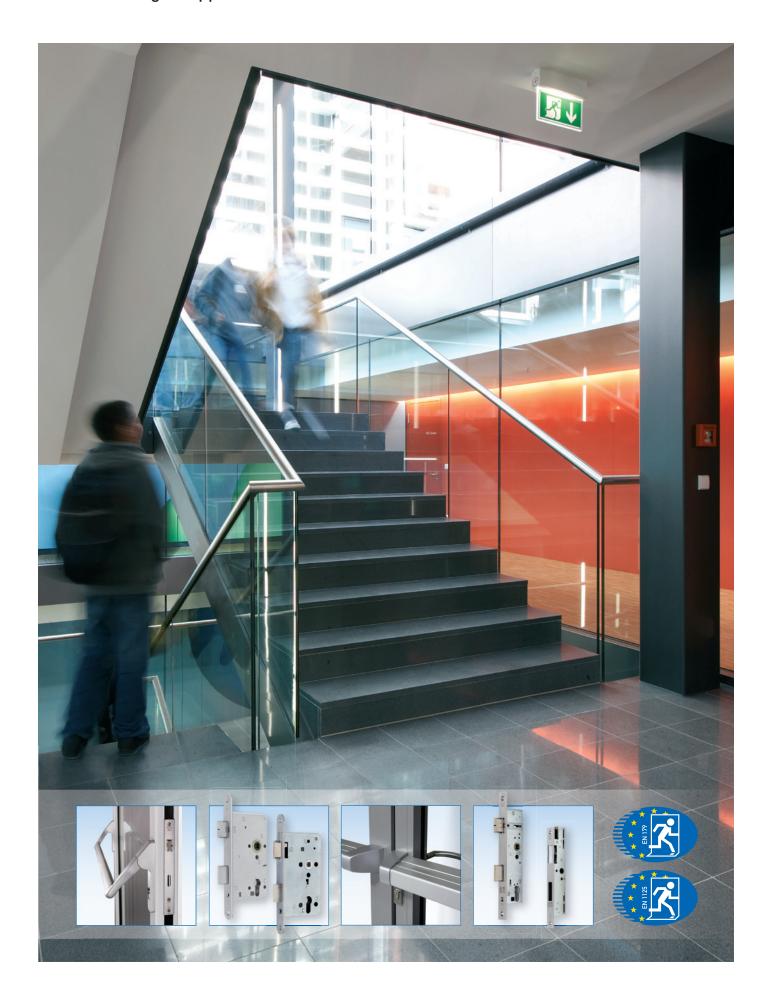




Lock and fitting as approved unit



Panic and emergency exit devices for Europe





The paramount aim of the Gretsch-Unitas Group of Companies is to meet various technical requirements and interests. By intelligently coordinating safety-relevant products with each other, the Group succeeds in fulfilling all kinds of demands in the field of window and door fittings.

In doing so, not only the current standards are fulfilled, but more than that trends and benchmarks set with future-oriented innovations. Thanks to the counselling and planning service provided by us at an early stage, cost-efficient door functions can be considered already in the planning phase of a building. With solutions offered by the Gretsch-Unitas Group you'll never take any risks!

Created in 1997, the European Standards EN 179 and EN 1125 have been revised in April 2008 in order to incorporate clarification of their definitions, safety requirements and test procedures, in particular for emergency exit (EN 179), respectively panic exit (EN 1125) devices intended for use on double leaf doors.

The revised documents incorporate extension of the classification to avoid misuse of the products, extension of the limits of door mass and dimensions as well as extension of the field of door

application to cover products already available on the market which were not covered by the 1997 edition of these European Standards.

While the protection of human life and hazard prevention in buildings are a top priority, the type of building is not important nor the question which persons must escape from the building in the event of whatever hazard.



No matter if the young, elderly, infirm or patients, visitors, customers are concerned — everybody must have the possibility to escape from a building safe and uninjured.

When escaping from a building in a hazardous situation, one passes through various types of doors and door units which must comply with the requirement of protecting human life, however, in "normal", everyday life have completely other functions.

Apart from the necessity to escape from buildings, architects, planners, building owners and users naturally have other concerns:

- What about appearance and design?
- What about protection against burglary?
- What about barrier freedom and convenient operation?
- What about smoke and fire protection?
- What about security installations such as access control and monitoring systems?
- What about functioning in the event of power failure?



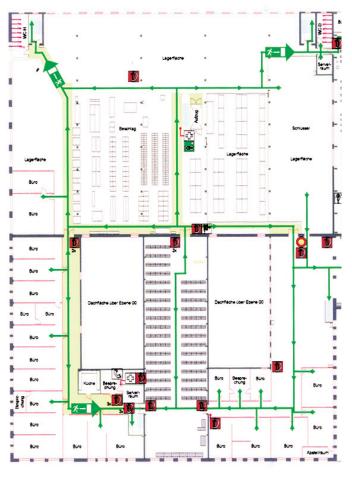
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Panic and emergency exit devices were never clearly regulated by product standards. Only "... easy opening, ... from the interior, ... at the full width" was required in these codes. However, the important term of "easy opening" was never described with reproducible values. There was also no clear regulation as to how door fittings must be designed, so that people would not injure themselves on them. The interplay of various individual components was never subjected to a real-life vandalism test. The customer was generally left alone with problems in the assembly or in the interplay of products by various manufacturers. Most of the specifications came from the area of fire protection and always required the appropriate verification of suitability for fire-rated doors.





New uniform standards for the equipment of escape doors are now valid in Europe. These standards describe in detailed test specifications how "easy opening" can be measured. Moreover, they contain directives specifying the design and function of fittings. An essential innovation: Lock, fitting and assembly accessories are tested together and may only be used as a tested unit. Thanks to practical tests such as vandalism tests and to single products being made compatible with each other, the assembly of fittings is simplified and their long-range function clearly improved. All new products must be approved accordingly since 04/01/2003 and be marked with a classification code along with the CE-marking. The classification code indicates the range of approved applications and makes it easy to verify the proper product combination during a later building inspection.

The protection of people in buildings does not only play an important role in the event of a fire, but also in panic situations that might occur every day.

Different locking systems for different fields of application





Two types of escape doors – two new EU standards. Escape door systems within the context of the new standards are divided into emergency exit and panic exit devices.

This means that escape doors must be designed as panic exit devices or as emergency exit devices depending on the respective application.

Emergency exit devices according to EN 179 are designed for buildings or building sections which are not open to the public, i.e. where users are familiar with the function of the escape door.

They are suitable for all applications where public traffic may be excluded. Secondary exits or doors in building sections frequented by authorised persons only must also be equipped according to EN 179.

Application examples:

- Private housing areas
- Class rooms in schools
- Administrative buildings of industrial concerns not accessible to the public
- Areas of event buildings not accessible to the public
- Areas in airports, banks, shopping centres, etc. not accessible to the public.

As operating elements this standard specifies lever handles or push pads.

Recommended use:

Exit devices to EN 179 should be applied in areas where public use may generally be excluded.



Panic exit device to EN 1125



Emergency exit device to EN 179

Panic exit devices according to EN 1125 are used in public buildings or building sections where visitors **not** familiar with the function of the escape doors must be able to operate these without instructions in the event of an emergency.

This specifically includes:

- ✓ Hospitals
- Escape routes in schools
- Public administration
- Events buildings
- Airports
- Shopping centres, etc.

As operating elements this standard specifies push bars or touch bars reaching over the total width (or at least 60%) of the door leaf.

Recommended use:

If a later use of the building is not clearly defined at the beginning of planning, panic exit devices to EN 1125 should preferably be installed.

This also applies to a modified use at a future time. Otherwise, considerable retrofitting operations may become necessary.





Main requirements for escape doors:

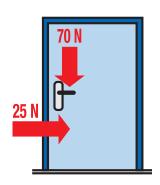
- → Doors in rescue routes must permit opening at all times from the inside easily and at the full width.
- → Esacpe doors must open the escape route within 1 second with a hand movement without the use of a key (EN 1125 / EN 179). Escape doors must open outwards.
- → Rescue routes must not be blocked.

- → Door fittings must be designed in a way that people's clothing will not catch on them.
- → The open end of the lever must be designed in a way that it points to the surface of the door leaf, in order to prevent injuries (EN 179).

→ Easy opening of escape routes through emergency exit devices according to EN 179

These are tested at a maximum opening force of 70 Newton applied vertically onto the lever handle. With all locking elements released, the door must open in the direction of the escape route.

Little friction of the lever bearing and the smooth interplay of the locking elements and the appropriate keepers in the door frame are important here. Moreover, in order to prove their everyday suitability, these locking systems are subjected to a vandalism test and an operational durability test with a permanent load of 25 Newton.

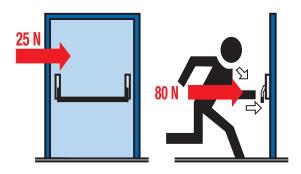


→ Easy opening of escape routes through panic exit devices according to EN 1125

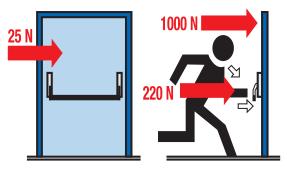
The exit device is checked for suitability in two different tests. The first test is carried out without an initial load being applied to the door leaf; the door must open automatically in the direction of the escape route at a maximum operating force of 80 Newton. In the second test carried out with an initial load of 1000 Newton applied to the door leaf, the operating force must not exceed 220 Newton to open the door. These values also apply to double leaf door units and to exit devices which have additional locking elements such as vertical rods or multipoint locks. As with EN 179, the locking systems are subjected to a vandalism test and an operational durability test with a permanent load of 25 Newton to prove their everyday suitability.

Note:

Only the new standards EN 179 and EN 1125 provide a measurable reference for the "easy opening" of escape doors.



Test 1: Door leaf without initial load



Test 2: Door leaf with an initial load of 1000 N





→ Escape routes must open in one movement

This means that on double leaf door units only full panic systems are permitted providing the opening of both door leaves, even when only the handle on the inactive leaf is operated. With the use of G.U-BKS locks, this requirement can be fulfilled in any location thanks to a choice of various panic functions for single and double leaf door assemblies. Further extensive safety requirements may be met with additional electromechanic options allowing for the integration of intelligent escape door control and access control systems. Mechanics and electronics are complemented here in one!

→ Escape doors must open outwards

This requirement is already known from various codes. It is incorporated in the new standards which specify locking systems for outward opening escape doors exclusively. Escape door functions "opening inward" known for special cases, cannot be permitted according to EN 179 and EN 1125. With the use of push bars and touch bars to EN 1125, this would not be logical after all.



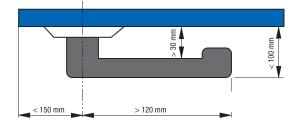
→ Rescue routes must not be blocked

Any kind of impediment in the floor area – except for thresholds up to a certain height – are not permitted. Human life is saved on freely accessible escape routes only.

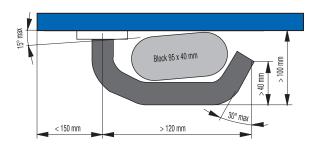
→ Fittings must be designed to prevent injury to people

With these standards, design variants are regulated for the first time. The adequacy of particular fittings can be easily verified by means of dimensioned graphics.

Graphic 1 shows the current requirements for lever handles according to EN 179. Here, precise dimensions of the lever end inclined toward the door leaf are missing among other specifications. Since the design possibilities according to this graphic are limited to U-shaped models, designs according to graphic 2 are planned for the next updated issue of the standard. Current licenses, however, already take this amendment into account; otherwise architects and building contractors would not have the creative scope they desire, and the manufacturers of fittings could offer only a very limited range of lever handles.



Graphic 1



Graphic 2





Locks and fittings must be provided with test identification codes (DO numbers) and with the required CE-marking.

This allows a locking system to be identified as approved during assembly and fincal acceptance.

We are aware that our product range is very extensive due to the numerous situations in buildings. For this reason, we have developed logos with which we additionally mark our products. For the sake of clarity, partners of G.U-BKS also use these logos, thus enabling you to combine solutions from different catalogues to meet your individual requirements.

The first purpose of CE marking is to simplify the movement of goods within the EC. Another purpose is to indicate the approved product use by the classification code on the CE label.

Our locks are visibly marked on the forends with the label explained below

Many of them are approved for use in locking systems according to EN 179 and EN 1125. Their approved use is recognisable by the classification code on the label.

The field of application is to be taken from the respective product description.

CE Marking

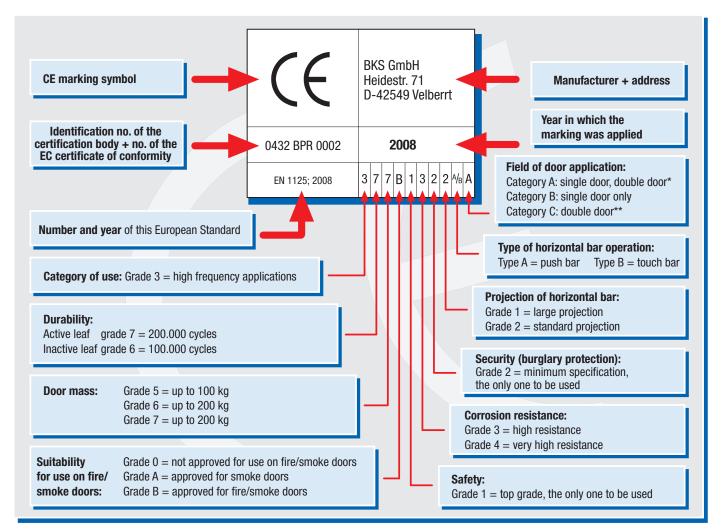
BKS locking systems have the following certification numbers:

→ DIN EN 179 = 0432 BPR 0003

→ DIN EN 1125 = 0432 BPR 0002











You can recognise BKS fittings by the test labels attached to the bottom side of the mounting plates.

The appropriate BKS locks are marked visibly on the forend.

The table on the right shows which combinations are approved. By means of the test labels it is possible to identify appropriate locks and fittings in the event of separate delivery.

	BKS locks	BKS fittings
Timber and steel doors	DO 5.0 DO 5.1 DO 9.2	D0 20.10.1
Narrow stile doors	DO 9.1 DO 9.6	D0 20.10.2
SECURY	DO 5.1 DO 9.1	DO 20.10.1

Note:

Approval and application as emergency exit device to EN 179 or panic exit device to EN 1125 are only possible in conjunction with the appropriate EC conformity certificate.

Fittings approved to EN 179

Various lever models are tested and approved for the use on contract doors.

The illustrated models only represent a part of our programme. We are continuously developing new products that correspond to the requirements of our customers.

Upon special request, we can also design individual models for your contract work which will conform to the requirements of EN 179.

Fittings approved to EN 1125

Only operational elements spanning the door width are approved as fittings to 1125. Push bars or touch bars are such operational elements.

The illustrated operational elements provide an overview of our programme.

Thanks to a variety of finishes, it is possible to create a harmonious appearance with regard to the fittings on other doors in the building.

Special fitting solutions for slim profiles to avoid material deformation and injury are also contained in our programme.









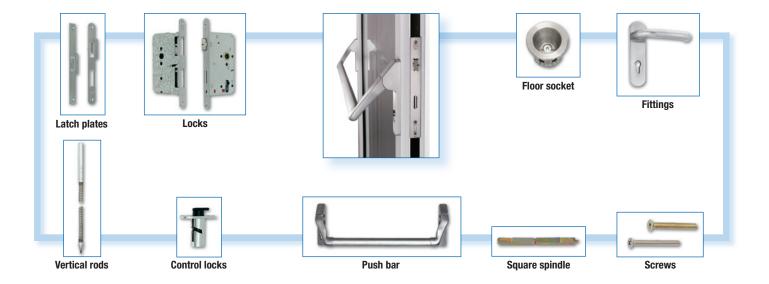
Locking systems as unit

Practical experiences in the combination of products by various manufacturers have shown that not all combinations function smoothly without an examination. For this reason, one of the essential features of the new requirements was defined:

Lock, fittings and accessories may only be tested, marked and assembled as a unit.

The user as well as the planner thereby receive a guarantee that the system was tested and approved for compatibility.

Extensive durability and manipulation tests guarantee a safe interaction of all components.



Approval and certification

Exit devices according to EN 179 and EN 1125 must only be tested by notarized institutes (authorized in Europe). Here, we are working together with the Material Testing Authority of North Rhine-Westphalia (MPA/NRW) in Dortmund.

The additional outside supervision of the products is also performed by MPA and is documented by the Ü-marking on the products.

Standardised operation throughout Europe

The operation of escape doors will be standardised in Europe in the future. The protection of human life is placed above the protection of property.

Both standards are generally implemented and valid in the EC. In many countries the use of push rods or touch bars similar to EN 1125 has been common practice for many years already.

Shipment according to EN 179 and EN 1125

The components of approved exit devices may be tendered separately. Depending on the sales method, separate deliveries directly to the location are also possible. The responsibility for the correct composition and assembly is then given to the assembly company. In this event, the door manufacturer and possibly participating dealers are subject to reporting requirements.

Sales partners of the G.U Group are under the obligation to point out the adherence to these specifications to their customers. These partners are authorized to use the illustrated label.



Door situation: Exit devices as complete units





■ Single leaf timber and steel door with lever handle set

Lock series 23, series 21 for timber and steel doors (automatically locking locks), multipoint door lock SECURY series 21







Contract fittings and fire protection fittings to EN 179, push rods or touch bars to EN 1125







Overhead door closers for fire and smoke doors OTS 430, 530, 730







Practical experiences in the combination of products by various manufacturers have shown that not all combinations function smoothly without an examination. For this reason one of the essential features of the new requirements was defined: Lock, fittings and accessories may only be tested, marked and assembled as a unit in future. The user as well as the planner thereby receive a guarantee that the system was tested and approved for compatibility. Extensive durability and manipulation tests guarantee a safe interaction of all components.

■ Double leaf narrow stile door with push bars

Lock series 18, series 19 for narrow stile doors (automatically locking locks), multipoint door lock SECURY series 19, panic shoot bolt







Contract and fire protection fittings to EN 179, push rods or touch bars to EN 1125









Overhead door closer OTS 730 SRI (top), door leaf coordinator with carrier bar (bottom)





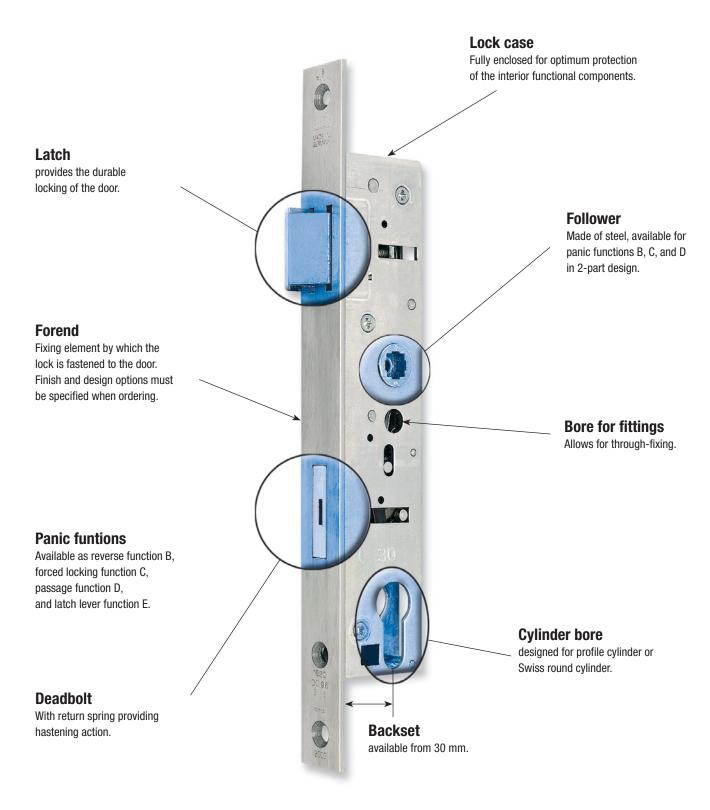






Panic lock series 18 for narrow stile doors units

This lock range for narrow stile doors has been well-established for many years. With numerous variants providing a multitude of applications, the complete series meets all requirements placed on a functional emergency or panic exit device.







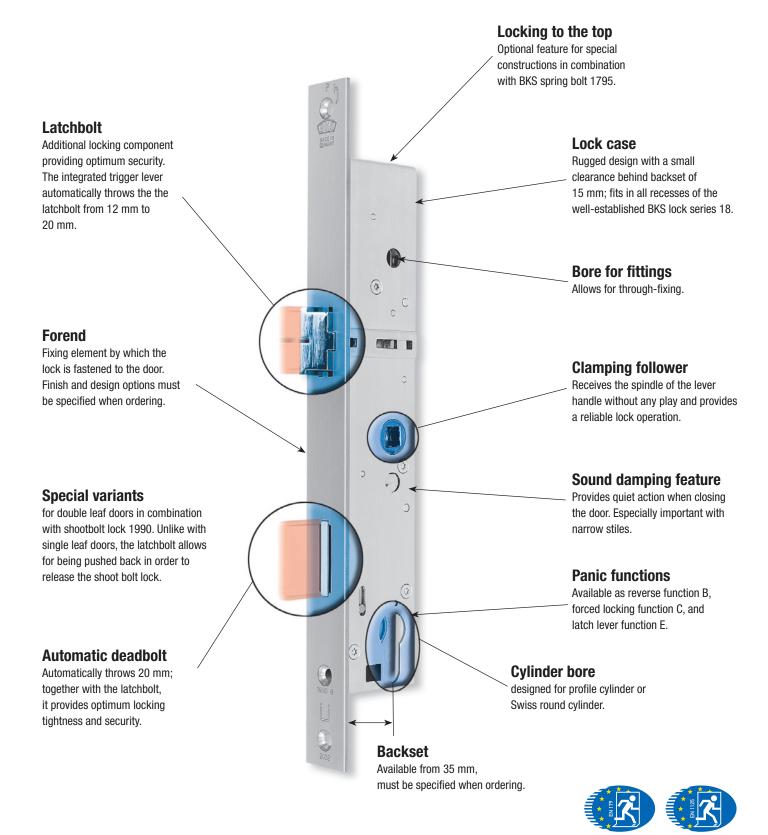




Automatically locking panic lock series 19 for narrow stile door units and electro-clutch lock series 19

Series 19 is the result of our consistent development of innovative products. Based on series 21, it is designed for narrow stile doors with small backsets. Performance features such as automatic locking, burglary protection,

suitability for single and double leaf fire rated doors and escape doors according to the new European standards provide numerous possibilities in the development and fitting of narrow stile door units.







Panic lock series 23 for timber and steel doors

The well-established lock range for timber and steel doors allowing for versatile applications. A complete programme with a multitude of variants in well-proven BKS quality. Suitable for single and double leaf contract doors.

Lock case Fully enclosed for optimum protection of the interior functional components. Latch Keeps the door closed reliably. **Follower** Made of steel in 2-part design. **Forend** Fixing element by which the lock is fastened to the door. Finish and design options must be specified when ordering. **Bore for fittings** Allows for through-fixing. **Panic functions** Available as reverse function B. forced locking function C, passage function D, and latch lever function E. (3 **Cylinder bore** designed for profile cylinder or Swiss round cylinder. **Deadbolt** With return spring **Backset** providing hastening action. Available in 65, 80

and 100 mm.





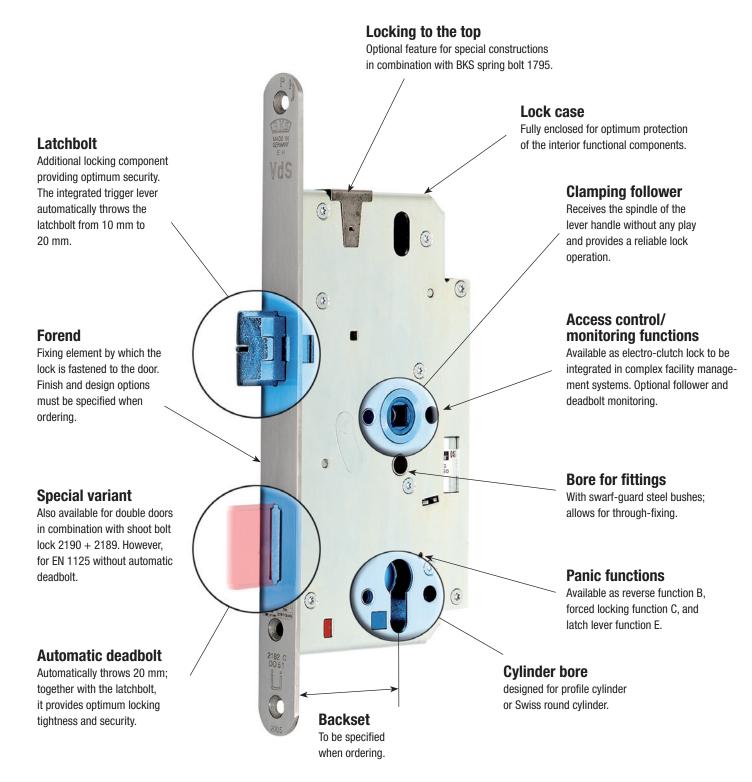




Automatically locking panic lock series 21 for narrow stile door units and electro-clutch lock series 21

This series gives proof of the competency of the G.U Group. Suitable for single and double leaf doors, the locks offer complex functional features meeting the requirements of innovative contract work.

Performance features such as burglary protection, suitability for fire doors and escape doors, possible integration in electric systems, e.g., intercoms or access control systems, show the scope of our skills.





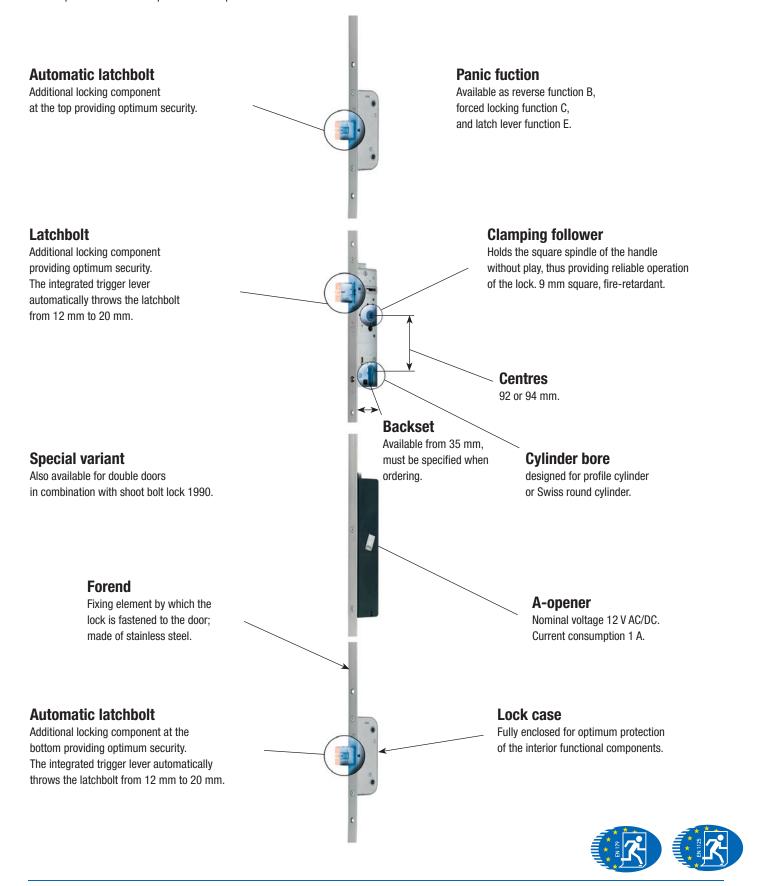






Panic locks for narrow stile door units SECURY series 19

High-quality locking with automatic multipoint technology. Up-to-date features such as burglary protection, suitability for fire protection and escape doors, and the optional motor-driven type G.U-SECURY Automatic with A-opener evidence the spectrum of our performance.

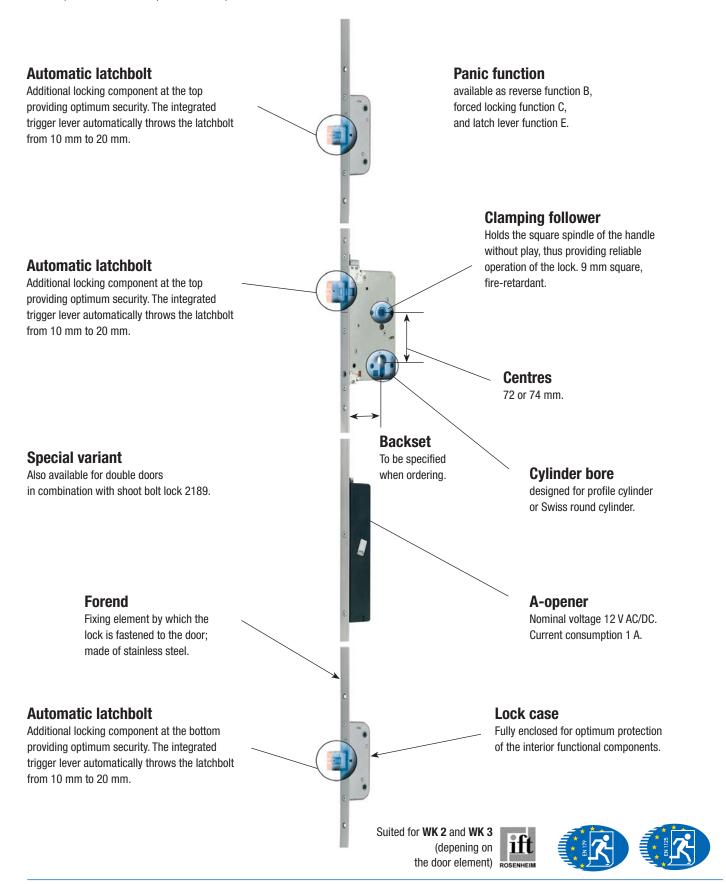






Panic locks for timber and steel door units SECURY series 21

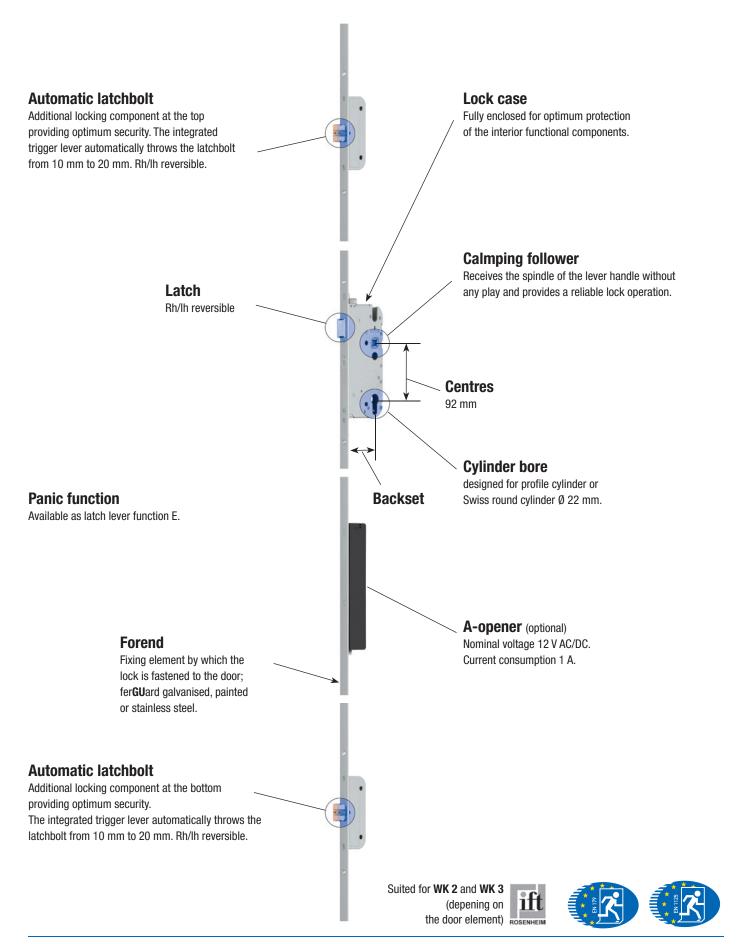
High-quality locking with automatic multipoint technology. Up-to-date features such as burglary protection, suitability for fire protection and escape doors, and the optional motor-driven type G.U-SECURY Automatic with A-opener evidence the spectrum of our performance.







G.U-SECURY Automatic Panic Function E

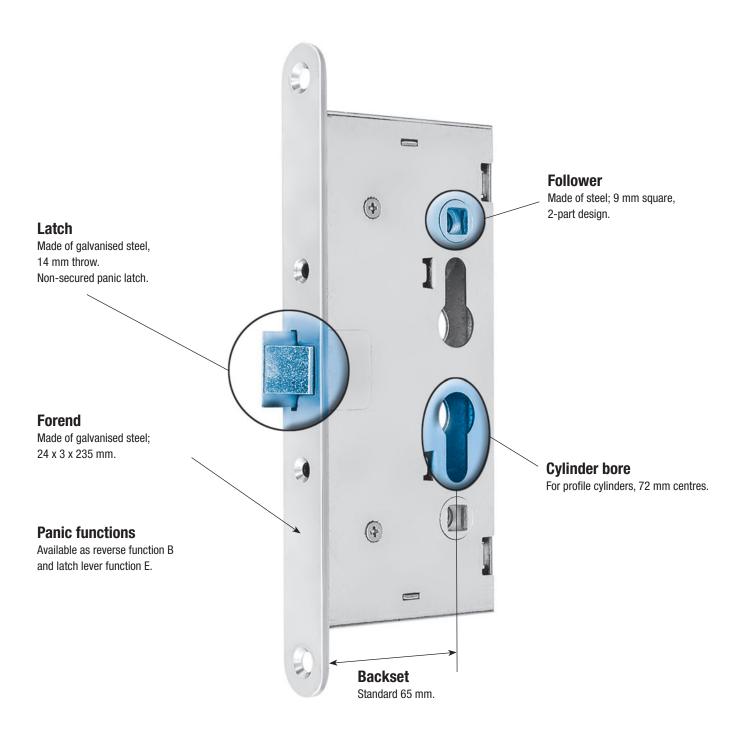






Panic lock 1125

The designation of this lock type speaks for itself. Used with the new push bars, the non-handed lock is approved to the new European standard. Lock and fitting are available as package allowing for cost-efficient entry into escape door solutions to EN 1125.











Fittings / Type of set	Timber and steel doors	Narrow stile doors
Lever set		
Entrance set	00	
Security fittings ES 3		
Turn handle		
Dummy plate		
above: Half set, interior		
below: Half set, exterior	0	
Knob backplate, outside	9	
above: Lever handle w/o CB, int.	<u></u>	9-
below: Lever handle w/o CB, ext.	5	\rightarrow
Rosette with CB	0	0

Product information

- The lever handles come with 8 or 9 mm square spindle (EN 179 only allows 9 mm), fixed backplate with friction washer
- Offset cranked door knob types are non-handed.
- Clip-on backplates
- Security fittings as lever or entrance set to DIN 18257 - ES 3
- The cylinder cover allows for a cylinder projection of 12 to 19 mm.
- The turn handle variant is provided with a detent mechanism to ensure its precisely vertical position.
- All material variants approved for use on fire and smoke doors to DIN 18273 and EN 1906, and for use on escape doors to EN 179 and EN 1125.
- Mounting accessories are included in the delivery (for 37-42 mm thick contract doors and 52-67 mm thick fire doors).
- For escape doors with divided follower, the lock position must be specified along with the door thickness.
- All door fitting sets are available with the handle models illustrated below.

All door fitting sets are available with the handle models illustrated below.

Timber and steel dorrs		Narrow stile doors
9		
RONDO	BELCANTO-P	RR-RONDO
OFFICE	EMMAUS	RR-BELCANTO-P







Push bar





heavy doors of up to 300 kg

■ Touch bar





- BKS touch bar for use on fire and smoke protection doors to EN 1634 and escape doors to EN 1125
- With integral gear, 9 mm square, and hold-up spring
- For use on active and inactive door leaves
- Suitable for doors of up to 300 kg

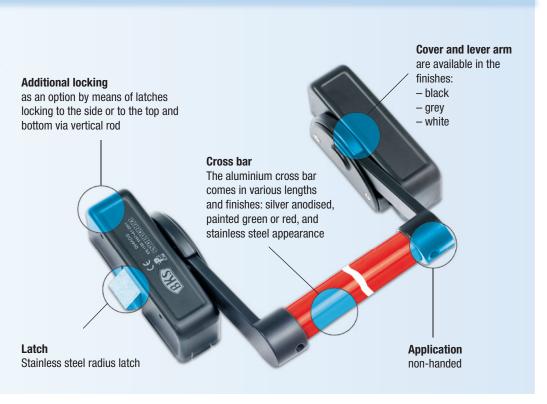






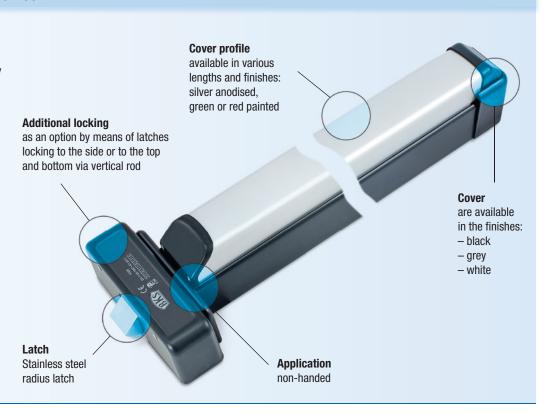
Push bar with integral lock

The push bar with integral lock combines proven mechanics with convenient assembly and operation. Available in various materials and designs, it allows for a multitude of applications. Technically up to date and corresponding to the new standard EN 1125, the push bar is suitable for panic exit devices and fire doors.



■ Touch bar with integral lock

The touch bar with integral lock combines proven mechanics with convenient assembly and operation. Available in various materials and designs, it allows for a multitude of applications. Technically up to date and corresponding to the new standard EN 1125, the touch bar is suitable for panic exit devices and fire doors.







The correct planning and ordering of locks and fittings for emergency exit doors (EN 179) and panic exit doors (EN 1125) requires specialised knowledge. Locks for active and inactive door leaves, fittings and their fixings, spindles to join various operating elements, door closers, and electronic monitoring systems must be assorted professionally. In doing so, it is also necessary that standards as well as building supervision test reports and approvals should be taken into account.

In addition to the clearly structured catalogues for fire and panic doors, the G.U-BKS Group now also offers the software "Hardware Manager" for PCs and notebooks.





In addition to the clearly structured catalogues for fire and panic doors, the G.U-BKS Group now also offers the software "Hardware Manager" for PCs and notebooks.

- PC with 800 MHz frequency or higher
- Operating systems and main storage:
 - Windows 2000 SR 2, 128 MB RAM, preferably 256 MB
 - Windows XP Professional Edition, 256 MB RAM, preferably 512 MB
 - Windows XP Home Edition, 256 MB RAM, preferably 512 MB
- Free hard disc space approx. 200 MB
- Screen resolution 1024 x 768 pixels, high colour (16 bit) or higher
- ISDN card, high-performance modem or DSL connection
- CD disc drive

The programme chronologically queries the requirements of the particular exit system and proposes appropriate solutions and variants; its product search results in market-driven system solutions complying with the requirements to EN 179 and EN 1125, and with building supervision approvals. The BKS Hardware Manager for fire protection and panic doors supports day-to-day business, enables reliable planning and helps to avoid wrong deliveries.









The constantly high quality standard of all operational sequences at BKS is guaranteed by the application of a Quality Assurance System to EN ISO 9001.

This is the highest quality standard in Europe, not only for production but also for other company divisions such as development, order processing or after-sales service etc. BKS applies this standard to all product areas (locking cylinders, door locks, fittings, electronics and door closers).

The products of the extensive G.U-BKS range are designed to bear high stress loads and to be compatible among each other.

A high level of quality, reliability and durability of door units can only be guaranteed with a system of compatible products which G.U-BKS is capable to offer thanks to the unequalled diversity of the Group's product range.

Product quality and compliance with various standards and regulations are documented in test results and approvals, copies of which are available on request.

The certificate holder always has the responsibility of testing and marking emergency exit and panic exit devices to EN 179,

respectively EN 1125. It is important that all components such as lock, fittings, push bars and accessories should be tested and certified as a unit. You will find our current EU certificates on our website www.g-u.com.

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