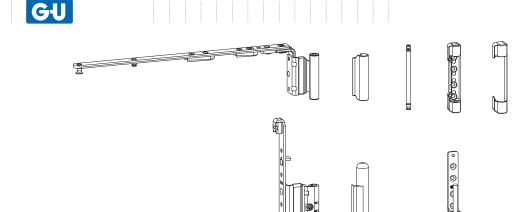




Stay-hinge	and	stav	bearing
,g-		,	· · · · · · · · · · · · · · · · ·

Product overview							
Description	Clearance [mm]	Axis [mm]	Sash overlap width [mm]	Tested hardware load- bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]	
UNI-JET C	12	9/13	18/20	130	1600	2800	

The face-fixed hardware systems for aluminium





UNI-JET D

The unpretentious elegance of the UNI-JET D hinge-side makes it an ideal match for the slimline profile design of aluminium windows. As it can also be used equally effectively for PVC windows, this significantly reduces storage overheads.

Design benefits

- Cohesive elegant design
- High-quality surface available from stock in white and silver, additional colours available on request
- Cover caps available in a large selection of colours

Easy handling

- Assembly-friendly pin safeguard in the stay-bearing
- Convenient three-dimensional hardware adjustment
- Stay bearing pin can be conveniently removed using the GU pull-handle or the GU adjustment tool, or a standard slotted screwdriver

Possible applications

- A barrier-free version is available with higher positioned corner-hinges for balcony and patio doors with threshold
- Sash opening angle up to 180°





Rebate corner-hinge

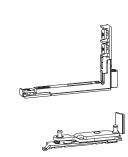
Stay-bearing

Product overview						
Description	Clearance [mm]	Axis [mm]	Sash overlap width [mm]	Tested hardware load- bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]
UNI-JET D	12	9/13	18/20	100	1600	2800
For all stated weights and dimensions, please refer to our application diagrams. For more information, www.g-u.com						

The concealed hardware system for aluminium









UNI-JET CC

The UNI-JET CC hinge-side ensures a refined overall appearance of aluminium windows. The fully clampable hardware system with fully concealed pivot-rests and stay-arms is the right choice for aluminium windows with 16 mm sash hardware groove.

Design benefits

■ No hardware components visible

Easy handling

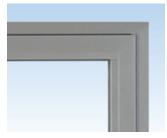
- No machining necessary on the frame profile
- Installation without any drilling: modular, fully clampable hinge-side
- One-man installation possible thanks to the parallel sash hinging
- Suitable for flat or rear-cut 16 mm sash grooves
- Convenient three-dimensional hardware adjustment

Possible applications

- Hardware load-bearing capacity tested up to 130 kg
- Opening angle up to 100°



Concealed hardware



View from inside

Product overview						
Description	Clearance [mm]	Axis [mm]	Sash overlap width [mm]	Tested hardware load- bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]
UNI-JET CC	12	9/13	18/20/22	130	1400	2800

The face-fixed hardware system ALU-JET AK 8

GU

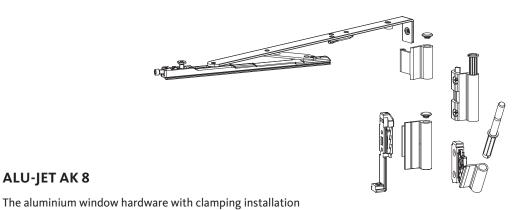




The ALU-JET AK 8 central locking system

The operation of the ALU-JET AK 8 central locking system is based on connecting rods and all components are compatible with the 15/20 aluminium sash Euro-groove.







Design benefits

ALU-JET AK 8

■ High-quality surface finish in anodised silver, white or black available from stock, an uncoated version is also available for project-related coating

technology for high-quality windows in commercial construction projects: all ALU-JET AK 8 face-fixed hinge components are made

■ Identical aesthetics of pivot-rest and stay-hinge, flush with sash overlap

Easy handling

No machining necessary on the frame profile

of anodised or powder-coated aluminium.

- All components are compatible with the aluminium 15/20 sash Euro-groove and the 10/14, 12/15 or 14/18 frame groove
- The logical connecting-rod coupling system simplifies production steps during hardware installation
- The connecting-rod geometry is perfectly adapted to the 15/20 sash hardware-groove
- Convenient three-dimensional hardware adjustment
- Convenient operation thanks to the tried-and-tested SPACIO and ADAGIO-A geared-handles. Alternatively: insertable drive-gear & standard 7 mm spindle handles



■ Hardware load-bearing capacity tested up to 130 kg



Stay hinge and stay-bearing



Pivot-rest

Product overview						
Description	Clearance [mm]	Frame grooves [mm]	Tested hardware load-bearing capacity [kg]	Max. sash width [mm]	Max. sash height [mm]	
ALU-JET AK 8	11.5	10/14 12/15 14/18	130	1700	2800	

The GU Group worldwide





Germany:

Gretsch-Unitas GmbH Baubeschläge

BKS GmbH

GU Automatic GmbH

ela-soft GmbH

France:

FERCO S.A.S.

Slovak Republic:

GU SLOVENSKO, s.r.o.

Canada:

FERRIC HARDWARE Inc.

Sales

Albania Argentina Australia Austria Bahrain Belgium

Bosnia-Herzegovina Brazil

Bulgaria Canada Chile China Croatia

Cyprus Czech Republic Denmark

Estonia Finland France Germany Greece Hungary India Indonesia Iran Ireland Israel Italy

Japan Kazakhstan Kuwait Latvia

Lithuania Macedonia Malaysia Mexico Moldova Netherlands Norway Oman Poland Portugal Qatar Romania Russia Saudi Arabia

Serbia Singapore Slovak Republic Slovenia South Korea Spain Sweden

Switzerland Thailand Turkey

United Kingdom Ukraine USA **United Arab**

Emirates Vietnam



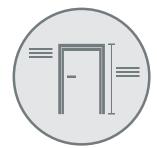






Systematic Service









ConfiGUrator

The right products in the right quantity: the practical confiGUrator is an online platform where part lists and hardware sets can be precisely determined. The right products in the right quantity: the practical confiGUrator is an online platform where part lists and hardware sets can be precisely determined. The data is determined based on current conditions and fundamental technical principles.

Hardware data service

Individual, accurate and comprehensive: GU's hardware data service generates hardware master data as defined in our catalogues or according to the fabricator's individual requirements. As a result, the customer has access to project-specific hardware data with commercial and technical details.

Tender-Text-Manager

Comprehensive, reliable and technically up-to-date: with the Tender-Text-Manager, the GU Group provides its customers with a convenient and effective online tool that allows them to effortlessly compile technical specifications and complete tender text specifications – for all of GU's products.

Customer Information System

Available at the click of a mouse: the Customer Information
System (CIS) is an ordering and information system for all of
GU's products. Customers can use the online platform 24/7 to access important information: from preparing a quotation all the way through to carrying out an availability check in real time, and from placing an order through to tracking it down.



A product on its own is not a solution. The correct level of security, function and cost effectiveness can only be achieved with the right planning and by ensuring correct application. The GU Group therefore also applies the systematic thought processes demonstrated in its product range to its service offering. Close interlinking of one-to-one expert advice, free online support and a comprehensive programme of technical seminars aims to make the day-to-day work of customers easier.









Order by Scanning (ObS)

The ordering system for streamlined logistics: Order by Scanning (ObS) is an easy-to-use scanner ordering system for recording requirements in production, warehouse and administration. The data is scanned via special barcode labels and transmitted to the GU Group directly online. The corresponding order number is displayed immediately and the status can be conveniently tracked online.

Logistics

Saves space and time: with the flat and ergonomically-optimised UNI-JET Tilt&Turn hardware packaging, the GU Group ensures efficient storage and easy removal of components at the workplace. This makes day-to-day work processes faster and more efficient.

Seminars and training courses

Practical knowledge based on first-hand experience: With around 160 events annually, the GU Group offers an extremely wide range of seminars and training courses. The programme includes product innovations and their applications, current architectural trends and standards and directives. Several seminars and training courses are certified and recognised as advanced training courses by the chamber of architects and civil engineers in Germany.

Licences and CE

Maximum security as standard: The GU Group is a CE licenser for windows and balcony-doors and can undertake the CE certification on your behalf thus saving you time and effort in your day-to-day business.

Notes





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