



Intelligent door management

Planning, Products, Service




Hardware meets electronics

A door is a door is a door – not at all! While Gertrude Stein said famously that a rose is a rose is a rose, this by no means applies to doors. The doors in a property are highly individual! And hardly any other product in the wide world of architecture is currently experiencing such a reevaluation in terms of its significance. **Hardly any interface in the logistics of a building needs to be networked as much as a door.**

A door is a piece of movable wall. It regulates access into and within a property. So what could be more obvious than integrating this access into the building management system? Flows of visitors are checked and regulated – and this in all situations, no matter whether in normal operation or in emergency plans.

But first there are plenty of elements that have proved worthwhile. In terms of the hardware on the door, mechanical and standardized quality has gained acceptance. The mechanics play an impressive role in ensuring that we can safely leave buildings through escape doors under difficult conditions when necessary – even in blackout or emergency situations. ECO Schulte is a pioneer of this doctrine, which came as a consequence of some terrible



A decorative background on the left side of the page. It features a dark blue vertical bar on the far left. To its right, there is a pattern of light blue and white lines resembling a circuit board or a network diagram, overlaid on a background of binary code (0s and 1s).

fire disasters, where many people were injured or lost their lives due to locked doors. A fire disaster in a hotel made a deep impression on Ernst Schulte. So when he returned from the USA in the 1970s, he already had the vision for his company: **Safely out with ECO!**

And his doctrine applies to this day. Yet ECO Schulte has kept on thinking and integrated its hardware in the buildings of the 21st century. With its Swiss partner, BSW SECURITY, ECO Schulte offers complete solutions today – from the engineering through to the realisation of complex door systematics. This is where hardware meets building management systems. **We call this intelligent door management.**

The requirements for such solutions are complex and the implementation is demanding. That is what we would like to show with this brochure, as well as pointing out that the combination of ECO Schulte and BSW SECURITY will be supervising your project with the highest quality in terms of product, solution and service. **The Aristotelian general equation, that the whole is greater than the sum of the parts, applies today and more than ever in the future.**



A world of doors

The urban world from above; a world full of intelligently managed doors. Hardware, mechatronics and software are combined in the building and fire alarm technology. They grant access or prevent it. They open doors and close them again. They create escape routes and secure fire prevention areas. They identify users through their fingerprints or card systems, they document access and report any unauthorised activity. They protect our belongings – yet make them safely accessible to authorised people. And finally they save lives. **We call this intelligent door management.**

Underground parking escape door with access control in the administrative building of a bank

Escape and fire barrier doors on the floors of a luxury hotel

Emergency exit to stairway in a shopping mall

Emergency exit to the fire escape staircase in a students' hostel



Electrically operated emergency exit
in access to a penthouse roof terrace

Section door with multiple lock points
Access to an administration floor

Electrically operated emergency exit
in an old people's home with short-
term care

Double-leaf escape doors at an
indoor stadium with VIP lounges

Floor with electronic access control:
the showroom of a designer furniture
company

Access control and escape doors:
outpatient day clinic

Garage staircase:
escape door in residential
building



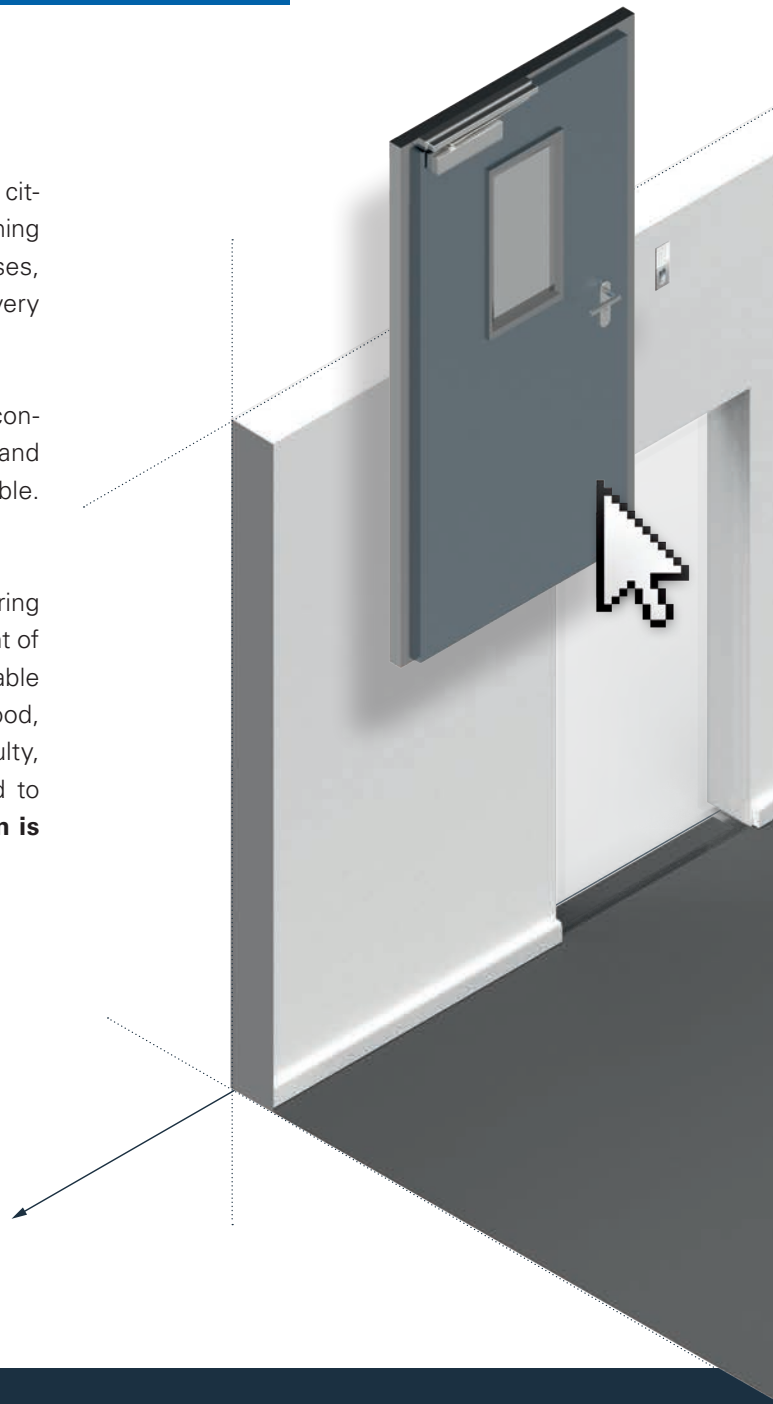


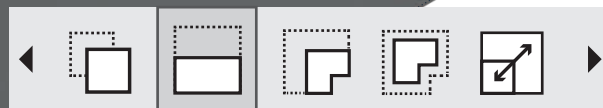
The future of planning – begins today

Architects and planners develop rooms, building and cities from their computers. Ever more complex planning generates ever more complex construction processes, where whole projects have to be broken down into every detail.

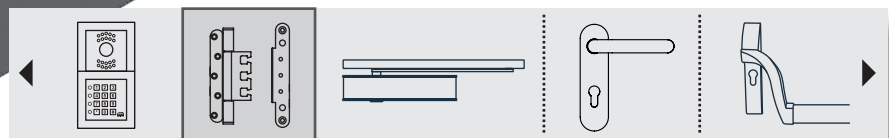
Together with its partners, ECO Schulte makes a contribution towards keeping the world of hardware and software on doors both manageable and predictable. The future of planning is digital – and flexible.

ECO Schulte provides all the support and engineering services necessary for the planning and development of complex door systems. We make planning data available for the range of hardware and mechatronics for wood, steel and section doors. And, in case of any difficulty, our experts in technology and norms are on hand to help. **What best complements good information is always perfect service.**





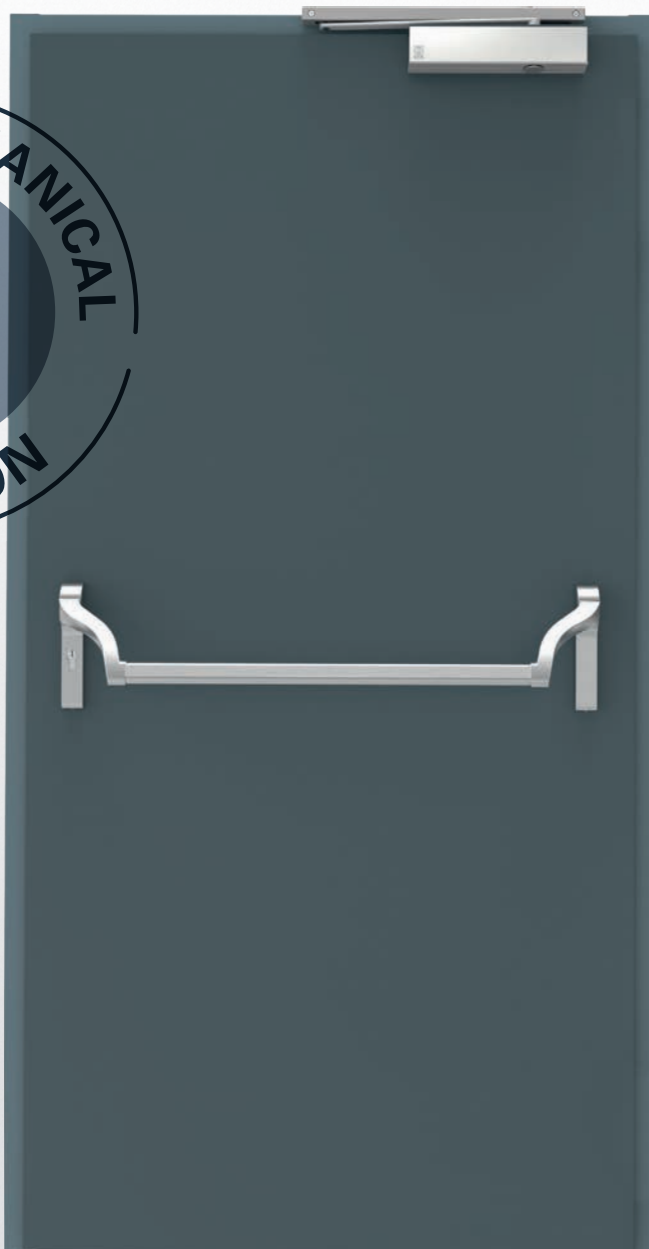
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Pure mechanics

Mechanics or mechatronics? ECO Schulte can do both. This is decided in each individual case. And just what complex functions are hidden behind it cannot be seen on every door. Open here!



Mechatronics





The fascination of mechanics: It works entirely without current

It is a bit like with clocks. As well as the electronic and digital ones, mechanical clock movements are also still available. And not just due to the fascination of mechanical precision, far more because they do not require any current or radio signals to work safely and precisely.

The complexity of a single emergency exit door, or even a double emergency exit door, is a technical marvel, as it is purely mechanically operable and manageable – including any door coordination with double doors. This always has advantages when doors have to operate independently when all other systems fail.

A secure escape route is always required when extreme situations threaten the people within the building. In cases of fire, smoke, earthquakes and toxic hazards, the doors with the green and white emergency exit symbols become absolute life-savers.

Door type

DIN Left door

Safety aspect

Suitable for emergency exits and escape routes

System options

Extendable system

Function description:

Entry

Is achieved through the engaged handle or the key

Exit

Is achieved through the panic bar.

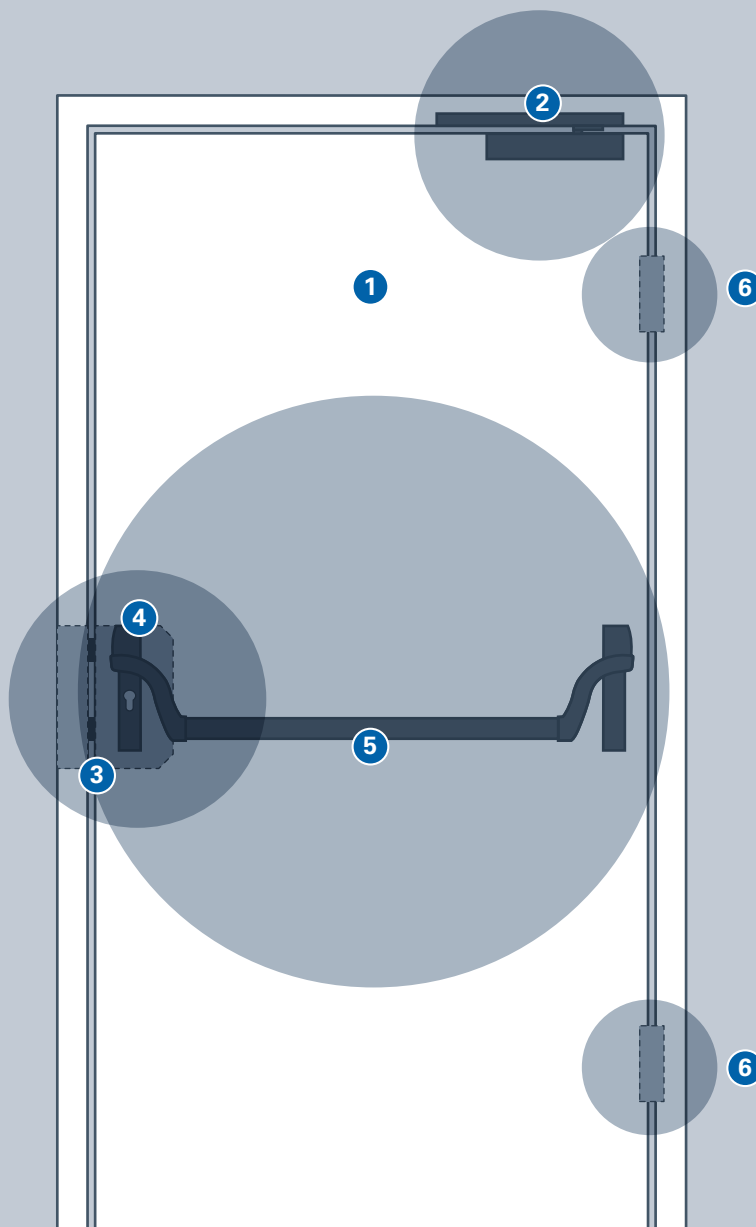
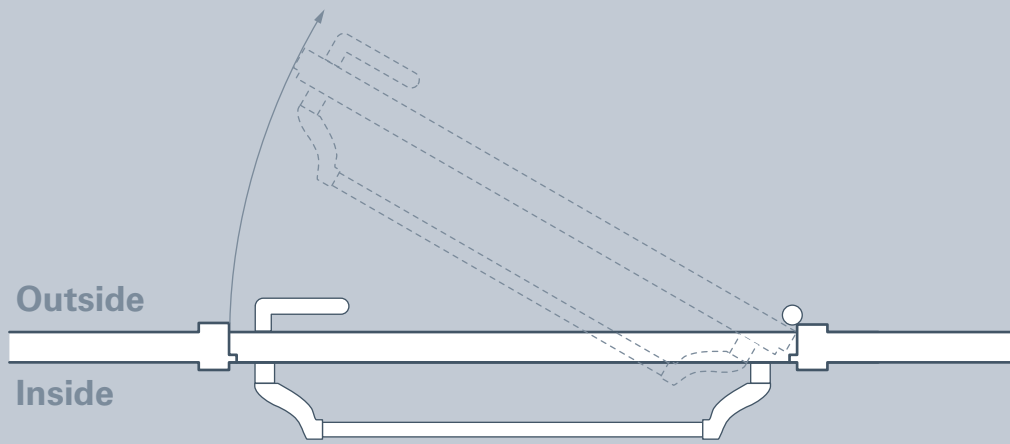
Emergency/Escape route

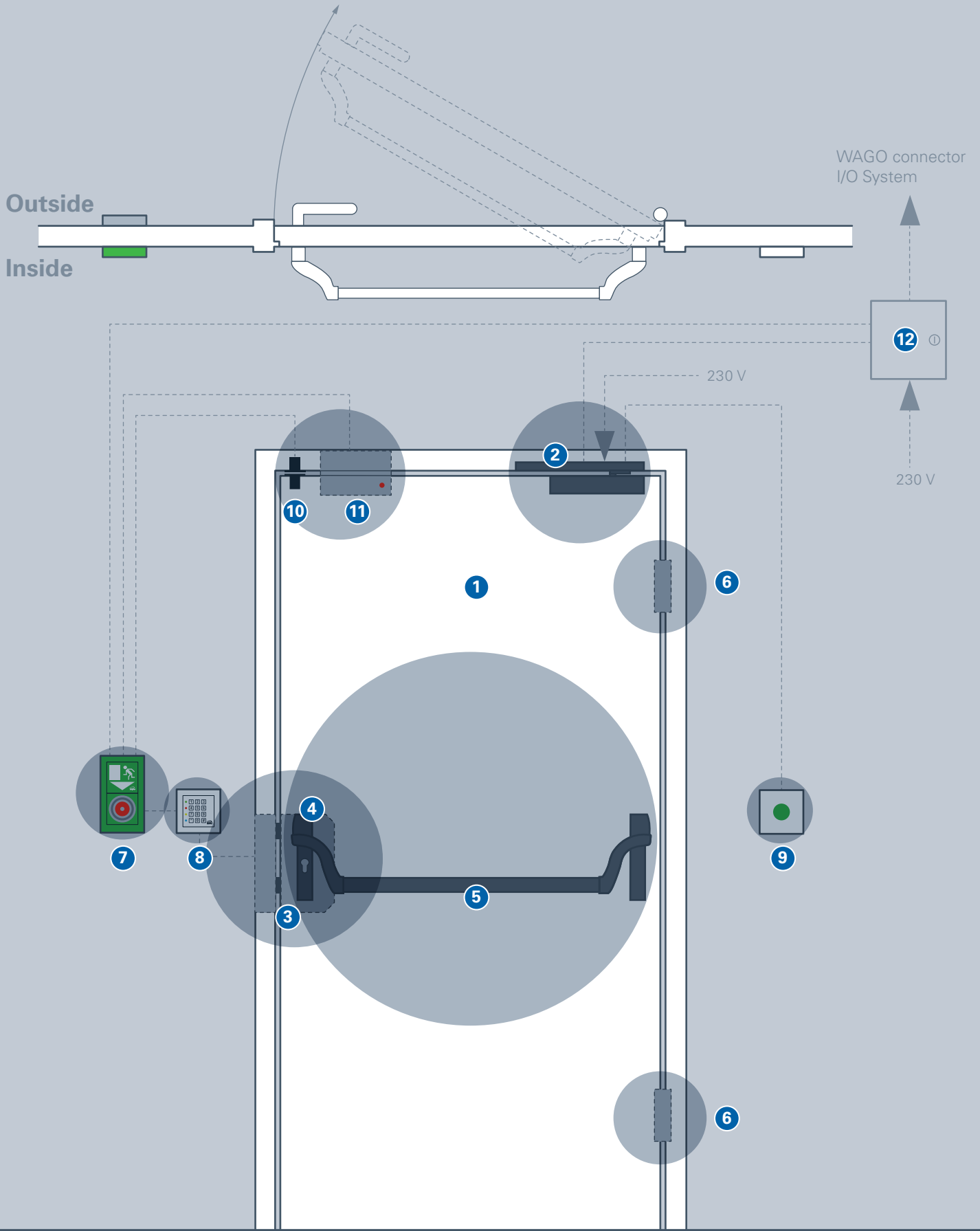
The door can always be opened in emergency by means of the panic bar

- 1 Single door
- 2 Door closer
- 3 Panic lock
- 4 Counter handle
- 5 Panic bar
- 6 Heavy-duty hinges

A purely mechanical solution:
conforms with all norms.







The fascination of mechatronics: Electronics make the mechanics more convenient

Electronic functions make the doors and their use visible and controllable. Entire systems of doors in buildings and building complexes can be managed intelligently this way. There is an unalterable basic law that applies here, and that is that the mechanics create the foundation upon which the electronics are based. Without this foundation the door is not safe. Only by intelligently combining top-quality and standardised mechanics with functional electronics do we get genuine value for operators and users.

Mechatronic doors grant and report entry, can be combined and can interact with smoke and fire alarms, can be integrated into fire protection and security plans and, consequently, become the basis of safety-orientated building management.

Door type

DIN Left door

Safety aspect

Suitable for emergency exits and escape routes

System options

Extendable system

Function description:

Entry

Is achieved through the engaged handle or the key and/or the code keypad

Exit

Is achieved through the panic bar and the terminal cylinder

Emergency/Escape route

The door can always be opened in emergency by means of the panic bar

- | | |
|------------------------------|--------------------|
| ① Single door | ⑩ Magnetic contact |
| ② Door closer | ⑪ Magnetic clamp |
| ③ Panic lock | ⑫ SPS control |
| ④ Counter handle | |
| ⑤ Panic bar | |
| ⑥ Heavy-duty hinges | |
| ⑦ Escape management terminal | |
| ⑧ Code keypad | |
| ⑨ Signal lamp | |

Mechatronic solution:
conforms with all norms.

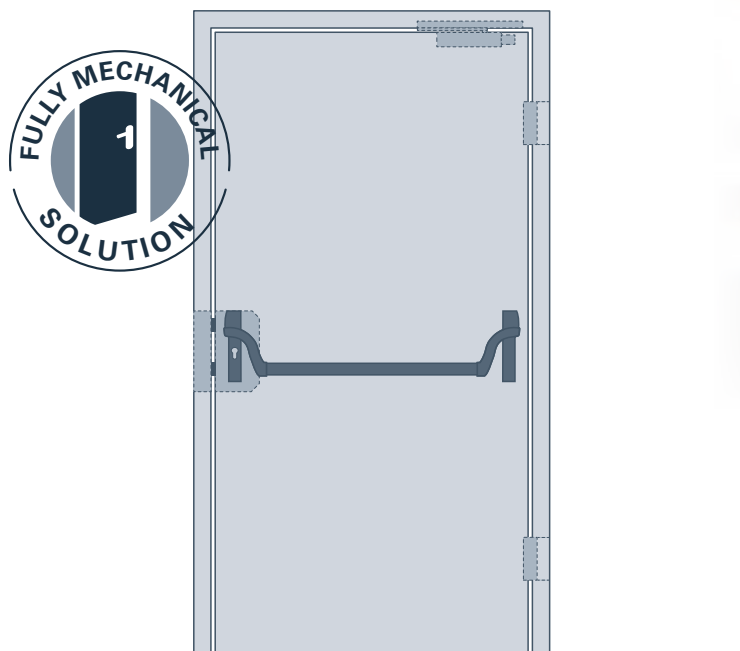




Case study #1

A Shopping Centre

This single, timeless fire escape door cuts off a fire section here in a department store. These doors are little used and must remain closed on a day-to-day basis. This is ensured by means of a mechanical lock and a mechanical door closer. A panic bar in combination with a panic lock (tested according to the EN 1125 standard) enables the locked door to be opened from the inside in case of fire or with any necessary evacuation procedure.







Case study #1

A Shopping Centre

Door type

DIN Left door

Safety aspect

Suitable for emergency exits and escape routes

System options

Extendable system

Function description:

Entry

Is achieved through the engaged handle or the key

Exit

Is achieved through the panic bar

Emergency/Escape route

The door can always be opened in emergency by means of the panic bar

Norms

EN 1125, EN 1154,
EN 1906, EN 1935,
EN 12209



1 Concealed door closer **ITS Multi Genius**



1x

2 Lock **GBS 92**



1x

3 Counter handle **D-110 short plate**



1x

4 Panic bar **EPN 900 IV**



1x

5 Heavy-duty hinges **OBX-18**

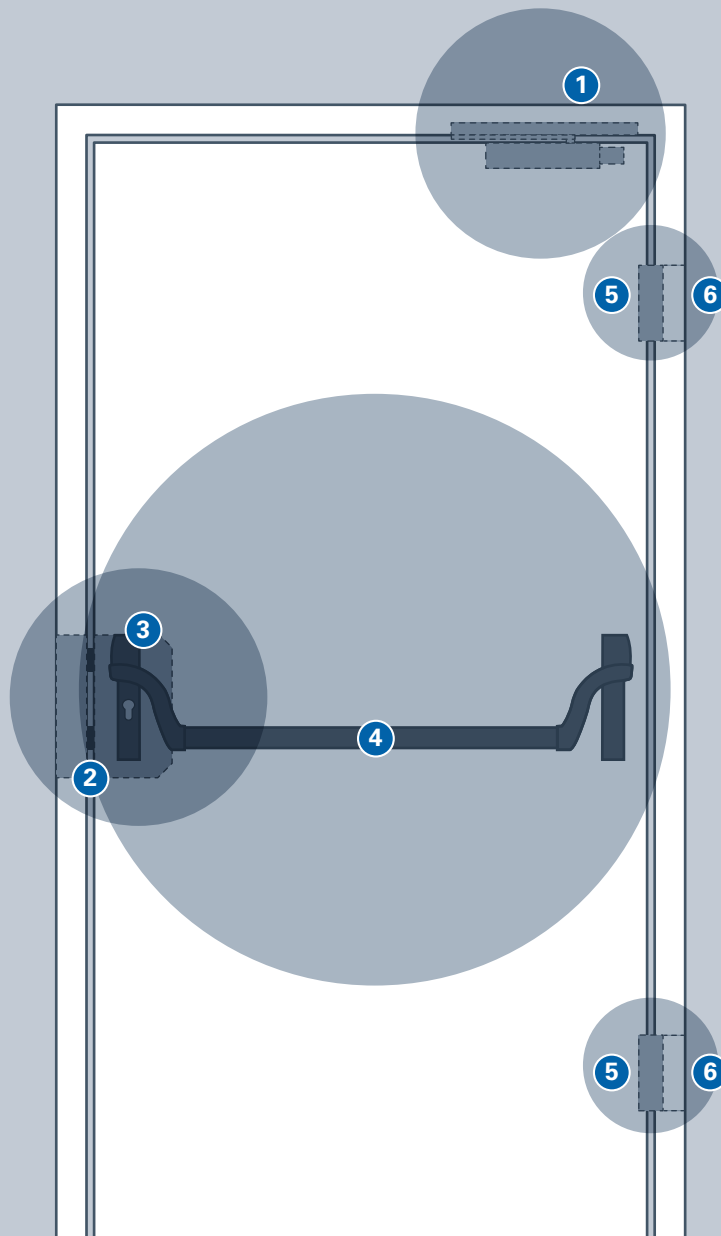
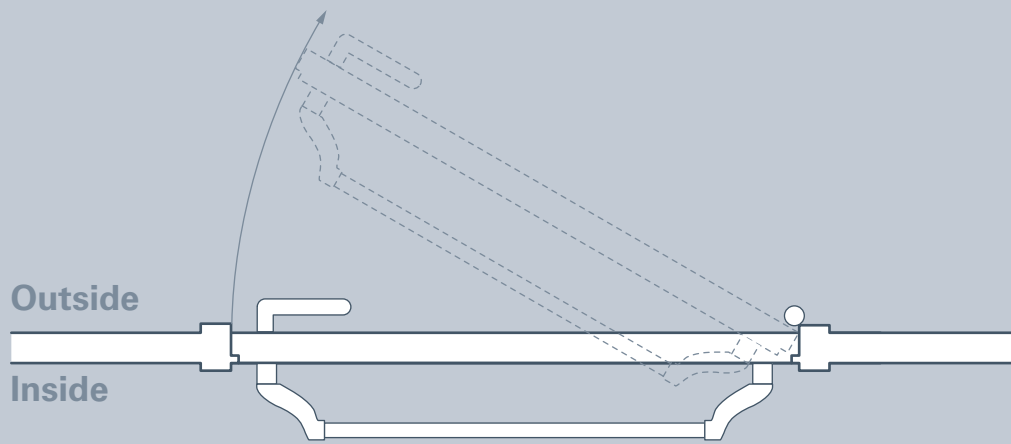


2x

6 Reception element **OBX-3011-3D**



2x

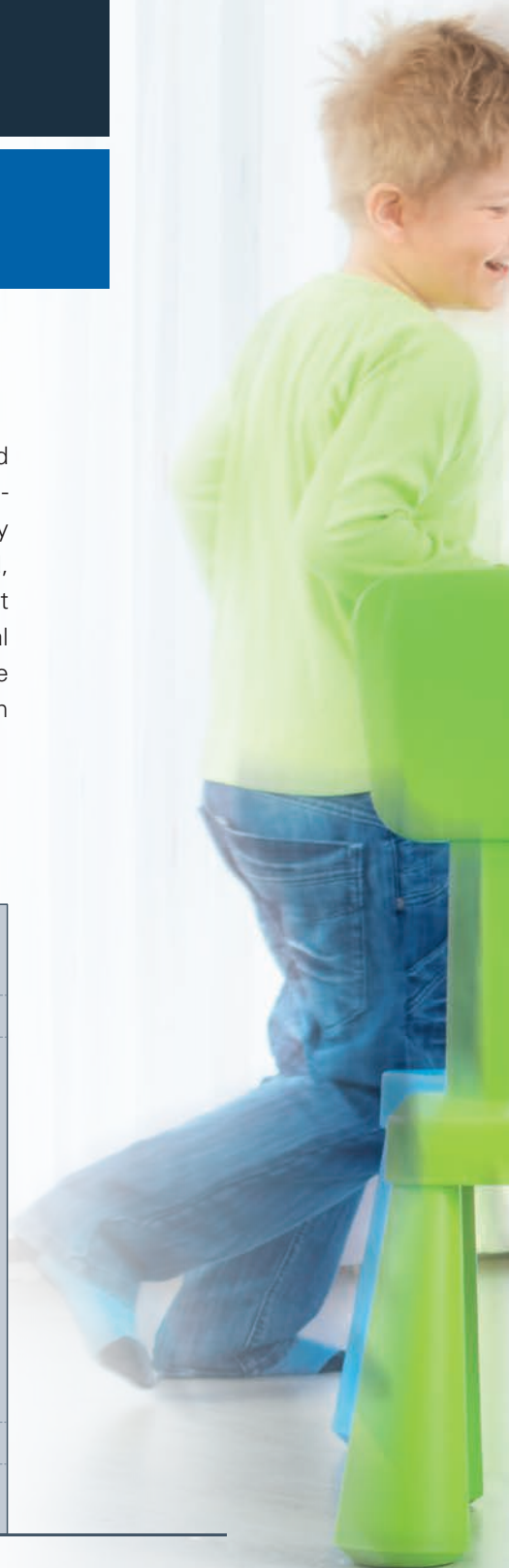
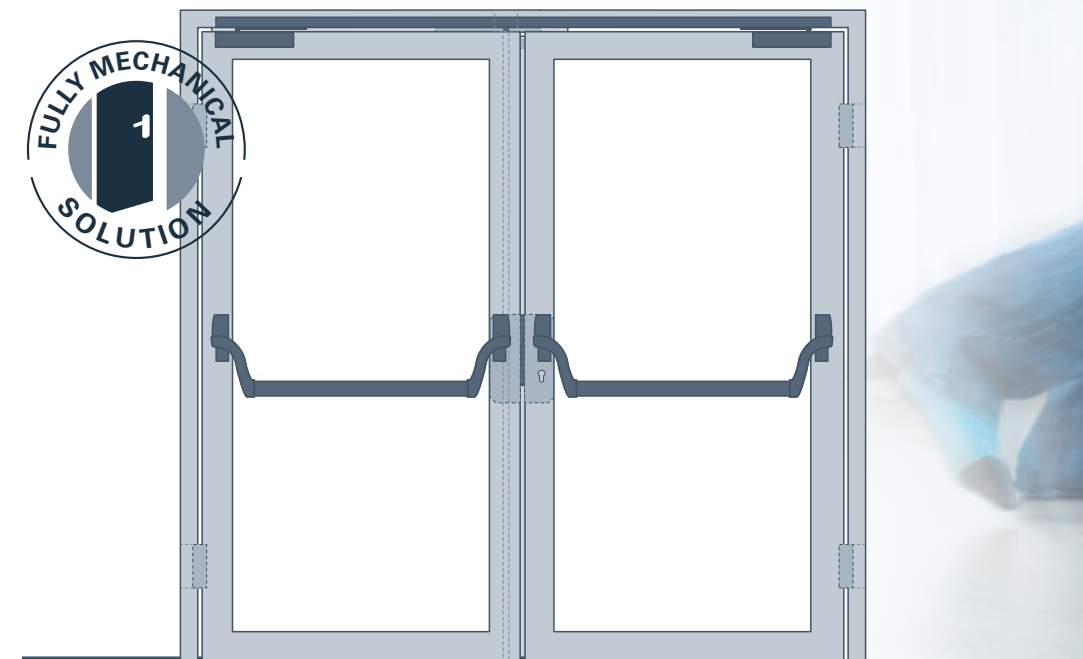




Case study #2

Kindergarten

When kindergartens and schools are affected by catastrophes of any kind whatsoever, the pictures and shocking news are sent round the world. Kindergartens and schools are buildings where the next generation of a society learns its social skills. These facilities are subject to special protection – and, in terms of their construction, they must meet special demands with respect to safety issues. The **“Safely out with ECO!”** doctrine acquires a special significance here, as door facilities from ECO Schulte guarantee free escape routes at all times and under all circumstances. Purely mechanically and, in blackout situations, even with little strength and awkward levers.







Case study #2

Kindergarten

Door type

DIN Left door

Safety aspect

Suitable for emergency exits and escape routes

System options

Extendable system

Function description:

Entry

Is achieved through the engaged handle or the key

Exit

Is achieved through the panic bar

Emergency/Escape route

The door can always be opened in emergency by means of the panic bar

Norms

EN 1125, EN 1154,
EN 1158, EN 1906,
EN 1935, EN 12209,



1 Door closers and door coordination
TS-62 SR BG



1x

2 Counter lock
GBS 94



1x

3 Lock
GBS 93



1x

4 Panic bar EPN 950



2x

5 Accessory
Shoot bolts
GBS 94



1x

6 Counter handle or latch
D-116 OVR III



1x

7 Accessory
Panic flap
MK Basis-2



1x

8 Accessory
Switch lock



1x

9 Heavy-duty hinges
OBX-18

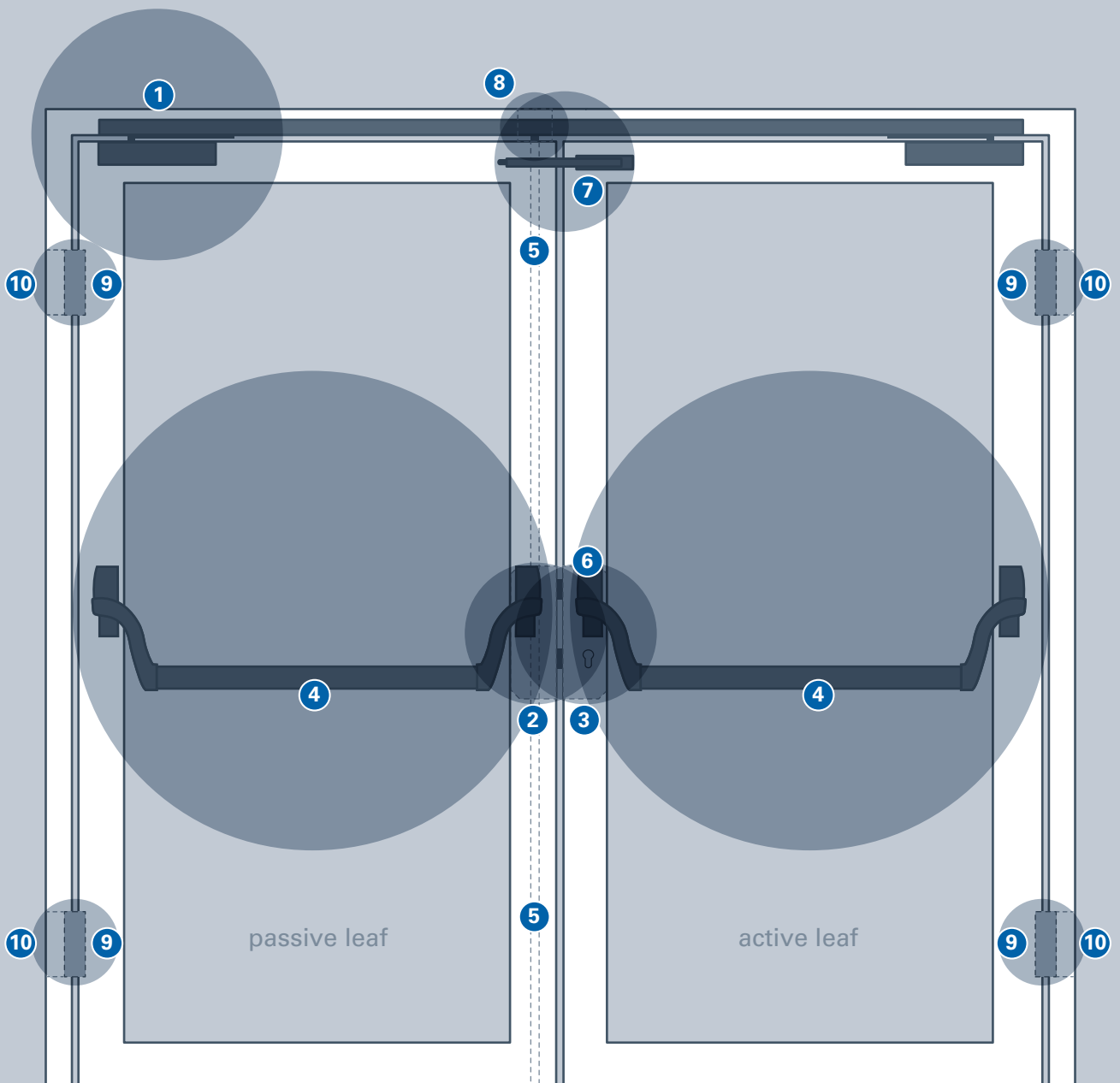
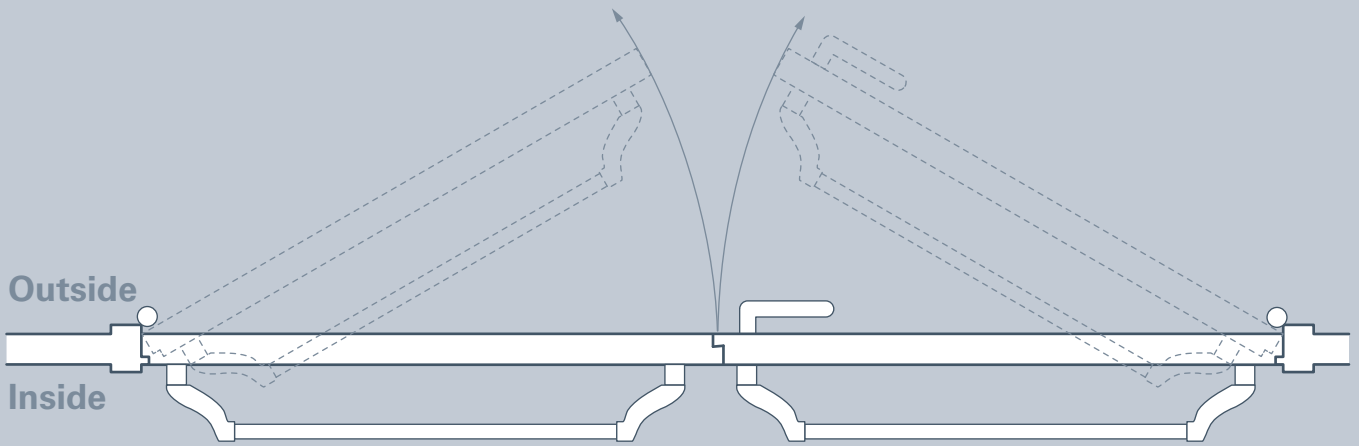


4x

10 Reception element
OBX-3011-3D



4x





Case study #3

Underground car park

In this semi-public underground car park, which is typically found in a hotel, a fire protection door acts as a barrier between the car park and the hotel section. As arriving and departing guests carry suitcases and bags, a standard feature is automatic opening and locking of this door. A card reader or a code keypad allows various straightforward options for granting

access. This can be time-controlled or needs-based. The openings can be documented electronically to show who has entered the building through this door. If the door is part of an escape routes system, then panic locks and/or panic bars can be integrated in it.



Door in a semi-public underground car park

Door type

DIN Left door, under surveillance

Safety aspect

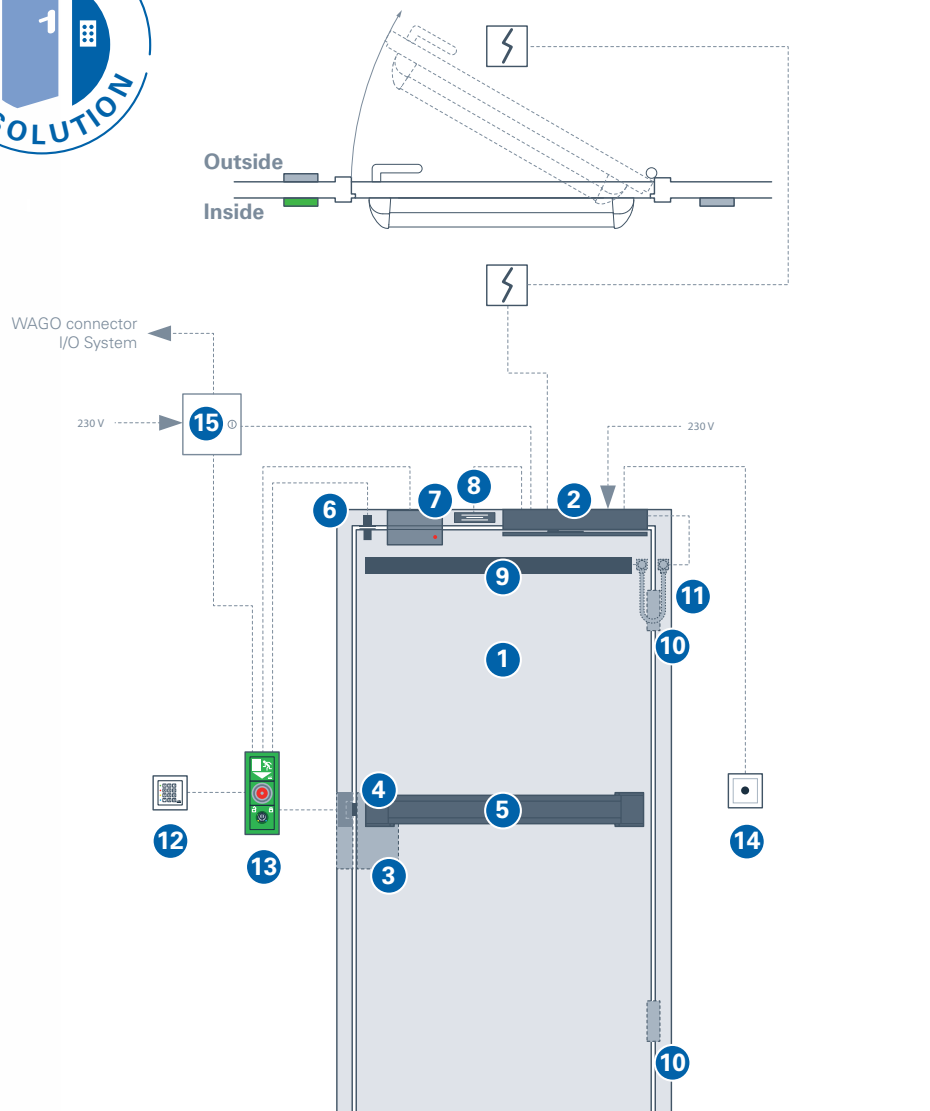
Suitable for emergency exits and escape routes; Fire protection door

In cases of emergency, the door can be opened by the emergency button (sets off an alarm). The door is always accessible in case of fire.

Norms

EN 1125, EN 1906, EN 1935, EN 12209, EN 13637, EN 16005

- ① Single steel door
- ② Automatic drive
- ③ Panic lock
- ④ Counter handle
- ⑤ Touch bar
- ⑥ Magnetic contact
- ⑦ Magnetic clamp
- ⑧ Lintel-mounted smoke alarm
- ⑨ Sensor stripe
- ⑩ Heavy-duty hinges
- ⑪ Cable connection
- ⑫ Code keypad
- ⑬ Escape management terminal
- ⑭ Approach detector for automatic opening
- ⑮ SPS control





Case study #4

University Hospital

The doors to wards in hospitals are among the most demanding door systems. The hardware (fittings, locks, hinges and motor-driven openers and closers) has to move large volumes with the double profile door. The door is in constant movement in an occupied ward during the day. Beds, visitors, patients and care personnel are constantly moving in and out. A combination of electronics and hardware regulates

access to the ward during the night. There are high demands on its panic and escape route properties because it must be assumed that, in the worst case, physically and mentally compromised people need to be evacuated. At the same time, the door also has fire protection tasks to fulfill and also serves as a barrier to keep the escape routes free of smoke.



Ward door in a hospital

Door type

DIN Left door
Door is monitored with a day alarm

Safety aspect

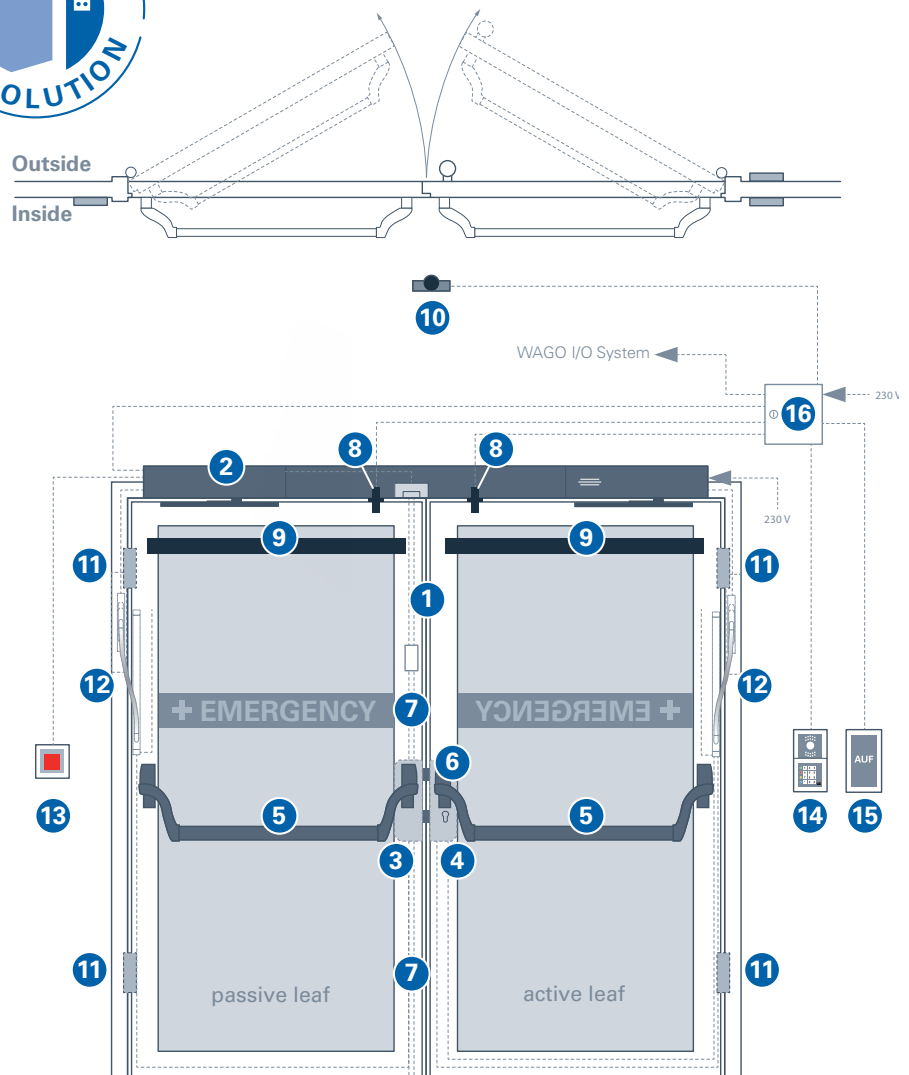
Suitable for emergency exits and escape routes
Fire protection door

This door can always be opened with the panic bars (setting off an alarm in extreme situations)

Norms

EN 1125, EN 1906, EN 1935,
EN 12209, EN 16005

- ① Double profile door
- ② Automatic drive
- ③ Counter lock with e-strike
- ④ Profile frame with panic lock
- ⑤ Panic bar
- ⑥ Counter handle
- ⑦ Shoot bolts
- ⑧ Magnetic contact
- ⑨ Sensor stripe
- ⑩ Radar
- ⑪ Heavy-duty hinges
- ⑫ Cable connections
- ⑬ "Close door" button
- ⑭ Code keypad/Reader
- ⑮ Button with large surface area
- ⑯ SPS control





Intelligent Door Management

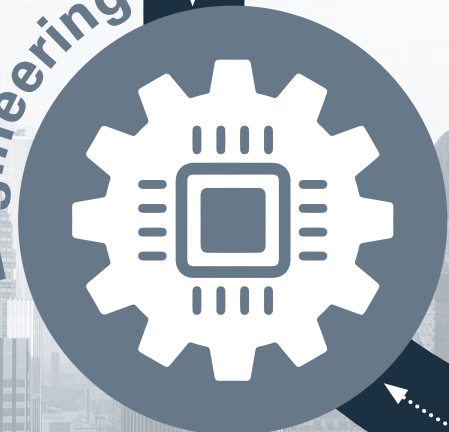
**DESIGN CONTRACT
COMPLEX
DOOR MANAGEMENT**



Mechanics



Engineering



Two partners who ideally complement each other. ECO **Schulte** from Menden in North-Rhine Westphalia and **BSW SECURITY AG** from Switzerland. Their expertise in clearly defined and they complement each other perfectly. ECO Schulte is the specialist for the hardware on the door. From handles and hinges, fittings, door closers and lock technology; the range works for all kinds of doors – profile doors, steel doors and wooden doors. BSW SECURITY then integrates the ECO Schulte hardware into the building process control and fire detection technology. The objective of this **partnership of specialists** is to integrate all the mechatronics and electronics to do with the doors – with open interfaces to the building process control system.

Intelligent Door Management makes high demands on both the mechanical and the electronic components. The planning for all parties involved in the construction process is just as demanding – no matter whether this is on the part of the contractors, the architects, the specialist planners for technical building equipment or the companies that carry out the work. As a system specialist for doors, this cooperation, based in Menden, is able to put together a complete, turnkey offer for any demanding door facilities. This can take account of all aspects including security, access control, escape routes and fire protection. ECO Schulte sees itself here as a system integrator – even for solutions involving different manufacturers. Any change of use of existing facilities are also possible here if, for example, existing components can be taken over.

Planners and contractors can expect a complete package of hardware, software and electronics as well as planning and service from ECO Schulte. And of course the guarantee that the system, as well as each individual component, conforms with the current standards.



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Your company imprint

■ SYSTEM TECHNOLOGY FOR THE DOOR

