



WINDOW TECHNOLOGY
DOOR TECHNOLOGY
AUTOMATIC ENTRANCE SYSTEMS
BUILDING MANAGEMENT SYSTEMS



FOR TIMBER, PVC AND ALUMINIUM WINDOWS AND BALCONY-DOORS

Tilt&Slide hardware, Fold&Slide hardware



Securing technology for you



Individual system solutions to meet the highest quality expectations

The Gretsch-Unitas range of Tilt&Slide hardware



Supplied courtesy of: Glenn Howells Architects, UK-Birmingham, London / Rotunda Project Birmingham

Tradition obliges – setting the highest design and quality standards

Gretsch-Unitas Group

The Gretsch-Unitas Group offers solutions for using Tilt&Slide hardware in all standard timber, PVC or aluminium window profiles. The most exacting quality expectations are met through systematic further developments and innovations.

Innovation

Tilt&Slide hardware has been part of the product range as standard for decades at the Gretsch-Unitas Group. Technical innovations, such as the GU-966/100 oZ bb Tilt&Slide hardware system which can be used for barrier-free dwelling concepts to DIN 18025, have shaped the market.

Tilt&Slide hardware

Tilt&Slide hardware is a hardware system that can completely satisfy the individual requirements of end users in relation to comfort, safety and functionality. Barrier-free dwellings to DIN 18025 are also possible with Tilt&Slide hardware from the GU Group.

System solutions for individual requirements

In accordance with our policy 'The systematic competitive edge', we ensure that an individual, sustainable and market-conform hardware solution can be provided in the form of a complete CE-certified system for each profile system. In its capacity as system supplier for timber elements, Gretsch-Unitas is in a position to pursue independent paths and meet all market requirements.

Tilt&Slide hardware

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The hardware system GU-968 mZ

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The Gretsch-Unitas range of Tilt&Slide hardware

Convenient operation and functionality

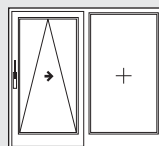


Fundamental characteristics and benefits of Tilt&Slide hardware systems:

- 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

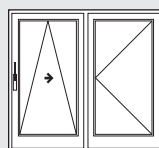
CE marking for windows and balcony-doors

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



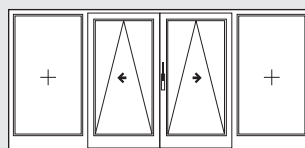
Pattern A – with mullion [1]

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



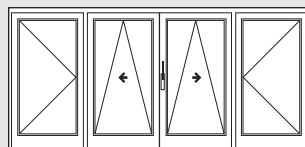
Pattern D – without mullion [2]

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



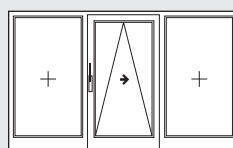
Pattern C – with mullions

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



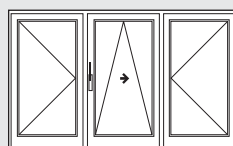
Pattern C – with mullions [1]

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



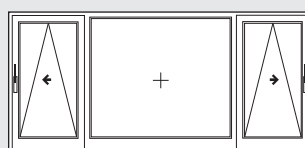
Pattern G – with mullions

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 - flat (6-24913-00-0-*)
- [2] Pattern D: Turn-Only sash with UNI-JET lever-operated gear



Supplied courtesy of Jansen AG, CH-Oberriet (title, pages 5 and 10)

You can enter an entirely new dimension when manufacturing terrace elements from standard window profiles using Tilt&Slide hardware. Gretsch-Unitas hardware is fully-fledged 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.

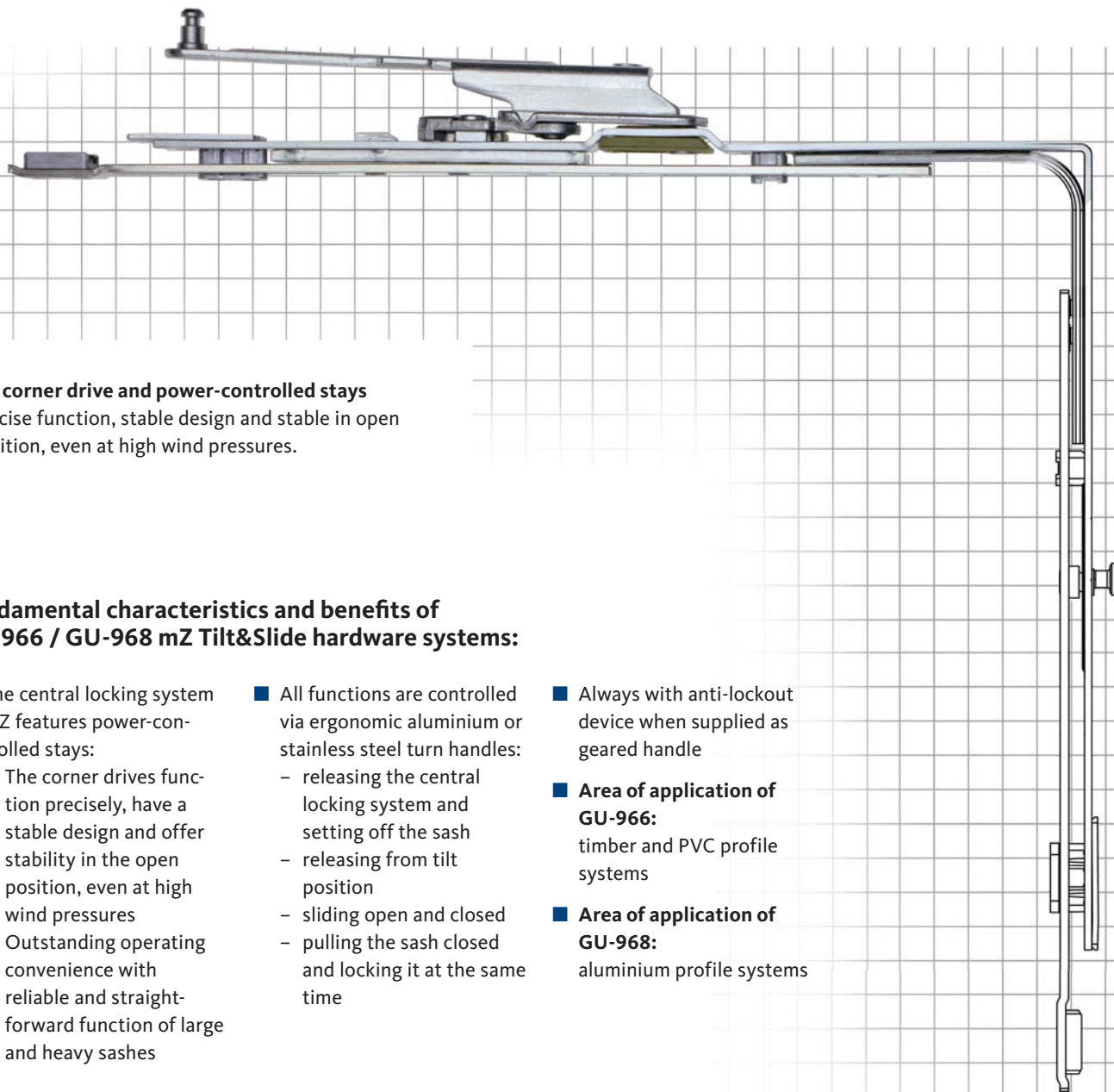
Description	GU-966/ 200 mZ**	GU-966/ 150 mZ	GU-968/ 200 mZ	GU-968/ 150 mZ	GU-966/ 150 oZ	GU-968/ 150 oZ	GU-966/ 100 oZ bb	GU-90 oZ
Application	Timber, PVC	Timber, PVC	Aluminium	Aluminium	Timber, PVC	Aluminium	Timber, PVC	Timber, PVC, aluminium
Sash weight (kg)	up to 200	up to 150	up to 200	up to 150	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 – RC2	■	■						

** 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.

Central locking system with power control (mZ)

GU-966 (timber / PVC) and GU-968 (aluminium) – 200 mZ and 150 mZ versions

GU



mZ corner drive and power-controlled stays

Precise function, stable design and stable in open position, even at high wind pressures.

Fundamental characteristics and benefits of GU-966 / GU-968 mZ Tilt&Slide hardware systems:

- The central locking system mZ features power-controlled stays:
 - The corner drives function precisely, have a stable design and offer stability in the open position, even at high wind pressures
 - Outstanding operating convenience with reliable and straightforward function of large and heavy sashes
- All functions are controlled via ergonomic aluminium or stainless steel turn handles:
 - releasing the central locking system and setting off the sash
 - releasing from tilt position
 - sliding open and closed
 - pulling the sash closed and locking it at the same time
- Always with anti-lockout device when supplied as geared handle
- **Area of application of GU-966:**
timber and PVC profile systems
- **Area of application of GU-968:**
aluminium profile systems



Innovative bogie technology

Based on many years of experience, we have developed bogies that effectively guarantee long-term use and outstanding precision. The bogies glide smoothly and safely from the tilt position into the slide position.



Automatic pin Cleverle

The different climatic conditions in the summer and winter frequently lead to changes in the locking cam settings. The Cleverle adapts automatically to the varying rebate clearances. This significantly reduces the effort required to carry out adjustments during manufacturing and when on-site.

The range of mZ handles

For Tilt&Turn units with power control



Geared turn handle DIRIGENT ^[1]
lockable – keyed alike

Stainless steel



Geared turn handle RONDO ^[1]
lockable – keyed alike

Stainless steel



Geared turn handle FORTE ^[1]
lockable – keyed alike

Stainless steel



Geared turn handle DIRIGENT ^[1]
lockable – keyed alike

Aluminium



**DIRIGENT turn handle on both sides
with PC hole and lugs**

Aluminium



Geared turn handle DIRIGENT ^[1]

Aluminium



**Turn handle DIRIGENT, inside
with PC hole and lugs**

Stainless steel



**Turn handle FORTE, inside
with PC hole and lugs**

Stainless steel



**Turn handle RONDO, inside
with PC hole and lugs**

Stainless steel

Note: for additional handle designs, refer to our relevant order catalogues.

^[1] All geared turn handles feature an anti-lockout device as standard.

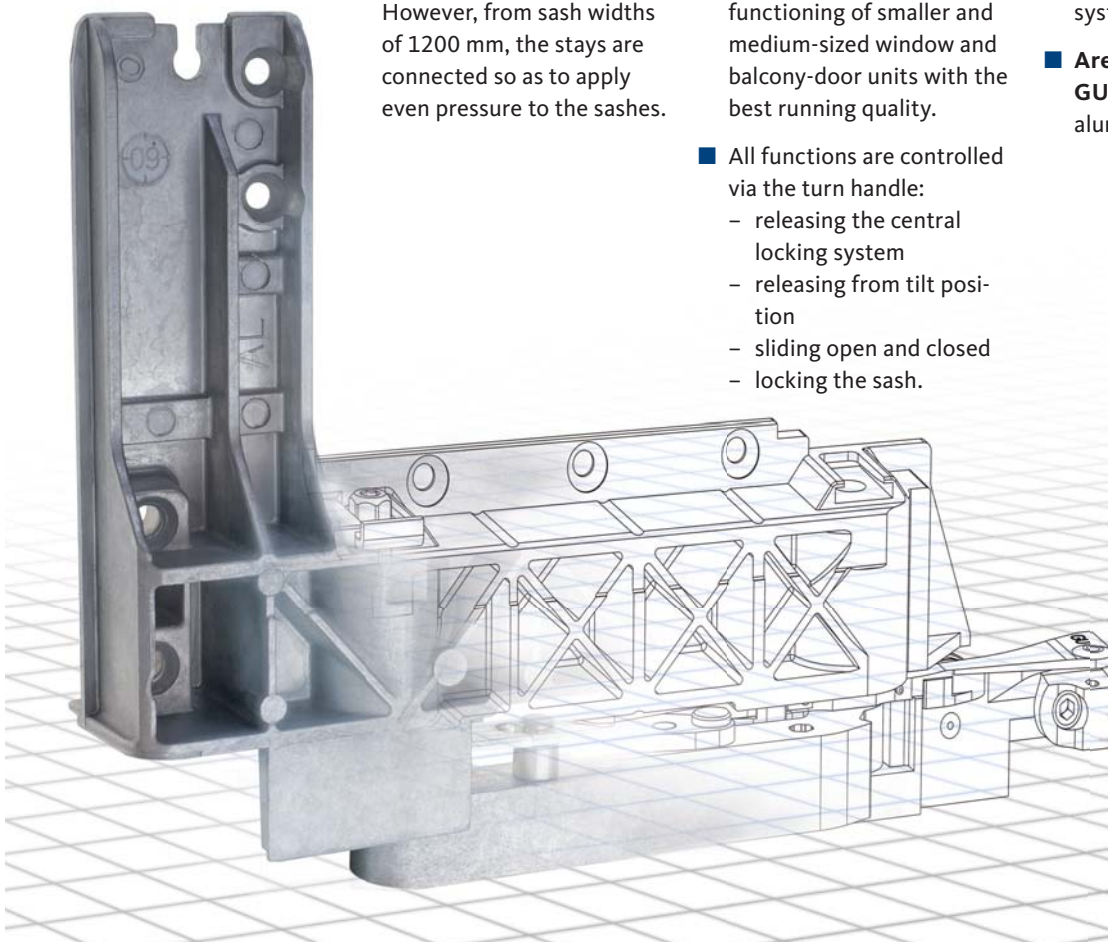
Central locking system without power control (oZ)

GU-966 (timber / PVC) and GU-968 (aluminium) – version 150 oZ



Fundamental characteristics and benefits of GU-966 / GU-968 oZ Tilt&Slide hardware systems:

- The oZ central locking system is not equipped with power-controlled stays. However, from sash widths of 1200 mm, the stays are connected so as to apply even pressure to the sashes.
- The stable design of the hardware components allows for the faultless functioning of smaller and medium-sized window and balcony-door units with the best running quality.
- All functions are controlled via the turn handle:
 - releasing the central locking system
 - releasing from tilt position
 - sliding open and closed
 - locking the sash.
- **Area of application of GU-966:** timber and PVC profile systems
- **Area of application of GU-968:** aluminium profile systems



Sound bogie design

Tried-and-tested over decades, straightforward, fast and reliable installation. Also features optimum precision adjustment.



The central locking system

All T&S central locking systems feature the **Cleverle** automatic cam and can be used for all requirements up to resistance class 2. The resistance class is defined exclusively by the striker.



The ferGUard*silver surface coating

All T&S central locking systems have first-class corrosion protection properties thanks to the ferGUard surface sealing. These are applied in state-of-the-art facilities in three coats which are harmonised with one another.

Central locking system without power control (oZ)

GU-966/100 oZ bb (timber / PVC) – suitable for barrier-free dwellings to DIN 18025



Fundamental characteristics and benefits of the GU-966/100 oZ bb Tilt&Slide hardware system:

- Cost-effective, barrier-free solution with high degree of operating convenience: the installation height of the threshold is only 20 mm
- For use in all standard timber and PVC profiles for units with sash weights up to 100 kg (pattern A)
- All central locking components feature the Cleverle automatic cam
- Centre locks with standard Tilt&Turn components
- Enhanced burglar protection with additional security components



Bogie design

Tried-and-tested bogie design and precise function incorporated into an extremely compact installation space provide the barrier-free solution for Tilt&Slide hardware without compromising operating convenience.



Barrier-free living

GU-966/100 oZ bb Tilt&Slide hardware, the solution for barrier-free dwellings to DIN 18025.



Central locking system without power control (oZ)

GU-90 oZ (timber / PVC / aluminium)



Fundamental characteristics and benefits of Tilt&Slide hardware system GU-90 oZ:

- For small and light doors with sash weights up to 90 kg
- Identical stays and bogies for timber, PVC, or aluminium units
- Centre locks with standard Tilt&Turn components
- All central locking components feature the Cleverle automatic cam



Gasket pressure control

The stays are connected with a metal rod, so the gasket pressure is distributed evenly over the total sash width.



Smooth engagement

When opened, the sash glides more or less effortlessly into the required position – and smoothly engages in the end position when closed.

The range of oZ handles

For Tilt&Slide units without power control



DIRIGENT-F | Inner handle (not shown)
DIRIGENT-F/Z | Inner handle, lockable
Aluminium



ADAGIO-F | Inner handle (not shown)
ADAGIO-F/Z | Inner handle, lockable
Aluminium



MODENA-F | Inner handle (not shown)
MODENA-F/Z | Inner handle, lockable
Aluminium



SOPRANO-F | Inner handle (not shown)
SOPRANO-F/Z | Inner handle, lockable
Aluminium



SAN REMO-F | Inner handle (not shown)
SAN REMO-F/Z | Inner handle, lockable
Aluminium



FORTE
 Inner handle
Stainless steel



ANDANTE
 Inner handle
Stainless steel



OFFICE
 Inner handle
Stainless steel



CRESCENDO
 Inner handle
Stainless steel

Note: for more turn handle versions, refer to our corresponding order catalogues.

The Gretsch-Unitas range of Fold&Slide hardware



Smooth-running and elegant

Guides with 2 rolls ensure the folding sash runs smoothly. A stylish appearance is achieved with the flat guide track. The folding sashes are moved with utmost ease: The 4-roll bogie ensures convenient operation; the small depth of the roller track contributes to the stylish appearance of the unit. Top-running bogies are concealed behind the guide track.

Settings

The hardware is adapted to the different sash overlaps of an extremely wide range of system profiles via individually adjustable bogies and guides. The connections between the folding sashes and the attachment to the frame are established via the sash hinges. The adjustment range of ± 2.5 mm for each sash hinge guarantees optimum positioning of the sashes in relation to one another.

Appropriate window design

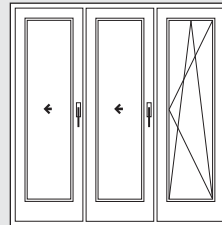
Folding sashes with widths of up to 900 mm (timber / PVC) or with widths up to 1000 mm (aluminium) are manufactured using Tilt&Turn profiles, which means Fold&Slide doors can be perfectly adapted to other windows in the building.

Reliable fixing

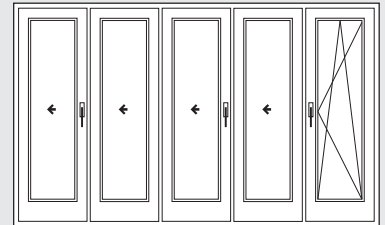
With bottom-running sashes, the entire weight of the Fold&Slide units is safely taken up by the roller track. The guide and roller track are screwed to the frame and provide a secure hold. The position of the retaining bolts and screw-on points of the sash hinges is such that the PVC profiles in particular are always located in the steel stiffeners.

CE marking for windows and balcony-doors

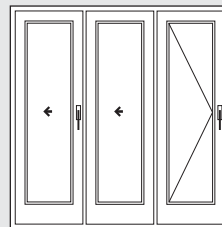
At our premises we provide you with the opportunity to acquire the prerequisites needed for the CE marking of timber windows and window doors. For more detailed information please refer to your responsible contact.



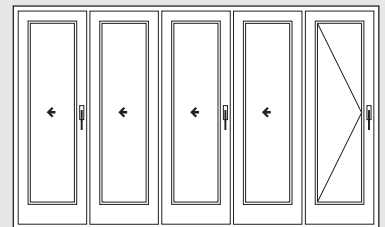
Pattern 321 [1]
2 Fold&Slide sashes
1 Tilt&Turn sash



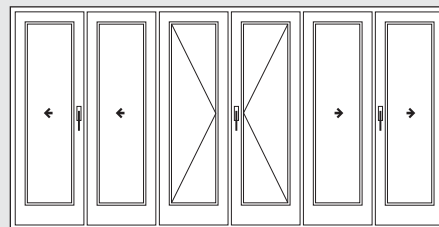
Pattern 541 [1]
4 Fold&Slide sashes
1 Tilt&Turn sash



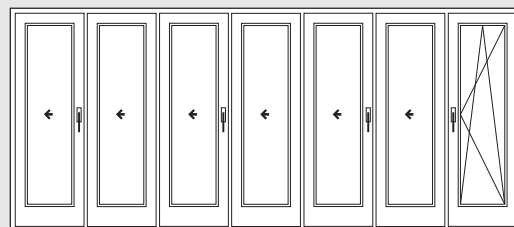
Pattern 330
2 Fold&Slide sashes
1 Turn-Only sash



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



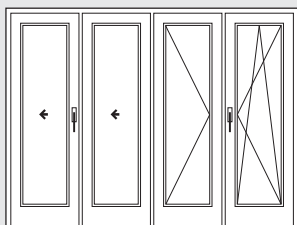
Pattern 633
4 Fold&Slide sashes
1 Turn-Only passive sash, 1 Turn-Only sash



Pattern 761 [1]
6 Fold&Slide sashes
1 Tilt&Turn sash

[1] Passage sash also as Turn-Only sash
– with sash hinges and UNI-JET Turn-Only hardware
– with UNI-JET Turn-Only hardware

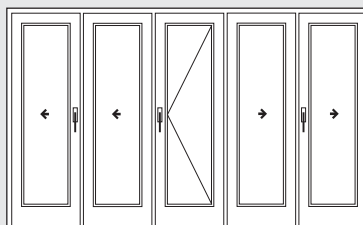




Pattern 431 [2]

2 Fold&Slide sashes

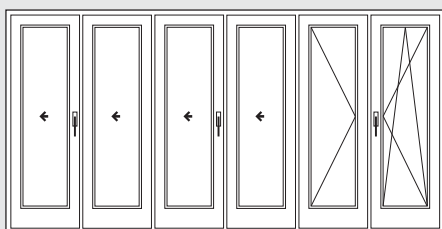
1 Turn-Only passive sash, 1 Tilt&Turn sash



Pattern 532

4 Fold&Slide sashes

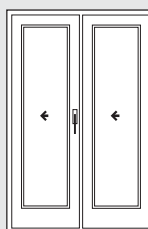
1 Turn-Only sash



Pattern 651 [2]

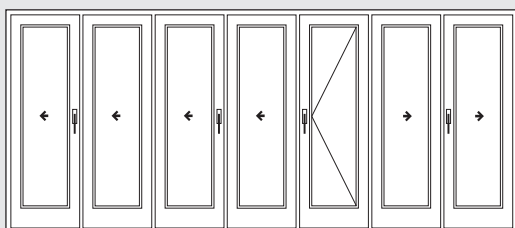
4 Fold&Slide sashes

1 Turn-Only passive sash, 1 Tilt&Turn sash



Pattern 220

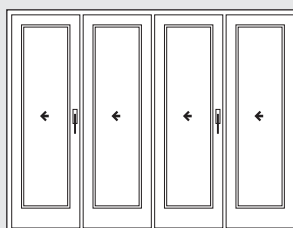
2 Fold&Slide sashes



Pattern 743

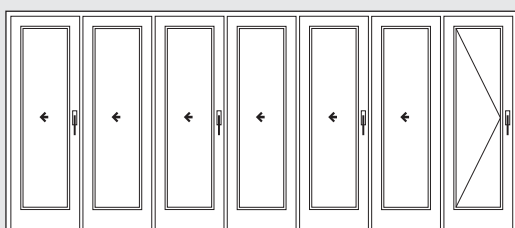
6 Fold&Slide sashes

1 Turn-Only sash



Pattern 440

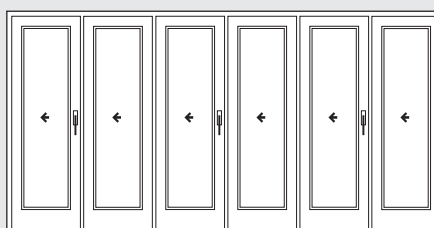
4 Fold&Slide sashes



Pattern 770

6 Fold&Slide sashes

1 Turn-Only sash



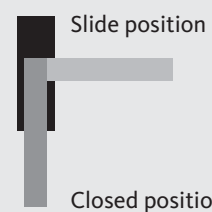
Pattern 660

6 Fold&Slide sashes

Operation

Fold&Slide units are easily operated by the turn handle with one hand.

Lockable gears and handles for operation from both sides are available for passage door leaves on request.



[2] First opening passage sash also as Turn-Only sash
 – with sash hinges and UNI-JET Turn-Only hardware
 – with UNI-JET Turn-Only hardware

Bottom-running Fold&Slide units

GU-922 (timber / PVC) and GU-822 (aluminium)



Comfortable spacious relationship with the outdoors

All folding sashes are pushed to one side where they form a compact package: living room and garden flow together to form a new living area in close touch with nature with outstanding comfort. The passage door leaf attached to the frame is easy to operate independently of the folding sashes as a Turn-Only or Tilt&Turn sash.



Fundamental characteristics and benefits of bottom-running Fold&Slide units:

- The roller track takes up the sash weight and transmits it to the floor safely. As a result, safe functioning is provided independently of the stability of the building construction at the top – e.g. eaves of conservatories.
- Folding sashes with a width up to 900 mm (timber/PVC) or 1000 mm (aluminium) and a weight up to 80 kg are manufactured from Tilt&Turn profiles
- Provided with circumferential gaskets, the units offer high impermeability as well as optimum heat and sound insulation
- The flat guide track provides a stylish appearance. The bottom-running bogies are concealed below a cover profile
- Fold&Slide hardware comes in inward and outward-folding versions and allows to fabricate elements with 2 to 7 sashes
- Optimum protection against corrosion with the surface sealing ferGUard*silver



Description	GU-922	GU-822
Application	Timber, PVC	Aluminium
Sash weight (kg)	up to 80	up to 80
Sash rebate width (mm)	400 – 900	max. 1000
Sash rebate height (mm)	850 – 2350	max. 2400

Top-running Fold&Slide units

GU-925 (timber / plastic) and GU-825 (aluminium)



Optimum ventilation

When pushed to the side, the folding sashes only require a small amount of lateral storage space. The interiors open up to the garden and terrace which provides outstanding living comfort. When secured in the tilt position, the Tilt&Turn version of the passage door leaf offers an additional ventilation option with 3 to 7-sash units.



Fundamental characteristics and benefits of top-running Fold&Slide units:

- This hardware can optionally be used with a floor-flush bottom guide, i.e. without a protruding threshold, and therefore provides an indoor solution for barrier-free dwellings to DIN 18025
- Folding sashes with a width up to 900 mm (timber/PVC) or 1000 mm (aluminium) and a weight up to 80 kg are manufactured from Tilt&Turn profiles
- Ceilings with high load capacity or ruggedly designed eaves allow for the stable fixing of the roller track at the top
- Provided with circumferential gaskets, the units offer high impermeability as well as optimum heat and sound insulation
- Hardware versions for 2 to 7 sash units are possible
- Optimum protection against corrosion with the surface sealing ferGUard*silver



Description	GU-925	GU-825
Application	Timber, PVC	Aluminium
Sash weight (kg)	up to 80	up to 80
Sash rebate width (mm)	400 – 900	max. 1000
Sash rebate height (mm)	850 – 2350	max. 2400



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BUILDING MANAGEMENT SYSTEMS

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