



# Operations and maintenance manual

Automatic and manual  
hinged doors

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## General safety precautions

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### General information

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This operations and maintenance manual applies to both manual and automatic hinged doors and must be read carefully before putting the door into operation. Be particularly attentive to safety information.

The description of the current door appears on the page before the table of contents.

Automatically controlled doors; door users should be instructed thoroughly in how to operate the door.

It is important to adhere to the service intervals to achieve the longest possible service life.




Hinged doors should be serviced by authorised service engineers.

This manual is primarily intended for operators, maintenance and cleaning personnel. The complete user manual for the door consists of an assembly guide (supplied only when Door System is not responsible for the assembly of the door, but can be found on the website), operation and maintenance manual and documentation for CE marking (if the door is CE marked).

### Warnings

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This manual contains warnings in the text at certain points, where the reader should be particularly attentive to personal safety or in relation to the operations of the equipment. Warnings are displayed according to the following:

 Caution	<p>Caution          Potentially harmful situation.          Possible consequences: light or minor damages.          The product or items close by could be damaged.</p>
 Warning	<p>Warning          Potentially dangerous situation.          Possible consequences: bodily harm or serious equipment damage.</p>
 Note	<p>Note          Important information about a product or parts of the user manual requiring special attention.</p>

## Hinged door use

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Hinged doors are made for nearly any type of industry (retail, food, medical, storerooms etc.) The doors are used to separate two areas from each other e.g. in case of temperature differences, fire requirements or functional separation.

Examples of use include; goods reception doors, staff doors, emergency exits, doors for compressor rooms, cold store or freezer room doors, fire doors or regular entrance doors. Modifications or changes on the door which affects the safety of the door is not allowed.

In principle there are no limits as to how often the doors are opened and closed, however, the time intervals between service and maintenance may vary depending on the door usage.

## Limited use

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Be aware of regulations regarding emergency exits and fire doors.

## Unpacking

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Usually, the doors are delivered in a crate wrapped in plastic.

If the doors are not mounted immediately upon receipt, they should be stored indoor and protected against moisture and variations in temperature.

The door is checked immediately upon receipt.

Check if the packaging is intact before unpacking the door. If the packaging is damaged, thoroughly examine the content for damages.

In case of damages, inform both the haulage contractor and Door System. The damages must be documented in a report including pictures to be sent immediately to Door System.

## Mounting the hinged door

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In cases, where the door is not mounted by Door System's own service engineers, instructions for mounting are included in the package. Also available at [www.doorsystem.dk](http://www.doorsystem.dk)



It is the customer's responsibility that the wall opening measurements matches the order confirmation, unless it was measured by Door System's own staff.

## Disposal

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The door must be disposed of according to the national environmental legislation and regulations in force at the time in question.

## General information about hinged doors

Hinged doors can be delivered with various types of frames, counter frames and door leafs depending on the function of the door.

All the doors are hinged at the side and are often used in a vertical wall, the doors can however also be installed as hatch in ceilings (horizontal wall).

The door opens either manually or by activating pull chord, radar, induction loop or via remote control. See descriptions of these functions in the section "functional descriptions (options)".

## Technical specifications

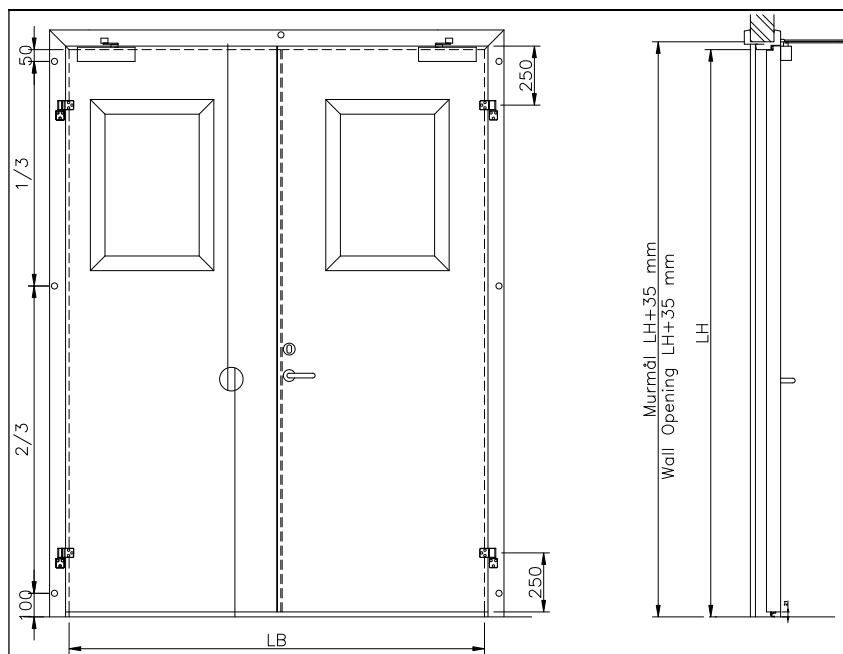
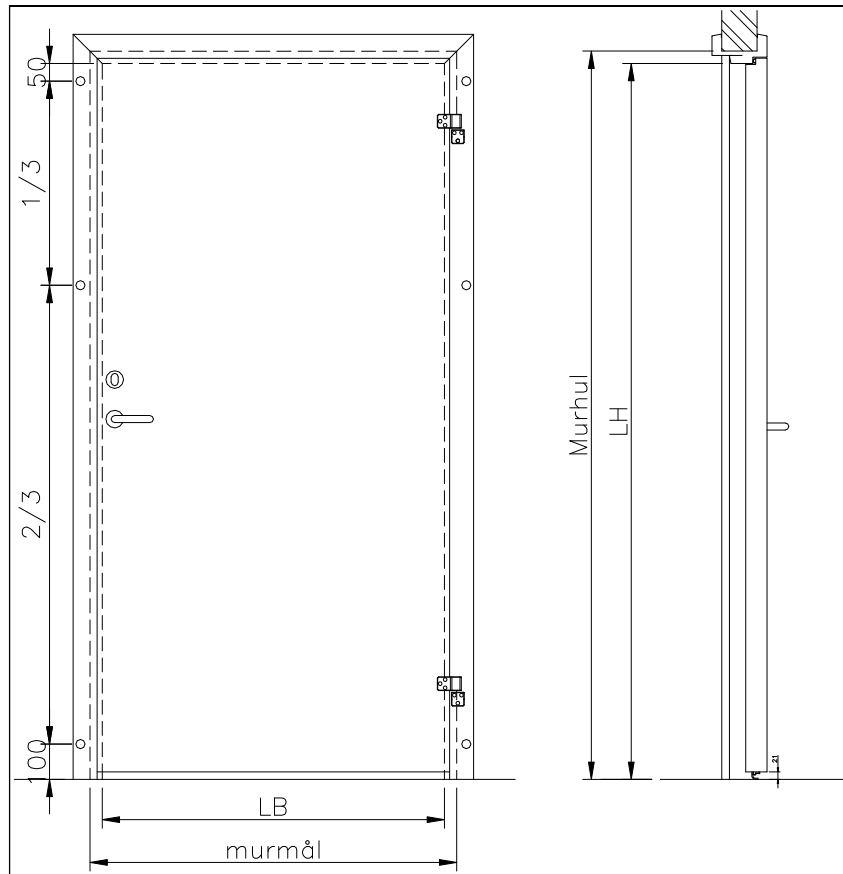
The table below shows possible choices for the construction of a hinged door (for a description of the actual door, refer to the description on the page before the table of contents).

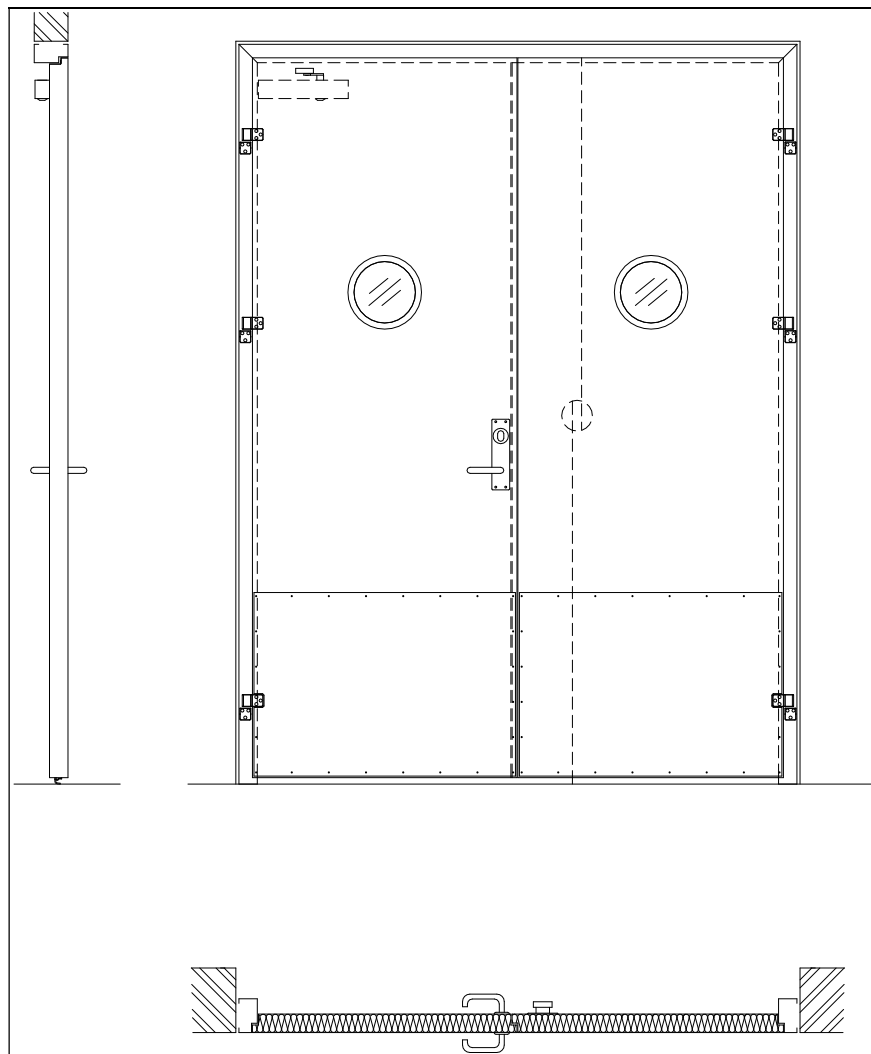
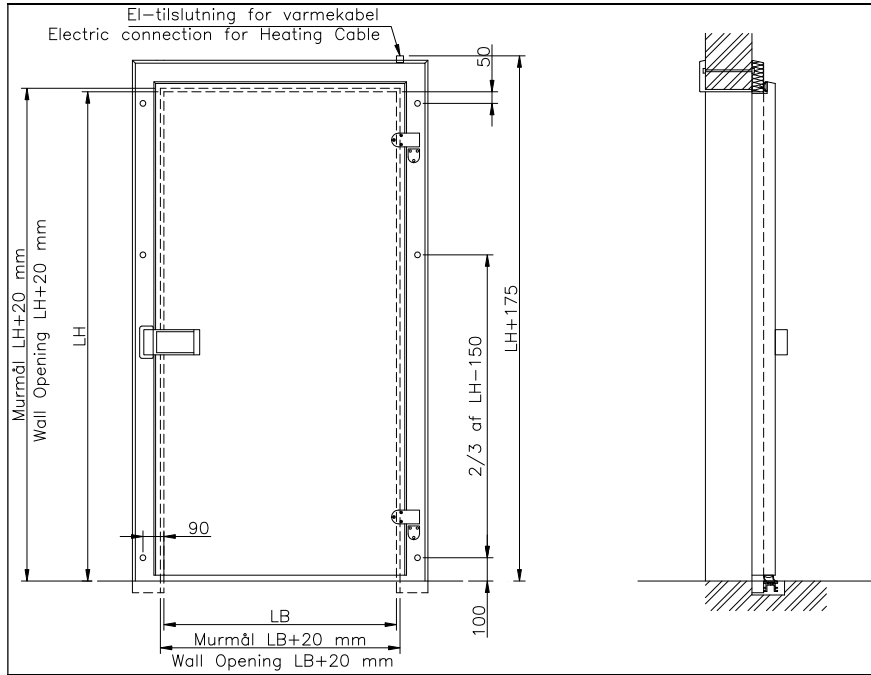
Door types:	Manual, automatic, fire door, cold room door, freezer door, facade door
Door thickness:	40, 60, 63, 75, 100, 125, 150 mm
Insulation type:	Polyisocyanurate (PIR) foam Skamol for fire doors Firebatts for fire doors
Plate material:	Galvanized steel Painted steel Stainless steel AISI 304 Acid-proof stainless steel AISI 316
Frame material:	Stainless steel profile
Operating temperature:	-40°C to +40°C
Options:	Automatics <sup>2)</sup> Pull chord <sup>2)</sup> Radar <sup>2)</sup> Radio control <sup>2)</sup> Induction loop <sup>1)+ 2)</sup> Selfclosing Fire Safe System (ABDL) Window <sup>2)</sup> Night lock Access control Door sensor Brush seal <sup>1)+ 2)</sup> Rat sealing <sup>2)</sup> Ventilation grill <sup>1)+2)</sup> Kickplate Doorviewer <sup>1) +2)</sup>

<sup>1)</sup> Not possible on certified fire doors.

<sup>2)</sup> not possible on certified frost fire doors.

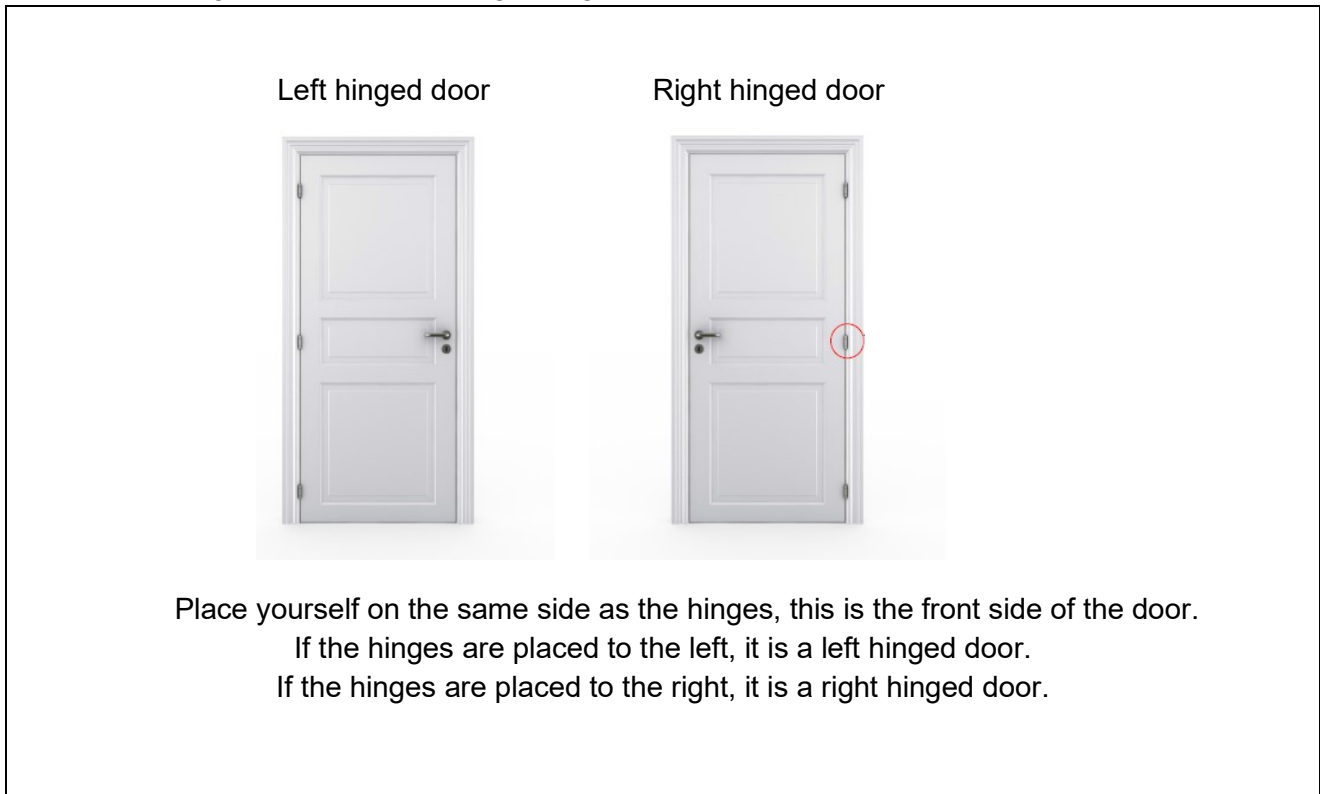
Hinged door projection



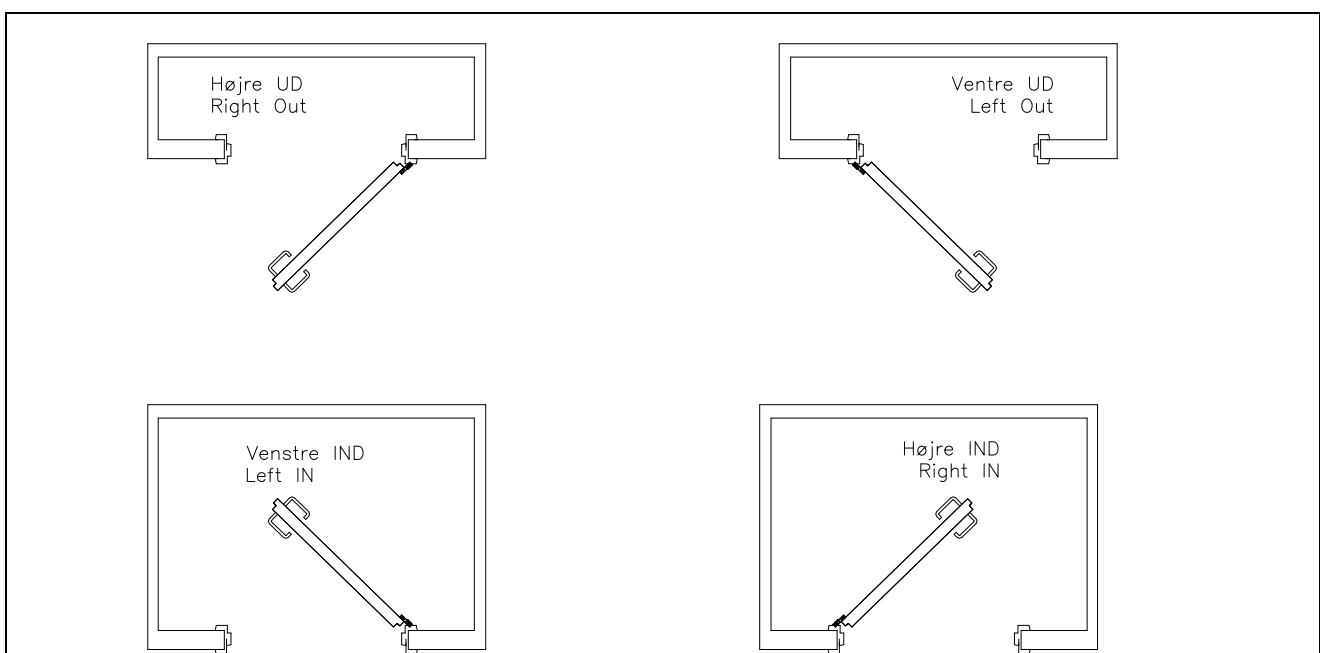


## Definition of right/left hinged door

The front of the door is the side where the hinges are visual. From the front, if the hinges are placed in the right side, the door is right hinged.

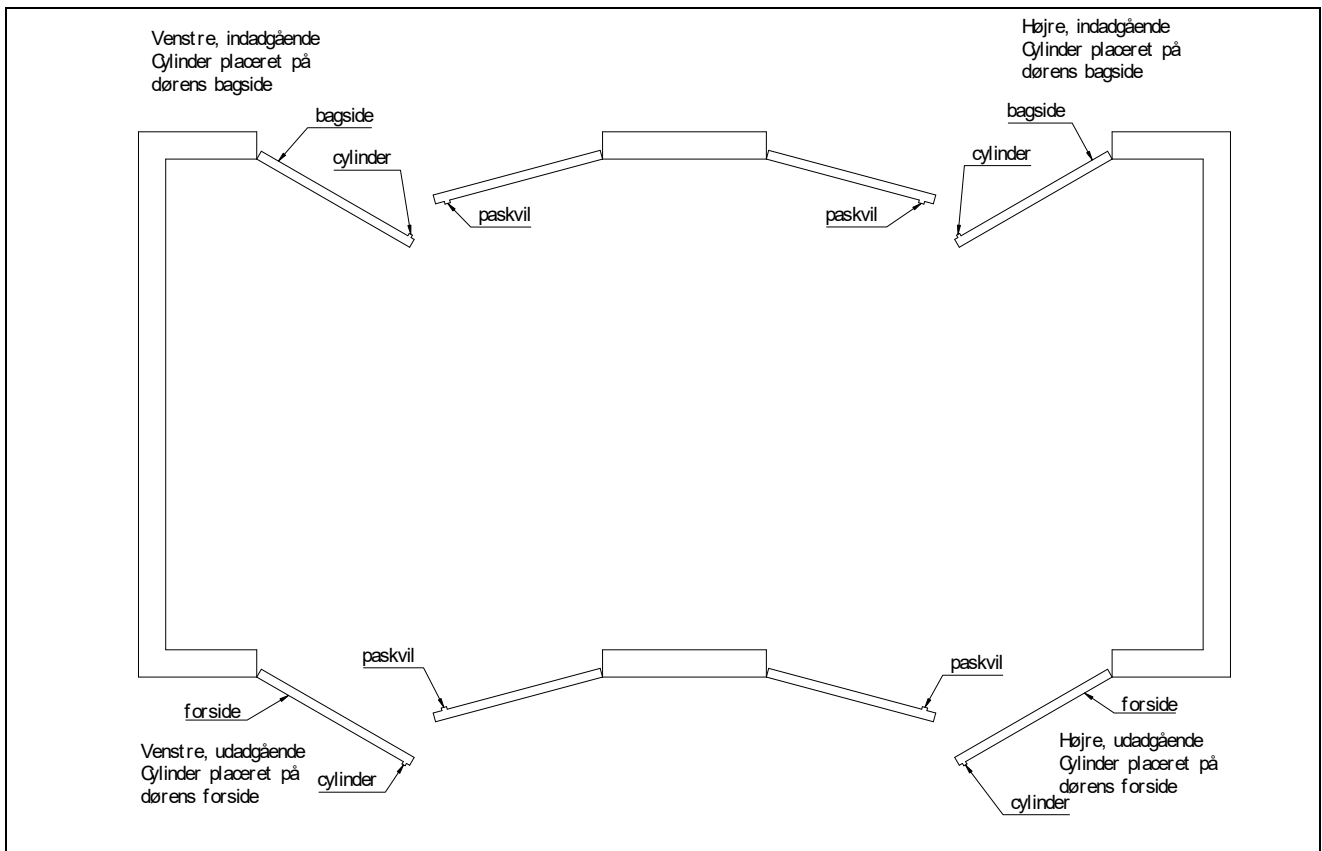


## Definition of in/out directions



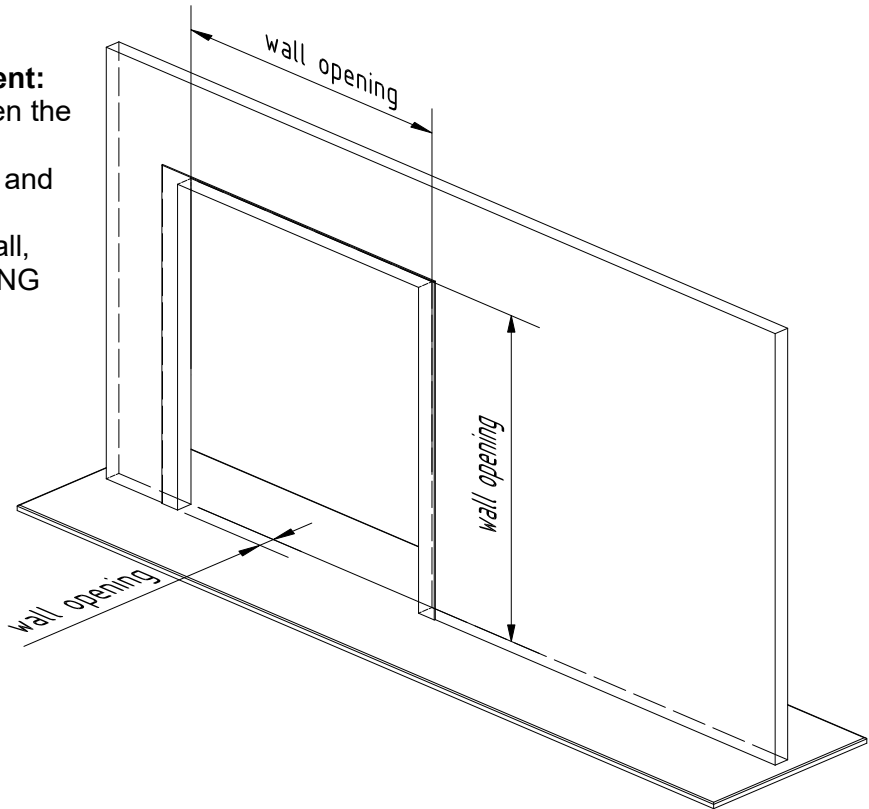


Definition of front/back

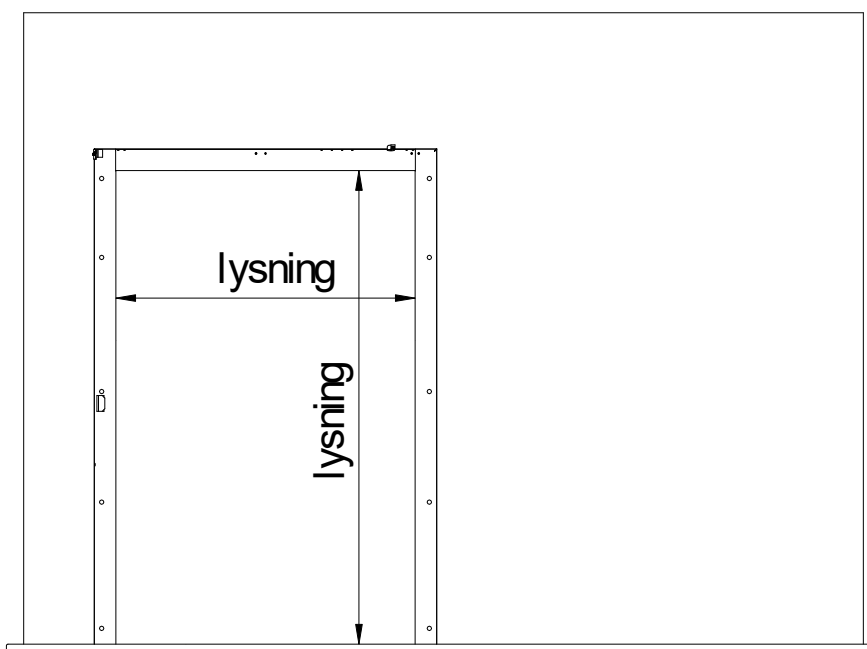


## Definition of wall opening measurement and frame measurement

**Wall opening measurement:**  
Horizontal distance between the two walls, the vertical distance between the floor and the top of the hole, and the thickness of the wall, is called the WALL OPENING MEASUREMENTS.



**Frame measurement:**  
Vertical distance between the 2 frames at the side of the door and the horizontal distance between the bottom of the upper horizontal frame and the floor/threshold, is called the FRAME MEASUREMENTS. In other words, the light visible through the hole (clear opening).



## Functional descriptions (options)

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### Automatics

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Electromagnetic door automatics for hinged doors open by means of an electro-motor and closes by motor power and a spring, or solely by a spring. All movements are controllable and adjustable via the control settings. A control manual for the door automation is included.

Any activation, adjustment, programming and service can be handled directly on the control panel by using push-buttons, no special equipment required.

The door automatics can be mounted to the front or back of the door.

### Pull chord

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The door is opened by pulling a chord and closes automatically after a certain period of time. The time is set on the timer. This means that even if the door is already open, the pull chord must still be activated, or the door might begin to close while you are moving through it.

The pull chord can also be set at a tilt function, meaning that the pull chord must be activated when opening the door and again when closing the door.

Only possible with automatic doors.

### Radar

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The radar can be used either for safety or to activate the door.

If the radar is used as safety radar, it will always open, when there is movement in front of the door.

If the radar is used to activate the door, the door will open when there is movement within the radar's "visual field". The door will close after at given period of time. The time is set on the timer. It is possible to install safety radar on one side of the door, and open/close radar on the other side of the door. This is to provide extra assurance of avoiding damages to persons or material.

Only possible with automatic doors.

### Radio control

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Radio control is a remote control for the door, often used in locations with truck traffic.

Only possible with automatic doors.

### Induction loop

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Magnetic field, which is buried in the floor. It registers when metal enters the area and opens the door. The door will close after at given period of time. The time is set on the timer.

Only possible with automatic doors.

### Fire Safe System (ABDL)

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ABDL is used in connection with fire doors. ABDL is an abbreviation of Automatic Fire Door Closing (Automatisk Brand Dørs Lukning) and ensures that the fire door automatically closes in case of fire. ABDL is connected to the door control.

The ABDL facility must be inspected and maintained every two years by an authorized electrical installation company.

## Night lock

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An extra cylinder lock for locking up at night.

## Access control

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Access control is carried out by electrically controlling either the finished sheet metal or the lock box, meaning that the frame or door leaf are wired. If the door leaf is wired, this means that there must be a frame conduction (wiring that cannot be damaged).

## Heating cable

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Heating cable can be used for doors fitted with a large temperature difference, to break the cold migration and reduce the risk of condensation. At the door to the freezer compartment, the heating cable must not be connected if the freezer is switched off, as overheating may occur and the heating cable may be damaged.

## Operations and maintenance

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Ongoing preventive maintenance is essential for the operation of the door. If some parts does not function as intended, the safety and functionality of the door can be disturbed.

The best way to secure the optimal conditions for the door, to make sure the safety on the door is ok and to optimize the lifetime of the component in the door are by continuously maintenance of the door. The maintenance of the door should be performed regularly and minimum as described below. The life expectancy of the door is up to 50 years when regular maintenance is performed.

It is the responsibility of the owner of the building to maintain the door as described below. Inspection of the fire control system (ABDL) is also statutory at least ones a year, which also includes function test of the fire door. Door System recommend service inspection of the fire doors is performed at least ones a year by a qualified service technician.



*For the daily operations to be as smooth as possible, it is important that the maintenance items below are checked/carried out regularly.*

	Subject	Control item	Control:						
			Visually	Annually	Bi-annually	Quarterly	Monthly	Daily	
1	Sealing strips*	In closed position, any sealing strips at the bottom of the door must touch the floor and the lists at the sides of the door must touch the frame. (Do not clamp the lists flat, as it limits the lists' service life) If sealing strips are damaged, and do not close tightly against the frame or threshold, they should be replaced.	X					X	
2	Frame	In case of ice on the frame, remove ice.	X						X
3	Heating wires*	Check at the heating wires work by feeling the frame. The frame must be free of ice. If the freezer compartment is switched off, the heating wire must not be connected.	X						X
4	Levers, locks and hinges	Greased when required (e.g. using Food Grease Plus). If the handle and lock begin to be tight, difficult or noisy during use, they must be lubricated.			X				
5	Electromagnetic grip (firedoors)*	The magnet and magnet grip are tightened if necessary. In case of rust on the magnet and magnet holder, these must be changed. The magnet and magnet holder can advantageously be lightly lubricated with oil to prevent rust formation.						X	
6	Open/close function	Control that the door opens easily compared to its size and that it does not begin to move tightly. Control that the door opens all the way without any rubber lists dragging on the floor or against the frame.	X				X		
7	Self-closing function*	Check and possibly adjustment of the self-closing function. Check at fully open and 30 cm open positions that the door closes and fully engages.	X				X		
8	ABDL system*	It must be checked that the door is released from the self-holding function when the test button on the ABDL system is activated.					X		
9	Accidental stress	If the door is subjected to collision that may have damaged the safety devices which causes a risk of personal injury, an inspection must be carried out.	X						

	Subject	Control item
10	Spare parts	When ordering spare parts the door number should be stated. The door number is located on the door sign, attached to the rear side of the door.
11	Cleaning	Painted and stainless surfaces are cleaned with mild soapy water. Wiping required. Under no circumstances clean with agents containing solvents (gasoline, thinner, alcohol or similar), abrasive or polishing agents, or wax, as these will reduce the product's service life. When using chlorine-containing cleaning agents, thorough washing must be carried out. Prolonged presence of chlorides on the surface of the door will reduce the surface's overall service life. For thorough cleaning, use a cleaning agent designed for stainless steel and aluminium.
12	Lubrication	Once cleaned, stainless surfaces are covered by acid-free oil, approved for the industry where the door is fitted.
13	Before putting the door into operation	Once mounted, remove the foil from the door and frames and lubricate with acid-free oil until the steel is saturated. This is done to avoid rust film and other substances getting stuck on the surface. Repeat this treatment after each cleaning, which could wash off the oil.

\*Not available for all door types.

## Statutory inspection

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Annual statutory inspection includes the following:

- Automatic doors
  - Checking that the door is in a safe condition in terms of safety and health
  - The inspection must be carried out by an expert
- Fire doors
  - Hinges, suspension system and locking function are cleaned and lubricated.
  - The self-closing mechanism is checked and possibly adjusted.
- ABDL plant
  - Quarterly function check that the door closes correctly when the ABDL system's test button is activated.
  - 2-year inspection of authorized electrical installation company.

For a warranty on the doors, an inspection by Door System A/S is required (when creating a service agreement).

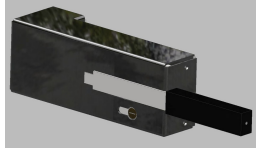
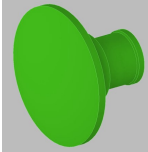
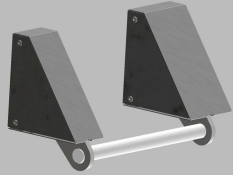
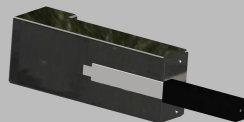

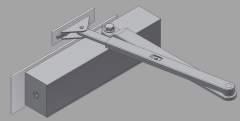
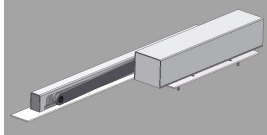
***Please direct any questions about the operations and maintenance to Door System's service department at +45 86 92 11 71.***

**Spare part list**

No.	Description	Item no.	
1	Hinge type C, door part	10-1004	
2	Hinge type C, frame part	10-1005	
3	Bushing for hinge, type C	10-1006	
4	Hinge type C1, door part (used with 10-1005 and 10-1006)	10-1008	
5	Hinge type B, door part, right	10-1013	
6	Hinge type B, door part, left	10-1014	
7	Hinge type B, frame part	10-1015	
8	Hinge type C, door part, right, Pharma (used with 10-1005 and 10-1006)	10-1010	
9	Hinge type C, door part, left, Pharma (used with 10-1005 and 10-1006)	10-1011	

No.	Description	Item no.	
10	Sealing strip 10x12x17 DS-E	42-0025	
11	Sealing strip 19x12,5xØ6 DS-E1	42-0000	
12	Sealing strip 30x12 DS-B	42-0011	
13	Lock boxes The type of lock box varies from one door to the next. The type can be read off the lock box.	E.g.: 10-1042 Ruko Assa 565	
14	Coupe Handle, type Randi 58-82 mm	10-1055	
15	Handle, type MU 36-70 mm	10-1034	
16	Fermod handle 621	140-080	
17	Fermod handle 921	140-085	



No.	Description	Item no.	
18	DS doorhandle for EI260 door (fire and freezer)	37-6000	
19	Push button (green) for EI260 door (fire and freezer)	37-6001	
20	Panic exit bar for EI260 door (fire and freezer)	37-6002	
21	DS-door handle without lock for EI260 door (fire and freezer)	37-6003	
22	Strike connector for DS handle (fire and freezer)	37-0058	
23	Door closer type Dorma TS83 3-6 (front)	106-100	
	Door closer type Dorma TS83 7 (front)	106-101	
	Door closer type Dorma TS83 3-6 (back)	106-105	
	Door closer type Dorma TS83 7 (back)	106-106	
24	Door closer type Dorma TS93 2-5 (front)	106-120	
	Door closer type Dorma TS83 5-7 (front)	106-121	
	Door closer type Dorma TS93 2-5 (back)	106-125	
	Door closer type Dorma TS83 5-7 (back)	106-126	
25	Heating wires. Length of the heating wires can be read off the door sign. When ordering, state door number.		
	<u>In general:</u> Fittings (hinges, handles, lock boxes etc.) for the individual door are often order specific. If the spare part does not appear on the above standard list, please contact Door System. When making an enquiry, please state door number.		