



WINDOW TECHNOLOGY  
DOOR TECHNOLOGY  
AUTOMATIC ENTRANCE SYSTEMS  
BUILDING MANAGEMENT SYSTEMS



GRETSCH-UNITAS GROUP

Securing technology for you

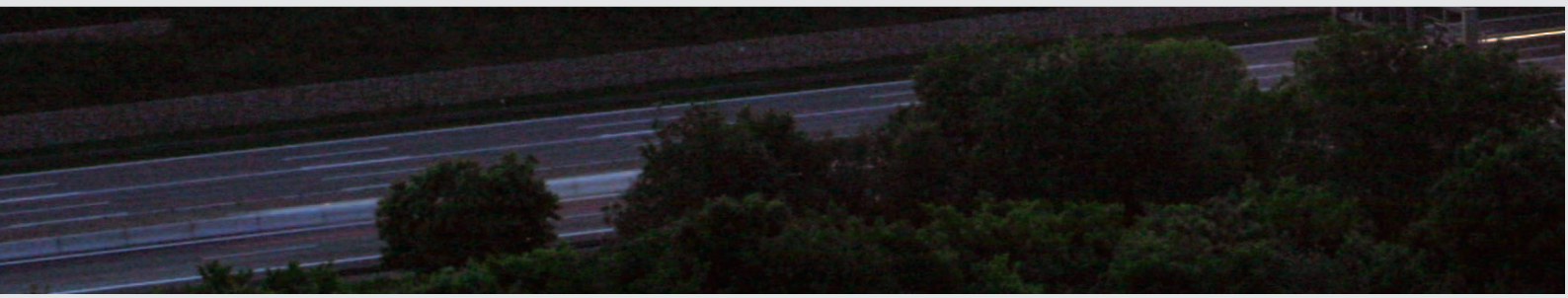


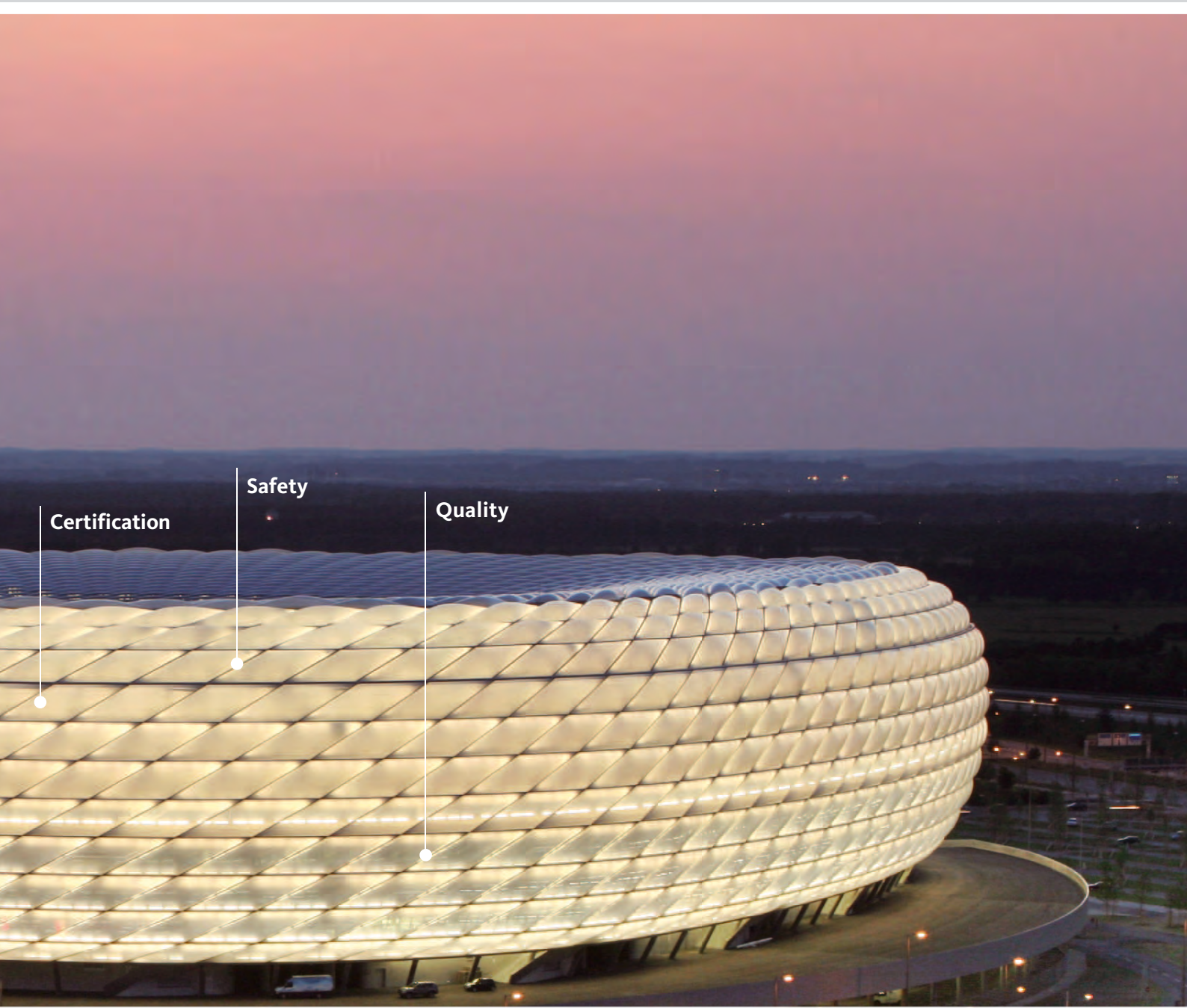
# State-of-the-Art Projects



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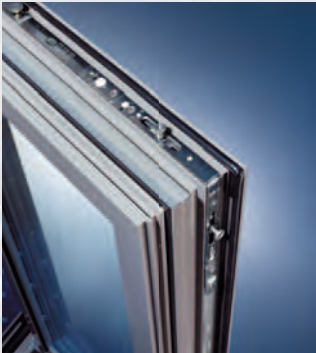




Certification

Safety

Quality



Window Technology



Door Technology



Automatic Entrance Systems



Management Systems

# Allianz

ALLIANZ ARENA | MÜNCHEN  
Architects: Herzog & de Meuron



**THE PEAK | HONGKONG**  
Architects: Terry Farrell & Partners, London



**GUGGENHEIM MUSEUM | BILBAO**  
Architects: Frank O. Gehry, Los Angeles



**MERCEDES-BENZ-ARENA | STUTTART** asp  
Architekten, Stuttgart, Arat - Siegel - Schust

**TAIPEI 101 | Taipei**  
Architects: C.Y Lee & Partners



**BMW WERK | LEIPZIG** Zaha  
Hadid Architects, London



**SCHOTTISCHES PARLAMENT | EDINBURGH**  
Enric Miralles, Benedetta Tagliabue (EMBT)



**PETRONAS TOWERS | KUALA LUMPUR**  
Pelli Clarke Pelli Architects

OVAL OFFICE | HAMBURG  
nps tchoban voss Architects BDA



**MERCEDES-BENZ-MUSEUM | STUTTART**  
Architects: UNStudio van Berkel & Bos, Amsterdam



**BMW Welt | MÜNCHEN**



**SAP ARENA | MANNHEIM**  
Architects: HPP Hentrich, Petschnigg & Partner



**PORCELAIN MANUFACTORY | MEISSEN**

Architects: Zumpe – Düsterhöft – Richter



**FRAUENKIRCHE | DRESDEN**

Architects: IPRO Dresden



**BÜHNEN DER STADT GERA | GERA**

Architects: BVS Architekten, Klaus Sorger



**ATOMIUM | BRÜSSEL**

Architects: André Waterkeyn

QUEEN MARY 2



**MAX SCHMELING HALLE | BERLIN**  
Prof. Jörg Joppien and Dietz Joppien Architects



**DRESDEN TECHNICAL UNIVERSITY-IT FACULTY**  
Zimmermann group of architects





# Modern technology

The entire product range



## Commitment to tradition – setting the highest design and quality standards

### A corporate group with tradition

For over 100 years, the owner-managed GU Group has been fascinated with the opening, swinging, closing and locking of windows and doors. Technical innovations and continual development of architectural hardware technology have and will continue to shape forces in the market, setting new standards and trends for the future.

### The Gretsch-Unitas Group

The corporate group consists of more than 50 manufacturing and distribution companies in 35 countries. With the internationally leading brands GU (architectural hardware), BKS (locks, locking systems) and FERCO (architectural hardware), the group offers "Securing technology for you".

### Corporate group product overview

In its window technology, door technology, automatic entrance systems and building management systems divisions, the GU Group manufactures and distributes about 30,000 single items which are easy to combine.

### Securing technology for you

We use the major challenges of creating innovative and visionary system solutions to break new ground. Together with architects, planners and professional system manufacturers, we develop individual comprehensive solutions.

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The corporate group has solutions for every product range, offering greater convenience and satisfying the criteria for barrier-free construction in accordance with DIN 18040.

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Suitable for barrier-free construction to



# Window technology

Innovative functionality and aesthetic window architecture





Sophisticated facade solutions using standard hardware



The UNI-JET Tilt&Turn hardware range makes anything possible

## Sophisticated facade solutions

Skilled in the development of innovative opening mechanisms and specialised in every method of facade opening, Gretsch-Unitas has been a competent partner in facade construction for many years. GU experts take project-related special parts developed exclusively for individual projects as innovative engineering work and combine them with elements from the tried-and-tested GU range. With hardware for lowering Top-Hung, Parallel-Projecting, Horizontal-Pivot or Turn-Only windows, as well as special designs based on individual customer specifications, it is possible to satisfy demands for new methods of opening and window shapes with unique aesthetic qualities. The range of services extends from technical planning and design through to production of the special parts and handling of projects together with customers all over the world.

Technical data		
	Lowering Top-Hung sash hardware	Parallel-Projecting hardware
Version	Aluminium, timber, PVC	Aluminium, timber, PVC
Sash weight in kg	up to 180	up to 300
Sash height in mm	276 – 2500	350 – 3000
Hollow dimension in mm	17 +/-1	21 +/-1
Handle version	<ul style="list-style-type: none"> <li>- SPACIO, standard</li> <li>- SPACIO, lockable</li> <li>- Concealed gear for standard handles</li> <li>- Other standard handles</li> </ul>	<ul style="list-style-type: none"> <li>- SPACIO, standard</li> <li>- SPACIO, lockable</li> <li>- Concealed gear for standard handles</li> <li>- Other standard handles</li> </ul>

## The UNI-JET Tilt&Turn hardware range

Each window makes particular demands of the hardware – whether its the variety of the materials used for the frame (PVC, timber or aluminium) or the desired look (face- xed or concealed hinge side). The UNI-JET Tilt&Turn hardware range for windows and balcony-doors offers the right solutions: aesthetically pleasing, high-quality and easy to work with. The last word in versatility: the modular UNI-JET central locking system can be used for all profiles with a 16 mm hardware groove in Tilt&Turn, Tilt-First, Turn-Only, Tilt-Only, Top-hung, Horizontal-Pivot and Vertical-Pivot windows as well as Fold&Slide, Parallel-Slide and Tilt&Slide balcony-doors. Gretsch-Unitas is a system supplier for RC 2 solutions for timber and PVC units with a comprehensive CE certification programme especially for timber units. The GU Group supports its customers as a system partner from the planning stage until eventual delivery.

Technical data			
Hardware version	Sash width in mm	Sash height in mm	Sash weight in kg
<b>Timber</b>			
UNI-JET M (milled)	280 – 1700	280 – 2800	up to 200
UNI-JET S (screwed)	280 – 1600	280 – 2800	up to 130
UNI-JET CONTURA	280 – 1600	350 – 2800	up to 130
UNI-JET S-CONCEALED	390 – 1400	350 – 2800	up to 130
<b>PVC</b>			
UNI-JET D (drilled)	280 – 1600	280 – 2800	up to 150
UNI-JET S-CONCEALED	390 – 1400	350 – 2800	up to 130
<b>Aluminium</b>			
ALU-JET AK 8	355 – 1700	500 – 2800	up to 130
UNI-JET C (clamped)	280 – 1600	280 – 2800	up to 130
UNI-JET D (drilled)	280 – 1600	280 – 2800	up to 100
UNI-JET C-CONCEALED	390 – 1400	350 – 2800	up to 130

# Window technology

Innovative functionality and aesthetic window architecture



Integrated mishandling device supplied as standard



The hardware solution without a tilting function for projects with changing users

## Tilt&Slide hardware

Tilt&Slide hardware allows the user to place the balcony-door in the tilt position. Sashes tilted for ventilation are held securely by storm-proof stays. The additional power-control feature (mZ) of the hardware variants for large and heavy units ensures that the sash is pulled against the gasket evenly upon closing and returned to the tilt position upon opening. This makes things really easy and convenient for the user.

The version without the power-control feature (oZ) uses components from the Tilt&Turn range, which helps reduce storage. Also, the stays are joined together in a way which ensures the sash is pressed evenly against the frame upon closing.

Used in conjunction with the GU DKS threshold, GU-966/100 bb hardware without power control is also suitable for "barrier-free living" in compliance with DIN 18040. Gresch-Unitas Tilt&Slide hardware also ensures the highest burglar resistance up to resistance class RC 2 in accordance with EN 1627.

## Parallel-Slide hardware

With its precise functionality, Parallel-Slide hardware is designed to last. It meets the individual demands of frequently changing users for convenience and security associated with certain projects. These may include hotels or public buildings. Sash widths of up to 2000 mm are possible, as are large passage widths. Thanks to the innovative combination of PVC-coated and ball-bearing-supported (i.e. maintenance-free) rollers and the proven Tilt&Slide bogies fitted to the sash at the bottom, the sliding sashes slide gently and quietly into their open or closed position. This kind of functionality prevents maloperation of balcony-doors. This hardware system without a tilting function can be used in all the usual standard window profiles.

Technical data			
Hardware version	Sash width in mm	Sash height in mm	Sash weight in kg
<b>Timber or PVC</b>			
GU-966/200 mZ	720 – 2000	820 – 2370	up to 200
GU-966/150 mZ	720 – 1600	820 – 2350	up to 150
GU-966/150 oZ	640 – 1600	700 – 2350	up to 130
GU-966/100 oZ bb	640 – 1600	700 – 2350	up to 100
GU-90 oZ	640 – 1600	700 – 2350	up to 90
<b>Metal</b>			
GU-968/200 mZ	740 – 2000	820 – 2400	up to 200
GU-968/150 mZ	720 – 1600	820 – 2370	up to 150
GU-968/150 oZ	600 – 1600	730 – 2370	up to 130
GU-90 oZ	640 – 1600	700 – 2400	up to 90

Technical data			
Hardware version	Sash width in mm	Sash height in mm	Sash weight in kg
<b>Timber or PVC</b>			
GU-966/200 oZ	640 – 2000	730 – 2350	130
	1050 – 2000	730 – 2350	up to 180*
	1050 – 2000	1050 – 2350	up to 200**
<b>Metal</b>			
GU-968/200 oZ	600 – 2000	730 – 2400	130
	1050 – 2000	730 – 2400	up to 180*
	1050 – 2000	730 – 2400	up to 200**

\* with tandem scissor sliders at top

\*\* with tandem bogies at bottom and tandem scissor sliders at top



Safety, convenience and installation friendliness in perfect harmony

### Fold&Slide hardware

Larger sections of glass with sash widths of up to 1 000 mm and a permissible sash weight of 1 30 kg offer the maximum possible opening widths based on a total frame width of 6700 mm. Qualities such as an incomparable running smoothness and really easy operation provide even more comfort and make Fold&Slide hardware from Gretsch-Unitas something quite special. Ball-bearing-supported and PVC-coated rolls in the bogies at the bottom and in the guide roll at the top ensure even heavy sashes are really easy to move and that sashes are securely guided along the tracks with hardly any noise at all. Depending on the profile system, this Fold&Slide hardware generation is also suitable for use in barrier-free areas and, in the context of burglar inhibition, the hardware system offers the highest level of security. The improvements in burglar inhibition include the concealed screws for the hinges and the option to attach the central locking system to just one sash. The two-dimensional adjustability of GU hinges ensures optimal installation conditions.

Technical data			
Hardware version	Sash width* in mm	Sash height* in mm	Sash weight* (in kg)
<b>Timber or PVC</b>			
GU-922 (bottom-running)	400 – 900	850 – 2350	up to 80
GU-923	500 – 1000	851 – 2350	up to 130
GU-925 (top-running)	400 – 900	850 – 2350	up to 80
<b>Metal</b>			
GU-822 (bottom-running)	– 1000	– 2350	up to 80
GU-823	500 – 1000	851 – 2350	up to 130
GU-825 (top-running)	400 – 1000	851 – 2350	up to 80

\* depends on the processing guidelines of the profile manufacturer



Horizontal-pivot window for sash weights up to 300 kg

### Horizontal- and Vertical-Pivot hardware

The UNITAS series can be used for both rectangular and round Horizontal-Pivot windows weighing up to 300 kg. The adjustable sash brake in the pivot holds the sash securely in any position, while still allowing the window to rotate 180°. Barrier-free solutions, whereby sashes can be moved without using any force, can be implemented, for example, by combining Horizontal-Pivot hardware with the ELTRAL 35 concealed chain drive. One of the advantages of using Vertical-Pivot hardware, as opposed to Horizontal-Pivot hardware, is the possibility of positioning the pivots eccentrically, and also the fact that it supports windows with a sash height of up to 2850 mm. As a result, interior design requirements can be perfectly implemented.

Technical data			
Hardware version	Sash width in mm	Sash height in mm	Sash weight in kg
<b>Horizontal-Pivot hardware</b>			
<b>Timber</b>			
UNITAS 5 Bo, 7 Bo	576 – 2950	700 – 2200	up to 175
UNITAS 10/22°	576 – 2950	700 – 2200	up to 300
UNITAS 4 circular window	Ø 424 – 2016		up to 100
FERCO 44 E	576 – 1450	700 – 2000	up to 80
FERCO 45 E	576 – 1450	700 – 2200	up to 120
<b>PVC</b>			
UNITAS 16	576 – 2950*	700 – 2200*	up to 175
<b>Aluminium</b>			
UNITAS 18/3	600 – 2800*	600 – 2200*	up to 175
<b>Vertical-Pivot hardware</b>			
UNITAS 93 Bo (timber)	356 – 1600	800 – 2850	up to 175
UNITAS 88 (aluminium)	600 – 1600*	600 – 2800*	up to 175

\* max. SW and SH as specified by the system supplier

# Window technology

Innovative functionality and aesthetic window architecture



Oliver Schuster, Stuttgart / baukunst philipp haus GmbH



More than 50 years of innovative hardware technology

## Lift&Slide hardware

Gretsch-Unitas developed the first Lift&Slide system in 1958 and is still setting the standards for others to follow. As a result of the consistent further development of Lift&Slide hardware, a multitude of hardware solutions including profile-system-related variants is available today for all customary joinery materials. A high level of burglar inhibition is achieved thanks to security components tested to resistance class RC 2 in accordance with EN 1627 and certified for retrofitting in accordance with DIN 18104-2. The stringent requirements of Germany's energy saving ordinance (EnEV) are more than satisfied, which means the systems are suitable in passive house applications. Motor-driven drives are available if required, and these offer even greater convenience in terms of barrier-free solutions in accordance with DIN 18040.

### Technical data

Hardware version, manual	Sash width in mm	Sash height in mm	Sash weight in kg
<b>Timber</b>			
GU-934 door	700 – 3300	1851 – 3250**	up to 300*
GU-934 window	700 – 3300	850 – 1865	up to 300*
GU-937 door	700 – 3300	1851 – 3250**	up to 150***
GU-937 window	700 – 3300	850 – 1865	up to 150***
<b>PVC / Metal</b>			
GU-934 balcony-door/window	depending on profile system	depending on profile system	up to 300*
GU-937 balcony-door/window	depending on profile system	depending on profile system	up to 150***
Hardware version, motor-driven	Sash width in mm	Sash height in mm	Sash weight in kg
<b>Timber, PVC or metal</b>			
HS-Master, pattern A	950 – 3300	1855 – 2765	up to 300
HS-Master, pattern C	950 – 3300	1855 – 2765	up to 300
HS-Master CONCEALED, pattern A	1200 – 3300	1840 – 2765	up to 300

\* with tandem bogies up to 400 kg. Maximum of 600 kg upon request  
 \*\* with gear extension 3750 mm upon request  
 \*\*\* with tandem bogie up to 300 kg

## Additional kits for Lift&Slide hardware

### Barrier freedom

- Turn handle 400 mm
- Tension spring for gear
- Comfort profile for thresholds
- HS-Master motor-driven drive



### Burglar protection

- SE security centre-closer
- Anti-jimmy device
- Anti-drill plate for gear
- Locked status monitoring
- HS meeting stile security profile



### Child safety

- Speed limiter
- Handle damper for controlled lowering of the sliding sash



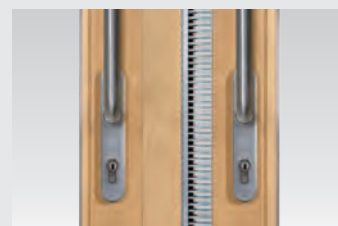
### Design

- LED lighting
- Stainless turn handle
- Concealed P 1850 guide track



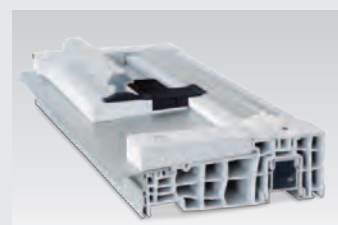
### Ventilation

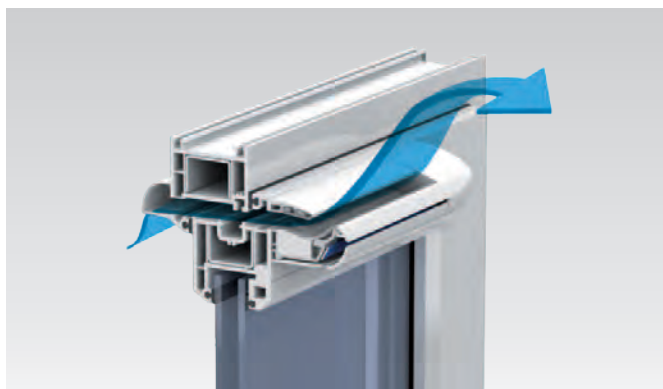
- Night ventilation
- Bottom keeper and night ventilation frame cam
- Humidity-sensitive ventilator



### GU-thermostep 204 threshold

- Excellent thermal properties
- With structural sealing set ex works
- Prefabrication: service based on various stages of pre-assembly





Ventilation as required: easy installation and retrofitting



Manual or motor-driven operation for ventilation purposes

## Humidity-controlled GU ventilator

The demand-driven ventilation system – whereby air is exchanged without any user input – creates a very comfortable place to live, helps to save energy efficiently and protects the building structure by preventing the formation of mould. With their discreet looks, the ventilators can fit seamlessly into the relevant domestic setting.

The self-regulating ventilators with humidity sensor require no electricity. A sound insulation version is available for the 36 – 41 dB range. Designed for use with timber, PVC and aluminium frame materials, the devices are easy to install and do not require any additional installation work on the building. Retrofitting is just as easy. The ventilator performance characteristics are tested in accordance with EN 13141 at a tift Rosenheim.

The airflow is as follows (based on the respective pressure difference):

- 2 Pa: with the ventilator closed approx. 1.5 m<sup>3</sup>/h,  
up to 1.4 m<sup>3</sup>/h with the ventilator open
- 8 Pa: with the ventilator closed approx. 4 m<sup>3</sup>/h,  
up to 3.0 m<sup>3</sup>/h with the ventilator open

## Fanlight opening systems

The VENTUS fanlight opening system from the GU Group enables manual operation of a fanlight or, when combined with the ELTRAL electric drive, a cost-effective means of motor-driven control for more than one sash unit. The flat design of the opening stays means fanlights require little space when installed with inward-opening, vertically-installed, rectangular Tilt-Only windows made of timber, PVC or metal. The automatic locking in the stays and the optional additional locking on the sash enable a high gasket pressure and therefore increase the tightness of the sash. The system is easy to install and is highly versatile in terms of operation.

### Technical data – manual operation

Hardware version	Sash width in mm	Sash height in mm	Opening width in mm
VENTUS F 200	400 – 3600	from 300	165/200
VENTUS F 300	620 – 3600	from 350	220/300

### Technical data – motor-driven operation

	ELTRAL S 230	ELTRAL 300 E1
Thrust in N	1200	3000
Current consumption in A	0.15	0.1
Max. travel in mm	50/70	40 – 70
Duty ratio in %	20	100
IP protection type	50	54
Dimensions in mm (L/W/H)	210/36/76	270/55/102

# Window technology

Innovative functionality and aesthetic window architecture



Chain drives ensure rooms receive the perfect amount of ventilation with opening widths up to 750 mm



Low smoke density rescue routes with SHEV system solutions from GU

## Electrical ventilation systems

Ventilation drives are the convenient solution for daily room ventilation, ensuring health and well-being with automated, electromotive ventilation. Chain drives from the ELTRAL L series support a large selection of fastening types and make almost any installation situation or mounting type possible (concealed or face-fixed) with inward- and outward-opening Turn-Only, Tilt-Only, Top-Hung, Parallel-Projecting, lowering Top-Hung, Horizontal- or Vertical-Pivot windows and skylights. Intelligent, integrated electronics allow for synchronous control of two or more drives (for large sash widths).

Spindle drives and rack and pinion drives from the ELTRAL S/Z series are the ideal solution for opening and closing heavy and large skylights or openings in facades – such as may be found in shopping centres, theatre lobbies, airport terminals or conservatories.

## Smoke and heat exhaust ventilation systems (RWA)

The Gretsch-Unitas Group offers state-of-the-art smoke and heat exhaust ventilation systems powered by electric motors for all kinds of natural smoke extraction (NRA) applications: from smoke evacuation in staircases to complex smoke and heat exhaust ventilation systems associated with major projects and SHEV system solutions with tested and certified components for timber profiles and euro groove aluminium profiles from major systems providers in all common opening types. With the GU range of spindle drives, chain drives, locking drives and combined opening and locking systems, there is a hardware solution for any individual application.

Technical data						
Chain/spindle drives ELTRAL 230 V AC	K25	KS 30/40	K30	K60	S80	Z45
Pull/push force in N	250	300	300	600	800	450
Current consumption in A	0.2	0.12	0.16	0.2	0.12	0.25
Opening width (travel) in mm	200 up to 400	variable adjustment	variable adjustment	250 400	300 up to 750	230 to 550
Protection type	IP 32	IP 30	IP 32	IP 32	IP 54	IP 44
Dimensions in mm W x H x D	L x 26 x 41	386 x 38 x 58	456 x 43 x 60	L x 40 x 56	(travel + 190) x43x76	L x 54 x 115

Technical data		
Limitations	Standardised Euro-groove aluminium systems	Timber/timber-aluminium compound systems
Opening types	Inward- or outward-opening Tilt-Only, Top-Hung and Turn-Only windows (inward-opening only for timber)	
Sash width in mm	350 – 3000	400 – 2900
Sash height in mm	200 – 3000	550 – 1900
Max. opening width in mm	up to 600	up to 600
Max. sash weight in kg	250/200 (Tilt-Only/Top-Hung)	150





Coordinated design lines for the entire building



Tailor-made solutions for any installation situation

## Hardware for doors, handles for windows and sliding units

The hardware solutions and lever handle series from the GU Group make it possible to maintain a consistent design throughout a building for both windows and doors – from standard hardware and burglar inhibition versions through to versions for glass doors, fire protection and smoke protection doors, and escape doors.

The hardware range offers a broad spectrum of hardware for timber and steel doors as well as aluminium and PVC narrow stile doors. The series also extends to hardware for large-format units, such as Parallel-Slide, Tilt&Slide and Lift&Slide units and glass doors and escape doors in accordance with EN 1125.

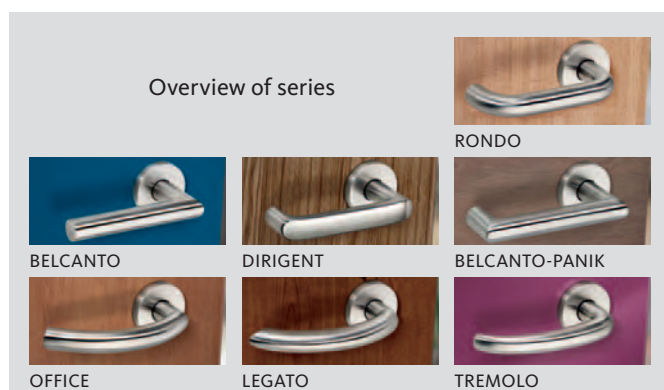
The option to combine the various lever handles and backplate types allows plenty of scope for customisation. Hardware for project doors includes a maintenance-free lever handle bearing (WDL), and all of these satisfy the Class 4 criteria in accordance with EN 1906.

## Thresholds for doors, windows and Lift&Slide units

A wide range of thresholds for Lift&Slide units, balcony-doors and house entrance doors made of timber and PVC and with CE certification in accordance with EN 14351-1 ensure energy efficiency, a high level of stability and problem-free adaptation to individual installation situations.

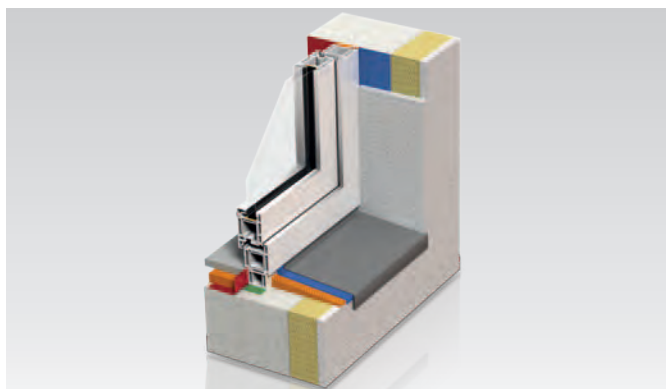
The needs of the fabricator inform ongoing technical development with a view to making Gretsch-Unitas products easy, quick and safe to put together. The GU-thermostep 204 threshold for Lift&Slide units represents a kind of made-to-measure prefabrication service for fabricators. It is possible to choose the level of prefabrication required.

A comprehensive range of accessories and standard installation heights make simple installation in new buildings and renovation projects possible. Almost all of our system solutions are suitable for "barrier-free living" in accordance with DIN 18040.



### Technical data

Threshold	Lift&Slide units	Balcony doors	House entrance doors	Height
GU-thermostep 164	■			67 mm
GU-thermostep 204	■			68 mm
GU-threshold 47	■			47 mm
GU-fl tstep 164	■			22 mm
GU-fl tstep 222	■			24 mm
GU-timberstep 164	■			22 mm
GU-timberstep 204	■			22 mm
GU system threshold		■	■	20 mm
DKS threshold		■		20 mm
HTS threshold			■	20 mm



Sealing systems, building chemicals, glazing technology:  
all from a single source

## Construction accessories

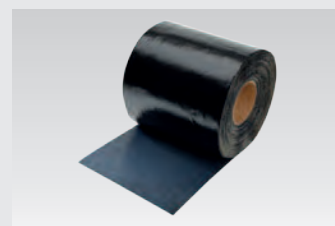
Professional installation significantly influences the usability of windows and doors over a reasonable usage period. Continued development of structural engineering, in particular as regards building air tightness by reducing unplanned infiltration heat loss, requires air-tight window attachment. General requirements for the installation of windows should be derived from energy conservation regulations (in Germany, the Energieeinsparverordnung, EnEV) among other things. In order to keep the indoor environment completely separate from that outdoors, the internal seal must be air-tight.

In contrast, the external seal must allow transmission of water vapour but include protection against driving rain. To ensure that all relevant features, standards and regulations are included in planning right from the start, everyone involved in the build – from designers (architects) to executors (workmen), right up to the client – should work as a team for the success of the building project and only use mutually compatible product systems which comply with the standards. The Gretsch-Unitas Group offers exactly that: a range of accessory products covering every requirement in the professional installation of windows and doors – and all from a single source.

## GU product range for new-build and renovation work

### Sealing systems

- Weathering protection
- For heat and sound purposes
- Separating indoor and outdoor environment
- Construction-foil adhesive and sealants



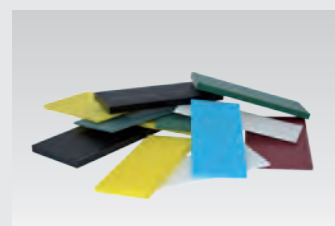
### Building chemicals

- Sealing compounds and smoothing agents
- PVC adhesives and PVC cleaners
- Aluminium cleaners and aluminium adhesives
- Maintenance sets



### Glazing accessories

- GU filler tapes
- GU glazing packers
- GU glazing packers with vent
- GU compensating blocks
- GU glazing paddle



### Window and door seals

Sash rebate seals with wire, without wire or for welding; frame, overlap, faceplate, glazing, renovation and tube seals



### Drip rails

- As protection for timber windows, with or without a thermal break
- Windows with GU drip rails have CE certification in accordance with EN 14351-1.



### GU installation bracket and retaining angle

- Secure load transfer, tested as lift system to 250 kg
- Ideal connection for composite thermal insulation system
- RC2-tested in accordance with DIN 1627-1630



# Door technology

The door as a convenient access zone

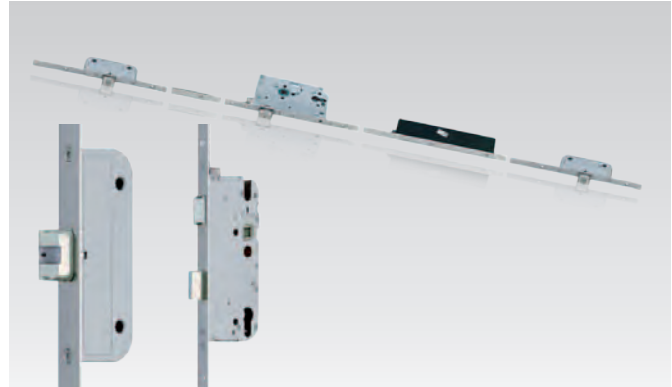


# Door technology

The door as a convenient access zone



One lock series with one lock case for any door requirement



GU-SECURITY Automatic: reassurance with the door just pulled shut

## Secure mechanics and convenient mechatronics!

The GU Group offers convenient and secure door functions on timber, steel, aluminium, PVC or glass doors. The technology used is sophisticated, from the simple mortise lock in accordance with DIN 18251 class 1 to the panic lock for escape doors in accordance with EN 179/EN 1125. Performance features such as burglar inhibition, fire protection and escape door suitability as well as possible integration in access control systems enable you to use BKS mortise locks for doors in many areas.

### Manual-locking locking systems

- Room door locks, project and heavy-duty locks for internal doors
- Escape door locks in accordance with EN 179/EN 1125 for use in 1- and 2-leaf narrow stile, PVC, timber and steel doors
- Locks for fire and smoke protection doors and burglar inhibition doors
- Miscellaneous locks such as radius bolt or hook bolt locks for sliding, side entrance or double-action swing doors

### Self-locking locking systems

- Escape door locks in accordance with EN 179/EN 1125 for use in 1- and 2-leaf narrow stile, PVC, timber and steel doors
- Electrically-locking panic locks (EVP)
- Mechatronic locks such as electrically coupled locks or motor-driven locks (e.g. for access control or barrier-free designs or in conjunction with swing-door drives)
- Radio battery locks: battery-operated, electrically coupled panic locks for integrating glass doors into access control systems or for retrofitting door

## Multi-point locks

Main entrance and facade doors present special challenges with regard to burglar resistance, fire protection, impermeability and accessibility. GU multi-point locks meet these challenges perfectly: additional locking elements at the top and bottom of the door as well as individual solutions for many installation situations – from the manual version to the self-locking central locking system with panic function.

Security for timber, PVC, aluminium and steel doors: with large and small backsets in all standard lock faceplate variants, with customised lever handle height for the slim profiles of aluminium or PVC doors, with continuous one-piece strikers in the frame and multi-point locks with fire-retardant characteristics – you can find a secure solution that fits your needs.

### Manual-locking locking systems

- SECURITY key-operated locks and SECURITY EUROPA lever-operated locks with
  - Massive bolt ('MR')
  - Hook bolt ('SH')
  - Double bolt ('DR')
  - Mushroom and roller cams
  - ECONOMY mortise lock

### Self-locking locking systems

- SECURITY Automatic self-locking locks with
  - Automatic latchbolt (including daytime release function)
  - Automatic double latchbolt
  - Automatic pin bolt
  - Automatic-Comfort
  - Automatic with panic function
  - A-opener as an option



Standard dimensions for all door locking systems and one-piece strikers



GU house entrance door concept: safe, comfortable and flexible

## GU-SECURITY system technology

Nowadays, door fabricators must be flexible in order to satisfy the wide range of customer requirements. In view of the security and convenience requirements as well as the design constraints and associated variation in door heights that presently exist, particularly specialised demands must be met. This is why Gretsch-Unitas has developed GU-SECURITY system technology – a particularly efficient modular system which also enables very high doors to be fitted with GU locking systems from the standard range. At the heart of GU-SECURITY system technology is a faceplate length concept based on a standardised faceplate length of 1750 mm. The extension elements make it possible to adapt the lock system for house entrance doors, using a modular approach, to the high security level associated with Gretsch-Unitas and to suit the specific requirements associated with the respective entrance situation.

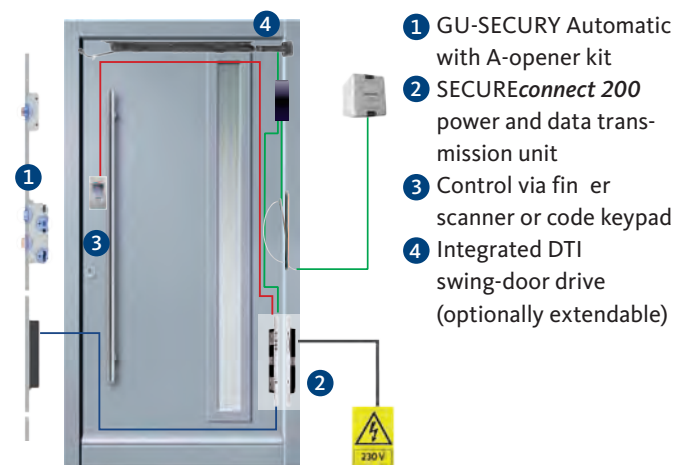
- Flexible usage associated with standard, convenient and panic versions of SECURITY products – locking points are in the same position, which means the milling position is the same regardless of the lock type
- Standardised faceplate length of 1750 mm for multi-point locks and one-piece strikers
- Modular faceplate and one-piece striker extensions with additional locking for door heights above 2500 mm
- Suitable for timber, PVC and metal door systems

## GU-SECURITY Automatic access controlled – the GU house entrance door concept

The modular system offers outstanding flexibility and consists of ready-to-install, easy-to-handle complete sets. The complete system can be assembled in the workshop and tested as an assembly group. The GU-SECURITY Automatic multi-point lock means the door is automatically locked and therefore secure at all times. Ease of installation is guaranteed thanks to the SECUREconnect 200 power and data transmission unit with integrated power supply unit – the door leaf can be removed at any time. Convenient access is assured with fingerprint recognition or individual access code.

### Components of the house entrance door package

Standard: installation in door leaf on lock side;  
alternative: retrofittable for installation outside the door leaf



# Door technology

The door as a convenient access zone



Electric door strike series no. 6: compact, flexible, powerful

## Electric strikes

The electric door strike series no. 6 offers the right solution for any door profile, be it the fail-secure version with or without high-preload controller or the fail-safe version. It is also available with a latch slide cover for concealed installation. For use on fire and smoke protection doors, there is a fire-rated FH version. The melting point of the material used to manufacture the mechanical components is over 1 000°C.

- Non-handed (DIN lh and DIN rh usable) due to the symmetrical design
- Small and compact size
- Adjustable radius keeper: 3 mm in 4 steps
- Twin coil design for a wide operating voltage range
- Connectable with electronic control units thanks to pole-reversal-proof spike protection with bipolar TVS diode (EMC protection)
- Whole range of requirements (aluminium, PVC and timber profiles) covered with just a few variants

Technical data	
Breaking resistance	3500 N
Operating temperature	-20°C to +50°C
Endurance rating	250,000
Door handing	DIN left/DIN right
Installation position	vertical/horizontal
Contact version	with contact to latch monitoring
Dimensions in mm (with contact) H x W x D	64.5 x 15.8 x 25.8



The new OTS 73x series: 1 slide rail, 1 slide arm, 1 axle extension and 1 mounting plate for all application and installation types

## Door closers

An extensive selection of face-fixed and concealed overhead and door-level door closers ensures there are solutions for barrier-free designs and hold-open systems for 1- and 2-leaf doors – even as part of more challenging building concepts. The new generation of OTS 73x series door closers is making an impact as an innovative modular system with very small dimensions, discreet design features and convenience of access.

Technical data			
Door closer type	Version or max. door weight in kg	Closing force size in accordance with DIN EN 1154	For fire doors and smoke protection doors
<b>Overhead door closers</b>			
OTS 736	with slide rail	3 – 6	F
OTS 735	with slide rail	2 – 5	F
OTS 733	with slide rail	3	F
OTS 536	with scissor-action arm	2 – 6	F
OTS 430	with scissor-action arm	2 – 5	F
OTS 210	with scissor-action arm	2/3/4	–
OTS 140	with scissor-action arm	2/3/4	–
OTS 130	with scissor-action arm	2/3/4	F
<b>Concealed overhead door closer</b>			
VTS 735	with slide rail	3 – 5	F
<b>Floor springs</b>			
UTS 85 HF/UTS 85 F	300	2 – 6	in F version
UTS 85 FE/UTS 85 FL	300	3 – 6	F
UTS 60	170	4	–
UTS 50	120	3	–
UTS 42	120	1 – 4	–
<b>Rebate door closers</b>			
20	35 – 80	1 – 2	–
24	50 – 140	2 – 3	–



janus reversible key system

## Mechanical locking systems

BKS locking systems offer individual and tailor-made solutions and are manufactured in accordance with the highest quality standards. You may wish to integrate high-quality mechanical security technology into your home with a registered key bitting or equip your multiple-dwelling building or company premises with a master key system – whatever the case, BKS locking cylinders are the right choice, and not just in terms of security. State-of-the-art locking systems with different levels of equipment and functionality, as well as numerous patents and certificates, speak volumes for the innovation of BKS products. All systems feature lock bumping protection as standard and can be fitted with certified drill and pick protection elements as an option. They therefore give you flexible design options, also when installing retrospectively in existing buildings.

- Tested in accordance with EN 1303 and DIN 18252
- Conventional locking systems such as detect3 with paracentric key profile
- janus, livius and helius reversible key systems for exceptional convenience
- Coded single key bitting in the normal profile
- Registered key bitting with security card
- Patent-protected cylinder systems
- Locking cylinder with modular design



The SE electronic locking system – the flexible master key system for every application

## SE electronic locking system

Electronic locking systems are extremely economic to run when combined with mechanical and mechatronic master key systems. They offer the convenience and flexibility of networked access control, with no wiring of doors required. The SE electronic locking system offers convenient solutions in terms of flexibility, altering amended access rights and security measures like secure encryption and easy blocking of lost keys. The modular security system satisfies any access requirement in any project situation – including in combination with mechanical master key systems if required. The focus is on simplicity and clear operating logic with only one medium. New or modified access rights can be flexibly adapted at any time during operation.

- Particularly low energy consumption of the products:
  - up to 600,000 locking cycles or up to 10 years standby/standard battery
- Certified highest security (BZ VdS approval, explosion protection, etc.)
- Flexible system versions
  - Offline (with programming device)
  - Online (via radio control, 868 MHz)
  - Data on transponder (virtual network)
- Transponders can be combined with mechanical keys
- Intuitive software operation (KeyManager) for administration and programming of master key systems
- Satisfies the highest security classes of EN 15684, the standard for mechatronic locking cylinders

# Door technology

The door as a convenient access zone



Holistic system solutions for securing escape from a building



GEMOS access: intelligent solutions for building access control

## Escape door system solutions

You can combine GU Group products for perfectly integrated system solutions that guarantee a safe escape route in compliance with EltVTR (German directive for electrical locking systems on escape route doors) or prEN 13637. Effective protection against unauthorised door use and safe opening in an emergency are no longer mutually exclusive.

### Escape door monitoring

The compact BÜ10 approach area monitoring device can be mounted over the door without structural modification. It monitors a flexibly adjustable area in front of the door and sets off an alarm before someone opens the door.

### Escape door control systems

The combination of an EVP lock and the FTNT10/20 escape door control system with its innovative signaling concept offers ideal escape door protection. Whether for single doors or networked systems – the GU Group offers a solution for every application.

### Escape door locking elements

In addition to separate electric locking elements for panic locks on doors, the GU Group also offers products with integrated locking elements:

- The electrically locking panic lock (EVP)
- The electrically locking touch bar (EVT)

- Effective protection of doors
- System solutions with reduced number of system components
- Automatic configuration
- Simple installation
- Innovative signalling concept with clear symbols
- Modern locking elements
- Extensive accessories
- Integrated BKS-NET interface

## Access control systems

GEMOS access, the access control system for small, medium-sized and large projects and applications. Possible uses range from an online access control system for small applications with 3 doors to premises with thousands of employees. GEMOS access spans different technical trades involved in the security – on and around the door – on a door. This means access control, escape door control and monitoring systems are combined on the door itself. The open interface architecture enables the connection of many customary card readers – independently of the reading technique. Clear menu structures, predefined settings for typical applications as well as hardware recognition assistants allow for fast and therefore economic handling both during installation and operation.

Performance features:

- Management of user groups with authorisation and time profiles
- Timed anti-passback
- Four-eyes principle (multiple person presence check)
- Parking space or other reporting system
- Connection with external systems for extended authorisation checks
- Multi-door sluice system and lift management
- Up to 1,000,000 users (authorised access)
- Up to 1,000,000 identification cards
- Up to 10 identification cards per user
- Up to 10,000 user groups
- Up to 10,000 reader groups or room zones
- Up to 20,000 readers
- Up to 1,000 time frames, including per user
- Up to 4 time intervals per day



# Automatic entrance systems

Transparent convenience for entrance solutions



# Automatic entrance systems

Transparent convenience for entrance solutions



compactMaster CM in-line sliding door: slender and technically flawless



For entrances that are sure to make an impression: revolving doors

## Automatic sliding doors

Automatic sliding doors are easy and convenient to pass through, meaning they are scarcely noticed by those using the building. They provide a modern entrance solution for public buildings, airports, train stations, shopping centres, banks, hospitals, retirement homes and homes for the disabled. The -F version of the series is tested and certified for use in escape and rescue routes.

The compactMaster CM in-line sliding door combines improved performance with a really compact design. With a "genuine" installation height of just 100 mm, the drive takes up all the top leaf profile and can be discreetly integrated into the demanding architecture of glass facades.

The HM-F FT type-tested escape route sliding door guarantees a secure escape route, even when locked – an excellent solution from the range of automatic sliding doors, which offers a harmonious combination of barrier freedom, functionality and great looks in accordance with the relevant directives.

### Product overview

- compactMaster CM and CM-F in-line sliding door: combining slim design with elegant looks
- econoMaster EM/EM-F in-line sliding door: reliable and economical, for almost all applications
- heavyMaster HM/HM-F in-line sliding door: the solution for heavier sliding panels
- HM-F FT escape route sliding door: guaranteed escape route even when door is locked
- EMT/EMT-F telescoping sliding door: for maximum passage widths in minimum space
- CMR/CMR-F curved sliding door: rounded out – sliding door with a revolving appearance
- CMW/CMW-F prismatic sliding door: entrance doors adapted to the building architecture

## Revolving doors and single-person access control systems

Revolving doors are used wherever impressive entrances are needed. They are primarily used to provide public buildings, hotels, banks, insurance offices or airports with a striking entrance. Both the GRA-F standard revolving door and the GGR all-glass revolving door are tested and suitable for use in escape and rescue routes; any relevant national regulations must also be observed. The closing of the leaf is released when triggered by the fire alarm system, power failure or actuation of the emergency switch on the revolving door: the leaves can then be folded back.

Security revolving doors and security curved sliding doors are used for entrances that require extra security. In particular, they provide banks, insurance offices, government ministry buildings, authorities, data centres, industrial plants or office buildings with extra security and convenience.

### Product overview

- GRA and GRA-F standard revolving door: individual solutions come as standard
- GGG all-glass revolving door: perfect integration of the entrance area into glass facades
- GGR large-capacity revolving door: comfortable entry, even in high-traffic areas
- GSI security revolving door: secure access control and fast access
- GSI security curved sliding door: single-person access control and transparency



Barrier-free passage with standard or fire protection doors



All-glass sliding panels: modular system with maximum functionality

## Automatic swing-door drives

The swing-door drives from the DTR series offer modern and barrier-free entrance solutions in public buildings. They ensure secure closure yet allow comfortable access via the radar motion sensor, push-button or access control system. Entrance doors in the facade can also make use of the benefits of the swing-door drive: when combined with multi-point locking, burglar protection and escape route safety are equally possible as well as barrier freedom. Running extremely quietly, the DTR/DTR B drives are suitable for installation in noise-sensitive areas. The drives are type-tested by TÜV and certified to DIN 18650/EN 16005. The DTR B version is approved by DIBt for use on fire protection doors.

## All-glass sliding panels

Elegant appearance, flexible in terms of use of space and minimal space requirements: the benefits of glass sliding panels are most evident in public areas. As partition walls, the glass sliding panel systems from the GU Group offer modern solutions that combine barrier freedom with a high level of versatility.

### shopMaster GSW-M manual all-glass sliding panel system

As a partition wall or facade concept for shop-in-shop constructions, the shopMaster GSW-M manual all-glass sliding panel system offers diverse and individual solutions for almost any floor plan. The glass panels can be flexibly arranged in a variety of ways by hand, a floor guide is not needed. Passages can be created by combining, for example, a side-hung end panel with door locks from the PRIME OFFICE series.

### shopMaster GSW-A automatic all-glass sliding panel system

The shopMaster GSW-A automatic all-glass sliding panel system is really convenient to use. The integrated obstacle recognition function provides the required level of security for variable sash clearances of up to 1500 mm. Panels can be easily moved manually if needed. The roller tracks and parking niches require only the bare minimum of space thanks to compact design. All systems offer the latest in bogie technology and their PVC-coated, ball-bearing-supported rollers ensure reliable long-term performance. The panels (with a maximum size of 3500 x 1250 mm) can be installed with a weight of up to 150 kg.

### Technical data

Hardware version	DTR swing-door drive	DTR B swing-door drive
<b>Timber, PVC or metal</b>		
1-leaf	■	■
2-leaf	■	■
For fire and smoke protection doors		■
Push-open version with scissor-action arm or slide rail	■	■
Pull-open version with slide rail	■	■
Opening	electromechanical	
Closing	electromechanical and with spring force	
Hold-open time, adjustable (in seconds)	60	
Door leaf weight (in kg)	200 (for a leaf width of 1000 mm)	
Protection type	IP 20	

# Physical security information management systems (PSIM)

Where it all comes together



Person photo: Cultura collection / Getty Images

GEMOS is a range of products comprising software, hardware, accessories and services. A software-based graphical management platform, GEMOS helps protect against all kinds of risks from both a technical and organisational perspective. Security is the main consideration, but the instrumentation must favour consistent implementation by the employees responsible during daily use and ensure operation is simple, logical and intuitive. GEMOS achieves this via cross-system interaction and logical connections between security-related equipment such as:

- Lift shafts
- Fire alarm systems
- Intrusion and attack alarms
- Electrotechnical equipment (lights, sockets via KNX/EIB)
- Electroacoustic equipment
- Electronic master key systems
- Escape route management systems
- Communications and telephone systems
- Media systems (audio, video, etc.)
- Personal emergency response systems
- Video systems
- Intercoms
- Access control and sluice-door systems

- GEMOS is the leading physical security information management system (PSIM) in the German market with over 700 different manufacturer-neutral interfaces and over 600 installations
- GEMOS is manufacturer-neutral, i.e. integration of systems from different manufacturers is possible
- The web-based interface makes it possible to design customised user interfaces in accordance with customer needs
- Superior availability thanks to various redundancy concepts (network, server, database, etc.)
- Special solutions for different sectors such as multifunctional sports arenas, penal facilities or data centres
- With CAD direct import, it is possible to save floor plans directly in the structural drawing format, which is often available, and then use these as a helpful guide
- High scalability thanks to flexible licence models, divided into three levels of light, standard and professional
- Software, hardware, and licences with modular system design

# The Gretsch-Unitas range of Tilt&Slide hardware

Convenient operation and functionality

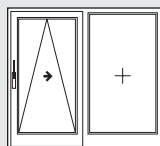


## Fundamental characteristics and benefits of Tilt&Slide hardware systems:

- All central locking systems feature a mishandling device as standard
- All central locking components are equipped with the automatic cam **Cleverle** which adapts automatically to varying rebate clearances. All settings are made with torx. Installation and maintenance is easier, more practical and logical.
- The resistance classes are determined exclusively by the choice of striker
- All locks in the frame feature Tilt&Turn components as standard
- Units featuring the GU central locking system can generally be equipped with a locking monitoring system and connected to an alarm system
- Outstanding corrosion protection with ferGUard\*silber surface sealing. Applied in three harmonised coats, the attractive bright silvery surface has become a tried-and-tested standard for window hardware.
- Outstanding operating convenience and reliable problem-free functionality in all weight classes
- Slides precisely into any required position and engages softly in the tilt position thanks to innovative bogie technology
- Solutions for barrier-free dwellings to DIN 18025
- Can be used with all standard profile materials such as timber, PVC, or aluminium
- Operation via aluminium or stainless steel turn handle
- Geared turn handle with anti-lockout device

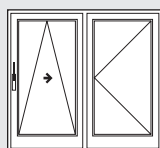
## CE marking for windows and balcony-doors

At our premises we provide you with the opportunity to acquire the prerequisites needed for the CE marking of timber windows and window doors. For more detailed information please refer to your responsible contact.



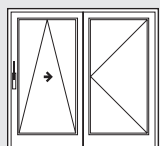
### Pattern A – with mullion

- 1 Tilt&Slide sash
- 1 fixed glazing
- Fig. shows LH handle



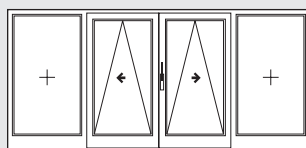
### Pattern A – with mullion [1]

- 1 Tilt&Slide sash
- 1 Turn-Only sash
- Fig. shows LH handle



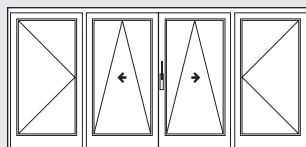
### Pattern D – without mullion [2]

- 1 Tilt&Slide sash
- 1 Turn-Only sash
- Fig. shows LH handle



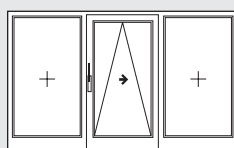
### Pattern C – with mullions

- 2 Tilt&Slide sashes
- 2 fixed glazings
- Fig. shows first opening sash with LH handle



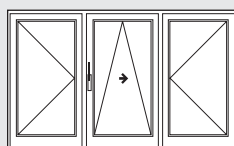
### Pattern C – with mullions [1]

- 2 Tilt&Slide sashes
- 2 Turn-Only sashes
- Fig. shows first opening sash with LH handle



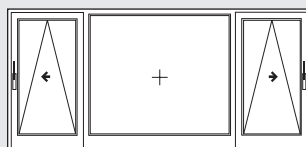
### Pattern G – with mullions

- 1 Tilt&Slide sash
- 2 fixed glazings
- Fig. shows LH handle



### Pattern G – with mullions [1]

- 1 Tilt&Slide sash
- 2 Turn-Only sashes
- Fig. shows LH handle



### Pattern K – with mullions

- 2 Tilt&Slide sashes
- 1 fixed glazing
- Fig. shows LH and RH handle

[1] Patterns A, C and G with Turn-Only sash:  
UNI-JET Turn-Only hardware with DIRIGENT-F/SG service handle (8-00694-33-0-\*) and F cover rosette, inside - at (6-2491 3-00-0-\*)

[2] Pattern D: Turn-Only sash with UNI-JET lever-operated gear

# Mishandling device supplied as standard!



With kind permission of: Jansen AG, CH-Oberriet

You can enter an entirely new dimension when manufacturing terrace elements from standard window profiles using Tilt&Slide hardware. Gretsch-Unitas hardware is fully- edged from a technical point of view and therefore ensures long-lasting use due to its precise functionality, even with heavy weights.

The additional power-control feature of the hardware variants for large and heavy units ensures that the sash is pulled against the gasket evenly at closing and moved back into the slide position at opening.

Description	GU-966/ 200 mZ**	GU-966/ 150 mZ	GU-968/ 200 mZ	GU-968/ 150 mZ	GU-966/ 150 oZ	GU-968/ 150 oZ	GU-966/ 100 oZ bb	GU-90 oZ
Application	Timber, PVC	Timber, PVC	Aluminium	Aluminium	Timber, PVC	Aluminium	Timber, PVC	Timber, PVC, aluminium
Sash weight (kg)	up to 200	up to 150	up to 200	up to 150	up to 130	up to 130	up to 100	up to 90
Sash rebate width (mm)	720 – 2000	720 – 1600	720 – 2000	720 – 1600	640 – 1600	600 – 1600	720 – 1600	640 – 1600
Sash rebate height (mm)	820 – 2370	820 – 2370	820 – 2370	820 – 2370	700 – 2350	730 – 2400	700 – 2350	700 – 2350
Basic security	■	■			■		■	■
Enhanced basic security	■	■			■		■	■
EN 1627 – R C2	■	■						

\*\* From SRW 1851 – 2000 mm an additional centre stay is required.  
From SRW 1600 – 2000 mm and for sash weights 180 – 200 kg, the use of tandem bogies is recommended.

# Unlimited scope for architectural design, up to 130 kg

Fully-fledged technology  
of a new generation of Fold&Slide doors



The new Fold&Slide hardware reveals solutions that combine countless benefits. As higher sash weights are permitted, fewer individual elements are required which guarantees maximum opening widths. The larger glass areas allow daylight to flood into the room thus creating an exclusive living atmosphere.

## Unrivalled running smoothness, for sash weights up to 130 kg

The sashes are precisely and quietly guided in the grooves of the running track by ball-bearing supported, plastic-coated rolls in the bogie at the bottom and guide roll at the top. Thanks to this technically innovative combination, large and heavy Fold&Slide sashes move safely and effortlessly. This means that window elements up to 6700 mm wide with a single sash weight of up to 130 kg can be used.

## Barrier-free threshold

With regard to the threshold, this new Fold&Slide generation offers barrier-free freedom as a standard solution – every Fold&Slide system can be positioned using the running track to obtain a barrier-free version (depending on the profile).

## Enhanced security

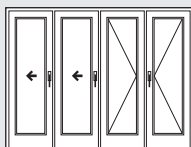
Emphasis is placed on burglar inhibition at the Fold&Slide element (among others) where the screw connection of the sash hinges is concealed and a UNI-JET central locking system is installed at each individual sash.

## Universally usable

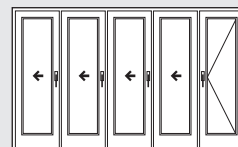
Fold&Slide hardware is used in the public sector and also particularly in the private sector – e.g. to provide barrier-free access in a private apartment to a terrace or the conservatory. The open sashes can be parked to the side in a space saving manner, e.g. as an optimum solution for the transition in a restaurant from inside to outside.



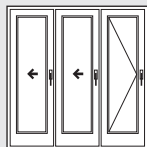
**Pattern 321 [1]**  
2 Fold&Slide sashes  
1 Turn-Only sash



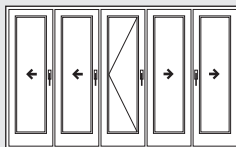
**Pattern 431 [1]**  
2 Fold&Slide sashes  
1 T-Turn-Only dummy mullion sash,  
1 Turn-Only sash



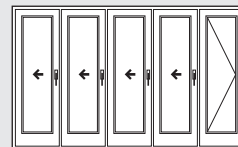
**Pattern 541 [1]**  
4 Fold&Slide sashes  
1 Turn-Only sash



**Pattern 330**  
2 Fold&Slide sashes  
1 T-Turn-Only sash

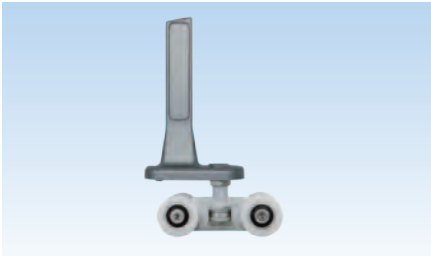


**Pattern 532**  
4 Fold&Slide sashes  
1 T-Turn-Only sash



**Pattern 550**  
4 Fold&Slide sashes  
1 T-Turn-Only sash

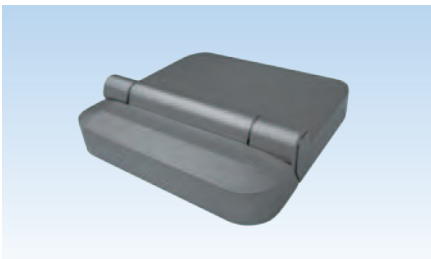
- [1] Passage leaf also as Tilt&Turn sash  
– with sash hinges and UNI-JET Turn-Only locking system  
– with UNI-JET Turn-Only hardware
- [2] A passage leaf is recommended, especially for use in winter



**Bottom bogie with pivot rest with 6 ball-bearing supported, plastic-coated rolls**



**Top guide roll with pivot rest with 2 ball-bearing supported, plastic-coated rolls**



**Sash hinge with concealed screw connection**

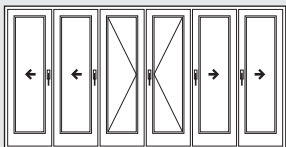
### Technical characteristics of the new Fold&Slide hardware system generation:

- Elements with a sash weight of up to 130 kg can be manufactured with the new GU hardware – this is ideal for even larger glass surfaces that can be safely moved with fewer sashes
- Bottom bogie with 6 ball-bearing supported, plastic-coated rolls (and 2 more on the top guide rolls) ensure that even heavy sashes can be guided smoothly and quietly
- Sash widths of up to 1000 mm are possible with GU hardware; large element widths of up to 6700 mm can be achieved
- The ferGUard\*silver surface sealing offers lasting corrosion protection
- This hardware system has made it possible to implement the new Gretsch-Unitas design line systematically, which is reflected in the sash hinges and pivot rests
- The pivot rests and sash hinges are available in the silver (-1), dark brown RAL 8022 (-5) and white (-7) surface finishes

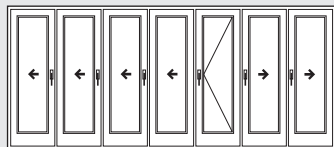
#### Fold&Slide hardware

	Timber	PVC	Aluminium
<b>Description</b>	<b>GU-923</b>	<b>GU-923</b>	<b>GU-823</b>
Sash weight [kg]*	up to 130	up to 130	up to 130
Sash width [mm]*	1000	1000	1000
Sash height*	2350	2350	2400
Number of sashes*	2 - 7	2 - 7	2 - 7

\* depends on the processing guidelines of the profile manufacturer



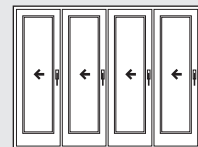
**Pattern 633**  
4 Fold&Slide sashes  
1 Turn-Only dummy mullion sash,  
1 Turn-Only sash



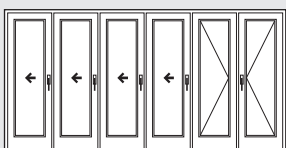
**Pattern 743**  
6 Fold&Slide sashes  
1 Turn-Only sash



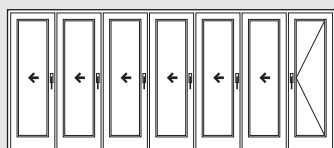
**Pattern 220 [2]**  
2 Fold&Slide sashes



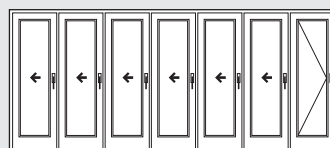
**Pattern 440 [2]**  
4 Fold&Slide sashes



**Pattern 651 [1]**  
4 Fold&Slide sashes  
1 Turn-Only dummy mullion sash,  
1 Turn-Only sash



**Pattern 761 [1]**  
6 Fold&Slide sashes  
1 Turn-Only sash



**Pattern 770**  
6 Fold&Slide sashes  
1 Turn-Only sash



**Pattern 660 [2]**  
6 Fold&Slide sashes



# Lift&Slide elements create space and translucence

Safe and convenient living areas



With the kind permission of: Oliver Schuster, Stuttgart / baukunst.philippaus GmbH

## Operating convenience and functionality leave nothing to be desired

For half a century, classic Lift&Slide elements with hardware from Gretsch-Unitas have been making it possible to design spaces flooded with light and so to create a particularly pleasant living ambience.

On the basis of trailblazing innovations, our corporate group has created a strong range consisting of various Lift&Slide systems and matching special applications. As a result, the technology from Gretsch-Unitas leaves nothing to be desired in terms of operating convenience, burglar inhibition and variable room ventilation.

"Simple, fast, safe" is the name of the game when it comes to window and door fabrication. The easy-to-process design of the hardware components, the extensive fixing accessories and the comprehensive documentation create a strong framework for achieving these goals. These materials help us to ensure that you can fabricate the products of Gretsch-Unitas particularly simply, fast and safely.

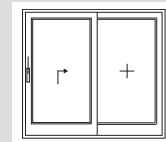


**All the hardware variants from Gretsch-Unitas for Lift&Slide applications share the same basic strengths and advantages:**

- Outstandingly smooth and quiet movement of sliding sashes
- Delightfully easy operation even of large and heavy sashes thanks to the perfect interplay of functional components such as bogies, drive gears and turn handles
- Considerable convenience of a wide range of accessories to enhance your customer satisfaction
- Gears for sash heights up to 3250 mm, 3750 mm on request
- Optimum thermal break in the bottom area achieved with the GU-thermostep 204 threshold
- Alternative threshold solutions requiring a minimum of material input allow for a wide range of applications
- High burglar inhibition even in standard items due to rugged hardware components
- Tested burglar inhibition achieved with optional security components
- Ideal corrosion protection with ferGUard\*silver surface sealing
- Turn handles for comfortable operation in appealing designs and different materials

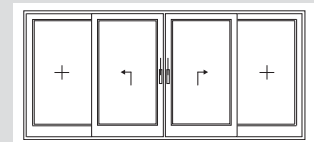
**Pattern A**

1 Lift&Slide door,  
1 fixed-glazed sash;  
Fig.: sliding direction to the right



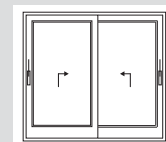
**Pattern C**

2 Lift&Slide doors,  
2 fixed-glazed sashes;  
Fig.: sliding direction to the right and left



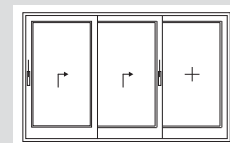
**Pattern D**

2 Lift&Slide doors;  
Fig.: sliding direction to the right and left



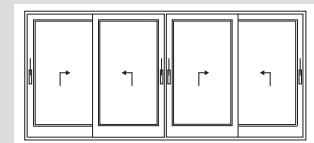
**Pattern E**

2 Lift&Slide doors,  
1 fixed-glazed sash;  
Fig.: sliding direction to the right



**Pattern F**

4 Lift&Slide doors;  
Fig.: sliding direction to the right and left



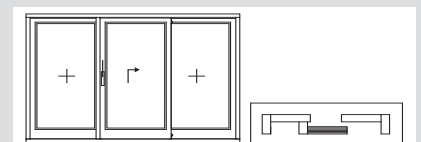
**Pattern G1 symmetrical**

1 Lift&Slide door,  
2 fixed-glazed sashes  
Fig.: sliding direction to the right



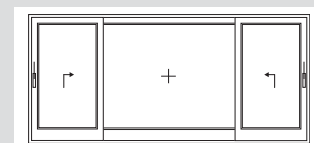
**Pattern G2 asymmetrical**

With fixed mullion  
1 Lift&Slide door,  
2 fixed-glazed sashes  
Fig.: sliding direction to the right



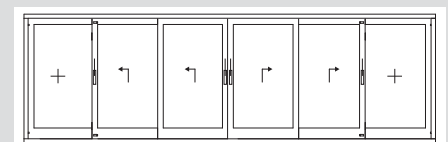
**Pattern K**

2 Lift&Slide doors,  
1 fixed-glazed sash;  
Fig.: sliding direction to the right and left



**Pattern L**

4 Lift&Slide doors,  
2 fixed-glazed sashes;  
Fig.: sliding direction to the right and left



# Parallel offset window



Trump Tower, TR-Istanbul · Brigitte Weber Architects, TR-Istanbul

**Products:** Parallel offset stays, drives, locking systems

**Opening type:** Motor-driven parallel offset window

**Solution:** Newly developed parallel offset stays for 60 kg. concealed chain drives

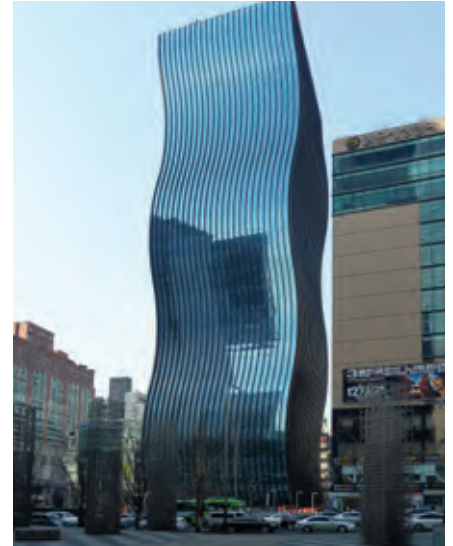


Bahnhof Aarau, CH-Aarau · Theo Hotz Partner AG, CH-Zürich

**Products:** Parallel offset stays, drive gears

**Opening Type:** Manually operated floor-to-ceiling parallel offset window

**Solution:** Parallel offset stays for 100 kg. concealed rebatedrive gear



GT Tower East, KR-Seoul · ArchitectenConsort (Peter Couwenbergh / Edgar Bosman), NL-Rotterdam

**Products:** Parallel offset stays, drives

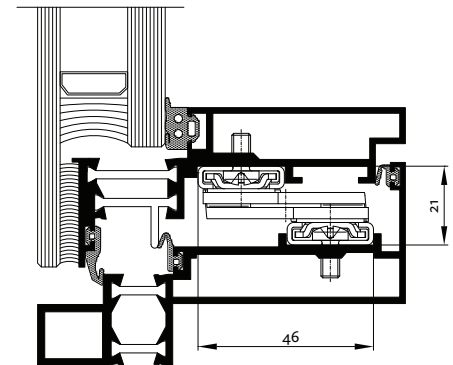
**Opening Type:** Motor-driven parallel offset window

**Solution:** Newly developed parallel offset stay for the "parallelogram" window form, concealed chain drives

## Elegant, homogenous facades

Parallel offset windows are used where the elegant visual effect and homogenous appearance of a glass facade should be retained even when the windows are opened in different ways. The window surface, as opposed to conventional Tilt-Only or Tilt&Turn windows, is not swung, in relation to the frame, but placed parallel to the glass facade.

Above and beyond that, this type of opening can also be used when realising natural ventilation concepts due to infinitely variable opening widths. In comparison to conventional Tilt-Only windows, parallel offset windows can obtain a much higher rate of air exchange with the same opening width. As with all outwardly opening windows, this type of opening does not take up any room inside.



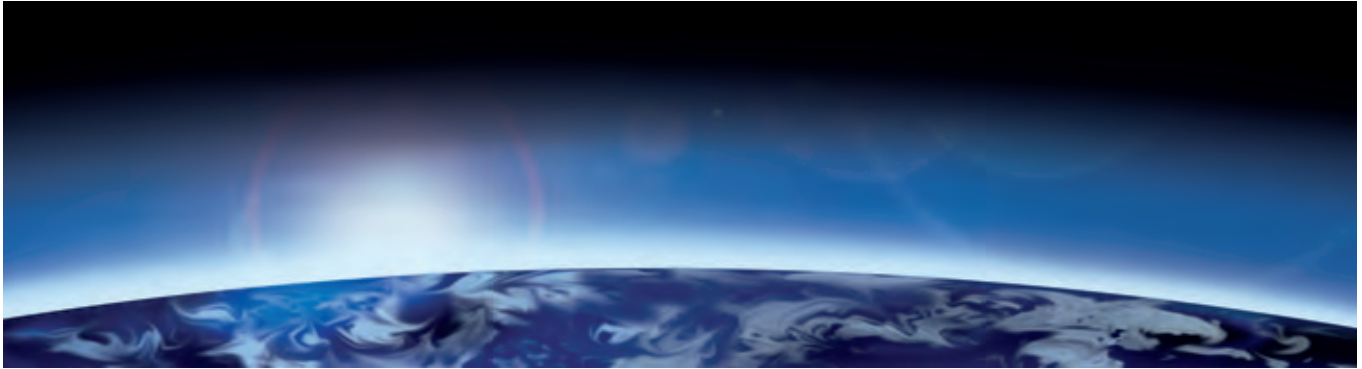
Example of construction: Parallel offset window

## Possible constructions / solutions with parallel offset windows:

Description	Sash weight <sup>(1)</sup> (max. in kg)	Sash height (min. in mm)	Sash width (min. in mm)	Sash height (max. in mm)	Sash width (max. in mm)	Opening width(mm)	
						manually	motor-driven
PAS350 Parallel offset stay	100	350	350	750	2000	150	180
PAS450 Parallel offset stay	100	450	450	1000	2000	180	250
PAS670 Parallel offset stay	200	670	670	1500	2000	150	180
PAS930 Parallel offset stay	200	930	930	2000	2000	180	250
PAS1135 Parallel offset stay	200	1400	1400	2100	2000	180	250
Dimension assembled for parallel systems	350	350	2000	3000			

(1) Higher weights possible if required

# The GU Group Worldwide



## Production sites

### Germany:

Gretsch-Unitas GmbH  
Baubeschläge  
BKS GmbH  
GU Automatic GmbH  
ela-soft GmbH

### France:

FERCO International  
S.A.S.

### Slovakia:

GU Slovensko S.R.O.

### Canada:

FERRIC HARDWARE Inc.

### Distribution

Albania  
Argentina  
Australia  
Austria  
Bahrain  
Belgium  
Bosnia-Herzegovina  
Brazil  
Bulgaria  
Canada  
Chile  
China  
Croatia  
Cyprus  
Czech Republic  
Denmark  
Egypt

Estonia  
Finland  
France  
Germany  
Greece  
Hungary  
India  
Indonesia  
Iran  
Ireland  
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Italy  
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Norway  
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Qatar  
Romania  
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Serbia

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Slovakia  
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Turkey  
Ukraine  
United Arab Emirates  
United Kingdom  
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Vietnam