



WINDOW TECHNOLOGY  
DOOR TECHNOLOGY  
AUTOMATIC ENTRANCE SYSTEMS  
BUILDING MANAGEMENT SYSTEMS



WINDOW TECHNOLOGY – DESIGN HANDBOOK AND ORDER CATALOGUE



## Lift&Slide hardware for aluminium elements

Edition 07/2016

Securing technology for you



# Lift&Slide hardware from the intelligent modular system

We provide customised solutions with innovative technology



## Commitment to tradition – Gretsch-Unitas sets the highest design and quality standards

### Gretsch-Unitas Group

In 1958, Gretsch-Unitas was the first company to develop and launch a Lift&Slide system. We shaped the market with this technical innovation, and since then we have repeatedly set standards with regard to profile geometry, function and quality.

### Innovation for more than 50 years

We have been consistently developing and enhancing our Lift&Slide hardware for half a century. During that time, the comprehensive range of various solutions for all the conventional profile materials has evolved – including system-based solutions – that now set the assortment from Gretsch-Unitas apart. We constantly adapt our technology to the latest requirements of the market and so live up to the highest quality demands.

### Lift&Slide systems – more than just hardware

Lift&Slide hardware from Gretsch-Unitas form an intelligent modular system with which our customers can fulfil all the individual requirements of the end users with regard to comfort, security and functionality. The flexibility of our solutions makes it possible to keep even existing Lift&Slide elements up to date with the state of the art.

### System solutions for individual demands

Our brand message "Securing technology for you" is also reflected in the strong offering from Gretsch-Unitas for Lift&Slide solutions. For example, we offer every system as a market-oriented and customised solution in the form of an integral system.

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# 1.0 General information



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# Lift&Slide elements create space and translucence

Safe and convenient living areas

GU



With the kind permission of: Oliver Schuster, Stuttgart / Baukunstphiliphaus 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\*
- 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

\* The application range varies depending on the profile system and must be coordinated with the individual profile manufacturer.

## Our special applications for Lift&Slide elements

**GU**





HS-Master motor-driven drive

## HS-Master motor-driven drive

### This degree of security can also be easy and convenient

Genuine comfort: this means enjoying the benefits of straightforward operation coupled with a great sense of security. Solutions from Gretsch-Unitas such as the HS-Master motor-driven drive satisfy these fundamental needs of the end users to an excellent degree. The drive has been tested by DEKRA and can be used without any additional safety devices. Its intelligent control unit recognises obstacles. This also acts as the basis for the integrated crush guard. In addition, the Lift&Slide door stops at a safe distance before the final open position, thus preventing injuries. There are also no compromises made in terms of safety when using the remote control to close or slide the door shut: the anti-lockout device stops the door elements up to 10 cm short of the fully closed position to prevent the user being locked out of the building.

How does an intelligent control unit work? The powerful sensor components immediately detect obstacles, stop the current procedure and wait for new input. This dispenses with the need for traditional protective equipment, such as an infrared light curtain or light barrier. However, the control unit can also be fitted optionally with an infrared light curtain or a light barrier, and even with radar sensors, to permit contact-free operation of the system.

# Special applications – comfort

GU



HS-SPEED Limiter

Lowering safeguard  
Detail, topLowering safeguard  
Detail, bottom

## HS-SPEED Limiter

### Safe operation of large and heavy elements

Considerable dynamic forces are generated when opening or closing Lift&Slide elements with high sash weights. This means that the greater the kinetic energy that is built up in the acceleration phase, the harder it is to slow the sash down again.

The HS-SPEED Limiter therefore prevents an uncontrolled acceleration of the sliding sash and restricts its speed to a maximum of 0.2 m/s. This prevents injuries to persons and also damage to the structure.

The HS-SPEED Limiter is especially suited for use in buildings with enhanced safety requirements. For example, this includes all public buildings that are subject to the German accident prevention regulations (Unfallverhütungsvorschrift – UVV), as well as all buildings for children such as kindergartens and schools.

**Note:** With the HS-SPEED Limiter, the maximum sliding speed of 0.2 m/s stipulated in the German accident prevention regulations and in the VHBE directive is not exceeded.

## Lowering safeguard

### Controlled closed position with lightweight sliding sashes

Innovative materials also make lightweight Lift&Slide elements possible. In the case of such lightweight sliding sashes, it may happen that their self-weight does not provide sufficient gasket pressure on the selas at the bottom horizontal.

The lowering safeguard therefore presses the sliding sash downwards in a controlled fashion on to the threshold and therefore provides the necessary sealing gasket pressure for the desired tightness of the sliding sash.

The lowering safeguard can be used in combination with all the Lift&Slide gears.



Tension spring



Handle damper

## Tension spring

### Reduced operating force in Lift&Slide elements

The use of a tension spring in the Lift&Slide gear noticeably reduces the operating force at the turn handle for the user. This considerably improves the operating comfort and makes it child's play to operate Lift&Slide doors, even with high sash weights up to 400 kg.

The tension spring for Lift&Slide gears is a result of many decades of experience at Gretsch-Unitas in the area of Lift&Slide hardware. We always recommend their use as from sash weights of more than 200 kg.

The installation of the tension spring is also possible subsequently in every Lift&Slide gear version. This functionality is particularly important for conversions. If, for example, the sash weights increase due to new glazing in the course of a renovation, the corresponding operating forces at the turn handle also increase.

The tension spring compensates for this increased force.

## Handle damper

### For rebound-free, controlled lowering of the sash

The use of the handle damper in the Lift&Slide gear improves the operating safety, particularly with large and heavy elements. Furthermore it provides controlled sash-lowering without rebound of the handle as well as a controlled rotary movement of the handle.

We recommend the handle damper for Lift&Slide gears with sash weights as from 100 kg. It can also be installed in connection with the tension spring – **to form a strong combination that is only offered in this form by Gretsch-Unitas.**

# Special applications – burglar protection

GU



Electronic locking monitoring

L&S locking set for pattern G1  
Detail, topL&S locking set for pattern G1  
Detail, bottom

## Electronic locking monitoring

### Lift&Slide elements tailor-made to satisfy individual security needs

Everyone has the desire for a secure home. The locking monitoring from Gretsch-Unitas provides a strong building block for achieving this aim: above and beyond mechanical burglar protection, electronic monitoring can also be integrated into the Lift&Slide element at any time.

If then, for example, the magnetic field of the locked status monitoring is broken due to opening by force, the concealed contact sends a signal to an alarm centre. This deters burglars at an early stage.

The locking monitoring for pattern A can be installed in every Lift&Slide gear, and the locking monitoring for pattern C can be attached to every Lift&Slide element.

## L&S locking set for pattern G1

### Secure locking without a lateral door frame or frame cam

In Lift&Slide elements according to pattern G1, two fixed-glazed sashes are installed in the outer level of the element – to the left and right of the sliding sash. The sliding sash is located in the centre of the element and, contrary to usual practice, cannot lock with the Lift&Slide gear into the frame cam of the door frame on the handle side and so lock the element securely.

With the locking set for pattern G1, Gretsch-Unitas offers an effective solution for locking upwards into a top keeper, which is installed in the top guide track. It is combined with locking of the handle-side bogie in a bottom keeper fitted on the roller track.

The result of this intelligence solution is the secure locking of the sliding sash at two different points. Moreover, the locking components in this version generate additional gasket pressure which further enhances the tightness.



# More than just products

## Construction Products Regulation (CPR)



You can download certificates and Declarations of Performance (DoP) for our products on our website at: [www.g-u.com/en/services/construction-products-regulation.html](http://www.g-u.com/en/services/construction-products-regulation.html).

In July 2013, the Construction Products Regulation (CPR) replaced the Construction Products Directive (CPD) which had been valid since 1989. Construction products introduced to the market after 1 July 2013 must fulfil the requirements of the CPR. However, this change does not affect products that were already on the market at the time this regulation came into force.

### Construction Products Regulation (CPR) 2013, Europe-wide binding uniform specifications

The CPR regulates the launching of construction products on the market. The regulation is designed to ensure that the drafting and execution of construction works do not endanger the safety of people or goods and do not harm the environment. To achieve these objectives, the regulation precisely defines important characteristics of construction products in harmonised standards. A Declaration of Performance is required for products that are covered by a harmonised standard.

In contrast to the previous Construction Products Directive, the implementation of which was governed by national laws, the legal form now chosen was the ordinance which demands legal validity directly in all European member states of the European Union.

The CE marking is implemented Europe-wide in accordance with uniform requirements and prevents discrepancies arising as a result of national regulations. This further promotes, and at the same time increases transparency and creates more uniform structures Europe-wide in relation to the free movement of goods and the unrestricted use of construction products.

The Declaration of Performance (DoP) is the central document via which the manufacturer of the construction product assumes responsibility for conformity of his products with the declared performances. It is the basis for the CE marking and must be available for each construction product. The CE marking on the construction product signals the product's compliance with the declared performance.

We make all Declarations of Performance for GU Group construction products available on our website as "DoP" downloads: <http://www.g-u.com/en/services/construction-products-regulation.html>

### Declaration of Performance

When the CPR came into force, a market monitoring was introduced throughout Europe. In Germany, this has been implemented by the German Institute of Building Technology (DIBt). In the event of contraventions, fines and/or custodial sentences may be imposed.

With our products, we offer you certified outstanding quality at all times in accordance with EN ISO 9001.

**Securing technology for you**



# More than just products

Service, planning, seminars

GU



Collection E+ / Getty Images

Tailor-made solutions  
for any project



Collection Image Source / Getty Images

Our service: consultation and planning



Collection E+ / Getty Images

Large selection for the most varied  
types of projects

## Our services in building project consulting

The experienced building project consultants from Gretsch-Unitas can offer you support when creating drafts, door lists, concept drafts with functional descriptions, invitations to tender and with cable diagrams for specific projects. In cooperation with the Development and Application Technology departments, we also find tailor-made solutions for special designs with the strengths of Gretsch-Unitas: our sophisticated and coordinated system solutions guarantee the desired and expected functionality even for the most demanding projects, while observing the necessary standards and directives.

As a matter of course, we continuously provide you with information about innovative product ideas as well as on relevant standards and directives and the immediate consequences of such changes during the planning and building phase.

Building security, protection of life and valuables, barrier freedom and convenient operation are often at odds in terms of their individual requirements. We shall therefore work together to find a tailor-made solution for the project, which creates a perfect balance of the various demands.

The spectrum of services we offer includes ascertaining the requirements for functionality, the conception and creation of different cross-trade equipment solutions up to the handover to your customers. The heart of the thinking and the guiding principle at Gretsch-Unitas is always the product and its benefit for people. The main beneficiaries of this strategy are our customers and the end users who expect a reliable and functional solution for their buildings over several years. This competence forms the foundation of the prestige of Gretsch-Unitas as a reliable partner all over the world.

## Gretsch-Unitas – your partner in planning

Together with you, we will work out the necessary requirements for the desired functionality, if required, and create an individual overall concept for your project. We know that comfort and safety are top priorities when opening, closing and monitoring doors and windows. That is why we do not focus on specific individual products, but rather we design integral solutions that also take the interfaces between the various trades into account.

## Our seminars with certified advanced training credits for architects

Gretsch-Unitas offers you the opportunity to always be at the forefront of technology, standards and product innovations and keep informed about system solutions with its expert seminars.

The seminar topics are diverse and give a holistic overview of the newest industry trends with regard to modern architecture, standards and directives. Our system solutions and certifications are, of course, also a major topic.

The individual GU Group seminars have been certified as advanced training events by several Chambers of Architects and Engineers. You can therefore have your attendance at these seminars acknowledged with advanced training credits.

# More than just products

## Tender-Text-Manager



**Vorsprung mit System**

Montag, 27. Februar 2012

Messen 10  
Downloads 5  
Prospekte

**Fenstertechnik**

Drehkippschiebebeschläge Parallelschiebe-Kippbeschläge Schiebe-Faltbeschläge

Hebeschiebebeschläge Fenster- und Schalldämmlüfter RWA-Anlagen

Oberlichtöffner



**Query result for EVP standard lock 21**

**Verriegelungssysteme nach DIN EN 1125**

**EVP**

Verriegelungssysteme nach DIN EN 1125  
Standardverschlüsse nach DIN EN 1220

Standardverschlüsse nach DIN EN 1220

Standardverschlüsse nach DIN EN 1220 und bestimmt für öffentlichen Gebäude (oder andere Anwendungen), bei denen die Benutzer die Funktionen des Verschlusses benötigen und diese im Rahmen der Nutzung nicht beeinträchtigen dürfen. Standardverschlüsse müssen sicher, effektiv, verlässlich, zugänglich und leicht zu bedienen sein. Sie müssen eine ausreichende Lebensdauer haben und die Nutzer dürfen keinen erheblichen Aufwand aufwenden, um die Funktionen des Verschlusses wiederherzustellen.

Tendering tool

### The Tender-Text-Manager – software for architects and planners

You would like to write extensive performance descriptions and entire tender texts both efficiently and quickly? For this purpose, Gretsch-Unitas offers all architects and planners the Tender-Text-Manager as a convenient and powerful tool. It allows you to produce the corresponding texts for all the products of the Gretsch-Unitas Group and then communicate them digitally.

A GAEB<sup>[1]</sup> import function is integrated in the Tender-Text-Manager. This allows you to integrate ongoing tenders into a project and continue editing them online.

### System requirements

- Internet access
  - Internet browser
- (Internet Explorer 7.0 / Firefox 7.0 or higher)

### Service email

- ausschreibungstexte@g-u.de

This is how to reach us in Germany:

**» Hotline for architects**  
**+49 2051 201-2000**

[1] Gaeb = Gemeinsamer Ausschuss für Elektronik im Bauwesen  
(Joint Committee on Electronics in Construction)

# More than just products

confiGUrator



The screenshot shows the confiGUrator software interface. At the top, there's a navigation bar with the GU logo, BKS, and FERCO logos, and the date 'Dienstag, 1. Juli 2014'. Below the navigation bar is a main menu with sections like 'Home', 'Produktkonfigurator', 'Offen', 'Vorgänge', 'Adressen', 'Einstellungen', 'Hilfe', and 'Abmelden'. On the left, there's a sidebar with links to 'Wechseln zu' (Homepage, CIS, MKS, User). The central area has tabs for 'Konfiguration', 'Übersicht', and 'Produktkonfigurator'. A sub-menu 'U. System' is open, showing four categories: 'Paratextiltechnik' (Innovative Beschlaglösungen für Hersteller und Fachvertreter aus Holz, Kunststoff und Metall), 'Füertechnik' (Hochwertige Metallbeschläge, Schließzylinder, Schlosser und Beschläge auch mit Zahnheuschen für Neubausperre und Premiums), 'Eingangssysteme' (Rappräsentative Eingangslösungen: Schiebetüren, Dreh-Straatne, Kassettentüren, Sicherheitstüren und Garagentorsysteme), and 'Gebäudetechnik' (Vernetzte elektronische und mechanische Sicherheit komplett aus einer Hand). Below these categories are buttons labeled 'Wählen' and 'Lösungswahl'.

confiGUrator

This screenshot shows a search results page for 'patterns'. It displays a grid of icons representing different hardware components, each with a small description and a 'Details' link. The icons include various door types, locks, and access control systems.

Query about patterns

This screenshot shows a detailed search result for a specific hardware item. It includes a large thumbnail image of a double door system, a table with technical specifications (Type: K 1000, Model: K 1000, Weight: 40 kg, Dimensions: 1000x2000x100 mm, etc.), and a 'Details' button.

Query about hardware version

This screenshot shows a table titled 'Hardwareübersicht' (Hardware Overview) listing various hardware items. The columns include 'Pos.', 'Produkt', 'Anzahl', 'Preis', and 'Beschreibung'. Examples of items listed are 'Schlüsselkombinationen für die Türschlösser', 'Schlüsselkombinationen für die Türeinfassungen', and 'Schlüsselkombinationen für die Türeinfassungen'.

Result: hardware overview

This screenshot shows a summary of an offer. It includes a table with columns 'Produkt', 'Anzahl', 'Preis', and 'Beschreibung', and a section for 'Bestellstatus' (Order status) with checkboxes for 'Bestell offen', 'Bestell abgeschlossen', 'Bestell bestätigt', and 'Bestell abgeschlossen'.

Result: offer

This screenshot shows a detailed view of an order. It features a table with columns 'Pos.', 'Produkt', 'Anzahl', 'Preis', 'Beschreibung', and 'Bestellstatus'. The table lists numerous items, such as 'Schlüsselkombinationen für die Türschlösser', 'Schlüsselkombinationen für die Türeinfassungen', and 'Schlüsselkombinationen für die Türeinfassungen'.

Result: order

## The hardware confiGUrator – guided ordering at the click of a button

The confiGUrator lets you put hardware sets together quickly and without any errors. The registered data can then be displayed as a hardware overview, as a tender or as an order overview. You can also transfer this information electronically as a PDF file at the click of a button.

Naturally, you can also import the data into the CIS (Customer Information System) order system at Gretsch-Unitas. As a customer, you can query the status of your order at any time in the CIS.

The confiGUrator is a service with which the GU Group gives its customers quick and comprehensive access to the hardware data. This service ensures a transparent process from registering the data to ordering and through to the delivery of the goods.

## System requirements

- Internet access

## Service email

- confiGUrator@g-u.de

# Finish for Lift&Slide hardware components made of metal

## ferGUard\*silver surface sealing



### Chromate-free coating system for highest corrosion protection

- Contact with materials such as mortar, cement dust and paint, varnishes, transparent coatings and cleaning detergents significantly affect the surface of architectural hardware over the years. This can lead to complaints from end users.
- Sealing the surface with ferGUard\*silver reliably prevents damage through corrosion and accompanying complaints. It consists of a combined coating (zinc + passivation without hexavalent chromium + additional coating) with excellent anti-corrosive qualities.
- The coating is applied without organic components, heavy metals and hexavalent chromium. This makes ferGUard\*silver extremely environmentally friendly which is in line with contemporary requirements.
- Another advantage is the visual effect of the surface sealing. ferGUard creates an even, light silver surface on the hardware components. This high-quality appearance is another sales argument for you to use when selling the product to your customers.

### How does the ferGUard\*silver additional coating work?

Up to now, the hardware components have been protected by a zinc coat with subsequent yellow passivation (method: zinc + standard chromating).

In cooperation with leading process suppliers and the automotive industry, Gretsch-Unitas has developed the additional coating ferGUard\*silver as an alternative to the conventional process.

After the usual treatment, the hardware components are covered with an inorganic coat in an additional work step. This process step is carried out at a fully automatic computer-controlled production facility.

The additional coat permeates deeply into the passivated coat, sealing the whole component firmly and permanently.

Special corrosion inhibitors added to the system also slow down the initial stages of corrosion.

### Environmentally friendly method

The coating is applied without organic components and heavy metals and therefore does not pollute either waste water or exhaust air. This is another example of the way in which Gretsch-Unitas is systematically designing production processes to minimise their impact on environment.

### Additional benefits: colouring

Our hardware components sealed with ferGUard\*silver stand out thanks to their attractively even, light silver colouring.

The additional coating from GU therefore offers dealers, fabricators and end customers many benefits.

### Advantages of ferGUard\*silver surface sealing

- Considerably improved corrosion protection due to additional coating
- Longer service life of window and door elements
- Dispensing with organic components or heavy metals: the coating from Gretsch-Unitas is environmentally friendly and so fulfils contemporary requirements
- If there is mechanical damage to the surface, the remote protective action of the zinc coat protects against corrosion
- Fewer complaints from end users due to a surface that is more resistant against detergents and household chemicals
- Even, light silver surface
- No hexavalent chromium in the surface sealing. ferGUard\*silver thus satisfies the EU environmental protection requirements

#### Salt Spray Test Certificate



Certificate

## Special solution for defending against aggressive influences

Extreme atmospheric conditions, as they can be found in some geographical regions or in certain industries, lead to a more intensive corrosive attack on the coating on hardware components. This applies, for example, to buildings near the coast, but also to industrialised regions and agricultural production sites. Moreover, wetrooms, direct weathering and contact with timber that is either impregnated with acetic acid or naturally contains high levels of tannic acid – for example, oak – represent additional load factors.

In all these cases, the hardware surfaces need a particularly effective coating that can successfully resist the external influences of such corrosion-promoting environments. The ceramic high-tech coating faceGUard from Gretsch-Unitas lives up to these requirements: It provides a far higher degree of resistance than that stipulated by the standard. This guarantees the long service life of the elements, even in particularly harsh conditions.

In the case of the neutral salt spray test according to EN ISO 9227 (formerly DIN 50021-SS), faceGUard achieves excellent values.

## Child's play even in extreme conditions

As a high-quality combination sealing, faceGUard possesses outstanding corrosion-protection characteristics. It should therefore be used wherever extreme and aggressive air and weathering conditions place extreme demands on the surface. Even in such conditions, faceGUard guarantees excellent functionality and a long service life.

## Advantages of the GU surface sealing faceGUard

- The dramatically improved corrosion protection extends the service life of the window and door elements
- The high-grade sealing protects all surfaces and offers utmost resistance against detergents, household chemicals and other substances. These characteristics are also in demand in commercial application areas with extremely high hygiene requirements, such as in dairies and cheese dairies
- faceGUard achieves peerless results in corrosion tests
- The sealing does not contain any hexavalent chromium and so complies with the EU environmental protection requirements
- The high-quality appearance is another sales argument



Certificate

# Materials and finishes

## Lift&Slide turn handles

GU



RONDO series



BELCANTO series



DIRIGENT series



### Silver / EV 1 look

With its cool, slightly reflective finish, the silver/EV 1 look offers the perfect complement to modern interiors. This robust surface also stands out thanks to its high impact and scratch resistance.

### Solid brass

One of the outstanding versions of Lift&Slide turn handles is the brass cast made of solid metal. This important hardware is characterized in long-term use by its excellent corrosion resistance and its extremely low maintenance requirements.

### Dark brown (similar to RAL 8022) White RAL 9016)

Gretsch-Unitas creates ideally resistant surfaces – even in various different RAL colour shades – through product-specific coating procedures, which are characterized by a high-quality appearance and a particularly long service life.

### matt stainless steel

The matt stainless steel surface is particularly resistant, and so is suitable as an ideal alternative to other surface coatings.

### Surface: 9 – more surfaces available on request

Our turn handles are also available in various special colours on request. Individual design solutions and colour concepts can therefore be realised harmoniously throughout the entire building thanks to the expertise of Gretsch-Unitas.

### Variety of profile cylinders

Delivery can be completed with compatible profile cylinders from the BKS locking cylinder range. Swiss round cylinders (Swiss RC) round off the range.

## 2.0 Technical information

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# Standards at a glance



Various standards and regulations apply to Lift&Slide hardware and the related products. We present a list of the most important of these requirements below.

## **EN 13126, part 1**

**Building hardware – Requirements and test methods for windows and door height windows.**

**Part 1: Requirements common to all types of hardware**  
EN 13126-1:2011

**Application range:**

This European standard stipulates the performance requirements for the strength and operational reliability of hardware for the actuation of movable sashes on windows and balcony-doors, including the requirements and test methods that apply to all hardware.

## **EN 13126, part 16**

**Architectural Hardware – Hardware for Windows and Balcony-Doors – Requirements and Test Methods**  
**Part 16: Hardware for Lift&Slide Windows and Balcony-Doors;**  
EN 13126-16:2008

**Application range:**

This part of EN 13126 stipulates the requirements and test methods for the operational reliability, strength, protective efficiency and function of hardware for Lift&Slide windows and balcony-doors, regardless of whether the hardware permits an additional tilt position.

**NOTE:** This European standard also applies to hardware systems where the window sash itself is not lifted, but rather a sealing mechanism is moved.

## **EN ISO 9227**

**Corrosion tests in artificial atmospheres – salt spray tests**

**EN ISO 9227:2006**

The following amendments have been made compared to DIN 50021 und EN ISO 7253:2002-04: the standards have been harmonised and the range of application has been summarised.

**Application range:**

This international standard stipulates the device, the reagents and the applicable procedure for performing the neutral salt spray (NSS) test, the acetic acid salt spray (AASS) test and the copper-accelerated acid salt spray (CASS) test for assessing the corrosion resistance of metal materials with or without permanent corrosion protection or with temporary corrosion protection.

The standard also describes the procedure for assessing the corrosivity in the test chamber.

The standard does not stipulate the dimensions of the samples, the duration of the stress to be applied for a particular product or the interpretation of the results. Such details are specified in the corresponding product specifications.

The salt spray tests are particularly useful for demonstrating weak points such as pores and other damage in certain metal platings and organic coatings, as well as anodic oxide layers and conversion coatings.



## DIN 18040 part 1

Construction of accessible buildings – design principles

Part 1: Publicly accessible buildings

### Application range:

This part of the standard applies to the barrier-free planning, execution and equipment of publicly accessible buildings and their outdoor areas, whereby accessibility refers to those parts of the building and their associated outdoor areas which are intended for public use. Accessible buildings include, in particular, cultural and educational institutions, sports and leisure facilities, health care facilities, office and administrative facilities and court houses, shops and restaurants, parking spaces, garages and toilet facilities (compare § 50, paragraph 2, MBO ("German building regulations").)

Barrier freedom refers to the parts of the building and the related outer annexes that are intended for use by the public.

The standard applies to new buildings. It should be applied within its meaning to the planning of conversions or renovations.

The protective objectives pursued with the requirements in accordance with this standard can also be fulfilled in other ways than those stipulated in the standard.

**NOTE:** As a rule, the individual clauses each initially state the protection objectives to be reached as a prerequisite for accessibility. Then it is demonstrated how the protection objective can be reached, differentiated according to the various needs of different groups of people, if necessary.

All dimensions are final dimensions. Deviations in the execution may be tolerated only insofar as the function intended in the standard is still achieved.

In the case of building projects for special user groups, additional or different requirements may be necessary.

## DIN 18040 part 2

Construction of accessible buildings – design principles

Part 2: Dwellings

### Application range:

This part of the standard applies to the barrier-free planning, execution and equipment of flats, buildings with flats and their outdoor areas which are intended for development and home-related use.

The requirements for infrastructure of the buildings with flats generally also take into account unrestricted use with a wheelchair.

Within flats a differentiation is made between

- barrier-free flats and
- barrier-free and unrestricted wheelchair use (**R**)

**NOTE:** Usability without restriction with a wheelchair refers to the geometrical requirements that are based on the fundamental dimensions of standard wheelchairs (maximum width 70 cm and maximum length 120 cm).

The additional and expanded requirements for dwellings intended for accessible use without restriction with a wheelchair are labelled with an **R**.

# Standards at a glance



## EN 1627

Draft – Pedestrian doorsets, windows, curtain walling, grilles and shutters – Burglar resistance – Requirements and classification; EN 1627:2011

### Application range:

This European standard specifies requirements and classification systems for burglar-resistant characteristics of pedestrian doorsets, windows, curtain walling, grilles and shutters. It is applicable to the following means of opening: turning, tilting, folding, tilt-turning, horizontal and vertical pivoting, sliding (horizontally and vertically) and rolling as well as fixed constructions.

## EN 1628

Pedestrian doorsets, windows, curtain walling, grilles and shutters – Burglar resistance – Test method for the determination of resistance under static loading; EN 1628:2011

### Application range:

This European standard specifies a test method for the determination of resistance to static loading in order to assess the burglar-resistant properties of pedestrian doorsets, windows, curtain walling, grilles and shutters. It is applicable to the following means of opening: turning, tilting, folding, turn-tilting, top or bottom hung, sliding (horizontally and vertically) and rolling as well as non-opening constructions.

## EN 1629

Pedestrian doorsets, windows, curtain walling, grilles and shutters – Burglar resistance – Test method for the determination of resistance under dynamic loading; EN 1629:2011

### Application range:

This European standard specifies a test method for the determination of resistance to dynamic loading in order to assess the burglar-resistant properties of pedestrian doorsets, windows, curtain walling, grilles and shutters. It is applicable to the following means of opening: turning, tilting, folding, tilt-turning, horizontal and vertical pivoting, sliding (horizontally and vertically) and rolling as well as fixed constructions.

## EN 1630

Pedestrian doorsets, windows, curtain walling, grilles and shutters – Burglar resistance – Test method for the determination of resistance to manual burglary attempts; EN 1630:2011

### Application range:

This European Standard specifies a test method for the determination of resistance to manual burglary attempts in order to assess the burglar-resistant characteristics of pedestrian doorsets, windows, curtain walling, grilles and shutters. It is applicable to the following means of opening: turning, tilting, folding, tilt-turning, horizontal and vertical pivoting, sliding (horizontally and vertically) and rolling as well as fixed constructions.



## DIN 18104 part 2

Mechanical security devices – Part 2: Additional burglar-resistant products for windows and doors – Requirements and test methods

### Application range:

This standard specifies requirements and test methods for mechanical security products that are retrofitted in the rebate of door and window elements and so increase the resistance of such elements against burglary, insofar as overcoming them with simple tools is made more difficult (for example, Tilt&Turn hardware, tongue-and-groove locks, mortise locks and multipoint locks).

**The Lift&Slide hardware GU-934 and GU-937 from the GU Group are certified according to DIN 18104 Part 2 and are approved for retrofitting.**



# Drawings overview

## Installation/profile specifications



Profile system	Bogies	Installation drawings				
		Lift&Slide hardware	HS-Master pattern A	HS-Master pattern C	HS-SPEED Limiter	Locking monitoring system
Akotherm AT 750 HS	GU-934	0-45754	0-44355	0-44521	0-44550	0-44449
Alcoa Europe	GU-934	0-44730	-	-	0-44550	0-44449
Alcoa RT 135	GU-934	0-44417	0-44355	0-44521	0-44550	0-44449
Aliplast Ultralglide	GU-934	0-45871	0-44355	0-44521	0-44550	0-44449
Alsistem	GU-934	0-45782	0-44355	0-44521	0-44550	0-44449
AluK SC140	GU-934	0-45641	-	-	-	0-44449
Alumil M300	GU-934	0-44685	-	-	-	0-44449
Alumil S400	GU-937	0-44694	-	-	-	0-44449
Aluprof MB-77HS	GU-934	0-45957	0-44355	0-44521	0-44550	0-44449
Aluprof MB-77HS	GU-937	0-45958	-	-	0-44550	0-44449
Etem E3000	GU-934	0-44306	0-44355	-	0-44550	0-44449
Etem E50	GU-937	0-46563	-	-	0-44550	0-44449
Etem E52	GU-937	0-46585	-	-	0-44550	0-44449
Etem E70	GU-934	0-45904	0-44355	0-44521	0-44550	0-44449
Etem E70	GU-937	0-46564	-	-	0-44550	0-44449
Exalco Albio 230	GU-934	0-44822	0-44355	0-44521	0-44550	0-44449
Feal T 120	GU-934	0-45732	0-44355	-	0-44550	0-44449
Forster Italy	GU-934	0-44559	-	-	-	0-44449
Gastaldello Sistemi	GU-934	0-44395	-	-	-	0-44449
Giugni	GU-937	0-44968	-	-	-	0-44449
Metra Monorotaia	GU-934	0-44812	-	-	-	0-44449
Metra Monorotaia	GU-937	0-44813	-	-	-	0-44449
Metra NC 150 STH Rodos (45°)	GU-934	0-45571	-	-	-	0-44449
Metra NC 150 STH Rodos (45°)	GU-937	0-45079	-	-	-	0-44449
Metra NC 150 STH Rodos (90°)	GU-934	0-44415	0-44355	0-44521	0-44550	0-44449
Metra NC 150 STH Rodos (90°)	GU-937	0-45553	-	-	-	0-44449
Ponzio SL1600	GU-934	0-46501	0-44355	-	0-44550	0-44449
Profilati	GU-934	0-44499	-	-	-	0-44449
Profilco	GU-934	0-45085	-	-	-	0-44449
Reynaers CP 130-LS	GU-934	0-45873	0-44355	0-44521	0-44550	0-44449
Reynaers CP 155	GU-934	0-45582	0-44355	-	0-44550	0-44449
Reynaers TSL 110	GU-934	0-45328	-	-	-	0-44449
Sapa Ekonal 125	GU-934	0-44718	-	-	-	0-44449
TS Aluminium	GU-937	0-44919	-	-	-	0-44449
Wicona Wicslide 160	GU-934	0-46552	0-44355	-	0-44550	0-44449



### Application ranges

With Lift&Slide hardware from Gretsch-UNitas, it is possible to produce Lift&Slide elements as

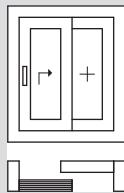
- Lift&Slide doors in 2- to 6-part versions and
- Lift&Slide windows in 2- to 6-part versions

### Sash configuration according to patterns A to L

The patterns to be implemented are system-dependent.

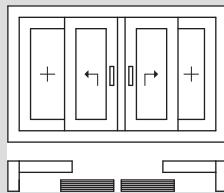
In Chapter 3.0 | System overviews for aluminium Lift&Slide elements, you will find the respective, possible patterns for all the systems.

#### Sash configurations



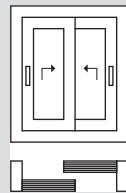
**Pattern A**

1 Lift&Slide sash,  
1 fixed-glazed sash;  
Depiction: sliding to the right



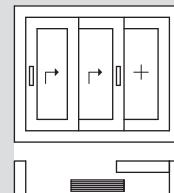
**Pattern C**

2 Lift&Slide sashes,  
2 fixed-glazed sashes;  
Depiction: sliding to the left and right



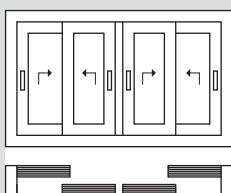
**Pattern D**

2 Lift&Slide sashes;  
Depiction: sliding to the left and right



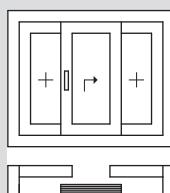
**Pattern E**

2 Lift&Slide sashes,  
1 fixed-glazed sash;  
Depiction: sliding to the right



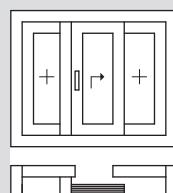
**Pattern F**

4 Lift&Slide sashes;  
Depiction: sliding to the left and right



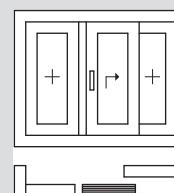
**Pattern G1 symmetrical**

1 Lift&Slide sash,  
2 fixed-glazed sashes;  
Depiction: sliding to the right



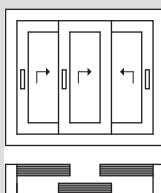
**Pattern G2 asymmetrical**

With fixed mullion  
1 Lift&Slide sash,  
2 fixed-glazed sashes;  
Depiction: sliding to the right



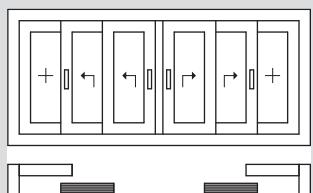
**Pattern G3 symmetrical**

1 Lift&Slide sash,  
2 fixed-glazed sashes;  
Depiction: sliding to the right



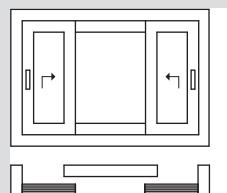
**Pattern H**

3 Lift&Slide sashes;  
(like pattern G1 symmetrical)  
Depiction: sliding to the left and right



**Pattern L**

4 Lift&Slide sashes,  
2 fixed-glazed sashes;  
Depiction: sliding to the left and right



**Pattern K**

2 Lift&Slide sashes,  
1 fixed-glazed sash;  
Depiction: sliding to the left and right

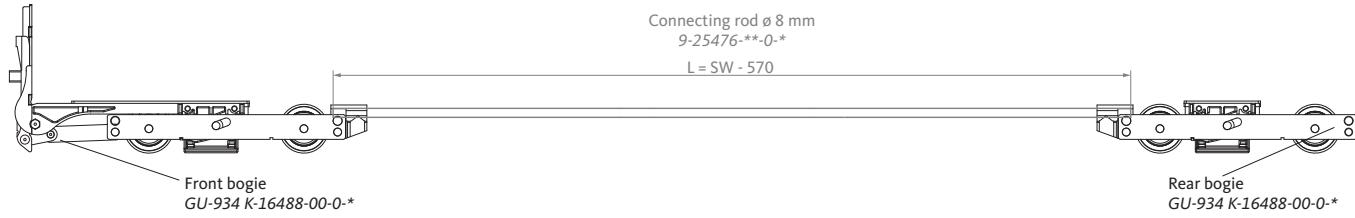
# GU-934 und GU-937 bogies

## Application ranges and technical specifications



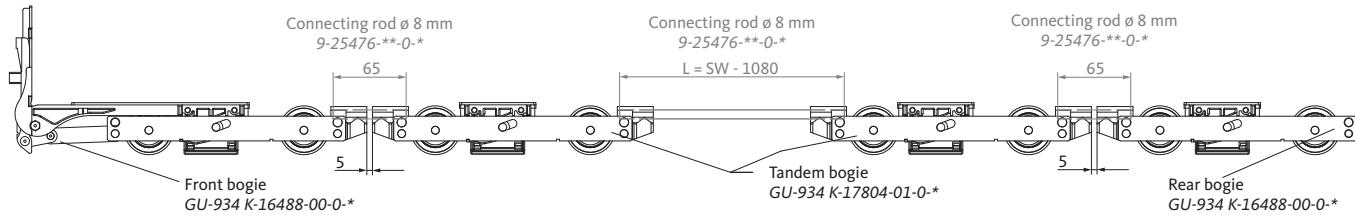
### GU-934 tandem bogies with connecting rod

- 2 bogies, each with 2 plastic-coated grooved ball bearings
- For sash weights up to 300 kg
- Ø track rollers 43 mm



### GU-934 tandem bogies with connecting rod

- 1 set of GU-934 bogies and 2 additional bogies, each with 2 plastic-coated grooved ball bearings
- Ø track rollers 43 mm
- Sash weights up to 400 kg
- Minimum sash width 1290 mm, respectively 1270 mm depending on the profile

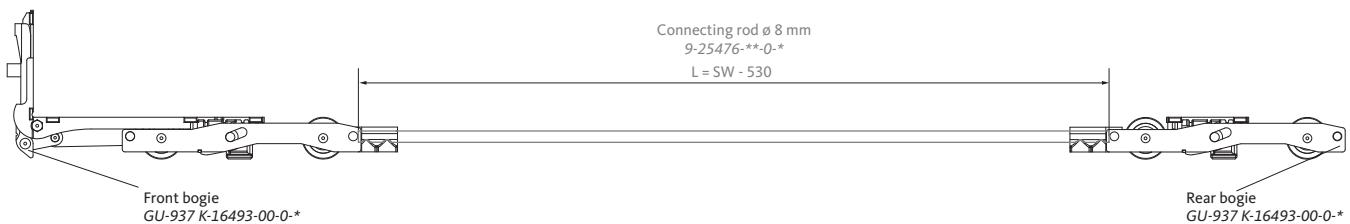


\* = Surface / \*\* = Length – you can find the corresponding versions in Chapter 4.0 "Individual parts overviews for Lift&Slide hardware".



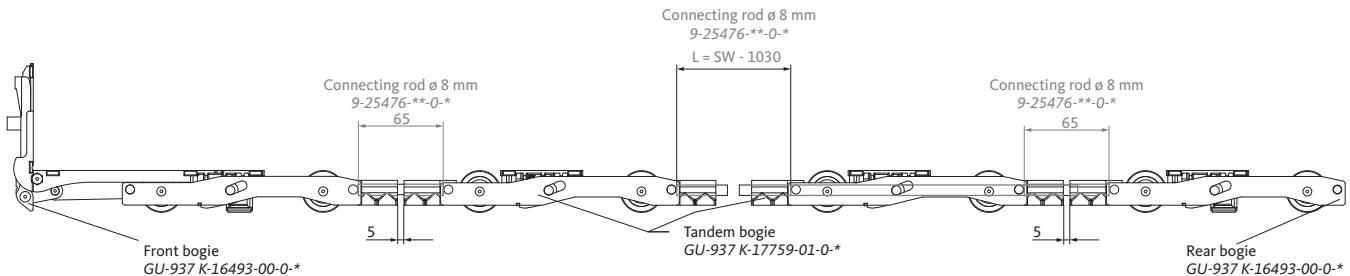
## GU-937 tandem bogies with connecting rod

- 2 bogies, each with 2 plastic-coated grooved ball bearings
- Ø rollers 32 mm
- For sash weights up to 150 kg



## GU-937 tandem bogies with connecting rod

- 1 set of GU-937 bogies and 2 additional bogies, each with 2 plastic-coated grooved ball bearings
- Ø rollers 32 mm
- For sash weights up to 300 kg
- Minimum sash width 1290 mm, respectively 1270 mm depending on the profile



\* = Surface / \*\* = Length – you can find the corresponding versions in Chapter 4.0 "Individual parts overviews for Lift&Slide hardware".

# Lift&Slide gears

## Drilling-hole patterns and dimensions

GU

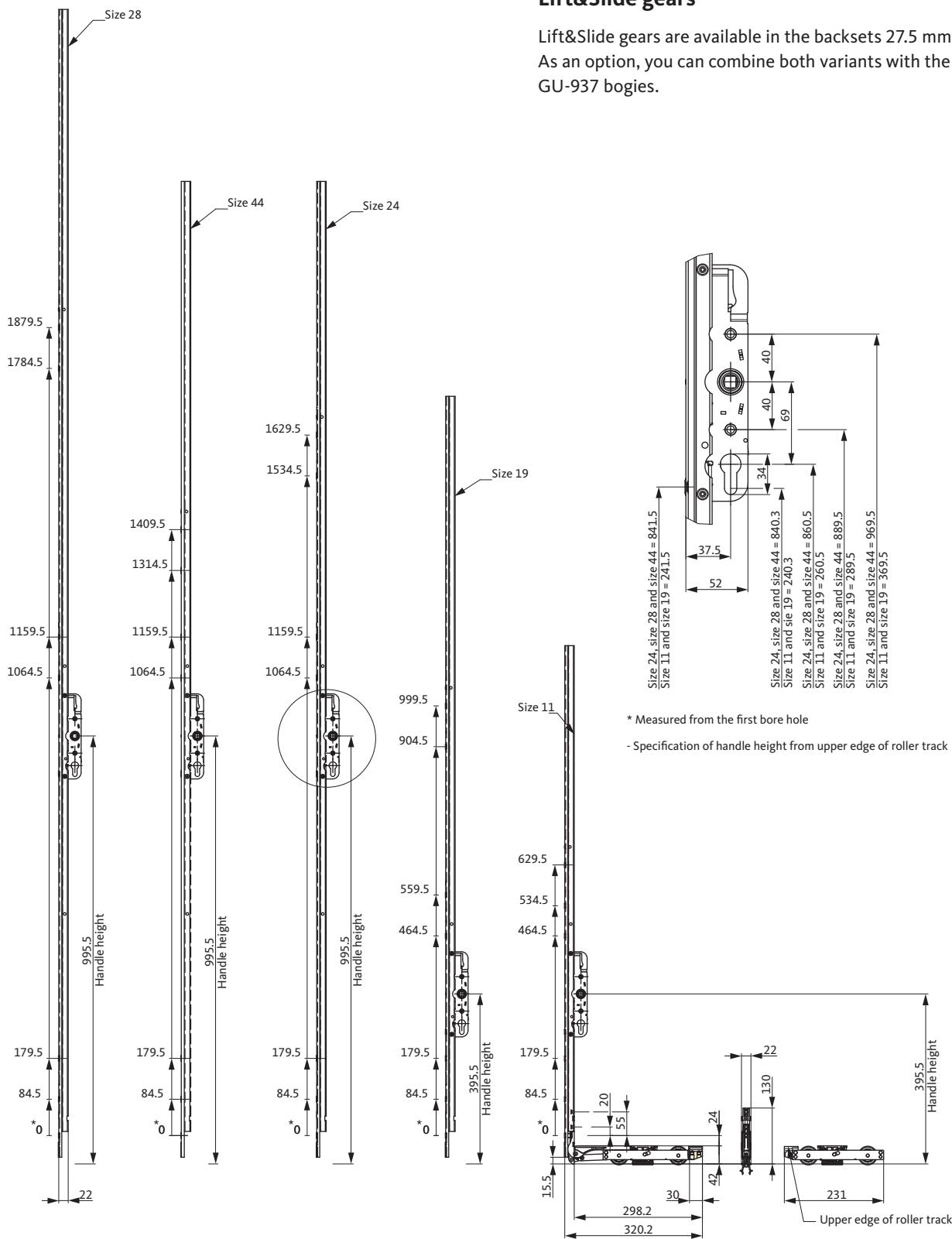


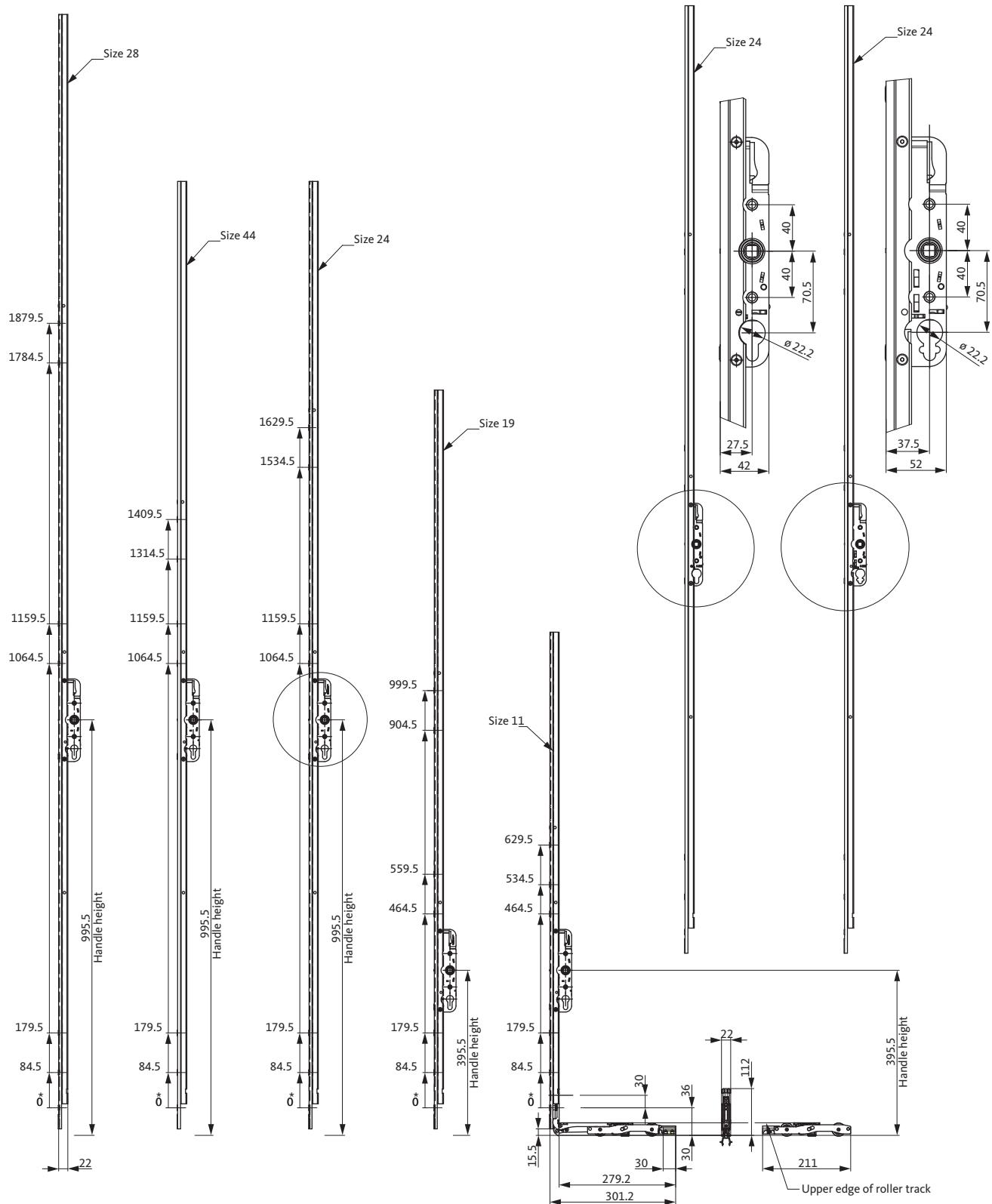
Fig.: Dimensions from upper edge of the roller track for GU-934 Lift&amp;Slide gears and bogies

## Lift&Slide gears

## Drilling-hole patterns and dimensions



 GU

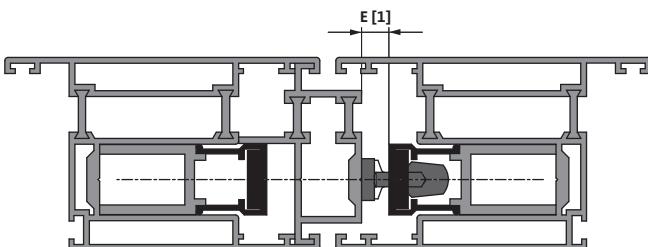
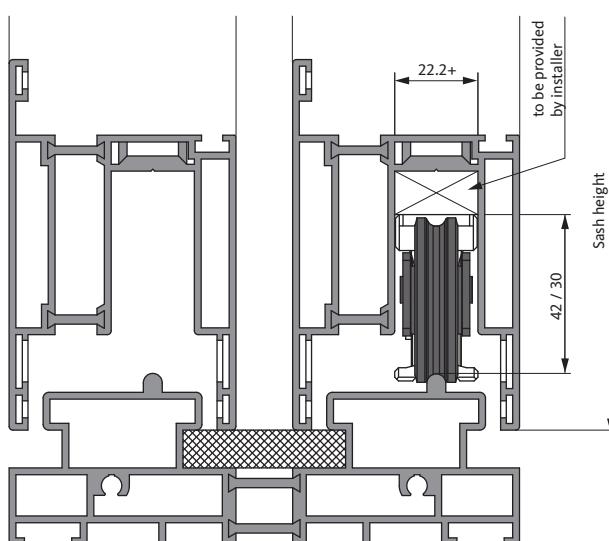
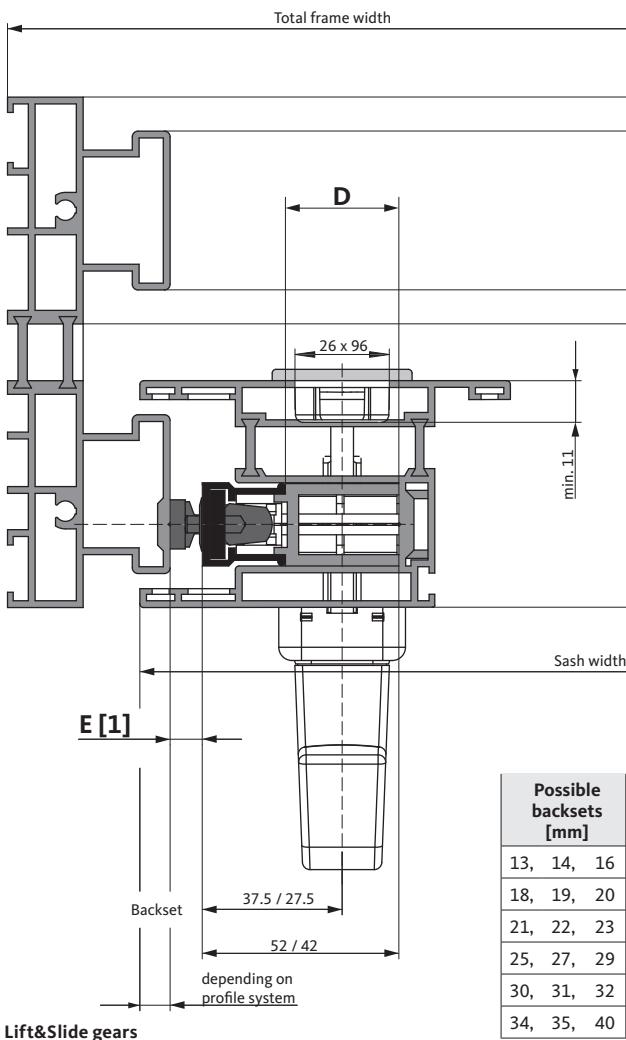


**Fig.: Dimensions from upper edge of the roller track for GU-937 Lift&Slide gears and bogies**

# Bogies, Lift&Slide gears

Installation, milling and drilling dimensions

**GU**



Sash locking at the meeting stile with pattern C and F

[1] Profile-specific details regarding Dimension E can be found in chapter 4.0 "Individual parts overviews for L&S hardware" on pages 298 and 299.

# Turn handles and flush pulls

GU

## Drilling-hole patterns and dimensions

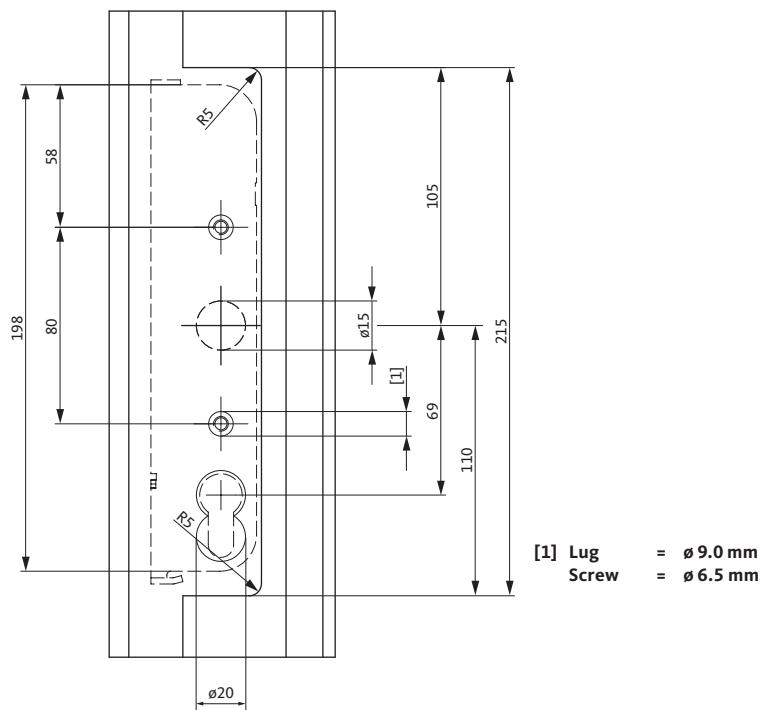
GU



The turn handles and flush pulls for Lift&Slide elements are available in various materials and finishes. The turn handle range is rounded off with turn handles for actuation on both sides and variants with a Swiss RC hole, as well as special versions.

Choose the right solution for you from our RONDO, BELCANTO and DIRIGENT series.

### Drilling and milling dimensions for installation in the sash



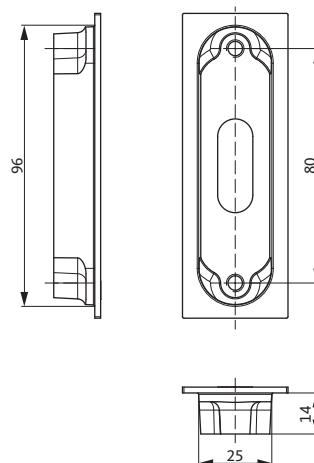
Drilling-hole pattern for turn handle

#### Drilling

The corresponding drilling jig can be found in chapter 5.0 "Drilling jigs and auxiliary tools" on page 310.

### Drilling and milling pattern for flush pull

The milling depth depends on the overall depth of the flush pull, and varies between 6 and 14 mm depending on the version.



You can find ordering information in Chapter 7.0 "Turn handles and accessories" from page 351.

**GU**



### 3.0 Lift&Slide systems for aluminium elements



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Reynaers TSL 110 / GU-934 bogies	262 – 267
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# Akotherm AT 750 HS / GU-934 bogies

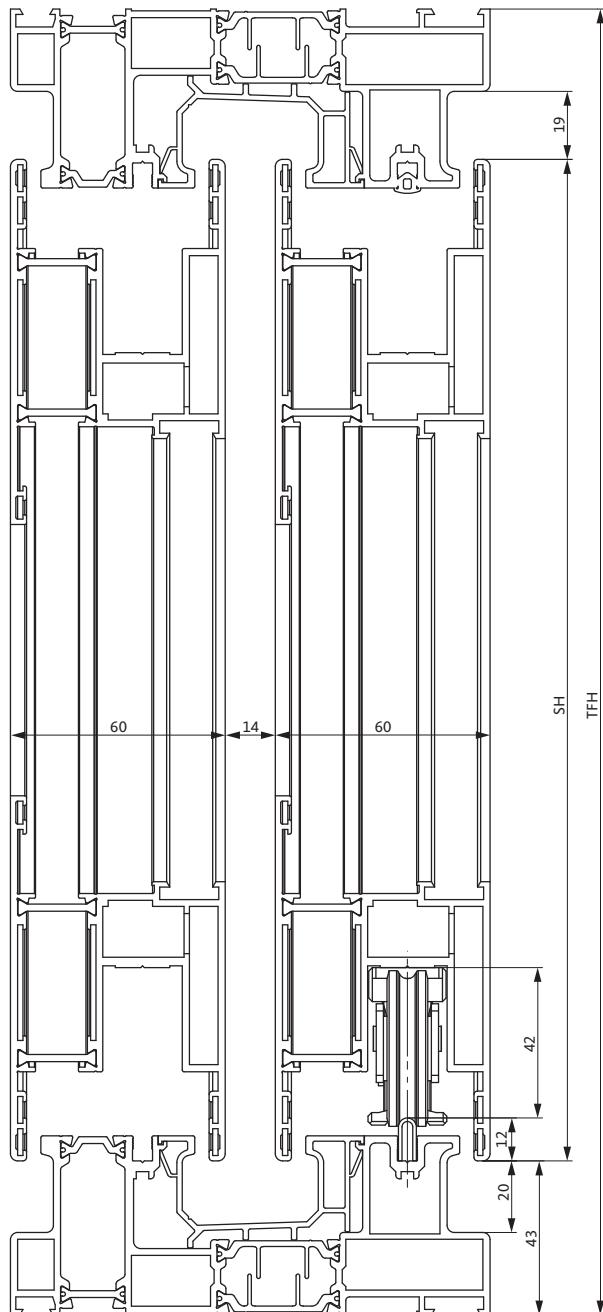
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weight	
		maximum	Bogies
700–3300 mm	822–2722 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1



SH = sash height / TFH = total frame height

## Installation drawings

Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45754	from page 37
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

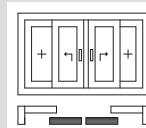
## Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

## Possible patterns



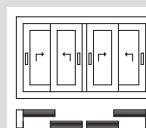
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



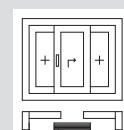
**Pattern C**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



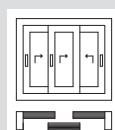
**Pattern D**  
2 Lift&Slide doors  
Fig: sliding direction to the right and left



**Pattern 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 H**  
3 Lift&Slide doors  
(like pattern G1 symmetrical)  
Fig: sliding direction to the right and left

# Akotherm AT 750 HS / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F, G1, H

Bogies and connecting rod – for sash weights up to 300 kg



Bogies											
Pattern						Designation	Contents	Surface	PU	Order no.	
A	C	D	F	G1	H						
1	2	2	4	1	3	GU-934 bogies set		1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
									faceGuard	1	K-16488-00-0-18

Connecting rod ø 8 mm										
Pattern						Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F	G1	H					
1	2	2	4	1	3	700–1600	1100	ferGuard	1	9-25476-11-0-1
								faceGuard	1	9-25476-11-0-18
						1601–1850	1350	ferGuard	1	9-25476-14-0-1
								faceGuard	1	9-25476-14-0-18
						1851–2350	1850	ferGuard	1	9-25476-18-0-1
								faceGuard	1	9-25476-18-0-18
						2351–3300	3300	ferGuard	1	9-25476-33-0-1
								faceGuard	1	9-25476-33-0-18

Bogies and connecting rod – for sash weights up to 400 kg



Bogies											
Pattern						Designation	Contents	Surface	PU	Order no.	
A	C	D	F	G1	H						
1	2	2	4	1	3	GU-934 bogies set		1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
									faceGuard	1	K-16488-00-0-18
1	2	2	4	1	3	GU-934 tandem bogies set		2 x central bogies	ferGuard	1	K-17804-01-0-1
									faceGuard	1	K-17804-01-0-18

Connecting rod ø 8 mm										
Pattern						Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F	G1	H					
1	2	2	4	1	3	1270–1600	1100	ferGuard	1	9-25476-11-0-1
								faceGuard	1	9-25476-11-0-18
						1601–1850	1350	ferGuard	1	9-25476-14-0-1
								faceGuard	1	9-25476-14-0-18
						1851–2350	1850	ferGuard	1	9-25476-18-0-1
								faceGuard	1	9-25476-18-0-18
						2351–3300	3300	ferGuard	1	9-25476-33-0-1
								faceGuard	1	9-25476-33-0-18

# Akotherm AT 750 HS / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F, G1, H

Lift&Slide gear, 37.5 mm backset							Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
Pattern										Cover rail	Lock case, connecting rod		
A	C	D	F	G1	H								
1	2	2	4	1	3	822-1242	1190	407	EV 1 / light grey	ferGUard	10	6-30021-11-0-1	
									UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5	
									EV 1 / light gray	faceGUard	10	6-30021-11-0-18	
						1192-1822	1770	407	EV 1 / light grey	ferGUard	10	6-30021-19-0-1	
									UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5	
									EV 1 / light grey	faceGUard	10	6-30021-19-0-18	
						1822-2322	2270	1007	EV 1 / light grey	ferGUard	10	6-30021-24-0-1	
									UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5	
									EV 1 / light grey	faceGUard	10	6-30021-24-0-18	
						2072-2722	2670	1007	EV 1 / light grey	ferGUard	10	6-30021-28-0-1	
									UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5	
									EV 1 / light grey	faceGUard	10	6-30021-28-0-18	
<b>Optional: Gear and cover-rail extension set 500 mm</b>									EV 1 / light grey	ferGUard	10	6-32030-00-0-1	
1	2	2	4	1	3	max. 3222	500	-	UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5	
<b>Optional: Cover-rail extension set 500 mm</b>									EV 1 / light grey	faceGUard	10	6-32030-00-0-18	
1	2	2	4	1	3	max. 3222	500	-	EV 1 / light grey	-	10	9-28483-00-0-1	
									UC 5 / dark bronze	-	10	9-28483-00-0-5	

Basic hardware set for Akotherm AT 750 HS							Designation	Surface	PU	Order no.	
A	C	D	F	G1	H						
1	2	2	4	1	3		Basic hardware set for Akotherm AT 750 HS	-	1	K-16934-00-0-0	
<b>Contents</b>											
Vertical adapters for Lift&Slide front bogies											
Spacer for Lift&Slide gear											
Frame cam [1]											
Rubber buffer 62 [2]											
Buffer 90 set [3]											
Countersunk screw M6 x 20 mm for fixing the turn handle											
Countersunk screw M5 x 16 mm for fixing the frame cams											
<b>Bag of screws</b> K-12256-00-0-0							<b>Contents</b>		<b>Qty.</b>	<b>Item no.</b>	
							Countersunk-head tapping screw 4.8 x 16 mm		1	9-13089-16-0-1	
							Countersunk screw M5 x 25 mm		4	9-13133-25-0-8	
							Countersunk screw M5 x 35 mm		1	9-13133-35-0-8	
							Countersunk screw M5 x 50 mm		7	9-13133-50-0-8	
							PC screw-hole cover cap (grey)		1	9-26687-00-0-1	
[1] Cannot be used with pattern G1											
[2] Cannot be used with patterns D, F and H											
[3] Optionally with patterns A and C											

Optional: packers for frame cams							Designation	Surface	PU	Order no.
A	C	D	F	G1	H					
2	2	4	6	-	4	Packer 0.5 mm		Stainless steel	10	K-18309-01-0-8
2	2	4	6	-	4	Packer 1.0 mm		Stainless steel	10	K-18309-02-0-8

# Akotherm AT 750 HS / GU-934 bogies

GU

## Hardware requirements

### Hardware requirements – patterns C, F

Accessories									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
-	1	-	1	-	-	Accessories set	-	1	K-13392-00-0-5

# Akotherm AT 750 HS / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1][2]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	1	3	DIRIGENT interior handle, without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
							Dark brown [3]	1	6-24608-00-0-5
							White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	3	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
							Dark brown [3]	1	6-24609-00-0-5
							White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for Akotherm AT 750 HS / order number K-16934-00-0-0.  
[3] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	1	3	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
							Dark brown [2]	1	6-24608-00-0-5
							White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	3	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
							Dark brown [2]	1	6-24609-00-0-5
							White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] Similar to RAL 8022

Flush pull									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	1	3	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
							Dark brown [1]	1	9-29992-01-0-5
							White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

# Akotherm AT 750 HS / GU-934 bogies

**GU**

## Hardware requirements

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	1	3	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
							Dark brown [2]	1	6-24615-96-0-5
							White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 2 and 3

Fixing screws										
Pattern						Designation	Application example	Surface	PU	Order no.
A	C	D	F	G1	H					
2	4	4	8	2	6	Countersunk screw M6 x 65 mm	2 + 3	-	1	9-13274-65-0-1

Optional: gasket plates										
Pattern						Designation	Application example	Surface	PU	Order no.
A	C	D	F	G1	H					
1	2	2	4	1	3	Gasket plate for flush pull	2	black	1	9-47211-01-0-6
1	2	2	4	1	3	Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6

# Akotherm AT 750 HS / GU-934 bogies

## Hardware requirements

**GU**



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	-	2	Anti-jemmy device set	-	1	K-16569-00-0-1
<b>Contents</b>									
Wedge									
Support									
Lever									

Corner-drive									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	-	2	Corner-drive set	-	1	K-16570-00-0-1
<b>Contents</b>									
Corner-drive									
Extension									
Cover									
Guide									
Stay arm slide block									
Lever complete									
Countersunk screw M5 x 16 mm									

Vertical packer									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	-	2	Vertical packer	-	1	9-47295-08-0-1

P 959 connecting rod										
Pattern						Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F	G1	H					
1	2	2	4	-	2	600–1220	1000	-	1	9-28355-10-0-3
						1221–1720	1500	-	1	9-28355-15-0-3
						1721–2020	1800	-	1	9-28355-18-0-3
						2021–3000	2600	-	1	9-28355-26-0-3
						Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	1	3	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G1	H				
1	2	2	4	1	3	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Alcoa Europe / GU-934 bogies

## Application ranges

**GU**

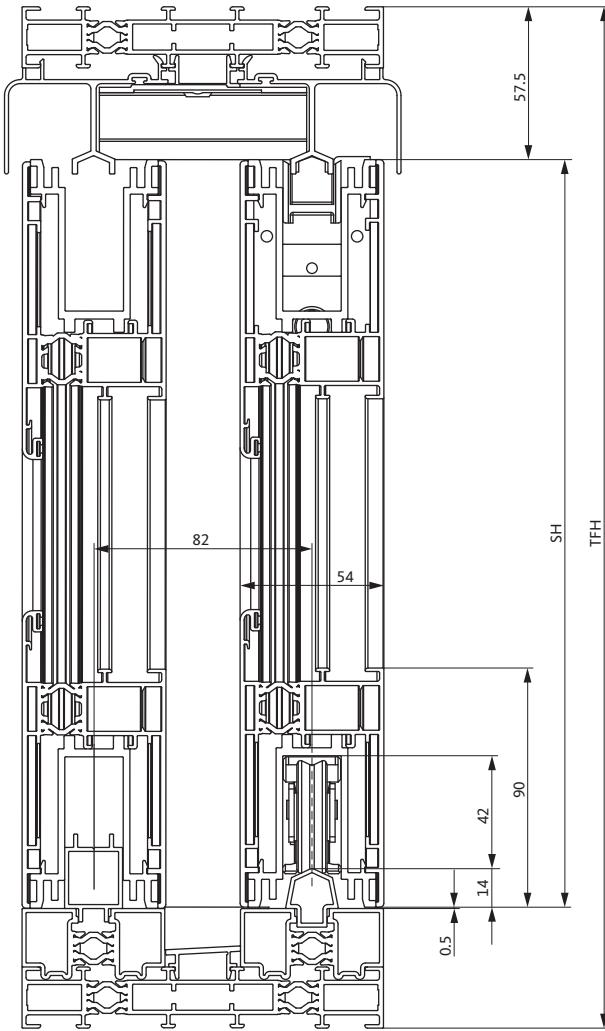
## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	845-2745 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

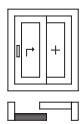
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44730	from page 45
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



### Possible patterns



#### Pattern A

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



#### Pattern D

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

### Hardware requirements – patterns A, D

Bogies and connecting rod – for sash weights up to 300 kg



Bogies			Surface	PU	Order no.
Pattern	Designation				
A	D				
1	GU-934 front bogie		ferGuard	1	[1]
1	GU-934 rear bogie		ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Alcoa Europe / order number K-16971-00-0-0.

Connecting rod ø 8 mm					
Pattern	Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D				
1	2	720–1600	1100	ferGuard	1 9-25476-11-0-1
		1601–1850	1350	ferGuard	1 9-25476-14-0-1
		1851–2350	1850	ferGuard	1 9-25476-18-0-1
		2351–3300	3300	ferGuard	1 9-25476-33-0-1

# Alcoa Europe / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, D

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	D				Cover rail	Lock case, connecting rod		
1	2	845–1265	1190	410	EV 1 / light grey	ferGuard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGuard	10	6-30021-11-0-5
		1215–1845	1770	410	EV 1 / light grey	ferGuard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGuard	10	6-30021-19-0-5
		1845–2345	2270	1010	EV 1 / light grey	ferGuard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGuard	10	6-30021-24-0-5
		2095–2745	2670	1010	EV 1 / light grey	ferGuard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGuard	10	6-30021-28-0-5
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3245	500	–	EV 1 / light grey	ferGuard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGuard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3245	500	–	EV 1 / light grey	–	10	9-28483-00-0-1
					UC 5 / dark bronze	–	10	9-28483-00-0-5

Basic hardware set for Alcoa Europe										
Pattern		Designation			Surface	PU	Order no.			
A	D						Qty.	Item no.		
1	2	Basic hardware set for Alcoa Europe			–	1	K-16971-00-0-0			
<b>Contents</b>										
GU-934 front bogie										
GU-934 rear bogie										
Vertical adapters for Lift&Slide front bogies										
Gasket plate										
Spacer for Lift&Slide gear										
Frame cam										
Packers for frame cams										
Rubber buffer 80										
Cover plate										
Spacer for top guide track										
Guide 1										
Guide 2										
Bridging gasket										
<b>Bag of screws K-16972-00-0-1</b>										
<b>Contents</b>										
Countersunk screw M6 x 65 mm										
Countersunk-head tapping screw 3.9 x 25 mm										
Countersunk-head tapping screw 4.8 x 30 mm										
Countersunk-head tapping screw 4.8 x 45 mm										
Countersunk-head tapping screw 4.8 x 50 mm										
Countersunk-head tapping screw 4.8 x 70 mm										
PC screw-hole cover cap (grey)										
Raised countersunk-head screw M5 x 10 mm										
Segmental nut										

### Optional additional components

Buffer 90				Surface	PU	Order no.
Pattern		Designation				
A	D					
1	2	Buffer 90 set		black	1	K-12024-00-0-6
				white	1	K-12024-00-0-7
				cream white	1	K-12024-00-0-7Z

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]				Surface	PU	Order no.
Pattern		Designation				
A	D					
1	2	Tension spring for reduction of operating forces		–	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

### Handle damper [1]

Handle damper [1]				Surface	PU	Order no.
Pattern		Designation				
A	D					
1	2	Handle damper for controlled lowering		–	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

### Additional kit (L&S night vent module)

Frame cam				Surface	PU	Order no.
Pattern		Designation				
A	D					
2	4	Frame cam		Stainless steel	1	9-43830-04-0-8

### Bottom keeper

Bottom keeper				Surface	PU	Order no.
Pattern		Designation				
A	D					
1	2	Bottom keeper set		ferGuard	1	K-12057-00-0-1

# Alcoa Europe / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

##### DIRIGENT turn handle [1]

Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
			Dark brown [2]	1	6-24606-00-0-5
			White, RAL 9016	1	6-24606-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
			Dark brown [2]	1	6-24607-00-0-5
			White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
			Dark brown [2]	1	6-24606-00-0-5
			White, RAL 9016	1	6-24606-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
			Dark brown [2]	1	6-24607-00-0-5
			White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

##### Flush pull

Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
			Dark brown [1]	1	9-29992-01-0-5
			White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]						
Pattern		Designation		Surface	PU	Order no.
A	D					
1	2	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1	6-24615-96-0-1
				Dark brown [2]	1	6-24615-96-0-5
				White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws							
Pattern		Designation		Example of application	Surface	PU	Order no.
A	D						
2	4	Countersunk screw M6 x 20 mm		1	–	1	9-13274-20-0-1
2	4	Countersunk screw M6 x 65 mm		2	–	1	9-13274-65-0-1
2	4	Countersunk screw M6 x 70 mm		3	–	1	9-13274-70-0-1

Optional: gasket plates							
Pattern		Designation		Example of application	Surface	PU	Order no.
A	D						
1	2	Gasket plate for flush pull		2	black	1	9-47211-01-0-6
1	2	Gasket plate for exterior and interior turn handle		3	black	1	9-47210-01-0-6

# Alcoa RT 135 / GU-934 bogies

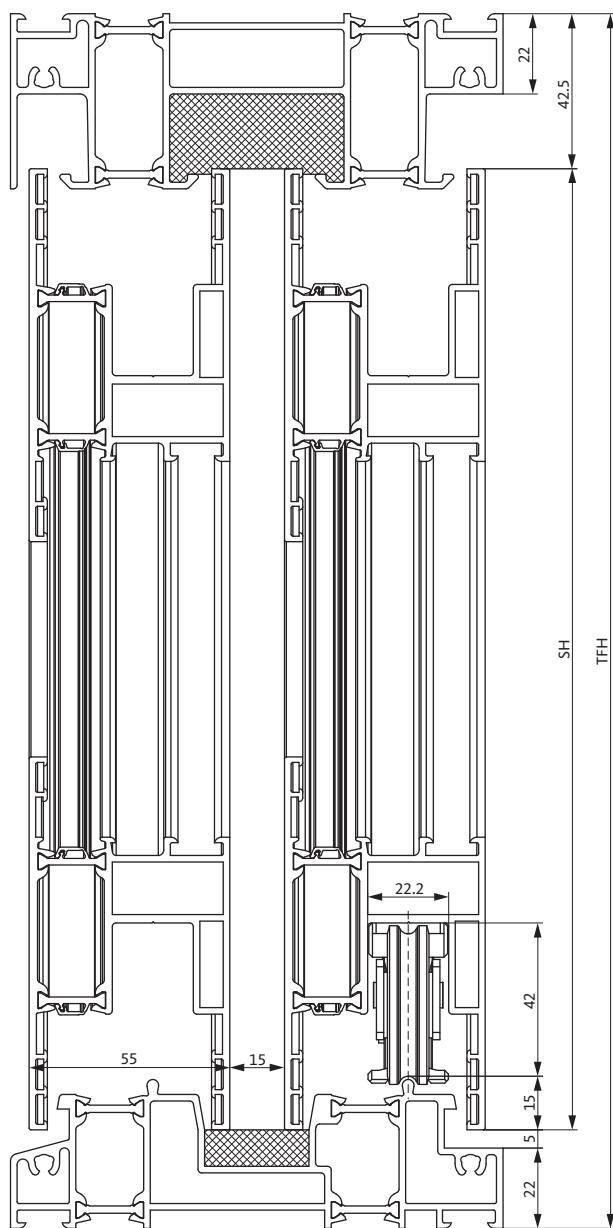
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	1832-2732 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1



SH = sash height / TFH = total frame height

## Installation drawings

Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44417	from page 51
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

## Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

## Possible patterns

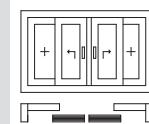


**Pattern A**

1 Lift&Slide door

1 fixed-glazed sash

Fig.: sliding direction to the right



**Pattern C**

2 Lift&Slide doors

2 fixed-glazed sashes

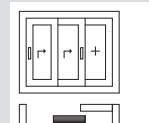
Fig.: sliding direction to the right and left



**Pattern D**

2 Lift&Slide doors

Fig.: sliding direction to the right and left

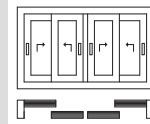


**Pattern E**

2 Lift&Slide doors

1 fixed-glazed sash

Fig.: sliding direction to the right

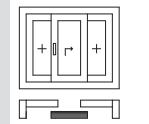


**Pattern F**

3 Lift&Slide doors

(like pattern G1 symmetrical)

Fig.: sliding direction to the right and left

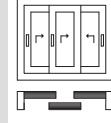


**Pattern G1 symmetrical**

1 Lift&Slide door

2 fixed-glazed sashes

Fig.: sliding direction to the right

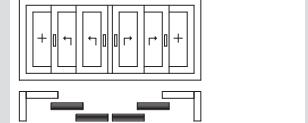


**Pattern H**

3 Lift&Slide doors

(like pattern G1 symmetrical)

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

# Alcoa RT 135 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, E, F, G1, H, L

Bogies and connecting rod – for sash weights up to 300 kg



Bogies												
Pattern								Designation	Contents	Surface	PU	Order no.
A	C	D	E	F	G1	H	L					
1	2	2	2	4	1	3	4	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Alcoa RT 135 / order number K-17007-00-0-0.

### Connecting rod ø 8 mm

Connecting rod ø 8 mm												
Pattern								Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	E	F	G1	H	L					
1	2	2	2	4	1	3	4	720-1600	1100	ferGuard	1	9-25476-11-0-1
								1601-1850	1350	ferGuard	1	9-25476-14-0-1
								1851-2350	1850	ferGuard	1	9-25476-18-0-1
								2351-3300	3300	ferGuard	1	9-25476-33-0-1

Bogies and connecting rod – for sash weights up to 400 kg



Bogies												
Pattern								Designation	Contents	Surface	PU	Order no.
A	C	D	E	F	G1	H	L					
1	2	2	2	4	1	3	4	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	[1]
1	2	2	2	4	1	3	4	GU-934 tandem bogies set	2 x central bogies	ferGuard	1	K-17804-01-0-1

[1] The bogies are contained in the basic hardware set for Alcoa RT 135 / order number K-17007-00-0-0.

### Connecting rod ø 8 mm

Connecting rod ø 8 mm												
Pattern								Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	E	F	G1	H	L					
1	2	2	2	4	1	3	4	1290-1600	1100	ferGuard	1	9-25476-11-0-1
								1601-1850	1350	ferGuard	1	9-25476-14-0-1
								1851-2350	1850	ferGuard	1	9-25476-18-0-1
								2351-3300	3300	ferGuard	1	9-25476-33-0-1

# Alcoa RT 135 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, E, F, G1, H, L

Lift&Slide gear, 37.5 mm backset										PU	Order no.			
Pattern								Sash height [mm]	Length [mm]	Handle height [mm]	Surface			
A	C	D	E	F	G1	H	L				Cover rail	Lock case, connecting rod		
1	2	2	2	4	1	3	4	1832–1270	2332	1010	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
											UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
	2	2	2	4	1	3	4	2082–2732	2670	1010	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
											UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
Optional: Gear and cover-rail extension set 500 mm										-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
1	2	2	2	4	1	3	4	max. 3232	500		UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
Optional: Cover-rail extension set 500 mm										-	EV 1 / light grey	-	10	9-28483-00-0-1
1	2	2	2	4	1	3	4	max. 3232	500		UC 5 / dark bronze	-	10	9-28483-00-0-5

# Alcoa RT 135 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, E, F, G1, H, L

Basic hardware set for Alcoa RT 135											
Pattern								Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L				
1	2	2	2	4	1	3	4	Basic hardware set for Alcoa RT 135	-	1	K-17007-00-0-0
<b>Contents</b>											
GU-934 front bogie											
GU-934 rear bogie											
Vertical adapters for Lift&Slide front bogies											
Spacer for Lift&Slide gear											
Countersunk screw M6 x 16 mm for fixing the turn handle											
Rubber buffer 82											
Frame cam set [1] K-13391-00-0-0				<b>Contents</b>							
				Frame cam							
				Countersunk-head tapping screw 3.9 x 25 mm							
Bag of screws K-12256-00-0-0				<b>Contents</b>							
				Countersunk-head tapping screw 4.8 x 16 mm							
				Countersunk screw M5 x 25 mm							
				Countersunk screw M5 x 35 mm							
				Countersunk screw M5 x 50 mm							
				PC screw-hole cover cap (grey)							

[1] Cannot be used with pattern G1

Horizontal packers for GU-934 bogies [1]											
Pattern								Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L				
1	2	2	2	4	1	3	4	Horizontal packers for front / rear bogies	-	1	K-17847-00-0-0
<b>Contents</b>											
Packer for GU-934 front bogie											
Packer for GU-934 rear bogie											

[1] Required with sash weights exceeding 200 kg.

Horizontal packers for GU-934 tandem bogies [1]											
Pattern								Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L				
2	4	4	4	8	2	6	8	Packer for central bogies	-	1	9-41681-02-0-1

[1] Required with sash weights exceeding 200 kg.

# Alcoa RT 135 / GU-934 bogies

## Hardware requirements

**GU**



### Hardware requirements – patterns A, C, D, E, F, G1, H, L

Buffer 90 [1]										Designation	Surface	PU	Order no.
Pattern										Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L						
-	-	2	2	4	4	4	4	Buffer 90 set	black	1	K-12024-00-0-6		
									white	1	K-12024-00-0-7		
									cream white	1	K-12024-00-0-7Z		

[1] Optionally with patterns A and C

Accessories										Designation	Surface	PU	Order no.
Pattern										Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L						
-	1	-	-	1	-	-	-	Accessories set	-	1	K-13392-00-0-5		
Contents									Qty.	Item no.			
Countersunk screw M5 x 40 mm										4	9-13133-40-0-0		
Pin									Qty.	Item no.			
Bushing										8	9-30329-00-0-5		
									Qty.	Item no.			
										4	9-34128-00-0-0		

### Hardware requirements – pattern H

Bottom keeper [1]											
Pattern								Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L				
-	-	-	-	-	-	1	-	Bottom keeper set	ferGuard	1	K-12057-00-0-1

[1] Optionally with patterns A, C, D, E, F and L

# Alcoa RT 135 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1][2]												
Pattern								Designation	Surface	PU	Order no.	
A	C	D	E	F	G1	H	L					
1 2 2 2 4 1 3 4								DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1	
									Dark brown [3]	1	6-24608-00-0-5	
									White, RAL 9016	1	6-24608-00-0-7	
1 2 2 2 4 1 3 4								DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1	
									Dark brown [3]	1	6-24609-00-0-5	
									White, RAL 9016	1	6-24609-00-0-7	

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for Alcoa RT 135 HS / order number K-17007-00-0-0.  
[3] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]												
Pattern								Designation	Surface	PU	Order no.	
A	C	D	E	F	G1	H	L					
1 2 2 2 4 1 3 4								DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1	
									Dark brown [2]	1	6-24608-00-0-5	
									White, RAL 9016	1	6-24608-00-0-7	
1 2 2 2 4 1 3 4								DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1	
									Dark brown [2]	1	6-24609-00-0-5	
									White, RAL 9016	1	6-24609-00-0-7	

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] Similar to RAL 8022

Flush pull												
Pattern								Designation	Surface	PU	Order no.	
A	C	D	E	F	G1	H	L					
1 2 2 2 4 1 3 4								Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1	
									Dark brown [1]	1	9-29992-01-0-5	
									White, RAL 9016	1	9-29992-01-0-7	

[1] Similar to RAL 8022

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]												
Pattern									Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L					
1	2	2	2	4	1	3	4	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1	
									Dark brown [2]	1	6-24615-96-0-5	
									White, RAL 9016	1	6-24615-96-0-7	

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 2 and 3

Fixing screws													
Pattern									Designation	Application ex- ample	Surface	PU	Order no.
A	C	D	E	F	G1	H	L						
2	4	4	4	8	2	6	8	Countersunk screw M6 x 65 mm	2 + 3	-	1	9-13274-65-0-1	

Optional: gasket plates													
Pattern									Designation	Application ex- ample	Surface	PU	Order no.
A	C	D	E	F	G1	H	L						
1	2	2	2	4	1	3	4	Gasket plate for flush pull	2	black	1	9-47211-01-0-6	
1	2	2	2	4	1	3	4	Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6	

# Alcoa RT 135 / GU-934 bogies

## Hardware requirements

**GU**



### Optional additional components

#### Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device												
Pattern								Designation	Surface	PU	Order no.	
A	C	D	E	F	G1	H	L					
1	2	2	2	4	-	2	4	Anti-jemmy device set	-	1	K-17178-00-0-1	
<b>Contents</b>									<b>Qty.</b>	<b>Item no.</b>		
Corner-drive									1	6-31284-00-0-1		
Extension									1	6-31282-00-0-1		
Cover									1	6-31283-00-0-1		
Vertical packer									1	9-47295-11-0-1		
Guide									2	9-28101-00-0-0		
Countersunk screw M5 x 16 mm									1	9-40828-00-R-1		
Countersunk screw M5 x 40 mm									2	9-13133-40-0-0		
Countersunk screw M5 x 50 mm									1	9-13133-50-0-0		

Anti-jemmy device												
Pattern								Designation	Surface	PU	Order no.	
A	C	D	E	F	G1	H	L					
1	2	2	2	4	-	2	4	Anti-jemmy device set	-	1	K-16569-00-0-1	
<b>Contents</b>									<b>Qty.</b>	<b>Item no.</b>		
Wedge									2	6-31219-00-0-1		
Support									2	9-40863-00-0-1		
Lever									2	9-40789-00-0-1		

P 959 connecting rod												
Pattern								Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	E	F	G1	H	L					
1	2	2	2	4	-	2	4	600-1220	1000	-	1	9-28355-10-0-3
								1221-1720	1500	-	1	9-28355-15-0-3
								1721-2020	1800	-	1	9-28355-18-0-3
								2021-3000	2600	-	1	9-28355-26-0-3
								Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]											
Pattern								Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L				
1	2	2	2	4	1	3	4	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]											
Pattern								Designation	Surface	PU	Order no.
A	C	D	E	F	G1	H	L				
1	2	2	2	4	1	3	4	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Aliplast Ultraglide / GU-934 bogies

## Application ranges

**GU**

## Application ranges

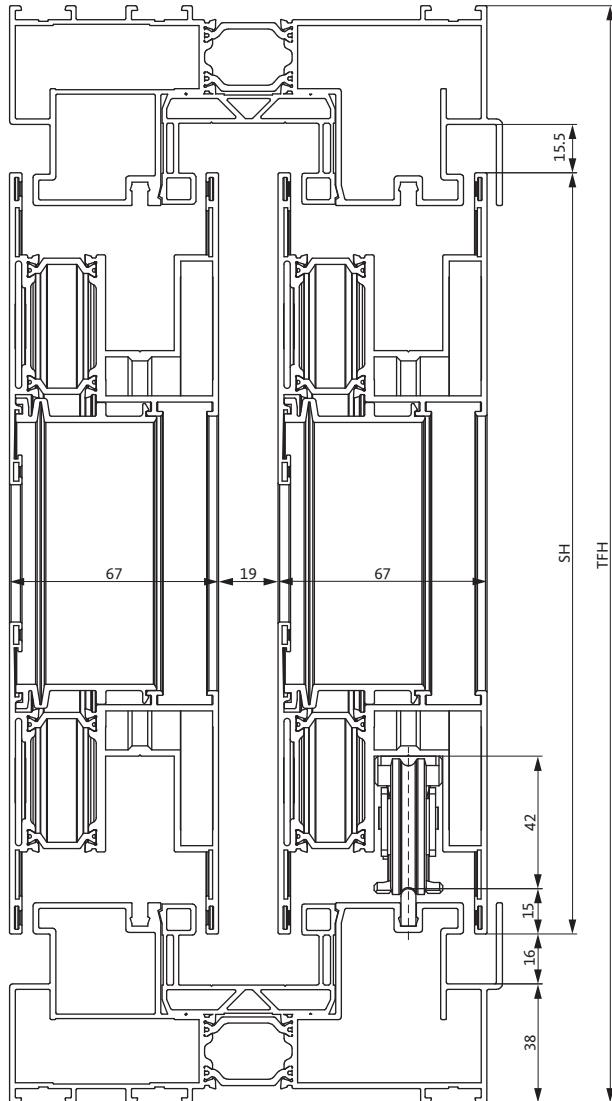
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	857-2727 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45871	from page 61
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

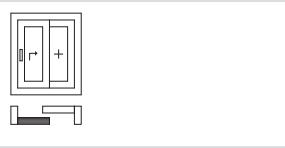
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

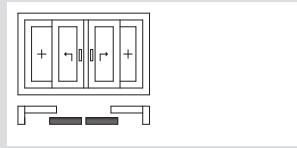


SH = sash height / TFH = total frame height

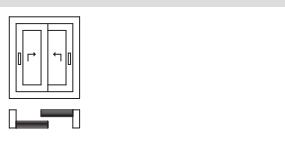
### Possible patterns



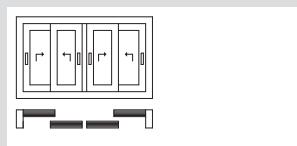
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



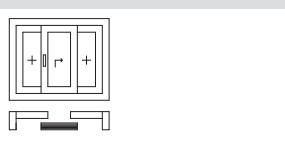
**Pattern C**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



**Pattern D**  
2 Lift&Slide doors  
Fig: sliding direction to the right and left



**Pattern 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

# Aliplast Ultraglide / GU-934 bogies

## Hardware requirements

**GU**

### Hardware requirements – patterns A, C, D, F, G1

Bogies and connecting rod – for sash weights up to 300 kg



Bogies									
Pattern					Designation	Contents	Surface	PU	Order no.
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	4	1			faceGuard	1	K-16488-00-0-18

Connecting rod ø 8 mm													
Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.				
A	C	D	F	G1	GU-934 bogies set	720–1600 1601–1850 1851–2350 2351–3300	1100 1350 1850 3300	ferGuard	1	9-25476-11-0-1			
1	2	2	4	1				faceGuard	1	9-25476-11-0-18			
								ferGuard	1	9-25476-14-0-1			
								faceGuard	1	9-25476-14-0-18			
								ferGuard	1	9-25476-18-0-1			
								faceGuard	1	9-25476-18-0-18			

Bogies and connecting rod – for sash weights up to 400 kg



Bogies									
Pattern					Designation	Contents	Surface	PU	Order no.
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	4	1			faceGuard	1	K-16488-00-0-18
1	2	2	4	1	GU-934 tandem bogies set	2 x central bogies	ferGuard	1	K-17804-01-0-1
							faceGuard	1	K-17804-01-0-18

Connecting rod ø 8 mm													
Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.				
A	C	D	F	G1	GU-934 tandem bogies set	1290–1600 1601–1850 1851–2350 2351–3300	1100 1350 1850 3300	ferGuard	1	9-25476-11-0-1			
1	2	2	4	1				faceGuard	1	9-25476-11-0-18			
								ferGuard	1	9-25476-14-0-1			
								faceGuard	1	9-25476-14-0-18			
								ferGuard	1	9-25476-18-0-1			
								faceGuard	1	9-25476-18-0-18			

# Aliplast Ultraglide / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F, G1

Lift&Slide gear, 37.5 mm backset							PU	Order no.			
Pattern					Sash height [mm]	Length [mm]	Handle height [mm]	Surface	Cover rail	Lock case, connecting rod	
A	C	D	F	G1							
1	2	2	4	1	857–1247	1190	407	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
								EV 1 / light gray	faceGUard	10	6-30021-11-0-18
					1197–1827	1770	407	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
								EV 1 / light grey	faceGUard	10	6-30021-19-0-18
					1828–2327	2270	1007	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
								EV 1 / light grey	faceGUard	10	6-30021-24-0-18
					2077–2727	2670	1007	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
								EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>											
1	2	2	4	1	max. 3227	500	–	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
								UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
								EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>											
1	2	2	4	1	max. 3227	500	–	EV 1 / light grey	–	10	9-28483-00-0-1
								UC 5 / dark bronze	–	10	9-28483-00-0-5

# Aliplast Ultraglide / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F, G1

Basic hardware set for Aliplast Ultraglide						Surface	PU	Order no.
Pattern					Designation			
A	C	D	F	G1				
1	2	2	4	1	Basic hardware set for Aliplast Ultraglide	-	1	K-18082-00-0-0
<b>Contents</b>						Qty.	Item no.	
Vertical adapters for Lift&Slide front bogies						1	9-47295-06-0-1	
Spacer for Lift&Slide gear						5	9-47296-07-0-1	
Frame cam [1]						2	6-22648-03-0-8	
Rubber buffer 62 [2]						2	9-24292-00-0-0	
Countersunk screw M6 x 80 mm for fixing the turn handle with flush pull or interior/exterior handle sets						2	9-13274-80-0-1	
PC screw-hole cover cap (grey)						1	9-26687-00-0-1	
[1] Cannot be used with pattern C and G1								
[2] Cannot be used with patterns D and F								

Frame cam						Surface	PU	Order no.
Pattern					Designation			
A	C	D	F	G1				
-	2	-	2	-	Frame cam	Stainless steel	1	6-22623-03-0-8

# Aliplast Ultraglide / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F, G1

Buffer 90 [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
-	-	2	4	4	Buffer 90 set	black	1	K-17134-00-0-6
						white	1	K-17134-00-0-7

[1] Optionally with patterns A and C

Fixing screws								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Bag of screws	-	1	K-12256-00-0-0

Contents							
					Qty.	Item no.	
Countersunk-head tapping screw 4.8 x 16 mm					1	9-13089-16-0-1	
Countersunk screw M5 x 25 mm					4	9-13133-25-0-8	
Countersunk screw M5 x 35 mm					1	9-13133-35-0-8	
Countersunk screw M5 x 50 mm					7	9-13133-50-0-8	
PC screw-hole cover cap (grey)					1	9-26687-00-0-1	

Accessories								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
-	1	-	1	-	Accessories set	-	1	K-13392-00-0-5

Contents							
					Qty.	Item no.	
Countersunk screw M5 x 40 mm					4	9-13133-40-0-0	
Pin					8	9-30329-00-0-5	
Bushing					4	9-34128-00-0-0	

### Hardware requirements – pattern G1

Bottom keeper [1]					Designation	Surface	PU	Order no.
A	C	D	F	G1				
-	-	-	-	1	Bottom keeper set	ferGuard	1	K-12057-00-0-1

[1] Optionally with patterns A, C, D and F

# Aliplast Ultraglide / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

##### DIRIGENT turn handle [1]

Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
						Dark brown [2]	1	6-24608-00-0-5
						White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
						Dark brown [2]	1	6-24609-00-0-5
						White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Fixing screws

Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
2	4	4	8	2	Countersunk screw 5.5 x 32 mm	-	1	9-13253-32-0-0

# Aliplast Ultraglide / GU-934 bogies

**GU**

## Hardware requirements

### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1][2]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
						Dark brown [3]	1	6-24608-00-0-5
						White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
						Dark brown [3]	1	6-24609-00-0-5
						White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] The fixing screws are contained in the basic hardware set for Aliplast Ultraglide / order number K-18082-00-0-0.

[3] Similar to RAL 8022

Flush pull								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
						Dark brown [1]	1	9-29992-01-0-5
						White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

Optionally: gasket plate								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Gasket plate for flush pull	black	1	9-47211-01-0-6

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1][2]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
						Dark brown [3]	1	6-24615-96-0-5
						White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.

[2] The fixing screws are contained in the basic hardware set for Aliplast Ultraglide / order number K-18082-00-0-0.

[3] Similar to RAL 8022

Optionally: gasket plate								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Aliplast Ultraglide / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Anti-jemmy device set
<b>Contents</b>					
Wedge				Qty.	
				2	
Support				2	
Lever				2	
				9-40789-00-0-1	

Corner-drive					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Corner-drive set
<b>Contents</b>					
Corner-drive				Qty.	
				1	
Extension				1	
Cover				1	
Guide				2	
Stay arm slide block				1	
Lever complete				1	
Countersunk screw M5 x 16 mm				1	

Vertical packer					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Vertical packer

P 959 connecting rod									
Pattern					Sash width [mm]				
A	C	D	F	G1	Length [mm]				
1	2	2	4	-	600–1220				
					1000				
					1221–1720				
					1500				
					1721–2020				
					2021–3000				
					2600				
					Stock length				
					4800				
					-				
					1				
					9-28355-48-0-3				

# Aliplast Ultraglide / GU-934 bogies

GU

## Hardware requirements

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	1	Tension spring for reduction of operating forces

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	1	Handle damper for controlled lowering

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam					
Pattern					Designation
A	C	D	F	G1	
2	-	4	4	-	Frame cam

Bottom keeper					
Pattern					Designation
A	C	D	F	G1	
1	-	2	2	-	Bottom keeper set

# Alsystem / GU-934 bogies

## Application ranges

**GU**

### Application ranges

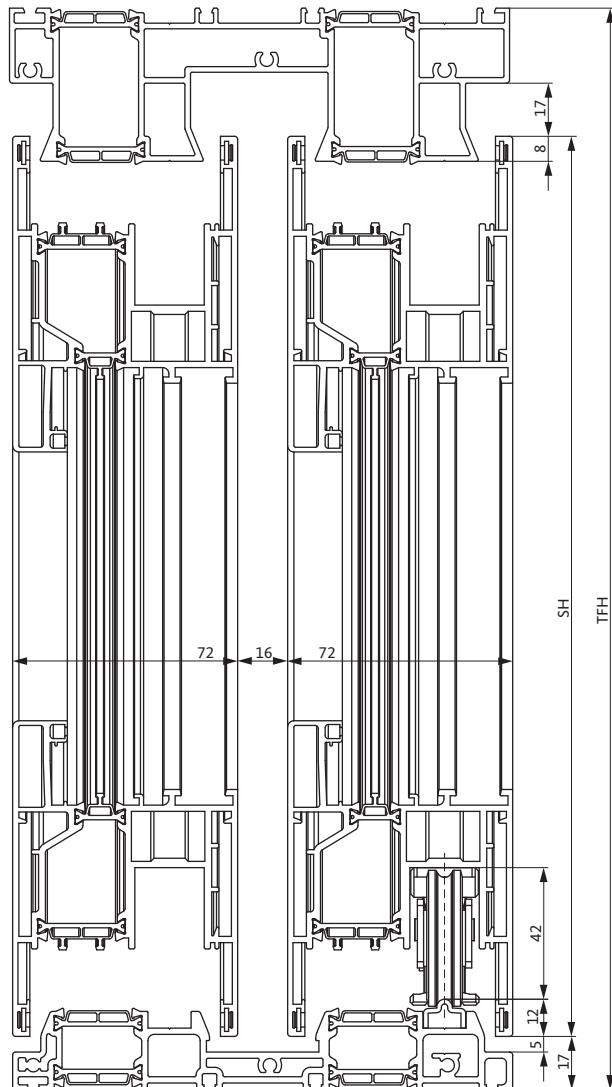
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	830-2730 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45782	from page 71
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

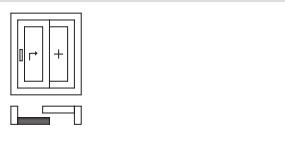
#### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

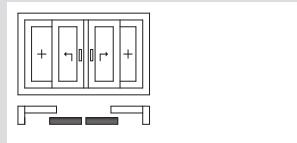


SH = sash height / TFH = total frame height

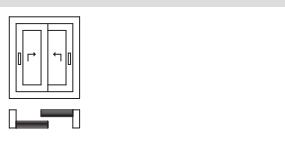
#### Possible patterns



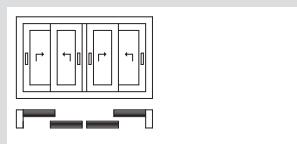
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



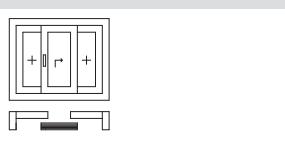
**Pattern C**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



**Pattern D**  
2 Lift&Slide doors  
Fig: sliding direction to the right and left



**Pattern 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

# Alsistem / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F, G1

Bogies and connecting rod – for sash weights up to 300 kg



Bogies									
Pattern					Designation	Contents	Surface	PU	Order no.
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	4	1			faceGuard	1	K-16488-00-0-18

Connecting rod ø 8 mm													
Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.				
A	C	D	F	G1	GU-934 bogies set	720–1600 1601–1850 1851–2350 2351–3300	1100 1350 1850 3300	ferGuard	1	9-25476-11-0-1			
1	2	2	4	1				faceGuard	1	9-25476-11-0-18			
								ferGuard	1	9-25476-14-0-1			
								faceGuard	1	9-25476-14-0-18			
								ferGuard	1	9-25476-18-0-1			
								faceGuard	1	9-25476-18-0-18			

Bogies and connecting rod – for sash weights up to 400 kg



Bogies									
Pattern					Designation	Contents	Surface	PU	Order no.
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	4	1			faceGuard	1	K-16488-00-0-18
1	2	2	4	1	GU-934 tandem bogies set	2 x central bogies	ferGuard	1	K-17804-01-0-1
							faceGuard	1	K-17804-01-0-18

Connecting rod ø 8 mm													
Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.				
A	C	D	F	G1	GU-934 tandem bogies set	1290–1600 1601–1850 1851–2350 2351–3300	1100 1350 1850 3300	ferGuard	1	9-25476-11-0-1			
1	2	2	4	1				faceGuard	1	9-25476-11-0-18			
								ferGuard	1	9-25476-14-0-1			
								faceGuard	1	9-25476-14-0-18			
								ferGuard	1	9-25476-18-0-1			
								faceGuard	1	9-25476-18-0-18			

# Alsistem / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F, G1

Lift&Slide gear, 37.5 mm backset											
Pattern					Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F	G1				Cover rail	Lock case, connecting rod		
1	2	2	4	1	830–1250	1190	407	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
								EV 1 / light gray	faceGUard	10	6-30021-11-0-18
					1200–1830	1770	407	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
								EV 1 / light grey	faceGUard	10	6-30021-19-0-18
					1831–2330	2270	1007	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
								EV 1 / light grey	faceGUard	10	6-30021-24-0-18
					2080–2730	2670	1007	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
								EV 1 / light grey	faceGUard	10	6-30021-28-0-18
Optional: Gear and cover-rail extension set 500 mm											
1	2	2	4	1	max. 3230	500	–	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
								UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
								EV 1 / light grey	faceGUard	10	6-32030-00-0-18
Optional: Cover-rail extension set 500 mm											
1	2	2	4	1	max. 3230	500	–	EV 1 / light grey	–	10	9-28483-00-0-1
								UC 5 / dark bronze	–	10	9-28483-00-0-5

Basic hardware set for Alsistem													
Pattern					Designation			Surface	PU	Order no.			
A	C	D	F	G1									
1	2	2	4	1	Basic hardware set for Alsistem			–	1	K-18082-00-0-0			
Contents									Qty.	Item no.			
Vertical adapters for Lift&Slide front bogies									1	9-47295-06-0-1			
Spacer for Lift&Slide gear									5	9-47296-07-0-1			
Frame cam [1]									2	6-22648-03-0-8			
Rubber buffer 62 [2]									2	9-24292-00-0-0			
Countersunk screw M6 x 80 mm for fixing the turn handle with flush pull or interior/exterior handle sets									2	9-13274-80-0-1			
PC screw-hole cover cap (grey)									1	9-26687-00-0-1			

[1] Cannot be used with pattern G1  
[2] Cannot be used with patterns D and F

Buffer 90 [1]										
Pattern					Designation			Surface	PU	Order no.
A	C	D	F	G1						
–	–	2	4	4	Buffer 90 set			black	1	K-17134-00-0-6
								white	1	K-17134-00-0-7

[1] Optionally with patterns A and C

### Hardware requirements – patterns A, C, D, F, G1

Fixing screws					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	1	Bag of screws
<b>Contents</b>					
Countersunk-head tapping screw 4.8 x 16 mm					1 9-13089-16-0-1
Countersunk screw M5 x 25 mm					4 9-13133-25-0-8
Countersunk screw M5 x 35 mm					1 9-13133-35-0-8
Countersunk screw M5 x 50 mm					7 9-13133-50-0-8
PC screw-hole cover cap (grey)					1 9-26687-00-0-1

Accessories					
Pattern					Designation
A	C	D	F	G1	
-	1	-	1	-	Accessories set
<b>Contents</b>					
Countersunk screw M5 x 40 mm					4 9-13133-40-0-0
Pin					8 9-30329-00-0-5
Bushing					4 9-34128-00-0-0

### Hardware requirements – pattern G1

Bottom keeper [1]					
Pattern					Designation
A	C	D	F	G1	
-	-	-	-	1	Bottom keeper set
[1] Optionally with patterns A, C, D and F					
					ferGUard
					1 K-12057-00-0-1

# Alsistem / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
						Dark brown [2]	1	6-24608-00-0-5
						White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
						Dark brown [2]	1	6-24609-00-0-5
						White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Fixing screws								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
2	4	4	8	2	Countersunk screw 5.5 x 32 mm	-	1	9-13253-32-0-0

### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1][2]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior handle, without PC hole [2]	Silver/EV 1 look	1	6-24608-00-0-1
						Dark brown [3]	1	6-24608-00-0-5
						White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole [2]	Silver/EV 1 look	1	6-24609-00-0-1
						Dark brown [3]	1	6-24609-00-0-5
						White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for Alsistem / order number K-18082-00-0-0.  
[3] Similar to RAL 8022

Flush pull								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
						Dark brown [1]	1	9-29992-01-0-5
						White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

Optionally: gasket plate								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Gasket plate for flush pull	black	1	9-47211-01-0-6

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1][2]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
						Dark brown [3]	1	6-24615-96-0-5
						White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] The fixing screws are contained in the basic hardware set for Alsistem / order number K-18082-00-0-0.  
[3] Similar to RAL 8022

Optionally: gasket plate								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Alsystem / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	-	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents					Qty.	Item no.		
Wedge					2	6-31219-00-0-1		
Support					2	9-40863-00-0-1		
Lever					2	9-40789-00-0-1		

Corner-drive								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	-	Corner-drive set	-	1	K-16570-00-0-1
Contents					Qty.	Item no.		
Corner-drive					1	6-31284-00-0-1		
Extension					1	6-31282-00-0-1		
Cover					1	6-31283-00-0-1		
Guide					2	9-28101-00-0-0		
Stay arm slide block					1	6-22755-00-0-6		
Lever complete					1	6-31234-00-0-1		
Countersunk screw M5 x 16 mm					1	9-40828-00-R-1		

Vertical packer								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	-	Vertical packer	-	1	9-47295-06-0-1

P 959 connecting rod									
Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F	G1					
1	2	2	4	-	600-1220	1000	-	1	9-28355-10-0-3
					1221-1720	1500	-	1	9-28355-15-0-3
					1721-2020	1800	-	1	9-28355-18-0-3
					2021-3000	2600	-	1	9-28355-26-0-3
					Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
2	4	4	4	-	Frame cam	Stainless steel	1	9-43830-03-0-8

Bottom keeper								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	2	-	Bottom keeper set	ferGUard	1	K-12057-00-0-1

# AluK SC140 / GU-934 bogies

## Application ranges

GU

### Application ranges

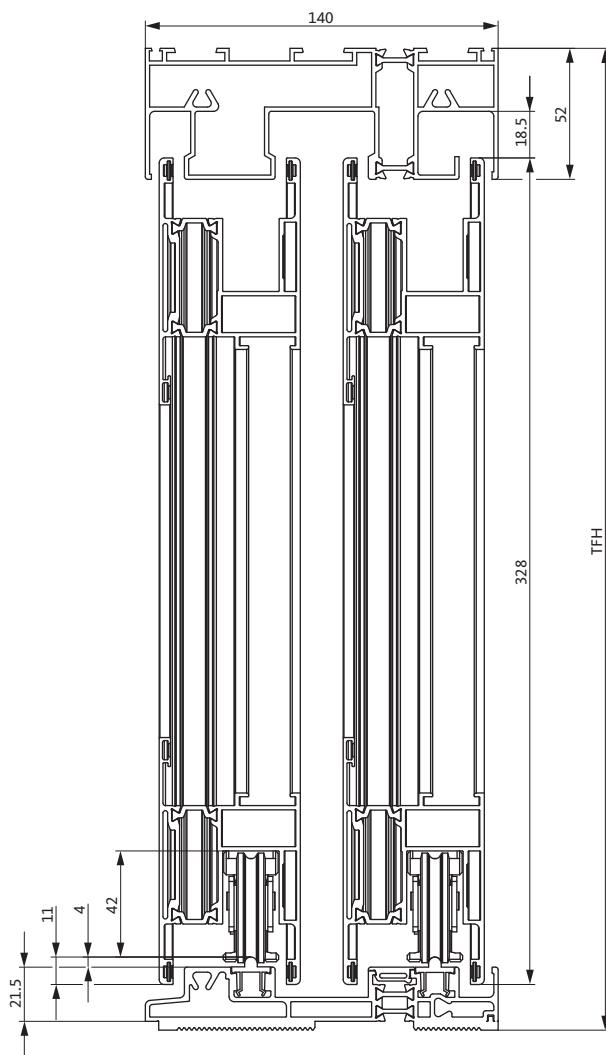
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700–3300 mm	850–2749 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45641	from page 79
Locking monitoring set	0-44449	from page 338

### Note:

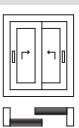
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



### Possible patterns



**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**Pattern D**  
2 Lift&Slide doors  
Fig: sliding direction to the right and left

TFH = total frame height

# AluK SC140 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, D

Bogies and connecting rod – for sash weights up to 300 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	D					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D					
1	2	700–1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18
		1601–1850	1350	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18
		1851–2350	1850	ferGuard faceGuard	1 1	9-25476-18-0-1 9-25476-18-0-18
		2351–3300	3300	ferGuard faceGuard	1 1	9-25476-33-0-1 9-25476-33-0-18

Bogies and connecting rod – for sash weights up to 400 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	D					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18
1	2	GU-934 tandem bogies set	2 x central bogies	ferGuard faceGuard	1 1	K-17804-01-0-1 K-17804-01-0-18

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D					
1	2	1270–1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18
		1601–1850	1350	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18
		1851–2350	1850	ferGuard faceGuard	1 1	9-25476-18-0-1 9-25476-18-0-18
		2351–3300	3300	ferGuard faceGuard	1 1	9-25476-33-0-1 9-25476-33-0-18

# AluK SC140 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, D

Lift&Slide gear, 27.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	D				Cover rail	Lock case, connecting rod		
1	2	850–1269	1190	406	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5
					EV 1 / light grey	faceGUard	10	6-30019-11-0-18
		1220–1849	1770	406	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5
					EV 1 / light grey	faceGUard	10	6-30019-19-0-18
		1850–2349	2270	1006	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5
					EV 1 / light grey	faceGUard	10	6-30019-24-0-18
		2100–2749	2670	1006	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-28-0-5
					EV 1 / light grey	faceGUard	10	6-30019-28-0-18
Optional: Gear and cover-rail extension set 500 mm								
1	2	max. 3249	500	–	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
					EV 1 / light grey	faceGUard	10	6-32030-00-0-18
Optional: Cover-rail extension set 500 mm								
1	2	max. 3249	500	–	EV 1 / light grey	–	10	9-28483-00-0-1
					UC 5 / dark bronze	–	10	9-28483-00-0-5

### Hardware requirements – patterns A, D

Grundkarton AluK SC 140					
Pattern	D	Designation	Surface	PU	Order no.
1	2	Basic hardware set for AluK SC 140	-	1	K-17981-00-0-0
<b>Contents</b>					<b>Qty.</b> Item no.
Vertical adapters for Lift&Slide front bogies					1 9-47295-08-0-1
Spacer for Lift&Slide gear					5 9-47296-09-0-1
Countersunk screw M6 x 20 mm for fixing the turn handle					2 9-13274-20-0-1
<b>Frame cam set K-17908-00-0-8 (2 x)</b>		<b>Contents</b>			<b>Qty.</b> Item no.
		Frame cam			1 6-35190-00-0-8
		Countersunk-head tapping screw 4.8 x 32 mm			2 9-13089-32-R-1
<b>Bag of screws K-17980-00-0-1</b>		<b>Contents</b>			<b>Qty.</b> Item no.
		Countersunk-head tapping screw 4.8 x 16 mm			1 9-13089-16-R-1
		Countersunk-head tapping screw 4.8 x 32 mm			4 9-13089-32-R-1
		Countersunk-head tapping screw 4.8 x 38 mm			1 9-13089-38-R-1
		Countersunk-head tapping screw 4.8 x 50 mm			7 9-13089-50-R-1
		PC screw-hole cover cap (grey)			1 9-26687-00-0-1

### Buffer 90

Pattern	D	Designation	Surface	PU	Order no.
2	2	Buffer 90 set	black	1	K-17134-00-0-6
			white	1	K-17134-00-0-7

### Optional additional components

Bottom keeper					
Pattern	D	Designation	Surface	PU	Order no.
1	2	Bottom keeper set	ferGuard	1	K-12057-00-0-1

# AluK SC140 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1][2]				
Pattern		Designation		
A	D			Surface
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1
			Dark brown [3]	1
			White, RAL 9016	1
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1
			Dark brown [3]	1
			White, RAL 9016	1

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for AluK SC 140 / order number K-17981-00-0-0.  
[3] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]				
Pattern		Designation		
A	D			Surface
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1
			Dark brown [2]	1
			White, RAL 9016	1
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1
			Dark brown [2]	1
			White, RAL 9016	1

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] Similar to RAL 8022

### Flush pull

Flush pull				
Pattern		Designation		
A	D			Surface
1	2	Flush pull MS, square	Silver/EV 1 look	1
			Dark brown [1]	1
			White, RAL 9016	1

[1] Similar to RAL 8022

### Fixing screws

Fixing screws				
Pattern		Designation		
A	D			Surface
2	4	Countersunk screw M6 x 75 mm	-	1

### Optionally: gasket plate

Optionally: gasket plate				
Pattern		Designation		
A	D			Surface
1	2	Gasket plate for flush pull	black	1

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1][2]						
Pattern		Designation		Surface	PU	Order no.
A	D					
1	2	Set: DIRIGENT turn handle on both sides, with PC hole		Silver/EV 1 look	1	K-13267-00-0-1
				Dark brown [3]	1	K-13267-00-0-5
				White, RAL 9016	1	K-13267-00-0-7

[1] Contents: 1 DIRIGENT interior/exterior handle set with PC hole, fixing screws, square spindle  
[2] The use of buffers is recommended. Order information refer to page 302.  
[3] Similar to RAL 8022

Optionally: gasket plate						
Pattern		Designation		Surface	PU	Order no.
A	D					
1	2	Gasket plate for exterior and interior turn handle		black	1	9-47210-01-0-6

### Application example 4: Interior turn handle – with extended exterior flush pull

DIRIGENT turn handle						
Pattern		Designation		Surface	PU	Order no.
A	D					
1	2	DIRIGENT interior turn handle set, without PC hole [1]		Silver/EV 1 look	1	K-13265-00-0-1
				Dark brown [3]	1	K-13265-00-0-5
				White, RAL 9016	1	K-13265-00-0-7
1	2	DIRIGENT interior turn handle set, with PC hole [2]		Silver/EV 1 look	1	K-13266-00-0-1
				Dark brown [3]	1	K-13266-00-0-5
				White, RAL 9016	1	K-13266-00-0-7

[1] Contents: DIRIGENT interior turn handle without PC hole, extended flush pull, square spindle  
[2] Contents: DIRIGENT interior turn handle with PC hole, extended flush pull, square spindle  
[3] Similar to RAL 8022

Fixing screws						
Pattern		Designation		Surface	PU	Order no.
A	D					
2	4	Countersunk screw M6 x 60 mm		-	1	9-13274-60-0-1

# AluK SC140 / GU-934 bogies

## Hardware requirements

**GU**



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents			Qty.	Item no.	
Wedge			2	6-31219-00-0-1	
Support			2	9-40863-00-0-1	
Lever			2	9-40789-00-0-1	

Corner-drive					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Corner-drive set	-	1	K-16570-00-0-1
Contents			Qty.	Item no.	
Corner-drive			1	6-31284-00-0-1	
Extension			1	6-31282-00-0-1	
Cover			1	6-31283-00-0-1	
Guide			2	9-28101-00-0-0	
Stay arm slide block			1	6-22755-00-0-6	
Lever complete			1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm			1	9-40828-00-R-1	

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D					
1	2	600-1220	1000	-	1	9-28355-10-0-3
		1221-1720	1500	-	1	9-28355-15-0-3
		1721-2020	1800	-	1	9-28355-18-0-3
		2021-3000	2600	-	1	9-28355-26-0-3
		Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]		Surface	PU	Order no.
Pattern	Designation			
A	D			
1	2	Tension spring for reduction of operating forces	-	1 9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]		Surface	PU	Order no.
Pattern	Designation			
A	D			
1	2	Handle damper for controlled lowering	-	1 K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Alumil M300 / GU-934 bogies

## Application ranges

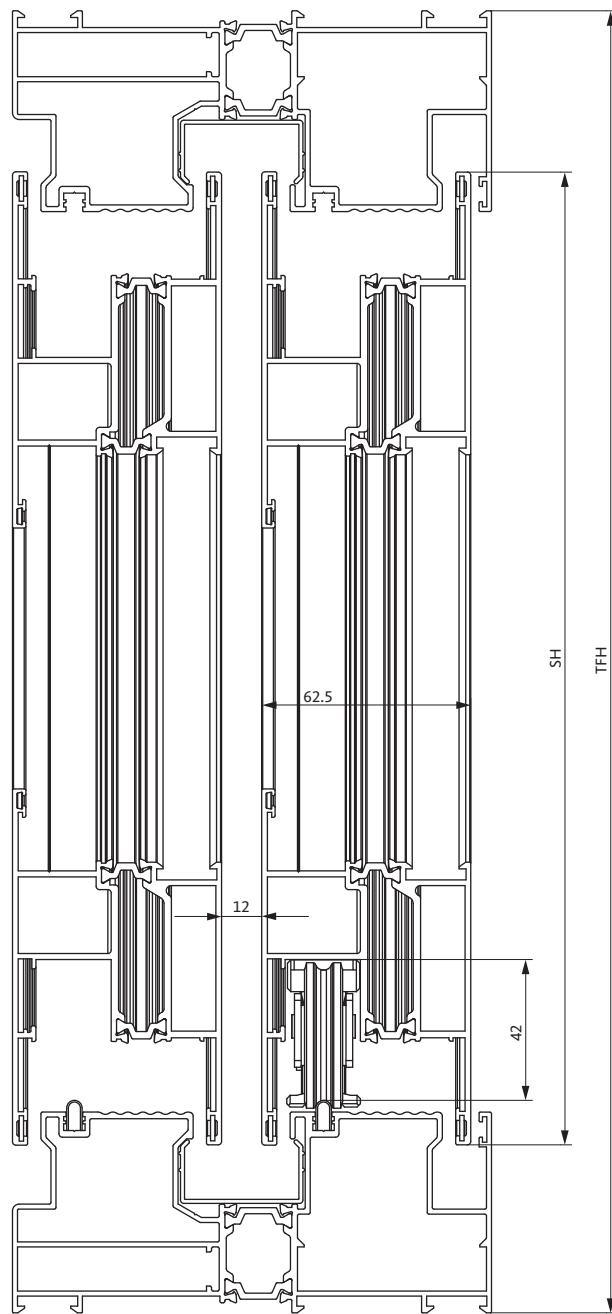
**GU**



## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	830-2730 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44685	from page 87
Locking monitoring set	0-44449	from page 338



SH = sash height / TFH = total frame height

### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



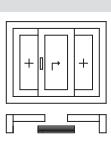
#### Pattern A

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



#### Pattern D

- 2 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

# Alumil M300 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, D, G1

Bogies and connecting rod – for sash weights up to 300 kg



Bogies			Designation	Contents	Surface	PU	Order no.
Pattern	A	D					
1	2	1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
					faceGuard	1	K-16488-00-0-18

Connecting rod ø 8 mm			Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern	A	D	G1				
1	2	1	700-1600	1100	ferGuard	1	9-25476-11-0-1
			1601-1850	1350	faceGuard	1	9-25476-11-0-18
			1851-2350	1850	ferGuard	1	9-25476-14-0-1
			2351-3300	3300	faceGuard	1	9-25476-14-0-18
					ferGuard	1	9-25476-18-0-1
					faceGuard	1	9-25476-18-0-18
					ferGuard	1	9-25476-33-0-1
					faceGuard	1	9-25476-33-0-18

# Alumil M300 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, D, G1

Lift&Slide gear, 37.5 mm backset									
Pattern			Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	D	G1				Cover rail	Lock case, connecting rod		
1	2	1	830–1250	1190	410	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
						EV 1 / light gray	faceGUard	10	6-30021-11-0-18
			1200–1830	1770	410	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
						EV 1 / light grey	faceGUard	10	6-30021-19-0-18
			1831–2330	2270	1010	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
						EV 1 / light grey	faceGUard	10	6-30021-24-0-18
			2080–2730	2670	1010	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
						EV 1 / light grey	faceGUard	10	6-30021-28-0-18
Optional: Gear and cover-rail extension set 500 mm									
1	2	1	max. 3230	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
						UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
						EV 1 / light grey	faceGUard	10	6-32030-00-0-18
Optional: Cover-rail extension set 500 mm									
1	2	1	max. 3230	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
						UC 5 / dark bronze	-	10	9-28483-00-0-5

Cover cap for profile cylinder								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	PC screw-hole cover cap			grey	1	9-26687-00-0-1

Basic hardware set for Alumil M300								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	Basic hardware set for Alumil M300			-	1	K-17464-00-0-0
Contents								
Vertical adapters for Lift&Slide front bogies							1	9-47295-06-0-1
Spacer for Lift&Slide gear							5	9-47296-07-0-1
Frame cam [1]							2	6-22648-01-0-8
Countersunk screw M6 x 70 mm for fixing the turn handle with flush pull or interior/exterior handle sets							2	9-13274-70-0-1
[1] Cannot be used with pattern G1								

### Hardware requirements – pattern G1

Bottom keeper			Designation	Surface	PU	Order no.
Pattern	A	D				
-	-	1	Bottom keeper set	ferGuard	1	K-17864-00-0-1

[1] Optionally with patterns A and D

# Alumil M300 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1][2]								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	DIRIGENT interior handle without PC hole		Silver/EV 1 look	1	6-24608-00-0-1	
					Dark brown [3]	1	6-24608-00-0-5	
					White, RAL 9016	1	6-24608-00-0-7	
1	2	1	DIRIGENT interior turn handle, with PC hole		Silver/EV 1 look	1	6-24609-00-0-1	
					Dark brown [3]	1	6-24609-00-0-5	
					White, RAL 9016	1	6-24609-00-0-7	

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] The fixing screws are contained in the basic hardware set for Alumil M300 / order number K-17464-00-0-0.

[3] Similar to RAL 8022

Flush pull								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	Flush pull MS, square		Silver/EV 1 look	1	9-29992-02-0-1	
					Dark brown [1]	1	9-29992-02-0-5	
					White, RAL 9016	1	9-29992-02-0-7	

[1] Similar to RAL 8022

Optionally: gasket plate								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	Gasket plate for flush pull		black	1	9-47211-01-0-6	

#### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1][2]								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1	6-24615-96-0-1	
					Dark brown [3]	1	6-24615-96-0-5	
					White, RAL 9016	1	6-24615-96-0-7	

[1] The use of buffers is recommended. Order information refer to page 302.

[2] The fixing screws are contained in the basic hardware set for Alumil M300 / order number K-17464-00-0-0.

[3] Similar to RAL 8022

Optionally: gasket plate								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	Gasket plate for exterior and interior turn handle		black	1	9-47210-01-0-6	

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]			Designation	Surface	PU	Order no.
Pattern	A	D	G1			
1	2	1	Tension spring for reduction of operating forces	–	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]			Designation	Surface	PU	Order no.
Pattern	A	D	G1			
1	2	1	Handle damper for controlled lowering	–	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Alumil S400 / GU-937 bogies

## Application ranges

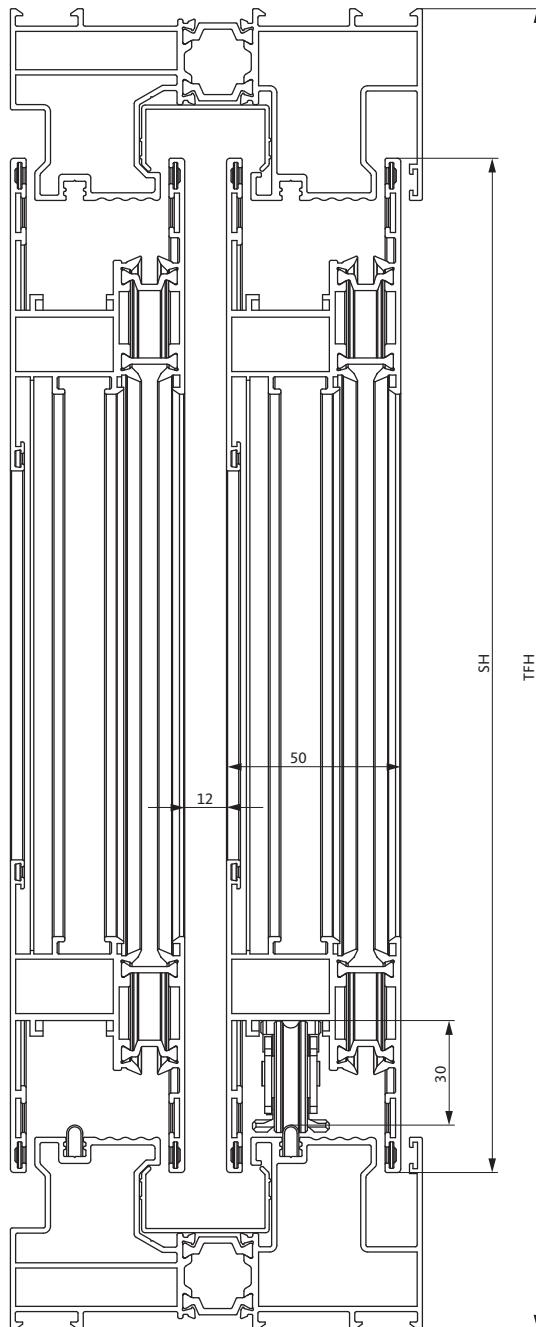
**GU**



## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	830-2730 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-44694	from page 93
Locking monitoring set	0-44449	from page 338

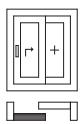


SH = sash height / TFH = total frame height

### Note:

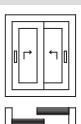
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



#### Pattern A

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



#### Pattern D

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

# Alumil S400 / GU-937 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, D

Bogies and connecting rod – for sash weights up to 150 kg



Bogies							
Pattern		Designation		Contents	Surface	PU	Order no.
A	D						
1	2	GU-937 bogies set		1 x front bogie 1 x rear bogie	ferGuard	1	K-16721-00-0-1

Connecting rod ø 8 mm							
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.	
A	D						
1	2	700-1600	1100	ferGuard	1	9-25476-11-0-1	
		1601-1850	1350	ferGuard	1	9-25476-14-0-1	
		1851-2350	1850	ferGuard	1	9-25476-18-0-1	
		2351-3300	3300	ferGuard	1	9-25476-33-0-1	

Lift&Slide gear, 27.5 mm backset							
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface	PU	Order no.
A	D				Cover rail	Lock case, connecting rod	
1	2	830-1250	1190	410	EV 1 / light grey	ferGuard	10
					UC 5 / dark bronze	ferGuard	10
		1200-1830	1770	410	EV 1 / light grey	ferGuard	10
					UC 5 / dark bronze	ferGuard	10
		1830-2330	2270	1010	EV 1 / light grey	ferGuard	10
					UC 5 / dark bronze	ferGuard	10
		2080-2730	2670	1010	EV 1 / light grey	ferGuard	10
					UC 5 / dark bronze	ferGuard	10
Optional: Gear and cover-rail extension set 500 mm							
1	2	max. 3230	500	-	EV 1 / light grey	ferGuard	10
					UC 5 / dark bronze	ferGuard	10
Optional: Cover-rail extension set 500 mm							
1	2	max. 3230	500	-	EV 1 / light grey	-	10
					UC 5 / dark bronze	-	10

Basic hardware set for Alumil S400							
Pattern		Designation		Surface	PU	Order no.	
A	D						
1	2	Basic hardware set for Alumil S400		-	1	K-17474-00-0-0	
Contents				Qty.	Item no.		
Frame cam				2	6-22648-02-0-8		
Countersunk screw M6 x 20 mm for fixing the turn handle				2	9-13274-20-0-1		

# Alumil S400 / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1][2]							
Pattern		Designation			Surface	PU	Order no.
A	D						
1	2	DIRIGENT interior handle without PC hole		Silver/EV 1 look	1	6-24608-00-0-1	
				Dark brown [3]	1	6-24608-00-0-5	
				White, RAL 9016	1	6-24608-00-0-7	
1	2	DIRIGENT interior turn handle, with PC hole		Silver/EV 1 look	1	6-24609-00-0-1	
				Dark brown [3]	1	6-24609-00-0-5	
				White, RAL 9016	1	6-24609-00-0-7	

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for Alumil S400 / order number K-17474-00-0-0.  
[3] Similar to RAL 8022

#### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]							
Pattern		Designation			Surface	PU	Order no.
A	D						
1	2	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1	6-24615-96-0-1	
				Dark brown [2]	1	6-24615-96-0-5	
				White, RAL 9016	1	6-24615-96-0-7	

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws							
Pattern		Designation			Surface	PU	Order no.
A	D						
2	4	Countersunk screw M6 x 50 mm		-	1	9-13274-50-0-1	

Optionally: gasket plate							
Pattern		Designation			Surface	PU	Order no.
A	D						
1	2	Gasket plate for exterior and interior turn handle		black	1	9-47210-01-0-6	

### Optional additional components

Buffer 90					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Buffer 90 set	black	1	K-12024-00-0-6
			white	1	K-12024-00-0-7
			cream white	1	K-12024-00-0-7Z

### Additional kit 'comfort' (see chapter 6.2)

Handle damper [1]					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

### Additional kit (L&S night vent module)

Frame cam					
Pattern		Designation	Surface	PU	Order no.
A	D				
2	4	Frame cam	Stainless steel	1	9-43830-04-0-8

Bottom keeper					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Bottom keeper set	ferGUard	1	K-12057-00-0-1

# Aluprof MB-77 HS / GU-934 bogies

## Application ranges

**GU**

### Application ranges

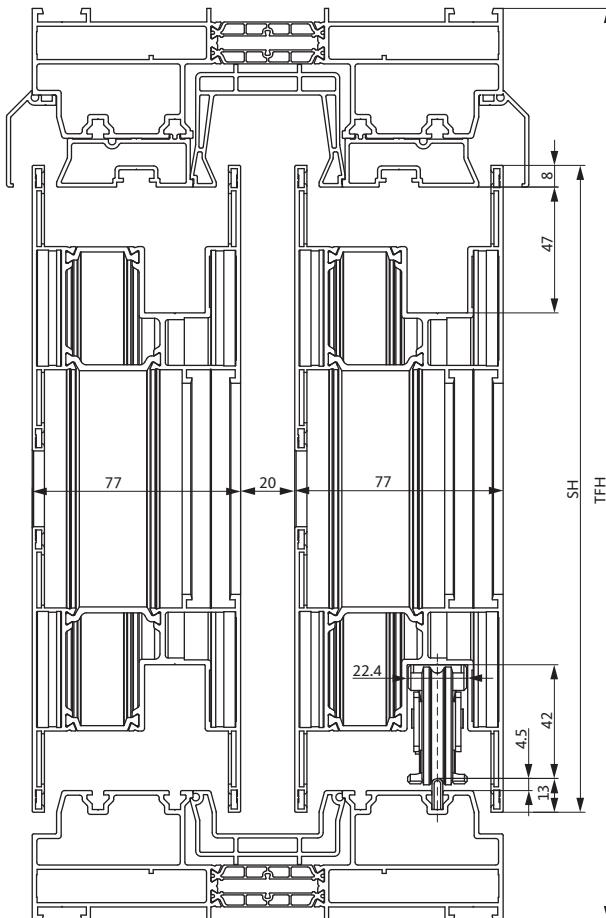
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	843-2743 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45957	from page 97
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

#### Note:

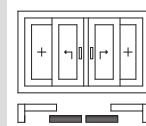
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



#### Possible patterns



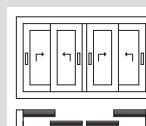
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



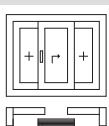
**Pattern C**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



**Pattern D**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



**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

SH = sash height / TFH = total frame height

# Aluprof MB-77 HS / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F, G1

Bogies and connecting rod – for sash weights up to 300 kg



Bogies									
Pattern					Designation	Contents	Surface	PU	Order no.
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	4	1			faceGuard	1	K-16488-00-0-18

### Connecting rod ø 8 mm

Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.		
A	C	D	F	G1	GU-934 bogies set	720–1600 1601–1850 1851–2350 2351–3300	ferGuard	1	9-25476-11-0-1		
1	2	2	4	1			faceGuard	1	9-25476-11-0-18		
							ferGuard	1	9-25476-14-0-1		
							faceGuard	1	9-25476-14-0-18		
							ferGuard	1	9-25476-18-0-1		
							faceGuard	1	9-25476-18-0-18		
							ferGuard	1	9-25476-33-0-1		
							faceGuard	1	9-25476-33-0-18		

Bogies and connecting rod – for sash weights up to 400 kg



Bogies										
Pattern					Designation	Contents	Surface	PU	Order no.	
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1	
1	2	2	4	1			faceGuard	1	K-16488-00-0-18	
1	2	2	4	1	GU-934 tandem bogies set		ferGuard	1	K-17804-01-0-1	
							faceGuard	1	K-17804-01-0-18	

### Connecting rod ø 8 mm

Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.		
A	C	D	F	G1	GU-934 tandem bogies set	1290–1600 1601–1850 1851–2350 2351–3300	ferGuard	1	9-25476-11-0-1		
1	2	2	4	1			faceGuard	1	9-25476-11-0-18		
							ferGuard	1	9-25476-14-0-1		
							faceGuard	1	9-25476-14-0-18		
							ferGuard	1	9-25476-18-0-1		
							faceGuard	1	9-25476-18-0-18		
							ferGuard	1	9-25476-33-0-1		
							faceGuard	1	9-25476-33-0-18		

# Aluprof MB-77 HS / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F, G1

Lift&Slide gear, 37.5 mm backset											
Pattern					Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F	G1				Cover rail	Lock case, connecting rod		
1	2	2	4	1	843-1263	1190	408	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
								EV 1 / light gray	faceGUard	10	6-30021-11-0-18
					1213-1843	1770	408	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
								EV 1 / light grey	faceGUard	10	6-30021-19-0-18
					1843-2343	2270	1008	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
								EV 1 / light grey	faceGUard	10	6-30021-24-0-18
					2093-2743	2670	1008	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
								EV 1 / light grey	faceGUard	10	6-30021-28-0-18
Optional: Gear and cover-rail extension set 500 mm											
1	2	2	4	1	max. 3243	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
								UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
								EV 1 / light grey	faceGUard	10	6-32030-00-0-18
Optional: Cover-rail extension set 500 mm											
1	2	2	4	1	max. 3243	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
								UC 5 / dark bronze	-	10	9-28483-00-0-5

Packer, spacer, frame cam, PC screw-hole cover cap, rubber buffer											
Pattern					Designation				Surface	PU	Order no.
A	C	D	F	G1							
1	2	2	4	1	Vertical adapters for Lift&Slide front bogies				-	1	9-47295-04-0-1
5	10	10	20	7	Spacer for Lift&Slide gear				-	1	9-47296-06-0-1
2	2	4	6	-	Frame cam				Stainless steel	1	6-22648-03-0-8
1	2	2	4	1	Cover cap for profile cylinder				grey	1	9-26687-00-0-1
2	4	-	-	2	Rubber buffer 62				black	1	9-24292-00-0-0

Buffer 90 [1]											
Pattern					Designation				Surface	PU	Order no.
A	C	D	F	G1							
-	-	2	4	4	Buffer 90 set				black	1	K-17134-00-0-6
									white	1	K-17134-00-0-7

[1] Optionally with patterns A and C

### Hardware requirements – pattern G1

Bottom keeper [1]					Designation	Surface	PU	Order no.
Pattern								
A	C	D	F	G1				
-	-	-	-	1	Bottom keeper set	ferGuard	1	K-12057-00-0-1

[1] Optionally with patterns A, C, D and F

# Aluprof MB-77 HS / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
						Dark brown [2]	1	6-24608-00-0-5
						White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
						Dark brown [2]	1	6-24609-00-0-5
						White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
						Dark brown [2]	1	6-24608-00-0-5
						White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
						Dark brown [2]	1	6-24609-00-0-5
						White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
						Dark brown [1]	1	9-29992-01-0-5
						White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
						Dark brown [2]	1	6-24615-96-0-5
						White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws									
Pattern					Designation	Example of application	Surface	PU	Order no.
A	C	D	F	G1					
2	4	4	8	2	Countersunk screw 5.5 x 32 mm				
2	4	4	8	2	Countersunk screw M6 x 85 mm				

Optional: gasket plates									
Pattern					Designation	Example of application	Surface	PU	Order no.
A	C	D	F	G1					
1	2	2	4	1	Gasket plate for flush pull				
1	2	2	4	1	Gasket plate for exterior and interior turn handle				

# Aluprof MB-77 HS / GU-934 bogies

## Hardware requirements

**GU**



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Anti-jemmy device set
Contents					
Wedge					Qty. Item no.
Support					2 6-31219-00-0-1
Lever					2 9-40863-00-0-1
					2 9-40789-00-0-1

Corner-drive					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Corner-drive set
Contents					
Corner-drive					Qty. Item no.
Extension					1 6-31284-00-0-1
Cover					1 6-31282-00-0-1
Guide					1 6-31283-00-0-1
Stay arm slide block					2 9-28101-00-0-0
Lever complete					1 6-22755-00-0-6
Countersunk screw M5 x 16 mm					1 6-31234-00-0-1
					1 9-40828-00-R-1

Vertical packer					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Vertical packer

P 959 connecting rod									
Pattern					Sash width [mm]				
A	C	D	F	G1	Length [mm]				
1	2	2	4	-	600–1220				
					1000				
					1221–1720				
					1500				
					1721–2020				
					2021–3000				
					2600				
					Stock length				
					4800				
					-				
					1 9-28355-48-0-3				

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
2	4	4	4	-	Frame cam	Stainless steel	1	9-43830-03-0-8

Bottom keeper								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	2	-	Bottom keeper set	ferGUard	1	K-12057-00-0-1

# Aluprof MB-77 HS / GU-937 bogies

## Application ranges

**GU**

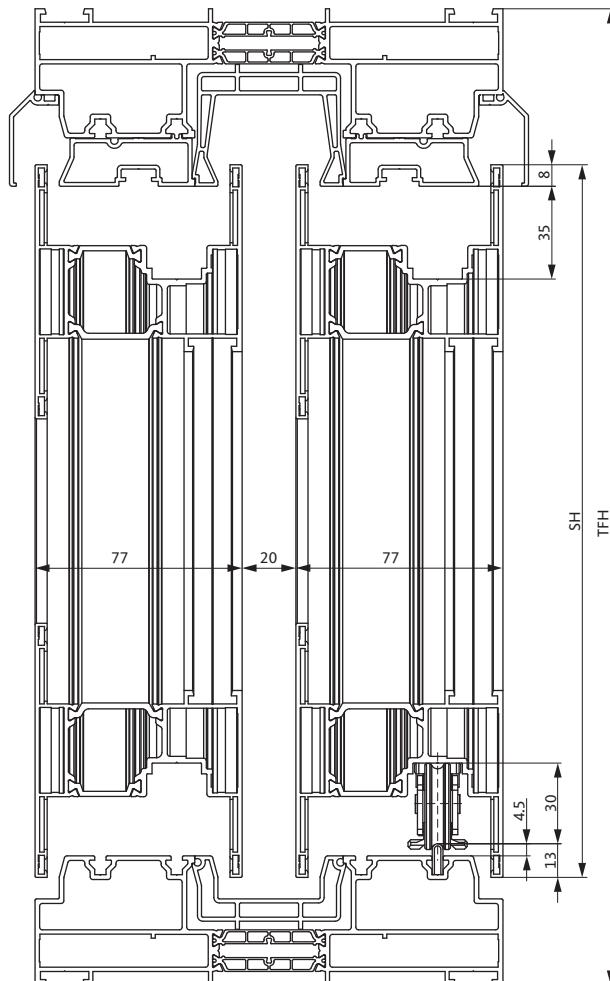
## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	841-2741 mm	200 kg	GU-937
SH : SW = 2.5 : 1			

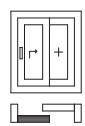
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-45958	from page 105
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

### Note:

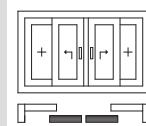
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



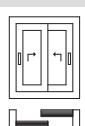
### Possible patterns



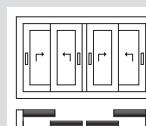
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



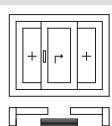
**Pattern C**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



**Pattern D**  
2 Lift&Slide doors  
Fig: sliding direction to the right and left



**Pattern 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

### Hardware requirements – patterns A, C, D, F, G1

Bogies and connecting rod – for sash weights up to 200 kg



Bogies									
Pattern					Designation				
A	C	D	F	G1	Contents				
1	2	2	4	1	GU-937 bogies set 1 x front bogie 1 x rear bogie				
					ferGuard				
					faceGuard				
					1				
					K-16493-00-0-1				
					1				
					K-16493-00-0-18				

Connecting rod ø 8 mm									
Pattern					Sash width [mm]				
A	C	D	F	G1	Length [mm]				
1	2	2	4	1	700–1600				
					1100				
					faceGuard				
					1				
					9-25476-11-0-18				
					1601–1850				
					1350				
					ferGuard				
					1				
					faceGuard				
					1				
					9-25476-14-0-1				
					1851–2350				
					1850				
					ferGuard				
					1				
					faceGuard				
					1				
					2351–3300				
					3300				
					ferGuard				
					1				
					9-25476-33-0-1				
					faceGuard				
					1				
					9-25476-33-0-18				

# Aluprof MB-77 HS / GU-937 bogies

## Hardware requirements

**GU**



### Hardware requirements – patterns A, C, D, F, G1

Lift&Slide gear, 27.5 mm backset							PU	Order no.			
Pattern					Sash height [mm]	Length [mm]	Handle height [mm]	Surface	Cover rail	Lock case, connecting rod	
A	C	D	F	G1							
1	2	2	4	1	841-1261	1190	408	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
								UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5
								EV 1 / light gray	faceGUard	10	6-30019-11-0-18
					1211-1841	1770	408	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
								UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5
								EV 1 / light grey	faceGUard	10	6-30019-19-0-18
					1841-2341	2270	1008	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
								UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5
								EV 1 / light grey	faceGUard	10	6-30019-24-0-18
					2091-2741	2670	1008	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
								UC 5 / dark bronze	ferGUard	10	6-30019-28-0-5
								EV 1 / light grey	faceGUard	10	6-30019-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>											
1	2	2	4	1	max. 3241	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
								UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
								EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>											
1	2	2	4	1	max. 3241	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
								UC 5 / dark bronze	-	10	9-28483-00-0-5

Frame cam, PC screw-hole cover cap, rubber buffer							Surface	PU	Order no.
Pattern					Designation				
A	C	D	F	G1					
2	2	4	6	-	Frame cam		Stainless steel	1	6-22648-03-0-8
1	2	2	4	1	Cover cap for profile cylinder		grey	1	9-26687-00-0-1
2	4	-	-	2	Rubber buffer 62		black	1	9-24292-00-0-0

Buffer 90 [1]							Surface	PU	Order no.
Pattern					Designation				
A	C	D	F	G1					
-	-	2	4	4	Buffer 90 set		black	1	K-17134-00-0-6
							white	1	K-17134-00-0-7

[1] Optionally with patterns A and C

### Hardware requirements – pattern G1

L&S locking set for pattern G1				
Pattern			Designation	
A	C	D	F	G1
-	-	-	-	1
Bottom keeper set K-17864-00-0-1		Bottom keeper set		-
		Contents		Qty.
		Bottom keeper		Item no.
		Countersunk-head tapping screw 3.9 x 25 mm		1
				9-45561-00-0-1
				2
				9-13132-25-0-0

# Aluprof MB-77 HS / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]						Designation	Surface	PU	Order no.
Pattern					G1				
A	C	D	F	G1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1	
1	2	2	4	1					
						Dark brown [2]	1	6-24608-00-0-5	
						White, RAL 9016	1	6-24608-00-0-7	
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1	
							Dark brown [2]	1	6-24609-00-0-5
							White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]						Designation	Surface	PU	Order no.
Pattern					G1				
A	C	D	F	G1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1	
1	2	2	4	1					
						Dark brown [2]	1	6-24608-00-0-5	
						White, RAL 9016	1	6-24608-00-0-7	
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1	
							Dark brown [2]	1	6-24609-00-0-5
							White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull						Designation	Surface	PU	Order no.
Pattern					G1				
A	C	D	F	G1	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1	
1	2	2	4	1					
						Dark brown [1]	1	9-29992-01-0-5	
						White, RAL 9016	1	9-29992-01-0-7	

[1] Similar to RAL 8022

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
						Dark brown [2]	1	6-24615-96-0-5
						White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws									
Pattern					Designation	Example of application	Surface	PU	Order no.
A	C	D	F	G1					
2	4	4	8	2	Countersunk screw 5.5 x 32 mm	1	–	1	9-13253-32-0-0
2	4	4	8	2	Countersunk screw M6 x 85 mm	2 + 3	–	1	9-13274-85-0-3

Optional: gasket plates									
Pattern					Designation	Example of application	Surface	PU	Order no.
A	C	D	F	G1					
1	2	2	4	1	Gasket plate for flush pull	2	black	1	9-47211-01-0-6
1	2	2	4	1	Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6

# Aluprof MB-77 HS / GU-937 bogies

## Hardware requirements

**GU**



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Anti-jemmy device set
Contents					
Wedge					Qty. Item no.
Support					2 6-31219-00-0-1
Lever					2 9-40863-00-0-1
					2 9-40789-00-0-1

Corner-drive					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Corner-drive set
Contents					
Corner-drive					Qty. Item no.
Extension					1 6-31284-00-0-1
Cover					1 6-31282-00-0-1
Guide					1 6-31283-00-0-1
Stay arm slide block					2 9-28101-00-0-0
Lever complete					1 6-22755-00-0-6
Countersunk screw M5 x 16 mm					1 6-31234-00-0-1
					1 9-40828-00-R-1

Vertical packer					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Vertical packer

P 959 connecting rod									
Pattern					Sash width [mm]				
A	C	D	F	G1	Length [mm]				
1	2	2	4	-	600–1220				
					1000				
					1221–1720				
					1500				
					1721–2020				
					2021–3000				
					2600				
					Stock length				
					4800				
					-				
					1 9-28355-48-0-3				

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Handle damper [1]					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	1	Handle damper for controlled lowering
[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.					

#### Additional kit (L&S night vent module)

Frame cam					
Pattern					Designation
A	C	D	F	G1	
2	4	4	4	-	Frame cam
Stainless steel					
					1
					9-43830-03-0-8

Bottom keeper					
Pattern					Designation
A	C	D	F	G1	
1	2	2	2	-	Bottom keeper set
					ferGuard
					1
					K-17864-00-0-1

# Etem E3000 / GU-934 bogies

## Application ranges

GU

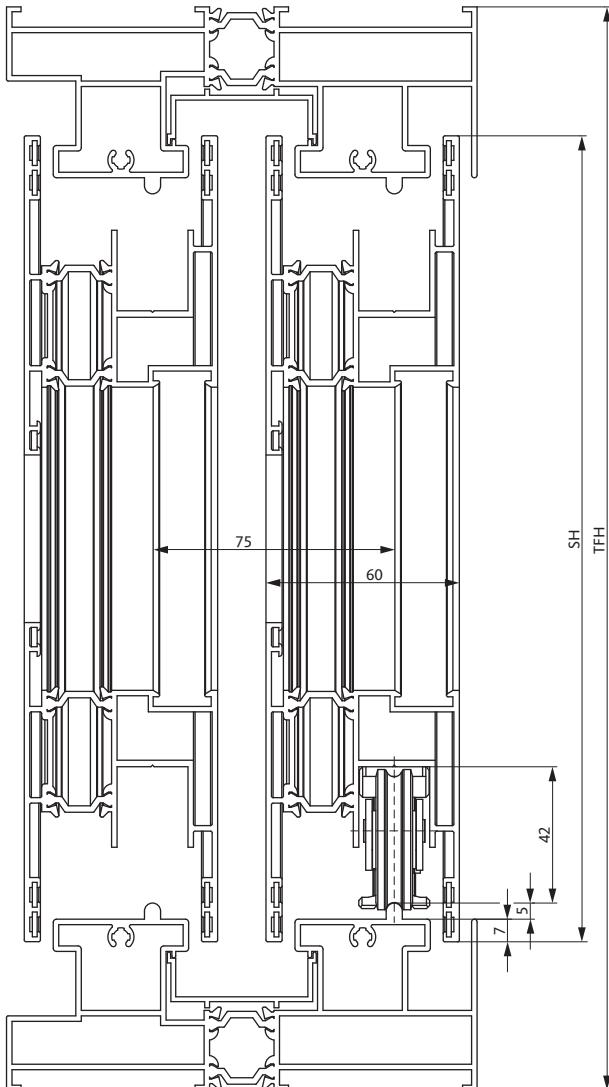
### Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720–3300 mm	825–2725 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44306	from page 113
HS-Master, pattern A	0-44355	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

#### Note:

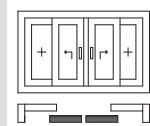
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



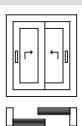
#### Possible patterns



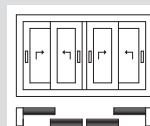
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left

SH = sash height / TFH = total frame height

# Etem E3000 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Bogies and connecting rod – for sash weights up to 300 kg



Bogies					Designation	Contents	Surface	PU	Order no.
A	C	D	F						
1	2	2	4	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18	

Connecting rod ø 8 mm					Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F						
1	2	2	4	720–1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18	
				1601–1850					
				1851–2350	1350 1850	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18	
				2351–3300					

# Etem E3000 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F

Lift&Slide gear, 37.5 mm backset										
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F				Cover rail	Lock case, connecting rod		
1	2	2	4	825-1245	1190	407	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
							EV 1 / light gray	faceGUard	10	6-30021-11-0-18
				1195-1825	1770	407	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
							EV 1 / light grey	faceGUard	10	6-30021-19-0-18
				1825-2325	2270	1007	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
							EV 1 / light grey	faceGUard	10	6-30021-24-0-18
				2075-2725	2670	1007	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
							EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>										
1	2	2	4	max. 3225	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
							UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
							EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>										
1	2	2	4	max. 3225	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
							UC 5 / dark bronze	-	10	9-28483-00-0-5

Packer, spacer, frame cam, PC screw-hole cover cap, rubber buffer										
Pattern				Designation				Surface	PU	Order no.
A	C	D	F							
1	2	2	4	Vertical adapters for Lift&Slide front bogies				-	1	9-47295-08-0-1
5	10	10	20	Spacer for Lift&Slide gear				-	1	9-47296-09-0-1
2	2	4	4	Frame cam				Stainless steel	1	6-22623-03-0-8
1	2	2	4	Cover cap for profile cylinder				grey	1	9-26687-00-0-1
2	4	-	-	Rubber buffer 60				black	1	9-23793-00-0-0

### Hardware requirements – patterns C, F

Counterplate										
Pattern				Designation				Surface	PU	Order no.
A	C	D	F							
-	1	-	1	Counterplate set				-	1	K-17605-00-0-0
<b>Contents</b>										
Counterplate										2
Countersunk screw M5 x 40 mm										4
										9-13255-40-0-1

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
2	4	4	4	Frame cam	Stainless steel	1	9-43830-03-0-8

Bottom keeper							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	2	Bottom keeper set	ferGUard	1	K-12057-00-0-1

# Etem E3000 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
					Dark brown [1]	1	9-29992-01-0-5
					White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

##### Fixing screws

Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
2	4	4	8	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

##### Optionally: gasket plate

Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Gasket plate for flush pull	black	1	9-47211-01-0-6

# Etem E3000 / GU-934 bogies



## Hardware requirements

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]				
Pattern				Designation
A	C	D	F	
1	2	2	4	DIRIGENT interior/exterior handle set, with PC hole
				Silver/EV 1 look
				Dark brown [2]
				White, RAL 9016

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws				
Pattern				Designation
A	C	D	F	
2	4	4	8	Countersunk screw M6 x 70 mm

### Optionally: gasket plate

Gasket plate				
Pattern				Designation
A	C	D	F	
1	2	2	4	Gasket plate for exterior and interior turn handle

# Etem E50 / GU-937 bogies

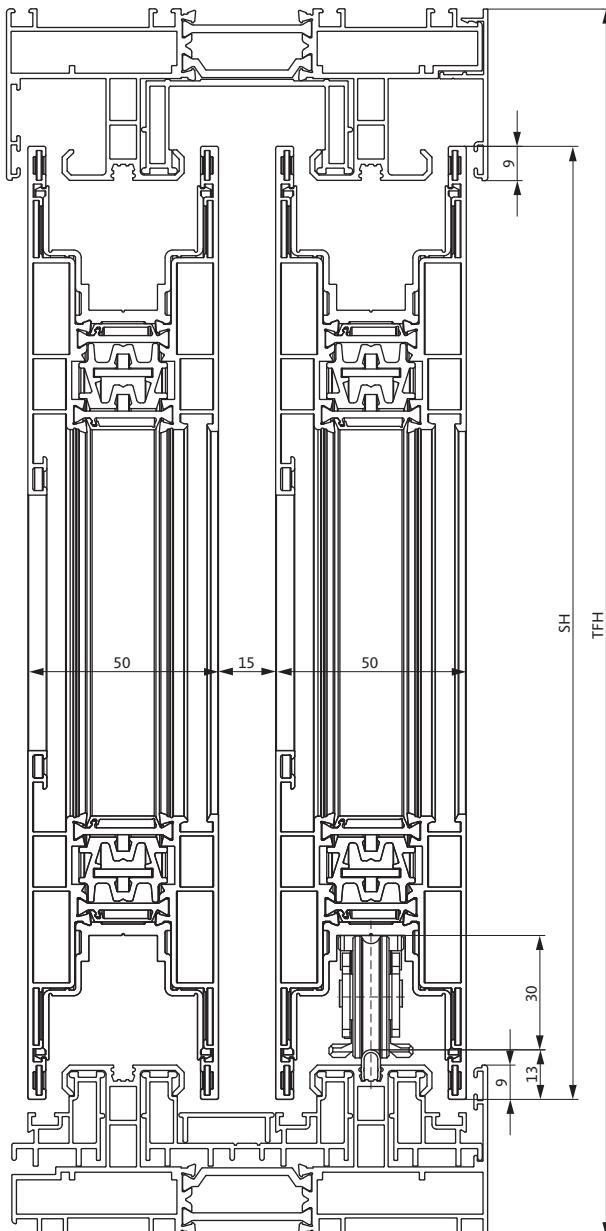
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	849-2749 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

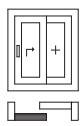
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-46563	from page 119
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338



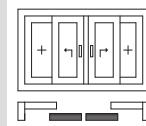
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

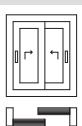
### Possible patterns



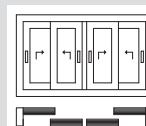
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left

# Etem E50 / GU-937 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Bogies and connecting rod – for sash weights up to 150 kg



Bogies					Designation	Contents	Surface	PU	Order no.
A	C	D	F						
1	2	2	4	GU-937 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16493-00-0-1 K-16493-00-0-18	

Connecting rod ø 8 mm					Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F						
1	2	2	4	700–1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18	
				1601–1850					
				1851–2350	1350 1850	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18	
				2351–3300					

# Etem E50 / GU-937 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F

Lift&Slide gear, 27.5 mm backset									
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface	PU	Order no.
A	C	D	F				Cover rail		
1	2	2	4	849-1269	1190	406	EV 1 / light grey	ferGUard	10
							UC 5 / dark bronze	ferGUard	10
							EV 1 / light gray	faceGUard	10
				1239-1849	1770	406	EV 1 / light grey	ferGUard	10
							UC 5 / dark bronze	ferGUard	10
							EV 1 / light grey	faceGUard	10
				1849-2349	2270	1006	EV 1 / light grey	ferGUard	10
							UC 5 / dark bronze	ferGUard	10
							EV 1 / light grey	faceGUard	10
				2099-2749	2670	1006	EV 1 / light grey	ferGUard	10
							UC 5 / dark bronze	ferGUard	10
							EV 1 / light grey	faceGUard	10
<b>Optional: Gear and cover-rail extension set 500 mm</b>									
1	2	2	4	max. 3249	500	-	EV 1 / light grey	ferGUard	10
							UC 5 / dark bronze	ferGUard	10
							EV 1 / light grey	faceGUard	10
<b>Optional: Cover-rail extension set 500 mm</b>									
1	2	2	4	max. 3249	500	-	EV 1 / light grey	-	10
							UC 5 / dark bronze	-	10

Frame cam									
Pattern				Designation			Surface	PU	Order no.
A	C	D	F						
2	-	4	4	Frame cam				Stainless steel	1
-	2	-	2	Frame cam pattern C				Stainless steel	1
-	4	-	4	Countersunk screw 4.8 x 38 mm				Stainless steel	1

Cover cap for profile cylinder									
Pattern				Designation			Surface	PU	Order no.
A	C	D	F						
1	2	2	4	Cover cap for profile cylinder				grey	1

# Etem E50 / GU-937 bogies

GU

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Buffer 90				
Pattern				Designation
A	C	D	F	
2	4	2	4	Buffer 90 set
				black
				white
				1 K-17134-00-0-6
				1 K-17134-00-0-7

### Optional additional components

Bottom keeper				
Pattern				Designation
A	C	D	F	
1	2	2	4	Bottom keeper set
				ferGUard
				1 K-12057-00-0-1

Handle damper [1]				
Pattern				Designation
A	C	D	F	
1	2	2	4	Handle damper for controlled lowering
				-
				1 K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Etem E50 / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
					Dark brown [1]	1	9-29992-01-0-5
					White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

# Item E50 / GU-937 bogies

**GU**

## Hardware requirements

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]					Designation	Surface	PU	Order no.
Pattern				A C D F				
1	2	2	4	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1	
					Dark brown [2]	1	6-24615-96-0-5	
					White, RAL 9016	1	6-24615-96-0-7	

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws					Designation	Example of application	Surface	PU	Order no.
Pattern				A C D F					
2	4	4	8	Countersunk screw M6 x 20 mm	1	-	1	9-13274-20-0-1	
2	4	4	8	Countersunk screw M6 x 80 mm	2 + 3	-	1	9-13274-80-0-1	

Optional: gasket plates					Designation	Example of application	Surface	PU	Order no.
Pattern				A C D F					
1	2	2	4	Gasket plate for flush pull	2	black	1	9-47211-01-0-6	
1	2	2	4	Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6	

# Etem E52 / GU-937 bogies

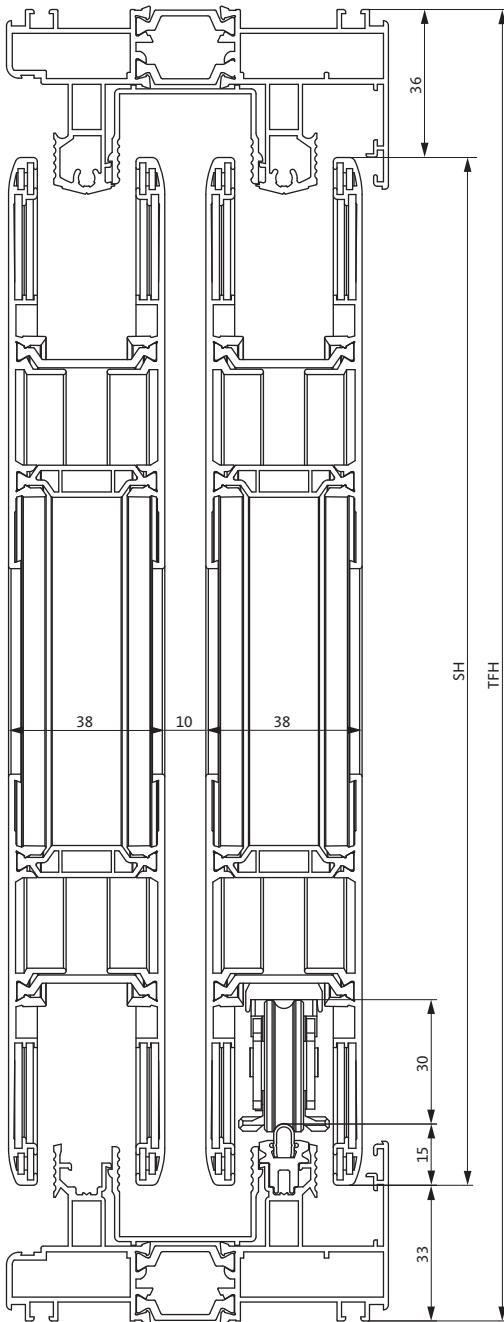
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	849-2749 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

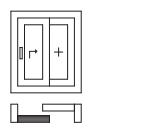
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-46585	from page 125
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338



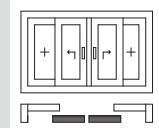
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

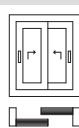
### Possible patterns



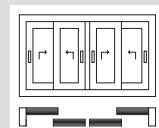
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left

# Item E52 / GU-937 bogies

GU

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Bogies and connecting rod – for sash weights up to 150 kg



Bogies								
Pattern				Designation	Contents	Surface	PU	Order no.
A	C	D	F					
1	2	2	4	GU-937 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16721-00-0-1

Connecting rod ø 8 mm								
Pattern				Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F					
1	2	2	4	700-1600	1100	ferGuard	1	9-25476-11-0-1
				1601-1850	1350	ferGuard	1	9-25476-14-0-1
				1851-2350	1850	ferGuard	1	9-25476-18-0-1
				2351-3300	3300	ferGuard	1	9-25476-33-0-1

# Etem E52 / GU-937 bogies

## Hardware requirements

**GU**



### Hardware requirements – patterns A, C, D, F

Lift&Slide gear, 27.5 mm backset										
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F				Cover rail	Lock case, connecting rod		
1	2	2	4	849-1269	1190	410	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5			
				1239-1849	1770	410	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5			
				1849-2349	2270	1010	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
				2099-2749	2670	1010	UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5
Optional: Gear and cover-rail extension set 500 mm										
1	2	2	4	max. 3249	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
							UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
Optional: Cover-rail extension set 500 mm										
1	2	2	4	max. 3249	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
							UC 5 / dark bronze	-	10	9-28483-00-0-5

Frame cam										
Pattern				Designation				Surface	PU	Order no.
A	C	D	F							
2	-	4	4	Frame cam				Stainless steel	1	9-47530-02-0-8
-	2	-	2	Frame cam pattern C				Stainless steel	1	6-22648-03-0-8
-	4	-	4	Countersunk screw 4.8 x 38 mm				Stainless steel	1	9-13089-38-R-8

Cover cap for profile cylinder										
Pattern				Designation				Surface	PU	Order no.
A	C	D	F							
1	2	2	4	Cover cap for profile cylinder				grey	1	9-26687-00-0-1

Buffer 90										
Pattern				Designation				Surface	PU	Order no.
A	C	D	F							
2	4	2	4	Buffer 90 set				black	1	K-17134-00-0-6
								white	1	K-17134-00-0-7

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Handle damper [1]							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
-	4	-	4	Frame cam	Stainless steel	1	9-43830-03-0-8

Bottom keeper							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	2	Bottom keeper set	ferGuard	1	K-12057-00-0-1

# Etem E52 / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

### Flush pull

Flush pull							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Flush pull, round	Silver/EV 1 look	1	9-46686-00-0-1
					Dark brown [1]	1	9-46686-00-0-5
					White, RAL 9016	1	9-46686-00-0-7
					Stainless steel	1	9-46686-00-0-8

[1] Similar to RAL 8022

# Etem E52 / GU-937 bogies

GU

## Hardware requirements

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]				
Pattern				Designation
A	C	D	F	
1	2	2	4	DIRIGENT interior/exterior handle set, with PC hole
				Silver/EV 1 look
				Dark brown [2]
				White, RAL 9016

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws				
Pattern				Designation
A	C	D	F	
2	4	4	8	Countersunk screw M6 x 20 mm
2	4	4	8	Countersunk screw M6 x 45 mm

Optional: gasket plates				
Pattern				Designation
A	C	D	F	
1	2	2	4	Gasket plate for flush pull
1	2	2	4	Gasket plate for exterior and interior turn handle

# Etem E70 / GU-934 bogies

## Application ranges

**GU**

### Application ranges

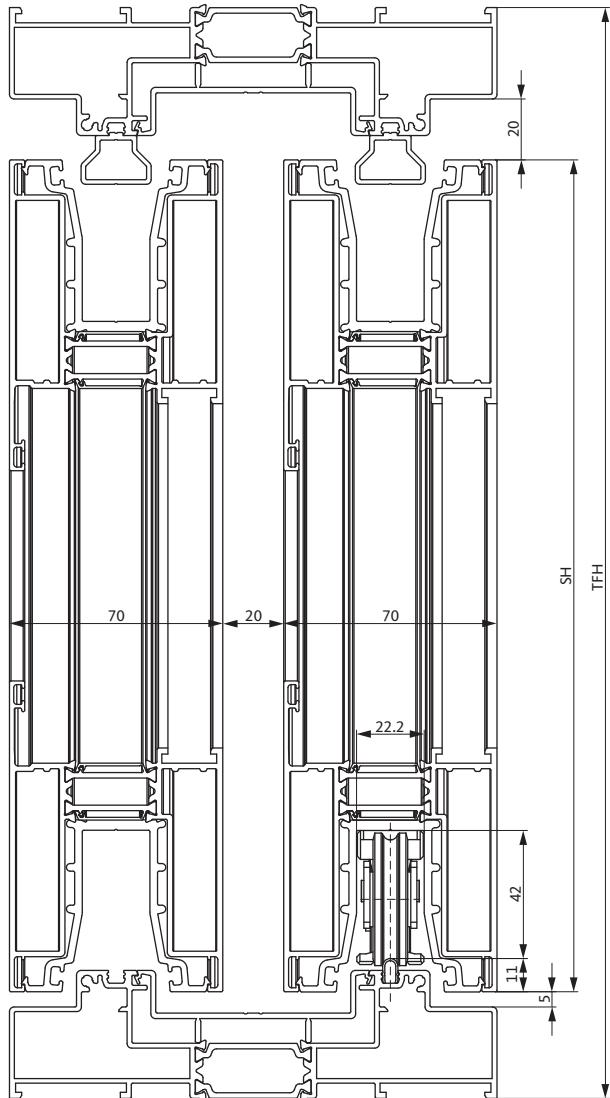
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700–3300 mm	849–2749 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45904	from page 131
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

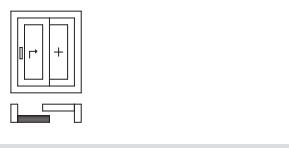
#### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

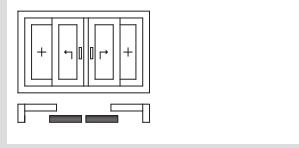


SH = sash height / TFH = total frame height

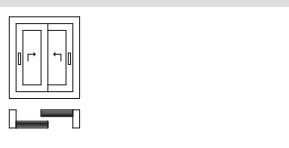
#### Possible patterns



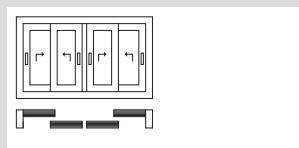
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



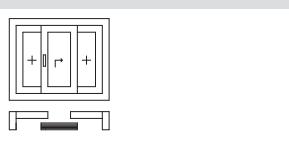
**Pattern C**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



**Pattern D**  
2 Lift&Slide doors  
Fig: sliding direction to the right and left



**Pattern 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

# Item E70 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F, G1



Bogies and connecting rod – for sash weights up to 300 kg

Bogies									
Pattern					Designation	Contents	Surface	PU	Order no.
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	4	1			faceGuard	1	K-16488-00-0-18

Connecting rod ø 8 mm													
Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.				
A	C	D	F	G1	GU-934 bogies set	700–1600 1601–1850 1851–2350 2351–3300	1100 1350 1850 3300	ferGuard	1	9-25476-11-0-1			
1	2	2	4	1				faceGuard	1	9-25476-11-0-18			
								ferGuard	1	9-25476-14-0-1			
								faceGuard	1	9-25476-14-0-18			
								ferGuard	1	9-25476-18-0-1			
								faceGuard	1	9-25476-18-0-18			

Bogies and connecting rod – for sash weights up to 400 kg



Bogies									
Pattern					Designation	Contents	Surface	PU	Order no.
A	C	D	F	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	4	1			faceGuard	1	K-16488-00-0-18
1	2	2	4	1	GU-934 tandem bogies set	2 x central bogies	ferGuard	1	K-17804-01-0-1
							faceGuard	1	K-17804-01-0-18

Connecting rod ø 8 mm													
Pattern					Sash width [mm]	Length [mm]	Surface	PU	Order no.				
A	C	D	F	G1	GU-934 tandem bogies set	1270–1600 1601–1850 1851–2350 2351–3300	1100 1350 1850 3300	ferGuard	1	9-25476-11-0-1			
1	2	2	4	1				faceGuard	1	9-25476-11-0-18			
								ferGuard	1	9-25476-14-0-1			
								faceGuard	1	9-25476-14-0-18			
								ferGuard	1	9-25476-18-0-1			
								faceGuard	1	9-25476-18-0-18			

# Etem E70 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F, G1

Lift&Slide gear, 37.5 mm backset											
Pattern					Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F	G1				Cover rail	Lock case, connecting rod		
1	2	2	4	1	849-1269	1190	406	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
								EV 1 / light gray	faceGUard	10	6-30021-11-0-18
					1239-1849	1770	406	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
								EV 1 / light grey	faceGUard	10	6-30021-19-0-18
					1849-2349	2270	1006	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
								EV 1 / light grey	faceGUard	10	6-30021-24-0-18
					2099-2749	2670	1006	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
								UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
								EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>											
1	2	2	4	1	max. 3249	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
								UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
								EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>											
1	2	2	4	1	max. 3249	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
								UC 5 / dark bronze	-	10	9-28483-00-0-5

Frame cam											
Pattern					Designation				Surface	PU	Order no.
A	C	D	F	G1							
2	2	4	6	-	Frame cam					1	6-22648-02-0-8
-	4	-	4	-	Countersunk screw 4.8 x 38 mm					1	9-13089-38-R-8

Packer, spacer, PC screw-hole cover cap											
Pattern					Designation				Surface	PU	Order no.
A	C	D	F	G1							
1	2	2	4	1	Vertical adapters for Lift&Slide front bogies					1	9-47295-06-0-1
5	10	10	20	6	Spacer for Lift&Slide gear					1	9-47296-07-0-1
1	2	2	4	1	Cover cap for profile cylinder					1	9-26687-00-0-1

Buffer 90												
Pattern					Designation				Surface	PU	Order no.	
A	C	D	F	G1								
2	4	2	4	2	Buffer 90 set					black	1	K-17134-00-0-6
										white	1	K-17134-00-0-7

# Etem E70 / GU-934 bogies

GU

## Hardware requirements

### Hardware requirements – pattern G1

Bottom keeper					Designation	Surface	PU	Order no.
Pattern	A	C	D	F	G1			
-	-	-	-	1	Bottom keeper set	ferGuard	1	K-12057-00-0-1

# Etem E70 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]						Designation	Surface	PU	Order no.
Pattern					G1				
A	C	D	F	G1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1	
1	2	2	4	1					
						Dark brown [2]	1	6-24606-00-0-5	
						White, RAL 9016	1	6-24606-00-0-7	
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1	
							Dark brown [2]	1	6-24607-00-0-5
							White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]						Designation	Surface	PU	Order no.
Pattern					G1				
A	C	D	F	G1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1	
1	2	2	4	1					
						Dark brown [2]	1	6-24606-00-0-5	
						White, RAL 9016	1	6-24606-00-0-7	
1	2	2	4	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1	
							Dark brown [2]	1	6-24607-00-0-5
							White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull						Designation	Surface	PU	Order no.
Pattern					G1				
A	C	D	F	G1	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1	
1	2	2	4	1					
						Dark brown [1]	1	9-29992-01-0-5	
						White, RAL 9016	1	9-29992-01-0-7	

[1] Similar to RAL 8022

# Etem E70 / GU-934 bogies

**GU**

## Hardware requirements

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]								
Pattern					Designation	Surface	PU	Order no.
A	C	D	F	G1				
1	2	2	4	1	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
						Dark brown [2]	1	6-24615-96-0-5
						White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws									
Pattern					Designation	Example of application	Surface	PU	Order no.
A	C	D	F	G1					
2	4	4	8	2	Countersunk screw M6 x 20 mm	1	-	1	9-13274-20-0-1
2	4	4	8	2	Countersunk screw M6 x 80 mm	2 + 3	-	1	9-13274-80-0-1

Optional: gasket plates									
Pattern					Designation	Example of application	Surface	PU	Order no.
A	C	D	F	G1					
1	2	2	4	1	Gasket plate for flush pull	2	black	1	9-47211-01-0-6
1	2	2	4	1	Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6

# Etem E70 / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Anti-jemmy device set
<b>Contents</b>					<b>Qty.</b> <b>Item no.</b>
Wedge					2 6-31219-00-0-1
Support					2 9-40863-00-0-1
Lever					2 9-40789-00-0-1

Corner-drive					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Corner-drive set
<b>Contents</b>					<b>Qty.</b> <b>Item no.</b>
Corner-drive					1 6-31284-00-0-1
Extension					1 6-31282-00-0-1
Cover					1 6-31283-00-0-1
Guide					2 9-28101-00-0-0
Stay arm slide block					1 6-22755-00-0-6
Lever complete					1 6-31234-00-0-1
Countersunk screw M5 x 16 mm					1 9-40828-00-R-1

Vertical packer					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	-	Vertical packer

P 959 connecting rod									
Pattern					Sash width [mm]				
A	C	D	F	G1	Length [mm]				
1	2	2	4	-	600–1220				
					1000				
					1221–1720				
					1500				
					1721–2020				
					2021–3000				
					2600				
					Stock length				
					4800				
					-				
					1 9-28355-48-0-3				

# Etem E70 / GU-934 bogies

GU

## Hardware requirements

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	1	Tension spring for reduction of operating forces

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]					
Pattern					Designation
A	C	D	F	G1	
1	2	2	4	1	Handle damper for controlled lowering

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam					
Pattern					Designation
A	C	D	F	G1	
2	4	4	4	-	Frame cam

Bottom keeper					
Pattern					Designation
A	C	D	F	G1	
1	2	2	2	-	Bottom keeper set

# Etem E70 / GU-937 bogies

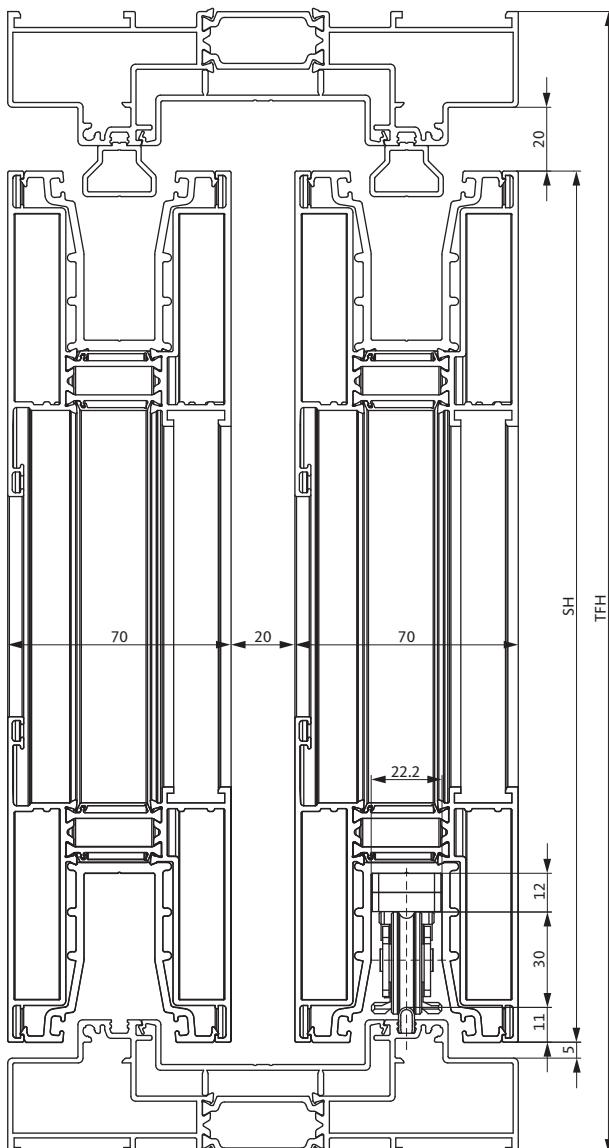
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	849-2749 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

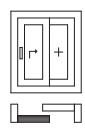
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-46564	from page 139
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338



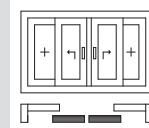
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



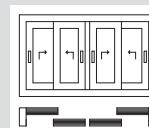
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left

# Etem E70 / GU-937 bogies

GU

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Bogies and connecting rod – for sash weights up to 150 kg



Bogies					Surface	PU	Order no.
Pattern				Designation	Contents		
A	C	D	F				
1	2	2	4	GU-937 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1 K-16493-00-0-1
						faceGuard	1 K-16493-00-0-18

Connecting rod ø 8 mm					Surface	PU	Order no.
Pattern				Sash width [mm]	Length [mm]		
A	C	D	F				
1	2	2	4	700–1600	1100	ferGuard	1 9-25476-11-0-1
				1601–1850	1350	faceGuard	1 9-25476-11-0-18
				1851–2350	1850	ferGuard	1 9-25476-14-0-1
				2351–3300	3300	faceGuard	1 9-25476-14-0-18
						ferGuard	1 9-25476-18-0-1
						faceGuard	1 9-25476-18-0-18

# Etem E70 / GU-937 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F

Lift&Slide gear, 27.5 mm backset										
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface	PU	Order no.	
A	C	D	F				Cover rail	Lock case, connecting rod		
1	2	2	4	849-1269	1190	406	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
							UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5
							EV 1 / light gray	faceGUard	10	6-30019-11-0-18
				1239-1849	1770	406	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
							UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5
							EV 1 / light grey	faceGUard	10	6-30019-19-0-18
				1849-2349	2270	1006	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
							UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5
							EV 1 / light grey	faceGUard	10	6-30019-24-0-18
				2099-2749	2670	1006	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
							UC 5 / dark bronze	ferGUard	10	6-30019-28-0-5
							EV 1 / light grey	faceGUard	10	6-30019-28-0-18
Optional: Gear and cover-rail extension set 500 mm										
1	2	2	4	max. 3249	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
							UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
							EV 1 / light grey	faceGUard	10	6-32030-00-0-18
Optional: Cover-rail extension set 500 mm										
1	2	2	4	max. 3249	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
							UC 5 / dark bronze	-	10	9-28483-00-0-5

# Item E70 / GU-937 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Frame cam				
Pattern				Designation
A	C	D	F	
2	2	4	6	Frame cam
-	4	-	4	Countersunk screw 4.8 x 38 mm

Horizontal packers				
Pattern				Designation
A	C	D	F	
2	4	4	8	Packer for GU-937 front bogie
2	4	4	8	Packer for GU-937 rear bogie

Packer, spacer, PC screw-hole cover cap				
Pattern				Designation
A	C	D	F	
1	2	2	4	Vertical adapters for Lift&Slide front bogies
5	10	10	20	Spacer for Lift&Slide gear
1	2	2	4	Cover cap for profile cylinder

Buffer 90				
Pattern				Designation
A	C	D	F	
2	4	2	4	Buffer 90 set
				black
				white

# Etem E70 / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] Similar to RAL 8022

Flush pull							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
					Dark brown [1]	1	9-29992-01-0-5
					White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

# Etem E70 / GU-937 bogies

**GU**

## Hardware requirements

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]					Designation	Surface	PU	Order no.
Pattern	A	C	D	F				
1	2	2	4	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1	
					Dark brown [2]	1	6-24615-96-0-5	
					White, RAL 9016	1	6-24615-96-0-7	

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws					Designation	Example of application	Surface	PU	Order no.
Pattern	A	C	D	F					
2	4	4	8		Countersunk screw M6 x 20 mm	1	–	1	9-13274-20-0-1
2	4	4	8		Countersunk screw M6 x 80 mm	2 + 3	–	1	9-13274-80-0-1
Optional: gasket plates									
Pattern	A	C	D	F	Designation	Example of application	Surface	PU	Order no.
1	2	2	4		Gasket plate for flush pull	2	black	1	9-47211-01-0-6
1	2	2	4		Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6

# Etem E70 / GU-937 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents							
Wedge							
Support							
Lever							

Corner-drive							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Corner-drive set	-	1	K-16570-00-0-1
Contents							
Corner-drive							
Extension							
Cover							
Guide							
Stay arm slide block							
Lever complete							
Countersunk screw M5 x 16 mm							

Vertical packer							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Vertical packer	-	1	9-47295-06-0-1

P 959 connecting rod								
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.		
A	C	D	F					
1	2	2	4	600-1220	1000	-	1	9-28355-10-0-3
				1221-1720	1500	-	1	9-28355-15-0-3
				1721-2020	1800	-	1	9-28355-18-0-3
				2021-3000	2600	-	1	9-28355-26-0-3
				Stock length	4800	-	1	9-28355-48-0-3

# Etem E70 / GU-937 bogies

GU

## Hardware requirements

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Handle damper [1]				
Pattern		Designation		
A	C	D	F	
1	2	2	4	Handle damper for controlled lowering
[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.				

#### Additional kit (L&S night vent module)

Frame cam				
Pattern		Designation		
A	C	D	F	
2	4	4	4	Frame cam
Stainless steel				

Bottom keeper				
Pattern		Designation		
A	C	D	F	
1	2	2	2	Bottom keeper set
ferGuard				

# Exalco Albio 230 / GU-934 bogies

## Application ranges

**GU**

### Application ranges

#### Sash widths / heights / weights

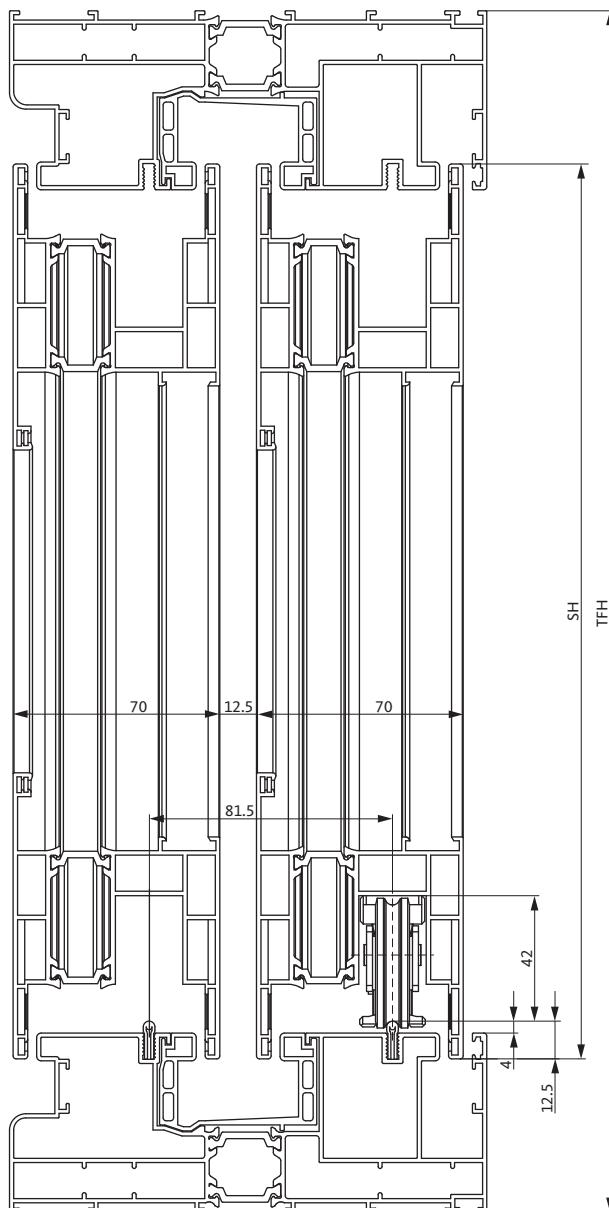
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700–3300 mm	825–2725 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

#### Installation drawings

Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44822	from page 147
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

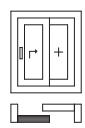
#### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

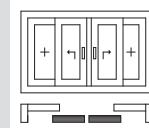


SH = sash height / TFH = total frame height

#### Possible patterns



**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

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 300 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	C					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	700–1600	1100	ferGuard	1	9-25476-11-0-1
				faceGuard	1	9-25476-11-0-18
		1601–1850	1350	ferGuard	1	9-25476-14-0-1
				faceGuard	1	9-25476-14-0-18
		1851–2350	1850	ferGuard	1	9-25476-18-0-1
		2351–3300		faceGuard	1	9-25476-18-0-18
			3300	ferGuard	1	9-25476-33-0-1
				faceGuard	1	9-25476-33-0-18

# Exalco Albio 230 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	825–1245	1190	407.5	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
		1195–1825	1770	407.5	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
		1825–2325	2270	1007.5	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
		2075–2725	2670	1007.5	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3225	500	–	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
			UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5		
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3225	500	–	EV 1 / light grey	–	10	9-28483-00-0-1
			UC 5 / dark bronze	–	10	9-28483-00-0-5		

Basic hardware set for Exalco Albio 230							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	Basic hardware set for Exalco Albio 230			–	1	K-17482-00-0-0
<b>Contents</b>							
Vertical adapters for Lift&Slide front bogies							
Spacer for Lift&Slide gear							
Frame cam							
Rubber buffer 82							
Countersunk screw M6 x 75 mm for fixing the turn handle with flush pull or interior/exterior handle sets							
PC screw-hole cover cap (grey)							
		Qty.		Item no.			

### Hardware requirements – pattern C

Counterplate		Designation	Surface	PU	Order no.
Pattern	A C				
-	2	Counterplate	-	1	9-24414-00-0-0

Fixing screws		Designation	Surface	PU	Order no.
Pattern	A C				
-	4	Countersunk screw M5 x 55 mm	Stainless steel	1	9-13133-55-0-8

### Optional additional components

Buffer 90		Designation	Surface	PU	Order no.
Pattern	A C				
2	4	Buffer 90 set	black	1	K-17134-00-0-6
			white	1	K-17134-00-0-7

# Exalco Albio 230 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1][2]							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	DIRIGENT interior handle without PC hole		Silver/EV 1 look	1	6-24608-00-0-1	
				Dark brown [3]	1	6-24608-00-0-5	
				White, RAL 9016	1	6-24608-00-0-7	
1	2	DIRIGENT interior turn handle, with PC hole		Silver/EV 1 look	1	6-24609-00-0-1	
				Dark brown [3]	1	6-24609-00-0-5	
				White, RAL 9016	1	6-24609-00-0-7	

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] The fixing screws are contained in the basic hardware set for Exalco Albio 230 / order number K-17482-00-0-0.

[3] Similar to RAL 8022

Flush pull							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	Flush pull MS, square		Silver/EV 1 look	1	9-29992-01-0-1	
				Dark brown [1]	1	9-29992-01-0-5	
				White, RAL 9016	1	9-29992-01-0-7	

[1] Similar to RAL 8022

Optionally: gasket plate							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	Gasket plate for flush pull		black	1	9-47211-01-0-6	

#### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1][2]							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1	6-24615-96-0-1	
				Dark brown [3]	1	6-24615-96-0-5	
				White, RAL 9016	1	6-24615-96-0-7	

[1] The use of buffers is recommended. Order information refer to page 302.

[2] The fixing screws are contained in the basic hardware set for Exalco Albio 230 / order number K-17482-00-0-0.

[3] Similar to RAL 8022

Optionally: gasket plate							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	Gasket plate for exterior and interior turn handle		black	1	9-47210-01-0-6	

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]		Surface	PU	Order no.
Pattern	Designation			
A C				
1 2	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]		Surface	PU	Order no.
Pattern	Designation			
A C				
1 2	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Feal T 120 / GU-934 bogies

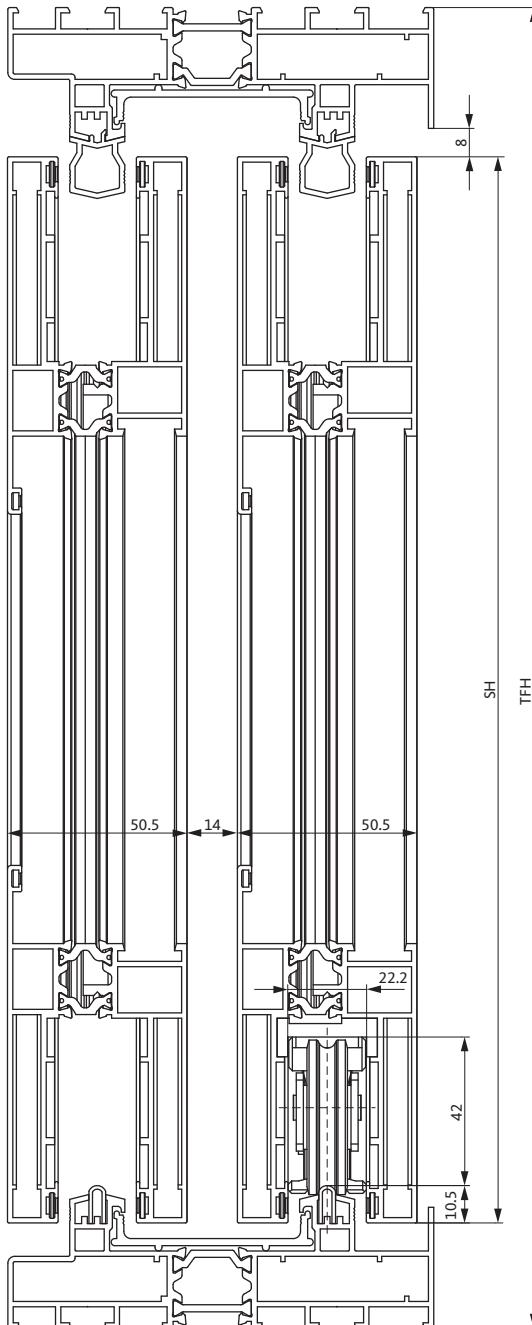
## Application ranges

**GU**

### Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	847-2747 mm	300 kg	GU-934
		400 kg	GU-934 Tandem
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45732	from page 153
HS-Master, pattern A	0-44355	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

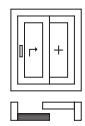


SH = sash height / TFH = total frame height

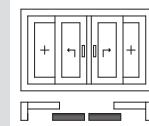
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



**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

# Feal T 120 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 300 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	C					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18

### Connecting rod ø 8 mm

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	720–1600	1100	ferGuard	1	9-25476-11-0-1
		1601–1850		faceGuard	1	9-25476-11-0-18
		1851–2350	1850	ferGuard	1	9-25476-14-0-1
		2351–3300		faceGuard	1	9-25476-14-0-18
			3300	ferGuard	1	9-25476-18-0-1
				faceGuard	1	9-25476-18-0-18

Bogies and connecting rod – for sash weights up to 400 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	C					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18
1	2	GU-934 tandem bogies set	2 x central bogies	ferGuard faceGuard	1 1	K-17804-01-0-1 K-17804-01-0-18

### Connecting rod ø 8 mm

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	1290–1600	1100	ferGuard	1	9-25476-11-0-1
		1601–1850		faceGuard	1	9-25476-11-0-18
		1851–2350	1850	ferGuard	1	9-25476-14-0-1
		2351–3300		faceGuard	1	9-25476-14-0-18
			3300	ferGuard	1	9-25476-18-0-1
				faceGuard	1	9-25476-18-0-18

# Feal T 120 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	847-1267	1190	405.5	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
					EV 1 / light grey	faceGUard	10	6-30021-11-0-18
		1217-1874	1770	405.5	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
					EV 1 / light grey	faceGUard	10	6-30021-19-0-18
		1874-2347	2270	1005.5	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
					EV 1 / light grey	faceGUard	10	6-30021-24-0-18
		2097-2747	2670	1005.5	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
					EV 1 / light grey	faceGUard	10	6-30021-28-0-18
Alternative: Lift&Slide gear, 27.5 mm backset								
1	2	847-1267	1190	405.5	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5
					EV 1 / light grey	faceGUard	10	6-30019-11-0-18
		1217-1874	1770	405.5	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5
					EV 1 / light grey	faceGUard	10	6-30019-19-0-18
		1874-2347	2270	1005.5	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5
					EV 1 / light grey	faceGUard	10	6-30019-24-0-18
		2097-2747	2670	1005.5	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-28-0-5
					EV 1 / light grey	faceGUard	10	6-30019-28-0-18
Optional: Gear and cover-rail extension set 500 mm								
1	2	max. 3247	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
					EV 1 / light grey	faceGUard	10	6-32030-00-0-18
Optional: Cover-rail extension set 500 mm								
1	2	max. 3247	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
					UC 5 / dark bronze	-	10	9-28483-00-0-5

# Feal T 120 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C

Horizontal packers for GU-934 bogies					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Packer for Lift&Slide front bogie	–	1	9-41680-05-0-1
1	2	Packer for Lift&Slide rear bogie	–	1	9-41681-05-0-1

Vertical adapters for GU-934 front bogies					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Packer for Lift&Slide front bogie	–	1	9-47295-05-0-1

Horizontal packers for GU-934 tandem bogies					
Pattern		Designation	Surface	PU	Order no.
A	C				
2	4	Packer for central bogies	–	1	9-41681-05-0-1

Frame cam					
Pattern		Designation	Surface	PU	Order no.
A	C				
2	–	Frame cam	Stainless steel	1	9-47530-01-0-8
–	2	Frame cam	Stainless steel	1	6-22648-02-0-8

Spacer, PC screw-hole cover cap					
Pattern		Designation	Surface	PU	Order no.
A	C				
5	10	Spacer for Lift&Slide gear	–	1	9-47296-07-0-1
1	2	Cover cap for profile cylinder	grey	1	9-26687-00-0-1

# Feal T 120 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
			Dark brown [2]	1	6-24608-00-0-5
			White, RAL 9016	1	6-24608-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
			Dark brown [2]	1	6-24609-00-0-5
			White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
			Dark brown [2]	1	6-24608-00-0-5
			White, RAL 9016	1	6-24608-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
			Dark brown [2]	1	6-24609-00-0-5
			White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
			Dark brown [1]	1	9-29992-01-0-5
			White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

# Feal T 120 / GU-934 bogies



## Hardware requirements

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]					
Pattern		Designation		Surface	PU
A	C				Order no.
1	2	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1
				Dark brown [2]	1
				White, RAL 9016	1

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws					
Pattern		Designation		Example of application	Surface
A	C				PU
2	4	Countersunk screw M6 x 20 mm		1	-
2	4	Countersunk screw M6 x 60 mm		2 + 3	-

Optional: gasket plates					
Pattern		Designation		Example of application	Surface
A	C				PU
1	2	Gasket plate for flush pull		2	black
1	2	Gasket plate for exterior and interior turn handle		3	black

# Feal T 120 / GU-934 bogies

## Hardware requirements



### Optional additional components

Buffer 90					
Pattern		Designation	Surface	PU	Order no.
A	C	Buffer 90 set	black	1	K-17134-00-0-6
2	4		white	1	K-17134-00-0-7

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Tension spring for reduction of operating forces		-	1 9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

### Handle damper [1]

Handle damper [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Handle damper for controlled lowering		-	1 K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

### Additional kit (L&S night vent module)

Frame cam					
Pattern		Designation	Surface	PU	Order no.
A	C				
-	4	Frame cam	Stainless steel	1	9-43830-04-0-8

### Bottom keeper

Bottom keeper					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Bottom keeper set		ferGuard	1 K-12057-00-0-1



# Forster Italy / GU-934 bogies

## Application ranges

GU



## Application ranges

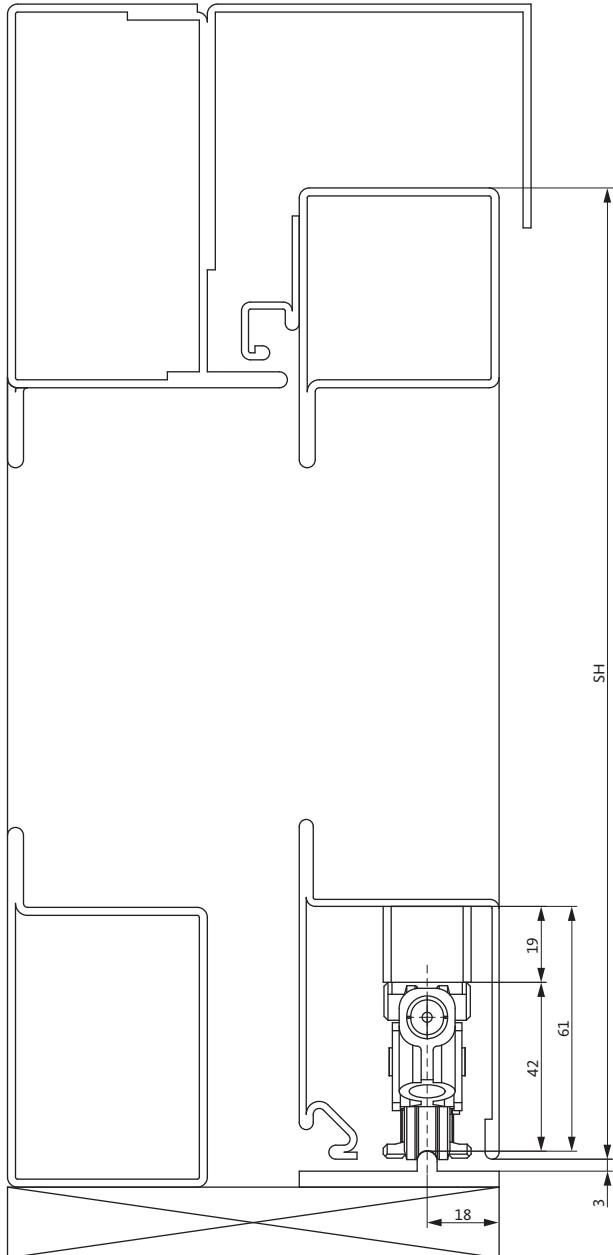
### Sash widths / heights / weights

Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700–3300 mm	825–2725 mm	300 kg	GU-934

SH : SW = 2.5 : 1

### Installation drawings

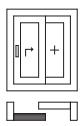
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44559	from page 161
Locking monitoring set	0-44449	from page 338



### Note:

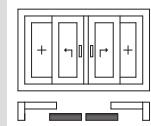
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



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

SH = sash height

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 300 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	C					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	700-1600	1100	ferGuard	1	9-25476-11-0-1
				faceGuard	1	9-25476-11-0-18
		1601-1850	1350	ferGuard	1	9-25476-14-0-1
				faceGuard	1	9-25476-14-0-18
		1851-2350	1850	ferGuard	1	9-25476-18-0-1
		2351-3300		faceGuard	1	9-25476-18-0-18
			3300	ferGuard	1	9-25476-33-0-1
				faceGuard	1	9-25476-33-0-18

# Forster Italy / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	825–1245	1190	398	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
					EV 1 / light gray	faceGUard	10	6-30021-11-0-18
		1195–1825	1770	398	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
					EV 1 / light grey	faceGUard	10	6-30021-19-0-18
		1826–2325	2270	998	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
					EV 1 / light grey	faceGUard	10	6-30021-24-0-18
		2075–2725	2020	998	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
					EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3225	500	–	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
					EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3225	500	–	EV 1 / light grey	–	10	9-28483-00-0-1
					UC 5 / dark bronze	–	10	9-28483-00-0-5

Basic hardware set for Forster Italy							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	Basic hardware set for Forster Italy		–	–	1	K-17121-00-0-0
<b>Contents</b>							
Vertical adapters for Lift&Slide front bogies							
Frame cam [1]							
Countersunk screw M5 x 20 mm for fixing the turn handle							
Bag of screws K-17122-00-0-0	<b>Contents</b>					Qty.	Item no.
	Countersunk screw M5 x 12 mm					6	9-13133-12
	Countersunk screw M5 x 30 mm					6	9-13133-30-0-0
	Countersunk screw M5 x 40 mm					4	9-13133-40-0-0
	PC screw-hole cover cap (grey)					2	9-26687-00-0-1
[1] Cannot be used with pattern C							

Rubber buffer							
Pattern		Designation			Surface	PU	Order no.
A	C						
2	4	Rubber buffer 60			black	1	9-23793-00-0-0

### Hardware requirements – pattern C

Frame cam, counterplate, fixing screws					
Pattern		Designation	Surface	PU	Order no.
A	C				
-	2	Frame cam	Stainless steel	1	6-22623-05-0-8
-	2	Counterplate	-	1	9-24414-00-0-0
-	4	Countersunk screw M5 x 30 mm	-	1	9-13133-30-0-0

# Forster Italy / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1][2]						
Pattern		Designation		Surface	PU	Order no.
A	C					
1	2	DIRIGENT interior turn handle, with PC hole		Silver/EV 1 look	1	6-24607-00-0-1
				Dark brown [3]	1	6-24607-00-0-5
				White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for Forster Italy / order number K-17121-00-0-0.  
[3] Similar to RAL 8022

#### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]						
Pattern		Designation		Surface	PU	Order no.
A	C					
1	2	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1	6-24615-96-0-1
				Dark brown [2]	1	6-24615-96-0-5
				White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws						
Pattern		Designation		Surface	PU	Order no.
A	C					
2	4	Countersunk screw M6 x 60 mm		-	1	9-13274-60-0-1

Optionally: gasket plate						
Pattern		Designation		Surface	PU	Order no.
A	C					
1	2	Gasket plate for exterior and interior turn handle		black	1	9-47210-01-0-6

### Optional additional components

Buffer 90					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Buffer 90 set	black	1	K-12024-00-0-6
			white	1	K-12024-00-0-7
			cream white	1	K-12024-00-0-7Z

Bottom keeper					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Bottom keeper set	ferGuard	1	K-12057-00-0-1

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1 2		Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1 2		Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Gastaldello Sistemi / GU-934 bogies

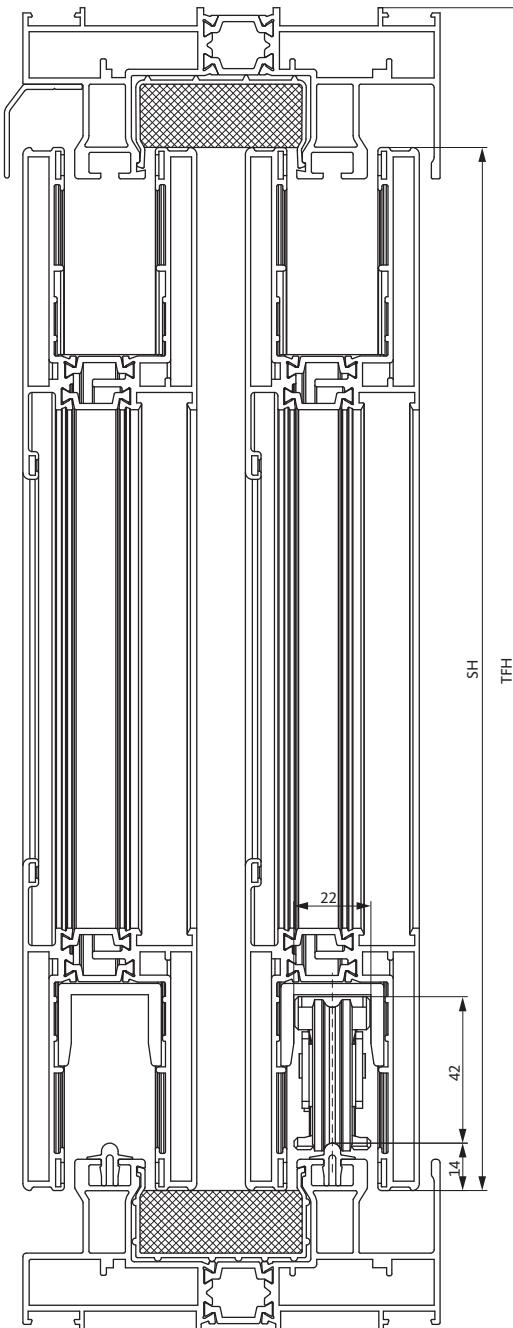
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	852-2752 mm	250 kg	GU-934
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44395	from page 167
Locking monitoring set	0-44449	from page 338

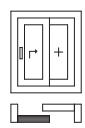


SH = sash height / TFH = total frame height

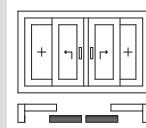
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



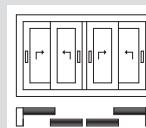
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left

### Hardware requirements – patterns A, C, D, F

Bogies and connecting rod – for sash weights up to 250 kg



Bogies								
Pattern				Designation	Contents	Surface	PU	Order no.
A	C	D	F					
1	2	2	4	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Gastaldello Sistemi / order number K-16967-00-0-0.

Connecting rod ø 8 mm								
Pattern				Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F					
1	2	2	4	700-1600	1100	ferGuard	1	9-25476-11-0-1
				1601-1850	1350	ferGuard	1	9-25476-14-0-1
				1851-2350	1850	ferGuard	1	9-25476-18-0-1
				2351-3300	3300	ferGuard	1	9-25476-33-0-1

# Gastaldello Sistemi / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F

Lift&Slide gear, 27.5 mm backset										
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F				Cover rail	Lock case, connecting rod		
1	2	2	4	852-1272	1190	409.5	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5			
				1222-1852	1770	409.5	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5			
				1852-2352	2270	1009.5	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5			
				2102-2752	2670	1009.5	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-28-0-5			
<b>Optional: Gear and cover-rail extension set 500 mm</b>										
1	2	2	4	max. 3252	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
			UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5				
<b>Optional: Cover-rail extension set 500 mm</b>										
1	2	2	4	max. 3252	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
			UC 5 / dark bronze	-	10	9-28483-00-0-5				

Basic hardware set for Gastaldello Sistemi																	
Pattern				Designation				Surface	PU	Order no.							
A	C	D	F	Basic hardware set for Gastaldello Sistemi				-	1	K-16967-00-0-0							
<b>Contents</b>																	
Bogies set		1 x front bogie 1 x rear bogie						-	1	K-16488-00-0-1							
Rubber buffer 80, bottom [1]										1	9-08488-00-0-6						
Rubber buffer 80, top [1]										1	9-08488-15-0-6						
Frame cam										2	9-38825-00-0-8						
Bag of screws K-15257-00-0-8	<b>Contents</b>							Qty.	Item no.								
	Countersunk-head tapping screw 4.8 x 60 mm							9	9-13089-60-0-8								
	Countersunk-head tapping screw 4.8 x 38 mm							12	9-13089-38-R-8								
	Countersunk-head tapping screw 3.5 x 16 mm							6	9-13151-16-0-5								
	PC screw-hole cover cap (grey)							1	9-26687-00-0-1								

[1] Cannot be used with patterns D and F

Cover plate										
Pattern				Designation				Surface	PU	Order no.
A	C	D	F	Cover plate, bottom				black	1	9-45585-00-0-6
1	2	2	4							

### Hardware requirements – patterns A, C, D, F

Spacer, guides				Designation	Surface	PU	Order no.
Pattern	A	C	D				
1	1	2	3	Spacer	-	1	[1]
1	1	2	3	Guide 1	-	1	[1]
1	2	2	4	Guide 2	-	1	[1]

[1] Delivered by Gretsch-Unitas Italia S.r.l.

# Gastaldello Sistemi / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

##### DIRIGENT turn handle [1]

Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
					Dark brown [2]	1	6-24608-00-0-5
					White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
					Dark brown [2]	1	6-24609-00-0-5
					White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Fixing screws

Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
2	4	4	8	Countersunk screw 5.5 x 32 mm	-	1	9-13253-32-0-0

### Optional additional components

Buffer 90							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
2	4	2	4	Buffer 90 set	black	1	K-12024-00-0-6
					white	1	K-12024-00-0-7
					cream white	1	K-12024-00-0-7Z

Packer for buffer 90							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
-	-	4	8	Packer for buffer 90 Height 8.0 mm	black	1	9-30294-01-0-6
					white	1	9-30294-01-0-7
					cream white	1	9-30294-01-0-7Z

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1 2 2 4				Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1 2 2 4				Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Giugni / GU-937 bogies

## Application ranges

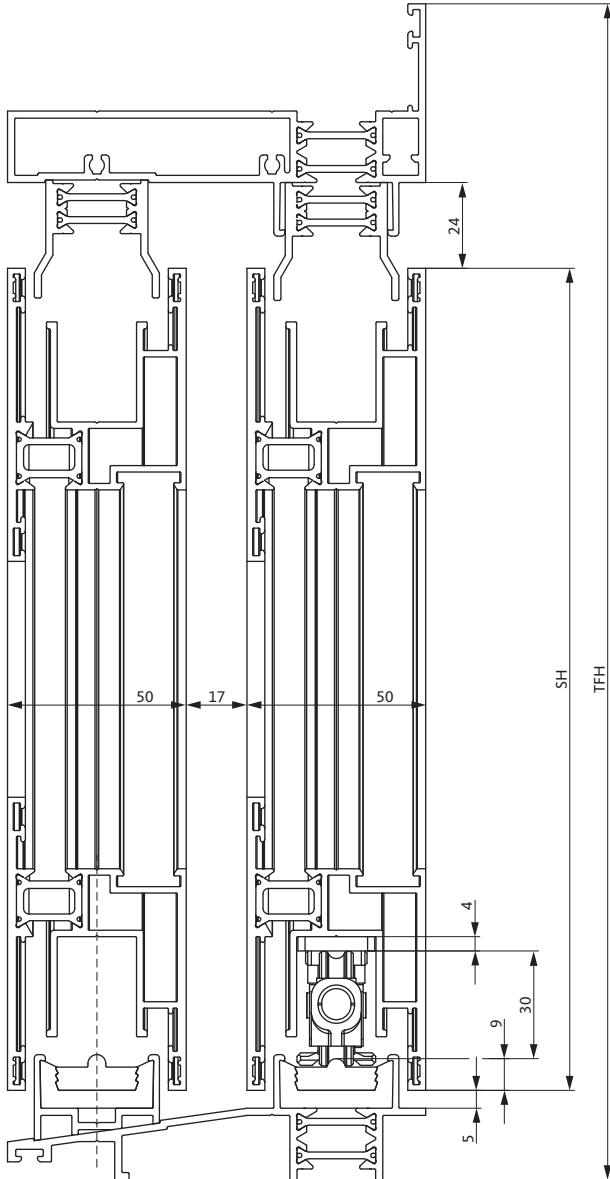
**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-2220 mm	845-2745 mm	150 kg	GU-937
		300 kg	GU-937 Tandem

SH : SW = 2.5 : 1

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-44968	from page 173
Locking monitoring set	0-44449	from page 338



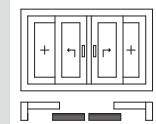
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



**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

SH = sash height / TFH = total frame height

# Giugni / GU-937 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 150 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	C					
1	2	GU-937 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16493-00-0-1 K-16493-00-0-18

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	700–1600	1100	ferGuard	1	9-25476-11-0-1
				faceGuard	1	9-25476-11-0-18
		1601–1850	1350	ferGuard	1	9-25476-14-0-1
				faceGuard	1	9-25476-14-0-18
		1851–2220	1850	ferGuard	1	9-25476-18-0-1
				faceGuard	1	9-25476-18-0-18

Bogies and connecting rod – for sash weights up to 300 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	C					
1	2	GU-937 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16493-00-0-1 K-16493-00-0-18
1	2	GU-937 tandem bogies set	2 x central bogies	ferGuard faceGuard	1 1	K-17759-01-0-1 K-17759-01-0-18

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	1270–1600	1100	ferGuard	1	9-25476-11-0-1
				faceGuard	1	9-25476-11-0-18
		1601–1850	1350	ferGuard	1	9-25476-14-0-1
				faceGuard	1	9-25476-14-0-18
		1851–2220	1850	ferGuard	1	9-25476-18-0-1
				faceGuard	1	9-25476-18-0-18

# Giugni / GU-937 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	845–1265	1190	404	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
					EV 1 / light grey	faceGUard	10	6-30021-11-0-18
		1215–1845	1770	404	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
					EV 1 / light grey	faceGUard	10	6-30021-19-0-18
		1845–2345	2270	1004	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
					EV 1 / light grey	faceGUard	10	6-30021-24-0-18
		2095–2745	2670	1004	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
					EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3245	500	–	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
					EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	.	500	–	EV 1 / light grey	–	10	9-28483-05-0-1
					UC 5 / dark bronze	–	10	9-28483-05-0-5

Basic hardware set for Giugni										
Pattern		Designation			Surface	PU	Order no.			
A	C									
1	2	Basic hardware set for Giugni			–	1	K-17683-00-0-0			
<b>Contents</b>										
Vertical adapters for Lift&Slide front bogies										
Horizontal packer for Lift&Slide front bogie										
Horizontal packer for Lift&Slide rear bogie										
Spacer for Lift&Slide gear										
Frame cam [1]										
Rubber buffer 60										
Countersunk screw M5 x 25 mm										
Countersunk screw M6 x 20 mm for fixing the turn handle										
PC screw-hole cover cap (grey)										
[1] Cannot be used with pattern C										

Horizontal packers for GU-937 tandem bogies							
Pattern		Designation			Surface	PU	Order no.
A	C						
2	4	Packer for central bogies			–	1	9-41681-14-0-1

### Hardware requirements – pattern C

Frame cam, counterplate		Designation	Surface	PU	Order no.
Pattern	C				
-	2	Frame cam	Stainless steel	1	6-22648-01-0-8
-	2	Counterplate	-	1	9-24414-00-0-0

# Giugni / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1][2]				Surface	PU	Order no.
Pattern	Designation					
A	C					
1	2	DIRIGENT interior handle without PC hole		Silver/EV 1 look	1	6-24606-00-0-1
				Dark brown [3]	1	6-24606-00-0-5
				White, RAL 9016	1	6-24606-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole		Silver/EV 1 look	1	6-24607-00-0-1
				Dark brown [3]	1	6-24607-00-0-5
				White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for Giugni / order number K-17683-00-0-0.  
[3] Similar to RAL 8022

### Optional additional components

Buffer 90				Surface	PU	Order no.
Pattern	Designation					
A	C					
2	4	Buffer 90 set		black	1	K-17134-00-0-6
				white	1	K-17134-00-0-7

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]				Surface	PU	Order no.
Pattern	Designation					
A	C					
1	2	Tension spring for reduction of operating forces			-	1 9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

### Handle damper [1]

Pattern	Designation	Surface	PU	Order no.
A	C			
1	2 Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

### Additional kit (L&S night vent module)

Frame cam				Surface	PU	Order no.
Pattern	Designation					
A	C					
2	-	Frame cam		Stainless steel	1	9-43830-03-0-8

### Bottom keeper

Pattern	Designation	Surface	PU	Order no.
A	C			
1	2 Bottom keeper set	ferGuard	1	K-12057-00-0-1

### Additional kit – burglar protection

Locking monitoring set				Surface	PU	Order no.
Pattern	Designation					
A	C					
1	-	Locking monitoring set		-	1	K-16752-00-0-0
1	-	Eccentric plug		brown	1	6-33079-00-0-5
				white	1	6-33079-00-0-7

# Metra Monorotaia / GU-934 bogies

## Application ranges

GU



## Application ranges

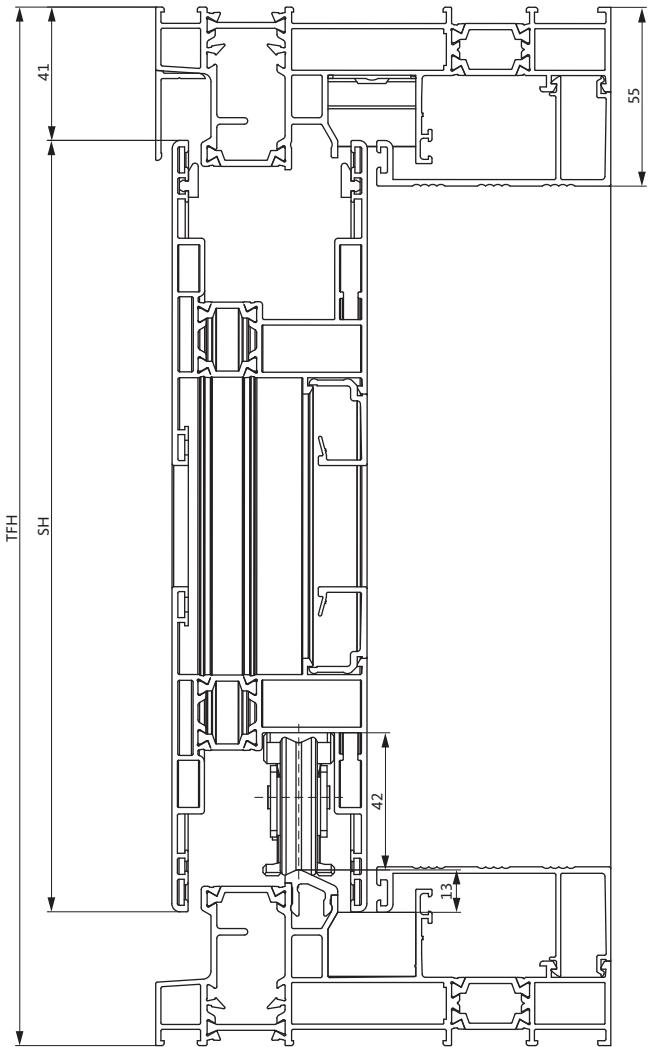
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700–3300 mm	855–2755 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

### Installation drawings

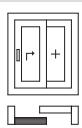
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44812	from page 179
Locking monitoring set	0-44449	from page 338

### Note:

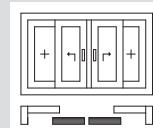
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



### Possible patterns



**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

# Metra Monorotaia / GU-934 bogies

GU

## Hardware requirements

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 300 kg



Bogies		Designation	Surface	PU	Order no.
Pattern					
A	C				
1	2	GU-934 front bogie	ferGuard	1	[1]
1	2	GU-934 rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Metra Monorotaia / order number K-17414-00-0-0.

Connecting rod ø 8 mm		Length [mm]	Surface	PU	Order no.
Pattern		Sash width [mm]			
A	C				
1	2	700–1600	1100	ferGuard	1 9-25476-11-0-1
		1601–1850	1350	ferGuard	1 9-25476-14-0-1
		1851–2350	1850	ferGuard	1 9-25476-18-0-1
		2351–3300	3300	ferGuard	1 9-25476-33-0-1

# Metra Monorotaia / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	855–1275	1190	408	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
		UC 5 / dark bronze	ferGUard		10	6-30021-11-0-5		
		1225–1855	1770	408	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
		UC 5 / dark bronze	ferGUard		10	6-30021-19-0-5		
		1855–2355	2270	1008	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
		UC 5 / dark bronze	ferGUard		10	6-30021-24-0-5		
		2105–2755	2670	1008	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
		UC 5 / dark bronze	ferGUard		10	6-30021-28-0-5		
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3255	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3255	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
					UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Metra Monorotaia											
Pattern		Designation			Surface	PU	Order no.				
A	C						Qty.	Item no.			
1	2	Basic hardware set for Metra Monorotaia			-	1	K-17414-00-0-0				
<b>Contents</b>											
GU-934 front bogie						1	6-30015-02-0-1				
GU-934 rear bogie						1	6-30017-02-0-1				
Vertical adapters for Lift&Slide front bogies						1	9-47295-11-0-1				
Spacer for Lift&Slide gear						5	9-47296-12-0-1				
Rubber buffer 82						4	9-22820-00-0-0				
<b>Bag of screws</b> <b>K-14279-00-0-0</b>			<b>Contents</b>			Qty.	<b>Item no.</b>				
			Countersunk-head tapping screw 4.8 x 16 mm			3	9-13089-16				
			Countersunk screw M6 x 70 mm			2	9-13274-70-0-1				
			Countersunk screw M5 x 10 mm			2	9-13133-10-0-0				
			Countersunk screw M5 x 25 mm			4	9-13133-25-0-0				
			Countersunk screw M5 x 35 mm			1	9-13133-35-0-0				
			Countersunk screw M5 x 50 mm			7	9-13133-50-0-0				
			PC screw-hole cover cap (grey)			2	9-26687-00-0-1				

Gasket plate, bridging gasket, top guide track								
Pattern		Designation			Surface	PU	Order no.	
A	C						Qty.	Item no.
1	2	Gasket plate			black	1	9-44106-00-0-6	
1	2	Bridging gasket			-	1	6-22154-13-0-0	
1	2	Top guide track			black	1	K-14281-00-0-6	

# Metra Monorotaia / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – pattern A

Frame cam							
Pattern	Designation		Surface	PU	Order no.		
A	C						
2	-	Frame cam set		Stainless steel	1 K-17415-00-0-8		
Contents				Qty.	Item no.		
Frame cam				1	9-44211-00-0-8		
Countersunk-head tapping screw 4.8 x 38 mm				2	9-13528-38-R-8		

### Hardware requirements – pattern C

Frame cam, counterplate, fixing screws					
Pattern	Designation		Surface	PU	Order no.
A	C				
-	2	Frame cam		Stainless steel	1 6-22623-05-0-8
-	2	Counterplate		-	1 9-24414-00-0-0
-	4	Countersunk screw M5 x 35 mm		-	1 9-13133-35-0-0

### Optional additional components

Buffer 90					
Pattern	Designation		Surface	PU	Order no.
A	C				
2	4	Buffer 90 set	black	1	K-12024-00-0-6
			white	1	K-12024-00-0-7
			cream white	1	K-12024-00-0-7Z

Bottom keeper					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Bottom keeper set		ferGuard	1 K-14568-00-0-1

# Metra Monorotaia / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
			Dark brown [2]	1	6-24606-00-0-5
			White, RAL 9016	1	6-24606-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
			Dark brown [2]	1	6-24607-00-0-5
			White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
			Dark brown [1]	1	9-29992-01-0-5
			White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

##### Fixing screws

Pattern		Designation	Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

##### Optionally: gasket plate

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Gasket plate for flush pull	black	1	9-47211-01-0-6

# Metra Monorotaia / GU-934 bogies

GU

## Hardware requirements

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
			Dark brown [2]	1	6-24615-96-0-5
			White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws					
Pattern	Designation		Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 70 mm	–	1	9-13274-70-0-1

Optionally: gasket plate					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Metra Monorotaia / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents			Qty.	Item no.	
Wedge			2	6-31219-00-0-1	
Support			2	9-40863-00-0-1	
Lever			2	9-40789-00-0-1	

Corner-drive					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Corner-drive set	-	1	K-16570-00-0-1
Contents			Qty.	Item no.	
Corner-drive			1	6-31284-00-0-1	
Extension			1	6-31282-00-0-1	
Cover			1	6-31283-00-0-1	
Guide			2	9-28101-00-0-0	
Stay arm slide block			1	6-22755-00-0-6	
Lever complete			1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm			1	9-40828-00-R-1	

Vertical packer					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Vertical packer	-	1	9-47295-11-0-1

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	600-1220	1000	-	1	9-28355-10-0-3
		1221-1720	1500	-	1	9-28355-15-0-3
		1721-2020	1800	-	1	9-28355-18-0-3
		2021-3000	2600	-	1	9-28355-26-0-3
		Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]		Surface	PU	Order no.
Pattern	Designation			
A	C			
1	2	Tension spring for reduction of operating forces	-	1 9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]		Surface	PU	Order no.
Pattern	Designation			
A	C			
1	2	Handle damper for controlled lowering	-	1 K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Metra Monorotaia / GU-937 bogies

## Application ranges

**GU**

## Application ranges

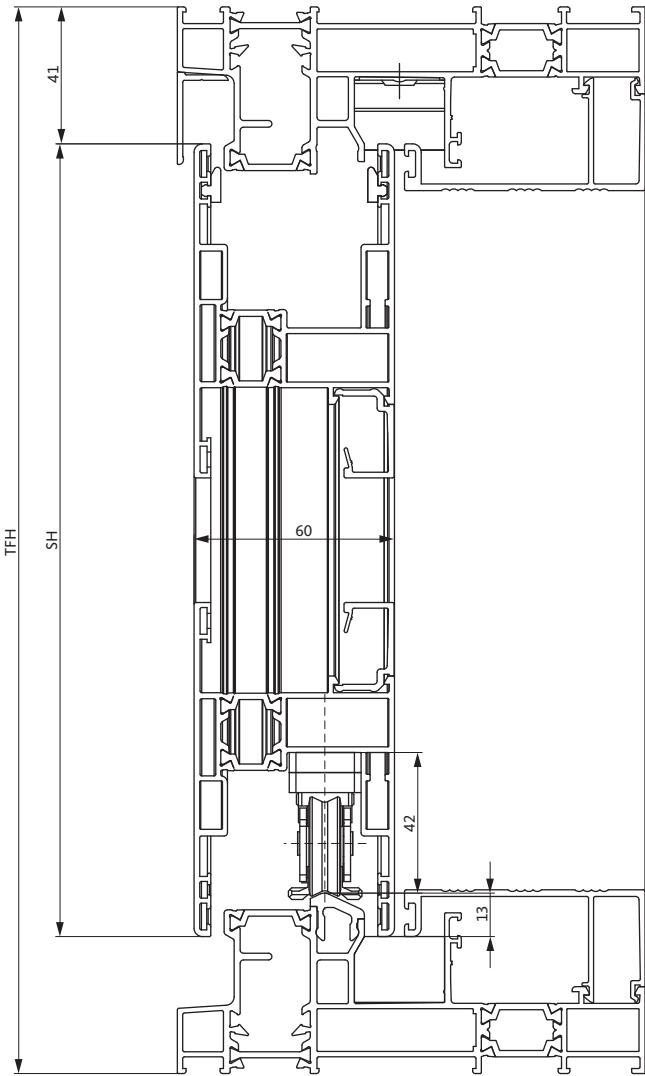
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	855-2755 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

### Installation drawings

Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-44813	from page 187
Locking monitoring set	0-44449	from page 338

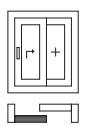
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

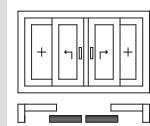


SH = sash height / TFH = total frame height

### Possible patterns



**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

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 150 kg



Bogies		Designation	Surface	PU	Order no.
Pattern					
A	C				
1	2	GU-937 front bogie	ferGuard	1	[1]
1	2	GU-937 rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Metra Monorotaia / order number K-17392-00-0-0.

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	700–1600	1100	ferGuard	1	9-25476-11-0-1
		1601–1850	1350	ferGuard	1	9-25476-14-0-1
		1851–2350	1850	ferGuard	1	9-25476-18-0-1
		2351–3300	3300	ferGuard	1	9-25476-33-0-1

# Metra Monorotaia / GU-937 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 27.5 mm backset									
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.	
A	C				Cover rail	Lock case, connecting rod			
1	2	855–1275	1190	408	EV 1 / light grey	ferGUard	10	6-30019-11-0-1	
		UC 5 / dark bronze	ferGUard		10	6-30019-11-0-5			
		1225–1855	1770		EV 1 / light grey	ferGUard	10	6-30019-19-0-1	
		UC 5 / dark bronze	ferGUard		10	6-30019-19-0-5			
		1855–2355	2270		EV 1 / light grey	ferGUard	10	6-30019-24-0-1	
		UC 5 / dark bronze	ferGUard		10	6-30019-24-0-5			
		2105–2755	2670	1008	EV 1 / light grey	ferGUard	10	6-30019-28-0-1	
		UC 5 / dark bronze	ferGUard		10	6-30019-28-0-5			
<b>Optional: Gear and cover-rail extension set 500 mm</b>									
1	2	max. 3255	500		EV 1 / light grey	ferGUard	10	6-32030-00-0-1	
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5	
<b>Optional: Cover-rail extension set 500 mm</b>									
1	2	max. 3255	500		EV 1 / light grey	-	10	9-28483-00-0-1	
					UC 5 / dark bronze	-	10	9-28483-00-0-5	

Basic hardware set for Metra Monorotaia											
Pattern		Designation			Surface	PU	Order no.				
A	C						Qty.	Item no.			
1	2	Basic hardware set for Metra Monorotaia			-	1	K-17392-00-0-0				
<b>Contents</b>											
GU-937 front bogie						1	6-30823-02-0-1				
GU-937 rear bogie						1	6-30824-02-0-1				
Vertical adapters for Lift&Slide front bogies						1	9-47295-11-0-1				
Horizontal packer for Lift&Slide front bogie						2	9-41680-16-0-1				
Horizontal packer for Lift&Slide rear bogie						2	9-41681-16-0-1				
Spacer for Lift&Slide gear						5	9-47296-12-0-1				
Rubber buffer 82						4	9-22820-00-0-0				
<b>Bag of screws K-17393-00-0-0</b>			<b>Contents</b>			<b>Qty.</b>	<b>Item no.</b>				
			Countersunk-head tapping screw 4.8 x 16 mm			3	9-13089-16				
			Countersunk screw M6 x 70 mm			2	9-13274-70-0-1				
			Countersunk screw M5 x 10 mm			2	9-13133-10-0-0				
			Countersunk screw M5 x 40 mm			4	9-13133-40-0-0				
			Countersunk screw M5 x 35 mm			1	9-13133-35-0-0				
			Countersunk screw M5 x 50 mm			7	9-13133-50-0-0				
			PC screw-hole cover cap (grey)			2	9-26687-00-0-1				

Gasket plate, bridging gasket, top guide track								
Pattern		Designation			Surface	PU	Order no.	
A	C						Qty.	Item no.
1	2	Gasket plate			black	1	9-44106-00-0-6	
1	2	Bridging gasket			-	1	6-22154-13-0-0	
1	2	Top guide track			black	1	K-14281-00-0-6	

# Metra Monorotaia / GU-937 bogies

GU

## Hardware requirements

### Hardware requirements – pattern A

Frame cam		Designation	Surface	PU	Order no.
Pattern	A C				
2	-	Frame cam set		Stainless steel	1 K-17415-00-0-8
Contents				Qty.	Item no.
Frame cam				1	9-44211-00-0-8
Countersunk-head tapping screw 4.8 x 38 mm				2	9-13528-38-R-8

### Hardware requirements – pattern C

Frame cam, counterplate, fixing screws		Designation	Surface	PU	Order no.
Pattern	A C				
-	2	Frame cam		Stainless steel	1 6-22623-05-0-8
-	2	Counterplate		-	1 9-24414-00-0-0
-	4	Countersunk screw M5 x 35 mm		-	1 9-13133-35-0-0

### Optional additional components

Buffer 90		Designation	Surface	PU	Order no.
Pattern	A C				
2	4	Buffer 90 set	black	1	K-12024-00-0-6
			white	1	K-12024-00-0-7
			cream white	1	K-12024-00-0-7Z

Bottom keeper		Designation	Surface	PU	Order no.
Pattern	A C				
1	2	Bottom keeper set		ferGuard	1 K-14568-00-0-1

# Metra Monorotaia / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
			Dark brown [2]	1	6-24606-00-0-5
			White, RAL 9016	1	6-24606-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
			Dark brown [2]	1	6-24607-00-0-5
			White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
			Dark brown [1]	1	9-29992-01-0-5
			White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

##### Fixing screws

Pattern		Designation	Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

##### Optionally: gasket plate

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Gasket plate for flush pull	black	1	9-47211-01-0-6

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
			Dark brown [2]	1	6-24615-96-0-5
			White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws					
Pattern		Designation	Surface	PU	Order no.
A	C				
2		Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

Optionally: gasket plate					
Pattern		Designation	Surface	PU	Order no.
A	C				
1		Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Metra Monorotaia / GU-937 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents			Qty.	Item no.	
Wedge			2	6-31219-00-0-1	
Support			2	9-40863-00-0-1	
Lever			2	9-40789-00-0-1	

Corner-drive					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Corner-drive set	-	1	K-16570-00-0-1
Contents			Qty.	Item no.	
Corner-drive			1	6-31284-00-0-1	
Extension			1	6-31282-00-0-1	
Cover			1	6-31283-00-0-1	
Guide			2	9-28101-00-0-0	
Stay arm slide block			1	6-22755-00-0-6	
Lever complete			1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm			1	9-40828-00-R-1	

Vertical packer					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Vertical packer	-	1	9-47295-11-0-1

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	600-1220	1000	-	1	9-28355-10-0-3
		1221-1720	1500	-	1	9-28355-15-0-3
		1721-2020	1800	-	1	9-28355-18-0-3
		2021-3000	2600	-	1	9-28355-26-0-3
		Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

Additional kit 'comfort' (see chapter 6.2)

Handle damper [1]		Pattern	Designation	Surface	PU	Order no.
A	C					
1	2	Handle damper for controlled lowering		-	1	K-19053-00-0-6
[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.						

# Metra NC 150 STH Rodos (45°) / GU-934 bogies

## Application ranges

**GU**

## Application ranges

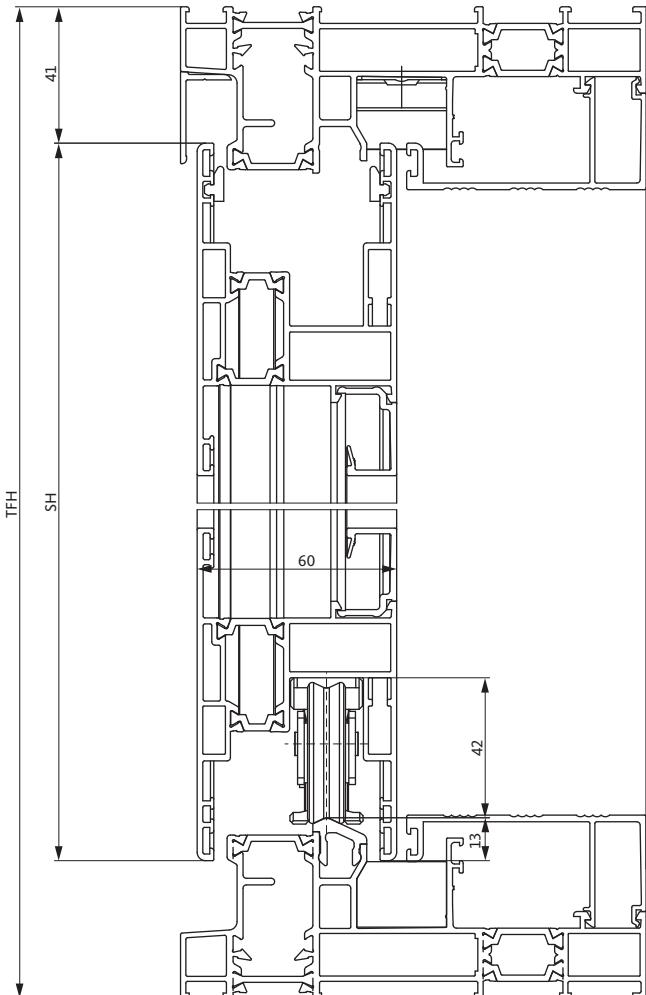
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	855-2755 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

### Installation drawings

Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45571	from page 195
Locking monitoring set	0-44449	from page 338

### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

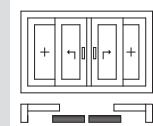


SH = sash height / TFH = total frame height

### Possible patterns



**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

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 300 kg



Bogies			Surface	PU	Order no.
Pattern	Designation				
A	C				
1	GU-934 front bogie		ferGuard	1	[1]
1	GU-934 rear bogie		ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Metra NC 150 STH Rodos / order number K-17414-00-0-0.

Connecting rod ø 8 mm					
Pattern	Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C				
1	2	700–1600	1100	ferGuard	1 9-25476-11-0-1
		1601–1850	1350	ferGuard	1 9-25476-14-0-1
		1851–2350	1850	ferGuard	1 9-25476-18-0-1
		2351–3300	3300	ferGuard	1 9-25476-33-0-1

# Metra NC 150 STH Rodos (45°) / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 27.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	855–1275	1190	408	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
		UC 5 / dark bronze	ferGUard		10	6-30019-11-0-5		
		1225–1855	1770	408	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
		UC 5 / dark bronze	ferGUard		10	6-30019-19-0-5		
		1855–2355	2270	1008	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
		UC 5 / dark bronze	ferGUard		10	6-30019-24-0-5		
		2105–2755	2670	1008	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
		UC 5 / dark bronze	ferGUard		10	6-30019-28-0-5		
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3255	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3255	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
					UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Metra NC 150 STH Rodos											
Pattern		Designation			Surface	PU	Order no.				
A	C						Qty.	Item no.			
1	2	Basic hardware set for Metra NC 150 STH Rodos			-	1	K-17414-00-0-0				
<b>Contents</b>											
GU-934 front bogie						1	6-30015-02-0-1				
GU-934 rear bogie						1	6-30017-02-0-1				
Vertical adapters for Lift&Slide front bogies						1	9-47295-11-0-1				
Spacer for Lift&Slide gear						5	9-47296-12-0-1				
Rubber buffer 82						4	9-22820-00-0-0				
Bag of screws K-14279-00-0-0			<b>Contents</b>			Qty.	Item no.				
			Countersunk-head tapping screw 4.8 x 16 mm			3	9-13089-16				
			Countersunk screw M6 x 70 mm			2	9-13274-70-0-1				
			Countersunk screw M5 x 10 mm			2	9-13133-10-0-0				
			Countersunk screw M5 x 25 mm			4	9-13133-25-0-0				
			Countersunk screw M5 x 35 mm			1	9-13133-35-0-0				
			Countersunk screw M5 x 50 mm			7	9-13133-50-0-0				
			PC screw-hole cover cap (grey)			2	9-26687-00-0-1				

Gasket plate, bridging gasket, top guide track								
Pattern		Designation			Surface	PU	Order no.	
A	C						Qty.	Item no.
1	2	Gasket plate			black	1	9-44106-00-0-6	
1	2	Bridging gasket			-	1	6-22154-13-0-0	
1	2	Top guide track			black	1	K-14281-00-0-6	

# Metra NC 150 STH Rodos (45°) / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – pattern A

Frame cam		Designation	Surface	PU	Order no.
Pattern	C				
2	-	Frame cam set	Stainless steel	1	K-17415-00-0-8
Contents					
Frame cam				1	9-44211-00-0-8
Countersunk-head tapping screw 4.8 x 38 mm				2	9-13528-38-R-8

### Hardware requirements – pattern C

Frame cam, counterplate, fixing screws		Designation	Surface	PU	Order no.
Pattern	C				
-	2	Frame cam	Stainless steel	1	6-22623-05-0-8
-	2	Counterplate	-	1	9-24414-00-0-0
-	4	Countersunk screw M5 x 35 mm	-	1	9-13133-35-0-0

### Optional additional components

Buffer 90		Designation	Surface	PU	Order no.
Pattern	C				
2	4	Buffer 90 set	black	1	K-12024-00-0-6
			white	1	K-12024-00-0-7
			cream white	1	K-12024-00-0-7Z

Bottom keeper		Designation	Surface	PU	Order no.
Pattern	C				
1	2	Bottom keeper set	ferGuard	1	K-14568-00-0-1

# Metra NC 150 STH Rodos (45°) / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
			Dark brown [2]	1	6-24606-00-0-5
			White, RAL 9016	1	6-24606-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
			Dark brown [2]	1	6-24607-00-0-5
			White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
			Dark brown [1]	1	9-29992-01-0-5
			White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

##### Fixing screws

Pattern		Designation	Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

##### Optionally: gasket plate

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Gasket plate for flush pull	black	1	9-47211-01-0-6

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
			Dark brown [2]	1	6-24615-96-0-5
			White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws					
Pattern	Designation		Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

Optionally: gasket plate					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Metra NC 150 STH Rodos (45°) / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents					Qty. Item no.
Wedge				2	6-31219-00-0-1
Support				2	9-40863-00-0-1
Lever				2	9-40789-00-0-1

Corner-drive					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Corner-drive set	-	1	K-16570-00-0-1
Contents					Qty. Item no.
Corner-drive				1	6-31284-00-0-1
Extension				1	6-31282-00-0-1
Cover				1	6-31283-00-0-1
Guide				2	9-28101-00-0-0
Stay arm slide block				1	6-22755-00-0-6
Lever complete				1	6-31234-00-0-1
Countersunk screw M5 x 16 mm				1	9-40828-00-R-1

Vertical packer					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Vertical packer	-	1	9-47295-11-0-1

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	600-1220	1000	-	1	9-28355-10-0-3
		1221-1720	1500	-	1	9-28355-15-0-3
		1721-2020	1800	-	1	9-28355-18-0-3
		2021-3000	2600	-	1	9-28355-26-0-3
		Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]		Surface	PU	Order no.
Pattern	Designation			
A	C			
1	2 Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]		Surface	PU	Order no.
Pattern	Designation			
A	C			
1	2 Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Metra NC 150 STH Rodos (45°) / GU-937 bogies

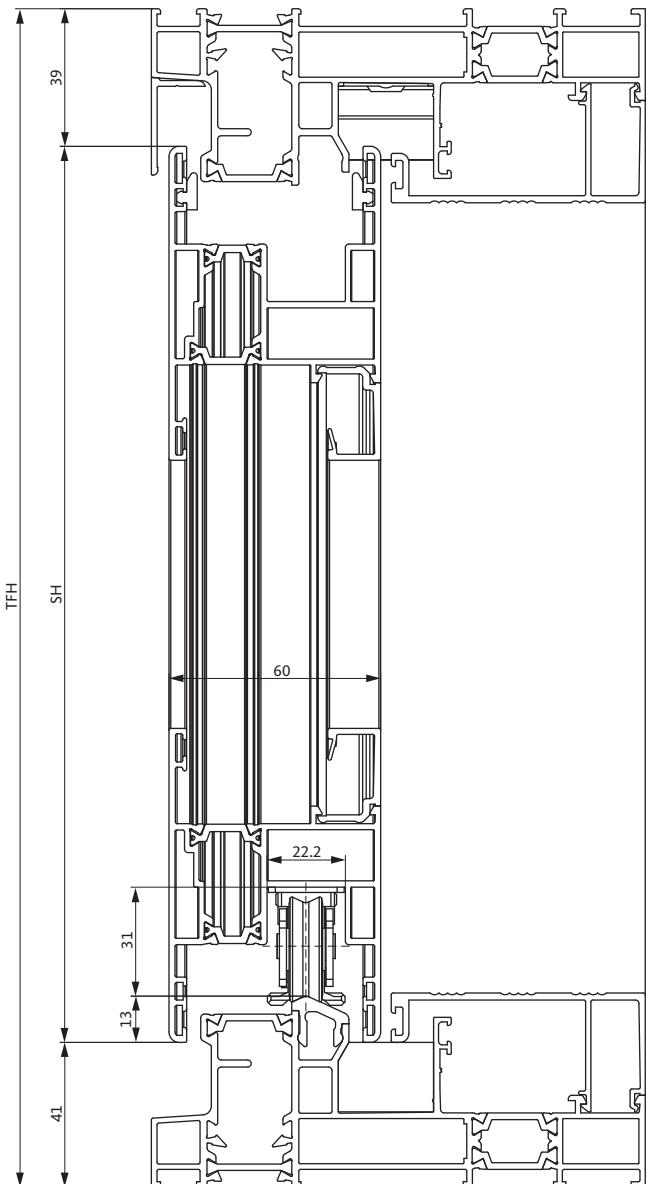
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720–3300 mm	830–2730 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

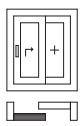
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-45079	from page 203
Locking monitoring set	0-44449	from page 338



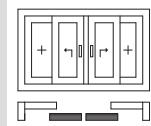
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



**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

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 150 kg



Bogies		Designation	Surface	PU	Order no.
Pattern					
A	C				
1	2	GU-937 front bogie	ferGuard	1	[1]
1	2	GU-937 rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Metra NC 150 STH Rodos / order number K-17687-00-0-0.

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	720–1600	1100	ferGuard	1	9-25476-11-0-1
		1601–1850	1350	ferGuard	1	9-25476-14-0-1
		1851–2350	1850	ferGuard	1	9-25476-18-0-1
		2351–3300	3300	ferGuard	1	9-25476-33-0-1

# Metra NC 150 STH Rodos (45°) / GU-937 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 27.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	830–1250	1190	408	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5
		1250–1830	1770	408	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5
		1830–2330	2270	1008	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5
		2080–2730	2670	1008	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30019-28-0-5
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3230	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
			UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5		
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3230	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
			UC 5 / dark bronze	-	10	9-28483-00-0-5		

Basic hardware set for Metra NC 150 STH Rodos											
Pattern		Designation			Surface	PU	Order no.				
A	C						Qty.	Item no.			
1	2	Basic hardware set for Metra NC 150 STH Rodos			-	1	K-17687-00-0-0				
<b>Contents</b>											
GU-937 front bogie						1	6-30823-02-0-1				
GU-937 rear bogie						1	6-30824-02-0-1				
Vertical adapters for Lift&Slide front bogies						1	9-43818-04-0-1				
Horizontal packer for Lift&Slide front bogie						1	9-41680-17-0-1				
Horizontal packer for Lift&Slide rear bogie						1	9-41681-17-0-1				
Spacer for Lift&Slide gear						5	9-47296-24-0-1				
Rubber buffer 82						2	9-22820-00-0-0				
Gasket plate						1	9-44106-00-0-6				
Bag of screws K-17688-00-0-0			Contents			Qty.	Item no.				
			Countersunk-head tapping screw 4.8 x 16 mm			3	9-13089-16				
			Countersunk screw M6 x 70 mm			2	9-13274-70-0-1				
			Countersunk screw M5 x 10 mm			2	9-13133-10-0-0				
			Countersunk screw M5 x 25 mm			5	9-13133-25-0-0				
			Countersunk screw M5 x 40 mm			7	9-13133-40-0-0				
			PC screw-hole cover cap (grey)			2	9-26687-00-0-1				

Gasket plate, top guide track								
Pattern		Designation			Surface	PU	Order no.	
A	C						Qty.	Item no.
1	2	Bridging gasket			-	1	6-22154-13-0-0	
1	2	Top guide track			black	1	K-14281-00-0-6	

# Metra NC 150 STH Rodos (45°) / GU-937 bogies

GU

## Hardware requirements

### Hardware requirements – pattern A

Frame cam				
Pattern	Designation		Surface	PU
A	C			Order no.
2	-	Frame cam set	Stainless steel	1 K-17415-00-0-8

# Metra NC 150 STH Rodos (45°) / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
			Dark brown [2]	1	6-24606-00-0-5
			White, RAL 9016	1	6-24606-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
			Dark brown [2]	1	6-24607-00-0-5
			White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
			Dark brown [1]	1	9-29992-01-0-5
			White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

##### Fixing screws

Pattern		Designation	Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

##### Optionally: gasket plate

Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Gasket plate for flush pull	black	1	9-47211-01-0-6

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
			Dark brown [2]	1	6-24615-96-0-5
			White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws					
Pattern		Designation	Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

### Optionally: gasket plate

Gasket plate					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Metra NC 150 STH Rodos (45°) / GU-937 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents			Qty.	Item no.	
Wedge			2	6-31219-00-0-1	
Support			2	9-40863-00-0-1	
Lever			2	9-40789-00-0-1	

Corner-drive					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Corner-drive set	-	1	K-16570-00-0-1
Contents			Qty.	Item no.	
Corner-drive			1	6-31284-00-0-1	
Extension			1	6-31282-00-0-1	
Cover			1	6-31283-00-0-1	
Guide			2	9-28101-00-0-0	
Stay arm slide block			1	6-22755-00-0-6	
Lever complete			1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm			1	9-40828-00-R-1	

Vertical packer					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Vertical packer	-	1	9-25740-08-0-0

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	600-1220	1000	-	1	9-28355-10-0-3
		1221-1720	1500	-	1	9-28355-15-0-3
		1721-2020	1800	-	1	9-28355-18-0-3
		2021-3000	2600	-	1	9-28355-26-0-3
		Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

Additional kit 'comfort' (see chapter 6.2)

Handle damper [1]		Surface	PU	Order no.
Pattern	Designation			
A	C			
1	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Metra NC 150 STH Rodos (90°) / GU-934 bogies

## Application ranges

**GU**

## Application ranges

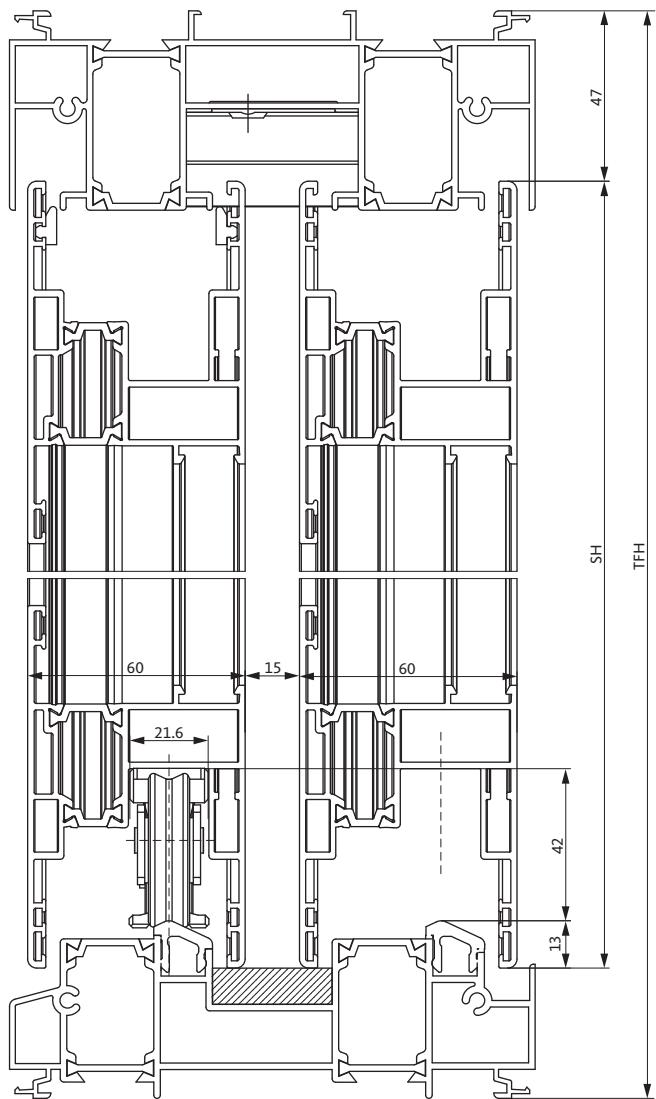
Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	855-2755 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44415	from page 211
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

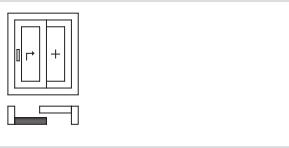
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

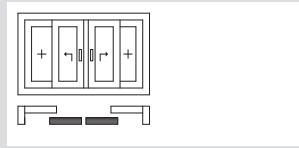


SH = sash height / TFH = total frame height

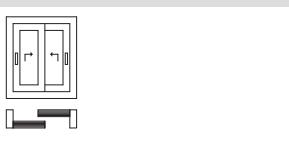
### Possible patterns



**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

# Metra NC 150 STH Rodos (90°) / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D

Bogies and connecting rod – for sash weights up to 300 kg



Bogies			Designation	Contents	Surface	PU	Order no.
Pattern	A	C	D				
1	2	2		GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1 [1]

[1] The bogies are contained in the basic hardware set for Metra NC 150 STH Rodos / order number K-17414-00-0-0.

### Connecting rod ø 8 mm

Connecting rod ø 8 mm			Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern	A	C	D				
1	2	2	720-1600	1100	ferGuard	1	9-25476-11-0-1
			1601-1850	1350	ferGuard	1	9-25476-14-0-1
			1851-2350	1850	ferGuard	1	9-25476-18-0-1
			2351-3300	3300	ferGuard	1	9-25476-33-0-1

Bogies and connecting rod – for sash weights up to 400 kg



Bogies			Designation	Contents	Surface	PU	Order no.
Pattern	A	C	D				
1	2	2		GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1 [1]
1	2	2		GU-934 tandem bogies set	2 x central bogies	ferGuard	1 K-17804-02-0-1

[1] The bogies are contained in the basic hardware set for Metra NC 150 STH Rodos / order number K-17414-00-0-0.

### Connecting rod ø 8 mm

Connecting rod ø 8 mm			Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern	A	C	D				
1	2	2	1290-1600	1100	ferGuard	1	9-25476-11-0-1
			1601-1850	1350	ferGuard	1	9-25476-14-0-1
			1851-2350	1850	ferGuard	1	9-25476-18-0-1
			2351-3300	3300	ferGuard	1	9-25476-33-0-1

# Metra NC 150 STH Rodos (90°) / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D

Lift&Slide gear, 37.5 mm backset									
Pattern			Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D				Cover rail	Lock case, connecting rod		
1	2	2	855-1275	1190	408	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
			1225-1855	1770	408	UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
			1855-2355	2270	1008	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
			2105-2755	2670	1008	UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
						EV 1 / light grey	ferGUard	10	6-30021-24-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
<b>Optional: Gear and cover-rail extension set 500 mm</b>									
1	2	2	max. 3255	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
						UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>									
1	2	2	max. 3255	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
						UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Metra NC 150 STH Rodos												
Pattern			Designation			Surface	PU	Order no.				
A	C	D						Qty.	Item no.			
1	2	2	Basic hardware set for Metra NC 150 STH Rodos			-		1	K-17414-00-0-0			
<b>Contents</b>												
GU-934 front bogie												
GU-934 rear bogie												
Vertical adapters for Lift&Slide front bogies												
Spacer for Lift&Slide gear												
Rubber buffer 82												
Bag of screws K-14279-00-0-0			<b>Contents</b>			Qty.	Item no.					
			Countersunk-head tapping screw 4.8 x 16 mm			3	9-13089-16					
			Countersunk screw M6 x 70 mm			2	9-13274-70-0-1					
			Countersunk screw M5 x 10 mm			2	9-13133-10-0-0					
			Countersunk screw M5 x 25 mm			4	9-13133-25-0-0					
			Countersunk screw M5 x 35 mm			1	9-13133-35-0-0					
			Countersunk screw M5 x 50 mm			7	9-13133-50-0-0					
			PC screw-hole cover cap (grey)			2	9-26687-00-0-1					

Gasket plate, top guide track									
Pattern			Designation			Surface	PU	Order no.	
A	C	D						Qty.	Item no.
1	2	2	Bridging gasket			-	1	6-22154-05-0-0	
1	2	4	Top guide track			black	1	K-14281-00-0-6	

### Hardware requirements – patterns A, C, D

Buffer 90 [1]				Designation	Surface	PU	Order no.
Pattern							
A	C	D		Buffer 90 set			
-	-	2			black	1	K-12024-00-0-6
					white	1	K-12024-00-0-7
					cream white	1	K-12024-00-0-7Z

[1] Optionally with patterns A and C

### Hardware requirements – patterns A, D

Frame cam				Designation	Surface	PU	Order no.
Pattern							
A	C	D					
2	-	4		Frame cam set	-	1	K-14388-00-0-1
Contents						Qty.	Item no.
Frame cam						1	6-23793-00-L-1
Countersunk-head tapping screw 4.2 x 32 mm						2	9-13537-32-R-1

### Hardware requirements – pattern C

Frame cam, counterplate, fixing screws				Designation	Surface	PU	Order no.
Pattern							
A	C	D					
-	2	-		Frame cam	Stainless steel	1	6-22623-05-0-8
-	2	-		Counterplate	-	1	9-24414-00-0-0
-	4	-		Countersunk screw M5 x 35 mm	-	1	9-13133-35-0-0

# Metra NC 150 STH Rodos (90°) / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern			Designation	Surface	PU	Order no.
A	C	D				
1	2	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
				Dark brown [2]	1	6-24606-00-0-5
				White, RAL 9016	1	6-24606-00-0-7
1	2	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
				Dark brown [2]	1	6-24607-00-0-5
				White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

Pattern			Designation	Surface	PU	Order no.
A	C	D				
1	2	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
				Dark brown [1]	1	9-29992-01-0-5
				White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

##### Fixing screws

Pattern			Designation	Surface	PU	Order no.
A	C	D				
2	4	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

##### Optionally: gasket plate

Pattern			Designation	Surface	PU	Order no.
A	C	D				
1	2	2	Gasket plate for flush pull	black	1	9-47211-01-0-6

# Metra NC 150 STH Rodos (90°) / GU-934 bogies

**GU**

## Hardware requirements

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]				Surface	PU	Order no.
Pattern		Designation				
A	C	D				
1	2	2	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
				Dark brown [2]	1	6-24615-96-0-5
				White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.

[2] Similar to RAL 8022

Fixing screws				Surface	PU	Order no.
Pattern		Designation				
A	C	D				
2	4	4	Countersunk screw M6 x 70 mm	–	1	9-13274-70-0-1

Optionally: gasket plate				Surface	PU	Order no.
Pattern		Designation				
A	C	D				
1	2	2	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Metra NC 150 STH Rodos (90°) / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device						
Pattern		Designation		Surface	PU	Order no.
A	C	D				
1	2	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents				Qty.	Item no.	
Wedge				2	6-31219-00-0-1	
Support				2	9-40863-00-0-1	
Lever				2	9-40789-00-0-1	

Corner-drive						
Pattern		Designation		Surface	PU	Order no.
A	C	D				
1	2	2	Corner-drive set	-	1	K-16570-00-0-1
Contents				Qty.	Item no.	
Corner-drive				1	6-31284-00-0-1	
Extension				1	6-31282-00-0-1	
Cover				1	6-31283-00-0-1	
Guide				2	9-28101-00-0-0	
Stay arm slide block				1	6-22755-00-0-6	
Lever complete				1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm				1	9-40828-00-R-1	

Vertical packer						
Pattern		Designation		Surface	PU	Order no.
A	C	D				
1	2	2	Vertical packer	-	1	9-47295-11-0-1

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D				
1	2	2	600-1220	1000	-	9-28355-10-0-3
			1221-1720	1500	-	9-28355-15-0-3
			1721-2020	1800	-	9-28355-18-0-3
			2021-3000	2600	-	9-28355-26-0-3
			Stock length	4800	-	9-28355-48-0-3

### Optional additional components

Bottom keeper			Designation	Surface	PU	Order no.
Pattern	A	C				
1	2	2	Bottom keeper set	ferGuard	1	K-14568-00-0-1

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]			Designation	Surface	PU	Order no.
Pattern	A	C				
1	2	2	Tension spring for reduction of operating forces	–	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]			Designation	Surface	PU	Order no.
Pattern	A	C				
1	2	2	Handle damper for controlled lowering	–	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Metra NC 150 STH Rodos (90°) / GU-937 bogies

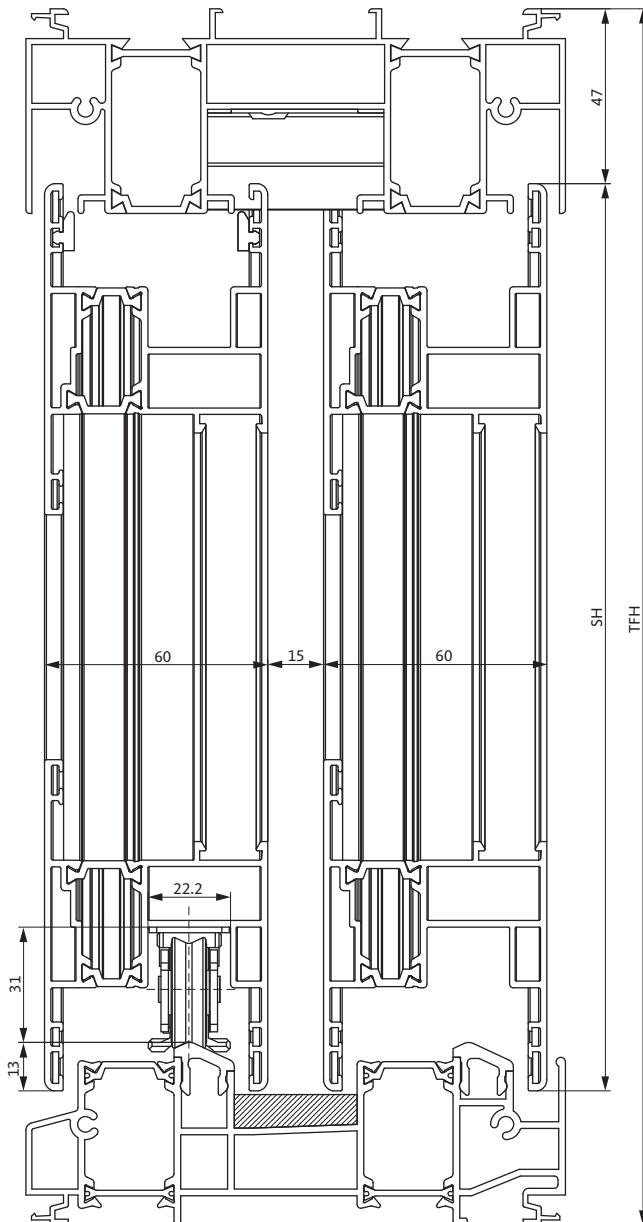
## Application ranges

**GU**

## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	830-2730 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

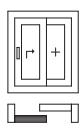
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-45553	from page 219
Locking monitoring set	0-44449	from page 338



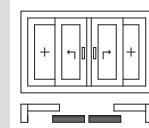
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



**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

### Hardware requirements – patterns A, C, D

Bogies and connecting rod – for sash weights up to 150 kg



Bogies			Designation	Surface	PU	Order no.
Pattern	A	C				
D						
1	2	2	GU-937 front bogie	ferGuard	1	[1]
1	2	2	GU-937 rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Metra NC 150 STH Rodos / order number K-17687-00-0-0.

Connecting rod ø 8 mm			Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern	A	C					
D							
1	2	2	720–1600	1100	ferGuard	1	9-25476-11-0-1
			1601–1850	1350	ferGuard	1	9-25476-14-0-1
			1851–2350	1850	ferGuard	1	9-25476-18-0-1
			2351–3300	3300	ferGuard	1	9-25476-33-0-1

# Metra NC 150 STH Rodos (90°) / GU-937 bogies

## Hardware requirements



## **Hardware requirements – patterns A, C, D**

Lift&Slide gear, 27.5 mm backset									
Pattern			Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D				Cover rail	Lock case, connecting rod		
1	2	2	830-1250	1190	408	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
			1250-1830	1770		UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5
			1830-2330	2270	1008	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
			2080-2730	2670		UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5
					1008	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
						UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5
<b>Optional: Gear and cover-rail extension set 500 mm</b>									
1	2	2	max. 3230	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
						UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>									
1	2	2	max. 3230	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
						UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Metra NC 150 STH Rodos						
Pattern		Designation	Surface	PU	Order no.	
A	C					
1	2	2	Basic hardware set for Metra NC 150 STH Rodos	-	1 K-17687-00-0-0	
<b>Contents</b>				<b>Qty.</b>	<b>Item no.</b>	
GU-937 front bogie				1	6-30823-02-0-1	
GU-937 rear bogie				1	6-30824-02-0-1	
Vertical adapters for Lift&Slide front bogies				1	9-43818-04-0-1	
Horizontal packer for Lift&Slide front bogie				1	9-41680-17-0-1	
Horizontal packer for Lift&Slide rear bogie				1	9-41681-17-0-1	
Spacer for Lift&Slide gear				5	9-47296-24-0-1	
Rubber buffer 82				2	9-22820-00-0-0	
Gasket plate				1	9-44106-00-0-6	
<b>Bag of screws K-17688-00-0-0</b>	<b>Contents</b>				<b>Qty.</b>	<b>Item no.</b>
	Countersunk-head tapping screw 4.8 x 16 mm				3	9-13089-16
	Countersunk screw M6 x 70 mm				2	9-13274-70-0-1
	Countersunk screw M5 x 10 mm				2	9-13133-10-0-0
	Countersunk screw M5 x 25 mm				5	9-13133-25-0-0
	Countersunk screw M5 x 40 mm				7	9-13133-40-0-0
	PC screw-hole cover cap (grey)				2	9-26687-00-0-1

Gasket plate, top guide track							
Pattern			Designation		Surface	PU	Order no.
A	C	D					
1	2	2	Bridging gasket		-	1	6-22154-05-0-0
1	2	4	Top guide track		black	1	K-14281-00-0-6

### Hardware requirements – patterns A, C, D

Buffer 90 [1]			Designation	Surface	PU	Order no.
Pattern	A	C				
–	–	2	Buffer 90 set	black	1	K-12024-00-0-6
				white	1	K-12024-00-0-7
				cream white	1	K-12024-00-0-7Z

[1] Optionally with patterns A and C

### Hardware requirements – patterns A, D

Frame cam			Designation	Surface	PU	Order no.
Pattern	A	C				
2	–	4	Frame cam set	–	1	K-14388-00-0-1
Contents						
Frame cam					1	6-23793-00-L-1
Countersunk-head tapping screw 4.2 x 32 mm					2	9-13537-32-R-1

### Hardware requirements – pattern C

Frame cam, counterplate, fixing screws			Designation	Surface	PU	Order no.
Pattern	A	C				
–	2	–	Frame cam	Stainless steel	1	6-22623-05-0-8
–	2	–	Counterplate	–	1	9-24414-00-0-0
–	4	–	Countersunk screw M5 x 35 mm	–	1	9-13133-35-0-0

# Metra NC 150 STH Rodos (90°) / GU-937 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

##### DIRIGENT turn handle [1]

Pattern			Designation	Surface	PU	Order no.
A	C	D				
1	2	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
				Dark brown [2]	1	6-24606-00-0-5
				White, RAL 9016	1	6-24606-00-0-7
1	2	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
				Dark brown [2]	1	6-24607-00-0-5
				White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

##### Flush pull

Pattern			Designation	Surface	PU	Order no.
A	C	D				
1	2	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
				Dark brown [1]	1	9-29992-01-0-5
				White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

##### Fixing screws

Pattern			Designation	Surface	PU	Order no.
A	C	D				
2	4	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

##### Optionally: gasket plate

Pattern			Designation	Surface	PU	Order no.
A	C	D				
1	2	2	Gasket plate for flush pull	black	1	9-47211-01-0-6

# Metra NC 150 STH Rodos (90°) / GU-937 bogies

GU

## Hardware requirements

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]			Designation	Surface	PU	Order no.
Pattern	A	C	D			
1	2	2	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
				Dark brown [2]	1	6-24615-96-0-5
				White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws			Designation	Surface	PU	Order no.
Pattern	A	C	D			
2	4	4	Countersunk screw M6 x 70 mm	-	1	9-13274-70-0-1

### Optionally: gasket plate

Pattern			Designation	Surface	PU	Order no.
A	C	D				
1	2	2	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Metra NC 150 STH Rodos (90°) / GU-937 bogies

## Hardware requirements

**GU**



### Optional additional components

#### Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device						
Pattern		Designation		Surface	PU	Order no.
A	C	D				
1	2	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents				Qty.	Item no.	
Wedge				2	6-31219-00-0-1	
Support				2	9-40863-00-0-1	
Lever				2	9-40789-00-0-1	

Corner-drive						
Pattern		Designation		Surface	PU	Order no.
A	C	D				
1	2	2	Corner-drive set	-	1	K-16570-00-0-1
Contents				Qty.	Item no.	
Corner-drive				1	6-31284-00-0-1	
Extension				1	6-31282-00-0-1	
Cover				1	6-31283-00-0-1	
Guide				2	9-28101-00-0-0	
Stay arm slide block				1	6-22755-00-0-6	
Lever complete				1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm				1	9-40828-00-R-1	

Vertical packer						
Pattern		Designation		Surface	PU	Order no.
A	C	D				
1	2	2	Vertical packer	-	1	9-25740-08-0-0

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D				
1	2	2	600-1220	1000	-	1 9-28355-10-0-3
			1221-1720	1500	-	1 9-28355-15-0-3
			1721-2020	1800	-	1 9-28355-18-0-3
			2021-3000	2600	-	1 9-28355-26-0-3
			Stock length	4800	-	1 9-28355-48-0-3

### Optional additional components

Bottom keeper			Designation	Surface	PU	Order no.
Pattern	A	C				
1	2	2	Bottom keeper set	ferGuard	1	K-14568-00-0-1

### Additional kit 'comfort' (see chapter 6.2)

Handle damper [1]			Designation	Surface	PU	Order no.
Pattern	A	C				
1	2	2	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Ponizio SL1600 / GU-934 bogies

## Application ranges

**GU**

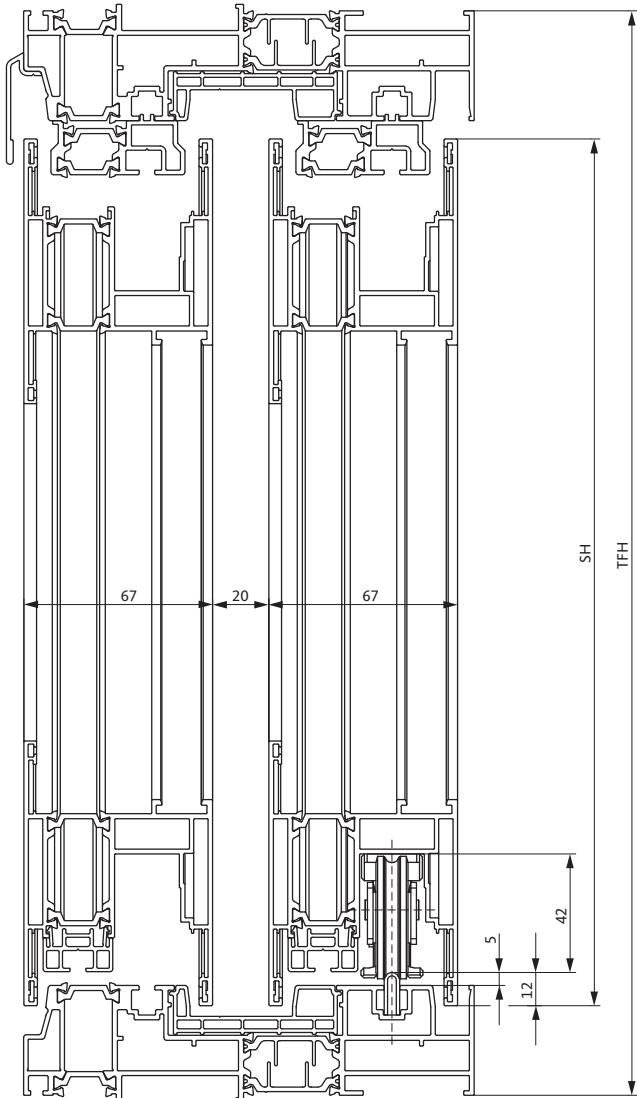
### Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	852-2752 mm	300 kg	GU-934
		400 kg	GU-934 Tandem
SH : SW = 2.5 : 1			

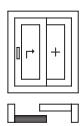
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-46501	from page 227
HS-Master, pattern A	0-44355	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

#### Note:

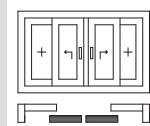
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



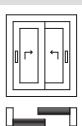
#### Possible patterns



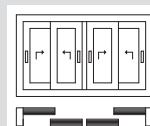
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left

# Ponzio SL1600 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Bogies and connecting rod – for sash weights up to 300 kg



Bogies					Designation	Contents	Surface	PU	Order no.
Pattern				A	C	D	F		
1	2	2	4	GU-934 bogies set		1 x front bogie 1 x rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Ponzio SL1600 / order number K-18435-00-0-0.

### Connecting rod ø 8 mm

Connecting rod ø 8 mm					Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern				A	C	D	F		
1	2	2	4	720-1600		1100	ferGuard	1	9-25476-11-0-1
				1601-1850		1350	ferGuard	1	9-25476-14-0-1
				1851-2350		1850	ferGuard	1	9-25476-18-0-1
				2351-3300		3300	ferGuard	1	9-25476-33-0-1

Bogies and connecting rod – for sash weights up to 400 kg



Bogies					Designation	Contents	Surface	PU	Order no.
Pattern				A	C	D	F		
1	2	2	4	GU-934 bogies set		1 x front bogie 1 x rear bogie	ferGuard	1	[1]
1	2	2	4	GU-934 tandem bogies set		2 x central bogies	ferGuard	1	K-17804-01-0-1

[1] The bogies are contained in the basic hardware set for Ponzio SL1600 / order number K-18435-00-0-0.

### Connecting rod ø 8 mm

Connecting rod ø 8 mm					Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern				A	C	D	F		
1	2	2	4	1290-1600		1100	ferGuard	1	9-25476-11-0-1
				1601-1850		1350	ferGuard	1	9-25476-14-0-1
				1851-2350		1850	ferGuard	1	9-25476-18-0-1
				2351-3300		3300	ferGuard	1	9-25476-33-0-1

# Ponzio SL1600 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F

Lift&Slide gear, 27.5 mm backset										
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F				Cover rail	Lock case, connecting rod		
1	2	2	4	852-1272	1190	407	EV 1 / light grey	ferGUard	10	6-30019-11-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-11-0-5			
				1222-1852	1770	407	EV 1 / light grey	ferGUard	10	6-30019-19-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-19-0-5			
				1852-2352	2270	1007	EV 1 / light grey	ferGUard	10	6-30019-24-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-24-0-5			
				2102-2752	2670	1007	EV 1 / light grey	ferGUard	10	6-30019-28-0-1
				UC 5 / dark bronze	ferGUard	10	6-30019-28-0-5			
With HS-Master, pattern A: Lift&Slide gear, 37.5 mm backset										
1	-	-	-	852-1272	1190	407	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5			
				1222-1852	1770	407	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5			
				1852-2352	2270	1007	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5			
				2102-2752	2670	1007	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5			
Optional: Gear and cover-rail extension set 500 mm										
1	2	2	4	max. 3252	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
							UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
Optional: Cover-rail extension set 500 mm										
1	2	2	4	max. 3252	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
							UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Ponzio SL1600																				
Pattern				Designation				Surface	PU	Order no.										
A	C	D	F																	
1	2	2	4	Basic hardware set for Ponzio SL1600				-	1	K-18435-00-0-0										
Contents																				
Bogies set		1 x front bogie 1 x rear bogie						1		K-16488-00-0-1										
Vertical adapters for Lift&Slide front bogies										1										
Spacer for Lift&Slide gear										5										
Frame cam										2										
Rubber buffer 60 [1]										2										
Countersunk screw M6 x 75 mm for fixing the turn handle with flush pull or interior/exterior handle sets										2										
Bag of screws K-18436-00-0-8				Contents				Qty.	Item no.											
				Countersunk-head tapping screw 4.8 x 25 mm				8	9-13089-25-0-8											
				Countersunk-head tapping screw 4.8 x 32 mm				1	9-13089-32-R-8											
				Countersunk-head tapping screw 4.8 x 60 mm				7	9-13089-60-0-8											
				PC screw-hole cover cap (grey)				1	9-26687-00-0-1											
				Cover cap				1	9-47821-01-0-0											

[1] Cannot be used with patterns D and F

# Ponzio SL1600 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Accessories				
Pattern				Designation
A	C	D	F	
-	1	-	1	Accessories set
Contents				
Countersunk screw M5 x 40 mm				4
Pin				8
Bushing				4
				Qty. Item no.
				9-13133-40-0-0
				9-30329-00-0-5
				9-34128-00-0-0

Buffer 90 [1]				
Pattern				Designation
A	C	D	F	
-	-	2	4	Buffer 90 set
				black
				white
				1 K-17134-00-0-6
				1 K-17134-00-0-7

[1] Optionally with patterns A and C

Optional: packers for frame cams				
Pattern				Designation
A	C	D	F	
2	2	4	6	Packer 0.5 mm
2	2	4	6	Packer 1.0 mm
				Stainless steel
				10 K-18309-01-0-8
				Stainless steel
				10 K-18309-02-0-8

# Ponzio SL1600 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1][2]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [3]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [3]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] The fixing screws are contained in the basic hardware set for Ponzio SL1600 / order number K-18435-00-0-0.

[3] Similar to RAL 8022

Flush pull – version 1							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
					Dark brown [1]	1	9-29992-01-0-5
					White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

Flush pull – version 2							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Flush pull, round	Silver/EV 1 look	1	9-46686-00-0-1
					Dark brown [1]	1	9-46686-00-0-5
					White, RAL 9016	1	9-46686-00-0-7
					Stainless steel	1	9-46686-00-0-8

[1] Similar to RAL 8022

Optionally: gasket plate							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1				Gasket plate for flush pull	black	1	9-47211-01-0-6

# Ponzio SL1600 / GU-934 bogies

GU

## Hardware requirements

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1][2]				
Pattern				Designation
A	C	D	F	
1	2	2	4	DIRIGENT interior/exterior handle set, with PC hole
				Silver/EV 1 look
				Dark brown [3]
				White, RAL 9016

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] The fixing screws are contained in the basic hardware set for Ponzio SL1600 / order number K-18435-00-0-0.  
[3] Similar to RAL 8022

Optionally: gasket plate				
Pattern				Designation
A	C	D	F	
1	2	2	4	Gasket plate for exterior and interior turn handle

# Ponizio SL1600 / GU-934 bogies

## Hardware requirements

**GU**



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Anti-jemmy device set	-	1	K-16569-00-0-1
<b>Contents</b>					<b>Qty.</b>	<b>Item no.</b>	
Wedge					2	6-31219-00-0-1	
Support					2	9-40863-00-0-1	
Lever					2	9-40789-00-0-1	

Corner-drive							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Corner-drive set	-	1	K-16570-00-0-1
<b>Contents</b>					<b>Qty.</b>	<b>Item no.</b>	
Corner-drive					1	6-31284-00-0-1	
Extension					1	6-31282-00-0-1	
Cover					1	6-31283-00-0-1	
Guide					2	9-28101-00-0-0	
Stay arm slide block					1	6-22755-00-0-6	
Lever complete					1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm					1	9-40828-00-R-1	

Vertical packer							
Pattern		Designation			Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Vertical packer	-	1	9-47295-06-0-1

P 959 connecting rod								
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.		
A	C	D	F					
1	2	2	4	600-1220	1000	-	1	9-28355-10-0-3
				1221-1720	1500	-	1	9-28355-15-0-3
				1721-2020	1800	-	1	9-28355-18-0-3
				2021-3000	2600	-	1	9-28355-26-0-3
				Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

Bottom keeper				Designation	Surface	PU	Order no.
Pattern	A	C	D				
1	2	2	4	Bottom keeper set	ferGuard	1	K-12057-00-0-1

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]				Designation	Surface	PU	Order no.
Pattern	A	C	D				
1	2	2	4	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

### Handle damper [1]

Handle damper [1]				Designation	Surface	PU	Order no.
Pattern	A	C	D				
1	2	2	4	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Profilati / GU-934 bogies

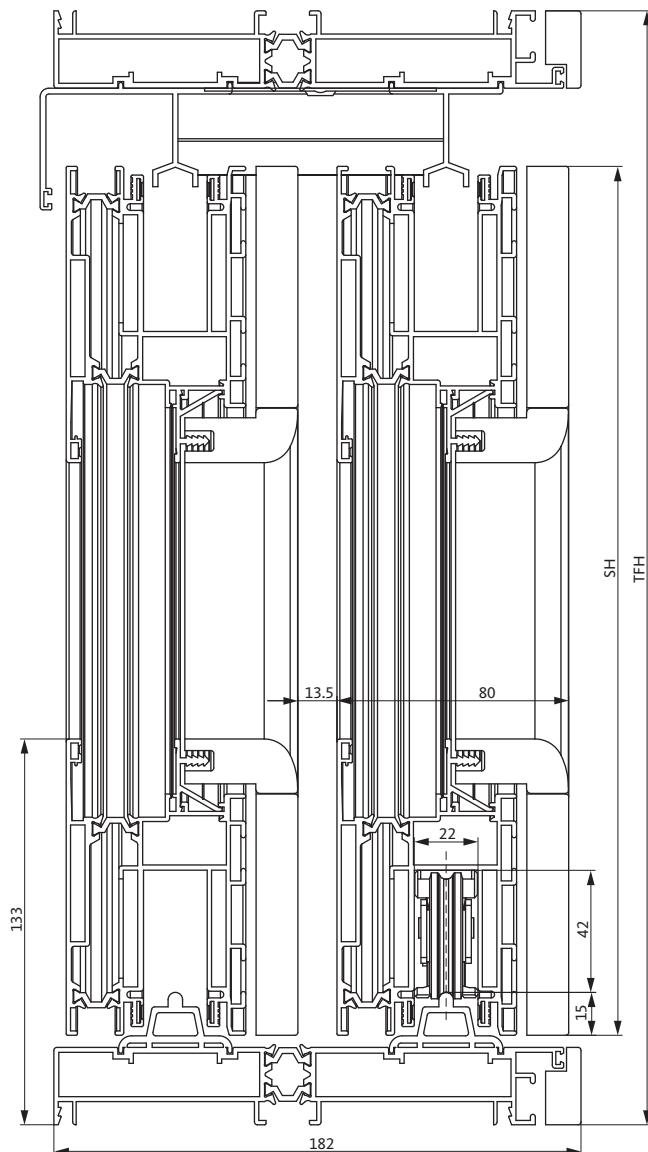
## Application ranges

GU

### Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	830-2730 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44499	from page 235
Locking monitoring set	0-44449	from page 338



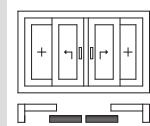
#### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

#### Possible patterns



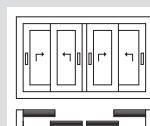
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left

# Profilati / GU-934 bogies

GU

## Hardware requirements

### Hardware requirements – patterns A, C, D, F

Bogies and connecting rod – for sash weights up to 300 kg



Bogies					Contents	Surface	PU	Order no.
Pattern				Designation				
A	C	D	F					
1	2	2	4	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	[1]

[1] The bogies are contained in the basic hardware set for Profilati / order number K-16978-00-0-0.

Connecting rod ø 8 mm					Length [mm]	Surface	PU	Order no.
Pattern				Sash width [mm]				
A	C	D	F					
1	2	2	4	700-1600	1100	ferGuard	1	9-25476-11-0-1
				1601-1850	1350	ferGuard	1	9-25476-14-0-1
				1851-2350	1850	ferGuard	1	9-25476-18-0-1
				2351-3300	3300	ferGuard	1	9-25476-33-0-1

# Profilati / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F

Lift&Slide gear, 37.5 mm backset										
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C	D	F				Cover rail	Lock case, connecting rod		
1	2	2	4	830–1250	1190	410	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5			
				1200–1830	1770	410	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5			
				1830–2330	2270	1010	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5			
				2080–2730	2670	1010	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
				UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5			
<b>Optional: Gear and cover-rail extension set 500 mm</b>										
1	2	2	4	max. 3230	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
							UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>										
1	2	2	4	max. 3230	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
							UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Profilati																		
Pattern				Designation				Surface	PU	Order no.								
A	C	D	F															
1	2	2	4	Basic hardware set for Profilati				-	1	K-16978-00-0-0								
<b>Contents</b>										<b>Qty.</b> <b>Item no.</b>								
Bogies set		1 x front bogie 1 x rear bogie								1 K-16488-00-0-1								
Vertical adapters for Lift&Slide front bogies										1 9-47295-18-0-1								
Spacer for Lift&Slide gear										5 9-47296-20-0-1								
Frame cam 1 [1]										2 9-26072-55-0-1								
Rubber buffer 80										4 9-08488-00-0-6								
Countersunk screw M6 x 90 mm for fixing the turn handle with flush pull or interior/exterior handle sets										2 9-13274-90-0-1								
Guide 1										1 9-24378-00-0-6								
Guide 2										2 9-24379-00-0-6								
Cover plate 15										2 9-24380-00-0-6								
Bridging gasket										1 6-22154-04-0-0								
Spacer profile										1 9-42887-02-0-0								
Bag of screws K-16977-00-0-1		<b>Contents</b>								<b>Qty.</b> <b>Item no.</b>								
		Countersunk-head tapping screw 4.8 x 38 mm								1 9-13089-38-R-1								
		Countersunk-head tapping screw 4.8 x 45 mm								3 9-13089-45-R-1								
		Countersunk-head tapping screw 4.8 x 70 mm								8 9-13089-70-R-1								
		Countersunk-head tapping screw 3.9 x 16 mm								14 9-13132-16-R-8								
		PC screw-hole cover cap (grey)								1 9-26687-00-0-1								

[1] Cannot be used with pattern C

### Hardware requirements – patterns C, F

Frame cam, counterplate, fixing screws							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
-	2	-	2	Frame cam	Stainless steel	1	6-22648-05-0-8
-	2	-	2	Counterplate	-	1	9-24414-00-0-0
-	4	-	4	Countersunk screw M5 x 20 mm	-	1	9-13133-20-0-0

# Profilati / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1][2]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
					Dark brown [3]	1	6-24608-00-0-5
					White, RAL 9016	1	6-24608-00-0-7
1	2	2	4	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
					Dark brown [3]	1	6-24609-00-0-5
					White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] The fixing screws are contained in the basic hardware set for Profilati / order number K-16978-00-0-0.

[3] Similar to RAL 8022

Flush pull							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
					Dark brown [1]	1	9-29992-01-0-5
					White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

Optionally: gasket plate							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Gasket plate for flush pull	black	1	9-47211-01-0-6

#### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1][2]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
					Dark brown [3]	1	6-24615-96-0-5
					White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.

[2] The fixing screws are contained in the basic hardware set for Profilati / order number K-16978-00-0-0.

[3] Similar to RAL 8022

Optionally: gasket plate							
Pattern				Designation	Surface	PU	Order no.
A	C	D	F				
1	2	2	4	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

### Optional additional components

Buffer 90					Designation	Surface	PU	Order no.
Pattern				A	C	D	F	
2	4	2	4	Buffer 90 set	black	1	K-12024-00-0-6	
					white	1	K-12024-00-0-7	
					cream white	1	K-12024-00-0-7Z	

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]					Designation	Surface	PU	Order no.
Pattern				A	C	D	F	
1	2	2	4	Tension spring for reduction of operating forces	–	1	9-40235-05-0-0	

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]					Designation	Surface	PU	Order no.
Pattern				A	C	D	F	
1	2	2	4	Handle damper for controlled lowering	–	1	9-19053-00-0-6	

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Profilco / GU-934 bogies

## Application ranges

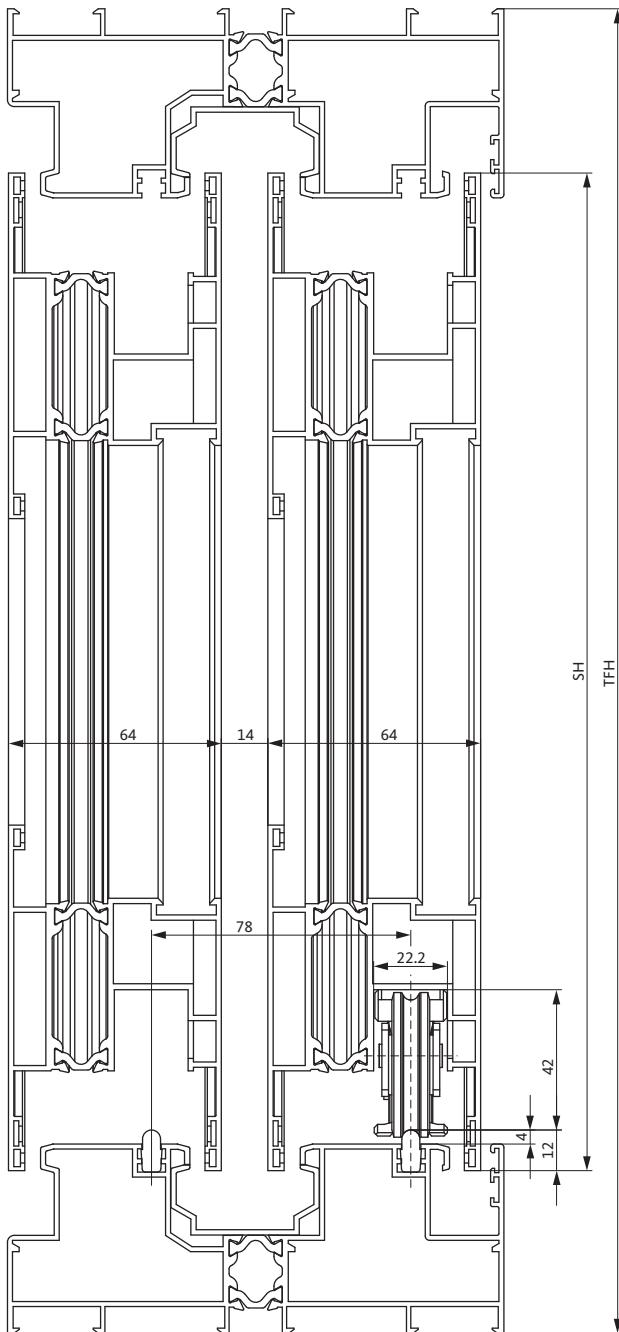
**GU**



## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700–3300 mm	825–2725 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45085	from page 241
Locking monitoring set	0-44449	from page 338



SH = sash height / TFH = total frame height

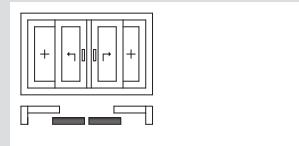
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



**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

# Profilco / GU-934 bogies

GU

## Hardware requirements

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 300 kg



Bogies					
Pattern		Designation	Contents	Surface	PU
A	C				Order no.
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1 K-16488-00-0-1 K-16488-00-0-18

Connecting rod ø 8 mm					
Pattern		Sash width [mm]	Length [mm]	Surface	PU
A	C				Order no.
1	2	700–1600	1100	ferGuard	1
				faceGuard	1
		1601–1850	1350	ferGuard	1
				faceGuard	1
		1851–2350	1850	ferGuard	1
				faceGuard	1
		2351–3300	3300	ferGuard	1
				faceGuard	1

# Profilco / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	825–1245	1190	407.5	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
					EV 1 / light grey	faceGUard	10	6-30021-11-0-18
		1195–1825	1770	407.5	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
					EV 1 / light grey	faceGUard	10	6-30021-19-0-18
		1825–2325	2270	1007.5	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
					EV 1 / light grey	faceGUard	10	6-30021-24-0-18
		2075–2725	2670	1007.5	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
					EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3225	500	–	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
					EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3225	500	–	EV 1 / light grey	–	10	9-28483-05-0-1
					UC 5 / dark bronze	–	10	9-28483-05-0-5

Basic hardware set for Profilco										
Pattern		Designation			Surface	PU	Order no.			
A	C									
1	2	Basic hardware set for Profilco			–	1	K-17702-00-0-0			
<b>Contents</b>										
Vertical adapters for Lift&Slide front bogies						1	9-47295-04-0-1			
Spacer for Lift&Slide gear						5	9-47296-06-0-1			
Frame cam						2	6-22648-03-0-8			
Rubber buffer 82						2	9-22820-00-0-0			
<b>Qty. Item no.</b>										

Cover cap for profile cylinder							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	Cover cap for profile cylinder			grey	1	9-26687-00-0-1

### Hardware requirements – pattern C

Frame cam, fixing screws					
Pattern	Designation		Surface	PU	Order no.
A	C				
-	2	Counterplate	-	1	9-24414-00-0-0
-	4	Countersunk screw M5 x 55 mm	Stainless steel	1	9-13133-55-0-8

### Optional additional components

Buffer 90					
Pattern	Designation		Surface	PU	Order no.
A	C				
2	4	Buffer 90 set	black	1	K-17134-00-0-6
			white	1	K-17134-00-0-7

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

### Handle damper [1]

Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

### Additional kit (L&S night vent module)

Frame cam					
Pattern	Designation		Surface	PU	Order no.
A	C				
2	4	Frame cam	Stainless steel	1	9-43830-03-0-8

### Bottom keeper

Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Bottom keeper set	ferGuard	1	K-12057-00-0-1

# Profilco / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
			Dark brown [2]	1	6-24608-00-0-5
			White, RAL 9016	1	6-24608-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
			Dark brown [2]	1	6-24609-00-0-5
			White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
			Dark brown [1]	1	9-29992-01-0-5
			White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

Fixing screws					
Pattern		Designation	Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 75 mm	-	1	9-13274-75-0-1

Optionally: gasket plate					
Pattern		Designation	Surface	PU	Order no.
A	C				
1	2	Gasket plate for flush pull	black	1	9-47211-01-0-6

### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
			Dark brown [2]	1	6-24615-96-0-5
			White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws					
Pattern	Designation		Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 75 mm	-	1	9-13274-75-0-1

Optionally: gasket plate					
Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6

# Reynaers CP 130-LS / GU-934 bogies

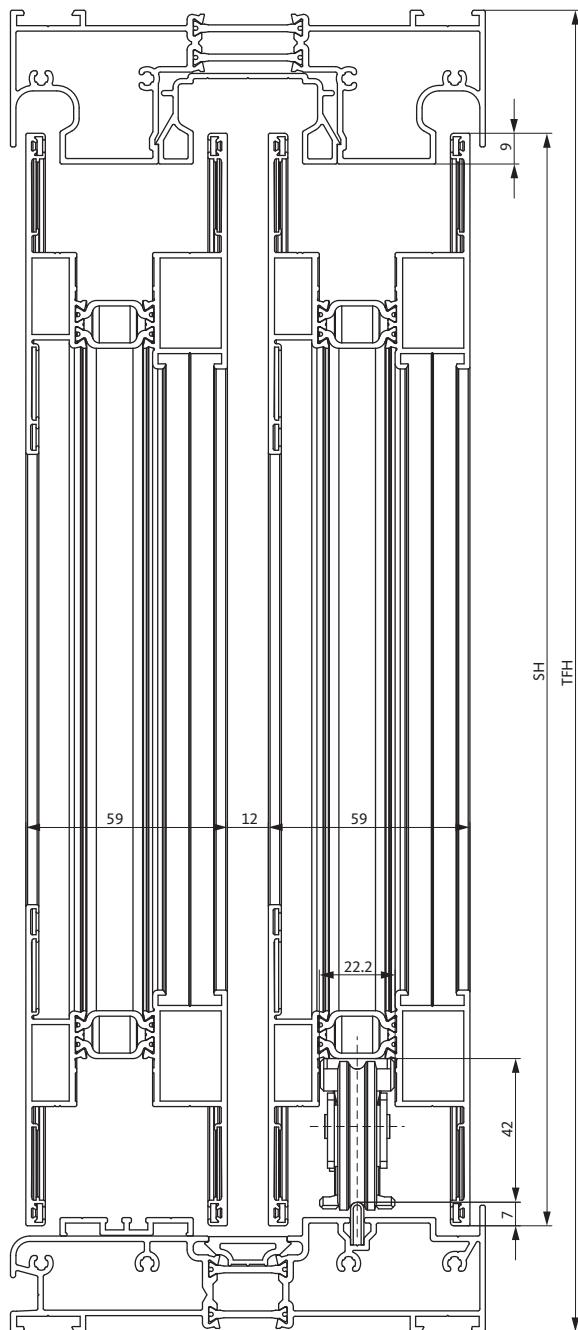
## Application ranges

**GU**

### Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	853-2753 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1



### Installation drawings

Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45873	from page 247
HS-Master, pattern A	0-44355	from page 314
HS-Master pattern C	0-44521	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

### Note:

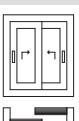
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



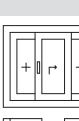
#### Pattern A

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



#### Pattern D

- 2 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

# Reynaers CP 130-LS / GU-934 bogies

## Hardware requirements

**GU**

### Hardware requirements – patterns A, D, G1

Bogies and connecting rod – for sash weights up to 300 kg



Bogies			Designation	Contents	Surface	PU	Order no.
Pattern	A	D					
1	2	1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18

Connecting rod ø 8 mm			Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern	A	D	G1				
1	2	1	700-1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18
			1601-1850	1350	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18
			1851-2350	1850	ferGuard faceGuard	1 1	9-25476-18-0-1 9-25476-18-0-18
			2351-3300	3300	ferGuard faceGuard	1 1	9-25476-33-0-1 9-25476-33-0-18

Alternative: bogies and connecting rod – for sash weights up to 400 kg



Bogies			Designation	Contents	Surface	PU	Order no.
Pattern	A	D					
1	2	1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18
1	2	1	GU-934 tandem bogies set	2 x central bogies	ferGuard faceGuard	1 1	K-17804-01-0-1 K-17804-01-0-18

Connecting rod ø 8 mm			Sash width [mm]	Length [mm]	Surface	PU	Order no.
Pattern	A	D	G1				
1	2	1	1270-1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18
			1601-1850	1350	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18
			1851-2350	1850	ferGuard faceGuard	1 1	9-25476-18-0-1 9-25476-18-0-18
			2351-3300	3300	ferGuard faceGuard	1 1	9-25476-33-0-1 9-25476-33-0-18

# Reynaers CP 130-LS / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, D, G1

Lift&Slide gear, 37.5 mm backset									
Pattern			Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	D	G1				Cover rail	Lock case, connecting rod		
1	2	1	853-1273	1190	408	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
						EV 1 / light gray	faceGUard	10	6-30021-11-0-18
			1273-1853	1770	408	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
						EV 1 / light grey	faceGUard	10	6-30021-19-0-18
			1853-2353	2270	1008	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
						EV 1 / light grey	faceGUard	10	6-30021-24-0-18
			2103-2753	2670	1008	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
						UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
						EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>									
1	2	1	max. 3253	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
						UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
						EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>									
1	2	1	max. 3253	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
						UC 5 / dark bronze	-	10	9-28483-00-0-5

Packer, spacer, frame cam, PC screw-hole cover cap, rubber buffer								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
1	2	1	Vertical adapters for Lift&Slide front bogies			-	1	9-47295-11-0-1
5	10	5	Spacer for Lift&Slide gear			-	1	9-47296-12-0-1
2	4	-	Frame cam			Stainless steel	1	6-22648-02-0-8
1	2	1	Cover cap for profile cylinder			grey	1	9-26687-00-0-1
2	-	-	Rubber buffer 60			black	1	9-23793-00-0-0

Buffer 90 [1]								
Pattern			Designation			Surface	PU	Order no.
A	D	G1						
-	2	2	Buffer 90 set			black	1	K-17134-00-0-6
						white	1	K-17134-00-0-7

[1] Optionally with pattern A

### Hardware requirements – pattern G1

Bottom keeper			Designation	Surface	PU	Order no.
Pattern	A	D				
G1	-	-	Bottom keeper set	ferGuard	1	K-12057-00-0-1

# Reynaers CP 130-LS / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]							
Pattern			Designation		Surface	PU	Order no.
A	D	G1					
1	2	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1	
				Dark brown [2]	1	6-24606-00-0-5	
				White, RAL 9016	1	6-24606-00-0-7	
1	2	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1	
				Dark brown [2]	1	6-24607-00-0-5	
				White, RAL 9016	1	6-24607-00-0-7	

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]							
Pattern			Designation		Surface	PU	Order no.
A	D	G1					
1	2	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1	
				Dark brown [2]	1	6-24606-00-0-5	
				White, RAL 9016	1	6-24606-00-0-7	
1	2	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1	
				Dark brown [2]	1	6-24607-00-0-5	
				White, RAL 9016	1	6-24607-00-0-7	

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull							
Pattern			Designation		Surface	PU	Order no.
A	D	G1					
1	2	1	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1	
				Dark brown [1]	1	9-29992-01-0-5	
				White, RAL 9016	1	9-29992-01-0-7	

[1] Similar to RAL 8022

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]			Designation	Surface	PU	Order no.
Pattern	A	D				
1	2	1	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
				Dark brown [2]	1	6-24615-96-0-5
				White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws			Designation	Example of application	Surface	PU	Order no.
Pattern	A	D					
2	4	2	Countersunk screw M6 x 20 mm	1	-	1	9-13274-20-0-1
2	4	2	Countersunk screw M6 x 70 mm	2 + 3	-	1	9-13274-70-0-1

Optional: gasket plates			Designation	Example of application	Surface	PU	Order no.
Pattern	A	D					
1	2	1	Gasket plate for flush pull	2	black	1	9-47211-01-0-6
1	2	1	Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6

# Reynaers CP 130-LS / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern		Designation	Surface	PU	Order no.
A	D	G1			
1	2	-	Anti-jemmy device set	-	1 K-16569-00-0-1
Contents				Qty.	Item no.
Wedge				2	6-31219-00-0-1
Support				2	9-40863-00-0-1
Lever				2	9-40789-00-0-1

Corner-drive					
Pattern		Designation	Surface	PU	Order no.
A	D	G1			
1	2	-	Corner-drive set	-	1 K-16570-00-0-1
Contents				Qty.	Item no.
Corner-drive				1	6-31284-00-0-1
Extension				1	6-31282-00-0-1
Cover				1	6-31283-00-0-1
Guide				2	9-28101-00-0-0
Stay arm slide block				1	6-22755-00-0-6
Lever complete				1	6-31234-00-0-1
Countersunk screw M5 x 16 mm				1	9-40828-00-R-1

Vertical packer					
Pattern		Designation	Surface	PU	Order no.
A	D	G1			
1	2	-	Vertical packer	-	1 9-47295-11-0-1

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D	G1				
1	2	-	600-1220	1000	-	1 9-28355-10-0-3
			1221-1720	1500	-	1 9-28355-15-0-3
			1721-2020	1800	-	1 9-28355-18-0-3
			2021-3000	2600	-	1 9-28355-26-0-3
			Stock length	4800	-	1 9-28355-48-0-3

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	1	Tension spring for reduction of operating forces	-	1 9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	1	Handle damper for controlled lowering	-	1 K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam					
Pattern		Designation	Surface	PU	Order no.
A	D				
2	4	-	Frame cam	Stainless steel	1 9-43830-04-0-8

Bottom keeper					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	-	Bottom keeper set	ferGUard	1 K-12057-00-0-1

# Reynaers CP 155 / GU-934 bogies

## Application ranges

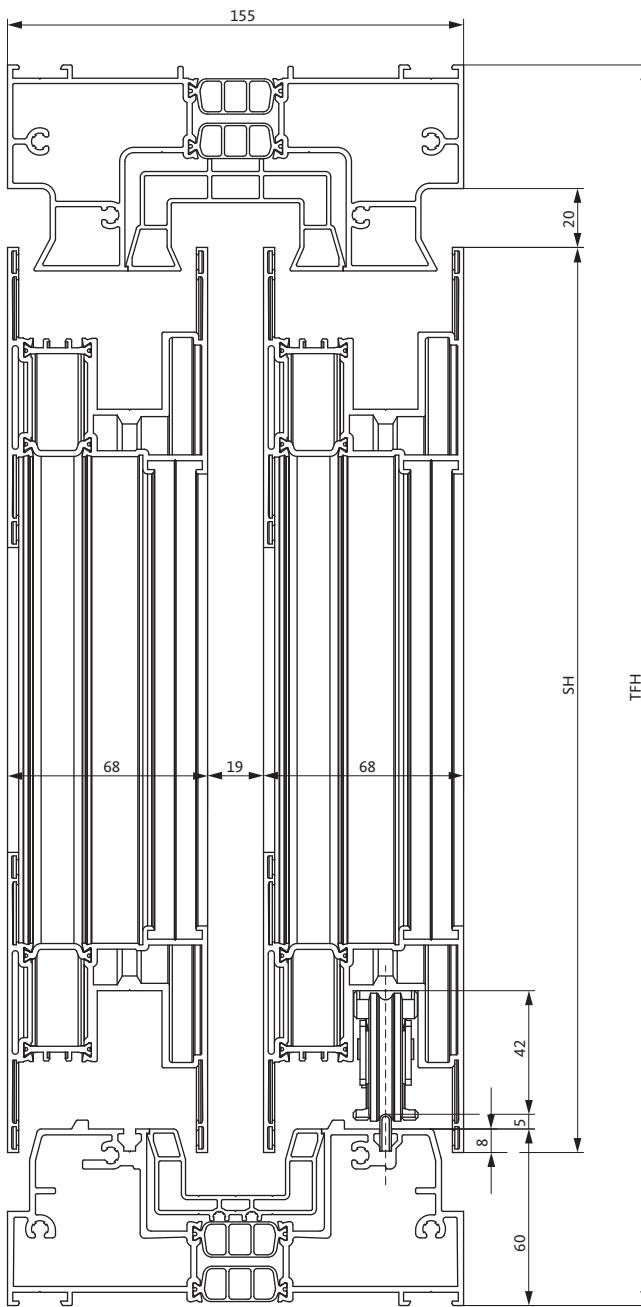
**GU**

### Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	853-2753 mm	300 kg	GU-934
		400 kg	GU-934 Tandem

SH : SW = 2.5 : 1

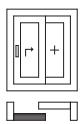
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45582	from page 255
HS-Master, pattern A	0-44355	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338



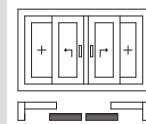
#### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

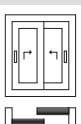
#### Possible patterns



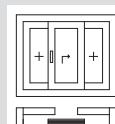
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



**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 G1 symmetrical**  
1 Lift&Slide door  
2 fixed-glazed sashes  
Fig.: sliding direction to the right

# Reynaers CP 155 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, G1



Bogies and connecting rod – for sash weights up to 300 kg

Bogies								
Pattern				Designation	Contents	Surface	PU	Order no.
A	C	D	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	1			faceGuard	1	K-16488-00-0-18

### Connecting rod ø 8 mm

Pattern				Sash width [mm]	Length [mm]	Surface	PU	Order no.		
A	C	D	G1	GU-934 bogies set	700-1600 1601-1850 1851-2350 2351-3300	ferGuard	1	9-25476-11-0-1		
1	2	2	1			faceGuard	1	9-25476-11-0-18		
						ferGuard	1	9-25476-14-0-1		
						faceGuard	1	9-25476-14-0-18		
						ferGuard	1	9-25476-18-0-1		
						faceGuard	1	9-25476-18-0-18		
						ferGuard	1	9-25476-33-0-1		
						faceGuard	1	9-25476-33-0-18		

### Alternative: bogies and connecting rod – for sash weights up to 400 kg



Bogies								
Pattern				Designation	Contents	Surface	PU	Order no.
A	C	D	G1	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
1	2	2	1			faceGuard	1	K-16488-00-0-18
1				GU-934 tandem bogies set	2 x central bogies	ferGuard	1	K-17804-01-0-1
1	2	2	1			faceGuard	1	K-17804-01-0-18

### Connecting rod ø 8 mm

Pattern				Sash width [mm]	Length [mm]	Surface	PU	Order no.		
A	C	D	G1	GU-934 tandem bogies set	1270-1600 1601-1850 1851-2350 2351-3300	ferGuard	1	9-25476-11-0-1		
1	2	2	1			faceGuard	1	9-25476-11-0-18		
						ferGuard	1	9-25476-14-0-1		
						faceGuard	1	9-25476-14-0-18		
						ferGuard	1	9-25476-18-0-1		
						faceGuard	1	9-25476-18-0-18		
						ferGuard	1	9-25476-33-0-1		
						faceGuard	1	9-25476-33-0-18		

# Reynaers CP 155 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, G1

Lift&Slide gear, 37.5 mm backset										
Pattern				Sash height [mm]	Length [mm]	Handle height [mm]	Surface	PU	Order no.	
A	C	D	G1				Cover rail	Lock case, connecting rod		
1	2	2	1	853-1273	1190	408	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
							EV 1 / light gray	faceGUard	10	6-30021-11-0-18
				1273-1853	1770	408	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
							EV 1 / light grey	faceGUard	10	6-30021-19-0-18
				1853-2353	2270	1008	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
							EV 1 / light grey	faceGUard	10	6-30021-24-0-18
				2103-2753	2670	1008	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
							UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
							EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>										
1	2	2	1	max. 3253	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
							UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
							EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>										
1	2	2	1	max. 3253	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
							UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Reynaers CP 155														
Pattern				Designation				Surface	PU	Order no.				
A	C	D	G1											
1	2	2	1	Basic hardware set for Reynaers CP 155				-	1	K-17936-00-0-0				
<b>Contents</b>										Qty. Item no.				
Vertical adapters for Lift&Slide front bogies										1 9-47295-11-0-1				
Spacer for Lift&Slide gear										5 9-47296-12-0-1				
Frame cam [1]										2 6-22623-04-0-8				
Rubber buffer 60 [2]										2 9-23793-00-0-0				
[1] Cannot be used with pattern C and G1														
[2] Cannot be used with patterns D and G1														

Cover cap for profile cylinder										
Pattern				Designation				Surface	PU	Order no.
A	C	D	G1							
1	2	2	1	Cover cap for profile cylinder				grey	1	9-26687-00-0-1

### Hardware requirements – patterns A, C, D, G1

Buffer 90				
Pattern				Designation
A	C	D	G1	
-	-	2	2	Buffer 90 set
				black
				white
				1
				K-17134-00-0-6
				1
				K-17134-00-0-7

### Hardware requirements – pattern C

Frame cam, fixing screws				
Pattern				Designation
A	C	D	G1	
-	2	-	-	Frame cam
-	4	-	-	Countersunk-head tapping screw 4.8 x 16 mm
				Stainless steel
				1
				6-22648-03-0-8
				-
				1
				9-13089-16-R-1

### Hardware requirements – pattern G1

Bottom keeper				
Pattern				Designation
A	C	D	G1	
-	-	-	1	Bottom keeper set
				ferGUard
				1
				K-12057-00-0-1

# Reynaers CP 155 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	G1				
1	2	2	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]							
Pattern				Designation	Surface	PU	Order no.
A	C	D	G1				
1	2	2	1	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24606-00-0-1
					Dark brown [2]	1	6-24606-00-0-5
					White, RAL 9016	1	6-24606-00-0-7
1	2	2	1	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24607-00-0-1
					Dark brown [2]	1	6-24607-00-0-5
					White, RAL 9016	1	6-24607-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull							
Pattern				Designation	Surface	PU	Order no.
A	C	D	G1				
1	2	2	1	Flush pull MS, square	Silver/EV 1 look	1	9-29992-01-0-1
					Dark brown [1]	1	9-29992-01-0-5
					White, RAL 9016	1	9-29992-01-0-7

[1] Similar to RAL 8022

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]					Surface	PU	Order no.
Pattern				Designation			
A	C	D	G1				
1	2	2	1	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look	1	6-24615-96-0-1
					Dark brown [2]	1	6-24615-96-0-5
					White, RAL 9016	1	6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws					Example of application	Surface	PU	Order no.
Pattern				Designation				
A	C	D	G1					
2	4	4	2	Countersunk screw M6 x 20 mm	1	-	1	9-13274-20-0-1
2	4	4	2	Countersunk screw M6 x 80 mm	2 + 3	-	1	9-13274-80-0-1

Optional: gasket plates					Example of application	Surface	PU	Order no.
Pattern				Designation				
A	C	D	G1					
1	2	2	1	Gasket plate for flush pull	2	black	1	9-47211-01-0-6
1	2	2	1	Gasket plate for exterior and interior turn handle	3	black	1	9-47210-01-0-6

# Reynaers CP 155 / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device							
Pattern		Designation			Surface	PU	Order no.
A	C	D	G1				
1	2	2	-	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents					Qty.	Item no.	
Wedge					2	6-31219-00-0-1	
Support					2	9-40863-00-0-1	
Lever					2	9-40789-00-0-1	

Corner-drive							
Pattern		Designation			Surface	PU	Order no.
A	C	D	G1				
1	2	2	-	Corner-drive set	-	1	K-16570-00-0-1
Contents					Qty.	Item no.	
Corner-drive					1	6-31284-00-0-1	
Extension					1	6-31282-00-0-1	
Cover					1	6-31283-00-0-1	
Guide					2	9-28101-00-0-0	
Stay arm slide block					1	6-22755-00-0-6	
Lever complete					1	6-31234-00-0-1	
Countersunk screw M5 x 16 mm					1	9-40828-00-R-1	

Vertical packer							
Pattern		Designation			Surface	PU	Order no.
A	C	D	G1				
1	2	2	-	Vertical packer	-	1	9-47295-11-0-1

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	G1			
1	2	2	-	600-1220	1000	-
				1221-1720	1500	-
				1721-2020	1800	-
				2021-3000	2600	-
				Stock length	4800	-

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]							
Pattern		Designation			Surface	PU	Order no.
A	C	D	G1				
1	2	2	1	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]							
Pattern		Designation			Surface	PU	Order no.
A	C	D	G1				
1	2	2	1	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam							
Pattern		Designation			Surface	PU	Order no.
A	C	D	G1				
-	4	-	-	Frame cam	Stainless steel	1	9-43830-03-0-8

Bottom keeper							
Pattern		Designation			Surface	PU	Order no.
A	C	D	G1				
1	2	2	-	Bottom keeper set	ferGUard	1	K-12057-00-0-1

# Reynaers TSL 110 / GU-934 bogies

## Application ranges

**GU**

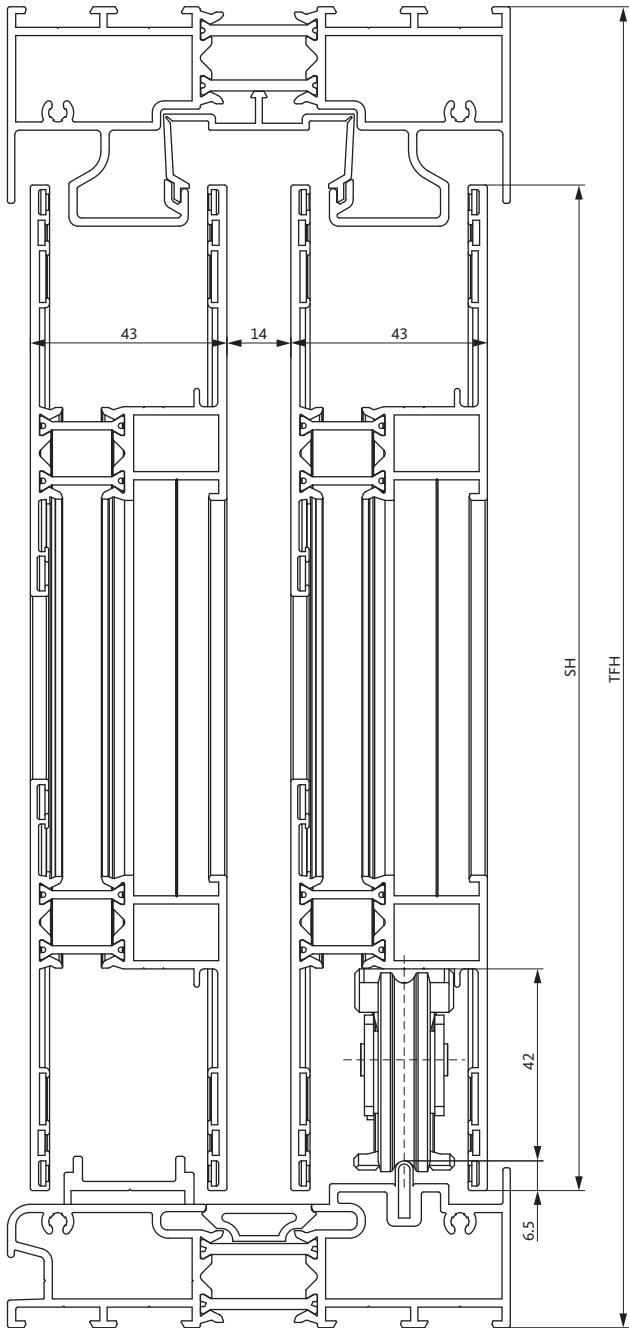
### Application ranges

#### Sash widths / heights / weights

Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	864-2764 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

#### Installation drawings

Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-45328	from page 263
Locking monitoring set	0-44449	from page 338

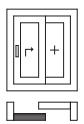


SH = sash height / TFH = total frame height

#### Note:

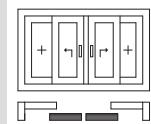
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

#### Possible patterns



**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

### Hardware requirements – patterns A, C

Bogies and connecting rod – for sash weights up to 300 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	C					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C					
1	2	700-1600	1100	ferGuard	1	9-25476-11-0-1
				faceGuard	1	9-25476-11-0-18
		1601-1850	1350	ferGuard	1	9-25476-14-0-1
				faceGuard	1	9-25476-14-0-18
		1851-2350	1850	ferGuard	1	9-25476-18-0-1
		2351-3300		faceGuard	1	9-25476-18-0-18
			3300	ferGuard	1	9-25476-33-0-1
				faceGuard	1	9-25476-33-0-18

# Reynaers TSL 110 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	C				Cover rail	Lock case, connecting rod		
1	2	864-1284	1190	406.5	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
					EV 1 / light grey	faceGUard	10	6-30021-11-0-18
		1234-1864	1770	406.5	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
					EV 1 / light grey	faceGUard	10	6-30021-19-0-18
		1864-2364	2270	1006.5	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
					EV 1 / light grey	faceGUard	10	6-30021-24-0-18
		2114-2764	2670	1006.5	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
					EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3264	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
					EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3264	500	-	EV 1 / light grey	-	10	9-28483-05-0-1
					UC 5 / dark bronze	-	10	9-28483-05-0-5

Basic hardware set for Reynaers TSL 110							
Pattern		Designation			Surface	PU	Order no.
A	C						
1	2	Basic hardware set for Reynaers TSL 110		-	-	1	K-17133-00-0-0
<b>Contents</b>							
Vertical adapters for Lift&Slide front bogies							
Spacer for Lift&Slide gear							
Frame cam [1]							
[1] Cannot be used with pattern C							

Frame cam, rubber buffer, cover cap							
Pattern		Designation			Surface	PU	Order no.
A	C						
-	2	Frame cam		Stainless steel	1	6-23309-00-0-8	
2	4	Rubber buffer 60		black	1	9-23793-00-0-0	
1	2	Cover cap for profile cylinder		grey	1	9-26687-00-0-1	

Buffer 90							
Pattern		Designation			Surface	PU	Order no.
A	C						
2	4	Buffer 90 set			black	1	K-12024-00-0-6
					white	1	K-12024-00-0-7
					cream white	1	K-12024-00-0-7Z

### Optional additional components

#### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]				Surface	PU	Order no.
Pattern	Designation					
A	C					
1	2	Tension spring for reduction of operating forces			-	1 9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]				Surface	PU	Order no.
Pattern	Designation					
A	C					
1	2	Handle damper for controlled lowering			-	1 K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

#### Additional kit (L&S night vent module)

Frame cam				Surface	PU	Order no.
Pattern	Designation					
A	C					
2	-	Frame cam			Stainless steel	1 9-43830-04-0-8

Bottom keeper				Surface	PU	Order no.
Pattern	Designation					
A	C					
1	2	Bottom keeper set			ferGUard	1 K-12057-00-0-1

# Reynaers TSL 110 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]				
Pattern		Designation		
A	C			Surface
1	2	DIRIGENT interior handle without PC hole		Silver/EV 1 look
				Dark brown [2]
				White, RAL 9016
1	2	DIRIGENT interior turn handle, with PC hole		Silver/EV 1 look
				Dark brown [2]
				White, RAL 9016

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

Flush pull				
Pattern		Designation		
A	C			Surface
1	2	Flush pull MS, square		Silver/EV 1 look
				Dark brown [1]
				White, RAL 9016

[1] Similar to RAL 8022

Fixing screws				
Pattern		Designation		
A	C			Surface
2	4	Countersunk screw M6 x 20 mm		-
				1
				9-13274-20-0-1

Optionally: gasket plate				
Pattern		Designation		
A	C			Surface
1	2	Gasket plate for flush pull		black
				1
				9-47211-01-0-6

### Application example 2: Interior/exterior handle set

#### DIRIGENT turn handle [1]

Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1 6-24615-96-0-1
				Dark brown [2]	1 6-24615-96-0-5
				White, RAL 9016	1 6-24615-96-0-7

[1] The use of buffers is recommended. Order information refer to page 302.

[2] Similar to RAL 8022

#### Fixing screws

Pattern	Designation		Surface	PU	Order no.
A	C				
2	4	Countersunk screw M6 x 50 mm		-	1 9-13274-50-0-1

#### Optionally: gasket plate

Pattern	Designation		Surface	PU	Order no.
A	C				
1	2	Gasket plate for exterior and interior turn handle		black	1 9-47210-01-0-6

# Sapa Ekonal 125 / GU-934 bogies

## Application ranges

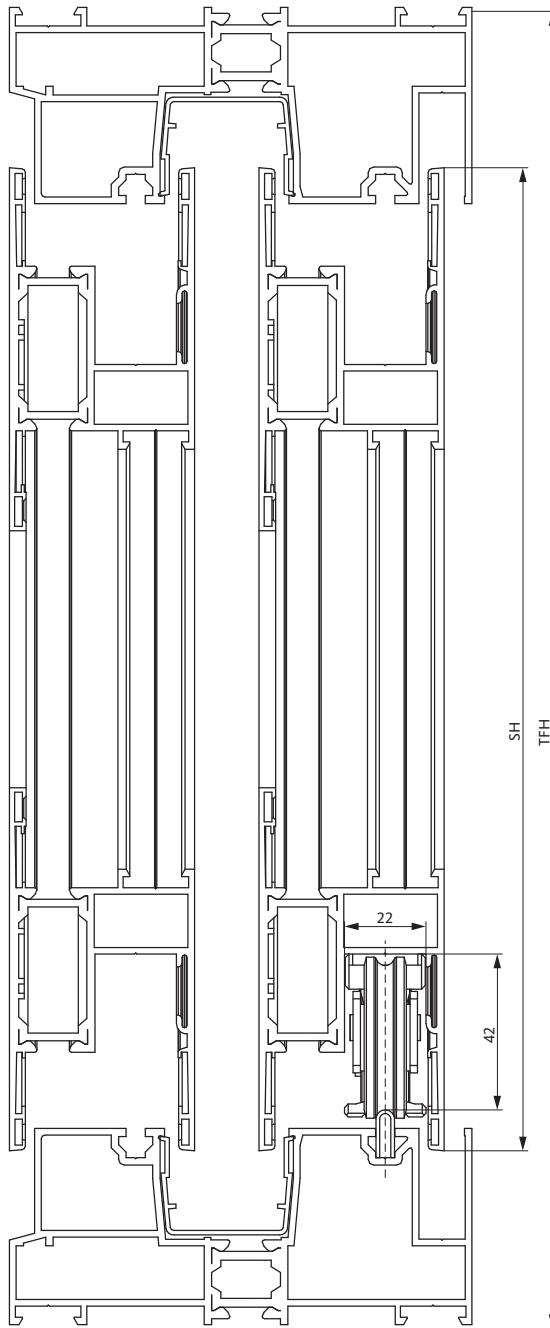
**GU**



## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	774-2719 mm	300 kg	GU-934
SH : SW = 2.5 : 1			

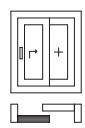
Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-44718	from page 269
Locking monitoring set	0-44449	from page 338



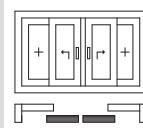
### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



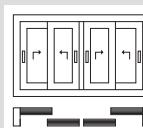
**Pattern A**  
1 Lift&Slide door  
1 fixed-glazed sash  
Fig.: sliding direction to the right



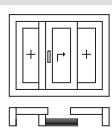
**Pattern C**  
2 Lift&Slide doors  
2 fixed-glazed sashes  
Fig: sliding direction to the right and left



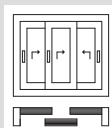
**Pattern D**  
2 Lift&Slide doors  
Fig: sliding direction to the right and left



**Pattern F**  
4 Lift&Slide doors  
Fig: sliding direction to the right and left



**Pattern G2 asymmetrical**  
with fixed mullion  
1 Lift&Slide door  
2 fixed-glazed sashes  
Fig.: sliding direction to the right



**Pattern H**  
3 Lift&Slide doors  
(like pattern G1 symmetrical)  
Fig: sliding direction to the right and left

# Sapa Ekonal 125 / GU-934 bogies

**GU**

## Hardware requirements

### Hardware requirements – patterns A, C, D, F, G2, H

Bogies and connecting rod – for sash weights up to 300 kg



Bogies											
Pattern						Designation	Contents	Surface	PU	Order no.	
A	C	D	F	G2	H						
1	2	2	4	1	3	GU-934 bogies set		1 x front bogie 1 x rear bogie	ferGuard	1	K-16488-00-0-1
									faceGuard	1	K-16488-00-0-18

Connecting rod ø 8 mm										
Pattern						Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	C	D	F	G2	H					
1	2	2	4	1	3	700–1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18
						1601–1850	1350	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18
						1851–2350	1850	ferGuard faceGuard	1 1	9-25476-18-0-1 9-25476-18-0-18
						2351–3300	3300	ferGuard faceGuard	1 1	9-25476-33-0-1 9-25476-33-0-18

# Sapa Ekonal 125 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, C, D, F, G2, H

Lift&Slide gear, 37.5 mm backset							Surface			PU	Order no.	
Pattern						Sash height [mm]	Length [mm]	Handle height [mm]	Cover rail	Lock case, connecting rod		
A	C	D	F	G2	H							
1	2	2	4	1	3	774-1239	1190	406	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
									UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
									EV 1 / light gray	faceGUard	10	6-30021-11-0-18
						1144-1819	1770	406	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
									UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
									EV 1 / light grey	faceGUard	10	6-30021-19-0-18
						1774-2319	2270	1006	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
									UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
									EV 1 / light grey	faceGUard	10	6-30021-24-0-18
						2024-2719	2670	1006	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
									UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
									EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>									EV 1 / light grey	ferGUard	10	6-32030-00-0-1
1	2	2	4	1	3	max. 3219	500	-	UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
1	2	2	4	1	3	max. 3219	500	-	EV 1 / light grey	faceGUard	10	6-32030-00-0-18
<b>Optional: Cover-rail extension set 500 mm</b>									EV 1 / light grey	-	10	9-28483-00-0-1
1	2	2	4	1	3	max. 3219	500	-	UC 5 / dark bronze	-	10	9-28483-00-0-5

Basic hardware set for Sapa Ekonal 125																	
Pattern						Designation					Surface	PU	Order no.				
A	C	D	F	G2	H												
1	2	2	4	1	3	Basic hardware set for Sapa Ekonal 125					-	1	K-17266-00-0-0				
<b>Contents</b>																	
Vertical adapters for Lift&Slide front bogies																	
Spacer for Lift&Slide gear																	
Frame cam [1]																	
Countersunk screw M5 x 20 mm for fixing the turn handle																	
<b>Bag of screws K-17267-00-0-0</b>						<b>Contents</b>					<b>Qty.</b>	<b>Item no.</b>					
						Countersunk-head tapping screw 4.8 x 16 mm					1	9-13089-16-R-1					
						Countersunk-head tapping screw 4.8 x 32 mm					5	9-13089-32-R-1					
						Countersunk-head tapping screw 4.8 x 50 mm					6	9-13089-50-R-1					
						PC screw-hole cover cap (grey)					2	9-26687-00-0-1					

[1] Cannot be used with pattern G2

# Sapa Ekonal 125 / GU-934 bogies

GU

## Hardware requirements

### Hardware requirements – pattern H

Spacer						Designation	Surface	PU	Order no.
Pattern									
A	C	D	F	G2	H				
-	-	-	-	-	1	Spacer	-	1	9-47296-06-0-1

Bottom keeper						Designation	Surface	PU	Order no.
Pattern									
A	C	D	F	G2	H				
-	-	-	-	-	1	Bottom keeper set	ferGuard	1	K-12057-00-0-1

# Sapa Ekonal 125 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1][2]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look Dark brown [3] White, RAL 9016	1 1 1	6-24607-00-0-1 6-24607-00-0-5 6-24607-00-0-7
1	2	2	4	1	3				

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.  
[2] The fixing screws are contained in the basic hardware set for Sapa Ekonal 125 / order number K-17266-00-0-0.  
[3] Similar to RAL 8022

#### Application example 2: Interior/exterior handle set

DIRIGENT turn handle [1]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H	DIRIGENT interior/exterior handle set, with PC hole	Silver/EV 1 look Dark brown [2] White, RAL 9016	1 1 1	6-24615-96-0-1 6-24615-96-0-5 6-24615-96-0-7
1	2	2	4	1	3				

[1] The use of buffers is recommended. Order information refer to page 302.  
[2] Similar to RAL 8022

Fixing screws									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H	Countersunk screw M6 x 65 mm	-	1	9-13274-65-0-1
2	4	4	8	2	6				

Optionally: gasket plate									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H	Gasket plate for exterior and interior turn handle	black	1	9-47210-01-0-6
1	2	2	4	1	3				

# Sapa Ekonal 125 / GU-934 bogies

**GU**

## Hardware requirements

### Optional additional components

Buffer 90									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H				
1	2	1	2	2	2	Buffer 90 set	black	1	K-12024-00-0-6
							white	1	K-12024-00-0-7
							cream white	1	K-12024-00-0-7Z

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H				
1	2	2	4	1	3	Tension spring for reduction of operating forces	-	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

Handle damper [1]									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H				
1	2	2	4	1	3	Handle damper for controlled lowering	-	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

### Additional kit (L&S night vent module)

Frame cam									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H				
2	4	4	4	-	-	Frame cam	Stainless steel	1	9-43830-03-0-8

Bottom keeper									
Pattern						Designation	Surface	PU	Order no.
A	C	D	F	G2	H				
1	2	2	2	-	-	Bottom keeper set	ferGuard	1	K-12057-00-0-1

# TS-Aluminium / GU-937 bogies

## Application ranges

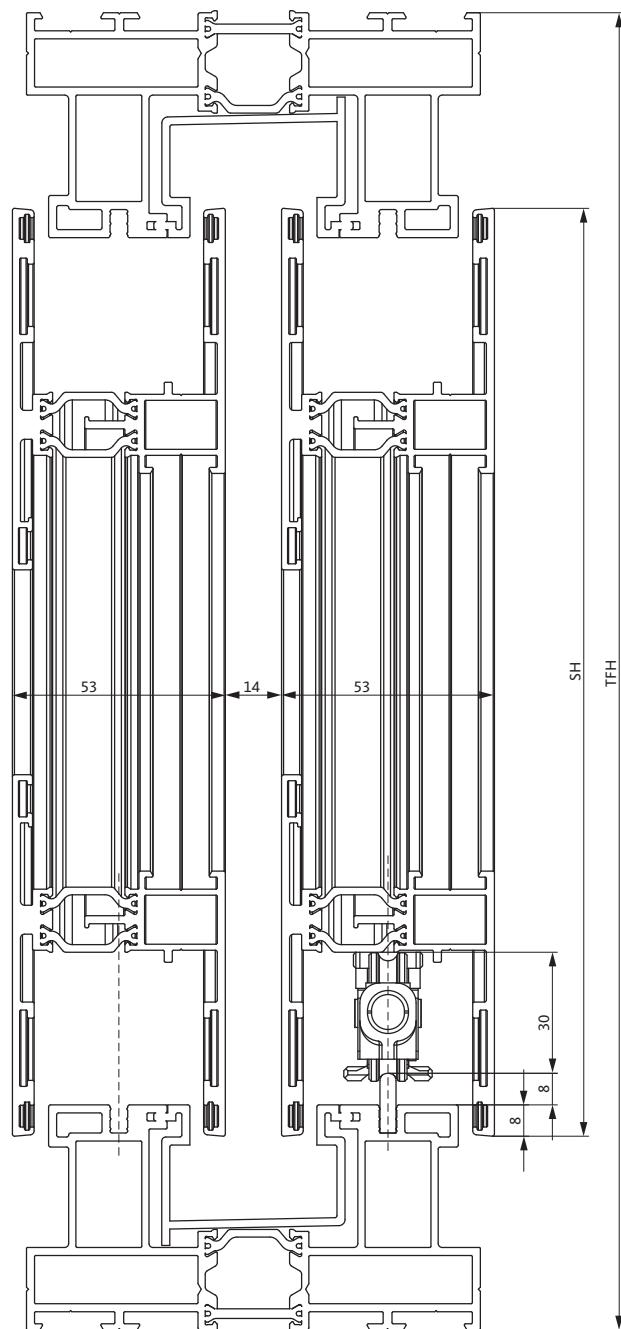
**GU**



## Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
700-3300 mm	830-2730 mm	150 kg	GU-937
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-937	0-44919	from page 275
Locking monitoring set	0-44449	from page 338



### Note:

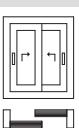
The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.

### Possible patterns



#### Pattern A

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



#### Pattern D

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

# TS-Aluminium / GU-937 bogies

## Hardware requirements



### Hardware requirements – patterns A, D

Bogies and connecting rod – for sash weights up to 150 kg



Bogies					
Pattern		Designation		Surface	PU
A	D				Order no.
1	2	GU-937 front bogie		ferGuard	1 [1]
1	2	GU-937 rear bogie		ferGuard	1 [1]

[1] The bogies are contained in the basic hardware set for TS-Aluminium / order number K-17599-00-0-0.

Connecting rod ø 8 mm					
Pattern		Sash width [mm]	Length [mm]	Surface	PU
A	D				Order no.
1	2	700–1600	1100	ferGuard	1 9-25476-11-0-1
		1601–1850	1350	ferGuard	1 9-25476-14-0-1
		1851–2350	1850	ferGuard	1 9-25476-18-0-1
		2351–3300	3300	ferGuard	1 9-25476-33-0-1

# TS-Aluminium / GU-937 bogies

## Hardware requirements

**GU**



### Hardware requirements – patterns A, D

Lift&Slide gear, 27.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	D				Cover rail	Lock case, connecting rod		
1	2	830–1250	1190	411	EV 1 / light grey	ferGuard	10	6-30019-11-0-1
					UC 5 / dark bronze	ferGuard	10	6-30019-11-0-5
		1200–1830	1770	411	EV 1 / light grey	ferGuard	10	6-30019-19-0-1
					UC 5 / dark bronze	ferGuard	10	6-30019-19-0-5
		1830–2330	2270	1011	EV 1 / light grey	ferGuard	10	6-30019-24-0-1
					UC 5 / dark bronze	ferGuard	10	6-30019-24-0-5
		2080–2730	2670	1011	EV 1 / light grey	ferGuard	10	6-30019-28-0-1
					UC 5 / dark bronze	ferGuard	10	6-30019-28-0-5
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3230	500	–	EV 1 / light grey	ferGuard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGuard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3230	500	–	EV 1 / light grey	–	10	9-28483-00-0-1
					UC 5 / dark bronze	–	10	9-28483-00-0-5

Basic hardware set for TS Aluminium										
Pattern		Designation			Surface	PU	Order no.			
A	D						Qty.	Item no.		
1	2	Basic hardware set for TS Aluminium			–	1	K-17599-00-0-0			
<b>Contents</b>										
GU-937 front bogie										
GU-937 rear bogie										
Vertical adapters for Lift&Slide front bogies										
Frame cam										
Rubber buffer 62										
<b>Bag of screws K-17673-00-0-0</b>					<b>Contents</b>	<b>Qty.</b>	<b>Item no.</b>			
					Countersunk-head tapping screw 4.8 x 16 mm	1	9-13528-16-R-8			
					Countersunk-head tapping screw 4.8 x 22 mm	4	9-13528-22-R-8			
					Countersunk-head tapping screw 4.8 x 32 mm	5	9-13528-32-R-8			
					Countersunk-head tapping screw 4.8 x 50 mm	6	9-13528-50-R-8			
					PC screw-hole cover cap (grey)	2	9-26687-00-0-1			

### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – with extended exterior flush pull

DIRIGENT turn handle set					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	DIRIGENT interior turn handle set, without PC hole [1]	Silver/EV 1 look	1	K-13265-00-0-1
			Dark brown [3]	1	K-13265-00-0-5
			White, RAL 9016	1	K-13265-00-0-7
1	2	DIRIGENT interior turn handle set, with PC hole [2]	Silver/EV 1 look	1	K-13266-00-0-1
			Dark brown [3]	1	K-13266-00-0-5
			White, RAL 9016	1	K-13266-00-0-7

[1] Contents: DIRIGENT interior turn handle without PC hole, extended flush pull, square spindle  
[2] Contents: DIRIGENT interior turn handle with PC hole, extended flush pull, square spindle  
[3] Similar to RAL 8022

Fixing screws					
Pattern		Designation	Surface	PU	Order no.
A	D				
2		Countersunk screw M6 x 50 mm	–	1	9-13274-50-0-1

### Optional additional components

Buffer 90					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Buffer 90 set	black	1	K-12024-00-0-6
			white	1	K-12024-00-0-7
			cream white	1	K-12024-00-0-7Z

Handle damper [1]					
Pattern		Designation	Surface	PU	Order no.
A	D				
1		Handle damper for controlled lowering	–	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

# Wicona Wicslide 160 / GU-934 bogies

## Application ranges

**GU**

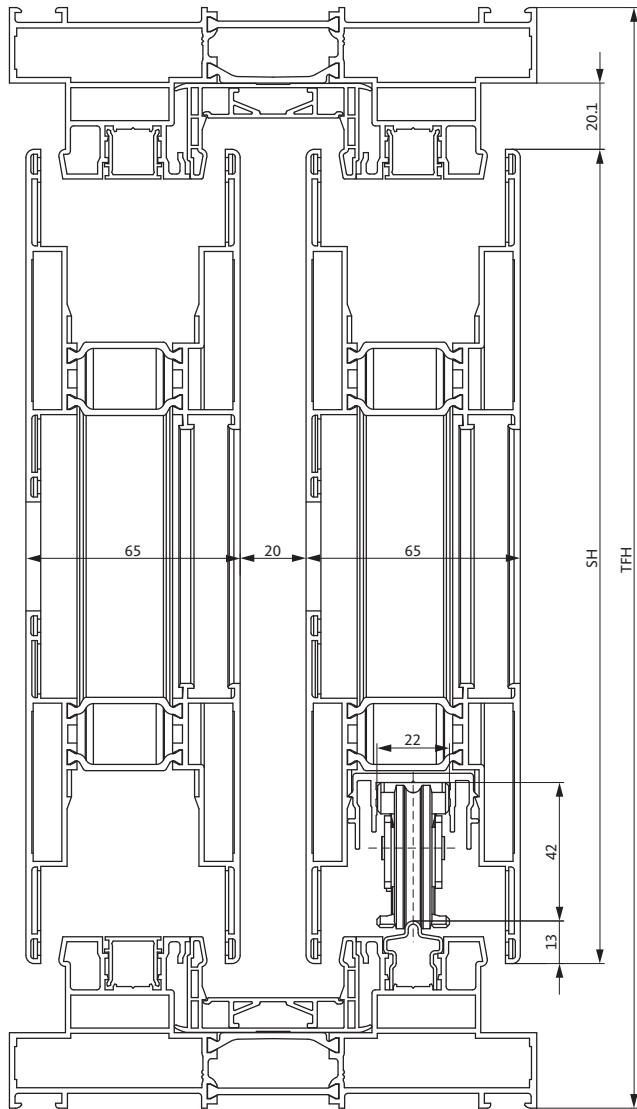
### Application ranges

Sash widths / heights / weights			
Sash width [SW]	Sash height [SH]	Sash weights	
		maximum	Bogies
720-3300 mm	843-2743 mm	300 kg	GU-934
		400 kg	GU-934 Tandem
SH : SW = 2.5 : 1			

Installation drawings		
Application range	Drawing	Order information
Lift&Slide hardware GU-934	0-46552	from page 279
HS-Master, pattern A	0-44355	from page 314
HS-SPEED Limiter	0-44550	from page 330
Locking monitoring set	0-44449	from page 338

#### Note:

The product guidelines of the system provider regarding construction, assembly, max. sash dimensions, max. sash weights and material qualities (e.g. linear profile expansion) are to be observed.



SH = sash height / TFH = total frame height

#### Possible patterns



##### Pattern A

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



##### Pattern D

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

# Wicona Wicslide 160 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, D

Bogies and connecting rod – for sash weights up to 300 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	D					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18

### Connecting rod ø 8 mm

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D					
1	2	720-1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18
		1601-1850	1350	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18
		1851-2350	1850	ferGuard faceGuard	1 1	9-25476-18-0-1 9-25476-18-0-18
		2351-3300	3300	ferGuard faceGuard	1 1	9-25476-33-0-1 9-25476-33-0-18

Bogies and connecting rod – for sash weights up to 400 kg



Bogies						
Pattern		Designation	Contents	Surface	PU	Order no.
A	D					
1	2	GU-934 bogies set	1 x front bogie 1 x rear bogie	ferGuard faceGuard	1 1	K-16488-00-0-1 K-16488-00-0-18
1	2	GU-934 tandem bogies set	2 x central bogies	ferGuard faceGuard	1 1	K-17804-01-0-1 K-17804-01-0-18

### Connecting rod ø 8 mm

Connecting rod ø 8 mm						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D					
1	2	1290-1600	1100	ferGuard faceGuard	1 1	9-25476-11-0-1 9-25476-11-0-18
		1601-1850	1350	ferGuard faceGuard	1 1	9-25476-14-0-1 9-25476-14-0-18
		1851-2350	1850	ferGuard faceGuard	1 1	9-25476-18-0-1 9-25476-18-0-18
		2351-3300	3300	ferGuard faceGuard	1 1	9-25476-33-0-1 9-25476-33-0-18

# Wicona Wicslide 160 / GU-934 bogies

## Hardware requirements



### Hardware requirements – patterns A, D

Lift&Slide gear, 37.5 mm backset								
Pattern		Sash height [mm]	Length [mm]	Handle height [mm]	Surface		PU	Order no.
A	D				Cover rail	Lock case, connecting rod		
1	2	843-1263	1190	408	EV 1 / light grey	ferGUard	10	6-30021-11-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-11-0-5
					EV 1 / light gray	faceGUard	10	6-30021-11-0-18
		1213-1843	1770	408	EV 1 / light grey	ferGUard	10	6-30021-19-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-19-0-5
					EV 1 / light grey	faceGUard	10	6-30021-19-0-18
		1843-2343	2270	1008	EV 1 / light grey	ferGUard	10	6-30021-24-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-24-0-5
					EV 1 / light grey	faceGUard	10	6-30021-24-0-18
		2093-2743	2670	1008	EV 1 / light grey	ferGUard	10	6-30021-28-0-1
					UC 5 / dark bronze	ferGUard	10	6-30021-28-0-5
					EV 1 / light grey	faceGUard	10	6-30021-28-0-18
<b>Optional: Gear and cover-rail extension set 500 mm</b>								
1	2	max. 3243	500	-	EV 1 / light grey	ferGUard	10	6-32030-00-0-1
					UC 5 / dark bronze	ferGUard	10	6-32030-00-0-5
<b>Optional: Cover-rail extension set 500 mm</b>								
1	2	max. 3243	500	-	EV 1 / light grey	-	10	9-28483-00-0-1
					UC 5 / dark bronze	-	10	9-28483-00-0-5

# Wicona Wicslide 160 / GU-934 bogies

GU

## Hardware requirements

### Hardware requirements – patterns A, D

Packer, spacer, frame cam, PC screw-hole cover cap, rubber buffer					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Vertical adapters for Lift&Slide front bogies	-	1	9-47295-08-0-1
5	10	Spacer for Lift&Slide gear	-	1	9-47296-09-0-1
2	4	Frame cam	Stainless steel	1	6-22648-01-0-8
1	2	Cover cap for profile cylinder	grey	1	9-26687-00-0-1
2	-	Rubber buffer 62	black	1	9-24292-00-0-0

Buffer 90 [1]					
Pattern		Designation	Surface	PU	Order no.
A	D				
-	2	Buffer 90 set	black	1	K-17134-00-0-6
			white	1	K-17134-00-0-7

[1] Optionally with pattern A

# Wicona Wicslide 160 / GU-934 bogies

## Hardware requirements



### Turn handles

The turn handle versions used in the following application examples are exemplary.

You can find other surfaces and handle designs in Chapter 7.0 "Turn handles and accessories" from page 351.

#### Application example 1: Interior turn handle – without exterior flush pull

DIRIGENT turn handle [1]					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	DIRIGENT interior handle, without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
			Dark brown [2]	1	6-24608-00-0-5
			White, RAL 9016	1	6-24608-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
			Dark brown [2]	1	6-24609-00-0-5
			White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

#### Application example 2: Interior turn handle – with exterior flush pull

DIRIGENT turn handle [1]					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	DIRIGENT interior handle without PC hole	Silver/EV 1 look	1	6-24608-00-0-1
			Dark brown [2]	1	6-24608-00-0-5
			White, RAL 9016	1	6-24608-00-0-7
1	2	DIRIGENT interior turn handle, with PC hole	Silver/EV 1 look	1	6-24609-00-0-1
			Dark brown [2]	1	6-24609-00-0-5
			White, RAL 9016	1	6-24609-00-0-7

[1] A removable service handle may be used alternatively for a fixed handle. Order information refer to page 422.

[2] Similar to RAL 8022

### Flush pull

Flush pull					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Flush pull MS, square	Silver/EV 1 look	1	9-29992-02-0-1
			Dark brown [1]	1	9-29992-02-0-5
			White, RAL 9016	1	9-29992-02-0-7

[1] Similar to RAL 8022

# Wicona Wicslide 160 / GU-934 bogies

GU

## Hardware requirements

### Application example 3: Interior/exterior handle set

DIRIGENT turn handle [1]					
Pattern		Designation		Surface	PU
A	D			Order no.	
1	2	DIRIGENT interior/exterior handle set, with PC hole		Silver/EV 1 look	1
				Dark brown [2]	1
				White, RAL 9016	1

[1] The use of buffers is recommended. Order information refer to page 302.

[2] Similar to RAL 8022

### Accessories for application examples 1 to 3

Fixing screws					
Pattern		Designation		Example of application	Surface
A	D			PU	Order no.
2	4	Countersunk screw 5.5 x 32 mm		1	-
2	4	Countersunk screw M6 x 75 mm		2	-
2	4	Countersunk screw M6 x 85 mm		3	-

Optional: gasket plates					
Pattern		Designation		Example of application	Surface
A	D			PU	Order no.
1	2	Gasket plate for flush pull		2	black
1	2	Gasket plate for exterior and interior turn handle		3	black

# Wicona Wicslide 160 / GU-934 bogies

## Hardware requirements



### Optional additional components

Additional kit 'burglar protection' (see chapter 6.4)

Anti-jemmy device					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Anti-jemmy device set	-	1	K-16569-00-0-1
Contents					
Wedge			-	2	6-31219-00-0-1
Support			-	2	9-40863-00-0-1
Lever			-	2	9-40789-00-0-1

Corner-drive					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Corner-drive set	-	1	K-16570-00-0-1
Contents					
Corner-drive			-	1	6-31284-00-0-1
Extension			-	1	6-31282-00-0-1
Cover			-	1	6-31283-00-0-1
Guide			-	2	9-28101-00-0-0
Stay arm slide block			-	1	6-22755-00-0-6
Lever complete			-	1	6-31234-00-0-1
Countersunk screw M5 x 16 mm			-	1	9-40828-00-R-1

Vertical packer					
Pattern		Designation	Surface	PU	Order no.
A	D				
1	2	Vertical packer	-	1	9-47295-08-0-1

P 959 connecting rod						
Pattern		Sash width [mm]	Length [mm]	Surface	PU	Order no.
A	D					
1	2	600-1220	1000	-	1	9-28355-10-0-3
		1221-1720	1500	-	1	9-28355-15-0-3
		1721-2020	1800	-	1	9-28355-18-0-3
		2021-3000	2600	-	1	9-28355-26-0-3
		Stock length	4800	-	1	9-28355-48-0-3

### Optional additional components

Bottom keeper		Designation	Surface	PU	Order no.
Pattern	A D				
1	2	Bottom keeper set	ferGuard	1	K-12057-00-0-1

### Additional kit 'comfort' (see chapter 6.2)

Tension spring [1]		Designation	Surface	PU	Order no.
Pattern	A D				
1	2	Tension spring for reduction of operating forces	–	1	9-40235-05-0-0

[1] Recommended from a sash weight of 200 kg for reduction of the operating forces.

### Handle damper [1]

Handle damper [1]		Designation	Surface	PU	Order no.
Pattern	A D				
1	2	Handle damper for controlled lowering	–	1	K-19053-00-0-6

[1] Recommended from a sash weight of 100 kg for controlled lowering of the sliding sash.

**GU**



## 4.0 Individual parts overviews



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GU-934 / GU-937 Lift&Slide bogies, connecting rod, bogie support	288 – 289
Packers for GU-934 / GU-937 bogies	290 – 291
Lift&Slide gears	292 – 295
Gear extensions and cover-rail extensions	296
Spacers	297
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Bottom keepers	300 – 301
Buffer	302
Rubber buffer	303
Lowering safeguard	306
Tension spring, handle damper	307

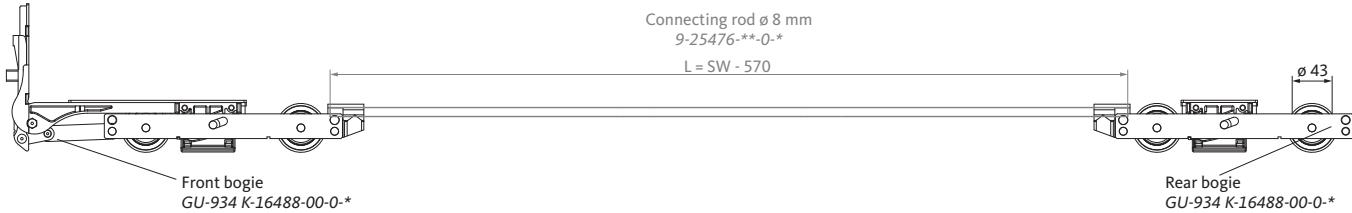
# Bogies, connecting rod, bogie support

GU-934, GU-934 Tandem / GU-937, GU-937 Tandem

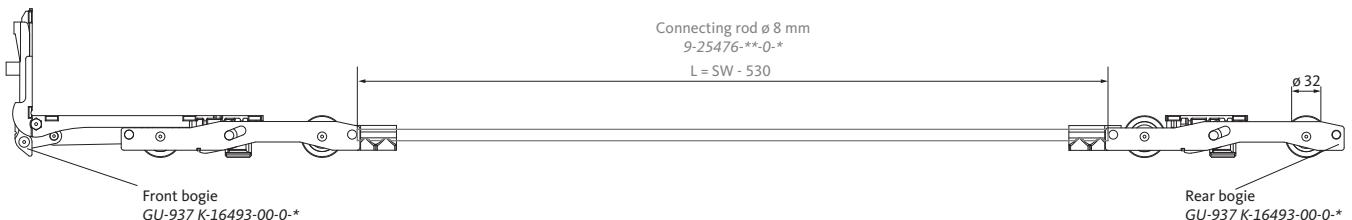


## Bogies with connecting rod

Use from a minimum sash width of 720 mm



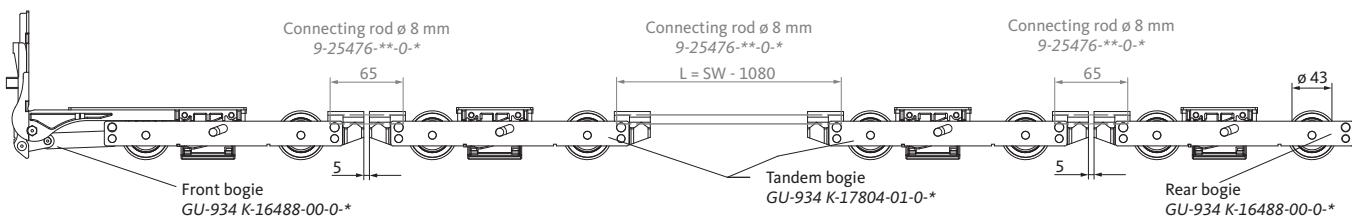
Depiction: GU-934 bogie set



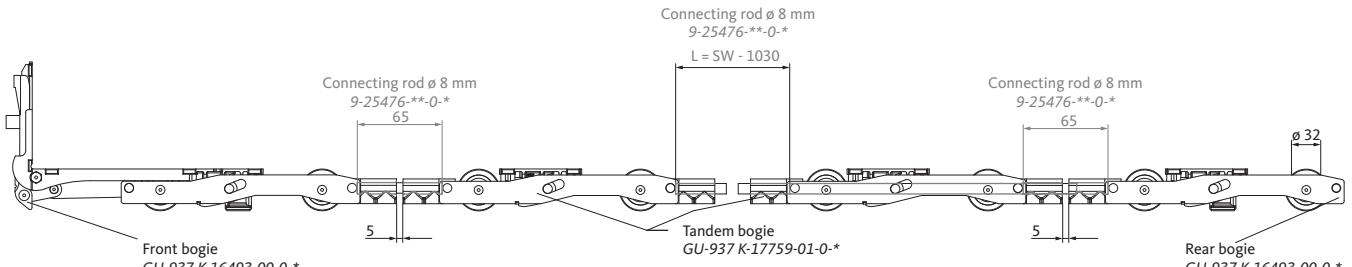
Depiction: GU-937 bogie set

Use with a minimum sash width of 1290 mm, respectively 1270 mm depending on the profile

## Tandem bogies with connecting rod



Depiction: GU-934 bogies set and GU-934 tandem bogies set



Depiction: GU-937 bogies set and GU-937 tandem bogies set

Use with a minimum sash width of 1290 mm, respectively 1270 mm depending on the profile

# Bogies, connecting rod, bogie support

GU-934, GU-934 Tandem / GU-937, GU-937 Tandem

**GU**

**GU**



## Bogies set (standard)\*\*

Designation	Application range [kg]	Contents	Surface	PU*	Order no.
GU-934 bogies set	max. 300	1 x front bogie	ferGuard	1	K-16488-00-0-1
		1 x rear bogie	faceGuard	1	K-16488-00-0-18
GU-934 tandem bogies set [1]	max. 400	2 x central bogies	ferGuard	1	K-17804-01-0-1
			faceGuard	1	K-17804-01-0-18
GU-937 bogies set	max. 150	1 x front bogie	ferGuard	1	K-16493-00-0-1
		1 x rear bogie	faceGuard	1	K-16493-00-0-18
GU-937 tandem bogies set [1]	max. 300	2 x central bogies	ferGuard	1	K-17759-01-0-1
			faceGuard	1	K-17759-01-0-18

[1] The GU-934 and/or GU-937 tandem bogies must be used in combination with the corresponding GU-934 and/or GU-937 bogies.

\* One PU is required for each sliding sash

\*\* The profile-specific bogie versions can be found on the respective order pages in chapter 3.0 from page 35.

## Connecting rod ø 8 mm

Designation	Length [mm]	Surface	PU	Order no.
Connecting rod ø 8 mm	1100	ferGuard	1	9-25476-11-0-1
		faceGuard	1	9-25476-11-0-18
	1350	ferGuard	1	9-25476-14-0-1
		faceGuard	1	9-25476-14-0-18
	1850	ferGuard	1	9-25476-18-0-1
		faceGuard	1	9-25476-18-0-18
	2800	ferGuard	1	9-25476-28-0-1
		faceGuard	1	9-25476-28-0-18
	3300	ferGuard	1	9-25476-33-0-1
		faceGuard	1	9-25476-33-0-18
	6000	ferGuard	1	9-25476-60-0-1
		faceGuard	1	9-25476-60-0-18

## Order notes

■ The connecting rods between the bogies are not included in the scope of delivery and must be fabricated separately from the connecting rod ø 8 mm.

### For length specifications see depictions:

-GU-934:

Depiction: GU-934 bogie set

-GU-937:

Depiction: GU-937 bogie set

-GU-934 tandem:

Depiction: GU-934 bogies set and GU-934 tandem bogies set

-GU-937 tandem:

Depiction: GU-937 bogies set and GU-937 tandem bogies set



Contents:  
2 x bogie support R 2.5  
9-43614-03-0-1

## GU-934 bogie support

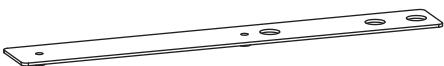
The bogie supports can be used to ensure that the guide rollers of the bogies are 100% unburdened when lowered and the total weight of the sliding sash is distributed over the roller track into the threshold. Recommended for sliding sashes that are used infrequently.

### GU-934 bogie support

Designation	Contents	PU	Order no.
GU-934 bogie support for roller track 'R 2.5'	2 x bogie support R 2.5	1	K-17455-03-0-0

# Horizontal packers

for GU-934 and GU-937 Lift&Slide bogies



Packer for GU-934 front bogie



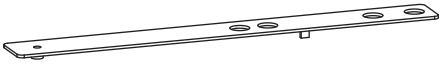
Packer for GU-934 rear bogie

## Horizontal packers

for GU-934 Lift&Slide bogies

### Versions/order numbers

Designation	Thickness [mm]	PU	Order no.	
			Front bogie	Rear bogie
Horizontal packers for Lift&Slide bogies GU-934	1.0	1	9-41680-01-0-1	9-41681-01-0-1
	1.5	1	9-41680-17-0-1	9-41681-17-0-1
	2.0	1	9-41680-02-0-1	9-41681-02-0-1
	3.0	1	9-41680-20-0-1	9-41681-20-0-1
	5.0	1	9-41680-05-0-1	9-41681-05-0-1
	6.0	1	9-41680-06-0-1	9-41681-06-0-1



Packer for GU-937 front bogie



Packer for GU-937 rear bogie

## Horizontal packers

for GU-937 Lift&Slide bogies

### Versions/order numbers

Designation	Thickness [mm]	PU	Order no.	
			Front bogie	Rear bogie
Horizontal packers for Lift&Slide bogies GU-937	1.0	1	9-41680-11-0-1	9-41681-11-0-1
	1.5	1	9-41680-17-0-1	9-41681-17-0-1
	4.0	1	9-41680-14-0-1	9-41681-14-0-1
	6.0	1	9-41680-16-0-1	9-41681-16-0-1
	8.6	1	9-41680-18-0-1	9-41681-18-0-1



Adapters for horizontal packer

Front bogie



Adapters for horizontal packer

Rear bogie

## Adapters for horizontal packers

for exchanging GU-937 bogies with GU-934 bogies

### Versions/order numbers

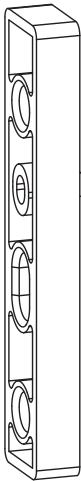
Designation	Thickness [mm]	PU	Order no.	
			Front bogie	Rear bogie
Adapters for horizontal packers	6.0	1	9-41680-16-0-1	9-41681-06-0-1

# Vertical packers

for GU-934 and GU-937 Lift&Slide front bogies

GU

GU



## Vertical packers

for GU-934 and GU-937 Lift&Slide front bogies

### Versions/order numbers

Designation	Height [mm]	PU	Order no.
			Front bogie
	8.0	1	9-43818-01-0-1
	8.5	1	9-43818-02-0-1
	11.0	1	9-43818-04-0-1
	13.0	1	9-47295-01-0-1
	14.0	1	9-47295-02-0-1
	16.0	1	9-47295-04-0-1
	18.5	1	9-47295-06-0-1
	19.0	1	9-47295-07-0-1
	20.0	1	9-47295-08-0-1
	21.0	1	9-47295-09-0-1
	22.0	1	9-47295-10-0-1
	23.0	1	9-47295-11-0-1
	24.5	1	9-47295-12-0-1
	27.0	1	9-47295-13-0-1
	29.0	1	9-47295-15-0-1
	30.0	1	9-47295-16-0-1
	31.0	1	9-47295-17-0-1
	32.0	1	9-47295-18-0-1
	35.0	1	9-47295-20-0-1
	38.0	1	9-47295-21-0-1

Vertical packers  
for Lift&Slide front bogies  
GU-934 and GU-937

# Lift&Slide gears

for use with profile cylinders and round cylinders

**GU**

## Lift&Slide gears

The specifications for the sash height and the handle height are general and may deviate minimally depending on the used roller track and profile system.

The system-related dimensions can be found in the profile system drawings.

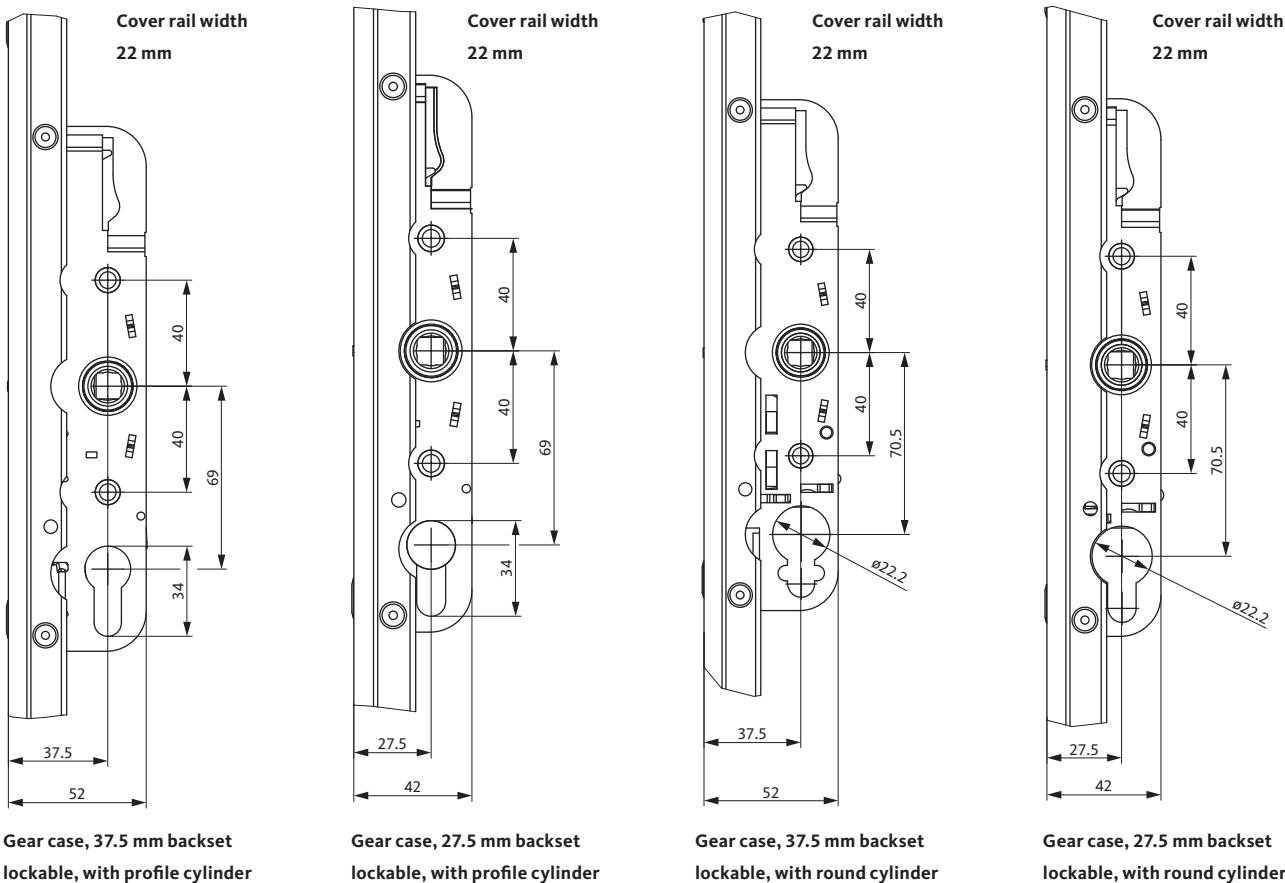
Further detailed specifications about the drilling and milling dimensions, the dimensioning of the gear cases, etc. can be found in Chapter 2 "Technical information".

### Special size in the case of a non-standard handle height and gear length:

The gear size -98- specified in the following tables is a special size that is fabricated with the handle height at the customer's request. The application range depends on the basic size of the drive-gear that is used for the fabrication (sizes 19 to 44).

Please request prices and delivery times in the individual case.

Installation drawing 0-44186



# Lift&Slide gears

for use with profile cylinders – 37.5 mm backset

**GU**

**GU**



## Lift&Slide gear – 37.5 mm backset – lockable, with profile cylinder

Designation	Sash height SH [mm] [1]	Handle height [mm] [1]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 anodised	UC 5 anodised	ferGuard	faceGuard		
Lift&Slide gear 37.5 mm backset lockable with profile cylinder (PC)	840-1260	400	1 + 1 optional	■		■		1	6-30021-11-0-1
					■	■		1	6-30021-11-0-5
				■			■	1	6-30021-11-0-18
	1210-1840	400	2	■		■		1	6-30021-19-0-1
					■	■		1	6-30021-19-0-5
				■			■	1	6-30021-19-0-18
	1840-2340	1000	2 + 1 optional	■		■		1	6-30021-44-0-1
					■	■		1	6-30021-44-0-5
				■			■	1	6-30021-44-0-18
	1620-2120	700	2 + 1 optional	■		■		1	6-30021-40-0-1
					■	■		1	6-30021-40-0-5
				■			■	1	6-30021-40-0-18
	1840-2340	840	2	■		■		1	6-30021-20-0-1
					■	■		1	6-30021-20-0-5
				■			■	1	6-30021-20-0-18
	1840-2340	1000	2 + 1 optional	■		■		1	6-30021-24-0-1
					■	■		1	6-30021-24-0-5
				■			■	1	6-30021-24-0-18
	2090-2740	1000	2 + 1 optional	■		■		1	6-30021-28-0-1
					■	■		1	6-30021-28-0-5
				■			■	1	6-30021-28-0-18
	- 2740	min. 400	2 + 1 optional	■		■		1	6-30021-98-0-1
					■	■		1	6-30021-98-0-5

[1] Dimension specifications for use of the 5 mm roller track.

When using the 10 and/or 15 mm roller tracks, the dimension specifications increase by 5 or 10 mm respectively.

# Lift&Slide gears

for use with profile cylinders – 27.5 mm backset



## Lift&Slide gear – 27.5 mm backset – lockable, with profile cylinder

Designation	Sash height SH [mm] [1]	Handle height [mm] [1]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 anodised	UC 5 anodised	ferGUard	faceGUard		
Lift&Slide gear 27.5 mm backset lockable with profile cylinder (PC)	840-1260	400	1 + 1 optional	■		■		1	6-30019-11-0-1
					■	■		1	6-30019-11-0-5
				■			■	1	6-30019-11-0-18
	1210-1840	400	2	■		■		1	6-30019-19-0-1
					■	■		1	6-30019-19-0-5
				■			■	1	6-30019-19-0-18
	1840-2340	1000	2 + 1 optional	■		■		1	6-30019-44-0-1
					■	■		1	6-30019-44-0-5
				■			■	1	6-30019-44-0-18
	1620-2120	700	2 + 1 optional	■		■		1	6-30019-40-0-1
					■	■		1	6-30019-40-0-5
				■			■	1	6-30019-40-0-18
	1840-2340	840	2	■		■		1	6-30019-20-0-1
					■	■		1	6-30019-20-0-5
				■			■	1	6-30019-20-0-18
	1840-2340	1000	2 + 1 optional	■		■		1	6-30019-24-0-1
					■	■		1	6-30019-24-0-5
				■			■	1	6-30019-24-0-18
	2090-2740	1000	2 + 1 optional	■		■		1	6-30019-28-0-1
					■	■		1	6-30019-28-0-5
				■			■	1	6-30019-28-0-18
	- 2740	min. 400	2 + 1 optional	■		■		1	6-30019-98-0-1
					■	■		1	6-30019-98-0-5

[1] Dimension specifications for use of the 5 mm roller track.

When using the 10 and/or 15 mm roller tracks, the dimension specifications increase by 5 or 10 mm respectively.

# Lift&Slide gears

for use with round cylinders – 37.5 mm and 27.5 mm backset

**GU**

**GU**



## Lift&Slide gear – 37.5 mm backset – lockable, with round cylinder

Designation	Sash height SH [mm] [1]	Handle height [mm] [1]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 anodised	UC 5 anodised	ferGUard	faceGUard		
Lift&Slide gear 37.5 mm backset  lockable with round cylinder (Swiss RC)	840-1260	400	1 + 1 optional	■		■		1	6-31020-11-0-1
					■	■		1	6-31020-11-0-5
				■			■	1	6-31020-11-0-18
	1210-1840	400	2	■		■		1	6-31020-19-0-1
					■	■		1	6-31020-19-0-5
				■			■	1	6-31020-19-0-18
	1840-2340	1000	2 + 1 optional	■		■		1	6-31020-44-0-1
					■		■	1	6-31020-44-0-18
				■			■	1	6-31020-40-0-1
	1620-2120	700	2 + 1 optional	■		■		1	6-31020-40-0-18
					■		■	1	6-31020-24-0-1
				■			■	1	6-31020-24-0-5
	1840-2340	1000	2 + 1 optional	■		■		1	6-31020-24-0-18
					■		■	1	6-31020-28-0-1
				■			■	1	6-31020-28-0-5
	2090-2740	1000	2 + 1 optional	■		■		1	6-31020-28-0-18

[1] Dimension specifications for use of the 5 mm roller track.

When using the 10 and/or 15 mm roller tracks, the dimension specifications increase by 5 or 10 mm respectively.

## Lift&Slide gear – 27.5 mm backset – lockable, with round cylinder

Designation	Sash height SH [mm] [1]	Handle height [mm] [1]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 anodised	UC 5 anodised	ferGUard	faceGUard		
Lift&Slide gear 27.5 mm backset  lockable with round cylinder (Swiss RC)	840-1260	400	1 + 1 optional	■		■		1	6-31021-11-0-1
					■	■		1	6-31021-11-0-5
				■			■	1	6-31021-11-0-18
	1210-1840	400	2	■		■		1	6-31021-19-0-1
					■	■		1	6-31021-19-0-5
				■			■	1	6-31021-19-0-18
	1840-2340	1000	2 + 1 optional	■		■		1	6-31021-44-0-1
					■		■	1	6-31021-44-0-18
				■			■	1	6-31021-40-0-1
	1620-2120	700	2 + 1 optional	■		■		1	6-31021-40-0-18
					■		■	1	6-31021-24-0-1
				■			■	1	6-31021-24-0-5
	1840-2340	1000	2 + 1 optional	■		■		1	6-31021-24-0-18
					■		■	1	6-31021-28-0-1
				■			■	1	6-31021-28-0-5
	2090-2740	1000	2 + 1 optional	■			■	1	6-31021-28-0-18

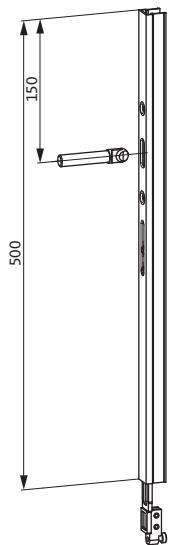
[1] Dimension specifications for use of the 5 mm roller track.

When using the 10 and/or 15 mm roller tracks, the dimension specifications increase by 5 or 10 mm respectively.

# Gear extensions and cover-rail extensions

for Lift&Slide gears

**GU**



## Gear extensions and cover-rail extensions

The gear and cover-rail extensions have a length of 500 mm and can be attached to any Lift&Slide gear. The extension is cropped to the necessary sash dimension on the Lift&Slide gear.

The gear extension features an additional locking point.

**Position of the locking point:** 150 mm from the end of the cover rail.

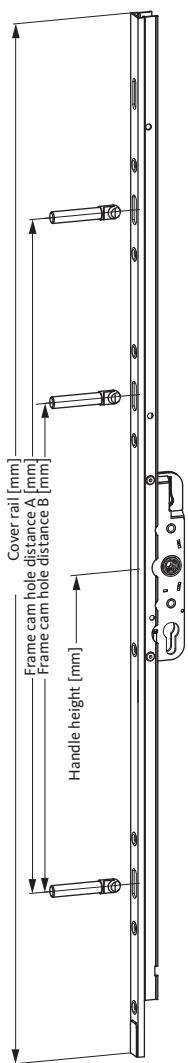
See depiction "Gear extensions and cover-rail extensions"

If necessary, the gear extensions can be coupled.

Sash heights greater than the maximum system-specific heights require a technical test and special approval from Gretsch-Unitas.

## Versions/order numbers

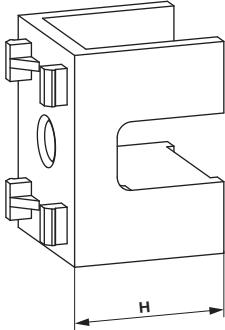
Designation	Application range [kg]	Number of locks	Surface				PU	Order no.		
			Cover rail		Connecting rod					
			EV 1	UC 5	ferGUard	faceGUard				
Gear and cover-rail extension set GU-934 / GU-937	max. 400	1	■	-	■	-	1	6-32030-00-0-1		
			-	■	■	-	1	6-32030-00-0-5		
			■	-	-	■	1	6-32030-00-0-18		
GU-934 / GU-937 cover-rail extension	max. 400	-	■	-	-	-	1	9-28483-05-0-1		
			-	■	-	-	1	9-28483-05-0-5		



### Depiction:

Gear and cover-rail extension set

Dimensional details can be found on pages 30 and 31.



Dimension H = Height in mm

## Spacer

for Lift&Slide gears, backset 37.5 and 27.5 mm

### Versions/order numbers

Designation	Height [mm]	PU	Order no.
Spacer for Lift&Slide gears, 37.5 and 27.5 mm backset	8.0	1	9-47296-02-0-1
	11.0	1	9-47296-24-0-1
	13.0	1	9-47296-04-0-1
	14.0	1	9-47296-05-0-1
	16.0	1	9-47296-06-0-1
	18.0	1	9-47296-07-0-1
	19.0	1	9-47296-08-0-1
	20.0	1	9-47296-09-0-1
	21.0	1	9-47296-10-0-1
	22.0	1	9-47296-11-0-1
	23.0	1	9-47296-12-0-1
	24.5	1	9-47296-13-0-1
	25.0	1	9-47296-14-0-1
	27.0	1	9-47296-16-0-1
	29.0	1	9-47296-17-0-1
	30.0	1	9-47296-18-0-1
	31.0	1	9-47296-19-0-1
	32.0	1	9-47296-20-0-1
	35.0	1	9-47296-22-0-1

# Frame cam



## Frame cam

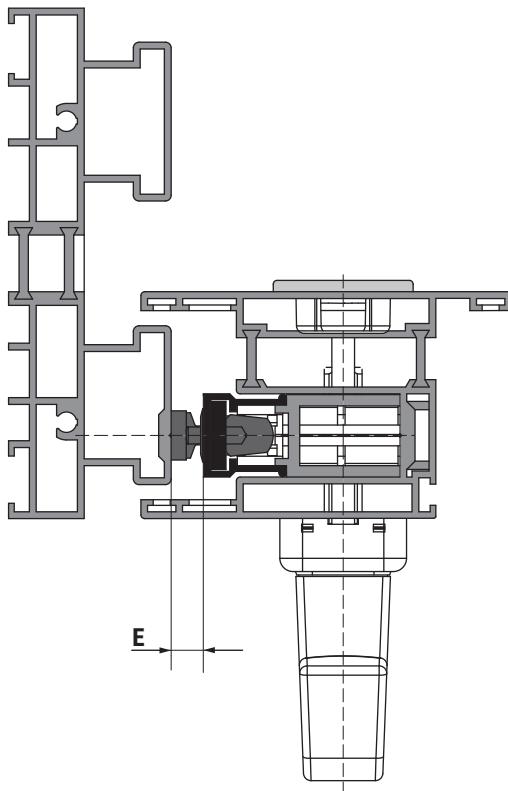
### Profile-specific versions

Profile system	Bogies	Patterns	Dim. E [mm]	Surface	PU	Order no.	
						standard	Lift&Slide night vent module
Akotherm AT 750 HS	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	-
Alcoa Europe	GU-934	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Alcoa RT 135	GU-934	depending on profile system	6.5	ferGUard	1	G-19734-00-0-1	-
Aliplast Ultraglide	GU-934	A / D / F	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
		C / F	17.0	Stainless steel	1	6-22623-03-0-8	-
Alsistem	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
AluK SC140	GU-934	depending on profile system	13.4	Stainless steel	1	6-35190-00-0-8	-
Alumil M300	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	-
Alumil S400	GU-937	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Aluprof MB-77HS	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Aluprof MB-77HS	GU-937	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Etem E3000	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Etem E50	GU-937	A / D / F	13.4	Stainless steel	1	9-38825-00-0-8	-
		C / F	5.5	Stainless steel	1	6-22648-01-0-8	-
Etem E52	GU-937	A / D / F	8.3	Stainless steel	1	9-47530-02-0-8	-
		C / F	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Etem E70	GU-934	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Etem E70	GU-937	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Exalco Albio 230	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	-
Feal T 120	GU-934	A	15.2	Stainless steel	1	9-47530-01-0-8	-
		C	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Forster Italy	GU-934	A	9.5	Stainless steel	1	6-22648-04-0-8	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-
Gastaldello Sistemi	GU-934	depending on profile system	13.4	Stainless steel	1	9-38825-00-0-8	-
Giugni	GU-937	A	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
		C	5.5	Stainless steel	1	6-22648-01-0-8	-
Metra Monorotaia	GU-934	A	13.0	Stainless steel	1	9-44211-00-0-8	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-
Metra Monorotaia	GU-937	A	13.0	Stainless steel	1	9-44211-00-0-8	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-
Metra NC 150 STH Rodos (45°)	GU-934	A	13.0	Stainless steel	1	9-44211-00-0-8	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-
Metra NC 150 STH Rodos (45°)	GU-937	A	13.0	Stainless steel	1	9-44211-00-0-8	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-
Metra NC 150 STH Rodos (90°)	GU-934	A / D	17.5	ferGUard	1	6-23793-00-L-1	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-



## Profile-specific versions

Profile system	Bogies	Patterns	Dim. E [mm]	Surface	PU	Order no.	
						standard	Lift&Slide night vent module
Metra NC 150 STH Rodos (90°)	GU-937	A / D	17.5	ferGUard	1	6-23793-00-L-1	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-
Ponzio SL1600	GU-934	depending on profile system	13.4	Stainless steel	1	9-38825-00-0-8	-
Profilati	GU-934	A / D / F	11.8	ferGUard	1	9-26072-55-0-1	-
		C / F	11.0	Stainless steel	1	6-22648-05-0-8	-
Profilco	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Reynaers CP 130-LS	GU-934	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Reynaers CP 155	GU-934	A / D	19.5	Stainless steel	1	6-22623-04-0-8	-
		C	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Reynaers TSL 110	GU-934	A	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
		C	16.0	Stainless steel	1	6-23309-00-0-8	-
Sapa Ekonal 125	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
TS Aluminium	GU-937	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	-
Wicona Wicslide 160	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	-

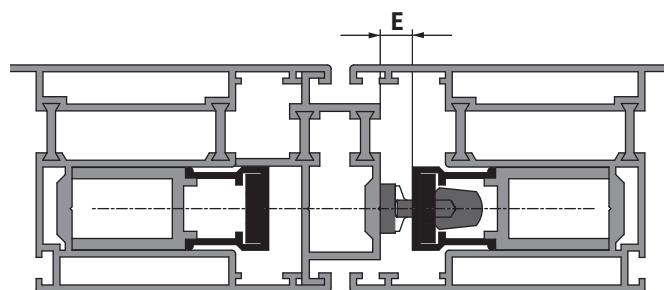


Locking into the frame, example shows pattern A

## Packers for frame cams

### Versions/order numbers

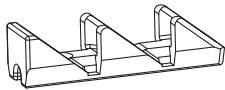
Height [mm]	Surface	PU	Order no.
0.5 mm	Stainless steel	10	K-18309-01-0-8
1.0 mm	Stainless steel	10	K-18309-02-0-8



Sash locking at the meeting stile with pattern C and F

## Bottom keepers

GU

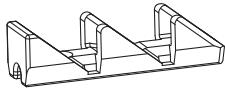


### Bottom keeper

- With 2 bolt positions

#### Versions/order numbers

Designation	Surface	PU	Order no.
Bottom keeper set	ferGuard	1	K-12057-00-0-1
Contents	Qty.	Item no.	
Bottom keeper	1	9-28440-00-0-1	
Countersunk-head tapping screw 3.9 x 16 mm	2	9-13132-16-R-8	



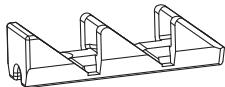
(milled off at the bottom)

### Bottom keeper

- With 2 bolt positions

#### Versions/order numbers

Designation	Surface	PU	Order no.
Bottom keeper set	ferGuard	1	K-17864-00-0-1
Contents	Qty.	Item no.	
Bottom keeper	1	9-45561-00-0-1	
Countersunk-head tapping screw 3.9 x 25 mm	2	9-13132-25-0-0	

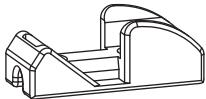
(for roller track  
with trapezoidal cross-section)

### Bottom keeper

- With 2 bolt positions

#### Versions/order numbers

Designation	Surface	PU	Order no.
Bottom keeper set	ferGuard	1	K-14568-00-0-1
Contents	Qty.	Item no.	
Bottom keeper	1	9-28439-00-0-1	
Anti-jemmy device	1	9-24895-11-R-1	



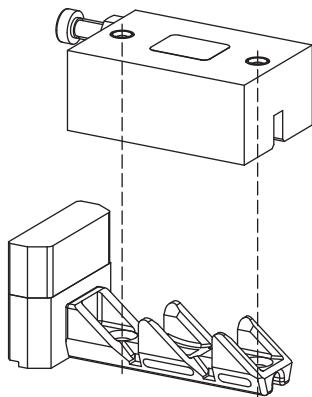
## Bottom keeper

- With 1 bolt position

### Versions/order numbers

Designation	Material	PU	Order no.
Bottom keeper	Stainless steel	1	9-47330-00-0-8

Note: can be optionally used to hold the passive sash in closed position with pattern C



## Drilling jig for installing the bottom keeper

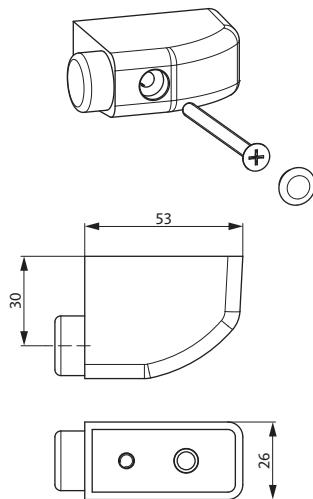
Non-handed

### Versions/order numbers

Designation	Application range	PU	Order no.
Drilling jig for the installation of the bottom keeper	Hardware installation	1	6-34129-00-0-0

# Buffer

**GU**



## Buffer 90

The buffer 90 is recommended for safe braking of the sliding sash in the opening direction and when using turn handles on both sides. It is positioned so that the sliding sash with the exterior handle cannot collide with the fixed-glazed sash. This prevents damage to the handle and the element.

### Versions/order numbers

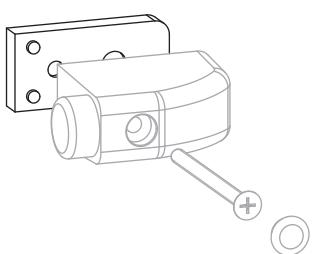
Designation	Surface	PU	Order no.
Buffer 90 set	black	1	K-12024-00-0-6
	white	1	K-12024-00-0-7
	cream white	1	K-12024-00-0-7Z
Contents	Qty.	Item no.	
Buffer 90	[1]	1	6-22990-00-0-*
Cover cap 90	[1]	1	9-30292-00-0-*
Countersunk-head tapping screw 4.8 x 70 mm	-	1	9-13089-70-R-1

[1] \* = finish -6, -7 and -7Z

### Versions/order numbers

Designation	Surface	PU	Order no.
Buffer 90 set	black	1	K-17134-00-0-6
	white	1	K-17134-00-0-7
Contents	Qty.	Item no.	
Buffer 90	[1]	1	6-22990-03-0-*
Cover cap 90	[1]	1	9-30292-00-0-*
Countersunk screw M5 x 45 mm	-	1	9-13255-45-0-1

[1] \* = finish -6, and -7

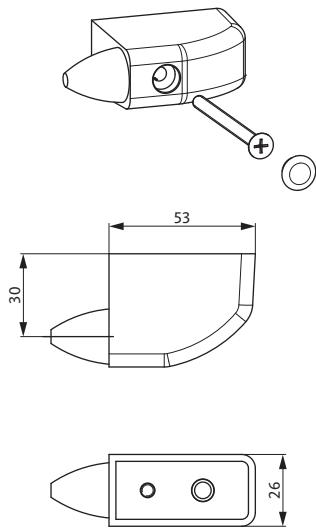


## Packer

for buffer 90

### Versions/order numbers

Designation	Height [mm]	Surface	PU	Order no.
Packers for buffer 90	8.0	black	1	9-30294-01-0-6
		white	1	9-30294-01-0-7
		cream white	1	9-30294-01-0-7Z
	4.0	black	1	9-30294-02-0-6
		white	1	9-30294-02-0-7
		cream white	1	9-30294-02-0-7Z

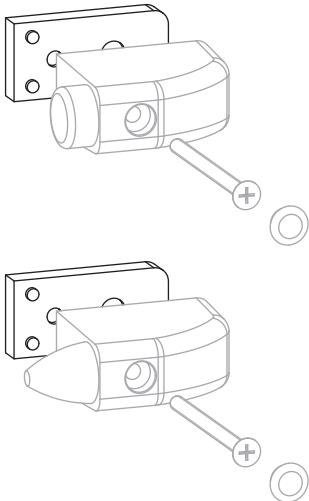


## Buffer S

The buffer S is recommended for safe braking of the sliding sash in the opening direction and when using turn handles on both sides. It is positioned so that the sliding sash with the exterior handle cannot collide with the fixed-glazed sash. This prevents damage to the handle and the element. The buffer S brakes the sash in a particularly gentle way.

### Versions/order numbers

Designation	Surface	PU	Order no.
Buffer S	black	1	K-19035-00-0-6
	white	1	K-19035-00-0-7
	cream white	1	K-19035-00-0-7Z

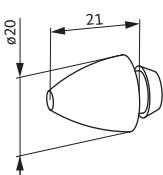


## Packer

for buffer 90 and buffer S

### Versions/order numbers

Designation	Height [mm]	Surface	PU	Order no.
Packers for buffer 90 and for buffer S	8.0	black	1	9-30294-01-0-6
		white	1	9-30294-01-0-7
		cream white	1	9-30294-01-0-7Z
	4.0	black	1	9-30294-02-0-6
		white	1	9-30294-02-0-7
		cream white	1	9-30294-02-0-7Z



## Rubber buffer

for stopping the sash safely at the door frame, in order to prevent damage to the element and the frame

### Versions/order numbers

Designation	Surface	PU	Order no.
Rubber buffer	light grey	1	9-48849-00-0-1
	black	1	9-48849-00-0-6

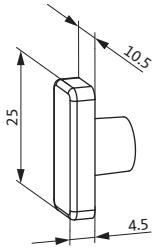
## Rubber buffer

GU



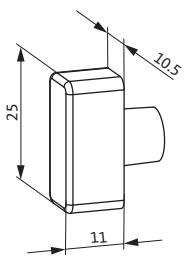
### Rubber buffer

for stopping the sash safely at the door frame, in order to prevent damage to the element and the frame



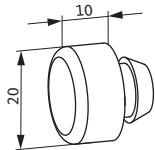
#### Versions/order numbers

Designation	Surface	PU	Order no.
Rubber buffer 60	black	1	9-23793-00-0-0

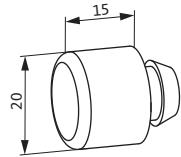


#### Versions/order numbers

Designation	Surface	PU	Order no.
Rubber buffer 62	black	1	9-24292-00-0-0



9-08488-00

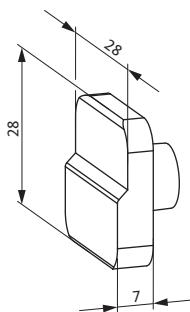


9-08488-15

## Versions/order numbers

Designation	Surface	PU	Order no.
Rubber buffer 80	light grey	1	9-08488-**-0-1
	black	1	9-08488-**-0-6

\*\* Size 00 or 15

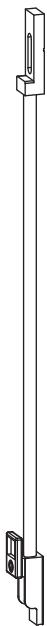


## Versions/order numbers

Designation	Surface	PU	Order no.
Rubber buffer 82	black	1	9-22820-00-0-0

# Lowering safeguard

GU



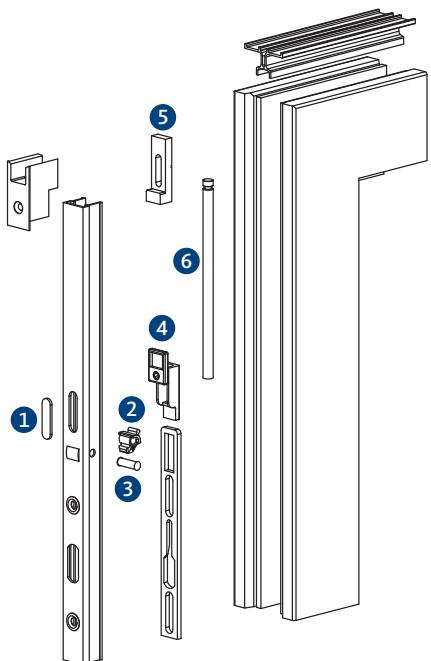
## Lowering safeguard

The lowering safeguard is recommended when the sliding sash of the element is very light so its self-weight is not sufficient to lower it in such a way that it creates a 100% lock and is reliably in full contact with the horizontal sealings.

### Versions/order numbers

Designation	PU	Order no.
Lowering safeguard set	1	K-16621-00-0-1

### Installation sequence with neutral top guide track\*



1. Press punching item out of cover rail **1**.
2. Rivet reverser **2** with rivet pin **3**.  
Ensure correct positioning!
3. Insert slider **4** into cover rail from above,  
ensuring that Allen screw is screwed in completely.
4. Crop connecting rod **6** and press  
into pressure part **5** from behind.
5. Fasten connecting rod **6** in slider **4** by tightening  
the Allen screw.

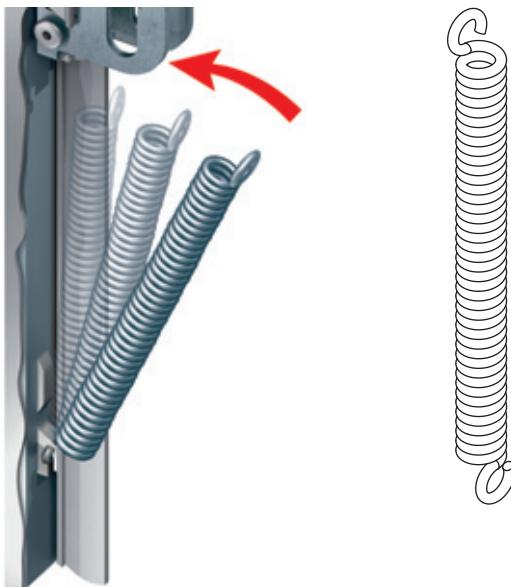
\* Deviations possible depending on the profile

# Tension springs, handle dampers

for Lift&Slide gears

**GU**

**GU**



Installation drawing 0-46862

## Tension spring for Lift&Slide gears

To reduce the operating force of sashes weighing over 200 kg

Thanks to the use of tension springs in Lift&Slide gears, the operational force at the turn handle is significantly reduced for the user, greatly increasing operating convenience. The result is extremely easy operation of the Lift&Slide door for high sash weights of up to 400 kg, in particular.

The tension spring can be retrofitted quickly and easily in every standard Lift&Slide gear.

### Versions/order numbers

Designation	From sash weight [kg]	PU	Order no.
Tension spring	200	1	9-40235-05-0-0



Installation drawing 0-46862

## Handle damper for Lift&Slide gears

For even safer operation of sashes weighing more than 100 kg

The handle damper in Lift&Slide gears ensures controlled lowering of the sliding sash and prevents the turn handle from recoiling.

The handle damper can also be retrofitted quickly and easily in every standard gear.

### Versions/order numbers

Designation	From sash weight [kg]	PU	Order no.
Handle damper	100	1	K-19053-00-0-6



## **5.0 Drilling jigs and auxiliary tools**

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### **Drilling jigs and auxiliary tools**

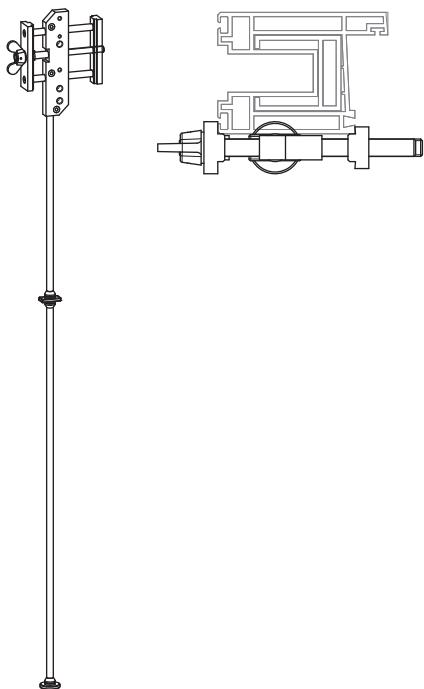
Drilling jigs and milling jigs  
Mounting tools

310 – 311  
312

# Milling jig, drilling jig

for the installation of turn handles

GU



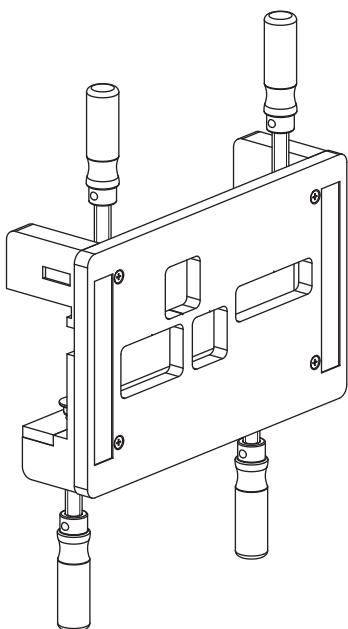
## Drilling jig for the installation of turn handles

Non-handed

For aluminium profiles

### Versions/order numbers

Designation	Application range	PU	Order no.
Drilling jig for the installation of turn handles Aluminium profiles with Euro-groove	Hardware installation	1	9-27272-01-0-1



## Milling jig for flush pull and centre-closer

### Versions/order numbers

Designation	Application range	PU	Order no.
Milling jig for flush pull/centre-closer	Hardware installation	1	6-35035-00-0-0



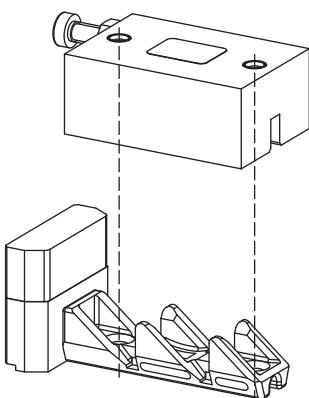
## Drilling jig for handle damper

Use according to drawing 0-46862

### Versions/order numbers

Designation	Application range	PU	Order no.
Drilling jig for handle damper [1]	Hardware installation	1	6-37928-01-0-1

[1] Required for retrofitting on all Lift&Slide gears installed before July 2014.



## Drilling jig for installing the bottom keeper

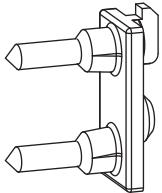
Non-handed

### Versions/order numbers

Designation	Application range	PU	Order no.
Drilling jig for the installation of the bottom keeper	Hardware installation	1	6-34129-00-0-0

# Mounting tools

## Centre punch

**GU**

### Centre punch for the installation of the frame cams

#### Versions/order numbers

Designation	For frame cams	Centre punch length [mm]	PU	Order no.
Centre punch for the installation of the frame cams	Hole spacing 25 mm	31 mm	1	6-33500-00-0-0
		12 mm		9-27315-00-0-0

# 6.0 Special applications



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## 6.4 Additional kit – burglar protection

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## 6.5 Additional kit – ventilation

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Frame cams	348 – 349
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# HS-Master motor-driven drive

## Important notes and range of application



### Important notes

- The HS-Master can be installed in various Lift&Slide systems shown in Chapter 3.0 (patterns A and C)
- The standard Lift&Slide gear is replaced with the HS-Master Lift&Slide gear
- With HS-Master, the backset is always 37.5 mm. The sash profile must be dimensioned accordingly
- Due to the crush guard, the passage opening is reduced by 150 mm. The Lift&Slide door stops 150 mm before the door frame at the fixed-glazed sash; if necessary, the door can be opened fully manually
- The drive case at the rear is 17 mm shorter than the cover profile that is visible from the front and below
- The scope of delivery includes the installation and maintenance manual M.00098.00.0
- The scope of delivery includes the operating manual M.00099.00.0 (pattern A) or M.00139.00.0 (pattern C), which must be passed on to the end customer
- The valid installation drawings must be followed.
  - Pattern A = 0-44355
  - Pattern C = 0-44521
- We shall be glad to advise you in the event of any deviations from the general conditions described here. Please feel free to contact your field consultant

### General application ranges

(Deviations possible depending on the profile)

**HS-Master – pattern A**

Pattern A	
Min. length of drive [mm]	1900
Max. length of drive [mm]	6700
Sash width SW [mm]	950–3300
Sash height SH [mm]*	1855–2765 [1]
Max. sash weight [kg]	400

**HS-Master – pattern C**

Pattern C	
Min. length of drive [mm]	4100
Max. length of drive [mm]	13410
Sash width SW [mm]	950–3300
Sash height SH [mm]*	1855–2765 [1]
Max. sash weight [kg]	400

\* The sash height depends on which top guide track is used and the height of the roller track.  
For the dimensions of the various Lift&Slide systems, refer to the corresponding installation drawings.

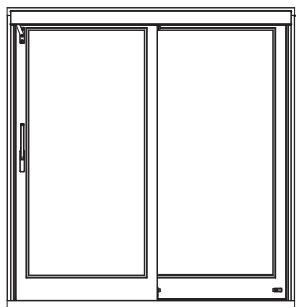
[1] Sash heights from 2765 mm to 3265 mm can be implemented on request with the cover-rail extension set and require the approval of the system provider.

# HS-Master motor-driven drive

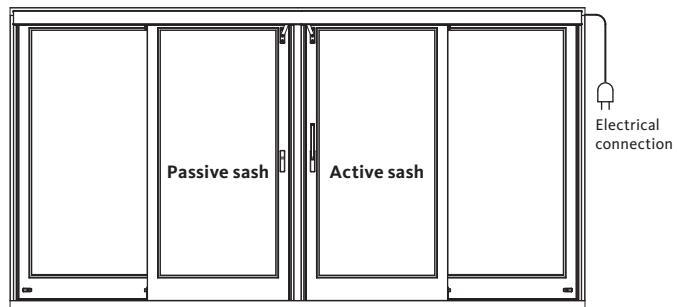
## Ordering specifications

**GU**

**GU**



Interior view – pattern A  
(illustration shows version with handle position on left;  
right laterally reversed)



Interior view – pattern C  
Electricity on active sash side

## Ordering specifications

### HS-Master – pattern A

Length of drive (LD)	_____ [mm]	Length of drive (LD)	_____ [mm]
Dimension X (min. 90 mm)	_____ [mm]	Handle distance (HD) (min. 155 mm)	_____ [mm]
Width of reveal (WR)	_____ [mm]	Width of reveal (WR)	_____ [mm]
Sash thickness (ST)	_____ [mm]	Sash thickness (ST)	_____ [mm]
Total frame width (TFW)	_____ [mm]	Total frame width (TFW)	_____ [mm]
Sash width (SW)	_____ [mm]	Sash width (SW)	_____ [mm]
Sash height (SH)	_____ [mm]	Sash height (SH)	_____ [mm]
Sash distance (SD)	_____ [mm]	Sash distance (SD)	_____ [mm]
Handle position (interior view)	<input type="checkbox"/> left <input type="checkbox"/> right 	First-opening (active) sash	<input type="checkbox"/> right <input type="checkbox"/> left 

### Profile details

Manufacturer	_____	Manufacturer	_____
Profile series	_____	Profile series	_____

### Profile details

# HS-Master motor-driven drive

## Important dimension specifications

**GU**



### The following dimension specifications must be observed and complied with without fail

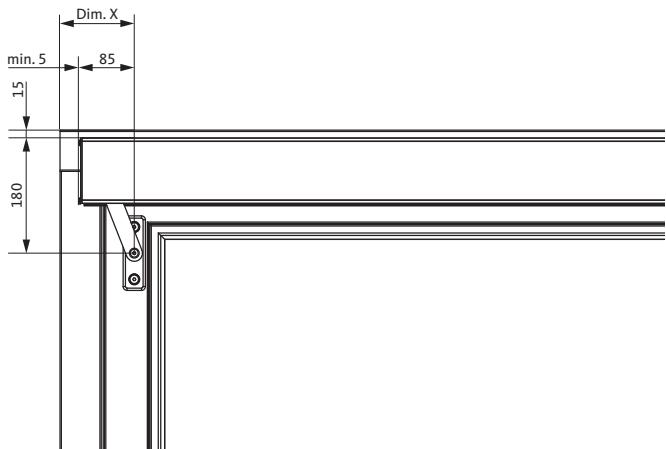
The space requirement for the linkage is 85 mm measured from the pivot of the gear to the outer edge of the drive case.

The minimum distance from the drive case to the edge of the plaster is 5 mm.

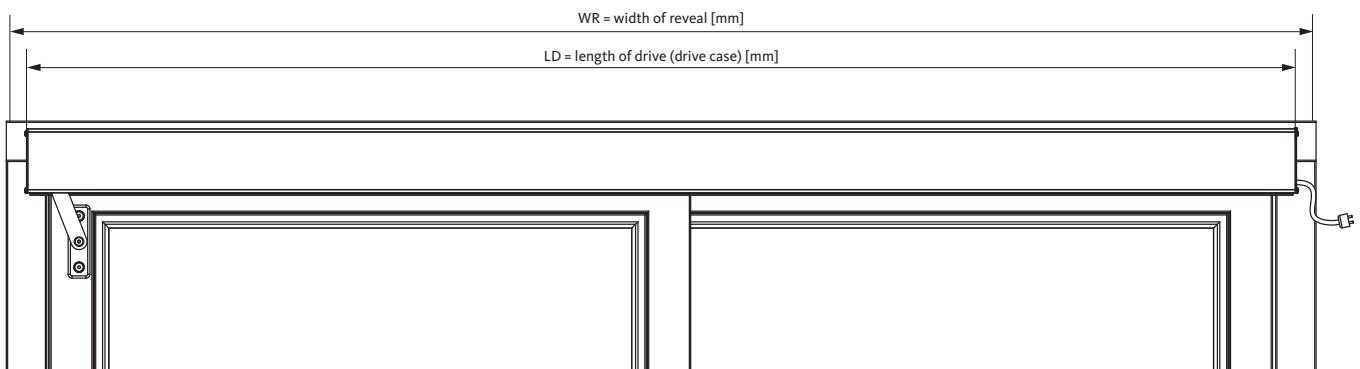
These two dimensions produce **dimension X**, which is necessary for the order.

In order to guarantee error-free installation and function, these dimensions must be observed without fail: lower values are not acceptable.

Installation drawing 0-44355



A minimum distance of 5 mm must be measured on both sides between the drive case on the top door frame of the Lift&Slide element and the edge of the plaster of the neighbouring masonry. The dimension between the plaster edges at the sides is specified in the ordering specifications as the width of reveal.



# HS-Master motor-driven drive

GU

## Important dimension specifications

GU

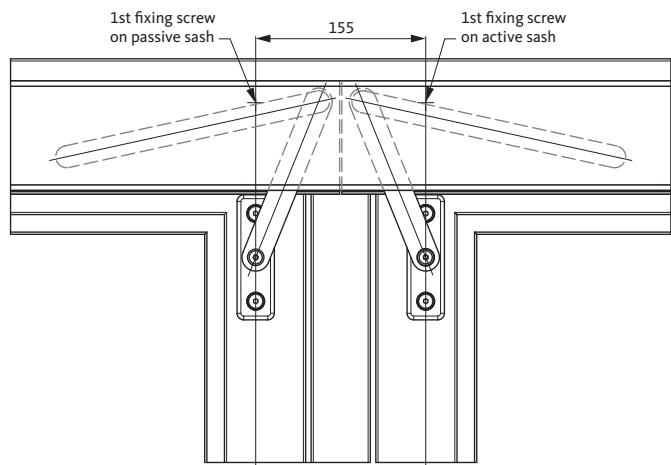


**When using the HS-Master in Lift&Slide elements in pattern C, the following dimensional specifications must also be observed:**

The space requirement for the linkage is 155 mm measured between the pivots of the gear. This dimension provides the handle distance HD, which is necessary for the order.

In order to guarantee error-free installation and function, this dimension must be observed without fail: lower values are not acceptable.

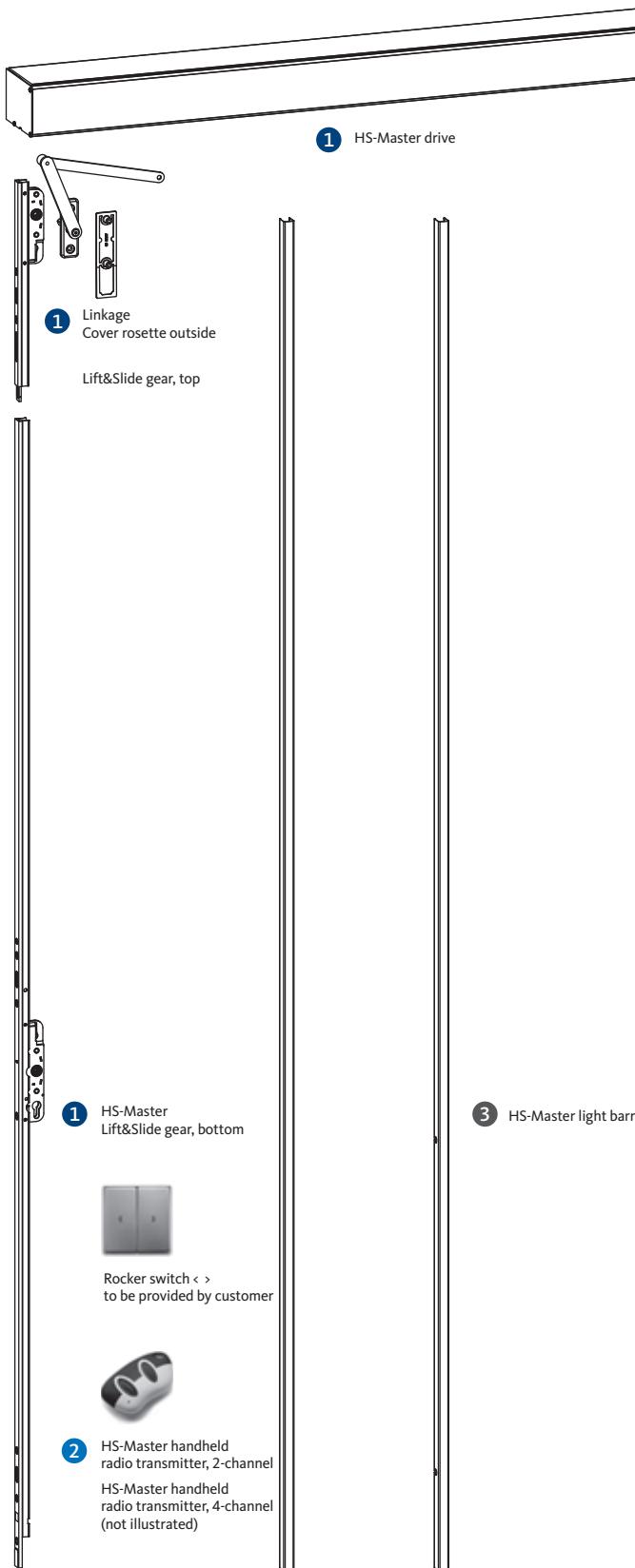
Installation drawing 0-44521



# HS-Master motor-driven drive

## Order information, pattern A

GU



Order overview

	Description
1	Required components
2	Accessories for new systems and for retrofitting
3	Optional security accessories

# HS-Master motor-driven drive

**GU**

## Order information, pattern A

**GU**



### Step 1: Order your standard hardware set

- **Exception:** The standard Lift&Slide gear is replaced with the HS-Master Lift&Slide gear

Standard hardware sets		Order information from page
Pattern A	Standard hardware sets	
1	Lift&Slide hardware GU-934 (without Lift&Slide gear)	see particular profile system
1	Lift&Slide hardware GU-934 Tandem (without Lift&Slide gear)	see particular profile system
1	Lift&Slide hardware GU-937 (without Lift&Slide gear)	see particular profile system
1	Lift&Slide hardware GU-937 Tandem (without Lift&Slide gear)	see particular profile system

### Step 2: In addition to the standard hardware set, order the following components:

#### ① General hardware requirements for pattern A

HS-Master drive – standard version [1]					
Pattern A	Designation	Description	PU	Surface	Order no.
				on left	right-hand side
1	HS-Master drive	Standard version for – Operation via turn handle / Push & Go function – Operation via rocker switch (provided by customer)	1	EV 1 / light grey	6-32205-98-L-1
			1	UC 5 / dark bronze	6-32205-98-L-5
			1	white	6-32205-98-L-7
Alternative: HS-Master drive – radio-controlled version [2]					
1	HS-Master drive	as standard version, and also prepared for operation via handheld radio transmitter	1	EV 1 / light grey	6-32654-98-L-1
			1	UC 5 / dark bronze	6-32654-98-L-5
			1	white	6-32654-98-L-7

[1] Manufacture according to ordering specifications – see page 315.  
[2] The radio receiver is installed. 1 handheld radio transmitter is included in the scope of delivery; other handheld radio transmitters may be ordered separately as accessories.

HS-Master linkage set					
Pattern A	Designation	Contents	PU	Surface	Order no.
1	HS-Master linkage set	1 linkage 1 exterior cover rosette Fixing material	1	EV 1 / light grey	K-16750-00-0-1
			1	UC 5 / dark bronze	K-16750-00-0-5
			1	white	K-16750-00-0-7

HS-Master Lift&Slide gear set					
Pattern A	Designation	Contents	PU	Surface	Order no.
1	HS-Master Lift&Slide gear set [1]	2 Lift&Slide gears (top, bottom) 1 connecting rod 1 drilling jig	1	EV 1 / light grey	K-16748-00-0-1
1	HS-Master cover-rail extension set	1 cover rail, 500 mm 1 connecting rod	1	EV 1 / light grey	K-18896-00-0-1

[1] Sash heights from 2765 mm to 3265 mm can be implemented on request with the cover-rail extension set.

# HS-Master motor-driven drive

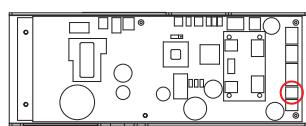
## Order information, pattern A

GU

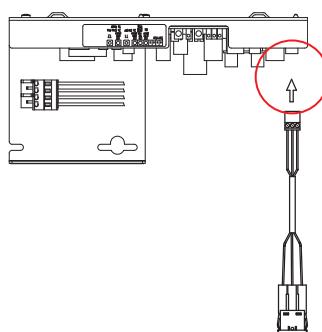


### 2 Accessories for new systems and for retrofitting

Hand-held radio transmitter for HS-Master					
Pattern A	Designation	Description	PU	Surface	Order no.
1	Handheld radio transmitter for HS-Master	2-channel with GU-specific coding, for HS-Master drives in radio-controlled version, spare button battery CR 2016, 2 x	1	grey-blue	6-32264-01-0-0
			1	grey-wine red	6-32264-02-0-0
			1	grey-anthracite	6-32264-03-0-0
			1	grey-red	6-32264-04-0-0
Alternative: HS-Master handheld radio transmitter, 4-channel					
1	Handheld radio transmitter for HS-Master	4 channel	1	grey-yellow	6-33788-00-0-0
HS-Master radio receiver card					
Pattern A	Designation		PU	Surface	Order no.
1	HS-Master radio receiver card		1	-	6-32627-00-0-0
HS-Master commissioning set / operating sticker					
Pattern A	Designation		PU	Surface	Order no.
1	HS-Master commissioning set		1	-	6-36125-00-0-0
1	Operating sticker		1	-	9-47818-01-0-0

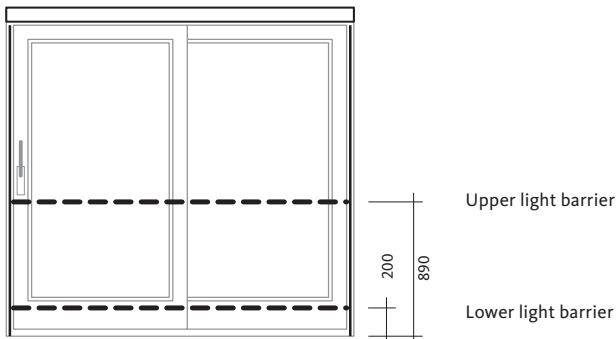


HS-Master commissioning set  
Plug-in position on inside: slots 4 5 6

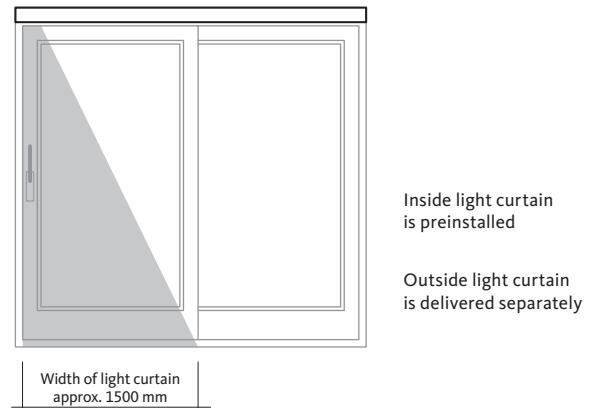




### Safeguarding with light barrier



### Safeguarding with light curtain



### ③ Optional security accessories

#### HS-Master drive – version prepared for light barrier kit

Pattern A	Designation	Description	PU	Surface	Order no.	
					on left	right-hand side
1	HS-Master drive	as standard version, and also prepared for securing with light barrier kit	1	EV 1 / light grey	on request	on request
			1	UC 5 / dark bronze	on request	on request
			1	white	on request	on request

#### Alternative: HS-Master drive – remote control version [2] / version prepared for light barrier kit

1	HS-Master drive	as standard version, and also prepared for operation via handheld radio transmitter and prepared for securing with light barrier kit	1	EV 1 / light grey	on request	on request
			1	UC 5 / dark bronze	on request	on request
			1	white	on request	on request

[2] The radio receiver is installed. 1 handheld radio transmitter is included in the scope of delivery; other handheld radio transmitters may be ordered separately as accessories.

#### HS-Master light barrier kit

Pattern A	Designation	Contents	PU	Surface	Order no.
1	Light barrier kit HS-Master	2 light barrier rails (left/right) 2 light barriers – transmitter 2 light barriers – receiver 8 guides	1	EV 1 / light grey	K-16772-00-0-1
			1	UC 5 / dark bronze	K-16772-00-0-5
			1	white	K-16772-00-0-7

#### HS-Master drive – version with light curtain inside [3]

Pattern A	Designation	Description	PU	Surface	Order no.	
					on left	right-hand side
1	HS-Master drive	as standard version, with light curtain inside	1	EV 1 / light grey	on request	on request
			1	UC 5 / dark bronze	on request	on request
			1	white	on request	on request

#### Alternative: HS-Master drive – radio-controlled version [2] / with light curtain inside [3]

1	HS-Master drive	as standard version, and also prepared for operation via handheld radio transmitter, with light curtain inside	1	EV 1 / light grey	on request	on request
			1	UC 5 / dark bronze	on request	on request
			1	white	on request	on request

[2] The radio receiver is installed. 1 handheld radio transmitter is included in the scope of delivery; other handheld radio transmitters may be ordered separately as accessories.

[3] The outside light curtain must always be ordered separately.

#### HS-Master light curtain, outside [3]

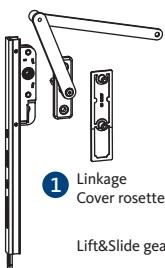
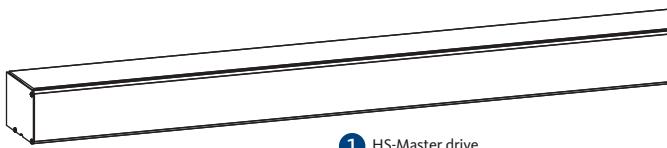
Pattern A	Designation	PU	Surface	Order no.
1	HS-Master light curtain, outside	1	-	6-32640-00-0-0

[3] The HS-Master drive with light curtain must always be ordered with light curtain inside and light curtain outside

# HS-Master motor-driven drive

## Order information, pattern C

GU



1 Linkage  
Cover rosette outside

Lift&Slide gear, top



1 HS-Master  
Lift&Slide gear, bottom



Rocker switch < >  
to be provided by customer



2 HS-Master  
handheld radio transmitter, 2-channel  
HS-Master  
handheld radio transmitter, 4-channel  
(not illustrated)

### Order overview

	Description
1	Required components
2	Accessories for new systems and for retrofitting

# HS-Master motor-driven drive

**GU**

## Order information, pattern C

**GU**



### Step 1: Order your standard hardware set

- **Exception:** The standard Lift&Slide gear is replaced with the HS-Master Lift&Slide gear

Standard hardware sets		Order information from page
Pattern C	Standard hardware sets	
<b>Hardware set (choose from the following variants):</b>		
1	Lift&Slide hardware GU-934 (without Lift&Slide gear)	see particular profile system
1	Lift&Slide hardware GU-934 Tandem (without Lift&Slide gear)	see particular profile system
1	Lift&Slide hardware GU-937 (without Lift&Slide gear)	see particular profile system
1	Lift&Slide hardware GU-937 Tandem (without Lift&Slide gear)	see particular profile system

### Step 2: In addition to the standard hardware set, order the following components:

#### ① General hardware requirements for pattern C

HS-Master drive – standard version [1]						
Pattern C	Designation	Description	PU	Surface	Order no.	
					on left	right-hand side
1	HS-Master drive	Standard version for – Operation via turn handle / Push & Go function – Operation via rocker switch (provided by customer)	1	EV 1 / light grey	6-33625-98-L-1	6-33625-98-R-1
			1	UC 5 / dark bronze	6-33625-98-L-5	6-33625-98-R-5
			1	white	6-33625-98-L-7	6-33625-98-R-7
Alternative: HS-Master drive – radio-controlled version [2]						
1	HS-Master drive	as standard version, and also prepared for operation via handheld radio transmitter	1	EV 1 / light grey	6-33626-98-L-1	6-33626-98-R-1
			1	UC 5 / dark bronze	6-33626-98-L-5	6-33626-98-R-5
			1	white	6-33626-98-L-7	6-33626-98-R-7

[1] Manufacture according to ordering specifications – see page 315.

[2] The radio receiver is installed. 1 handheld radio transmitter is included in the scope of delivery; other handheld radio transmitters may be ordered separately as accessories.

HS-Master linkage set					
Pattern C	Designation	Contents	PU	Surface	Order no.
2	HS-Master linkage set	1 linkage 1 exterior cover rosette Fixing material	1	EV 1 / light grey	K-16750-00-0-1
			1	UC 5 / dark bronze	K-16750-00-0-5
			1	white	K-16750-00-0-7

HS-Master Lift&Slide gear set					
Pattern C	Designation	Contents	PU	Surface	Order no.
2	HS-Master Lift&Slide gear set [1]	2 Lift&Slide gears (top, bottom) 1 connecting rod 1 drilling jig	1	EV 1 / light grey	K-16748-00-0-1
2	HS-Master cover-rail extension set	1 cover rail, 500 mm 1 connecting rod	1	EV 1 / light grey	K-18896-00-0-1

[1] Sash heights from 2765 mm to 3265 mm can be implemented on request with the cover-rail extension set.

# HS-Master motor-driven drive

## Order information, pattern C

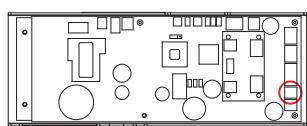
**GU**



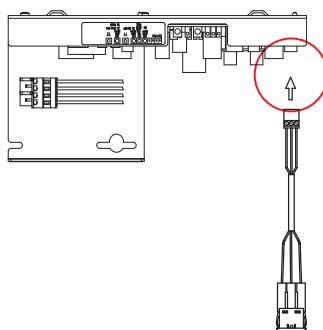
### 2 Accessories for new systems and for retrofitting

Hand-held radio transmitter for HS-Master					
Pattern A	Designation	Description	PU	Surface	Order no.
1	Handheld radio transmitter for HS-Master	2-channel with GU-specific coding, for HS-Master drives in radio-controlled version, spare button battery CR 2016, 2 x	1	grey-blue	6-32264-01-0-0
			1	grey-wine red	6-32264-02-0-0
			1	grey-anthracite	6-32264-03-0-0
			1	grey-red	6-32264-04-0-0
Alternative: HS-Master handheld radio transmitter, 4-channel					
1	Handheld radio transmitter for HS-Master	4 channel	1	grey-yellow	6-33788-00-0-0

HS-Master commissioning set / operating sticker					
Pattern A	Designation	PU	Surface	Order no.	
1	HS-Master commissioning set	1	-	6-36125-00-0-0	
1	Operating sticker	1	-	9-47818-01-0-0	



HS-Master commissioning set  
Plug-in position on inside: slots 4 5 6





# Barrier freedom with regard to operation of the handle

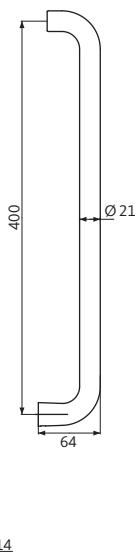
Extended handle – RONDO series – interior turn handle with PC hole

**GU**



## Product information

- High-quality stainless steel handle with PC hole, interior
- Handle length 400 mm
- Handle height 78 mm
- With 10 mm square spindle and 80 mm distance between screw centres
- Square spindle adjustable
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- For sash thicknesses up to 110 mm



## Suitable for barrier-free construction in compliance with DIN 18040

The operating force for raising the sliding sash can be reduced by up to 50% due to the extended turn handle.



You can find ordering information on the individual handle variants in Chapter 7.0 "Turn handles and accessories" on pages 370 – 371.

# Barrier freedom with regard to operation of the handle

GU

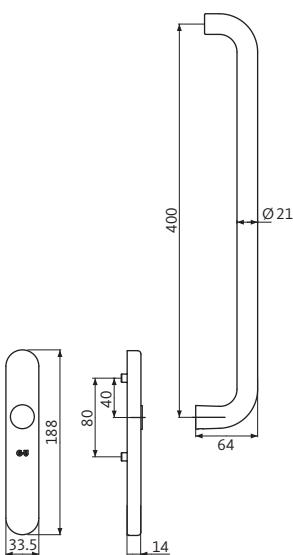
Extended handle – RONDO series – interior turn handle without PC hole

GU



## Product information

- High-quality stainless steel turn handle without PC hole
- Handle length 400 mm
- Handle height 78 mm
- With 10 mm square spindle and 80 mm distance between screw centres
- Square spindle adjustable
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- For sash thicknesses up to 110 mm



## Suitable for barrier-free construction in compliance with DIN 18040

The operating force for raising the sliding sash can be reduced by up to 50% due to the extended turn handle.



# Barrier freedom with regard to operation of the handle

Lift&Slide gear with profile cylinder – handle height 850 mm and handle height variable



## Note:

The specifications for the range of applications (sash heights) and the handle height are general and may deviate minimally depending on the roller track height and the used profile system. The system-related dimensions can be found in the profile system drawings.

Further detailed specifications about the drilling and milling dimensions and the dimensioning of the gear cases can be found in Chapter 2 "Technical information".

### Special size -98-

The size -98- specified in the table is a special size that is fabricated with the handle height at the customer's request.

The application range depends on the basic size of the drive-gear that is used for the fabrication (sizes -19- to -44-).

Please request prices and delivery times in individual cases.

Installation drawing 0-44186

#### Lift&Slide gear – 37.5 mm backset – lockable, with profile cylinder

Backset [mm]	Sash height SH [mm]	Handle height [mm]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 anodised	UC 5 anodised	ferGUard	faceGUard		
37.5	1850–2350	850	2	■		■		1	6-30021-20-0-1
					■	■		1	6-30021-20-0-5
				■			■	1	6-30021-20-0-18
	1220–2750	min. 410	2	■		■		1	6-30021-98-0-1

#### Lift&Slide gear – 27.5 mm backset – lockable, with profile cylinder

Backset [mm]	Sash height SH [mm]	Handle height [mm]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 anodised	UC 5 anodised	ferGUard	faceGUard		
27.5	1850–2350	850	2	■		■		1	6-30019-20-0-1
					■	■		1	6-30019-20-0-5
				■			■	1	6-30019-20-0-18
	1220–2750	min. 410	2	■		■		1	6-30019-98-0-1

# Barrier freedom with regard to operation of the handle

Lift&Slide gear with Swiss round cylinder – handle height 710 mm



## Lift&Slide gear – 37.5 mm backset – lockable, with Swiss round cylinder

Backset [mm]	Sash height SH [mm]	Handle height [mm]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 anodised	UC 5 anodised	ferGUard	faceGUard		
37.5	1850–2350	710	2 + 1 optional	■		■		1	6-31020-40-0-1
				■			■	1	6-31020-40-0-18

## Lift&Slide gear – 27.5 mm backset – lockable, with Swiss round cylinder

Backset [mm]	Sash height SH [mm]	Handle height [mm]	Quantity of locks	Cover rail surface		Lock case surface		PU	Order no.
				EV 1 ano- dised	UC 5 anodised	ferGUard	faceGUard		
27.5	1850–2350	710	2 + 1 optional	■		■		1	6-31021-40-0-1
				■			■	1	6-31021-40-0-18

# Safe operation of large and heavy elements

## HS-SPEED Limiter – advantages and ranges of application

**GU**

### Advantages

- The HS-SPEED Limiter prevents the sliding sash from accelerating to avoid
  - personal injury
  - damage to the structure
- Unrestricted ease of operation
- Simple installation; retrofittable
- Ideally suited for installation in public buildings such as, eg schools
- Suitable for elements of timber, PVC, and aluminium

### General application ranges

(Deviations possible depending on the profile)

HS-SPEED Limiter	
Sliding speed [m/s]	0.2
Sash width SW [mm]	max. 3300 [1] [2]
Sash height SH [mm]	max. 2765 [1] [2]
Sash weight [kg]	max. 400 [1]
Sash configurations	Pattern A and C

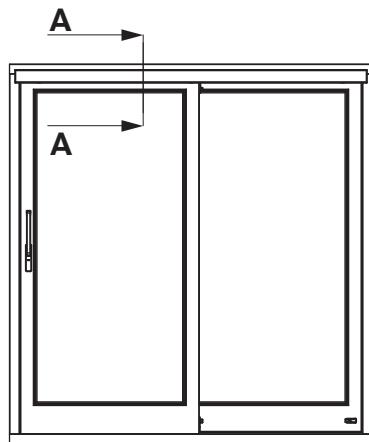
[1] Coordinated with Lift&Slide hardware GU-934

[2] Coordinated with Lift&Slide hardware GU-937

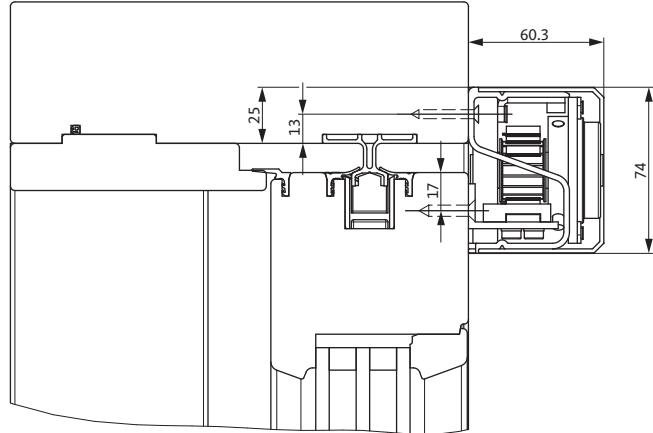
Note: With the HS-SPEED Limiter, the maximum sliding speed of 0.2 m/s stipulated in the German accident prevention regulations and in the VHBE directive is not exceeded.

### Installation drawing 0-44550

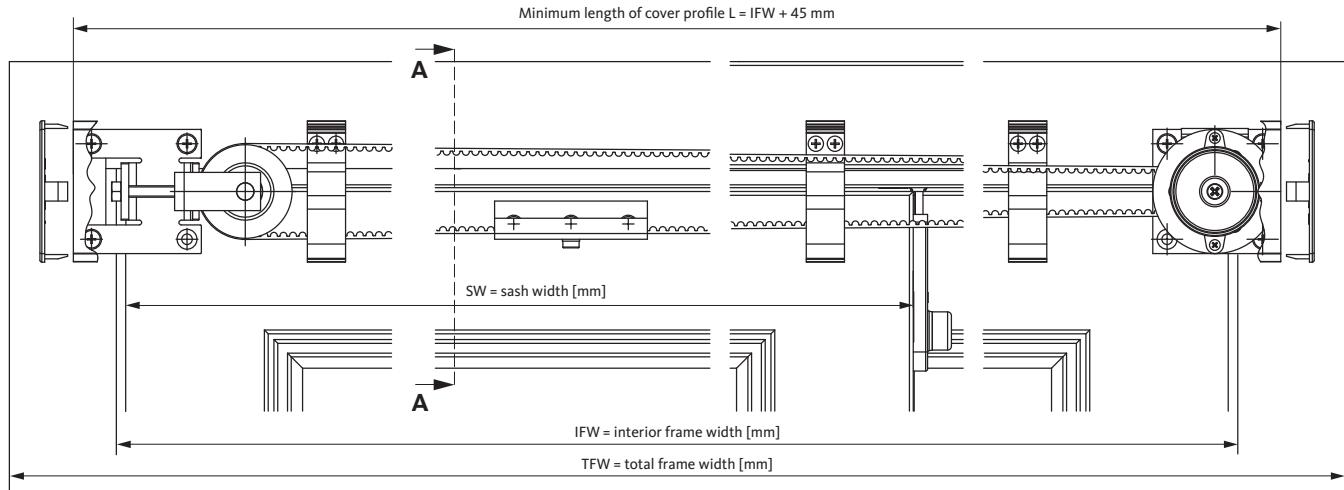
Sticker with operating instructions 9-50594-00-0-1 to be ordered separately.



Interior view – pattern A



Section A – A



# Safe operation of large and heavy elements

GU

## HS-SPEED Limiter – order information

GU



**Hardware requirements depending on sash size for patterns A and D internal sash**  
**Hardware requirements depending on sash size for patterns C and F internal sash**

### HS-SPEED Limiter basic hardware set

Pattern				Designation	Surface	PU	Order no.
A	C	D	F	HS-SPEED Limiter basic hardware set	EV 1 / light grey	1	K-17179-20-0-1
1	2	1	2				

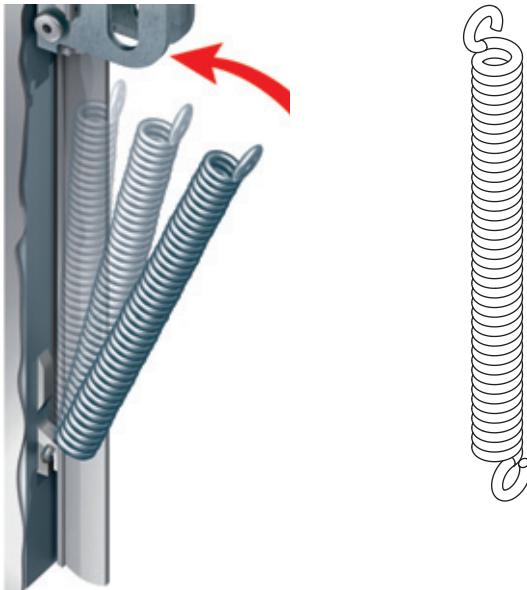
### HS-SPEED Limiter profiles set

Pattern				Sash width [mm]	Total frame width [mm]	Surface	PU	Order no.
A	C	D	F					
1	-	1	-	- 1450	- 3000	EV 1 / light grey	1	K-17180-30-0-1
						UC 5 / dark bronze	1	K-17180-30-0-5
						white	1	K-17180-30-0-7
-	1	-	1	- 1450	- 6700	EV 1 / light grey	1	K-17180-67-0-1
						UC 5 / dark bronze	1	K-17180-67-0-5
						white	1	K-17180-67-0-7
1	-	1	-	1451 – 1700	3001 – 3500	EV 1 / light grey	1	K-17180-35-0-1
						UC 5 / dark bronze	1	K-17180-35-0-5
						white	1	K-17180-35-0-7
-	2	-	2	1451 – 1700	6701 – 7000	EV 1 / light grey	1	K-17180-35-0-1
						UC 5 / dark bronze	1	K-17180-35-0-5
						white	1	K-17180-35-0-7
1	-	1	-	1701 – 1950	3501 – 4000	EV 1 / light grey	1	K-17180-40-0-1
						UC 5 / dark bronze	1	K-17180-40-0-5
						white	1	K-17180-40-0-7
-	2	-	2	1701 – 1950	7001 – 8000	EV 1 / light grey	1	K-17180-40-0-1
						UC 5 / dark bronze	1	K-17180-40-0-5
						white	1	K-17180-40-0-7
1	-	1	-	1951 – 2200	4001 – 4500	EV 1 / light grey	1	K-17180-45-0-1
						UC 5 / dark bronze	1	K-17180-45-0-5
						white	1	K-17180-45-0-7
-	2	-	2	1951 – 2200	8001 – 9000	EV 1 / light grey	1	K-17180-45-0-1
						UC 5 / dark bronze	1	K-17180-45-0-5
						white	1	K-17180-45-0-7
1	-	1	-	2201 – 2450	4501 – 5000	EV 1 / light grey	1	K-17180-50-0-1
						UC 5 / dark bronze	1	K-17180-50-0-5
						white	1	K-17180-50-0-7
-	2	-	2	2201 – 2450	9001 – 10000	EV 1 / light grey	1	K-17180-50-0-1
						UC 5 / dark bronze	1	K-17180-50-0-5
						white	1	K-17180-50-0-7
1	-	1	-	2451 – 3300	5001 – 6700	EV 1 / light grey	1	K-17180-67-0-1
						UC 5 / dark bronze	1	K-17180-67-0-5
						white	1	K-17180-67-0-7
-	2	-	2	2451 – 3300	10001 – 13400	EV 1 / light grey	1	K-17180-67-0-1
						UC 5 / dark bronze	1	K-17180-67-0-5
						white	1	K-17180-67-0-7

## Reduced operating force in Lift&Slide elements

Tension spring for Lift&Slide gears

**GU**



Installation drawing 0-46862

### Tension spring for Lift&Slide gears

To reduce the operating force of sashes weighing over 200 kg

Thanks to the use of tension springs in Lift&Slide gears, the operational force at the turn handle is significantly reduced for the user, greatly increasing operating convenience. The result is extremely easy operation of the Lift&Slide door for high sash weights of up to 400 kg, in particular.

#### Versions/order numbers

Designation	From sash weight [kg]	PU	Order no.
Tension spring	200	1	9-40235-05-0-0

# Improved operating safety for Lift&Slide elements

Handle damper for Lift&Slide gears



## Handle damper for Lift&Slide gears

For even safer operation of sashes weighing more than 100 kg

The handle damper in Lift&Slide gears ensures controlled lowering of the sliding sash and prevents the turn handle from recoiling. The handle damper can also be retrofitted quickly and easily in every standard gear.

### Versions/order numbers

Designation	From sash weight [kg]	PU	Order no.
Handle damper	100	1	K-19053-00-0-6

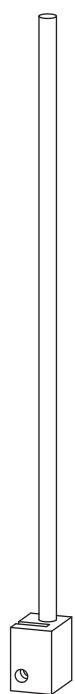
Installation drawing 0-46862

## Drilling jig for handle damper

### Versions/order numbers

Designation	PU	Order no.
Drilling jig for handle damper [1]	1	6-37928-01-0-1

[1] Required for retrofitting on all Lift&Slide gears installed before July 2014.



Installation drawing 0-46862

## Lift&Slide turn handles in special design

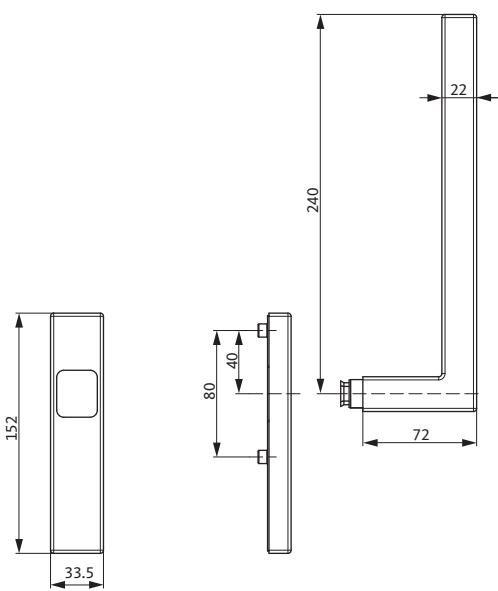
### Special form

GU



#### Product information

- High-quality stainless steel turn handle, interior, with dummy backplate
- With 10 mm square spindle and 80 mm distance between screw centres
- Flush pull must be ordered separately
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16



You can find detailed overviews, specifications about dimensions and various versions in the catalogue section 7.0 "Turn handles and accessories".

# Lift&Slide turn handles in special design

RONDO series

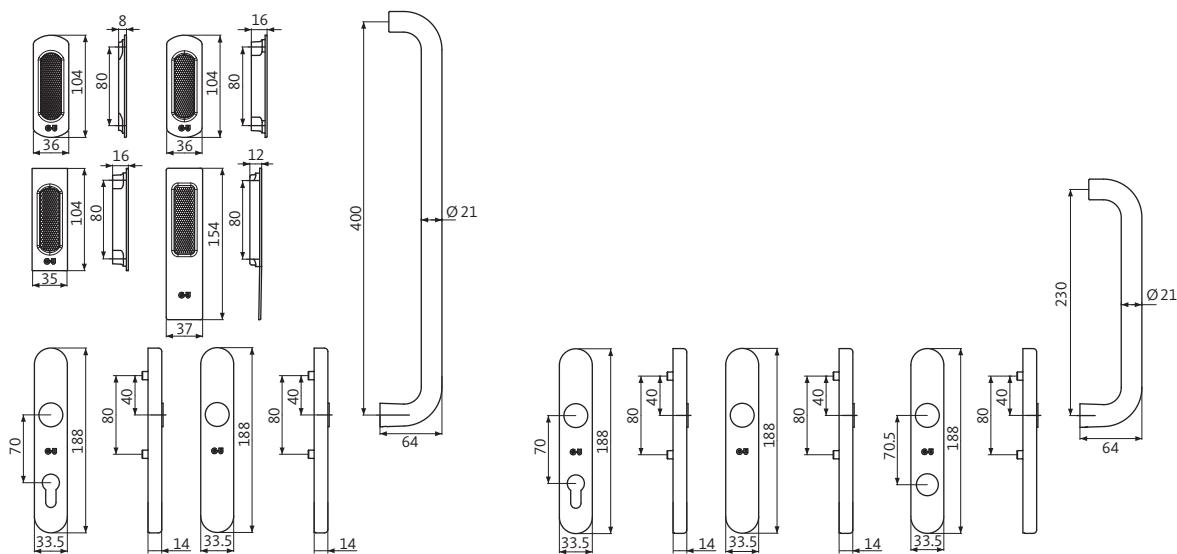
GU

GU



## Product information

- High-quality stainless steel turn handles, optionally with
  - Dummy backplate
  - Profile cylinder hole (PC) or
  - Round cylinder hole (Swiss RC)
- With 10 mm square spindle and 80 mm distance between screw centres
- Optionally with exterior handle or exterior flush pull
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16



You can find detailed overviews, specifications about dimensions and various versions in the catalogue section 7.0 "Turn handles and accessories".

# Lift&Slide turn handles in special design

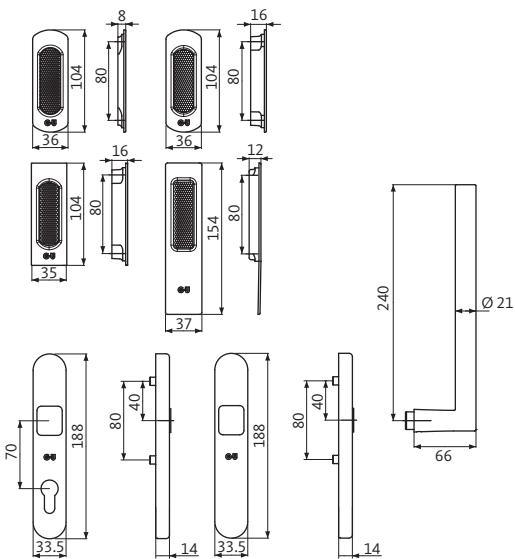
BELCANTO series

**GU**



## Product information

- High-quality stainless steel turn handles, optionally with
  - Dummy backplate or
  - Profile cylinder hole (PC)
- With 10 mm square spindle and 80 mm distance between screw centres
- Optionally with exterior handle or exterior flush pull
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight.
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16



You can find detailed overviews, specifications about dimensions and various versions in the catalogue section 7.0 "Turn handles and accessories".

# Lift&Slide turn handles in special design

GU

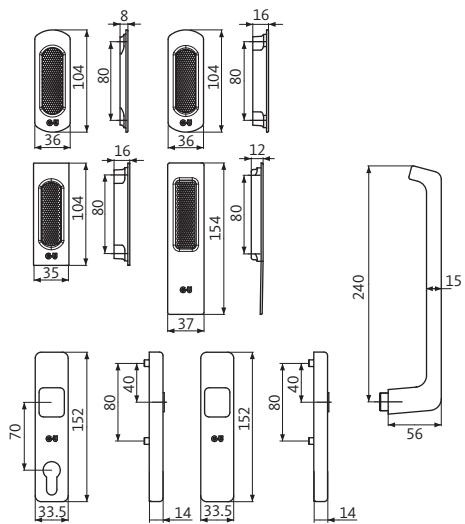
DIRIGENT series

GU



## Product information

- High-quality stainless steel turn handles, optionally with
  - Dummy backplate or
  - Profile cylinder hole (PC)
- With 10 mm square spindle and 80 mm distance between screw centres
- Optionally with exterior handle or exterior flush pull
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16



You can find detailed overviews, specifications about dimensions and various versions in the catalogue section 7.0 "Turn handles and accessories".

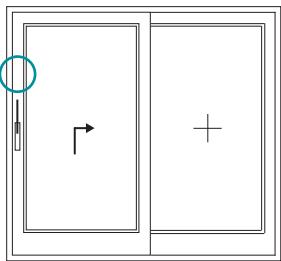
# Electronic security

## Locking monitoring – pattern A and pattern C

GU



### Pattern A



Installation drawing 0-44449

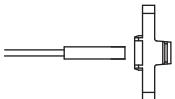
VdS certificate no. G 105012

### Locking monitoring

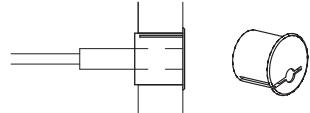
Magnetic locking monitoring between door frame and sliding sash

#### Versions/order numbers

Designation	PU	Order no.
Locking monitoring set	1	K-16752-00-0-0
Designation	Surface	
Eccentric plug	brown	6-33079-00-0-5
	white	6-33079-00-0-7

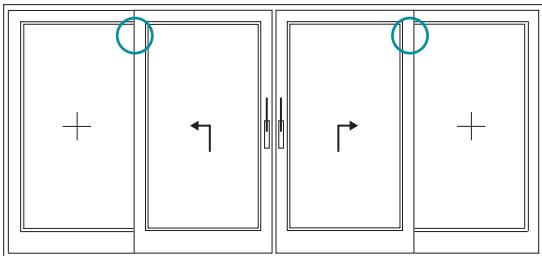


Locking monitoring set



Locking monitoring with eccentric plug

### Pattern C



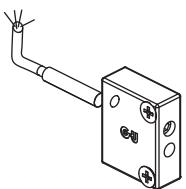
Installation drawing 0-44768

### Locking monitoring set

Magnetic locking monitoring between sliding sashes and fixed-glazed sashes

#### Versions/order numbers

Designation	Cable length [m]	PU	Order no.
Locking monitoring set	4.0	1	K-17322-00-0-0
	10.0	1	K-17322-10-0-0

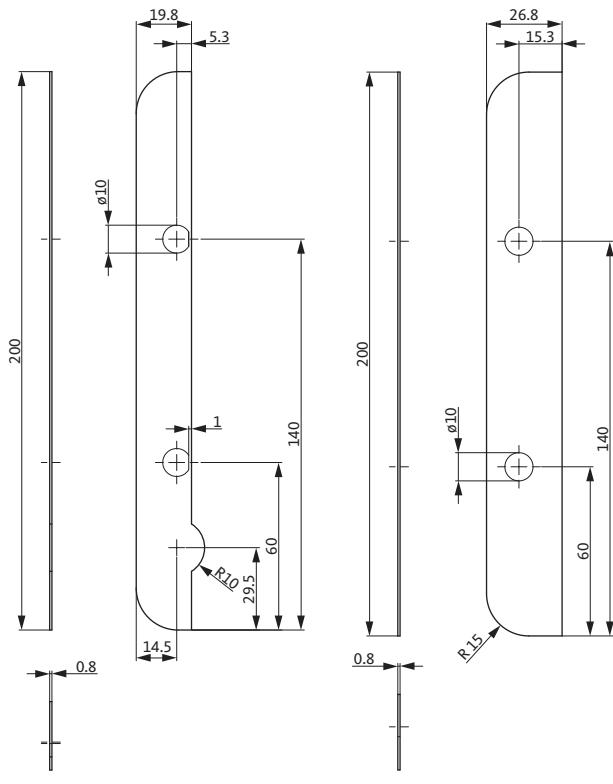


# Mechanical security

Anti-drill plate for L&S geared turn handles

GU

GU



## Anti-drill plate for L&S geared turn handles

Accessories for RC 2 versions

### Versions/order numbers

Designation	Lift&Slide gear Backset [mm]	PU	Order no.
Anti-drill plate for gear	27.5	1	9-41309-01-0-0
	37.5	1	9-41309-02-0-0

# Mechanical security

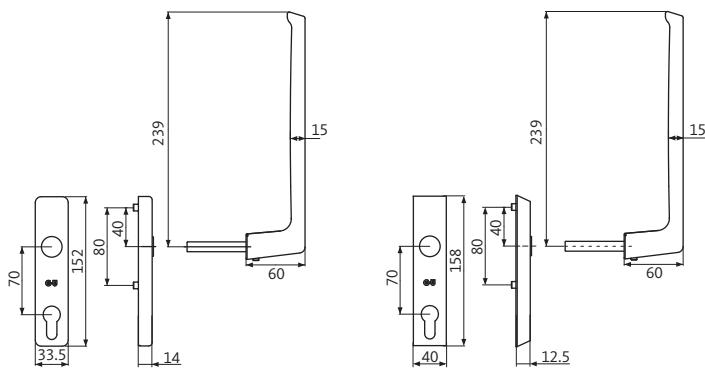
Interior/exterior handle set with PC hole – DIRIGENT Sec – RC 2-tested

**GU**



## Product information

- High-quality aluminium turn handles, internal and external, with PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Optionally with exterior handle or exterior flush pull
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight.
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 74 mm.
- Note: We recommend the use of a buffer – see pages 302



# Mechanical security

GU

Interior/exterior handle set with PC hole – DIRIGENT Sec – RC 2-tested



## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
Set: DIRIGENT Sec turn handle on both sides, with PC hole RC 2-tested	180°	Aluminium	with lugs	yes	1	Silver/EV 1 look	6-24617-96-0-1
					1	Dark brown [1]	6-24617-96-0-5
					1	White, RAL 9016	6-24617-96-0-7
	90°	Aluminium	with lugs	yes	1	Silver/EV 1 look	6-24618-96-0-1
					1	Dark brown [1]	6-24618-96-0-5
					1	White, RAL 9016	6-24618-96-0-7

[1] Similar to RAL 8022

Contents	Piece
DIRIGENT Sec turn handle on both sides, with PC hole	1
Square spindle (suitable for sash thicknesses up to 92 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

### Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	145	contained in the turn handle set
	68		
	78		
	88		
	90		
	92		
	110		
	170		9-27377-18-0-1

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	70	9-13274-70-0-1
	68	80	9-13274-80-0-1
	78	90	9-13274-90-0-1
	88	100	9-13274-97-R-3
	90	100	9-13274-97-R-3
	92	100	9-13274-97-R-3
	110	125	9-13274-96-R-1

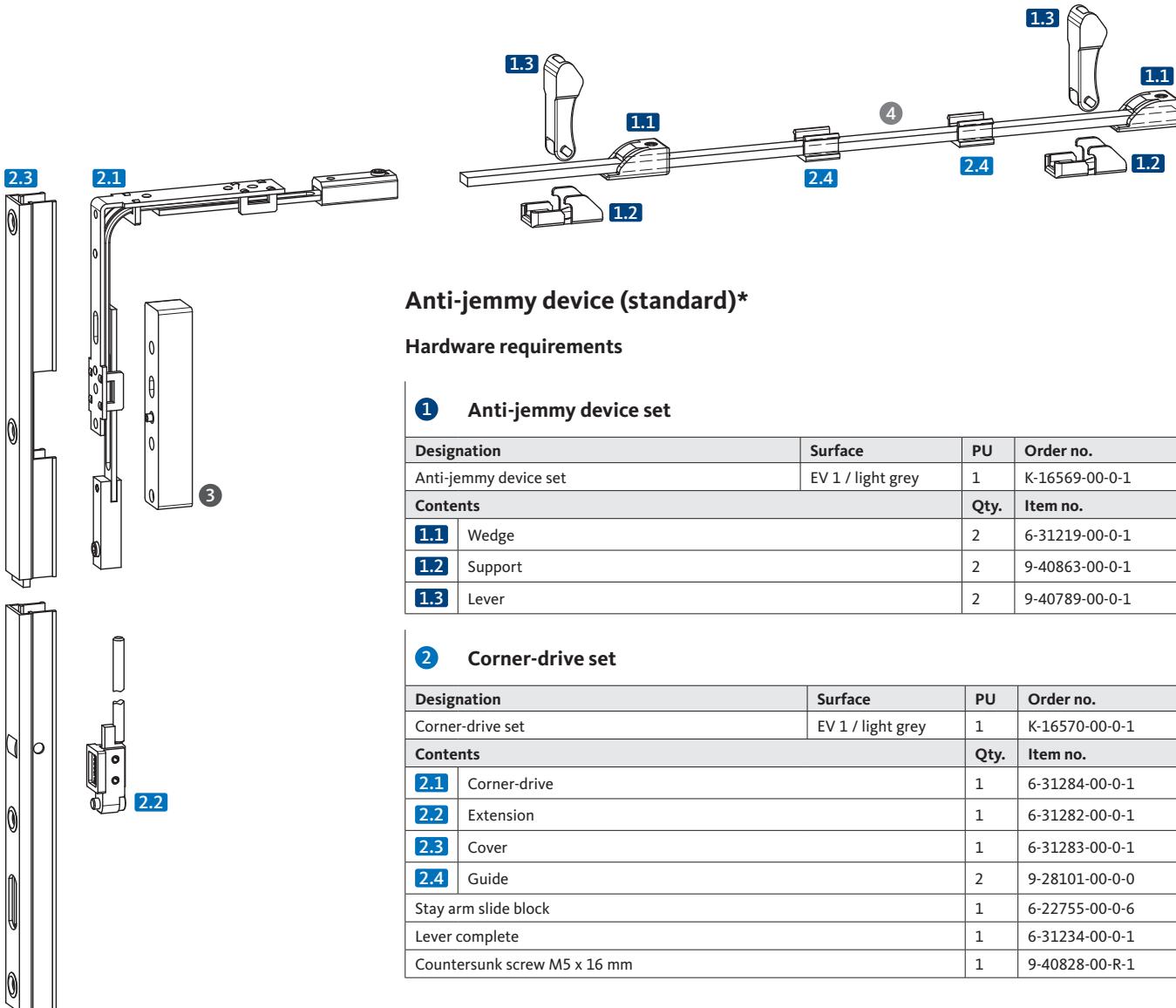
## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

# Mechanical security

## Anti-jemmy device – hardware requirements

GU



**3 Vertical packer**

Designation	PU	Order no.
Vertical packer	1	[1]

[1] The profile-specific version can be found on the next page and on the respective order pages in chapter 3.0 from page 35.

**4 P 959 connecting rod**

Designation	Sash width [mm]	Length [mm]	PU	Order no.
P 959 connecting rod	600–1220	1000	1	9-28355-10-0-3
	1221–1720	1500	1	9-28355-15-0-3
	1721–2020	1800	1	9-28355-18-0-3
	2021–3000	2600	1	9-28355-26-0-3
	Stock length	4800	1	9-28355-48-0-3

\* Profile-specific versions can be found on the next page and on the respective order pages in chapter 3.0 from page 35.

# Mechanical security

Anti-jemmy device – depending on profile system

**GU**

**GU**



## Versions/order numbers

Profile system	Bogies	Anti-jemmy device components				Page
		Anti-jemmy device	Corner-drive	Packer vertical	P 959 connecting rod	
Akotherm AT 750 HS	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-08-0-1	9-28355-**-0-3	42
Alcoa Europe	GU-934	-	-	-	-	-
Alcoa RT 135	GU-934	K-16569-00-0-1	K-17178-00-0-1		9-28355-**-0-3	58
Aliplast Ultralglide	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-06-0-1	9-28355-**-0-3	68
Alsistem	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-06-0-1	9-28355-**-0-3	76
AluK SC140	GU-934	K-16569-00-0-1	K-16570-00-0-1	-	9-28355-**-0-3	84
Alumil M300	GU-934	-	-	-	-	-
Alumil S400	GU-937	-	-	-	-	-
Aluprof MB-77HS	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-04-0-1	9-28355-**-0-3	102
Aluprof MB-77HS	GU-937	K-16569-00-0-1	K-16570-00-0-1	9-47295-06-0-1	9-28355-**-0-3	110
Etem E3000	GU-934	-	-	-	-	-
Etem E50	GU-937	-	-	-	-	-
Etem E52	GU-937	-	-	-	-	-
Etem E70	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-06-0-1	9-28355-**-0-3	136
Etem E70	GU-937	K-16569-00-0-1	K-16570-00-0-1	9-47295-06-0-1	9-28355-**-0-3	144
Exalco Albio 230	GU-934	-	-	-	-	-
Feal T 120	GU-934	-	-	-	-	-
Forster Italy	GU-934	-	-	-	-	-
Gastaldello Sistemi	GU-934	-	-	-	-	-
Giugni	GU-937	-	-	-	-	-
Metra Monorotaia	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-11-0-1	9-28355-**-0-3	184
Metra Monorotaia	GU-937	K-16569-00-0-1	K-16570-00-0-1	9-47295-11-0-1	9-28355-**-0-3	192
Metra NC 150 STH Rodos (45°)	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-11-0-1	9-28355-**-0-3	200
Metra NC 150 STH Rodos (45°)	GU-937	K-16569-00-0-1	K-16570-00-0-1	9-25740-08-0-0	9-28355-**-0-3	208
Metra NC 150 STH Rodos (90°)	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-11-0-1	9-28355-**-0-3	216
Metra NC 150 STH Rodos (90°)	GU-937	K-16569-00-0-1	K-16570-00-0-1	9-25740-08-0-0	9-28355-**-0-3	224
Ponzio SL1600	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-06-0-1	9-28355-**-0-3	232
Profilati	GU-934	-	-	-	-	-
Profilco	GU-934	-	-	-	-	-
Reynaers CP 130-LS	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-11-0-1	9-28355-**-0-3	252
Reynaers CP 155	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-11-0-1	9-28355-**-0-3	260
Reynaers TSL 110	GU-934	-	-	-	-	-
Sapa Ekonal 125	GU-934	-	-	-	-	-
TS Aluminium	GU-937	-	-	-	-	-
Wicona Wicslide 160	GU-934	K-16569-00-0-1	K-16570-00-0-1	9-47295-08-0-1	9-28355-**-0-3	284

\*\* Size 10, 15, 18, 26 or 48 (depending on the sash width)

# Mechanical security

## Meeting stile security profiles

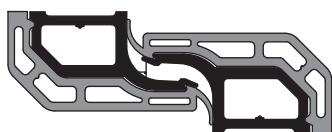
GU



Meeting-stile security profile L&amp;S 10 RC



Meeting-stile security profile L&amp;S 16/20 RC



Meeting-stile security profile L&amp;S 25/29 RC

### L&S meeting stile security profile set

#### Versions/order numbers

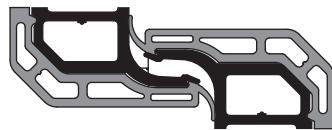
Designation	Sash distance [mm]	Length [mm]	PU	Surface	Order no.
Meeting-stile security profile set L&S 10 RC	10	2400	1	grey	K-15797-24-0-1
			1	black	K-15797-24-0-6
			1	white	K-15797-24-0-7
	10	2900	1	grey	K-15797-29-0-1
			1	black	K-15797-29-0-6
			1	white	K-15797-29-0-7
Meeting-stile security profile set L&S 16/20 RC	16–20	2400	1	grey	K-15798-24-0-1
			1	black	K-15798-24-0-6
			1	white	K-15798-24-0-7
	16–20	2900	1	grey	K-15798-29-0-1
			1	black	K-15798-29-0-6
			1	white	K-15798-29-0-7
Meeting-stile security profile set L&S 25/29 RC	25–29	2400	1	grey	K-15799-24-0-1
			1	black	K-15799-24-0-6
			1	white	K-15799-24-0-7
	25–29	2900	1	grey	K-15799-29-0-1
			1	black	K-15799-29-0-6
			1	white	K-15799-29-0-7



Extension L&S 10 RC



Extension L&S 16/20 RC



Extension L&S 25/29 RC

### L&S extension set

#### Versions/order numbers

Designation	Sash distance [mm]	Length [mm]	PU	Surface	Order no.
Extension set L&S 10 RC	10	500	1	grey	K-16855-00-0-1
			1	black	K-16855-00-0-6
			1	white	K-16855-00-0-7
Extension set L&S 16/20 RC	16–20	500	1	grey	K-16856-00-0-1
			1	black	K-16856-00-0-6
			1	white	K-16856-00-0-7
Extension set L&S 25/29 RC	25–29	500	1	grey	K-16857-00-0-1
			1	black	K-16857-00-0-6
			1	white	K-16857-00-0-7

### Accessories for meeting stile security profile

#### Versions/order numbers

Designation	Dimensions [mm]	PU	Requirements per meeting stile security profile set	Order no.
Spax screw	5 x 50	1	24	H-00112-50-0-1
Spax screw	5 x 60	1	24	H-00112-60-0-1
Spax screw	3.5 x 35	1	1	H-00109-35-0-1

# Frame cam



## Frame cam

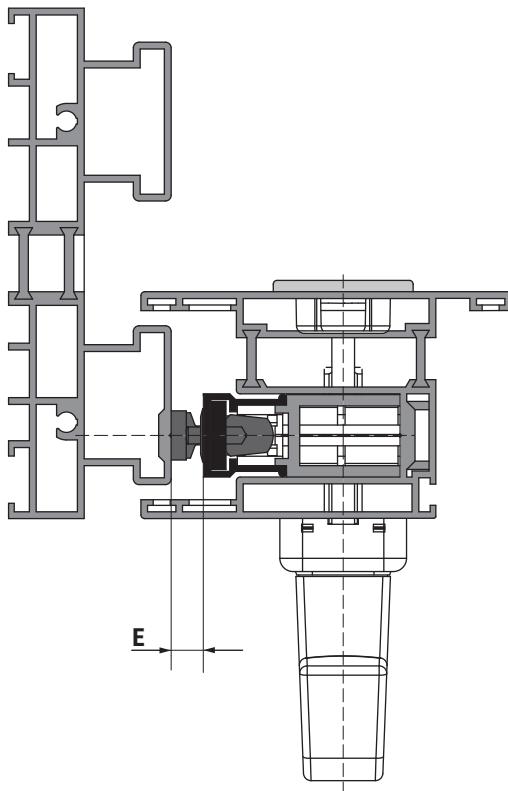
### Profile-specific versions

Profile system	Bogies	Patterns	Dim. E [mm]	Surface	PU	Order no.	
						standard	Lift&Slide night vent module
Akotherm AT 750 HS	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	–
Alcoa Europe	GU-934	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Alcoa RT 135	GU-934	depending on profile system	6.5	ferGUard	1	G-19734-00-0-1	–
Aliplast Ultraglide	GU-934	A / D / F	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
		C / F	17.0	Stainless steel	1	6-22623-03-0-8	–
Alsistem	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
AluK SC140	GU-934	depending on profile system	13.4	Stainless steel	1	6-35190-00-0-8	–
Alumil M300	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	–
Alumil S400	GU-937	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Aluprof MB-77HS	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Aluprof MB-77HS	GU-937	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Etem E3000	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Etem E50	GU-937	A / D / F	13.4	Stainless steel	1	9-38825-00-0-8	–
		C / F	5.5	Stainless steel	1	6-22648-01-0-8	–
Etem E52	GU-937	A / D / F	8.3	Stainless steel	1	9-47530-02-0-8	–
		C / F	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Etem E70	GU-934	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Etem E70	GU-937	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Exalco Albio 230	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	–
Feal T 120	GU-934	A	15.2	Stainless steel	1	9-47530-01-0-8	–
		C	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Forster Italy	GU-934	A	9.5	Stainless steel	1	6-22648-04-0-8	–
		C	21.5	Stainless steel	1	6-22623-05-0-8	–
Gastaldello Sistemi	GU-934	depending on profile system	13.4	Stainless steel	1	9-38825-00-0-8	–
Giugni	GU-937	A	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
		C	5.5	Stainless steel	1	6-22648-01-0-8	–
Metra Monorotaia	GU-934	A	13.0	Stainless steel	1	9-44211-00-0-8	–
		C	21.5	Stainless steel	1	6-22623-05-0-8	–
Metra Monorotaia	GU-937	A	13.0	Stainless steel	1	9-44211-00-0-8	–
		C	21.5	Stainless steel	1	6-22623-05-0-8	–
Metra NC 150 STH Rodos (45°)	GU-934	A	13.0	Stainless steel	1	9-44211-00-0-8	–
		C	21.5	Stainless steel	1	6-22623-05-0-8	–
Metra NC 150 STH Rodos (45°)	GU-937	A	13.0	Stainless steel	1	9-44211-00-0-8	–
		C	21.5	Stainless steel	1	6-22623-05-0-8	–
Metra NC 150 STH Rodos (90°)	GU-934	A / D	17.5	ferGUard	1	6-23793-00-L-1	–
		C	21.5	Stainless steel	1	6-22623-05-0-8	–



## Profile-specific versions

Profile system	Bogies	Patterns	Dim. E [mm]	Surface	PU	Order no.	
						standard	Lift&Slide night vent module
Metra NC 150 STH Rodos (90°)	GU-937	A / D	17.5	ferGUard	1	6-23793-00-L-1	-
		C	21.5	Stainless steel	1	6-22623-05-0-8	-
Ponzio SL1600	GU-934	depending on profile system	13.4	Stainless steel	1	9-38825-00-0-8	-
Profilati	GU-934	A / D / F	11.8	ferGUard	1	9-26072-55-0-1	-
		C / F	11.0	Stainless steel	1	6-22648-05-0-8	-
Profilco	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Reynaers CP 130-LS	GU-934	depending on profile system	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
Reynaers CP 155	GU-934	A / D	19.5	Stainless steel	1	6-22623-04-0-8	-
		C	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
Reynaers TSL 110	GU-934	A	6.5	Stainless steel	1	6-22648-02-0-8	9-43830-04-0-8
		C	16.0	Stainless steel	1	6-23309-00-0-8	-
Sapa Ekonal 125	GU-934	depending on profile system	8.5	Stainless steel	1	6-22648-03-0-8	9-43830-03-0-8
TS Aluminium	GU-937	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	-
Wicona Wicslide 160	GU-934	depending on profile system	5.5	Stainless steel	1	6-22648-01-0-8	-

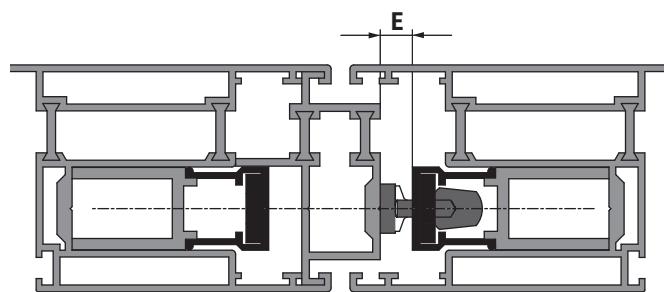
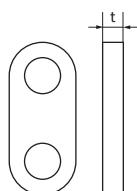


Locking into the frame, example shows pattern A

## Packers for frame cams

### Versions/order numbers

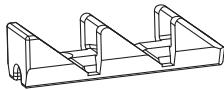
Height [mm]	Surface	PU	Order no.
0.5 mm	Stainless steel	10	K-18309-01-0-8
1.0 mm	Stainless steel	10	K-18309-02-0-8



Sash locking at the meeting stile with pattern C and F

## Bottom keepers

GU

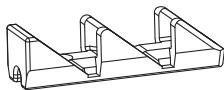


### Bottom keeper

- With 2 bolt positions

#### Versions/order numbers

Designation	Surface	PU	Order no.
Bottom keeper set	ferGuard	1	K-12057-00-0-1
Contents	Qty.	Item no.	
Bottom keeper	1	9-28440-00-0-1	
Countersunk-head tapping screw 3.9 x 16 mm	2	9-13132-16-R-8	



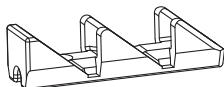
(milled off at the bottom)

### Bottom keeper

- With 2 bolt positions

#### Versions/order numbers

Designation	Surface	PU	Order no.
Bottom keeper set	ferGuard	1	K-17864-00-0-1
Contents	Qty.	Item no.	
Bottom keeper	1	9-45561-00-0-1	
Countersunk-head tapping screw 3.9 x 25 mm	2	9-13132-25-0-0	

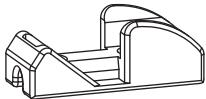
(for roller track  
with trapezoidal cross-section)

### Bottom keeper

- With 2 bolt positions

#### Versions/order numbers

Designation	Surface	PU	Order no.
Bottom keeper set	ferGuard	1	K-14568-00-0-1
Contents	Qty.	Item no.	
Bottom keeper	1	9-28439-00-0-1	
Anti-jemmy device	1	9-24895-11-R-1	

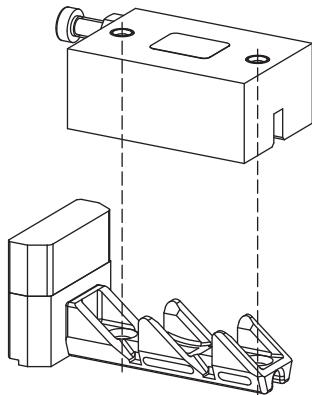


## Bottom keeper (alternatively)

- With 1 bolt position

### Versions/order numbers

Designation	Material	PU	Order no.
Bottom keeper	Stainless steel	1	9-47330-00-0-8



## Drilling jig for installing the bottom keeper

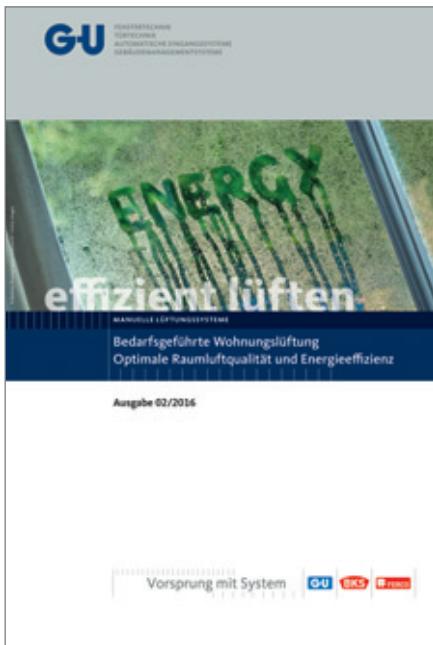
Non-handed

### Versions/order numbers

Designation	Application range	PU	Order no.
Drilling jig for the installation of the bottom keeper	Hardware installation	1	6-34129-00-0-0

# Needs-oriented apartment ventilation

Manual ventilation systems from the Gretsch-Unitas Group



## Window ventilators

GU window ventilators provide a wide selection of technical solutions for implementing individualised and needs-oriented ventilation concepts. The discreet appearance integrates itself into the window system and subtly achieves an ideal exchange of air.

You are interested in our product range of window ventilators? We would be glad to send you our brochure "Needs-oriented apartment ventilation – ideal air quality and energy efficiency".

### Turn handles and accessories

Turn handle – Special form	352 – 353
RONDO series	355 – 373
BELCANTO series	375 – 385
DIRIGENT series	387 – 417
Accessories	418 – 426

## Special form – interior turn handle, without PC hole

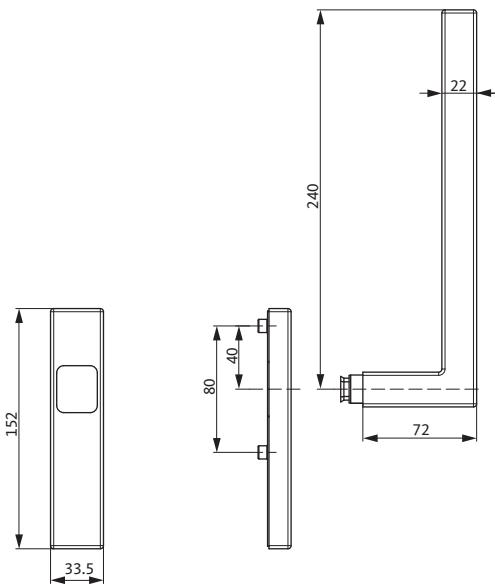
without flush pull

**GU**



### Product information

- High-quality stainless steel turn handle, interior, without PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.



# Special form – interior turn handle, without PC hole without flush pull



## Turn handles

Versions/order numbers							
Designation		Detent	Material	Version	lockable	PU	Order no.
Special form – interior turn handle set, without PC hole		180°	Stainless steel	with lugs	no	1	K-18684-00-0-8
Contents							Piece
Special form – interior turn handle, without PC hole		1					
Square spindle (suitable for sash thicknesses up to 80 mm)		1					

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

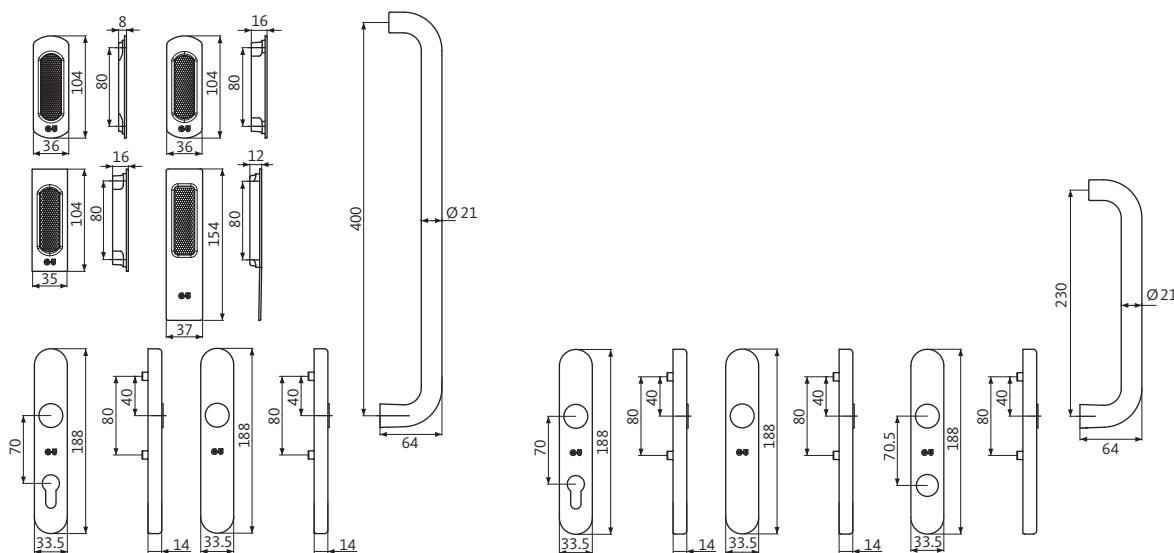
**GU**





### Product information

- High-quality stainless steel turn handles, optionally with
  - Dummy backplate
  - Profile cylinder hole (PC) or
  - Round cylinder hole (Swiss RC)
- With 10 mm square spindle and 80 mm distance between screw centres
- Optionally with exterior handle or exterior flush pull
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16



Some products in this series are suitable for



## RONDO series – interior turn handle with PC hole

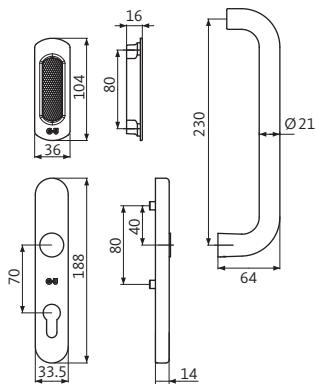
with exterior flush pull

**GU**



### Product information

- High-quality stainless steel turn handle, interior, with PC hole
- Exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.



# RONDO series – interior turn handle with PC hole

with exterior flush pull



## Turn handles

Versions/order numbers							
Designation		Detent	Material	Version	lockable	PU	Order no.
Set: RONDO interior turn handle, with PC hole		180°	Stainless steel	with lugs	yes	1	K-16797-00-0-8
		90°	Stainless steel	with lugs	yes	1	K-16863-00-0-8
Contents				Piece			
RONDO interior turn handle, with PC hole				1			
Flush pull				1			
Square spindle (suitable for sash thicknesses up to 80 mm)				1			

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## RONDO series – interior turn handle without PC hole

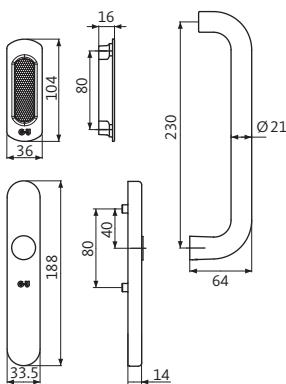
with exterior flush pull

**GU**



### Product information

- High-quality stainless steel turn handle, interior, without PC hole
- Exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber and PVC Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.



# RONDO series – interior turn handle without PC hole

with exterior flush pull



## Turn handles

Versions/order numbers								
Designation		Detent	Material	Version	lockable	PU	Order no.	
Set: RONDO interior turn handle, without PC hole		180°	Stainless steel	with lugs	no	1	K-16796-00-0-8	
		90°	Stainless steel	with lugs	no	1	K-16862-00-0-8	
Contents				Piece				
RONDO interior turn handle, without PC hole				1				
Flush pull				1				
Square spindle (suitable for sash thicknesses up to 80 mm)				1				

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1

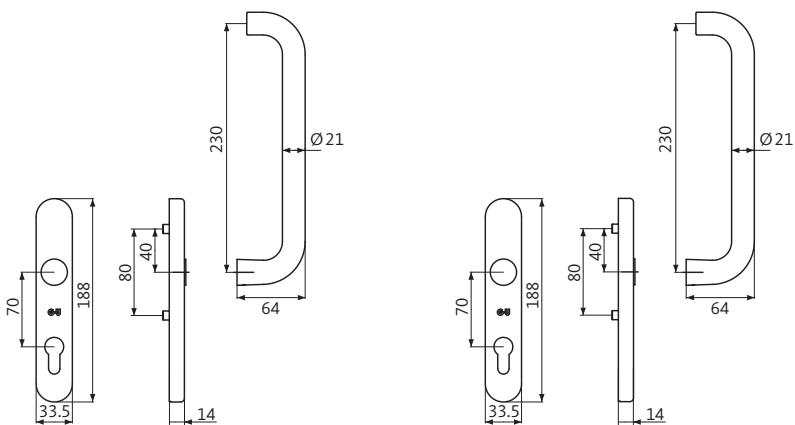
## RONDO series – interior/exterior handle set with PC hole

GU



### Product information

- High-quality stainless steel turn handles, interior and exterior, with PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.
- Note: We recommend the use of a buffer – see pages 302



# RONDO series – interior/exterior handle set with PC hole

**GU**

## Turn handles

Versions/order numbers								
Designation		Detent	Material	Version	lockable	PU	Order no.	
RONDO interior/exterior handle set, with PC hole		180°	Stainless steel	with lugs	yes	1	K-16798-00-0-8	
		90°	Stainless steel	with lugs	yes	1	K-16864-00-0-8	
Contents				Piece				
RONDO interior/exterior handle set with PC hole				1				
Fixing screws M6 x 100 mm				2				
Square spindle (suitable for sash thicknesses up to 92 mm)				1				

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately in the event of deviating sash thicknesses.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	145	contained in the turn handle set
	68		
	78		
	88		
	90		
	92		
	110		
170      9-27377-18-0-1			

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	70	9-13274-70-0-1
	68	80	9-13274-80-0-1
	78	90	9-13274-90-0-1
	88	100	contained in the turn handle set
	90		
	92		
	110	125	9-13274-96-R-1

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## RONDO series – interior turn handle with PC hole

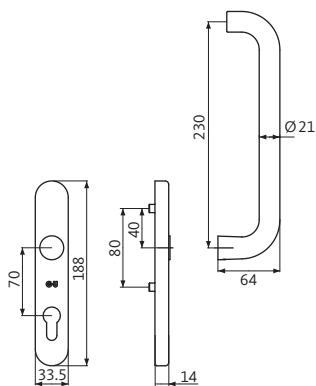
without flush pull

**GU**



### Product information

- High-quality stainless steel turn handle, interior, with PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.



# RONDO series – interior turn handle with PC hole

without flush pull



## Turn handles

Versions/order numbers							
Designation		Detent	Material	Version	lockable	PU	Order no.
Set: RONDO interior turn handle, with PC hole		180°	Stainless steel	with lugs	yes	1	K-16808-00-0-8
		90°	Stainless steel	with lugs	yes	1	K-16866-00-0-8
Contents				Piece			
RONDO interior turn handle, with PC hole				1			
Square spindle (suitable for sash thicknesses up to 80 mm)				1			

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## RONDO series – interior turn handle without PC hole

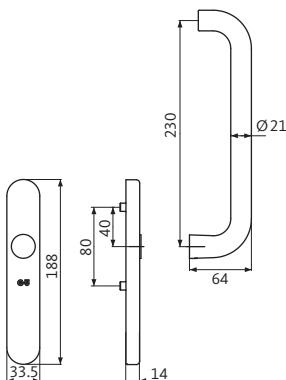
without flush pull

**GU**



### Product information

- High-quality stainless steel turn handle, interior, without PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.



# RONDO series – interior turn handle without PC hole

without flush pull



## Turn handles

Versions/order numbers								
Designation		Detent	Material	Version	lockable	PU	Order no.	
Set: RONDO interior turn handle, without PC hole		180°	Stainless steel	with lugs	no	1	K-16807-00-0-8	
		90°	Stainless steel	with lugs	no	1	K-16868-00-0-8	
Contents				Piece				
RONDO interior turn handle, without PC hole				1				
Square spindle (suitable for sash thicknesses up to 80 mm)				1				

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

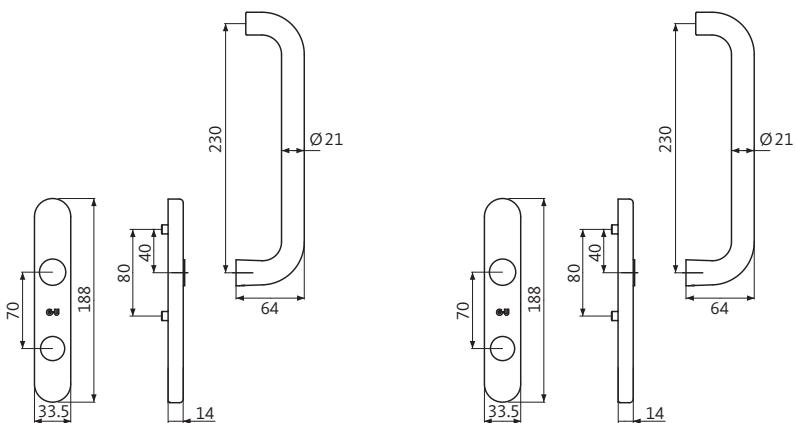
## RONDO series – interior/exterior handle set with Swiss RC hole

GU



### Product information

- High-quality stainless steel turn handles, interior and exterior, with 22 mm Swiss RC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.
- Note: We recommend the use of a buffer – see pages 302



# RONDO series – interior/exterior handle set with Swiss RC hole

**GU**

## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
RONDO interior/exterior handle set, with Swiss RC hole	180°	Stainless steel	with lugs	yes	1	K-16908-00-0-8

Contents	Piece
RONDO interior/exterior handle set with Swiss RC hole	1
Fixing screws M6 x 100 mm	2
Square spindle (suitable for sash thicknesses up to 92 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately in the event of deviating sash thicknesses.

## Square spindle

## Fixing screws

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	145	contained in the turn handle set
	68		
	78		
	88		
	90		
	92		
	110		9-27377-18-0-1

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	70	9-13274-70-0-1
	68	80	9-13274-80-0-1
	78	90	9-13274-90-0-1
	88	100	contained in the turn handle set
	90		
	92		
	110	125	9-13274-96-R-1

## Drilling jigs

### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## RONDO series – interior turn handle with Swiss RC hole

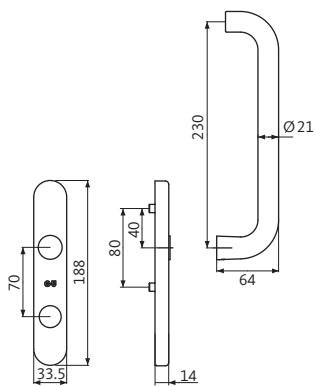
without flush pull

**GU**



### Product information

- High-quality stainless steel turn handle, interior, with 22 mm Swiss RC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 78 mm.



# RONDO series – interior turn handle with Swiss RC hole

without flush pull



## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
Set: RONDO interior turn handle, with Swiss RC hole	180°	Stainless steel	with lugs	yes	1	K-17624-00-0-8

Contents	Piece
RONDO interior turn handle with Swiss RC hole	1
Square spindle (suitable for sash thicknesses up to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## RONDO series – interior turn handle with PC hole

extended handle

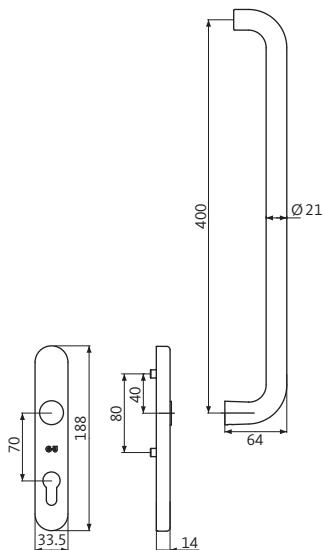
**GU**



### Product information

- High-quality stainless steel turn handle, interior, with PC hole
- Special length 400 mm
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 400 mm  
Handle height 78 mm.

This product is suitable for use in accordance with



### Turn handles

#### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
Set: RONDO interior turn handle, with PC hole	180°	Stainless steel	with lugs	yes	1	K-17232-00-0-8

Contents	Piece
RONDO interior turn handle, with PC hole	1
Square spindle (suitable for sash thicknesses up to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

### Square spindle

#### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

### Fixing screws

#### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

### Drilling jigs

#### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## RONDO series – interior turn handle without PC hole

extended handle

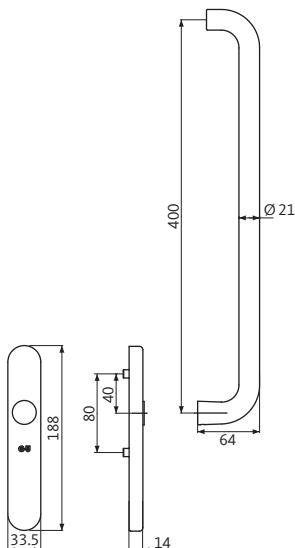
**GU**



### Product information

- High-quality stainless steel turn handle, interior, without PC hole
- Special length 400 mm
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 400 mm  
Handle height 78 mm.

This product is suitable for use in accordance with



# RONDO series – interior turn handle without PC hole

extended handle



## Turn handles

Versions/order numbers							
Designation		Detent	Material	Version	lockable	PU	Order no.
Set: RONDO interior turn handle, without PC hole		180°	Stainless steel	with lugs	no	1	K-17231-00-0-8
Contents							Piece
RONDO interior turn handle, without PC hole		1					
Square spindle (suitable for sash thicknesses up to 80 mm)		1					

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

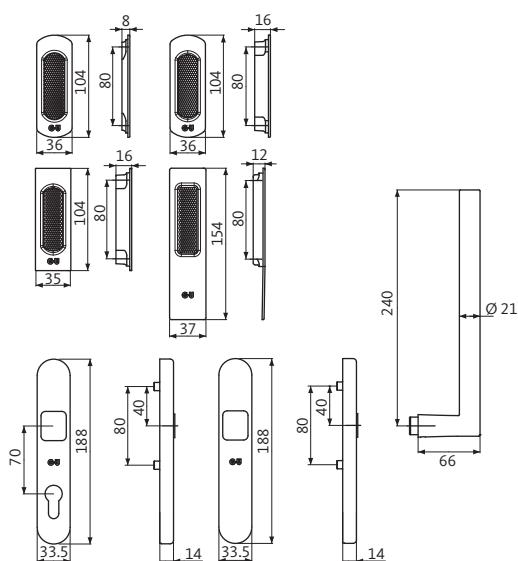
**GU**





### Product information

- High-quality stainless steel turn handles, optionally with
  - Dummy backplate
  - Profile cylinder hole (PC)
- With 10 mm square spindle and 80 mm distance between screw centres
- Optionally with exterior handle or exterior flush pull
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16



Some products in this series are suitable for



# BELCANTO series – interior turn handle with PC hole

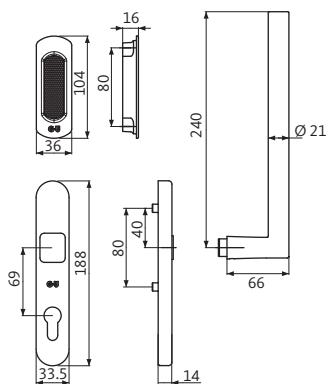
with exterior flush pull

**GU**



## Product information

- High-quality stainless steel turn handle, interior, with PC hole
- Exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber and PVC Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 80 mm.



# BELCANTO series – interior turn handle with PC hole with exterior flush pull



## Turn handles

Versions/order numbers							
Designation		Detent	Material	Version	lockable	PU	Order no.
Set: BELCANTO interior turn handle, with PC hole	180°	Stainless steel	with lugs	yes	1	K-17016-00-0-8	
	90°	Stainless steel	with lugs	yes	1	K-17021-00-0-8	
Contents				Piece			
BELCANTO interior turn handle, with PC hole				1			
Flush pull				1			
Square spindle (suitable for sash thicknesses up to 80 mm)				1			

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1

# BELCANTO series – interior turn handle without PC hole

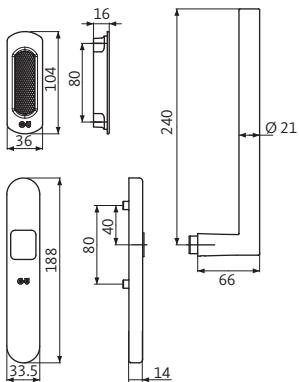
with exterior flush pull

**GU**



## Product information

- High-quality stainless steel turn handle, interior, without PC hole
- Exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber and PVC Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 80 mm.



# BELCANTO series – interior turn handle without PC hole

with exterior flush pull



## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
Set: BELCANTO interior turn handle, without PC hole	180°	Stainless steel	with lugs	no	1	K-17015-00-0-8
	90°	Stainless steel	with lugs	no	1	K-17020-00-0-8
Contents	Piece					
BELCANTO interior turn handle, without PC hole						1
Flush pull						1
Square spindle (suitable for sash thicknesses up to 80 mm)						1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1

## BELCANTO series – interior turn handle with PC hole

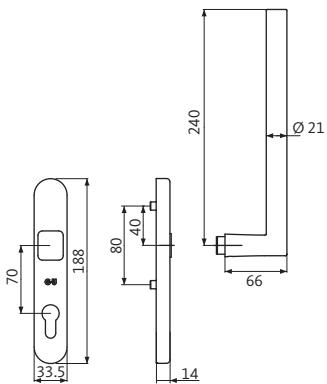
without flush pull

GU



### Product information

- High-quality stainless steel turn handle, interior, with PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 80 mm.



## Turn handles

Versions/order numbers								
Designation		Detent	Material	Version	lockable	PU	Order no.	
Set: BELCANTO interior turn handle, with PC hole		180°	Stainless steel	with lugs	yes	1	K-17014-00-0-8	
		90°	Stainless steel	with lugs	yes	1	K-17019-00-0-8	
Contents				Piece				
BELCANTO interior turn handle, with PC hole				1				
Square spindle (suitable for sash thicknesses up to 80 mm)				1				

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	6-27272-01-0-1

## BELCANTO series – interior turn handle without PC hole

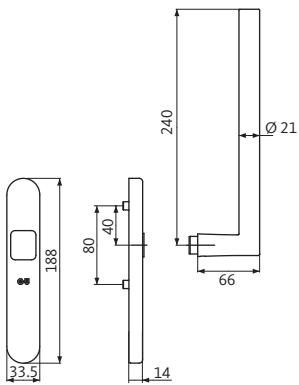
without flush pull

GU



### Product information

- High-quality stainless steel turn handle, interior, without PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 80 mm.



# BELCANTO series – interior turn handle without PC hole



without flush pull

## Turn handles

Versions/order numbers							
Designation		Detent	Material	Version	lockable	PU	Order no.
Set: BELCANTO interior turn handle, without PC hole	180°	Stainless steel	with lugs	yes	1	K-17013-00-0-8	
	90°	Stainless steel	with lugs	yes	1	K-17018-00-0-8	
Contents				Piece			
BELCANTO interior turn handle, without PC hole				1			
Square spindle (suitable for sash thicknesses up to 80 mm)				1			

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	6-27272-01-0-1

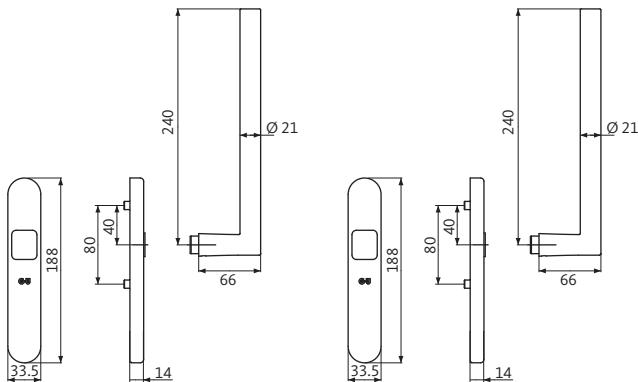
## BELCANTO series – interior/exterior handle set with PC hole

GU



### Product information

- High-quality stainless steel turn handles, interior and exterior, with PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 80 mm.
- Note: We recommend the use of a buffer – see pages 302



# BELCANTO series – interior/exterior handle set with PC hole

**GU**

## Turn handles

Versions/order numbers							
Designation		Detent	Material	Version	lockable	PU	Order no.
BELCANTO exterior/exterior handle set, with PC hole	180°	Stainless steel	with lugs	yes	1	K-17017-00-0-8	
	90°	Stainless steel	with lugs	yes	1	K-17022-00-0-8	
Contents				Piece			
BELCANTO interior/exterior handle set, with PC hole				1			
Fixing screws M6 x 100 mm				2			
Square spindle (suitable for sash thicknesses up to 92 mm)				1			

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately in the event of deviating sash thicknesses.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	145	contained in the turn handle set
	68		
	78		
	88		
	90		
	92		
	110		9-27377-18-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	70	9-13274-70-0-1
	68	80	9-13274-80-0-1
	78	90	9-13274-90-0-1
	88	100	contained in the turn handle set
	90		
	92		
	110	125	9-13274-96-R-1

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

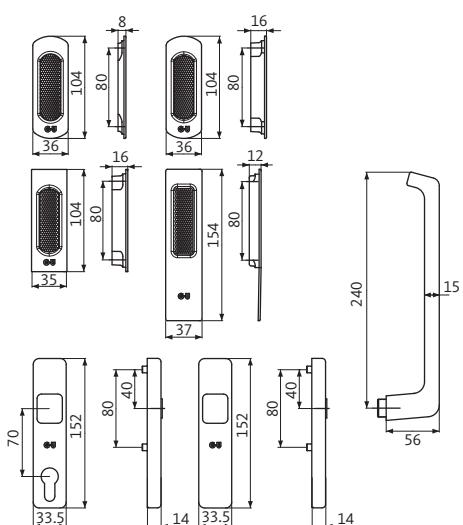
**GU**





### Product information

- High-quality stainless steel turn handles, optionally with
  - Dummy backplate
  - Profile cylinder hole (PC)
- With 10 mm square spindle and 80 mm distance between screw centres
- Optionally with exterior handle or exterior flush pull
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16



Some products in this series are suitable for



## DIRIGENT series – interior turn handle with PC hole

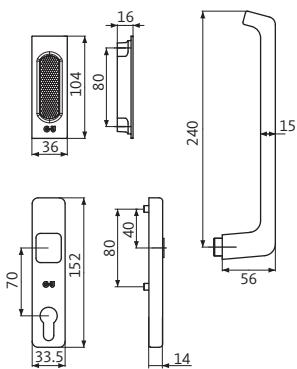
with exterior flush pull

**GU**



### Product information

- High-quality stainless steel turn handle, interior, with PC hole
- Exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber and PVC Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 70 mm.



# DIRIGENT series – interior turn handle with PC hole with exterior flush pull



## Turn handles

Versions/order numbers								
Designation		Detent	Material	Version	lockable	PU	Order no.	
Set: DIRIGENT interior turn handle, with PC hole		180°	Stainless steel	with lugs	yes	1	K-16794-00-0-8	
		90°	Stainless steel	with lugs	yes	1	K-16860-00-0-8	
Contents				Piece				
DIRIGENT interior turn handle, with PC hole				1				
Flush pull				1				
Square spindle (suitable for sash thicknesses up to 80 mm)				1				

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1

## DIRIGENT series – interior turn handle with PC hole

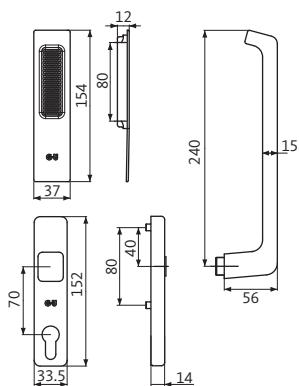
with extended exterior flush pull

**GU**



### Product information

- High-quality aluminium turn handle, interior, with PC hole
- Extended exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber and PVC Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 70 mm.



# DIRIGENT series – interior turn handle with PC hole

with extended exterior flush pull



## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
Set: DIRIGENT interior turn handle, with PC hole	180°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-13266-00-0-1
					1	Dark brown [1]	K-13266-00-0-5
					1	White, RAL 9016	K-13266-00-0-7
	90°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-13263-00-0-1
					1	Dark brown [1]	K-13263-00-0-5
					1	White, RAL 9016	K-13263-00-0-7

[1] Similar to RAL 8022

Contents	Piece
DIRIGENT interior turn handle, with PC hole	1
Flush pull, extended	1
Square spindle (suitable for sash thicknesses up to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

### Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1

# DIRIGENT series – interior turn handle, without PC hole

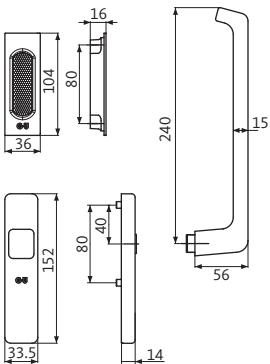
with exterior flush pull

**GU**



## Product information

- High-quality stainless steel turn handle, interior, without PC hole
- Exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber and PVC Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 70 mm.



# DIRIGENT series – interior turn handle, without PC hole

with exterior flush pull



## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
Set: DIRIGENT interior turn handle, without PC hole	180°	Stainless steel	with lugs	no	1	K-16793-00-0-8
	90°	Stainless steel	with lugs	no	1	K-16859-00-0-8
Contents	Piece					
DIRIGENT interior handle without PC hole	1					
Flush pull	1					
Square spindle (suitable for sash thicknesses up to 80 mm)	1					

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1

# DIRIGENT series – interior turn handle without PC hole

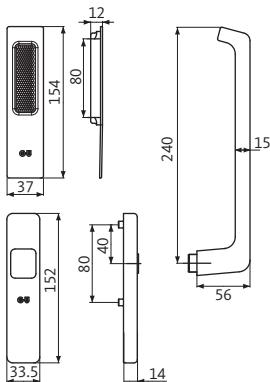
with extended exterior flush pull

**GU**



## Product information

- High-quality aluminium turn handle, interior, without PC hole
- Extended exterior flush pull
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber and PVC Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thickness up to 68 mm, fixed square spindle
- Suitable for sash thickness from 69 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 70 mm.



# DIRIGENT series – interior turn handle without PC hole

with extended exterior flush pull



## Turn handles

### Versions/order numbers

Designation	Detent	Sash thickness	Material	Version	lockable	PU	Surface	Order no.
DIRIGENT interior turn handle set, without PC hole	180°	up to 68 mm [1]	Aluminium	with lugs	no	1	Silver/EV 1 look	K-13265-00-0-1
						1	Dark brown [3]	K-13265-00-0-5
						1	White, RAL 9016	K-13265-00-0-7
	180°	up to 110 mm [2]	Aluminium	with lugs	no	1	Silver/EV 1 look	K-13785-00-0-1
						1	Dark brown [3]	K-13785-00-0-5
						1	White, RAL 9016	K-13785-00-0-7
	90°	up to 68 mm [1]	Aluminium	with lugs	no	1	Silver/EV 1 look	K-13262-00-0-1
						1	Dark brown [3]	K-13262-00-0-5
						1	White, RAL 9016	K-13262-00-0-7
	90°	up to 110 mm [2]	Aluminium	with lugs	no	1	Silver/EV 1 look	K-13787-00-0-1
						1	Dark brown [3]	K-13787-00-0-5
						1	White, RAL 9016	K-13787-00-0-7

[1] Square spindle, fixed

[2] Square spindle, adjustable

[3] Similar to RAL 8022

Contents (with sash thickness up to 68 mm)	Piece
DIRIGENT interior handle without PC hole	1
Flush pull, extended	1
Square spindle (suitable for sash thicknesses up to 68 mm)	1

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

Contents (with sash thickness up to 110 mm)	Piece
DIRIGENT interior handle without PC hole	1
Flush pull, extended	1
Square spindle (suitable for sash thicknesses from 69 to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

# DIRIGENT series – interior turn handle without PC hole

with extended exterior flush pull



## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1

# DIRIGENT series – interior/exterior handle set with PC hole

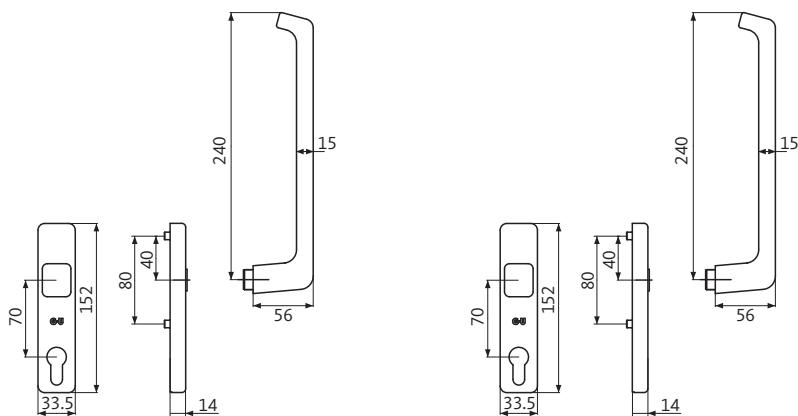
GU

GU



## Product information

- High-quality aluminium, stainless steel or brass turn handles, interior and exterior, with PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 70 mm.
- Note: We recommend the use of a buffer – see pages 302



# DIRIGENT series – interior/exterior handle set with PC hole

GU

## Aluminium turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
Set: DIRIGENT turn handle on both sides, with PC hole	180°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-13267-00-0-1
					1	Dark brown [1]	K-13267-00-0-5
					1	White, RAL 9016	K-13267-00-0-7
	90°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-13264-00-0-1
					1	Dark brown [1]	K-13264-00-0-5
					1	White, RAL 9016	K-13264-00-0-7
<b>For aluminium profiles only</b>							
Set: DIRIGENT turn handle on both sides, with PC hole	180°	Aluminium	without lugs	yes	1	Silver/EV 1 look	6-24615-96-0-1
					1	Dark brown [1]	6-24615-96-0-5
					1	White, RAL 9016	6-24615-96-0-7
	90°	Aluminium	without lugs	yes	1	Silver/EV 1 look	6-24616-96-0-1
					1	Dark brown [1]	6-24616-96-0-5
					1	White, RAL 9016	6-24616-96-0-7

[1] Similar to RAL 8022

## Stainless-steel turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
Set: DIRIGENT turn handle on both sides, with PC hole	180°	Stainless steel	with lugs	yes	1	K-16795-00-0-8
	90°	Stainless steel	with lugs	yes	1	K-16861-00-0-8

## Brass turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
Set: DIRIGENT turn handle on both sides, with PC hole	180°	Polished brass	with lugs	yes	1	6-26731-00-0-B
	90°	Polished brass	with lugs	yes	1	6-26732-00-0-B

## Contents: set, DIRIGENT turn handle: aluminium, stainless steel or brass

Contents (with version with lugs)	Piece
DIRIGENT interior/exterior handle set, with PC hole	1
Fixing screws M6 x 100 mm	2
Square spindle (suitable for sash thicknesses up to 92 mm)	1

Contents (with version without lugs)	Piece
DIRIGENT interior/exterior handle set, with PC hole	1
Square spindle (suitable for sash thicknesses up to 92 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately in the event of deviating sash thicknesses.

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

# DIRIGENT series – interior/exterior handle set with PC hole



## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	145	contained in the turn handle set
	68		
	78		
	88		
	90		
	92		
	110	170	9-27377-18-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	70	9-13274-70-0-1
	68	80	9-13274-80-0-1
	78	90	9-13274-90-0-1
	88	100	9-13274-97-R-3 *
	90	100	9-13274-97-R-3 *
	92	100	9-13274-97-R-3 *
	110	125	9-13274-96-R-1

\* Order only with version without lugs

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## DIRIGENT series – interior turn handle with PC hole

without flush pull

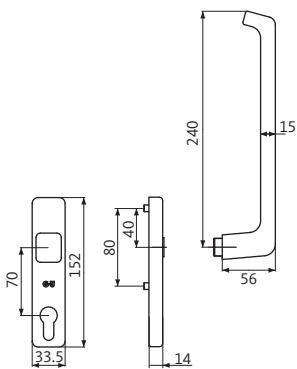
**GU**



### Product information



- High-quality aluminium, stainless steel or brass turn handle, interior, with PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 70 mm.



# DIRIGENT series – interior turn handle with PC hole

without flush pull



## Aluminium turn handles

Versions/order numbers							
Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
<b>For aluminium profiles only</b>							
DIRIGENT interior turn handle, with PC hole	180°	Aluminium	with lugs	yes	1	Silver/EV 1 look	6-24607-00-0-1
					1	Dark brown [1]	6-24607-00-0-5
					1	White, RAL 9016	6-24607-00-0-7
	180°	Aluminium	without lugs	yes	1	Silver/EV 1 look	6-24609-00-0-1
					1	Dark brown [1]	6-24609-00-0-5
					1	White, RAL 9016	6-24609-00-0-7
	90°	Aluminium	without lugs	yes	1	Silver/EV 1 look	6-24614-00-0-1
					1	Dark brown [1]	6-24614-00-0-5
					1	White, RAL 9016	6-24614-00-0-7

[1] Similar to RAL 8022

## Stainless-steel turn handles

Versions/order numbers						
Designation	Detent	Material	Version	lockable	PU	Order no.
DIRIGENT interior turn handle, with PC hole	180°	Stainless steel	with lugs	yes	1	K-16805-00-0-8
	90°	Stainless steel	with lugs	yes	1	K-16865-00-0-8

## Brass turn handles

Versions/order numbers						
Designation	Detent	Material	Version	lockable	PU	Order no.
DIRIGENT interior turn handle, with PC hole	180°	Polished brass	with lugs	yes	1	6-26728-02-0-B
	90°	Polished brass	with lugs	yes	1	6-26729-02-0-B

## Contents: set, DIRIGENT turn handle: aluminium, stainless steel or brass

Contents	Piece
DIRIGENT interior turn handle, with PC hole	1
Square spindle (suitable for sash thicknesses up to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

# DIRIGENT series – interior turn handle with PC hole

without flush pull



## Square spindle

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

# DIRIGENT series – interior turn handle without PC hole

without flush pull

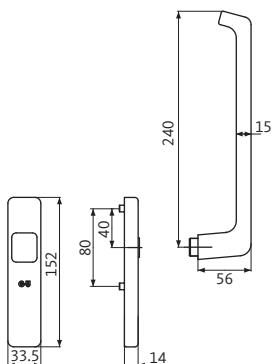
GU

GU



## Product information

- High-quality aluminium, stainless steel or brass turn handle, interior, without PC hole
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 70 mm.



# DIRIGENT series – interior turn handle without PC hole

## without flush pull

GU



### Aluminium turn handles

#### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
DIRIGENT interior turn handle, without PC hole	180°	Aluminium	with lugs	no	1	Silver/EV 1 look	6-24606-00-0-1 [2]
					1	Dark brown [1]	6-24606-00-0-5 [2]
					1	White, RAL 9016	6-24606-00-0-7 [2]
	180°	Aluminium	without lugs	no	1	Silver/EV 1 look	6-24608-00-0-1
					1	Dark brown [1]	6-24608-00-0-5
					1	White, RAL 9016	6-24608-00-0-7
	90°	Aluminium	without lugs	no	1	Silver/EV 1 look	6-24613-00-0-1
					1	Dark brown [1]	6-24613-00-0-5
					1	White, RAL 9016	6-24613-00-0-7

[1] Similar to RAL 8022 [2] Sash thickness up to 78 mm, square spindle not adjustable

### Stainless-steel turn handles

#### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
DIRIGENT interior turn handle, without PC hole	180°	Stainless steel	with lugs	no	1	K-16804-00-0-8

### Brass turn handles

#### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Order no.
DIRIGENT interior turn handle, without PC hole	180°	Polished brass	with lugs	no	1	6-26728-01-0-B
	90°	Polished brass	with lugs		1	6-26729-01-0-B

### Contents: set, DIRIGENT turn handle: aluminium, stainless steel or brass

Contents	Piece
DIRIGENT interior handle without PC hole	1
Square spindle (suitable for sash thicknesses up to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

**Square spindle**

<b>Versions/order numbers</b>			
<b>Designation</b>	<b>Sash thickness [mm]</b>	<b>Length [mm]</b>	<b>Order no.</b>
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	9-24377-50-0-1
	90	90	9-24377-50-0-1
	92	90	9-24377-50-0-1
	110	100	9-24377-60-0-1

**Fixing screws**

<b>Versions/order numbers</b>			
<b>Designation</b>	<b>Sash thickness [mm]</b>	<b>Length [mm]</b>	<b>Order no.</b>
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

**Drilling jigs**

<b>Versions/order numbers</b>		
<b>Drilling jigs</b>	<b>PU</b>	<b>Order no.</b>
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	6-27272-01-0-1

## DIRIGENT series – interior turn handle with PC hole

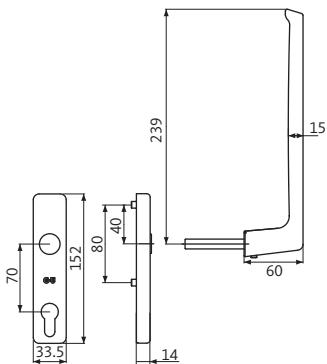
without flush pull, removable

GU



### Product information

- High-quality aluminium turn handle, interior, with PC hole
- Removable, suitable for customer's own coating
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 74 mm.



## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
Set: DIRIGENT interior turn handle, with PC hole	180°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-17397-00-0-1
					1	Dark brown [1]	K-17397-00-0-5
					1	White, RAL 9016	K-17397-00-0-7
	180°	Aluminium	without lugs	yes	1	Silver/EV 1 look	K-17399-00-0-1
					1	Dark brown [1]	K-17399-00-0-5
					1	White, RAL 9016	K-17399-00-0-7

[1] Similar to RAL 8022

Contents	Piece
DIRIGENT interior turn handle, with PC hole	1
Square spindle (suitable for sash thicknesses up to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	
	90	90	
	92	90	
	110	100	

## Fixing screws

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

## Drilling jigs

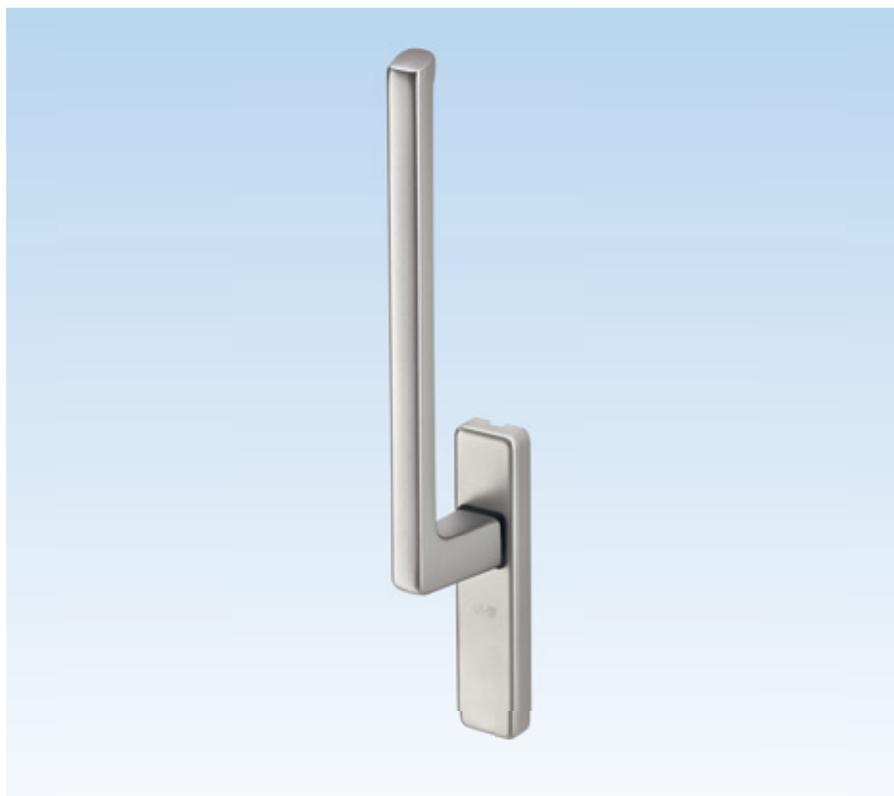
### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## DIRIGENT series – interior turn handle without PC hole

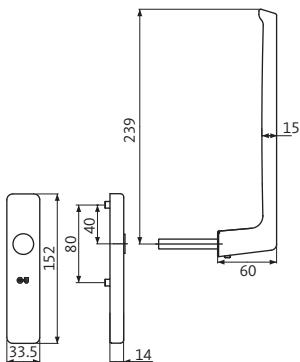
without flush pull, removable

**GU**



### Product information

- High-quality aluminium turn handle, interior
- Removable, suitable for customer's own coating
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 74 mm.



# DIRIGENT series – interior turn handle without PC hole

without flush pull, removable



## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
DIRIGENT interior turn handle set, without PC hole	180°	Aluminium	with lugs	no	1	Silver/EV 1 look	K-17396-00-0-1
					1	Dark brown [1]	K-17396-00-0-5
					1	White, RAL 9016	K-17396-00-0-7
	180°	Aluminium	without lugs	no	1	Silver/EV 1 look	K-17398-00-0-1
					1	Dark brown [1]	K-17398-00-0-5
					1	White, RAL 9016	K-17398-00-0-7

[1] Similar to RAL 8022

Contents	Piece
DIRIGENT interior handle without PC hole	1
Square spindle (suitable for sash thicknesses up to 80 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	80	contained in the turn handle set
	68		
	78		
	88	90	
	90	90	
	92	90	
	110	100	

## Fixing screws

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	60	9-13274-60-0-1
	68	70	9-13274-70-0-1
	78	80	9-13274-80-0-1
	88	90	9-13274-90-0-1
	90	95	9-13274-95-R-1
	92	100	9-13274-97-R-3
	110	110	9-13274-98-R-3

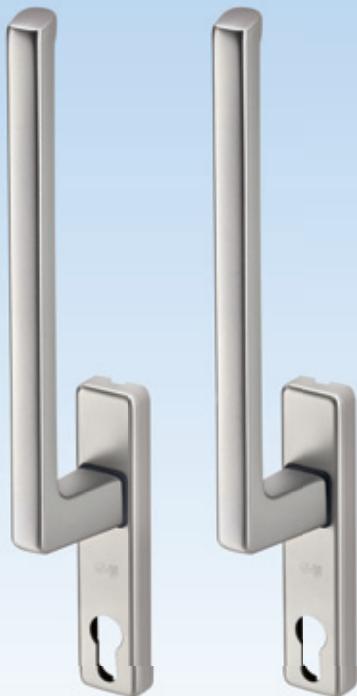
## Drilling jigs

### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

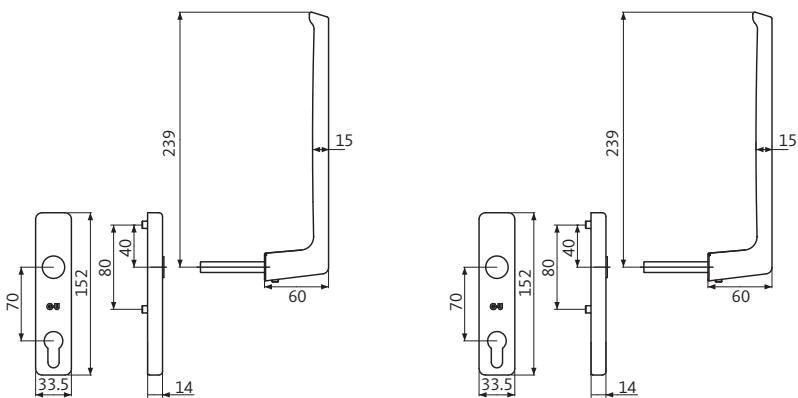
## DIRIGENT series – interior/exterior handle set with PC hole removable

GU



### Product information

- High-quality aluminium turn handles, internal and external, with PC hole
- Removable, suitable for customer's own coating
- With 10 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- Suitable for sash thicknesses up to 110 mm, adjustable square spindle
- Handle length 240 mm  
Handle height 74 mm.
- Note: We recommend the use of a buffer – see pages 302



# DIRIGENT series – interior/exterior handle set with PC hole removable

**GU**

## Turn handles

Versions/order numbers							
Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
Set: DIRIGENT turn handle on both sides, with PC hole	180°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-17400-00-0-1
					1	Dark brown [1]	K-17400-00-0-5
					1	White, RAL 9016	K-17400-00-0-7

[1] Similar to RAL 8022

Contents	Piece
DIRIGENT interior/exterior handle set, with PC hole	1
Square spindle (suitable for sash thicknesses up to 92 mm)	1

**Note about square spindle:** If the sash thicknesses differ, the square spindle must be ordered separately.

**Note about fixing screws:** The fixing screws must be ordered separately depending on the sash thickness.

## Square spindle

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 10 mm	56	145	contained in the turn handle set
	68		
	78		
	88		
	90		
	92		
	110	170	9-27377-18-0-1

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	70	9-13274-70-0-1
	68	80	9-13274-80-0-1
	78	90	9-13274-90-0-1
	88	100	9-13274-97-R-3
	90	100	9-13274-97-R-3
	92	100	9-13274-97-R-3
	110	125	9-13274-96-R-1

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## DIRIGENT series – interior HL turn handle, without PC hole

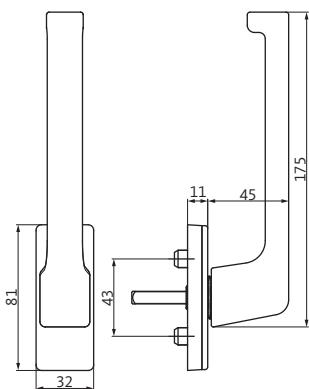
for light Lift&Slide elements

GU



### Product information

- High-quality aluminium turn handle, interior, without PC hole
- With 7 mm square spindle and 43 mm distance between screw centres
- The square spindle can be enlarged to 10 mm (requires handle adapter set K-16554-01-0-1)
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 120 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16
- For sash thicknesses up to 56 mm
- Handle length 160 mm  
Handle height 58 mm.



**DIRIGENT series –**  
**interior HL turn handle without PC hole**  
 for light Lift&Slide elements

**GU**

**Versions/order numbers – turn handle**

Designation	Material	Version	lockable	PU	Surface	Order no.
DIRIGENT HL interior turn handle, without PC hole	Aluminium	with lugs	no	1	Silver/EV 1 look	6-31809-37-0-1
				1	Dark brown [1]	6-31809-37-0-5
				1	White, RAL 9016	6-31809-37-0-7

[1] Similar to RAL 8022

**Versions/order numbers – required accessories**

Designation	Contents	PU	Order no.
Handle adapter set	1 x fixing plate 43 1 x reduction sleeve 10/7 2 x countersunk screw M5 x 22 mm 2 x press-in screw socket	1	K-16554-01-0-1

# DIRIGENT series – interior/exterior handle set with PC hole

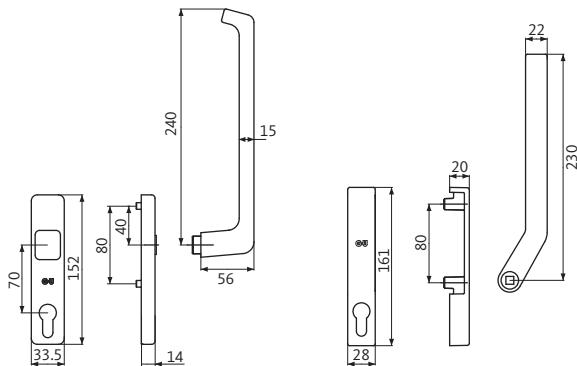
cranked flat on the outside – exterior height 20 mm

**GU**



## Product information

- High-quality aluminium turn handles, internal and external, with PC hole
- With 8 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 17
- Suitable for sash thickness up to 110 mm, square spindle can be cropped to necessary sash thickness
- Interior handle
  - Handle length 240 mm
  - Handle height 70 mm
- Exterior handle
  - Handle length 230 mm
  - Handle height 15 mm
  - Rosette height 20 mm
- Note: We recommend the use of a buffer – see pages 302



# DIRIGENT series – interior/exterior handle set with PC hole

flat on the outside – exterior height 20 mm

**GU**

## Turn handles

Versions/order numbers							
Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
Set: DIRIGENT turn handle on both sides, with PC hole	90°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-13167-00-0-1
					1	Dark brown [1]	K-13167-00-0-5
					1	White, RAL 9016	K-13167-00-0-7

[1] Similar to RAL 8022

Contents	Piece
DIRIGENT interior/exterior handle set, with PC hole	1
Fixing screws M6 x 85 mm (suitable for sash thicknesses up to 68 mm)	2
Square spindle (suitable for all sash thicknesses)	1

### Note:

The square spindle must be shortened to the right size depending on the sash thickness.

### Note:

The fixing screws must be ordered separately in the event of deviating sash thicknesses.

## Fixing screws

Versions/order numbers			
Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	85	contained in the turn handle set
	68	80	
	78	90	9-13274-90-0-1
	88	100	9-13274-97-R-3
	90	100	9-13274-97-R-3
	92	100	9-13274-97-R-3
	110	125	9-13274-96-R-1



## Reduction insert

for mounting 8 mm square spindles in 10 mm square spindle mounts

### Versions/order numbers

Designation	PU	Order no.
Reduction insert	1	9-43986-00-0-1

## Drilling jigs

Versions/order numbers		
Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

# DIRIGENT series – interior/exterior handle set with PC hole

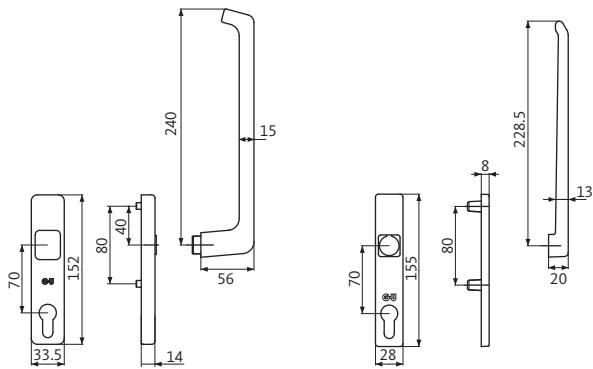
flat on the outside – exterior height 30 mm

**GU**



## Product information

- High-quality aluminium turn handles, internal and external, with PC hole
- With 8 mm square spindle and 80 mm distance between screw centres
- Suitable for use with all customary timber, PVC or aluminium Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 17
- Suitable for sash thickness up to 110 mm, square spindle can be cropped to necessary sash thickness
- Interior handle
  - Handle length 240 mm
  - Handle height 70 mm
- Exterior handle
  - Handle length 228.5 mm
  - Handle height 30 mm
- Note: We recommend the use of a buffer
  - see pages 302



# DIRIGENT series – interior/exterior handle set with PC hole

flat on the outside – exterior height 30 mm

**GU**

## Turn handles

### Versions/order numbers

Designation	Detent	Material	Version	lockable	PU	Surface	Order no.
Set: DIRIGENT turn handle on both sides, with PC hole	90°	Aluminium	with lugs	yes	1	Silver/EV 1 look	K-12919-00-0-1
					1	Dark brown [1]	K-12919-00-0-5
					1	White, RAL 9016	K-12919-00-0-7

[1] Similar to RAL 8022

Contents	Piece
DIRIGENT interior/exterior handle set, with PC hole	1
Fixing screws M6 x 75 mm (suitable for sash thicknesses up to 56 mm)	2
Square spindle (suitable for sash thicknesses up to 92 mm)	1

### Note:

The square spindle must be shortened to the right size depending on the sash thickness.

Order separately for sash thickness > 92 mm.

### Note:

The fixing screws must be ordered separately in the event of deviating sash thicknesses.

## Square spindle

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
Square spindle 8 mm	up to 88	90	contained in the turn handle set
	> 88	135	
	> 88	150	

## Fixing screws

### Versions/order numbers

Designation	Sash thickness [mm]	Length [mm]	Order no.
M6 fixing screws	56	75	contained in the turn handle set
	68	80	9-13274-80-0-1
	78	90	9-13274-90-0-1
	88	100	9-13274-97-R-3
	90	100	9-13274-97-R-3
	92	100	9-13274-97-R-3
	110	125	9-13274-96-R-1

## Reduction insert

for mounting 8 mm square spindles in 10 mm square spindle mounts



### Versions/order numbers

Designation	PU	Order no.
Reduction insert	1	9-43986-00-0-1

## Drilling jigs

### Versions/order numbers

Drilling jigs	PU	Order no.
Drilling jig for the installation of turn handles – timber profiles	1	6-35524-00-0-1
Drilling jig for the installation of turn handles – PVC profiles	1	9-27272-00-0-1
Drilling jig for the installation of turn handles – aluminium profiles with Euro-groove	1	9-27272-01-0-1

## Accessories

### Flush pull, round

GU

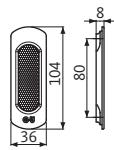


#### Product information



- High-quality flush pull made of stainless steel
- Distance between screw centres 80 mm
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16

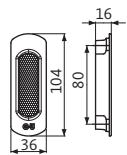
## Flush pull, round



**Flush pull, stainless steel**

Designation	GU logo	Overall depth	Version	PU	Surface	Order no.
Flush pull, round	yes	6 mm	without lugs	1	Silver/EV 1 look	9-46686-00-0-1
				1	Dark brown [1]	9-46686-00-0-5
				1	White, RAL 9016	9-46686-00-0-7
				1	Stainless steel	9-46686-00-0-8
Flush pull, round	yes	6 + 3 mm	with lugs (3 mm)	1	Stainless steel	9-46686-01-0-8

[1] Similar to RAL 8022



**Flush pull, stainless steel**

Designation	GU logo	Overall depth	Version	PU	Surface	Order no.
Flush pull, round	yes	14 mm	without lugs	1	Stainless steel	9-39035-01-0-8
Flush pull, round	no	14 mm	without lugs	1	Stainless steel	9-39035-02-0-8

## Accessories

### Flush pull, square

GU

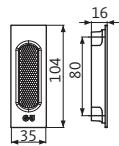


#### Product information



- High-quality flush pull made of stainless steel, aluminium or brass
- Distance between screw centres 80 mm
- Suitable for use with all customary Lift&Slide profile systems for up to 400 kg sash weight
- Durability test with 25,000 cycles in compliance with DIN 13126 part 16

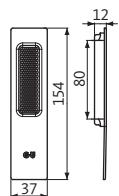
## Flush pull, square



### Flush pull, stainless steel

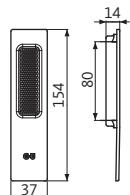
Designation	GU logo	Overall depth	Version	PU	Surface	Order no.
Flush pull, square	yes	14 mm	without lugs	1	Stainless steel	9-42539-01-0-8
Flush pull, square	no	14 mm	without lugs	1	Stainless steel	9-42539-02-0-8
				1	Silver/EV 1 look	9-29622-00-0-1
Flush pull Se, square	no	12 mm	without lugs	1	Dark brown [1]	9-29622-00-0-5
				1	White, RAL 9016	9-29622-00-0-7
				1	Stainless steel	9-29622-00-0-8

[1] Similar to RAL 8022



### Flush pull, stainless steel

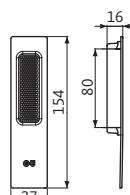
Designation	GU logo	Overall depth	Version	PU	Surface	Order no.
Flush pull, square	yes	10 mm	without lugs	1	Stainless steel	9-42737-01-0-8
Flush pull, square	no	10 mm	without lugs	1	Stainless steel	9-42737-00-0-8



### Flush pull, aluminium

Designation	GU logo	Overall depth	Version	PU	Surface	Order no.
Flush pull MS, square	yes	10 mm	without lugs	1	Silver/EV 1 look	9-29992-02-0-1
				1	Dark brown [1]	9-29992-02-0-5
				1	White, RAL 9016	9-29992-02-0-7
Flush pull MS, square	yes	11 mm	without lugs	1	Silver/EV 1 look	9-29992-01-0-1
				1	Dark brown [1]	9-29992-01-0-5
				1	White, RAL 9016	9-29992-01-0-7
Flush pull, square	yes	16 mm	without lugs	1	Silver/EV 1 look	9-29526-00-0-1
				1	Dark brown [1]	9-29526-00-0-5
				1	White, RAL 9016	9-29526-00-0-7

[1] Similar to RAL 8022



### Flush pull, brass

Designation	GU logo	Overall depth	Version	PU	Surface	Order no.
Flush pull MS, square	yes	14 mm	without lugs	1	Brass	9-34957-00-0-B

# Accessories

## Service handle, cover rosette

GU



### DIRIGENT service handle

#### Versions/order numbers

Designation	PU	Surface	Order no.
DIRIGENT service handle Handle length 240 mm	1	Silver/EV 1 look	6-24619-00-0-1
	1	Dark brown [1]	6-24619-00-0-5
	1	White, RAL 9016	6-24619-00-0-7

[1] Similar to RAL 8022



### Interior cover rosette

without PC hole

#### Versions/order numbers

Designation	PU	Surface	Order no.
Interior cover rosette without PC hole	1	Silver/EV 1 look	6-23243-01-0-1
	1	Dark brown [1]	6-23243-01-0-5
	1	White, RAL 9016	6-23243-01-0-7

[1] Similar to RAL 8022



### Interior cover rosette

with PC hole

#### Versions/order numbers

Designation	PU	Surface	Order no.
Interior cover rosette with PC hole	1	Silver/EV 1 look	6-23243-02-0-1
	1	Dark brown [1]	6-23243-02-0-5
	1	White, RAL 9016	6-23243-02-0-7

[1] Similar to RAL 8022



### Exterior cover rosette

#### Versions/order numbers

Designation	PU	Surface	Order no.
Exterior cover rosette	1	Silver/EV 1 look	9-29527-00-0-1
	1	Dark brown [1]	9-29527-00-0-5
	1	White, RAL 9016	9-29527-00-0-7

[1] Similar to RAL 8022



### Set of cover discs

#### Versions/order numbers

Designation	PU	Surface	Order no.
Set of cover discs	1	Silver/EV 1 look	K-17481-00-0-1
	1	Dark brown [1]	K-17841-00-0-5
	1	black	K-17841-00-0-6
	1	White, RAL 9016	K-17841-00-0-7
	1	Stainless steel appearance	K-17841-00-0-8

#### Contents

1 x cover disc

1 x bushing

1 x countersunk sheet metal screw 3.9 x 13 mm

[1] Similar to RAL 8022

# Accessories

## Gasket plates

GU



### Gasket plate for exterior and interior turn handle

The optional gasket plate which is universally applicable for all handle models provides increased tightness, especially in Blower Door Tests. The profile cylinder insert is removable so the gasket ensures optimal sealing for all handle variants.

#### Versions/order numbers

Designation	PU	Surface	Order no.
Gasket plate for turn handle	1	black	9-47210-01-0-6



### Gasket plate for flush pull

The optional gasket plate which is universally applicable for all flush pulls provides increased tightness, especially in Blower Door Tests. The adaptable gasket plate ensures optimal sealing for all flush pull models.

#### Versions/order numbers

Designation	PU	Surface	Order no.
Gasket plate for flush pull	1	black	9-47211-01-0-6



### Square spindles

The length of the optional square spindles must be determined depending on the spindle hole depth of the lock case. Wrongly dimensioned or short square spindles are not permissible as they cause damage to the window gear and the turn handle.

#### Versions/order numbers

Designation	Sash thickness [mm]	Interior turn handle / exterior flush pull / exterior cover rosette		Interior/exterior handle set	
		Length [mm]	Order no.	Length [mm]	Order no.
Square spindle 10 mm	56	80	9-24377-40-0-1	145	9-24377-96-0-1
	68	80	9-24377-40-0-1	145	9-24377-96-0-1
	78	80	9-24377-40-0-1	145	9-24377-96-0-1
	88	90	9-24377-50-0-1	145	9-24377-96-0-1
	90	90	9-24377-50-0-1	145	9-24377-96-0-1
	92	90	9-24377-50-0-1	145	9-24377-96-0-1
	110	100	9-24377-60-0-1	170	9-24377-18-0-1



### Reduction insert

for mounting 8 mm square spindles in 10 mm square spindle mounts

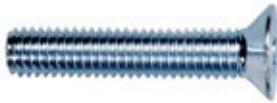
#### Versions/order numbers

Designation	PU	Order no.
Reduction insert	1	9-43986-00-0-1

# Accessories

## Fixing screws

GU



### Fixing screws

The approved Lift&Slide handles must be screwed into the mounting thread of the gear lock case using 2 metric screws M6 x length. Make sure that the full length of the threads is used. Fastening the handles on the sash using screws for timber constructions is not permitted.

#### Versions/order numbers

Designation	Sash thickness [mm]	Interior turn handle / exterior flush pull / exterior cover rosette		Interior/exterior handle set	
		Length [mm]	Order no.	Length [mm]	Order no.
Fixing screw M6	56	60	9-13274-60-0-1	70	9-13274-70-0-1
	68	70	9-13274-70-0-1	80	9-13274-80-0-1
	78	80	9-13274-80-0-1	90	9-13274-90-0-1
	88	100	9-13274-90-0-1	100	9-13274-97-R-3
	90	100	9-13274-95-R-3	100	9-13274-97-R-3
	92	100	9-13274-97-R-3	100	9-13274-97-R-3
	110	110	9-13274-98-R-3	125	9-13274-96-R-1

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