Operations and maintenance manual

Automatic and manual hinged doors

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Content

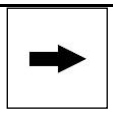
General safety precautions

General information

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.
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.

Warnings

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:

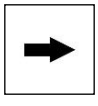
 Caution	Caution Potentially harmful situation. Possible consequences: light or minor damages. The product or items close by could be damaged.
 Warning	Warning Potentially dangerous situation. Possible consequences: bodily harm or serious equipment damage.
 Note	Note Important information about a product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

Hinged door use

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. 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.
Fire doors/fire adapted doors are in principle always open and only close automatically in case of fire.

Limited use

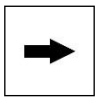
 Be aware of regulations regarding emergency exits and fire doors.

Unpacking

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.
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

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



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

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

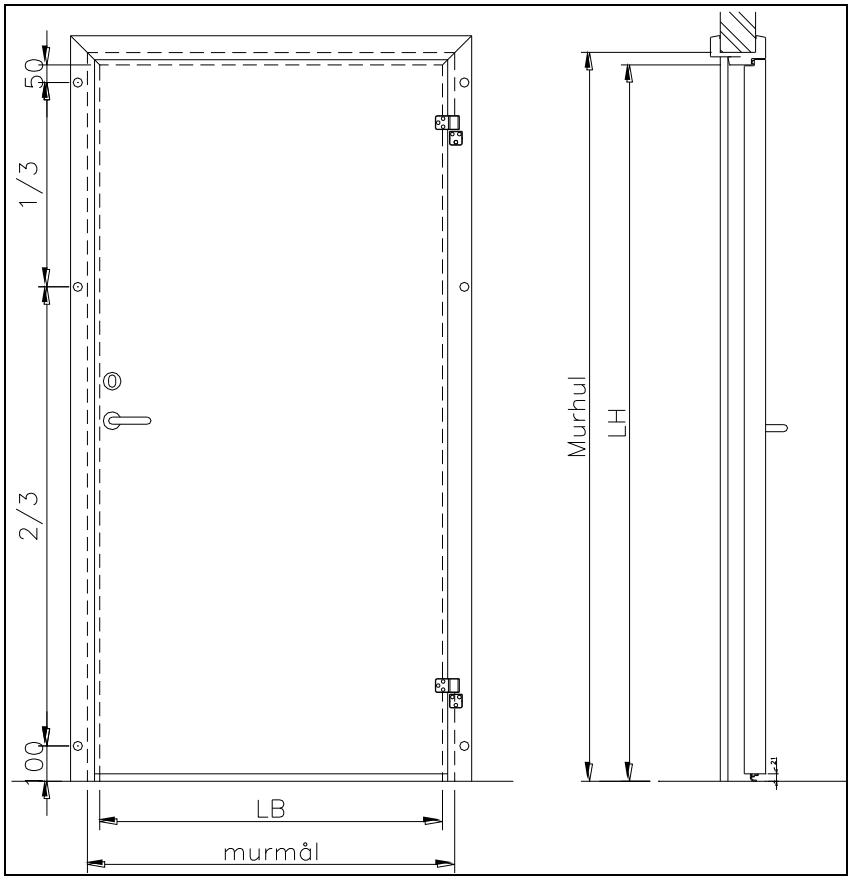
Hinged doors can be delivered with various types of frames, counter frames and door leafs depending on the function of the door.
All the doors are hinged at the side and are often used in a vertical wall, the doors can however also be installed as hatch in ceilings (horizontal wall).
The door opens either manually or by activating pull chord, radar, induction loop or via remote control. See descriptions of these functions in the section ”functional descriptions (options)”.

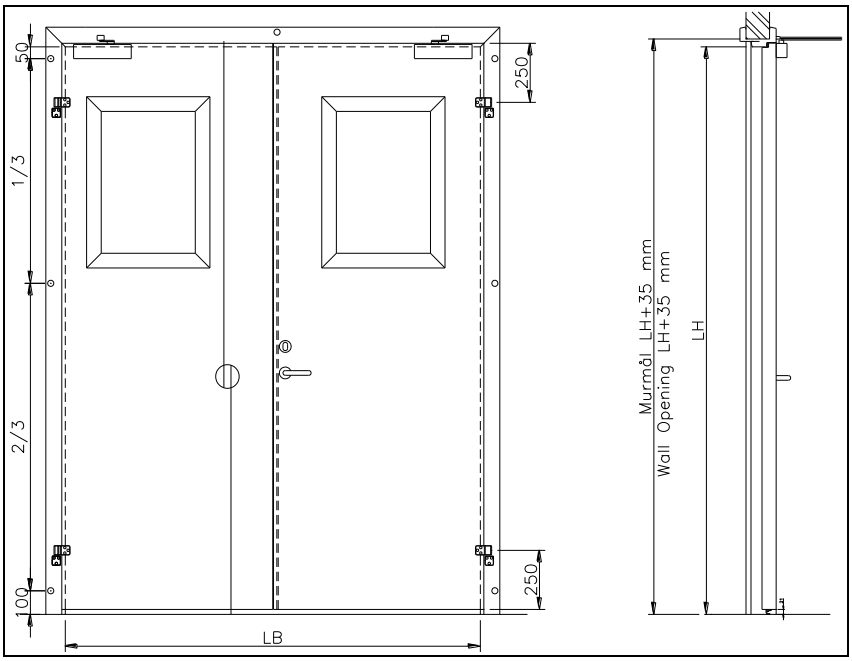
Technical specifications

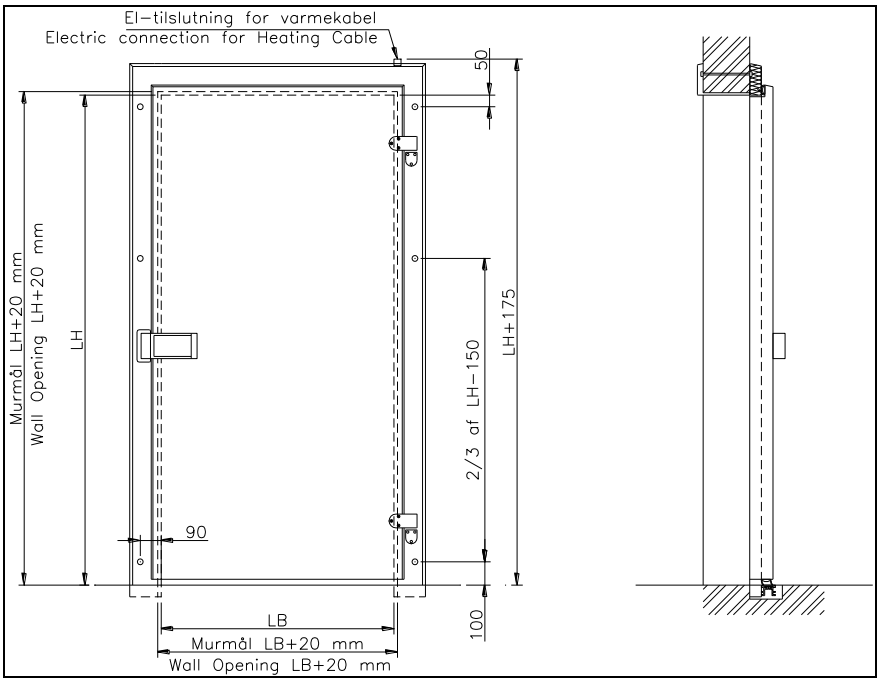
Door types:	Manual Automatic Fire door
Door thickness:	40, 60, 63, 75, 100, 150 mm
Insulation type:	Polyurethane(PUR) foam Polyisocyanurate (PIR) foam Skamol for fire doors Firebatts for fire doors
Plate material:	Galvanized steel Painted steel Stainless steel AISI 304 Acid-proof stainless steel AISI 316
Frame material:	Stainless steel profile
Operating temperature:	-40°C to +40°C
Options:	Automatics* Pull chord* Radar* Radio control* Induction loop* Selfclosing Fire Safe System (ABDL) Window Night lock Access control Door sensor Bruch seal* Ventilation grill* Kickplate Doorviewer*

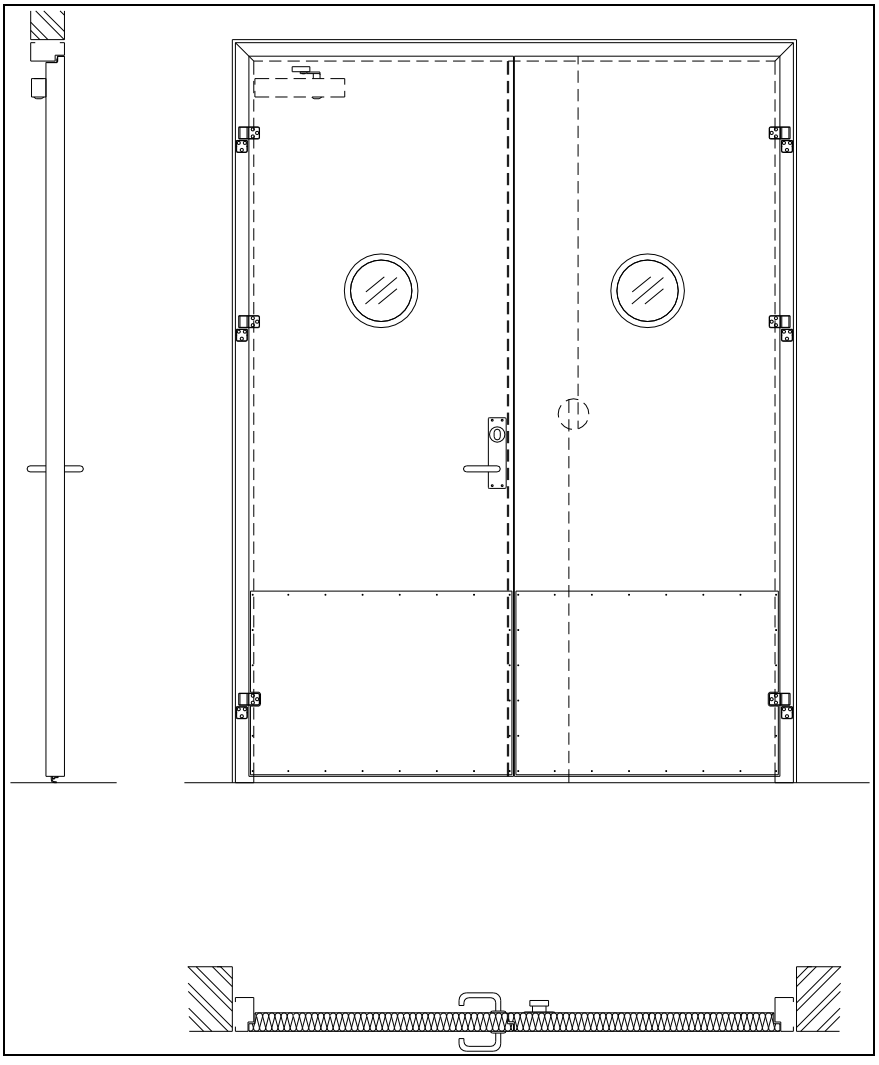
*Not approved on certified fire doors.

Hinged door projection



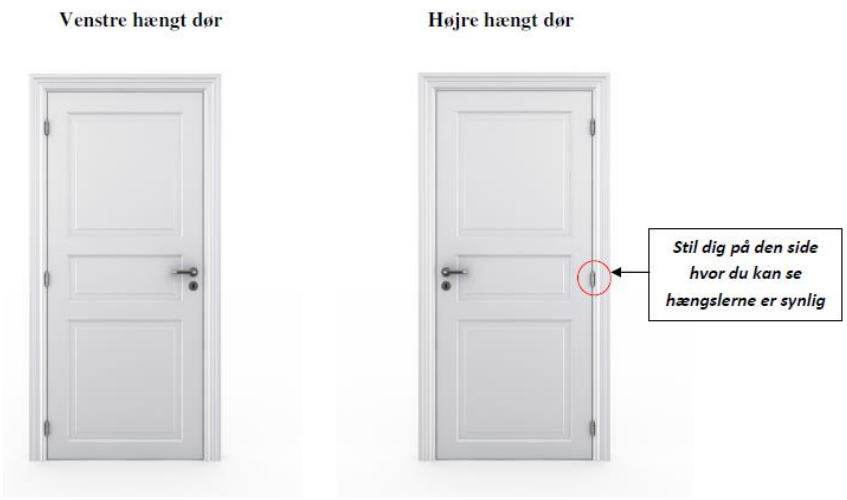



El–tilslutning for varmekabel
Electric connection for Heating Cable
50
Murmål LH+20 mm
Wall Opening LH+20 mm
LH
LH+175
2/3 af LH–150
90
100
LB
Murmål LB+20 mm
Wall Opening LB+20 mm



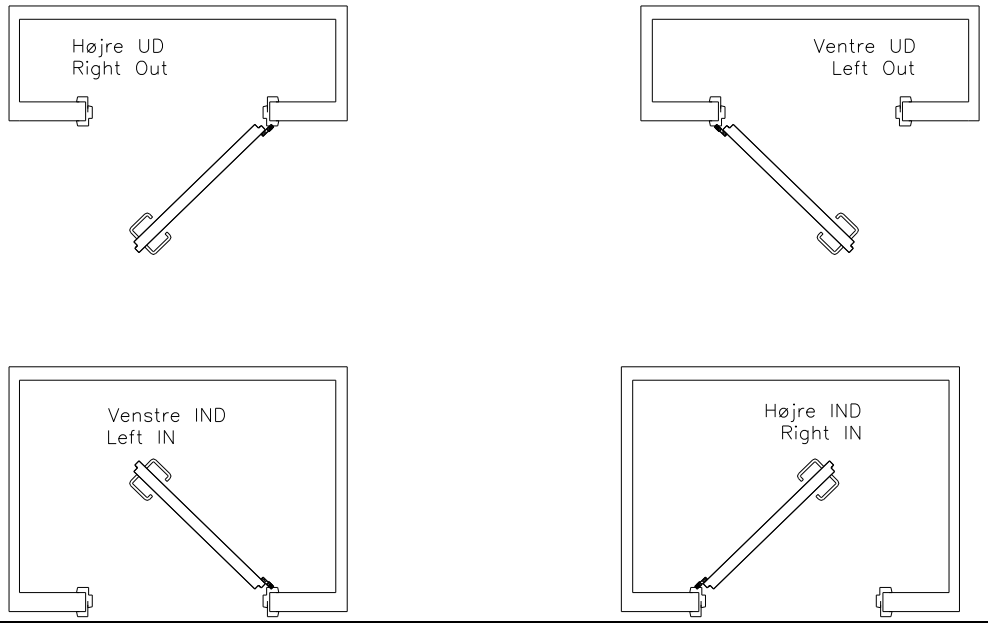
Definition of right/left hinged door

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.

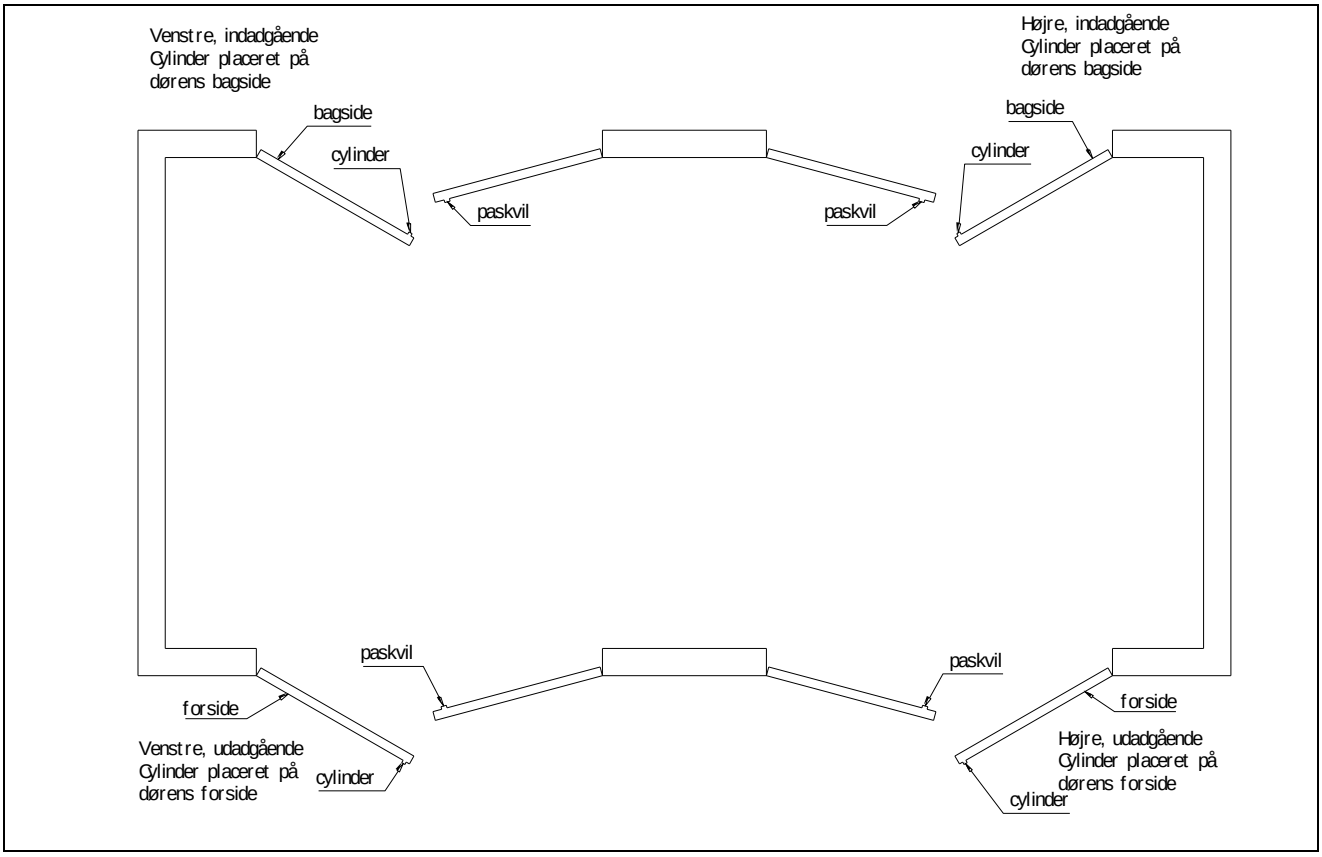


Place yourself on the same side as the hinges, this is the front side of the door. If the hinges are placed to the left, it is a left hinged door, if the hinges are placed to the right, it is a right hinged door.

Definition of in/out directions

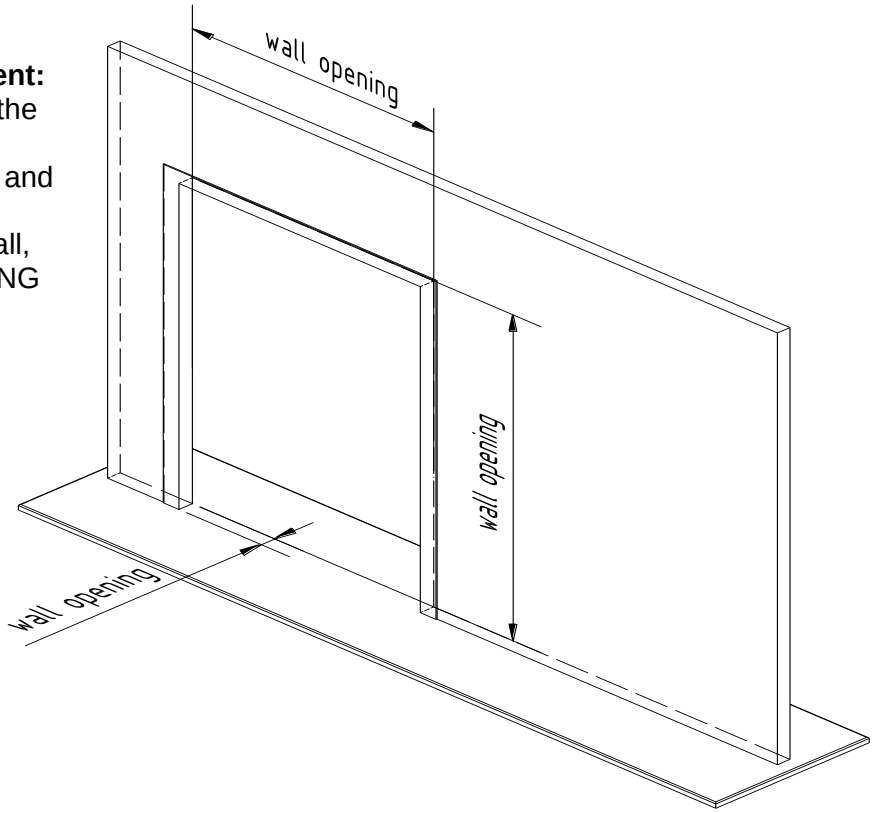


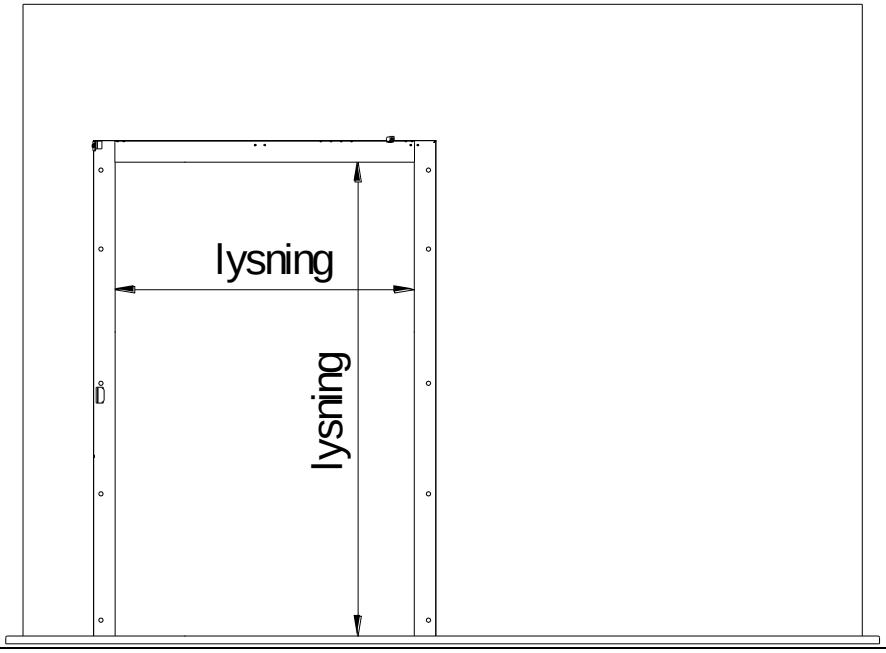
Definition of front/back



Definition of wall opening measurement and frame measurement

Wall opening measurement:
Vertical distance between the two walls, the horizontal 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)

Automatics

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

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.

Radar

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.

Radio control

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

Induction loop

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.

Fire Safe System (ABDL)

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.

Night lock

An extra cylinder lock for locking up at night.

Access control

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)

Operations and maintenance

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.

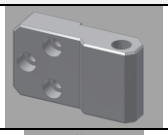
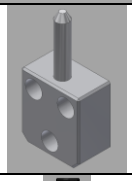
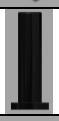
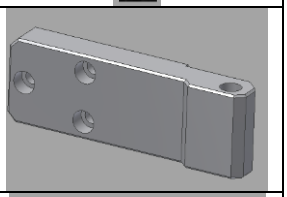
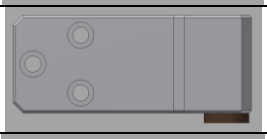
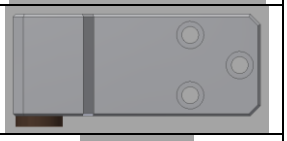
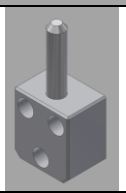
For the daily operations to be as smooth as possible, it is important that the maintenance items below are checked/carried out regularly.

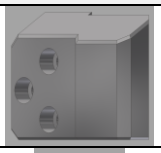
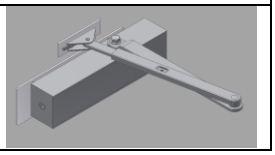
	Subject	Control item	Control:					
			Visually	Annually	Bi-annually	Quarterly	Mon thly	Daily
1	Rubber lists	In closed position, any rubber lists at the bottom of the door must touch the floor and the lists at the sides of the door must touch the frame. (Do not clamp the lists flat, as it limits the lists' service life)	X				X	
2	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			
3	Frame	In case of ice on the frame, remove ice.	X					X
4	Heating wires	Check at the heating wires work by feeling the frame. The frame must be free of ice.	X					X
5	Levers, locks and hinges	Greased when required (e.g. using Food Grease Plus)			X			
6	Electromagn etic grip	The magnet and magnet grip are tightened if necessary.					X	
7	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					
8	Spare parts	When ordering spare parts the door number should be stated. The door number is located on the door sign, attached to the door.						

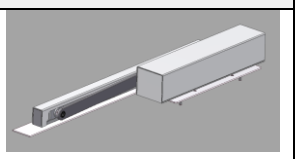
9	Cleaning	Painted and stainless surfaces are cleaned with mild soapy water. Wiping required. Under no circumstances clean with agents containing solvents (gasoline, thinner, alcohol or similar), abrasive or polishing agents, or wax, as these will reduce the product's service life.
10	Lubrication	Once cleaned, stainless surfaces are covered by acid-free oil, approved for the industry where the door is fitted.
	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.

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	

No.	Description	Item no.	
9	Hinge type C, door part, left, Pharma (used with 10-1005 and 10-1006)	10-1011	
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	
18	Door closer type Dorma TS83 3-6 (front) Door closer type Dorma TS83 7 (front)	106-100 106-101	
	Door closer type Dorma TS83 3-6 (back) Door closer type Dorma TS83 7 (back)	106-105 106-106	

No.	Description	Item no.	
19	Door closer type Dorma TS93 2-5 (front) Door closer type Dorma TS83 5-7 (front)	106-120 106-121	
	Door closer type Dorma TS93 2-5 (back) Door closer type Dorma TS83 5-7 (back)	106-125 106-126	
20	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.		