

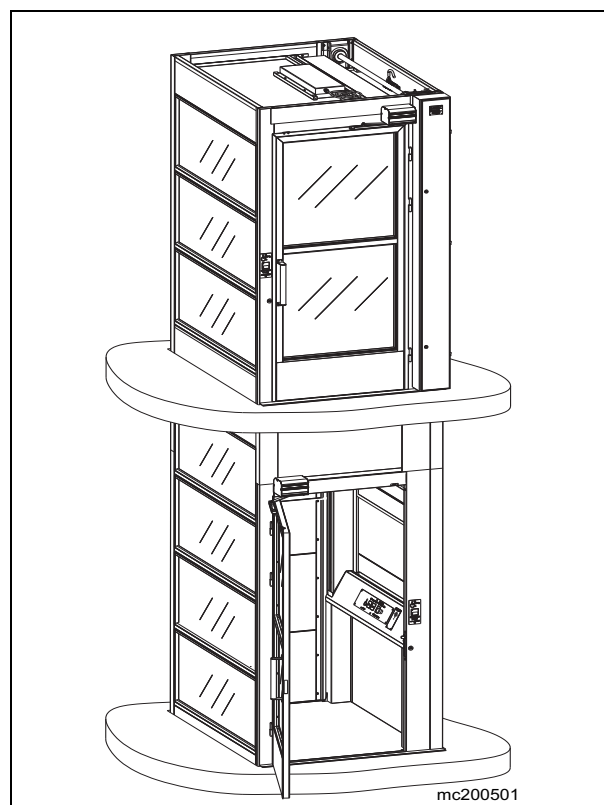


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LOW SPEED LIFT MC2000

2-6 landings
Automatic/manual doors

Assembly Instruction Manual



Release 2.02 2011-10-20



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Introduction

This assembly instruction manual shows you how to erect Motala Hissar MC2000 with 2-6 landings and manual or automatic doors.

The texts and the illustrations of the manual show an MC2000 with 2 landings, but are also valid for lifts with several landings. Note that the manual also describes the assembly of equipment that is not found in all lifts.

MC2000 can be delivered with straight or adjacent two-way entrances. For power supply, see the current electrical diagram.

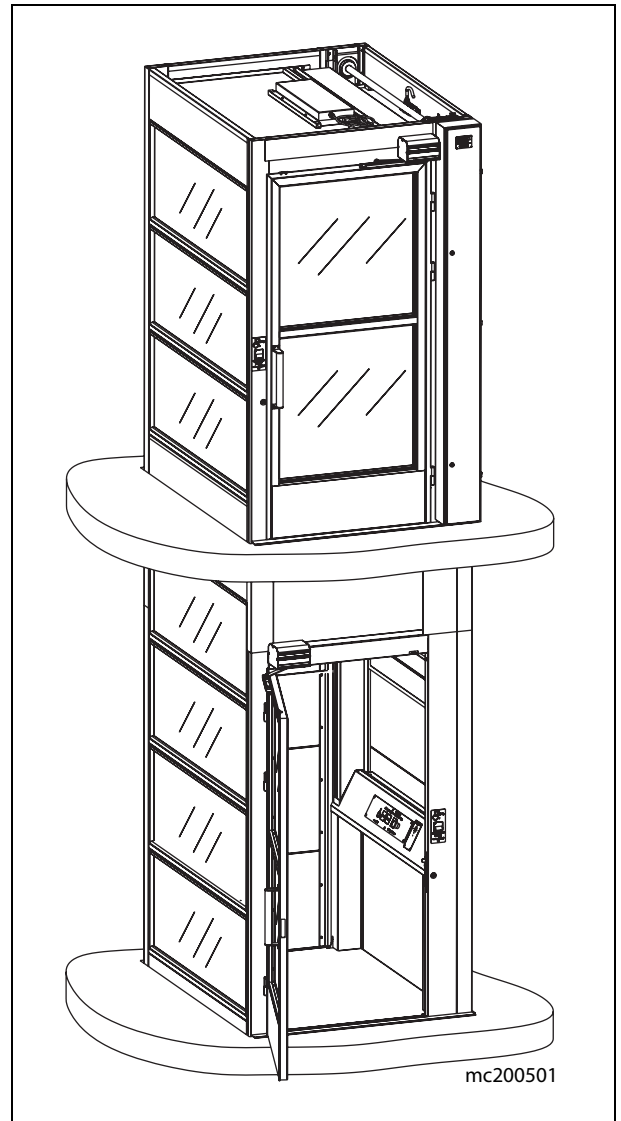
The assembly instructions are based on equipment and tools that were accessible when the manual was written. Because of continuous product development we reserve the right to alterations without further notice.

Safety regulations

Important!

For your own safety and for the safety of others, follow the existing safety regulations.

Warning! Risk to get jammed! Do not work in the pit without necessary pre-actions, use the pit prop, use the stop button, switch off the power!



Wordlist

Adjacent lift	Lift with door or doors on sides B or D.
Chain joint	For connecting the chain between the guide rail sections and between the chain and the jointing rod.
Clamp coupling	For jointing the driving shaft.
Corner profile 100x40	Non-drive side corner.
Corner profile 250x40	Drive side corner.
Door front	(With door frame, lock etc).
Drive command box	For temporary driving.
Drive command panel	Plate with control buttons, attached to the panel shelf and the panel plate.
Drive side	The side where the guide rails are placed. This is the wider side if you look at the door frame. Can be on the B or D side
FF	Finished floor.
Glass module	Glass module on the long and short sides.
Jointing rod	12x12 mm square rod for adjusting the chain tension.
Jointing sleeve	U-section to be put between two corner profiles.
Lift well module	Isolamine. Product and expression for 25 to 35 mm thick isolated steel modules.
Non-drive side	E.g. side B if the guide rails are on side D.
Panel plate	The plate to which the panel shelf and the control panel are attached.
Panel shelf	Steel shelf with electric equipment, attached to the panel plate.
Passage contact	Contact which straps across the lock contact when the lift is in the landing zone.
Platform	Floor frame, floor plate
Pit prop (in the pit)	Yellow safety bar that can be raised.
Safety gear test equipment.	Attached below the gripping lever. Remote-released by a cord in the control panel.
Side A	The side where the motor and gear are placed.
Side B	The side placed clockwise next to side A.
Side C	The side opposite side A.
Side D	The side placed clockwise next to side C.
Slide	Flat bar iron with sliding guide shoes where the chain is fastened.
Turning case	Cut plastic case where the chain changes direction.
Two-entrance lift.	Lift with doors on side A and side C.
Two-metre fixing plate angles.	Fixings for the large cover plate above the guide rails.
Work platforms	Occasional platforms for building lift wells.

Tools

Tools/Equipment with item numbers can be ordered from Motala Hissar AB.

Equipment	MH item number	Notes
Sets of dimension sticks, 1480 mm, 1081 mm, 1181 mm.	705827	For lift well construction, outside dimensions: depth 1560mm x width 1150 mm/1250mm.
Work platforms, standard set.	705658	For lift well construction. For about three floors. Extra equipment to be ordered
Drive command box complete with 25 m cable.	705868	For driving the lift during assembly and testing.
Winch or telfer, min. approx 100 kg.	705867	For lifting guide rails.
Lifting eye bolt with lock, see ill 6 on page 25.	705826	For lifting guide rails.
Fastening rod (telescopic)	705824	For suspending the winch in the well top.
Chain fixing tool.	701268	To prevent the chain from sliding during assembly.
Glue sprayer.	101428	
Structural glue.	100510	Gluing of platform floors.
Grease and lubricating substances.		Lubrication of guide rails and lock arms.
Lifting tool (suction cups), 2 pieces	101423	For glass and lift well modules.
Working place illumination		
Spirit-level, short, approx, 500 mm		
Spirit-level, long, approx, 2000 mm		
Measure tape/folding rule, plumb.		
Measuring instruments		
Tools for electric installation		
Jigg saw with long blade "120mm".		For cutting lift well modules "35mm thick".
Wire shears		For cutting wires and wire covers.
Electric screw driver with extender and bits, type ph2.		
Ratchet with extender and sleeves 13 mm and 17 mm.		
Ring-open-end spanners 7-17 mm.		
Plate shears		
Riveting tongs		
Drill, diameter 3.3, 4.2, 6 and 12 mm		For pop rivets and making holes in jointing rods for drive chains.
Hand tools: multi-purpose pliers, screwdrivers, socket wrenches etc.		
Hack saw		For sawing the joint rod of the drive chain.
Crowbar		

Preparations before assembly

Use the layout drawing for erection site check

Measurements

There is an example under the heading “Layout drawing” on page 48. (The measurements in the picture are taken from that example.)

Check that the pit:

- has the correct measurements
- is even and level
- is painted.

Check the lifting heights (FF-FF). Check that the floors are completed, i.e. have the correct height.

Use the plumb lines to measure the openings of the joists. Also check that the diagonal measures of the openings are equal.

Check that the erection space is at least 30 mm above the maximum height of the lift.

Check the wall opening dimensions in front of the door sections according to the layout drawing.

Free space for doors

Check the space available for opening doors, taking the inclination of the floors into consideration. Are the doors hung correctly - right or left?

Free space for the pit prop

Check the space available for the pit prop. See the layout drawing.

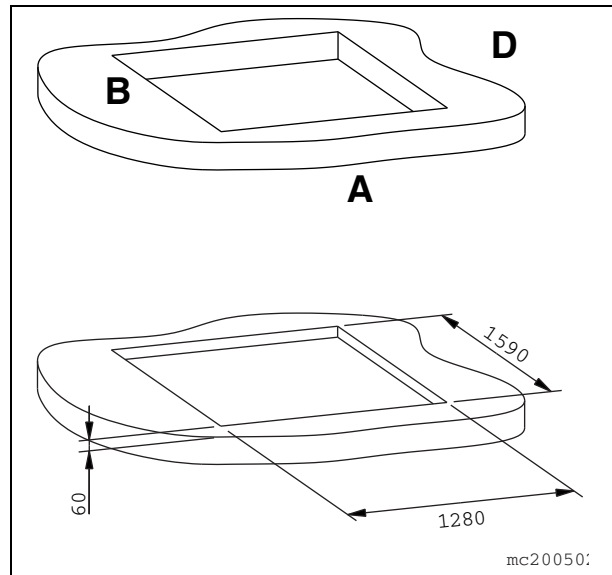
Power supply

Check that there is power supply for the lift, the illumination and the telephone. Compare with the electrical diagram and the layout drawing.

Other facts

Go through and make sure what parts of the lift are to be powder coated or just primed considering the framing of joists, walls etc. at the erection site. See the object description enclosed with the delivery of the lift. Also check the placing of glass modules, if any.

C



Lift material

Check at arrival

Check the number of packages against the consignment note and the equipment against the packing list.

Check that nothing is damaged or missing.

Placing

Transport the material to the erection site and place it on the appropriate floor. Use the “checklist”. See example under the heading on page 49. The door frames are marked on the bottom side of the profile with an 0, I, II, III or IIII, depending for which floor they are intended.

Lift well construction planning

- Where do glass module sections start and end, if any? The first lift well module might have to be adjusted so that the glass modules are at the right height above the correct joists higher up in the lift well. See the layout drawing.
- Where are the channels for lock wires and cables? (These channels can be found in adjacent lifts and in two-entrance lifts.)

Assembly

Introduction

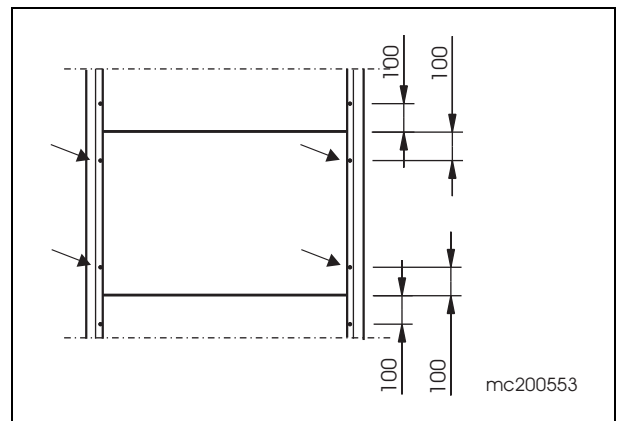
This section contains general information on how to construct so called precision gauge blocks and how to erect lift well modules and glass modules.

General information on how to erect modules

Lift well modules

Generally, each module is assembled with four screws in the corner profiles. The screws are placed about 100 mm from the upper and lower edges.

For a nicer look, the screws can be exchanged by pop rivets (4 mm).

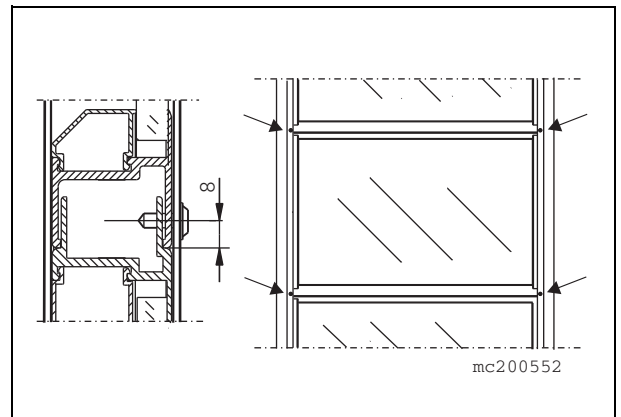


Glass modules

Glass modules are to be placed with the beveled window moulding on the outside of the lift well. (The flush side on the inside.)

The modules are generally put together so that each module is fastened with four screws in the corner profiles. You need to pre-drill 3,2mm.

The screws in the splice between two modules are placed about 8 mm from the lower edge of the upper module so that the screw also goes through the male profile of the lower module.



Construction of precision gauge blocks

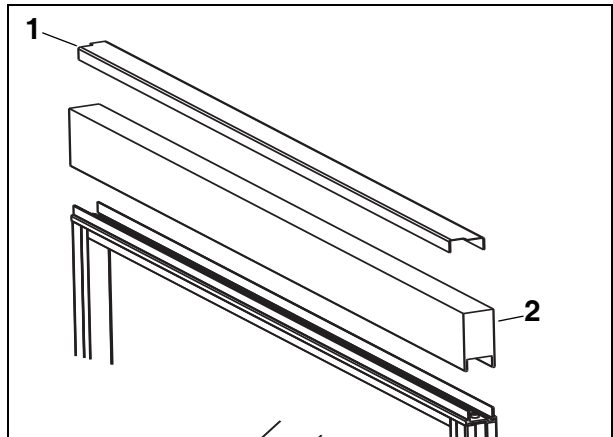
For glass modules, precision gauge blocks are used at joist passages and in the pit so that the glass surfaces are placed at the proper height according to the layout drawing. Note that the measurements in the layout drawing apply to cutting measurements of the precision gauge blocks. Example: see the heading “Layout drawing” on page 48

1. Cut the lift well modules with a jig saw. Protect the surface with insulating tape or something similar.
2. Remove the sharp edges.
3. Turn the U-profile with notch 1 towards the outside of the lift well. Note that the top U-profile looks different.



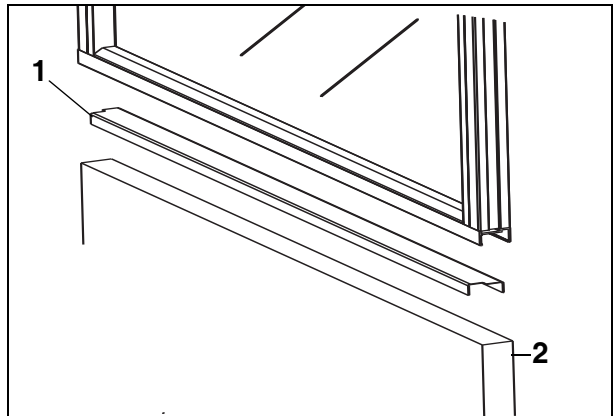
Finish (top clearance of lift well)

Use female section 2 of a lift well module.



Joist passage

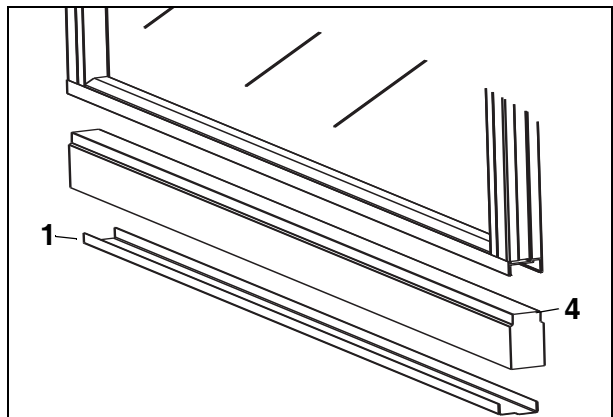
Use female section 2 of a lift well module.



Pit

For glass modules, for example.

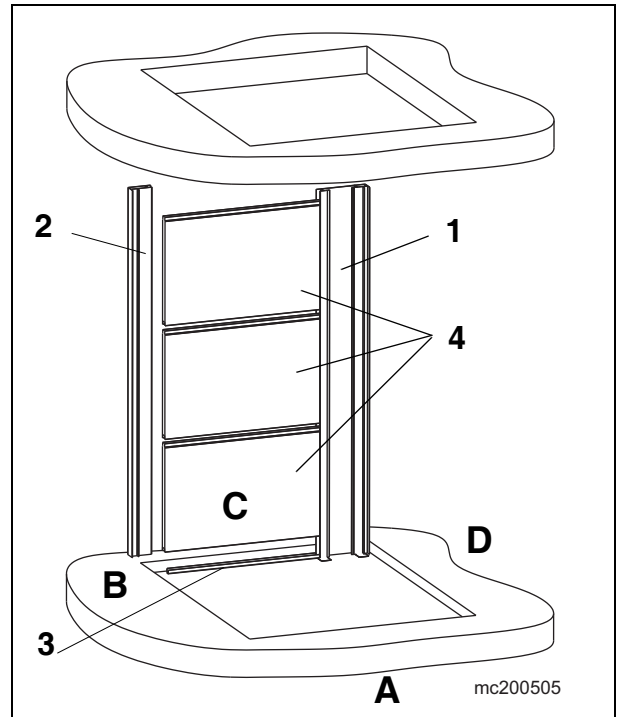
Use male section 4 of a lift well module.



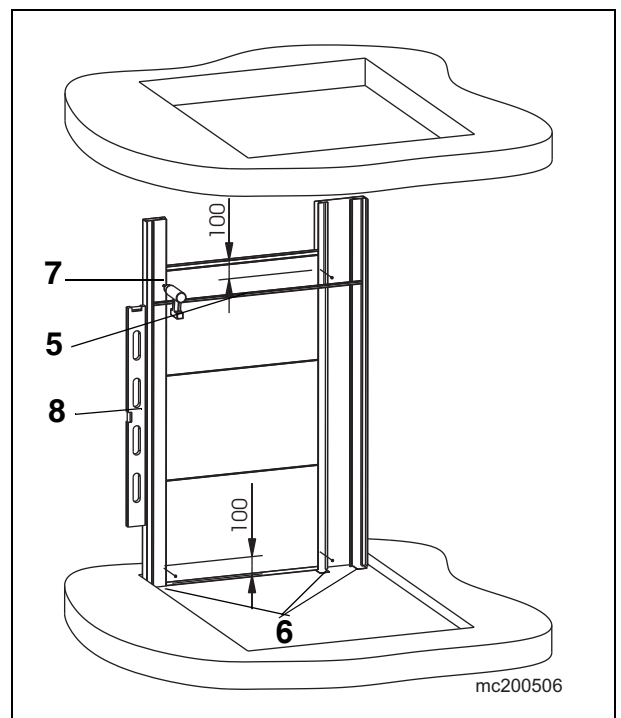
Lift well assembly according to layout drawing.

Bottom part of the lift well, landing 0

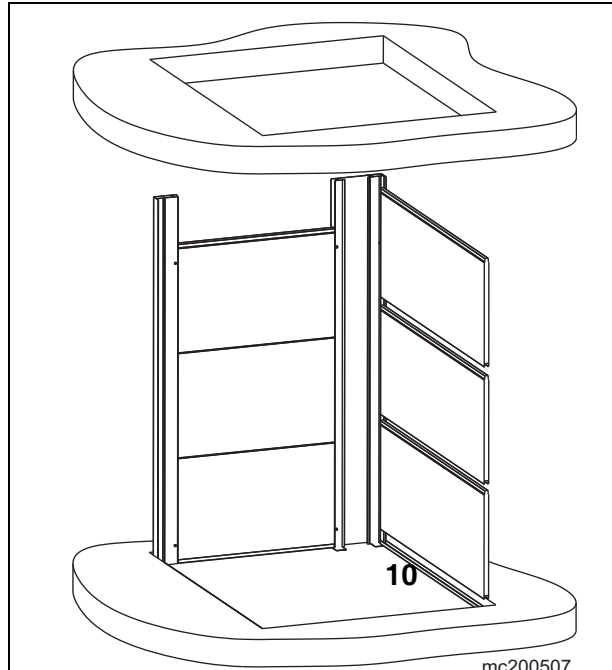
1. Erect the broad corner profile on side C of the lift well. Note that the broad profile must be placed against side D.
2. Erect the thin corner profile.
3. Place a U-profile (35 mm) on the bottom side, “female side”, at the bottom of the lowest lift well module/glass module. The notches (ends) of the U-profile should be turned towards the outside of the lift well.
4. Place three lift well modules/glass modules between the corner profiles. Turn the “male side” upwards. The modules must not reach the very bottom of the corner profiles. Leave a millimetre or two so that, later, you will be able to align the whole side C vertically.



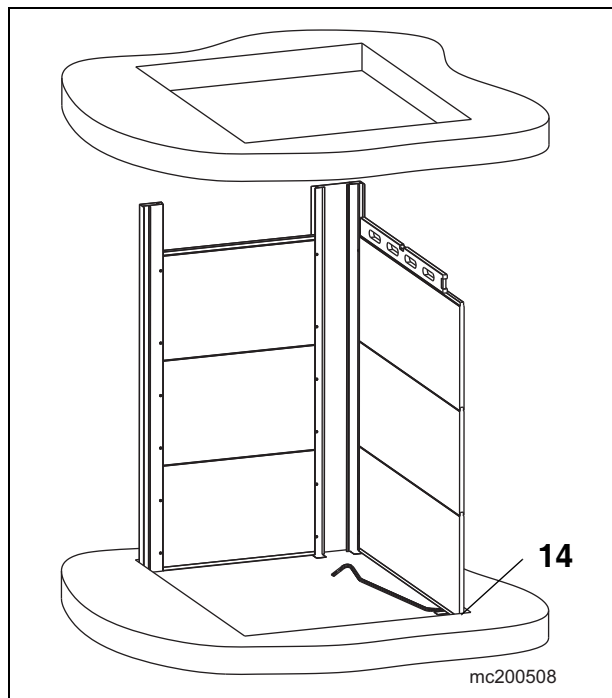
5. Place a short dimension stick between the corner profiles. Check that the base is level.
6. If necessary, adjust with a metal shim under the corner profiles. The shim must be placed under the corner profile and the module. Note! When plumbing, always start at the “highest point” of the pit.
7. Fasten the modules in the corner profile by attaching one screw at the top and one at the bottom of each side about 100 mm from the edges. Use a dimension stick. (For placing of screws, see the heading “General information on module assembly” on page 7).
8. Align vertically by means of a long spirit-level.
9. Fasten the modules and the corner profiles with screws.



10. Place a U-profile (25 mm) under the lift well module/glass module on side D. Turn the notch of the U-profile towards the outside of the lift well.
11. Place three lift well modules/glass modules on side D. Turn the “male side” upwards. The modules must not reach the very bottom of the corner profiles. Leave a millimetre or two so that, later, you will be able to align the whole side C vertically.

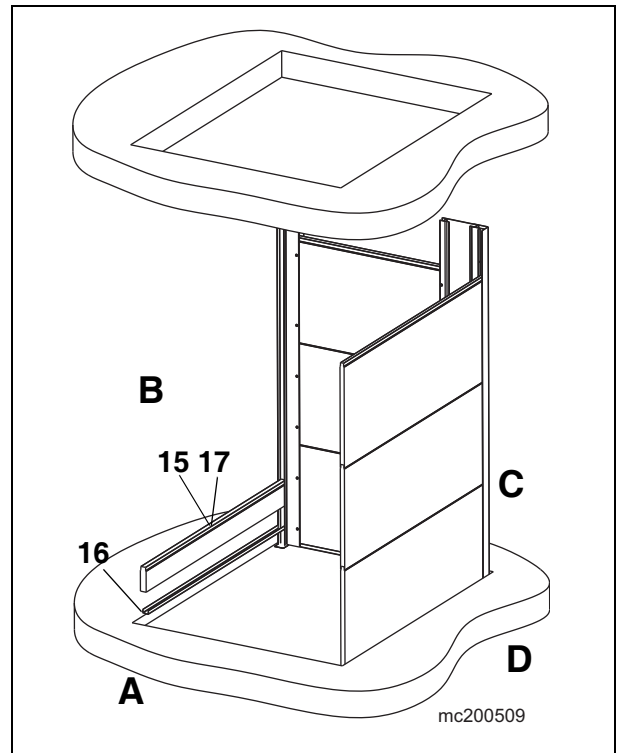


12. Fasten the modules in the corner profile by fastening one screw at the top and one at the bottom about 100 mm from the edges. Note! The screw heads in the corner profile of the driving side must be placed at least 6 mm from the corner profile to leave room for the guide rail flange.
13. Align horizontally by means of a spirit-level.
14. If necessary, use metal shims.

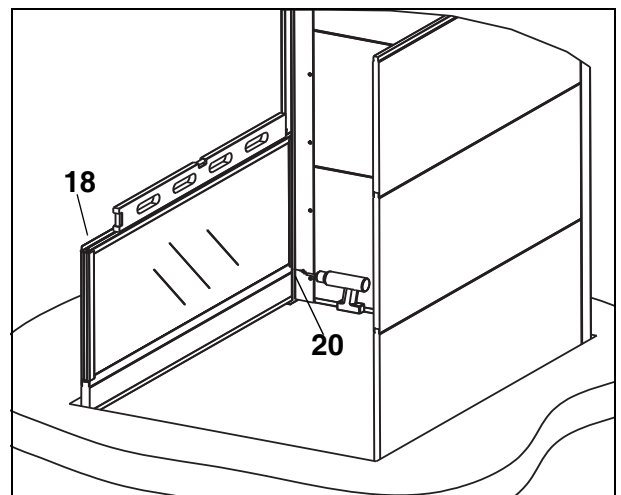


In this example, the lift well side B has glass modules. The first glass module must not be in close contact with the pit but should be placed a little higher up. For measurements, see the layout drawing.

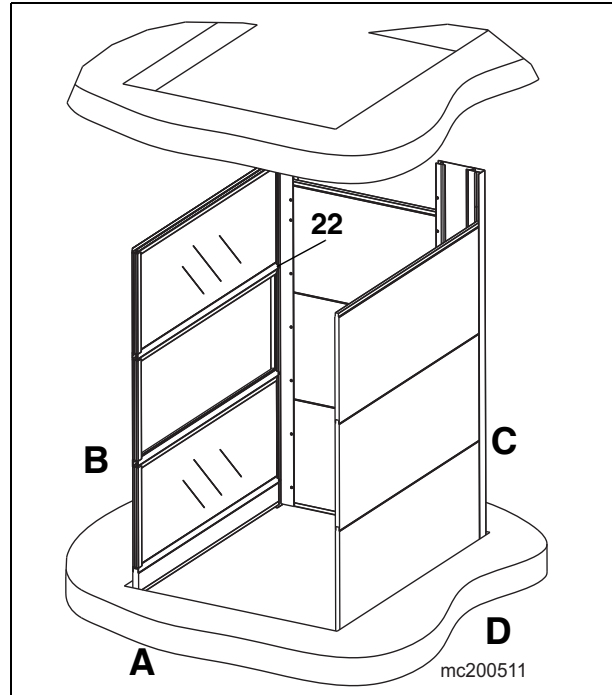
15. Using the male section of a lift well module, construct a precision gauge block and place it in close contact with the pit. See the heading “Construction of precision gauge blocks” on page 7.
16. Install the U-profile with the notch turned towards the outside of the lift well.
17. Fit the precision gauge block.



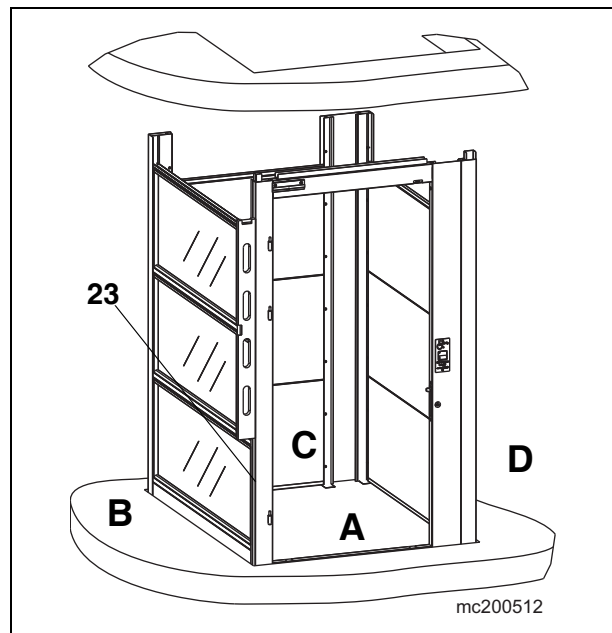
18. Place a glass module on top of the precision gauge block. Turn the “male side” upwards and the level glass side towards the lift well. Check with a spirit-level that the upper edge of the glass module is horizontal.
19. If necessary, adjust with a metal shim between the precision gauge block and the pit.
20. Fasten the glass module with a screw in the longitudinal bottom corner profile. See the heading “Glass module” on page 7.



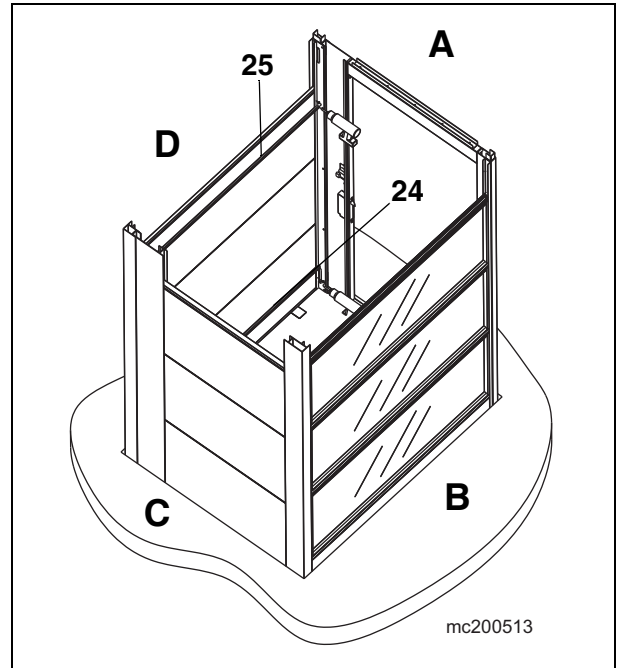
21. Fit three glass modules.
22. Fasten the tops of the glass modules in the corner profile with a screw through the two modules.



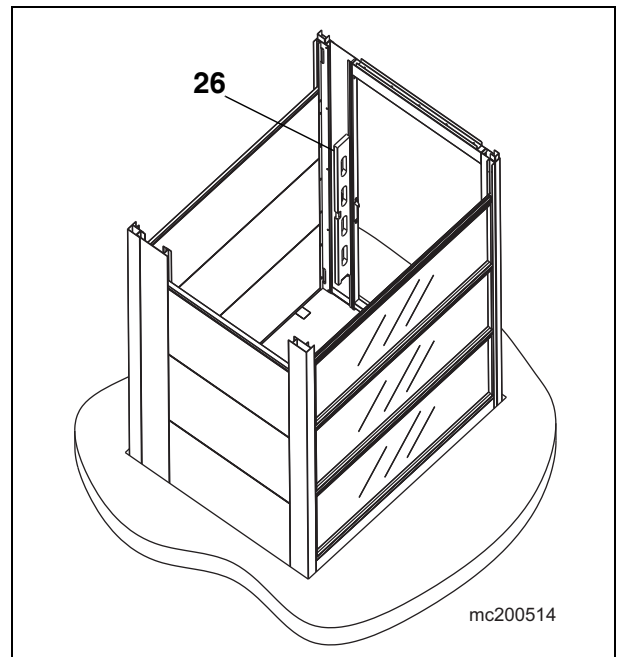
23. Set up the door frame. Start at the bottom. Check with a spirit-level that the door frame is laterally vertical. If necessary, adjust with metal shims.



24. Use a long dimension stick to check the correct distance between sides A and C of the lift well. Fasten the door frame with screws at the very bottom of the modules on sides B and D.
25. Move the dimension stick upwards and fasten the door frame with screws in the upper modules of sides B and D.

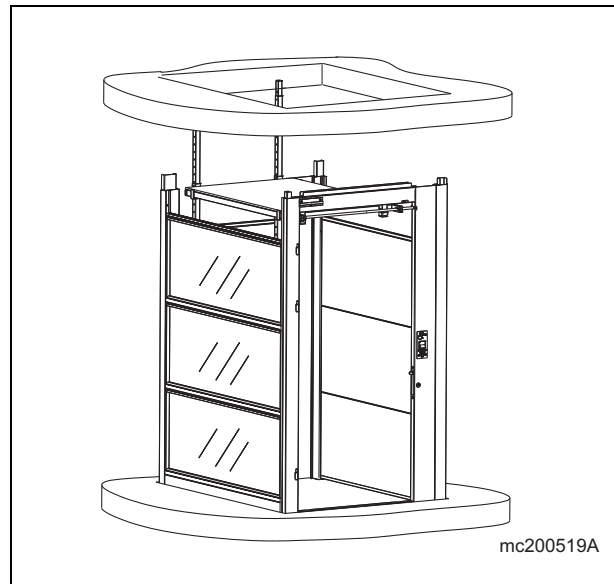


26. Check with a spirit-level and straighten the door frame vertically against sides A and C.
27. Secure the remaining screws in the modules.



Placing the lift well in the pit

1. Adjust the placing of the lift well in the pit and check that the lift well can pass freely upwards through the joists.

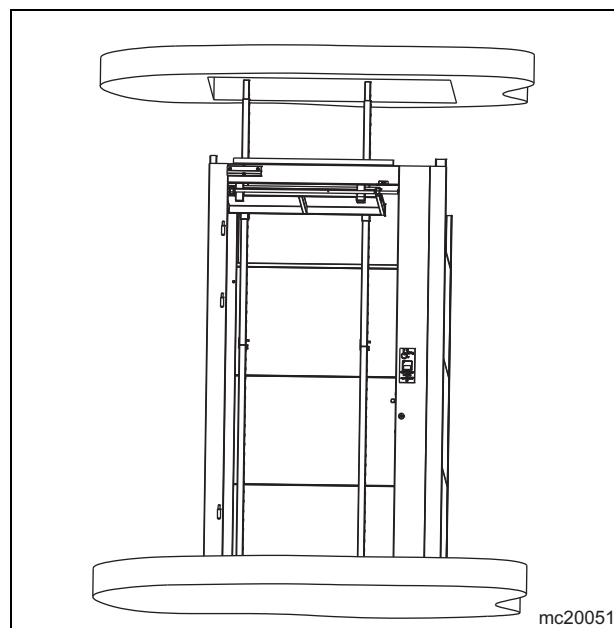


2. Measure and adjust the diagonal measurements of the lift well.

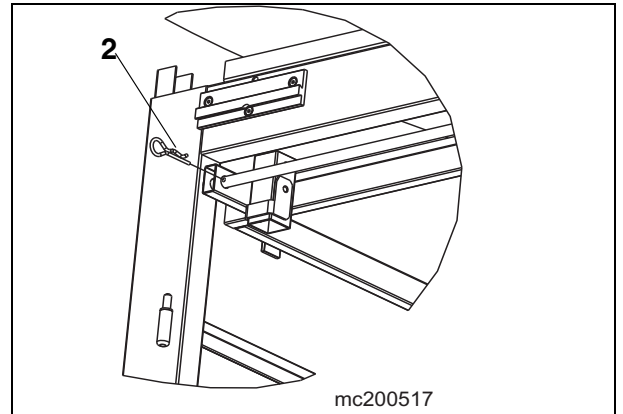


Erecting the work platform, landing 0.

1. Erect the work platform in the two pre-drilled holes of the door frame. Unfold the platform and set up two adjustable legs in the back edge of the platform.



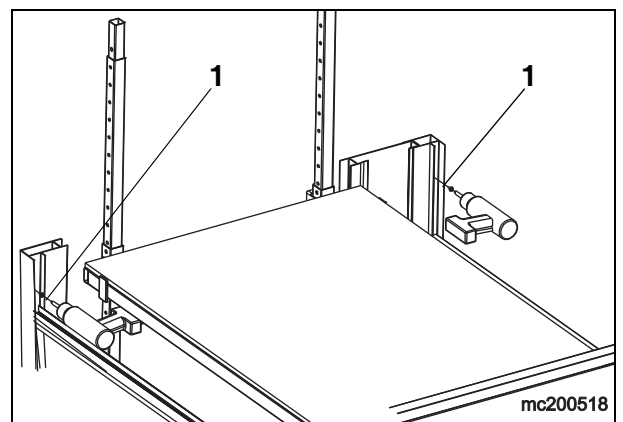
2. Attach the lock pins.
3. Set up the platform floor.



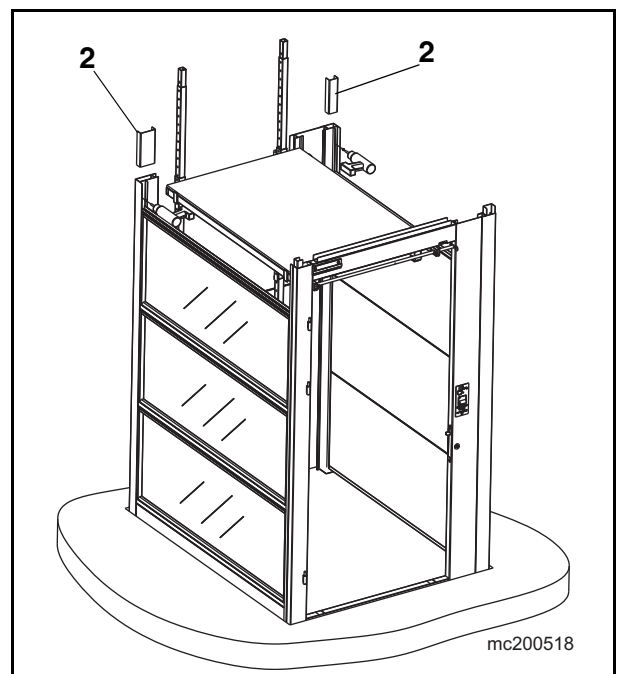
Construction of lift well for remaining floors (1-4)

Corner profiles, side C

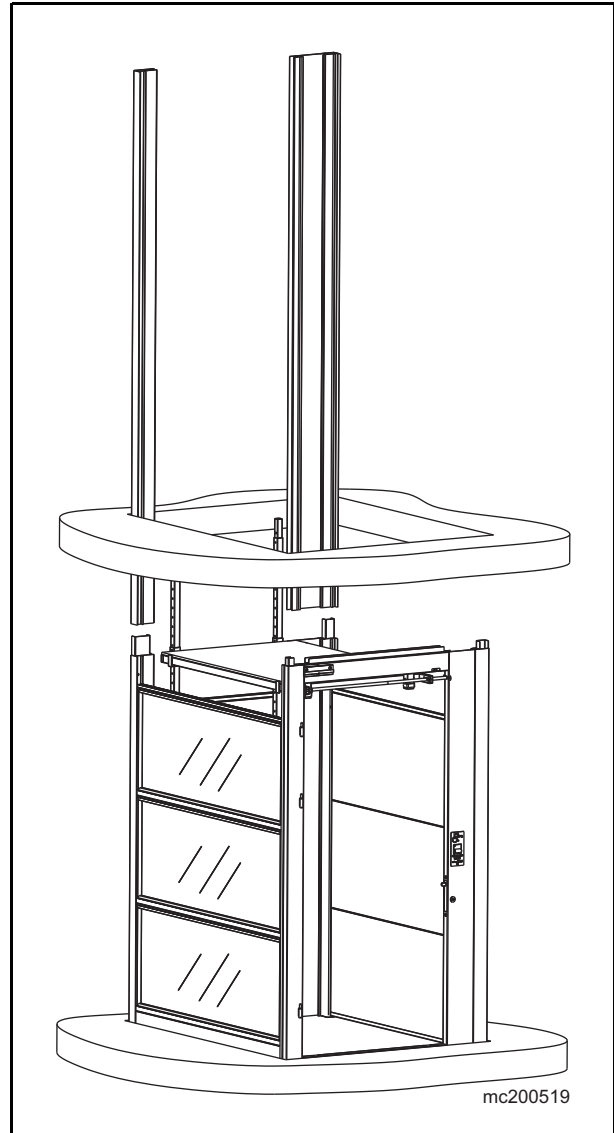
1. Fasten a screw in each corner profile of side C so that half the jointing sleeve descends into the profile.



2. Attach the jointing sleeves.

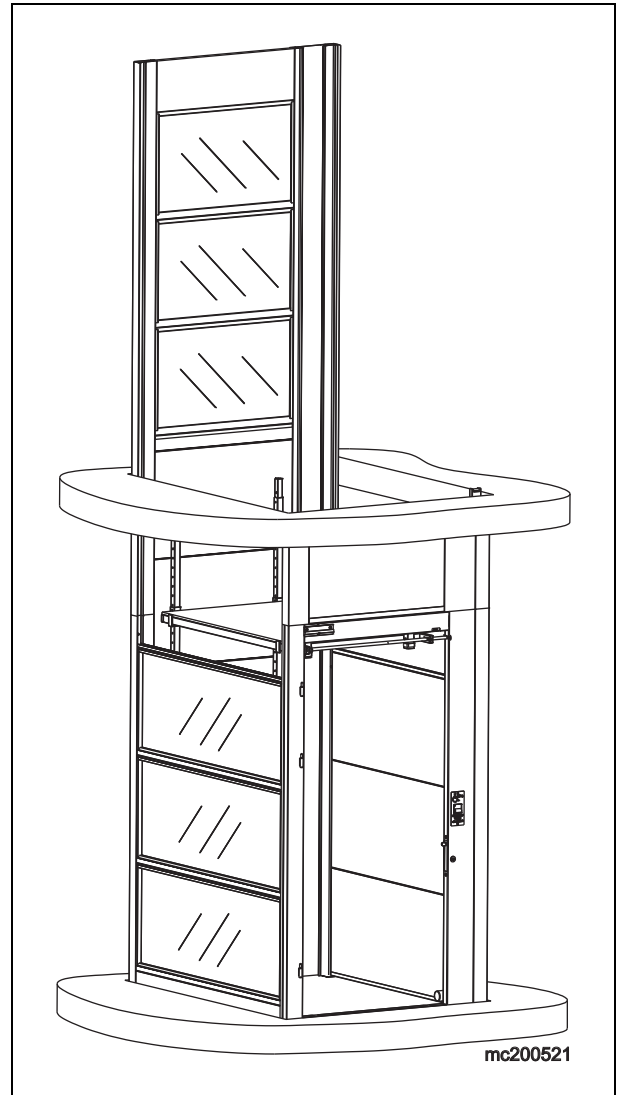


3. Erect the corner profiles onto the jointing sleeves



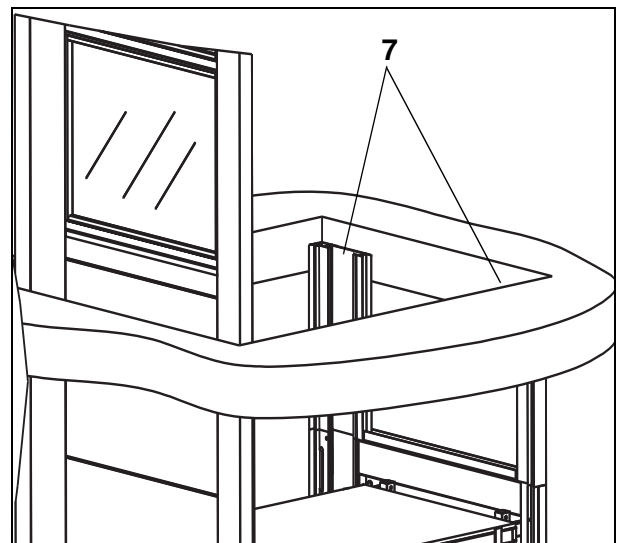
In this example side C is also fitted with glass modules and therefore a precision gauge block is needed for the joist passage and a second one is needed as a finish at the well top.

4. Construct precision gauge blocks, see the heading “Construction of precision gauge blocks”, on page 7.
5. Set up no more than 3 or 4 modules.
6. Align and fasten side C with screws in the same way as you did for landing 0.

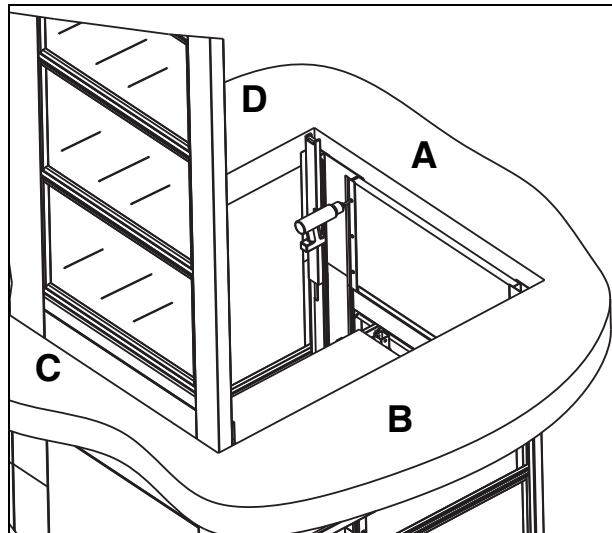


Corner profiles, side A

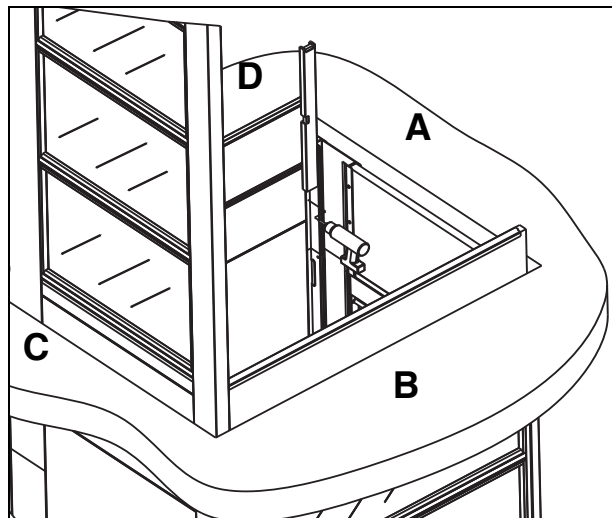
7. Push the two corner profiles into the door frame. For length, see the checklist. (The corner profiles ascend through the joists so that the door frame of landing 1 can be placed on top of these profiles.)



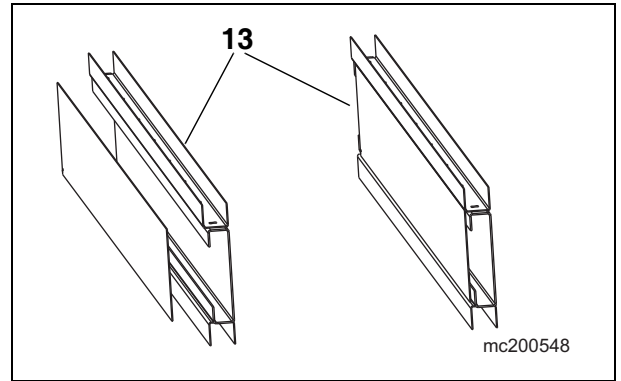
8. Measure and cut the lift well module with a jigg saw if necessary. The module should end a few millimetres below the upper ends of the corner profiles.
9. Assemble the module/modules.
10. Use a short dimension stick and fasten the module with two screws in the upper edges of the corner profiles.
11. Use a spirit-level and fasten the remaining screws in lift well wall A.



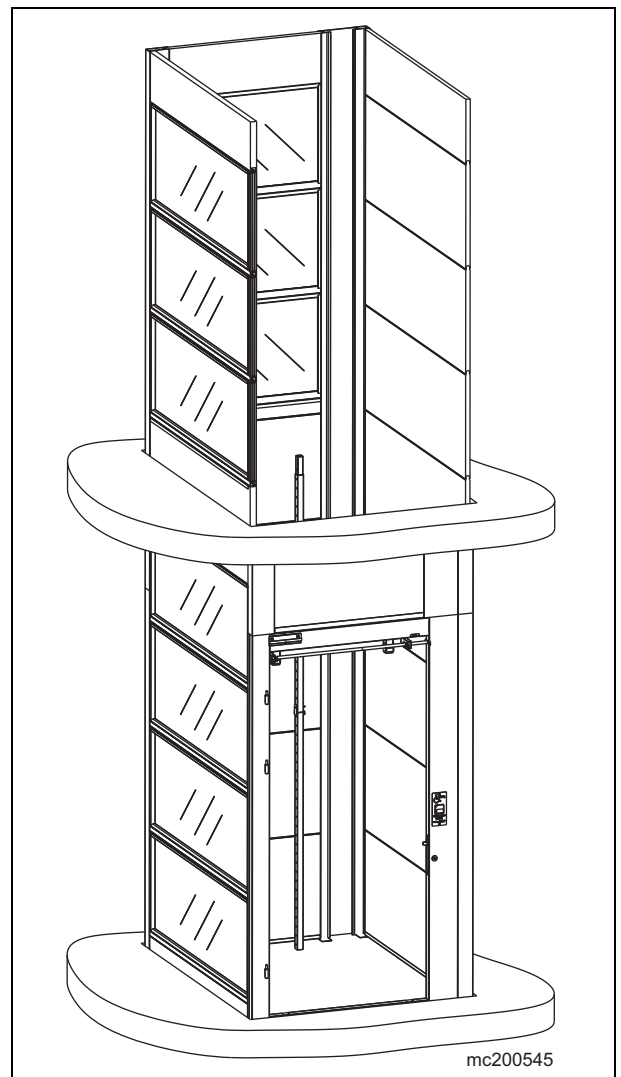
12. Erect the modules on sides B and D. Use a long dimension stick and fasten the modules with two screws in the upper edges of the corner profiles. Use a spirit-level and fasten the remaining screws in lift well walls B and D.



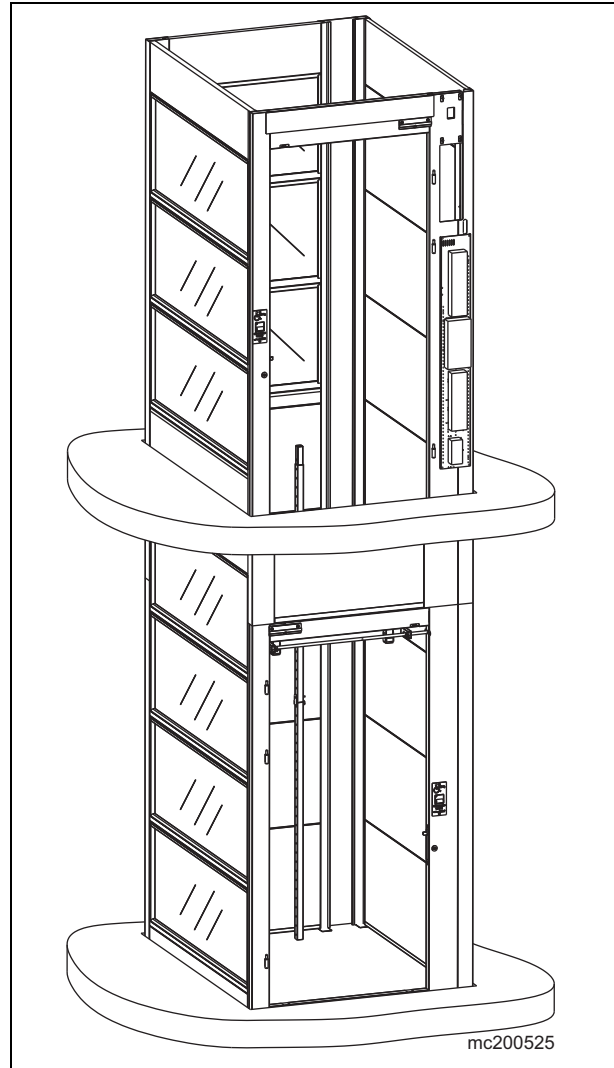
13. Note! For adjacent lifts and two-entrance lifts, remember that you need a channel for cables and wires in the lift well walls. The retiring ramp is always on the same side as the motor and the gear, see “Layout drawing” on page 48.



- 14. Install the modules on sides B and D.
- 15. Cut the modules about 2 mm shorter than the corner profiles.
- 16. Set up the U-profiles.
- 17. Fasten the sides with screws just as you did on the previous floor.



18. Install the door frame in the two foremost corner profiles.

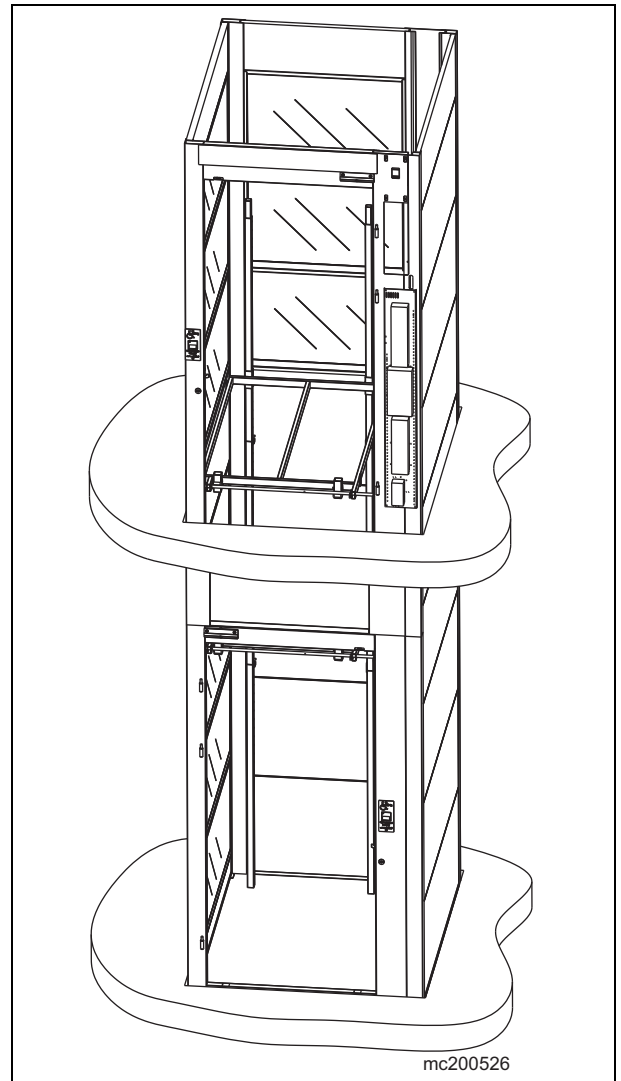


19. Unfold and fit the door frame against the modules of sides B and D. Use a glazier's lifting tool with suction cups.



Erecting the work platform, landings 1-4

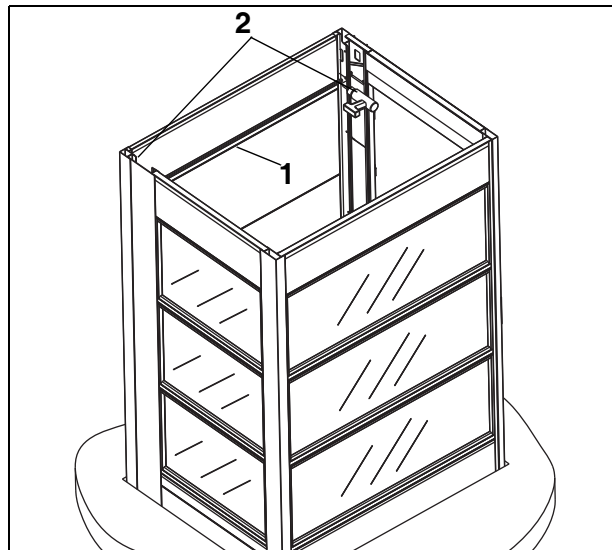
1. Erect the work platform in the two pre-drilled holes of the door frame. Unfold the platform and set it up in the two adjustable legs in the back edge of the platform.
2. Attach the lock pins.
3. Install the platform floor.



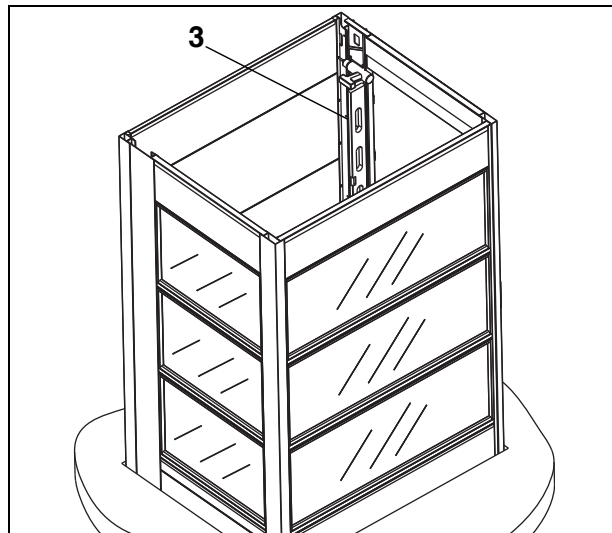
Finishing the upper part of the lift well

Straightening of sides B and D

1. Place the dimension stick on a level with the upper edge of the door frame.
2. Fasten a screw in the upper part of the door frame and another screw on the same level on side C.



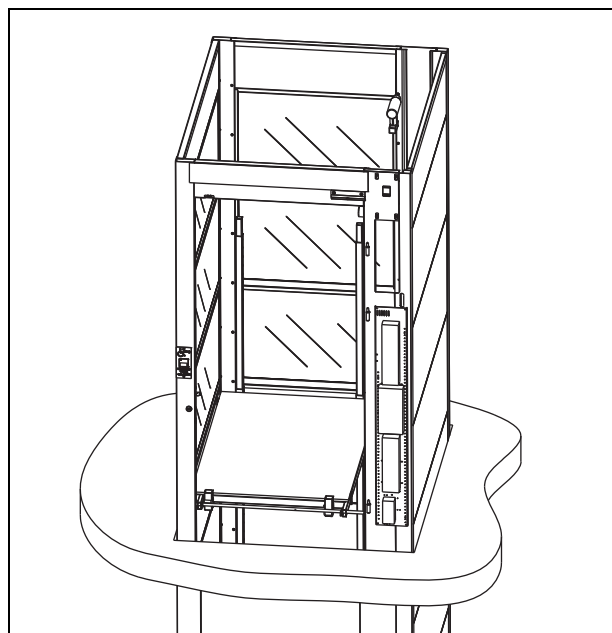
3. Align side A with a spirit-level and fasten the remaining screws.
4. Align and fasten the other side in the same way.



5. Erect the remaining modules on side C and secure them with screws. Use a short dimension stick.

In order to place the last lift well modules/glass modules on side C in case of minimal roof space.

- Unfasten the module screws temporarily.
- Pull the corner profiles apart so that the modules can be placed in between the corner profiles.
- Fasten the modules with screws.



Installation of electric cables and wires

Pull all the cables to the control panel, i.e. the cable from the pit and the cables from all the door frames.

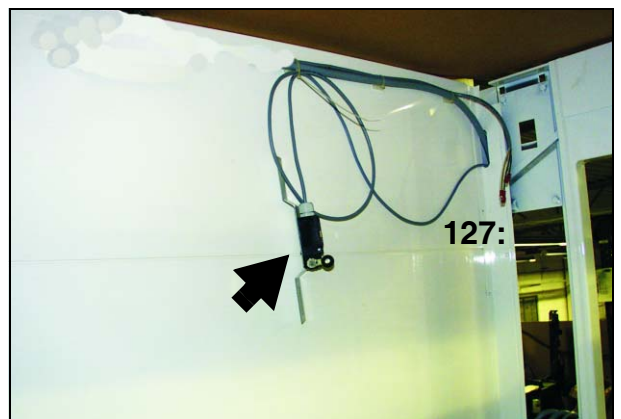
The illustrations show the standard installation, i.e. the control panel is installed on the door frame on the top floor at the same place as the motor and the gear.

If the control panel is placed on another floor on or outside the lift, cables for the hand wheel contact 28: must be installed; the motor cable and the brake cable to the control panel. (The hand wheel contact is effected by the hand wheel tool for emergency control of the lift.) Also see on page 28.



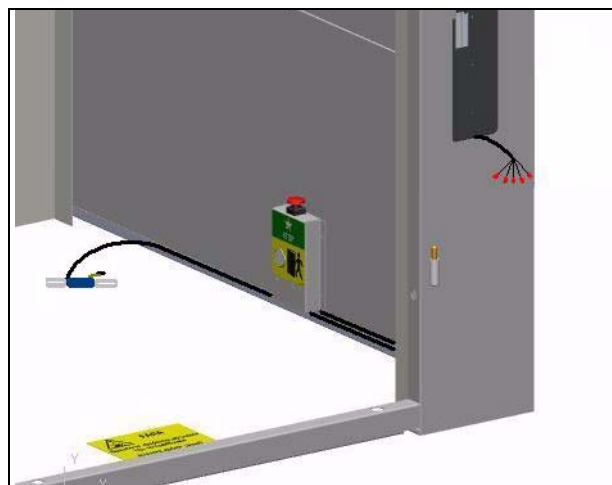
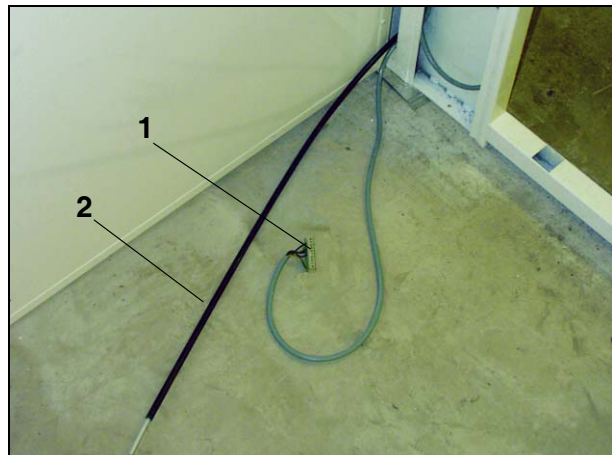
Top landing

1. Route the cable for the safety gear contact 127: to the control panel (to be installed later) with cable tie
2. .Temporarily fasten the upper end limit 62:U (marked with an arrow in the photo) and pull the cable through the door frame to the control panel.
3. Note where the cables from the door frames enter the channel so that you do not screw or drill through them by mistake. Try to keep the cables in the centre of the door frame profile and the corner profile.



Landing 0, pit

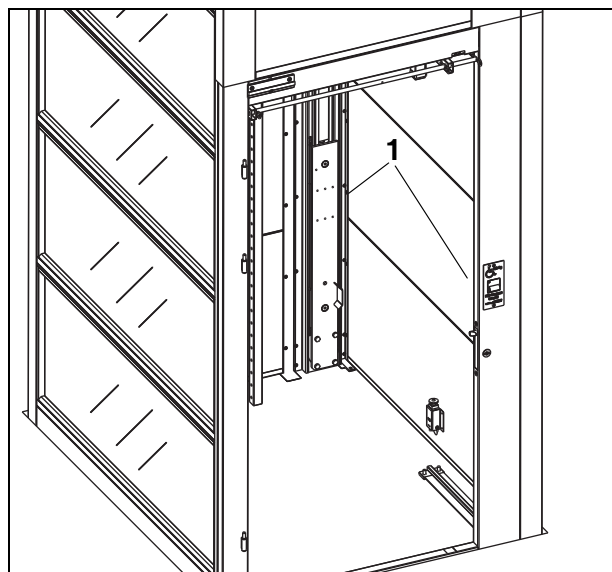
1. Pull the cable with terminal block “control panel - terminal block pit” through the opening in the door frame. (Length of cable to the block approx. 0.8 m.)
 2. Pull the door lock wire through the same opening.
-
3. Install “terminal block with the stop button” and cable for the pit prop and end limit switch 62:U on the side wall of the driving side in the lift well. It should be placed in a position of 100mm from centre nearest door side, about 50 mm upwards on the wall.
 4. Route the cable for the pit prop into the corner profile and out where the recess for the pit prop is. The end limit and the pit prop shall be fitted later.



Guide rails

Lower guide rails

1. Place the lower rails in the lift well. Note the markings A and C. Side A is always the side where the motor and the gear are placed.

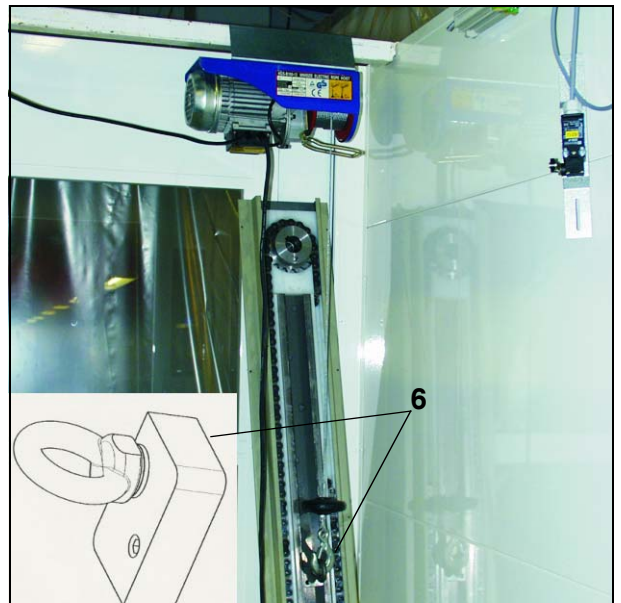
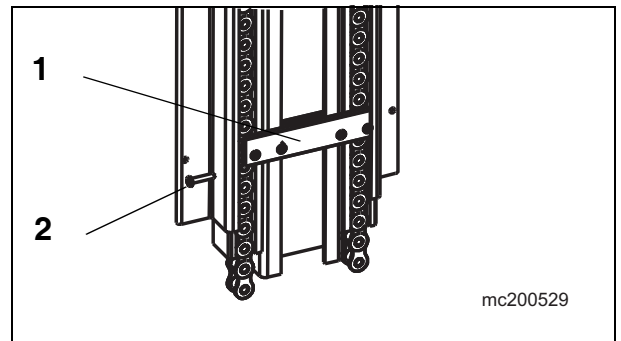


2. Place the guide rails in the very corners with the mounting brackets turned towards the lift well wall. Check that the lower end of the guide rail is on the same level as the lower edge of the lift well, i.e. take the shims, if any, into consideration
3. Secure the guide rails with screws. Note! Use 25 mm screws. Check that you do not screw through any cable or door lock.

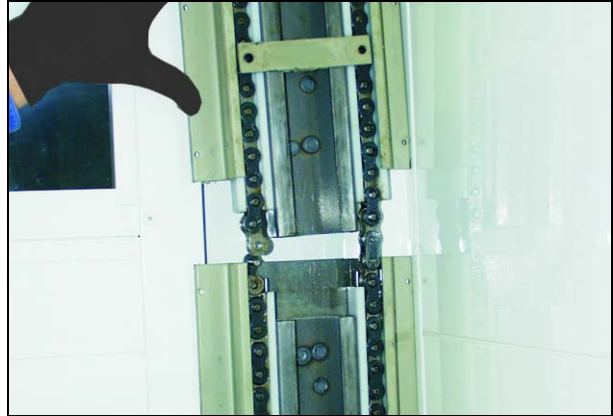


Upper guide rails

1. Install the chain fixing device.
2. Remove the two plate screws (transport locking) that keep the chain in place in each guide rail.
3. Erect the adjustable mounting rod between two of the walls of the lift well.
4. Attach the lifting winch to the mounting rod.
5. Lift the guide rails into the lift well.
6. Install a lifting loop on one of the guide rails.
7. Lift the guide rail. Check that it is installed in its correct position, see the marking in the guide rail profile..



8. Joint the chains. Lift the guide rail that is to be jointed high enough above the lower guide rail so that you can attach the connecting links.

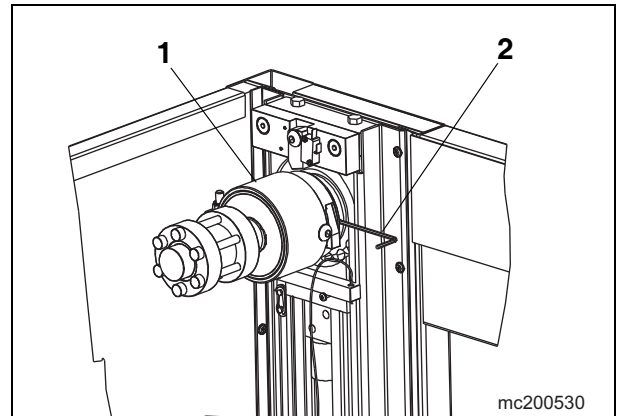


9. Hold the chains in the upper guide rail with e.g. two screw drivers and loosen the chain fixing device at the same time. Lower and adjust the guide rail. Work carefully and check that the steering pins enter the top track properly.
10. Fasten the guide rails in the lift well with screws. Use 25 mm screws. Check that the two C-profiles of the guide rails are in a position exactly opposite each other, so that the lift moves softly past the joint.
11. Perform the same operation with the remaining guide rails..

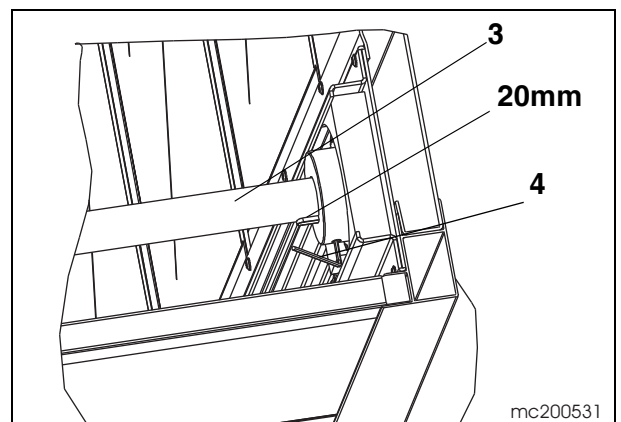


Driving shafts, gear and motor

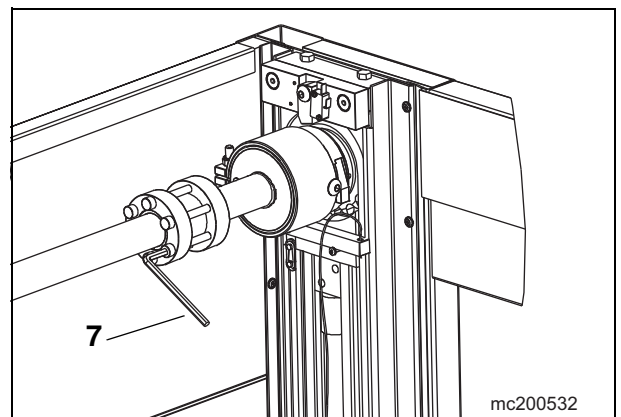
1. Carefully push the safety gear shaft into the sprocket wheel on side A of the lift. Note! Do not use force!
2. Fasten the lock screw (use a 3 mm socket wrench).



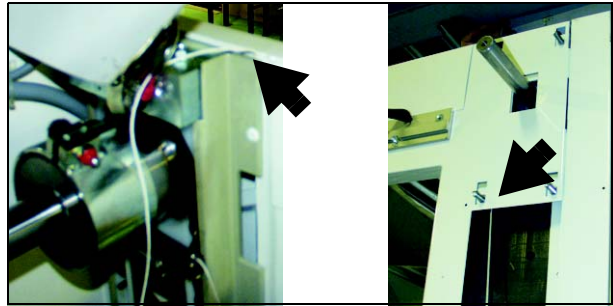
3. Carefully insert the long driving shaft into side A. Check that the shaft reaches the very bottom of the sprocket wheel bearing in the turning case. Maximally 20 mm of the keyway should be seen. Note! Do not use force!
4. Fasten the lock screw (use a 4 mm socket wrench.)



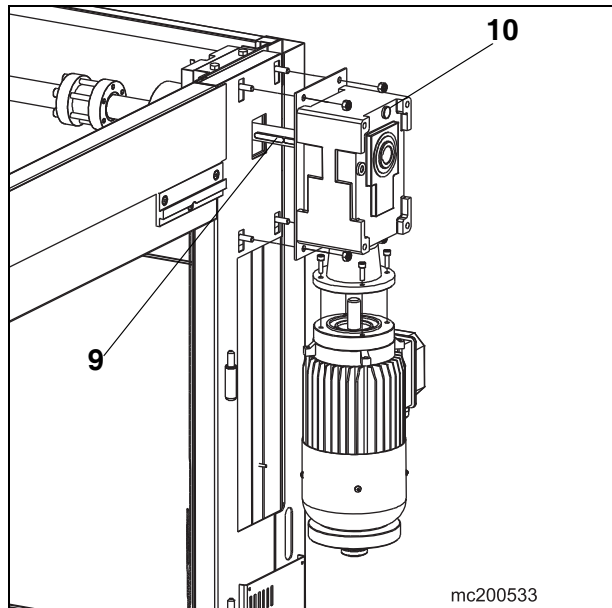
5. Loosen the four M10 screws (transport position) on each slide so that the shafts can be turned by hand. (Note! These screws will be needed later for platform fitting.)
6. Measure and adjust the chain joints of the two guide rails so that they are at the same distance from the turning case.
7. Pull the shaft coupling tight crosswise (use a 6 mm socket wrench 41 Nm).



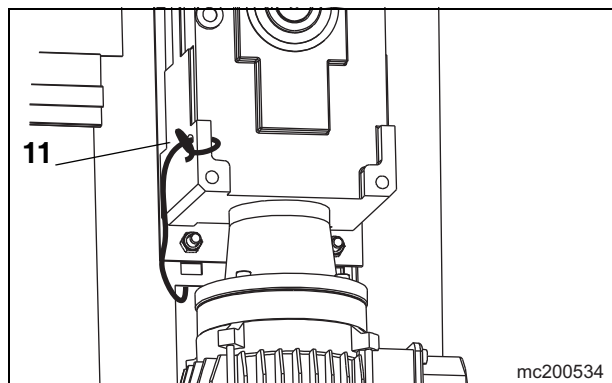
8. Thread on the test device cord of the safety gear through the hollow space between the guide rail and the door frame.



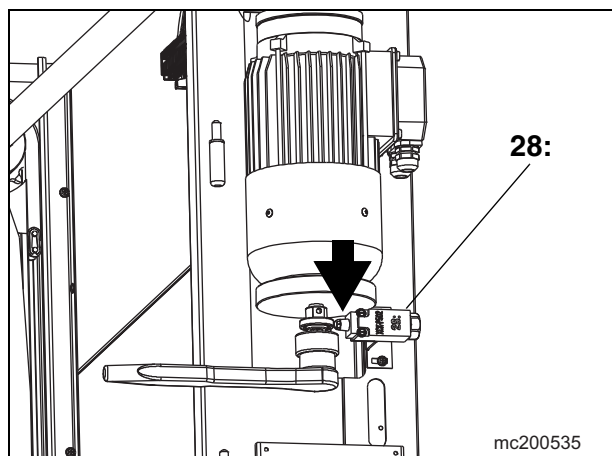
9. Fit the two keyways on the short driving shaft before installing the motor package.
10. Change the oil plug at the top of the gear for the enclosed plug with vent holes.



11. Tie the test device cord of the safety gear in an empty screw hole on the gear.



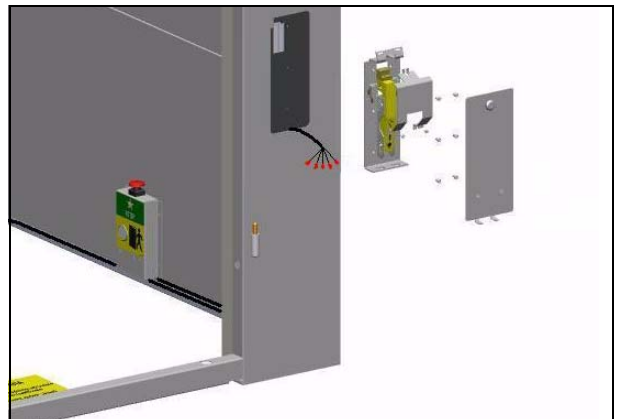
12. Fasten the hand wheel contact 28: with screws. The contact must be activated before the hand wheel tool enters the teeth.



Connecting pit functions

Connect the cables according to the electrical diagram of the lift. The bottom floor is called “landing 0” in the diagram.

1. Fit temporarily and connect the terminal floor switch (marked with an arrow in the illustration). The friction roller should be placed at least 40 mm from the outer edge of the guide rail. (The position is to be adjusted later).
2. Fit and connect the pit prop, contact 155:1 and the position contact 155:2. See in the electrical drawings
3. Fasten all cables in the side wall of the lift well.
4. Fit the pit prop cover.



Connecting control panel wiring

1. Connect the cables in the control panel according to the electrical diagram.
 - Do not cut the cables too short.
 - Unload the cables with cable tie.
 - **Important! Make sure there is no lead connected to terminal input 15 on the PLC! Impulse function!**

Connecting drive command box

Safety

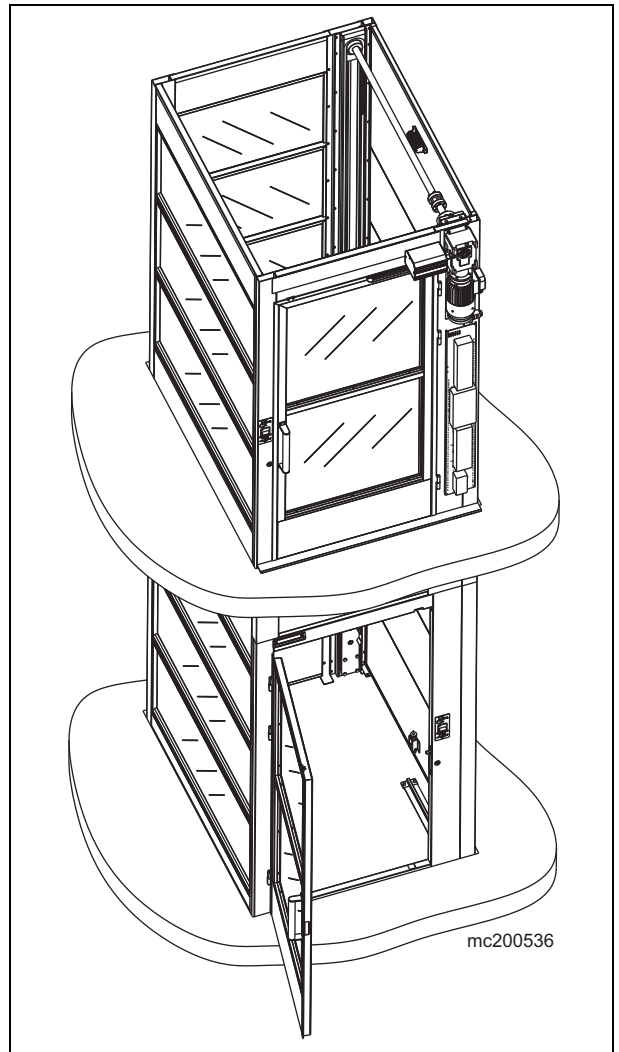
Use the approved drive command box from Motala Hissar (with emergency stop).

Note! For your own safety and that of other persons, disconnect the control voltage for the call buttons, connected to terminals X1/47 and X1/48. See the electrical drawings.

1. Connect the emergency stop to block X1/3 and X1/10 in the controlpanel. **Important! This is the same terminals where the platform safety contacts will be connected later. The command box shall be disconnected before connect the platform safety leads.**
2. Connect the lift drive wires. Connect the supply to terminal X1/24V, upwards drive to X1/42 and downwards drive to X1/41. See the electrical drawings.

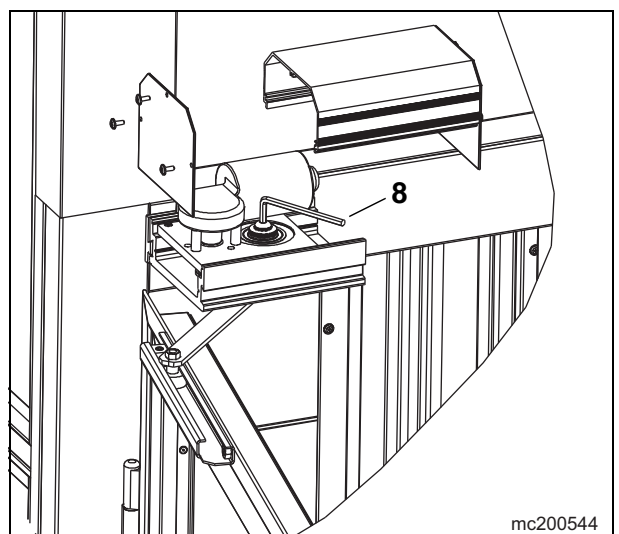
Door panel and removal of work platform

1. Secure the door openings so that nobody can accidentally fall into the lift well.
2. Install all the sills loosely except on landing 0 where the sill should be fitted properly after fastening the lift well.
3. Hang up the doors.
4. Remove the work platforms and close the doors as the platforms are being removed.
5. Adjust the doors and the lock box. (There should be an approximate play of 1 mm.) Adjust by loosening the screw above the lock box, push the loose wedge upwards or downwards.
6. Fasten the screw.



7. Install the door closer or electric door opener, with the exception of landing 0 where only the door panel should be fitted. The door closer is fitted after the fastening of the lift well.
8. The electric door opener moment is factory-set.

The adjustment of door opening times for electric door openers is made later. See separate instructions in the electrical diagram.



Commencing with drive command box

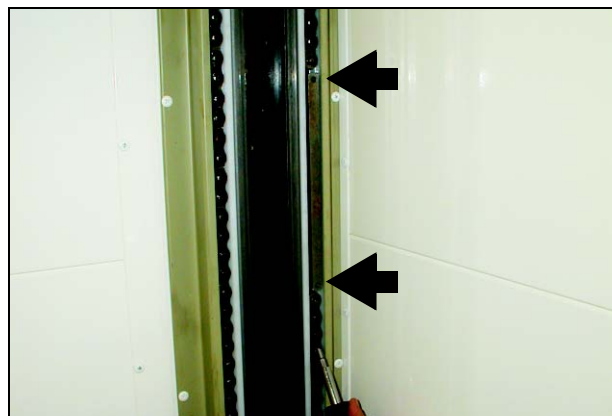
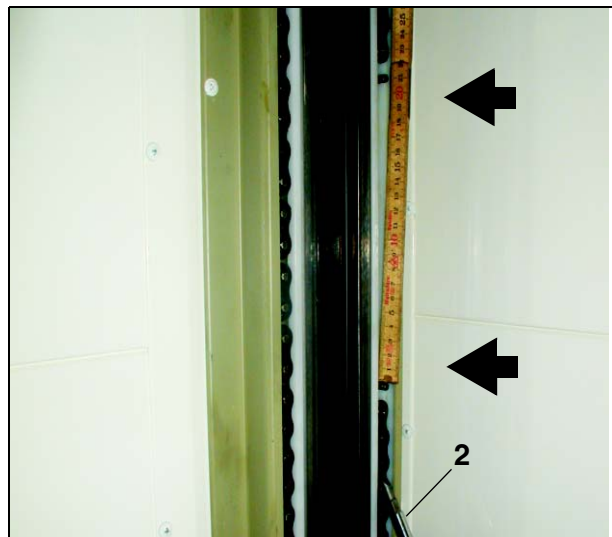
1. The safety circuit must be whole in order to drive, i.e. stop circuit, door circuit, lock circuit etc.
2. Switch on the supply voltage.
3. Check that the slides of the platform goes in the right direction in relation to the contactors. If they go in the wrong direction, change motor phase.

The lift will only go down after the current has been disconnected!

The lift has PLC control, so you can only drive to landing 0 the first time, in order to reset the PLC program after the current has been disconnected. You may need to adjust floor 0 limit switch now.

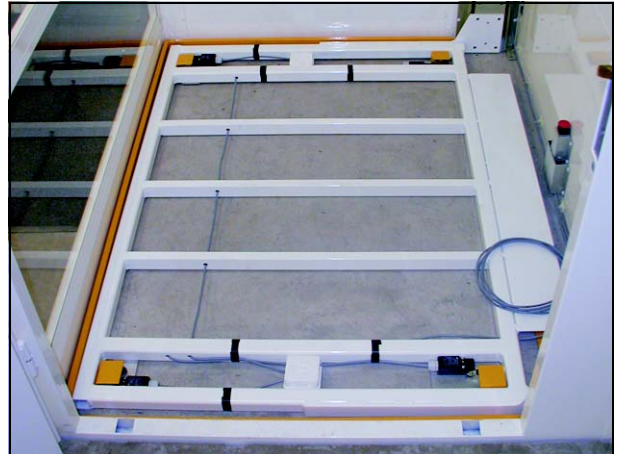
Chain jointing rod

1. With the drive command box, drive the slides almost to the top so that the chain ends are reachable from landing 0.
 2. With a big screw driver, press the lower end of the chain upwards. Measure the desirable length of the jointing rod.
-
3. Measure and drill a new hole (diameter 6.0 mm) in the jointing rod. Cut and bevel the ends.
 4. Fit the jointing rod with connecting links.
 5. Perform the same procedure on the other chain.
 6. Drive the slides down.

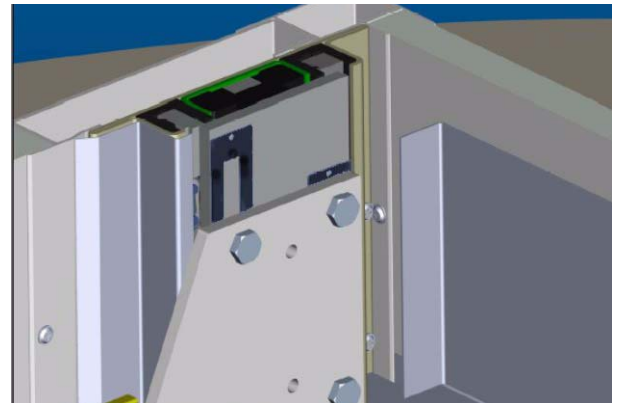


Platform

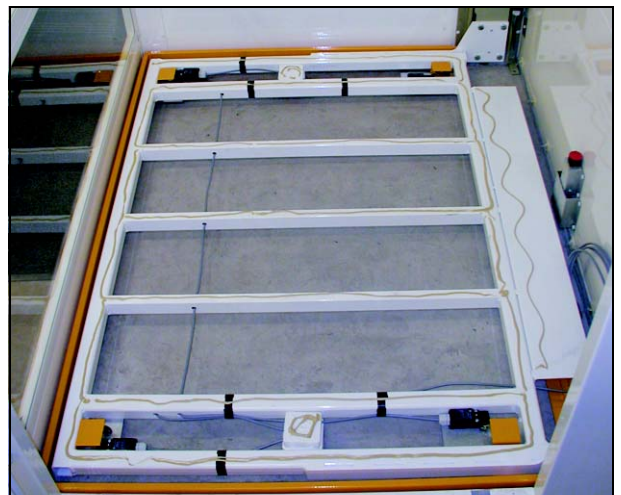
1. Lift the floor panel from the floor frame.
2. Carry the floor frame into the lift well and fold it downwards.



1. Fasten the floor frame in the slides, using eight M10 screws. Lift and adjust the floor frame into position with a crowbar so that the screws can be fastened loose by hand.
2. Fit if necessary shims "in pairs between" platform fixing and slide. If you need to put more than one pair of shims to fill up the gap, you shall share them equal only in pairs to both fixings.
3. Fasten the screws with 55 Nm



4. Put an adhesive run on all the floor frame crossbars.

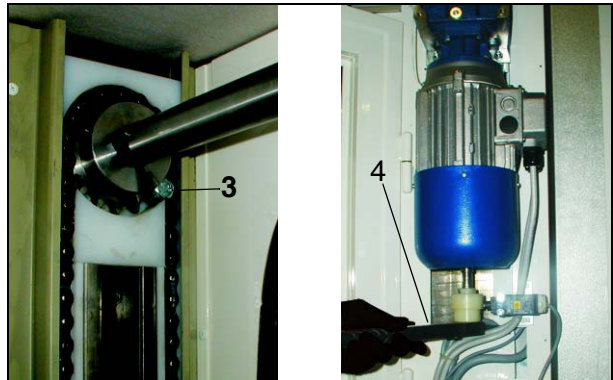


5. Install the floor panel. Check that the bent-down edge of the floor panel is in close contact with the floor frame.
6. If necessary, fine-adjust the diagonal measure of the lift well so that the platform can run freely and smoothly through the whole lift well.
7. Check with a spirit-level that the platform is horizontal. If it needs adjusting, see below.



Fine adjustment of the platform

1. Run to the topmost landing.
2. Push the emergency stop.
3. Place a 12 mm drill steel or a screw between the sprocket wheel of the driving shaft and the chain.
4. Lock the drill steel/screw by lowering the platform somewhat with the hand wheel tool.
5. Loosen the terminal coupling of the driving shaft.
6. Measure with a spirit-level and adjust with the hand wheel tool to make the platform floor horizontal.
7. Fasten the terminal coupling (41 Nm).
8. Raise the platform somewhat in order to remove the drill steel/the screw.
9. Note! Do not forget to remove the drill steel/the screw.

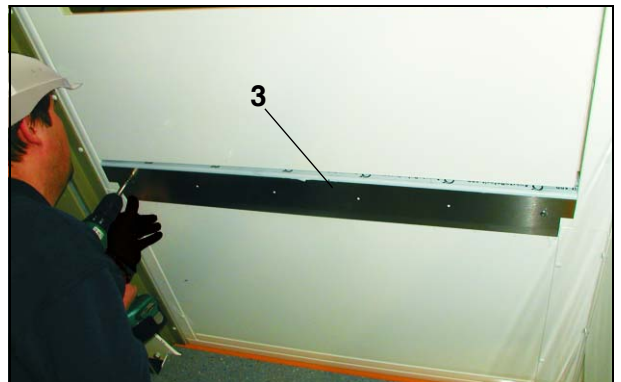


Fixing lift well

1. Fasten the lift well in the pit with bolts. One bolt for each guide rail and two in the notch of the door frame.

Sills

1. Lift or hang off the lower door (landing 0) temporarily and install the sill.
2. Install the door opener/door closer for landing 0.
3. Secure the sills on all landings with screws.
4. Check that the opening between the sill and the door panel does not exceed 6 mm. If the opening is wider, fit the door plate onto the inside of the door. This does not apply to landing 0.

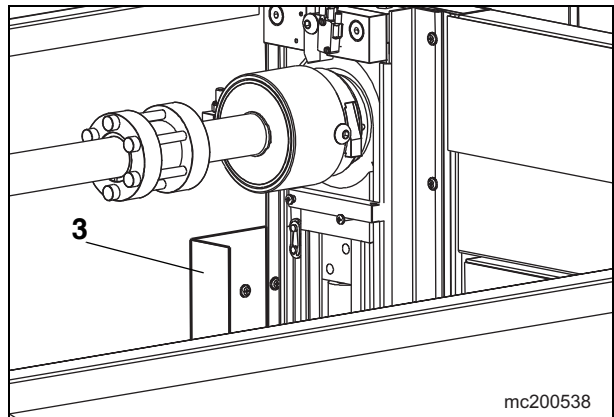


5. Placing of door plate.



Fixing plates

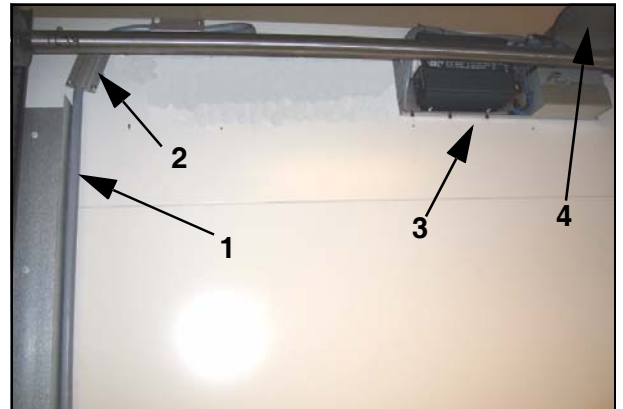
1. Secure the fixing plates (90x50x2000 mm) for the “large cover plates” of the guide rails with screws. The fixing plates must be edge to edge with the flange of the corner profiles. Start from the bottom, 50 mm from the pit. **Note!** You now have to loose the 62:N switch and re-install it up on the fixing plate.
2. Make notches for cables and wires, if any. (Applies to two-entrance lifts and open adjacent lifts.)
3. The fixing plates must end where the top turning cases of the guide rails begin. Check that the safety gear can rotate freely.



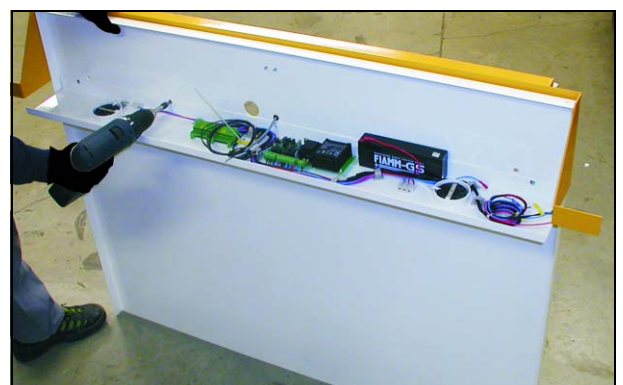
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Travelling flex cable, panel plate, overload unit and control panel

1. Run the lift to the topmost landing.
2. Lower the flex cable (1) with the platform terminals in the end on the opposite side of the door on floor 0. The unpeeled part of the cable should reach the pit precisely. Lower the cable another 1150 mm.
3. Secure the travelling cable with U-fasteners (2).
4. Fasten the remaining parts of the travelling cable with U-fasteners. The cable must not run down further than 180 mm from the well top. Check that no cables can touch the driving shaft. Note! If the lift has an electrical emergency lowering device (3). Also leave place for that.
5. Install the protection over the safety gear (4).
6. Fit (if any) the electrical emergency lowering device. Route the cables 28 and 29 to the control panel.
7. Switch off the supply voltage of the lift, route and connect the travelling cable to block X1 in the control panel.
8. Switch on the supply voltage of the lift, drive down to landing 0 and switch off the power.
9. Fit the retiring ramp on the same side as the motor is fitted. A-side.



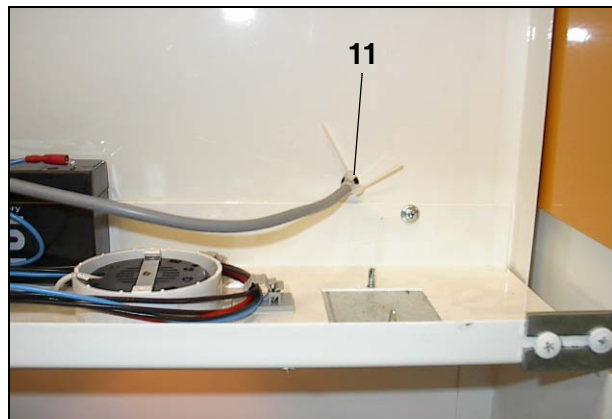
10. Attach the panel shelf with electric equipment on the panel plate of the platform.



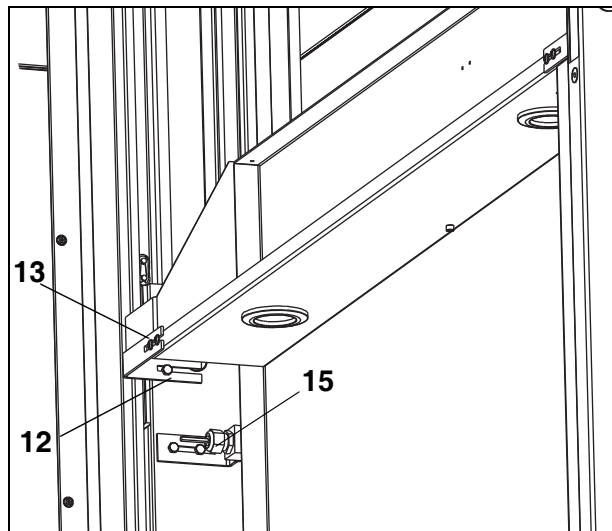
11. Place the panel plate on the platform.
12. Thread the travelling cable through the hole “nearest the side as the cable hangs on” in the panel plate and secure the cable with U-fasteners. Note! Check that the screws are not placed under the panel shelf or damage the shelf components.



13. Thread the cable from the floor sensitive edge contacts trough the hole. Stretch it and lock it with cable tie.

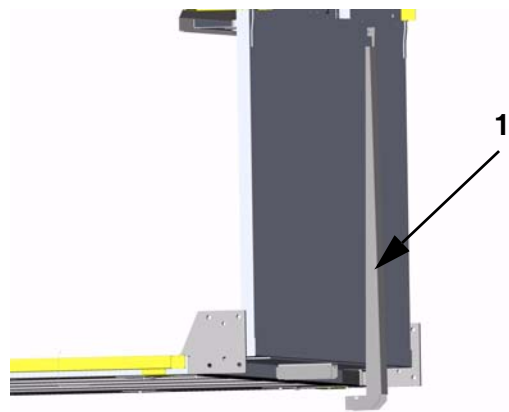


14. Fasten the two angle brackets for the panel shelf with hexagon-headed screws, M6x10, and plain washers in each slide.
15. Fasten the angle brackets in the panel plate with self tapping screws. Adjust the position of the brackets with the screws so that the panel plate is in an exact central position between the slides.
16. Adjust the distance between the sensitive edge list of the panel plate and the lift well wall. The distance should be 10-15 mm, maximally 15 mm. Adjust the distance by loosening the hexagon-headed screws.
17. Fasten the fixing with contacts 66:,61: (if any) and 51: in the upper pre-drilled holes in the slide on the opposite side of the side where the motor is placed.



Overload unit

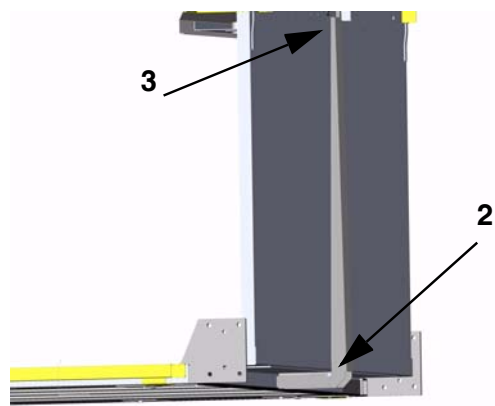
Bring the platform to the middle of the door opening so you can reach to fit the overload arm (1) from underneath.



Fit with screws in the pre-drilled holes nearest the inner corner (2).

Adjust the distance between arm and panel plate to be 15mm at the end of the arm (3) when the platform is unloaded.

Fasten the arm in the holes that remain. Use self-drilling screws.

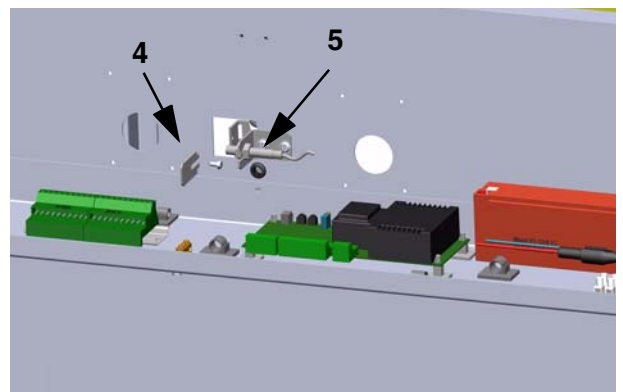


Fit the overload flag (4) from inside of the panel.

Pre-adjust the transmitter (5) to a gap of 2mm between transmitter and the flag and at the same time the distance between the edge of the flag to centre of the transmitter to about 6mm.

Note. Do not tighten the nuts to hard you may damaged the transmitter.

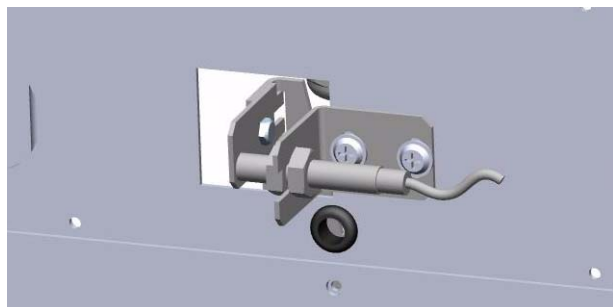
Adjustment with load has to be made later.



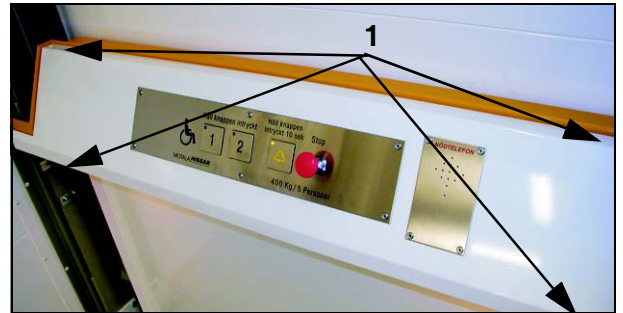
Electric connections on the platform panel plate

All electric connections are made according to the electrical diagram of the lift. Fasten all cables from the slide to the panel shelf on the inside of the angle bracket with cable tie (not on the top or bottom sides).

1. Connect the following cables:
 - the travelling cable 51.
 - the cable from the floor sensitive edge contacts 57.
 - the cable from the sensitive edge of the panel plate 56.
 - the cables 62-65 from the high speed contact 66:, 59:, 51: and intermediate floor detector 61:, if any.
 - the cable 53 from the retiring ramp.
2. Connect alarm and telephone equipment, if any. Do not yet install the battery, as the alarm signal might ring.
3. Push in both the stopbutton on the control panel and the commission box.
4. Connect the control panel.
5. Connect the battery. **Important! If the lift has the electrical emergency lowering system as an option. The battery on the panel is replaced with the battery in the emergency lowering unit, suited at the top of the shaft. You shall not in any circumstances connect two batteries!**
6. Switch on the main power
7. Bring in test load on the platform.
8. Adjust by move the transmitter in or outwards. The transmitter shall light when it's activated. Also check that input 0 on the PLC lights up. **Note.** Do not tighten the nuts to hard you may damaged the transmitter.



- Fasten the platform panel with four screws (1). Place the cables so that they cannot be damaged.



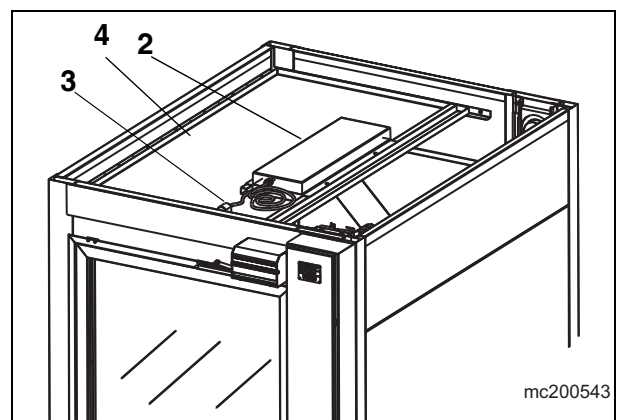
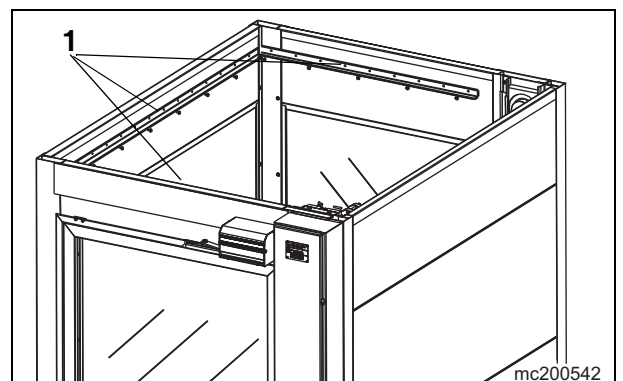
Cancelling drive command box

- Push the stop button on platform panel.
Warning! In this position, the button is connected in parallel with the emergency stop of the drive command box.
- Disconnect the command box from the control panel.
- Reset the stop button on the platform panel.

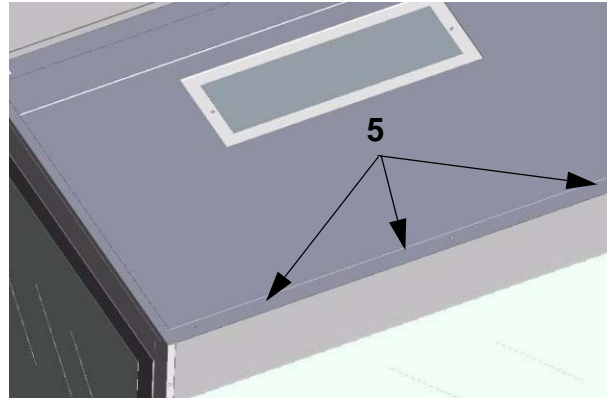
Ceiling

The ceiling should be placed at a height of 2100 mm above the floor of the topmost landing.

- Fasten three L-shaped mouldings on all walls except the wall of the drive side. Turn the side with the pre-drilled screw holes upwards.
- Install the ceiling (4). The electric fittings (2) should be centred in the lift well.
- Route and the light cable 18 to the control panel. Secure the cable on the safety gear cover plate to prevent it from getting damaged.
- Warning! There is power on the terminal LJ for the light even if the main switch is set to OFF!** Connect if the power is completely OFF from the main central and also the F8 fused shall be removed in the control panel.



5. **Important!** Fasten the ceiling in the L-shaped moulding with screws from underneath (5).



Commencing from platform control panel

1. Switch the main switch 220: to ON. Note! The lift is equipped with PLC control so it will run down to landing 0 in order to reset the PLC program, no matter which button you push.
2. Run to the upper terminal floor, to exactly correct height.
3. Install the terminal floor stop switch so that the roller of the arm is in close contact with the slide. Check that the arm cannot get stuck against the edge of the guide rail. Fasten the cable.



4. If the lift has more than two landings, run it down and install intermediate floor magnets. Switch the supply voltage off and on and run to landing 0 in order to reset the lift.
 - Note! The size of the magnet is 15X30 mm and must be fitted vertical. (Changed from horizontal to vertical in okt 2011 from control panel No 6000 and higher)



Lock arms

- Run the lift to an exact position on each floor and fit the lock arm. When the lift is on a certain floor, the roller of the lock arm should be in the centre of the ramp. Note! There is an exception for the bottom and top floors: there, the lock arm should be fitted so that, when the lift reaches the floor, the roller has just reached the flat part of the ramp.

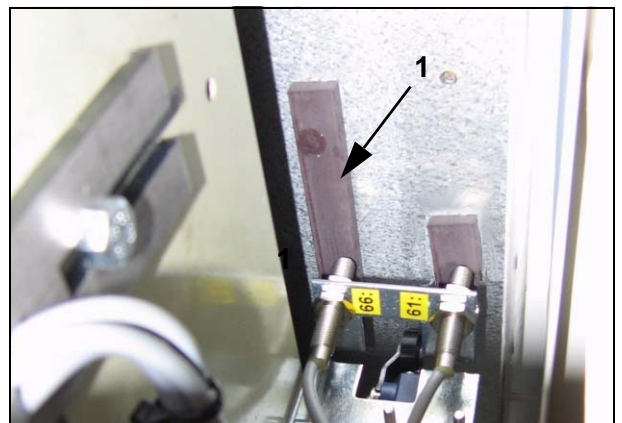


- Adjust the length of the lock wires by cutting the outer cover so that it reaches the lock arm. Let the inner cover run a short distance through the lock arm sleeve. Pull it down and fasten excessive wire in the recess of the arm.

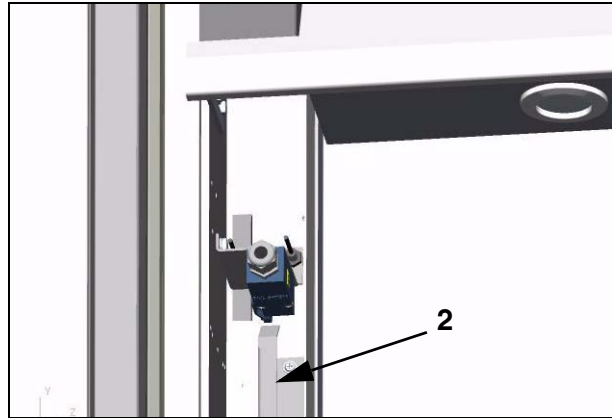


Highspeed contact and magnet

- Adjust the distance of the floor counting contact 61: (if any) and highspeed contact to 7 mm from the lift well wall.
- Fasten the highspeed contact magnet (1) at every floor. Adjust the magnet so it starts and ends 50 mm from the floor in question.

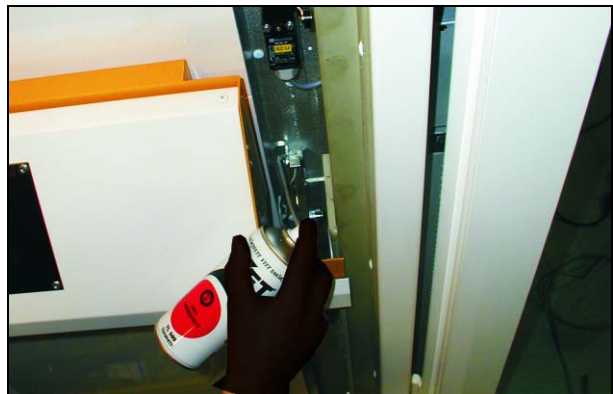


3. Fit the final stop ramp (2) for the 51: contact at the top and ground floor. The switch should be effected by the ramp if the lift runs more than 15mm above the top floor and 15mm below the ground floor. The ramp shall align against the angle plate corner.



Lubrication

1. Lubricate the C-profile guide rails. Use Superlube synthetic grease, article item number 100401.
2. Lubricate the roller of the lock arms where the wire runs.

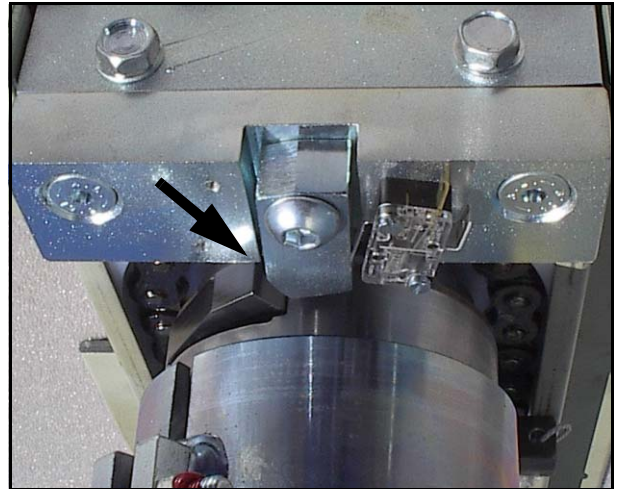


Cover plates

Check before fitting cover plates

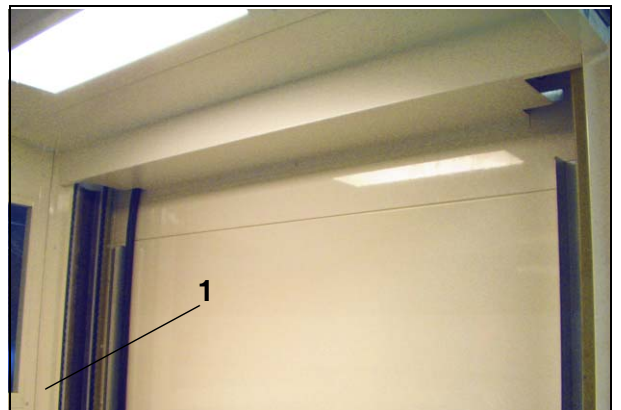
Check

- that the lift stops at the landings ± 10 mm.
- that the locks open properly, even if you pull the door and call the lift simultaneously.
- that the safety gear is placed correctly in relation to the motor position, see illustration, and that the safetygear testing function works.
- Check safety according to document IQ-BK98_10_C



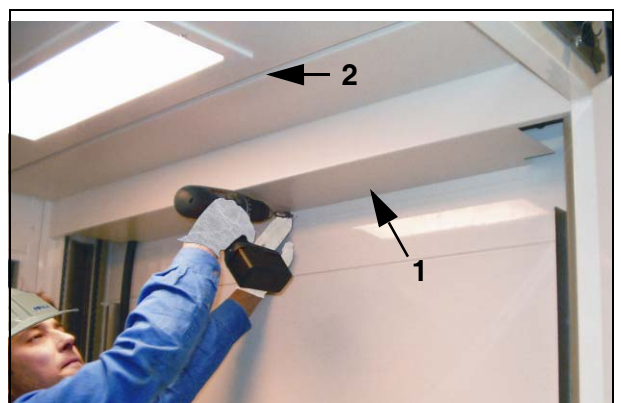
Small cover plates

1. Fasten the small guide rail cover plates with pop rivets. Start from the bottom and work upwards in the lift well. Note! Take care not to fasten pop rivets in the locks and cables that might be placed behind the covers.



Shaft hood

1. Fit the drive shaft cover plate (1). The illustration shows a lift with 2200 mm ceiling height.
2. Lose the screws for the ceiling a little, so you can push the ceiling tight against the shaft cover plate (2).
3. Then tighten the screws to the ceiling again.



On lifts with 1300 mm ceiling height the drive shaft cover plate is fastened in the same way and is also fastened with screws from the top side.

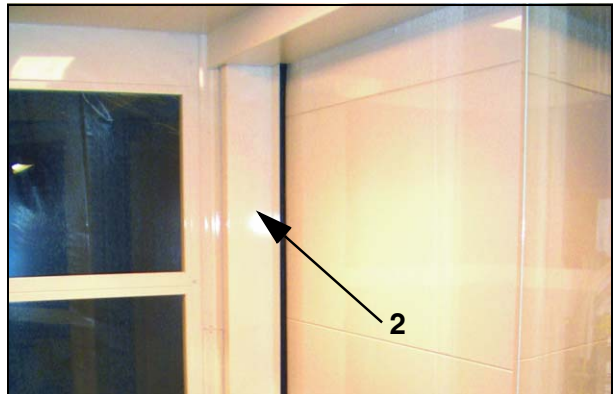


Large cover plates

1. Start from the bottom with the lowest cover plates (they can usually be shorter than the others) 50mm up from the pit.
2. Fit the next cover plates.
3. Continue with the remaining cover plates that measure 2000 mm. The two uppermost cover plates (2) must reach about 10 mm above the edge of the drive shaft cover plate.
4. Check that the safety gear can rotate freely.

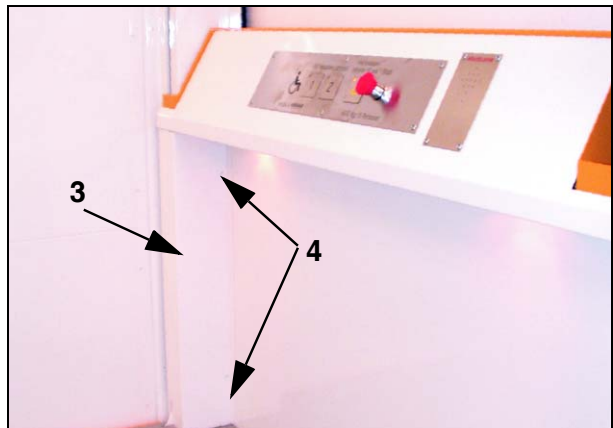


2. Fit the next cover plates.
3. Continue with the remaining cover plates that measure 2000 mm. The two uppermost cover plates (2) must reach about 10 mm above the edge of the drive shaft cover plate.
4. Check that the safety gear can rotate freely.



Cover plate, platform

5. Run the lift to the bottom position.
6. Fit the cover plates (3) with two short screws (4). Note! Maximum length 8 mm. Longer screws might scratch the large cover plates of the guide rail while the lift is running.



Finishing work

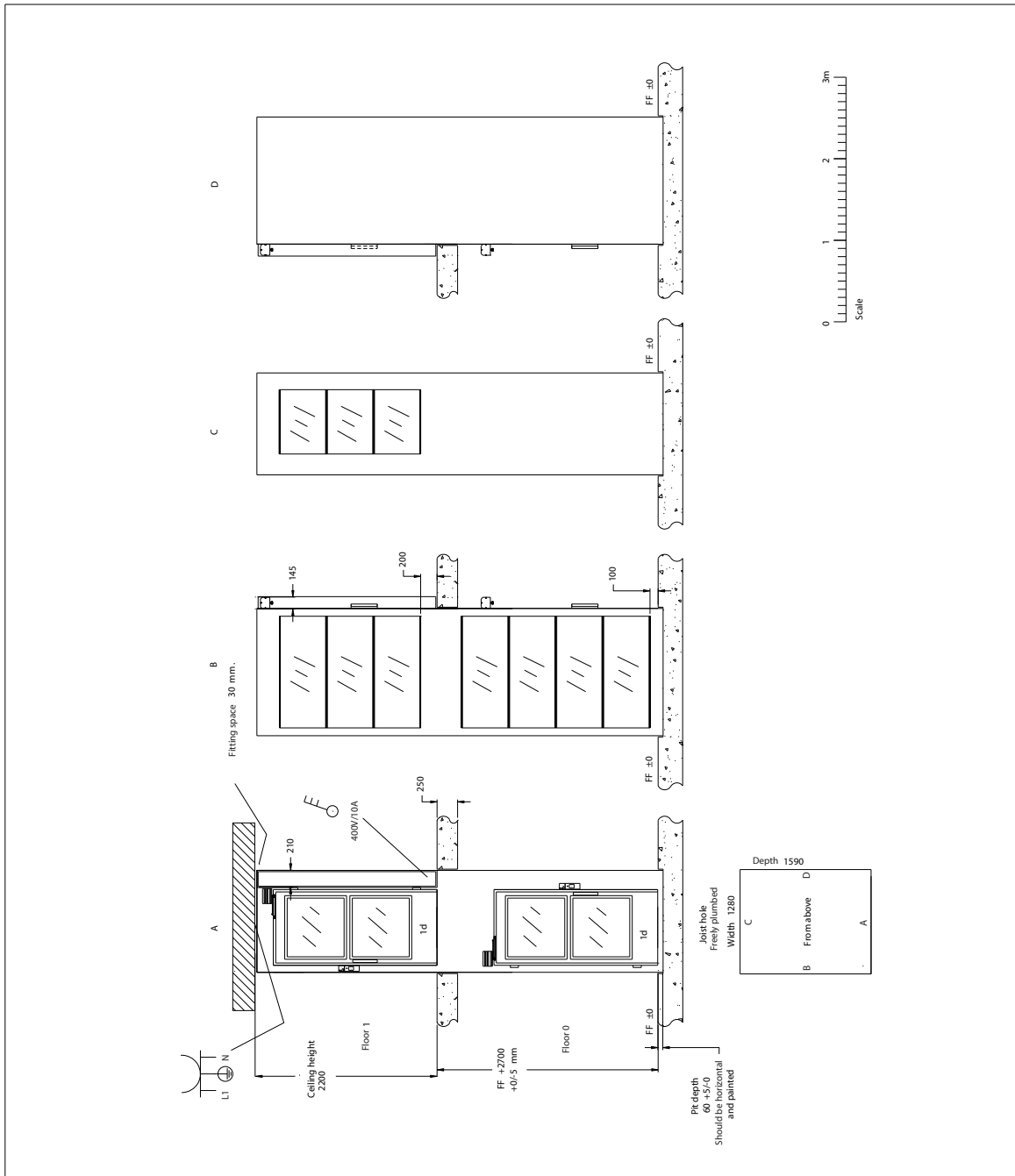
1. Fit the motor and the electric cabinet top cover.
2. Put up all necessary signs, taking local demands into consideration.
3. Clean the lift.
4. If necessary, patch damaged paint.
5. Inform customers and working staff about the lift and its functions.



Final inspection and own inspection

Make a final inspection and, at the same time, fill in the inspection form.

Layout drawing



IMPORTANT! Please check and adjust measures, door hangers etc.
Please return the layout drawing immediately.

Note! Basic free construction heights.
Floor with automatic doors requires free height min. 2200 mm.
Floor without automatic doors requires free height min. 2150 mm.

APPROVED with registered changes:
Purchaser's signature: _____

Drawn RMS Produktion	Delivery time	Check	Seller	Approved	Scale - Not according to scale	Replaces A	Replaced by A
 Box 4029 591 04 MOTALA Tel +46 141 237050 Fax +46 141 237051		Lift type Motala Lift MC2000			Date 030116		Drawing/Lift number 9187
		Object Demo Motala Hissar					

Checklist

Lift number:

Project:

Side A From below	Length [mm]	Door Al-prof.	Cable hole	Side C From below	Length [mm]	Door Al-prof.	
1	2155	Door		1	2950	Al-prof.	
2	535	Al-prof.		2	2010	Al-prof.	
3	2270	Door		3			
4				4			
5				5			
6				6			
7				7			
4960		mm		Total height		4960 mm	

Approvals and version history

Table 1:

Issue	Date	Description of change	Ref CR	Approve by
Rev.A	2005-05-04			
1.01	2007-01-31	Change of version counting. See first page		
		Adding this side. See “Approvals and version history” on page 50.		
		Headline and text modified in step 2 and 10. See “Travelling flex cable, panel plate, overload unit and control panel” on page 37.		
		New steps added for overload unit. See “Overload unit” on page 39.		
		Step 3, 6, 7 and 8 added. See “Electric connections on the platform panel plate” on page 40.		

Attachments

Hidden hinges

Mounting and adjustment of door with hidden hinges

2012-04-12

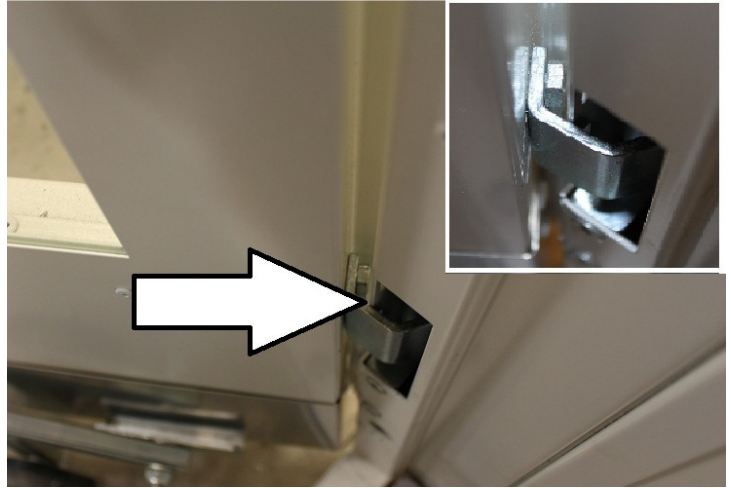


Draft 2 – Method for mounting door with hidden hinges.

Mounting door leaf

Tips!

Hold the door leaf in about 45 degree opening angle so that the door part of the hinge rests against the edge of the frame as shown, this makes it easier to steer hinges on the pins that are hidden inside the frame.

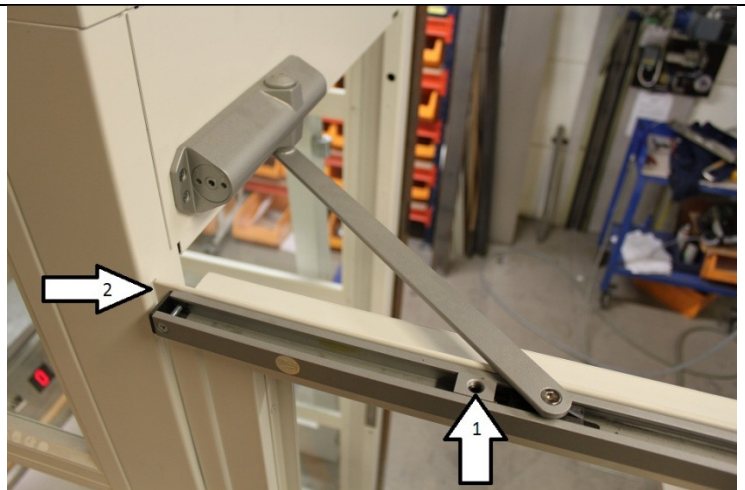


Door stop

Install the door stop (1) so that the door is not possible to open more than 90 degrees.

Note!

If the door is opened more than 90 degrees there is a risk to damage hinge or door frame (2).

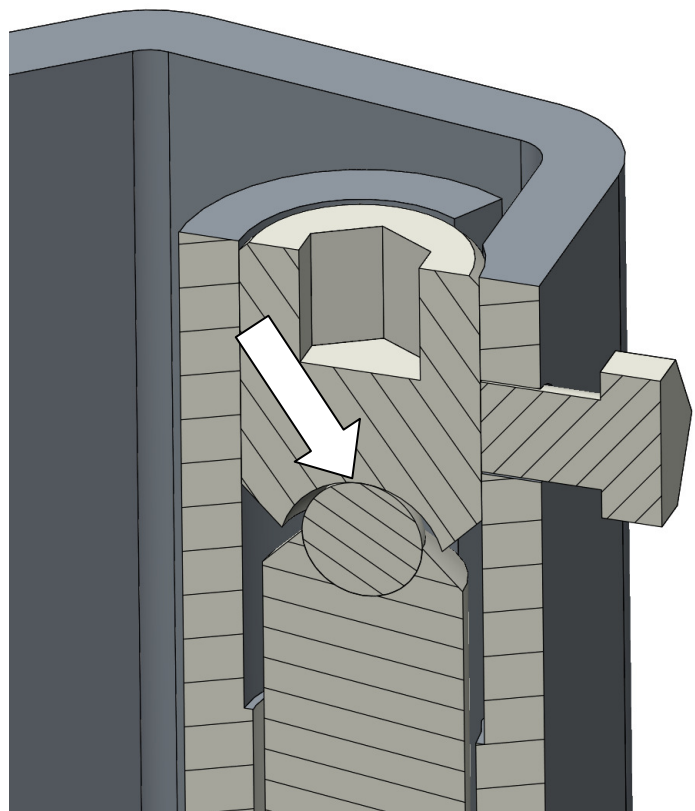
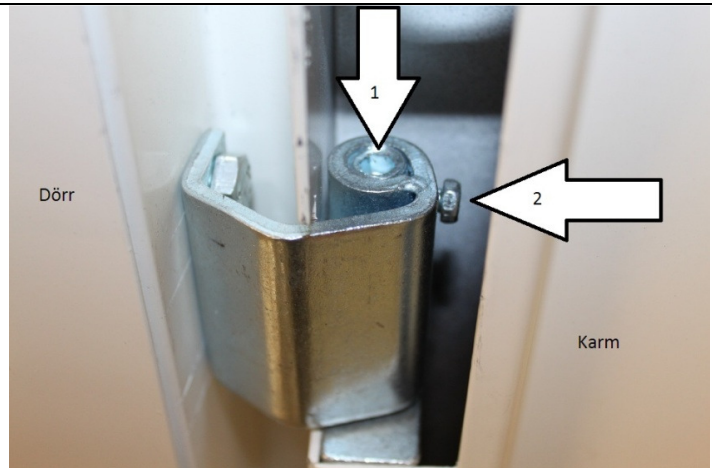


Adjusting the hinges

The hinges can only be adjusted in height.

1. Adjust the door in height by turning the Allen screw.
2. Lock Allen screw with hex.

Note! Adjust the upper and lower hinge equal. The hinges can only be adjusted in height.



Important!

Both the upper and lower hinge must be adjusted so that the ball of the hinge rests in the cup in order to avoid play in the hinges.

Install the cover at both hinges.

Insert the controller that fits into the groove of the door frame and snap on lid.



Done



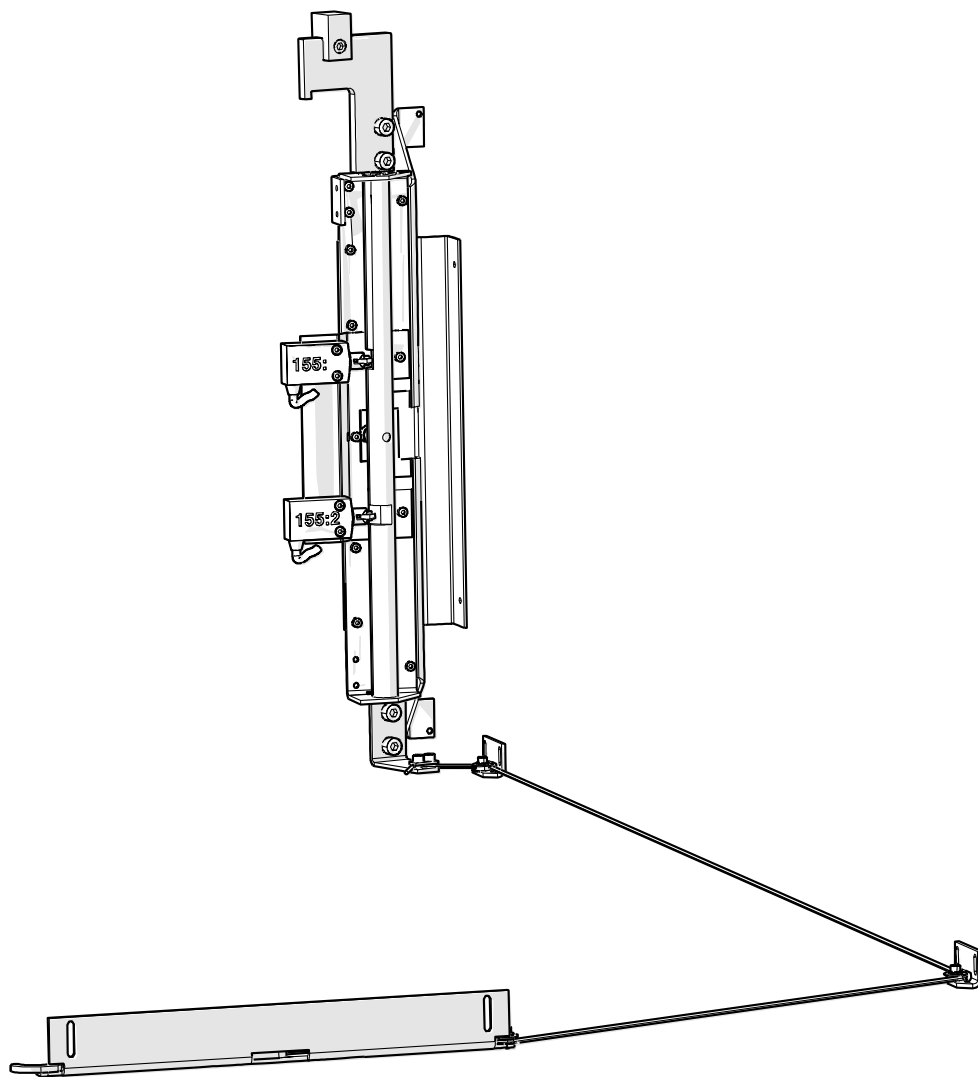
Removing the cover

Press gently with a screwdriver on the side as shown until the lid comes off.



Mechanical blocking device in the pit MC2000

Rev. B



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1. GENERAL

This mechanical blocking device are special designed to be fitted on MC2000. Follow this instruction carefully to ensure an efficient and trouble-free installation.

Related documents






This instruction is to be used with the MC2000 installation instruction.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

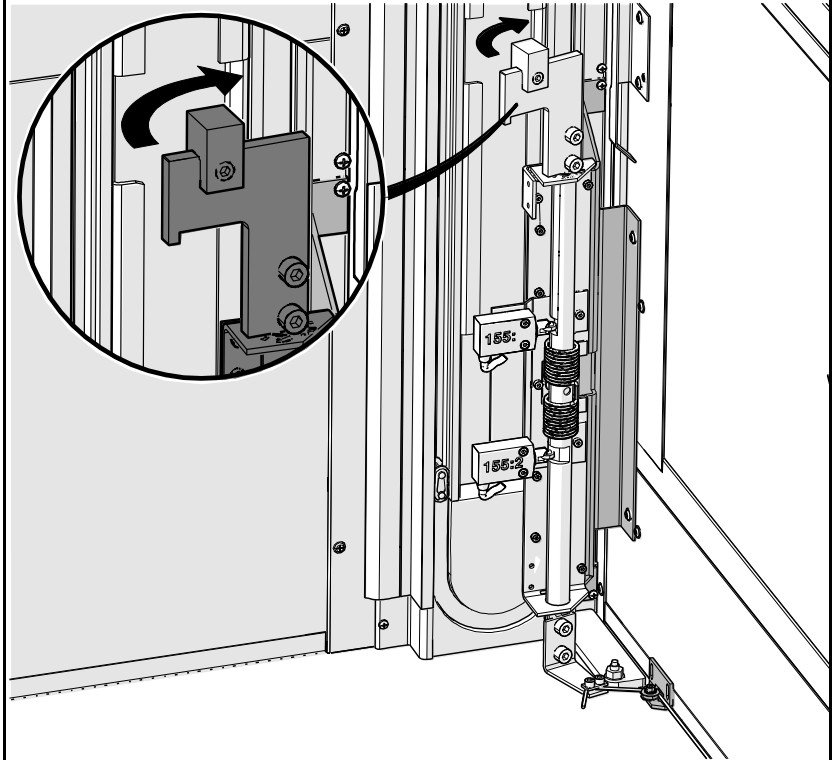
3. Fasteners used in the installation instruction

Number	Description	view
100223	Staps 4,2x14 CS Ph2	
100197	RXS B8x16	
102040	MC6S M4x8	
100179	M6S M10x16	
100136	MC6S M6x10	

4. Overview

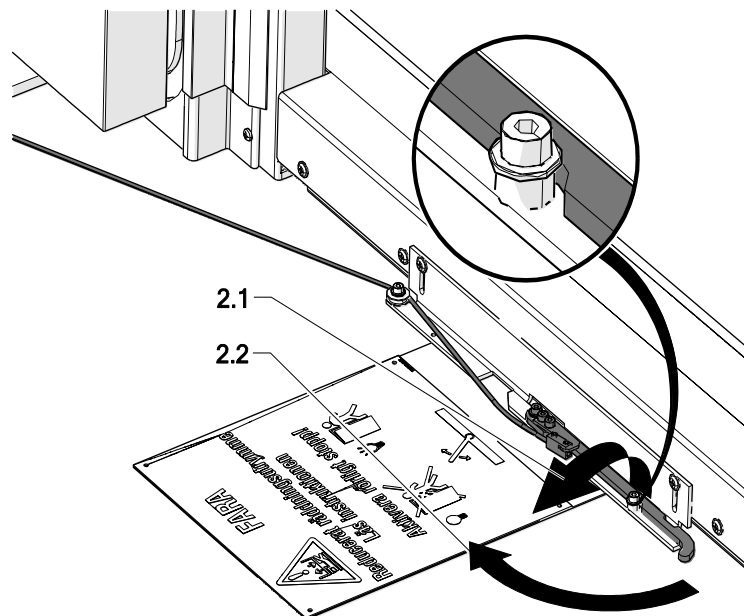
Mechanical blocking device

1. The mechanical blocking device in the pit is always placed on the opposite side from the motor and the retiring ramp. It is used to provide a safety space of 500 mm when working in the pit.



The operating handle to the mechanical blocking device

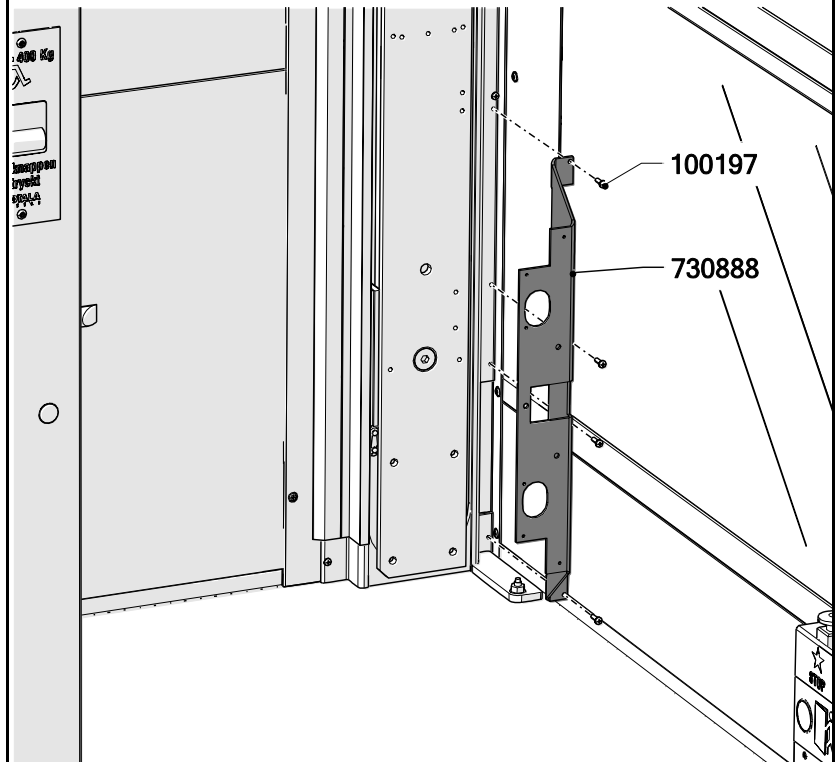
1. Open the bottom floor door, the operating handle is placed in the pit just inside the door.
2. Lift up (2.1) and swing out (2.2) the arm to activate the mechanical blocking device.
3. The green light on the emergency stop device must be switched on before entering the pit.
4. When entered the pit push the emergency stop device.
5. When you are leaving the pit make the steps in reverse order.



5. Installation

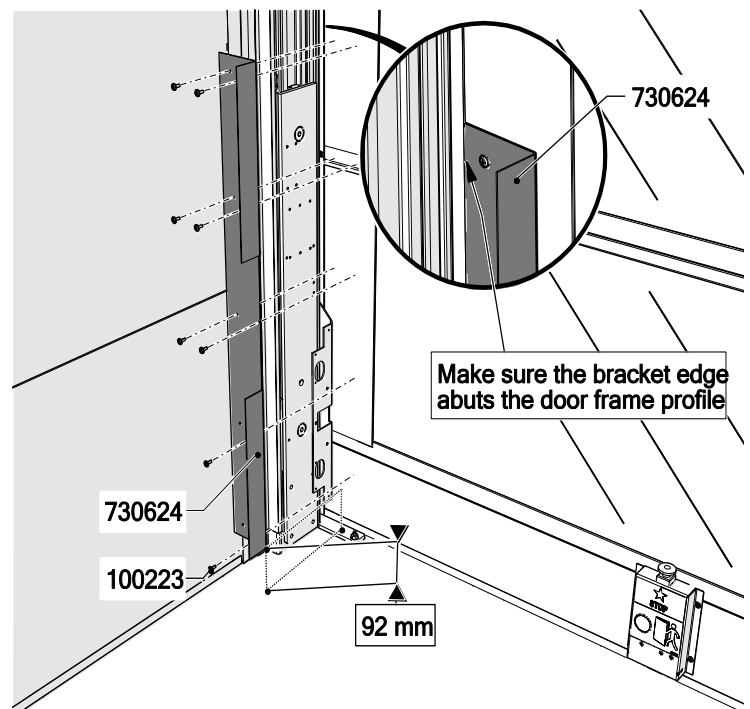
Mount the first bracket

1. Mount the bracket 730888 in the pre-drilled holes in the guide, use 4x 100197.



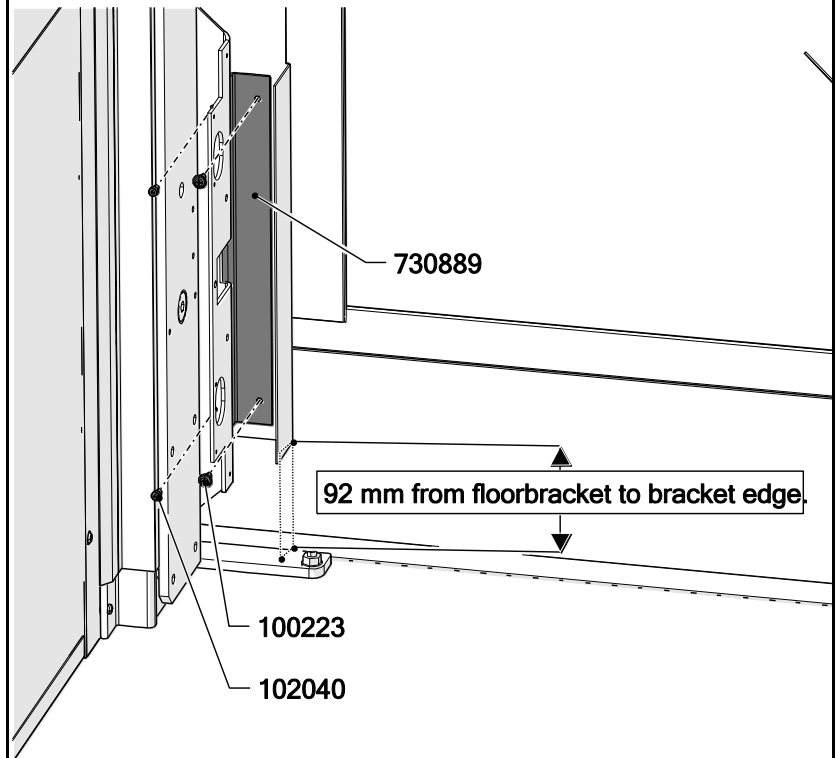
Mount the cover plate bracket

1. Mount the cover plate 730624, use 8x 100223.
2. Make sure that the cover plate edge rest against the edge of the door frame (or aluminum) profile. And its lower end is 100 mm over the pit floor.



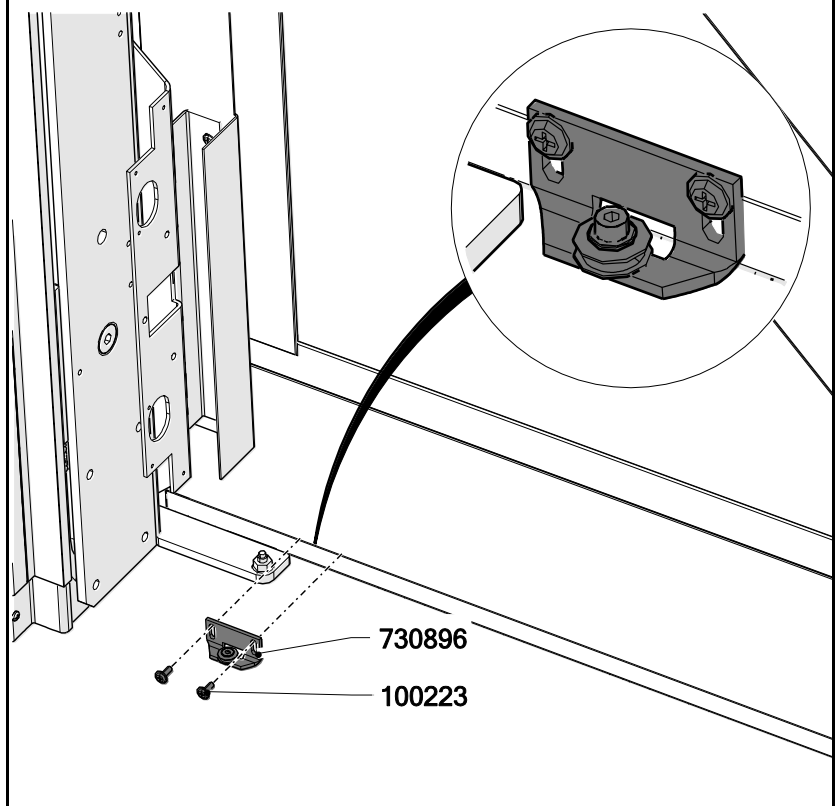
Mount the second bracket

1. Put the second bracket 730889 behind the first bracket.
2. Use 2x 102040.
3. Use 2x 100223.



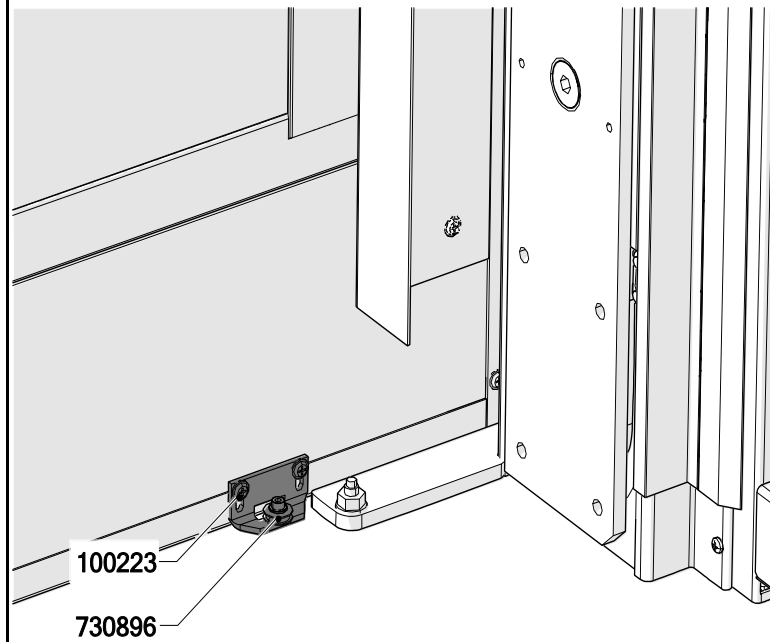
Mount the first pulley

1. The first pulley 730896 is mounted right next to the floor bracket.
2. Use 2x 100223



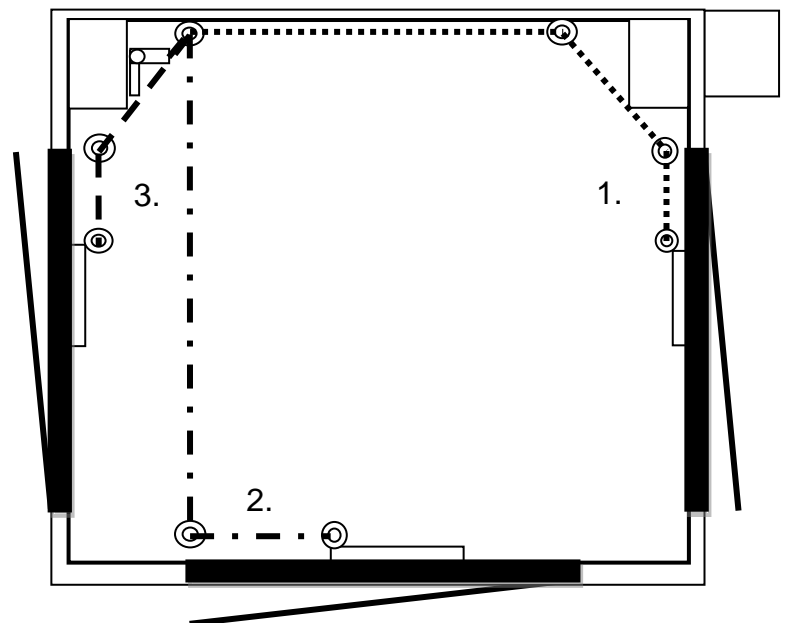
Mount the second pulley

1. The second pulley 730896 is mounted right next to the floor bracket.
2. Use 2x 100223.
3. Note that the second pulley can be placed in a variety of places depending on the placement of the mechanical blocking device and the door giving access to the pit. See example below.



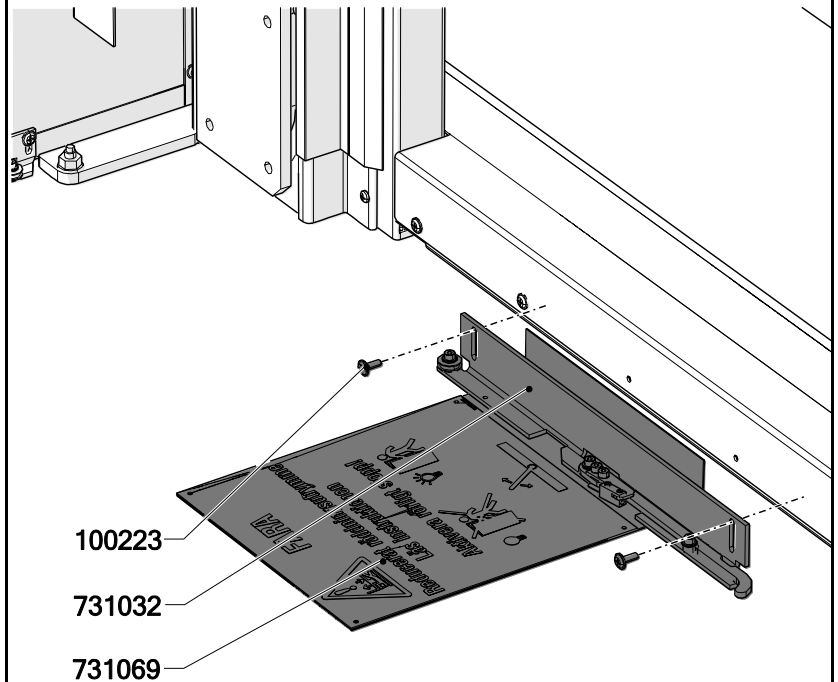
Example of pulley placement

1. If the mechanical blocking device is placed to the left this is 3 alternative for the pulleys and the wire. See the picture for alternative door placements 1, 2 and 3.
2. If the mechanical blocking device is placed to the right the alternatives will be mirrored.



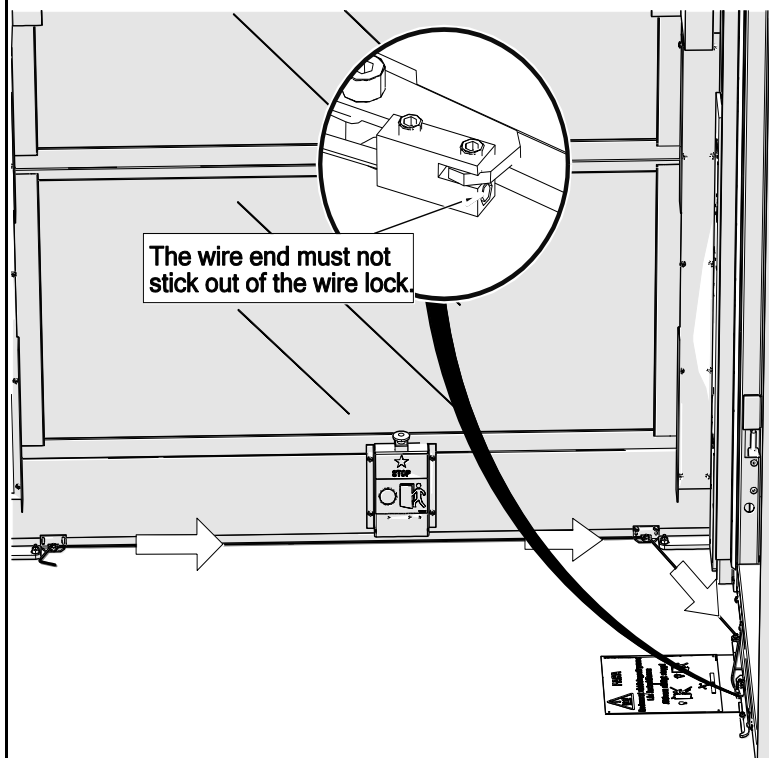
Mount the operating handle and the warning sign

1. Place the operating handle 731032 inside of the threshold on the door giving access to the pit, use 2x 100223.
2. Place the warning sign on the floor at the bottom of the pit, fix it with glue or screws.



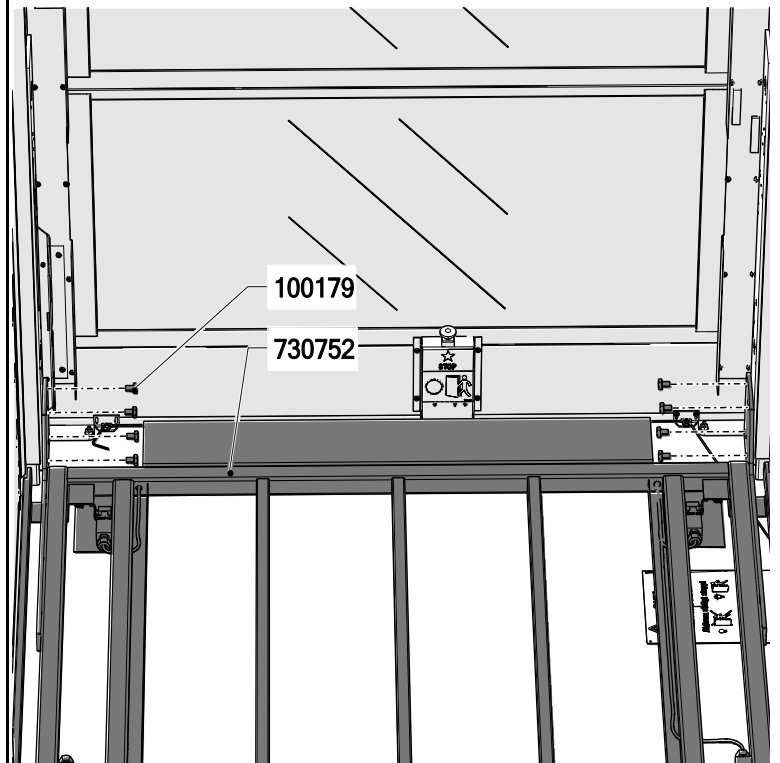
Mount the wire

1. Pull the wire from the mechanical blocking device to the operating handle.
2. The wire end must not stick out from the wire lock at the handle, that would prevent the handle movement.



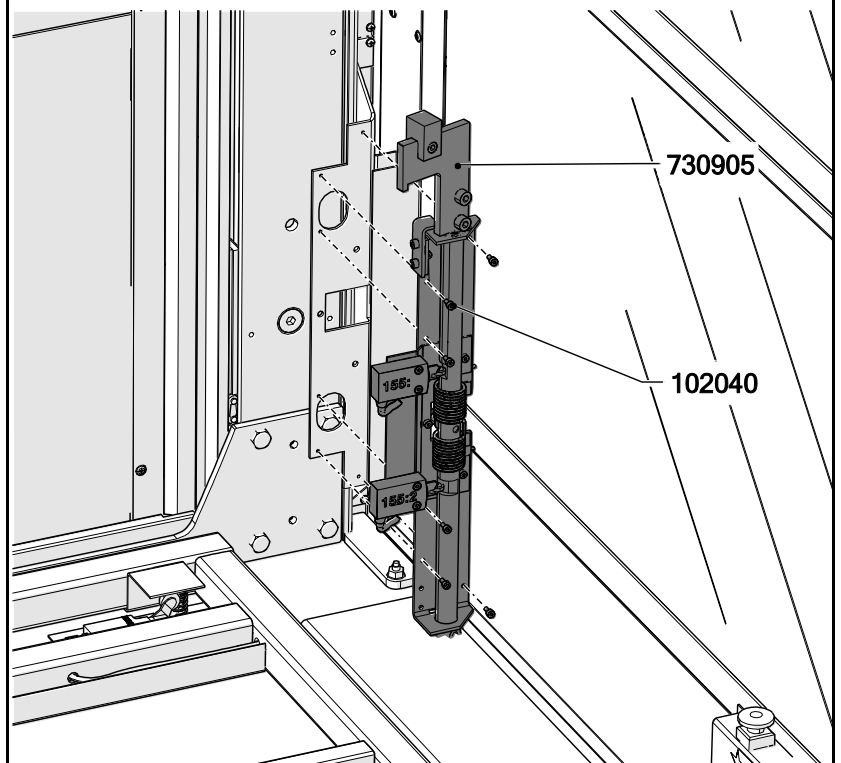
Mount the platform frame

1. Mount the platform frame 730752, use 8x 100179.
2. See the MC2000 installation instruction for further important details on mounting the platform.



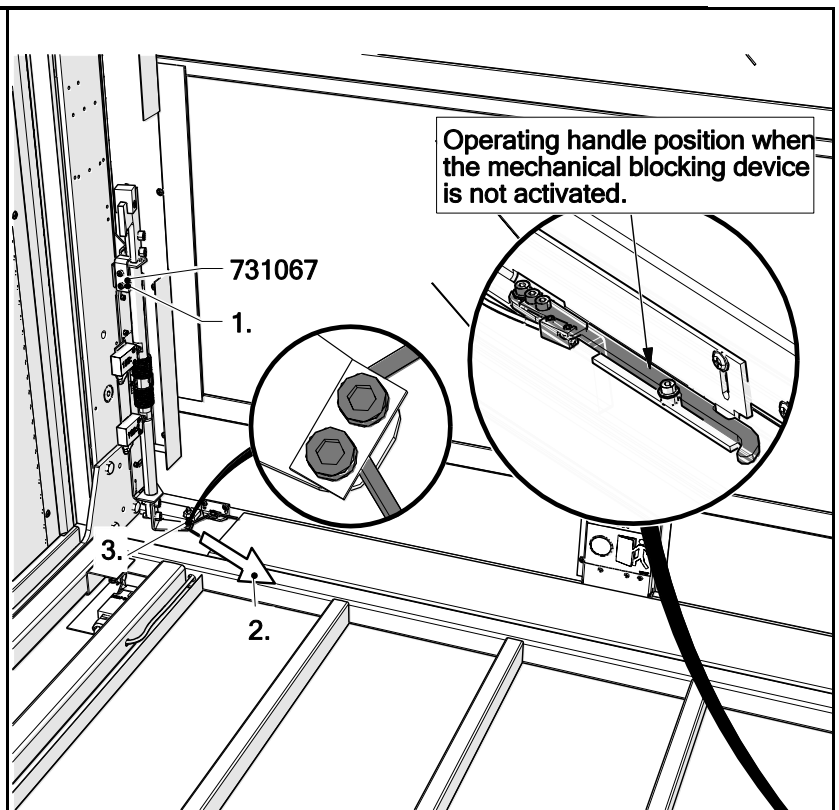
Mount the mechanical blocking device

1. Mount the mechanical blocking device 730905, use 6x 102040.



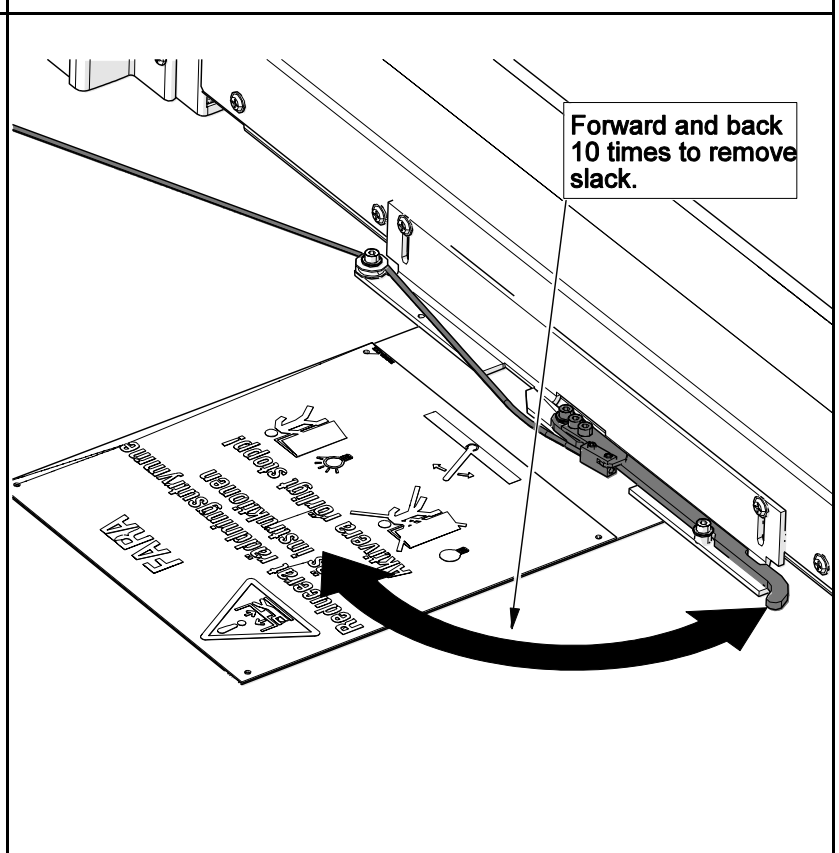
Adjustment of the wire

1. Make sure the red device 731067 is in its position. And the operating handle is in its inactivated position.
2. Stretch the wire.
3. Tighten the two screws to lock the wire.
4. Remove the red device 731067 and check that the mechanical blocking device is still in its inactivated position.
5. Test that the wire, stop and handle function works properly. (See - 4. Overview)



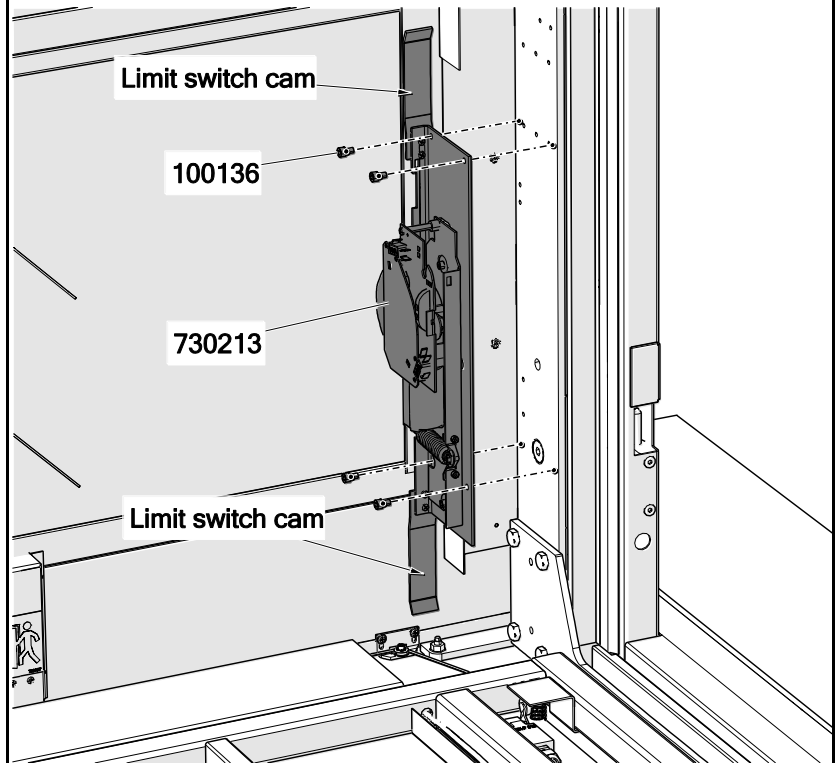
Remove slack in the operating handle and wire.

1. To make the mechanical stop work properly over time the slack in the operating handle and the wire must be eliminated.
2. Turn the handle forward and back 10 times.
3. Test that the wire, stop and handle function works properly. (See - 4. Overview), if not repeat (*adjustment of the wire 1-5*)



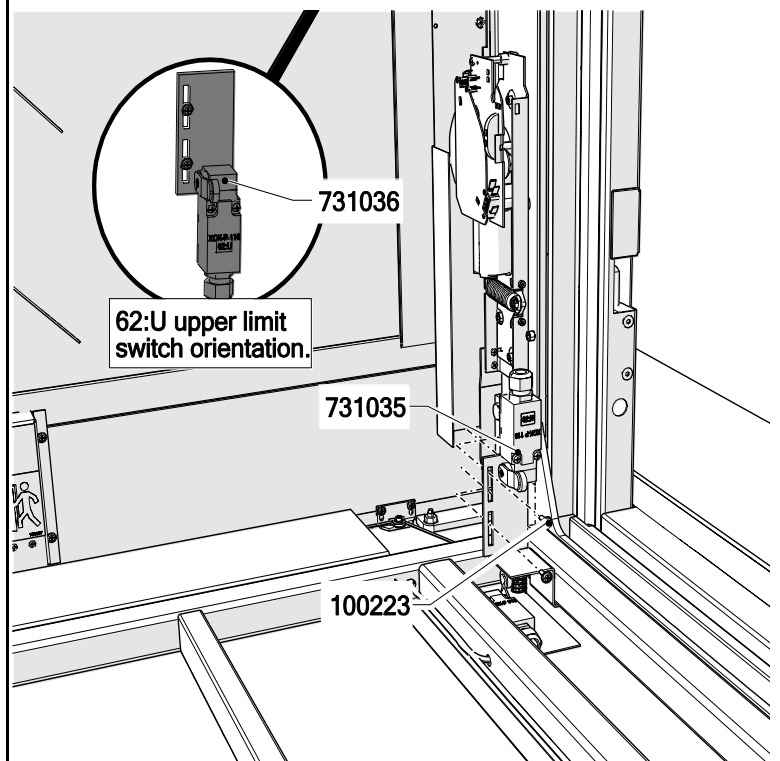
Mount the retiring ramp and limit switch cams

1. Mount the retiring ramp 730213, use 4x 100136.



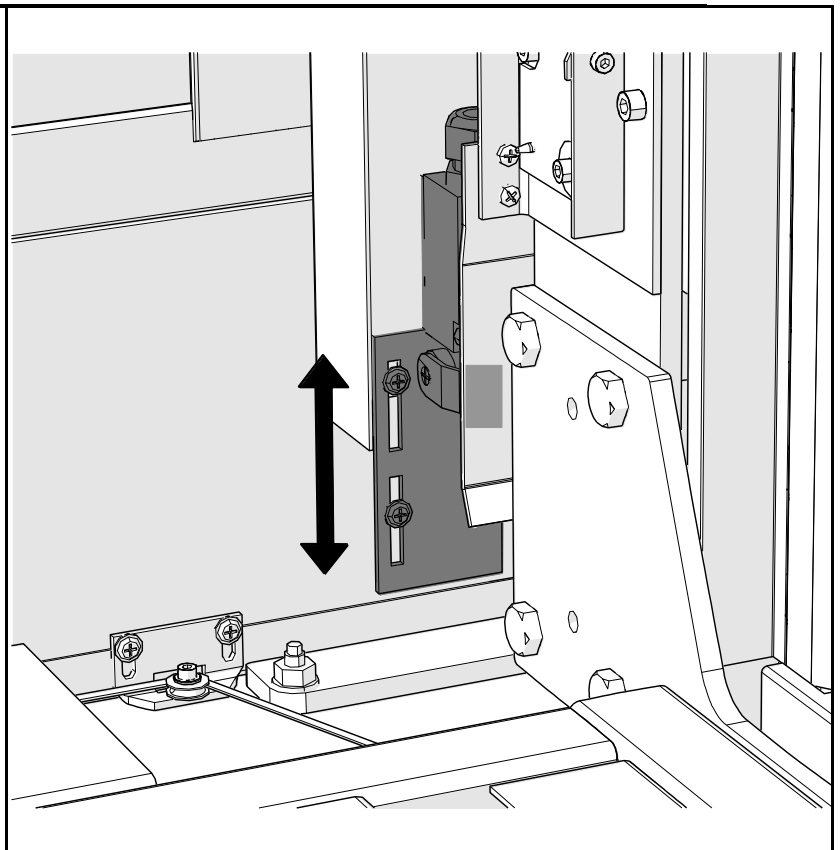
Mount the limit switches

1. Mount the retiring ramp 731035 (62:N) and 731036 (62:U), use 4x 100223.



Adjustment of the limit switches positions

1. Place the lower switch so that the ridge affects the switch 25 mm before the platform reaches the lower floor level.
2. Place the upper switch so that the cam break the switch just when the platform reaches the upper floor level.



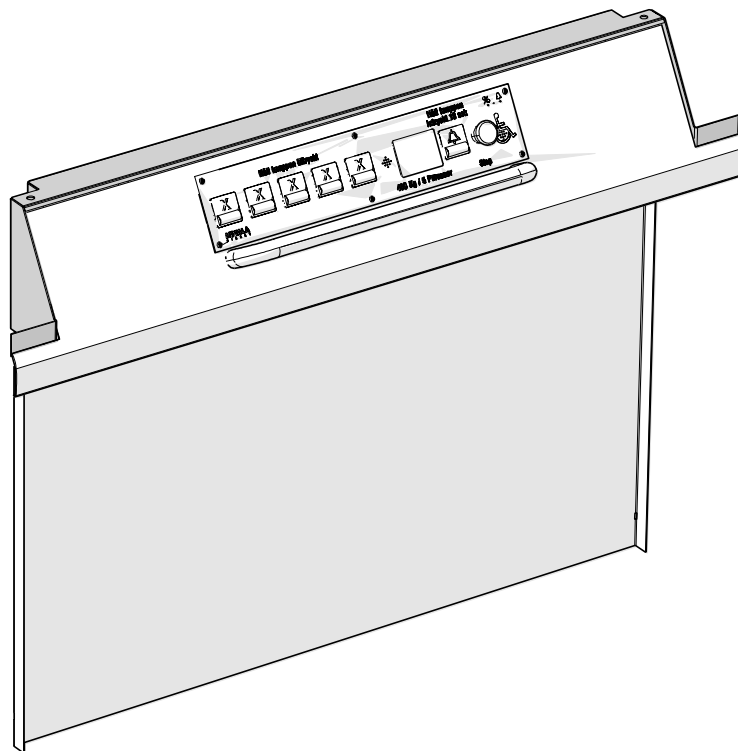
6. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2012-09-05	Draft 1.0	10521	Niklas Adell	Ari Nieminen
A	2012-09-25	New transport safety device	12629	Niklas Adell	Ari Nieminen
B	2013-02-19	Remove slack in the operating handle and wire	13536	Niklas Adell	Ari Nieminen
C					

Updated version of the platform wall MC2000

Rev. B



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1. GENERAL

This new platform wall is specially designed to achieve a better and easier installation and give the platform a better look. Follow this instruction carefully to ensure an efficient and trouble-free installation.

Related documents









This instruction is to be used with the MC2000 installation instruction and the electrical drawings.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

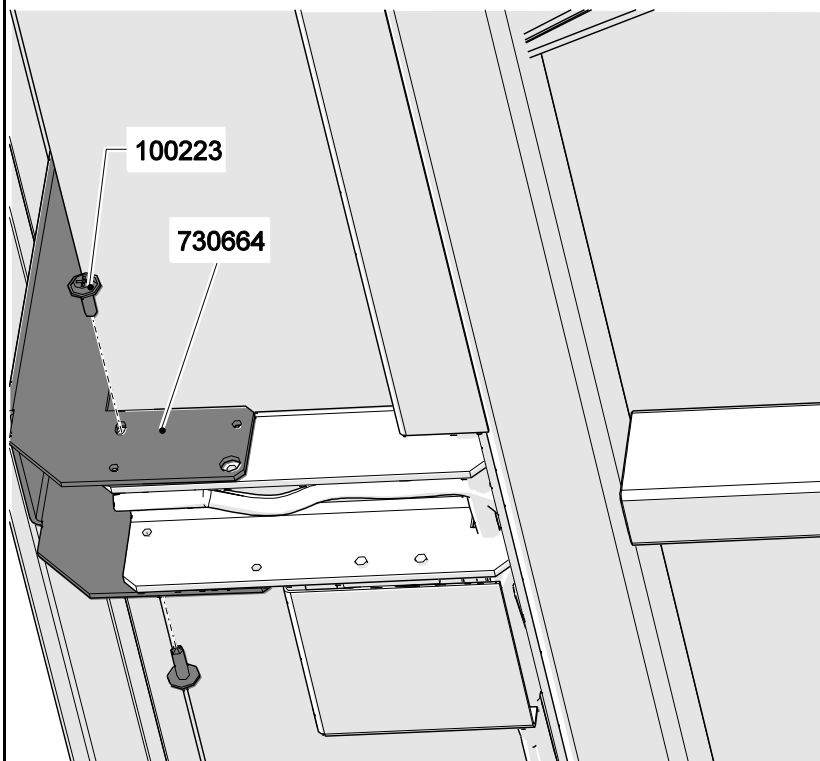
3. Fasteners used in the installation instruction

Number	Description	View
100223	Staps 4,2x14 CS Ph2	
100226	Staps 4,2x25 CS Ph2	
100132	MC6S M5x14 FZB	
100137	M6S M6x10 FZB DIN	
100260	AZ 5,3 FZB	
102332	SR 2604	
101924	Secufast M5x12	
100158	M6S M8x20 FZB DIN	

4. Installation

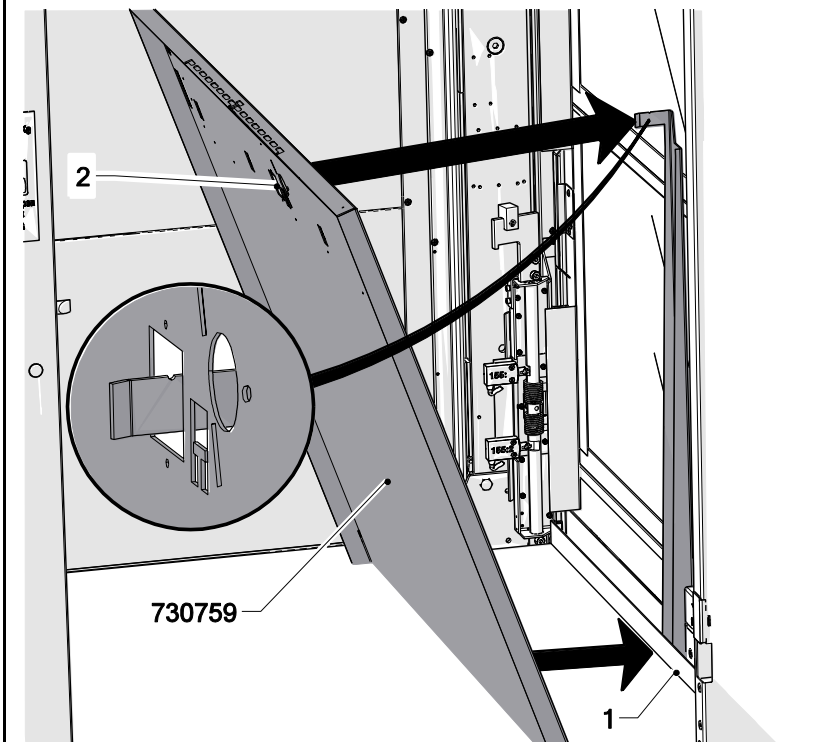
Install the overload arm

1. Fit the overload arm from the underside of the platform, use 2x 100233 so that it still can be adjusted.
2. Route the cable from the sensitive edges inside the arm.



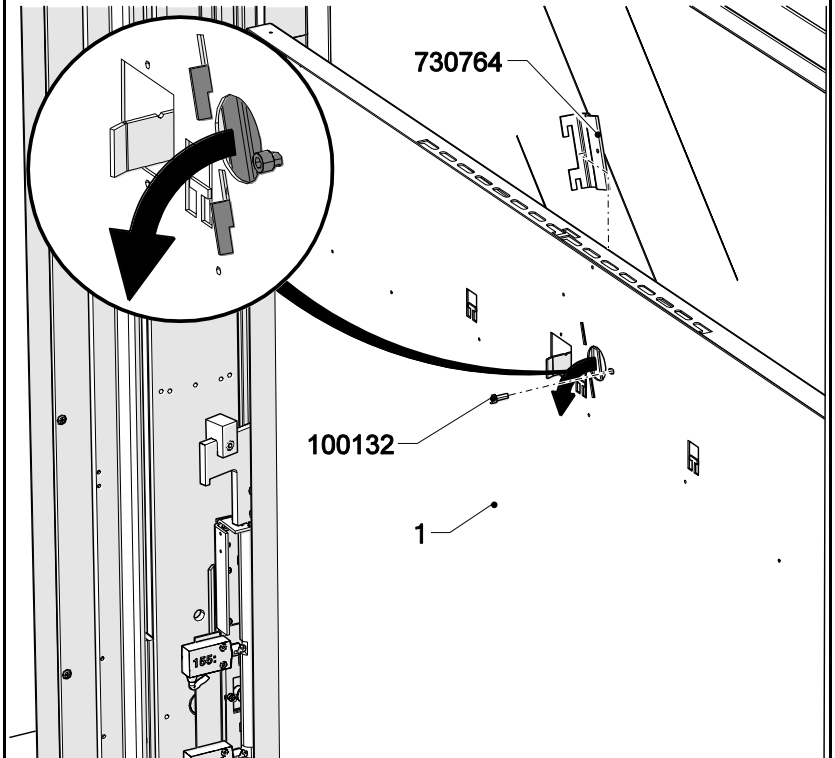
Install the platform wall

1. Fit the lower part of the wall 730759 so it abuts the platform floor edge (1).
2. Fit the overload arm into the hole (2) in the platform wall.



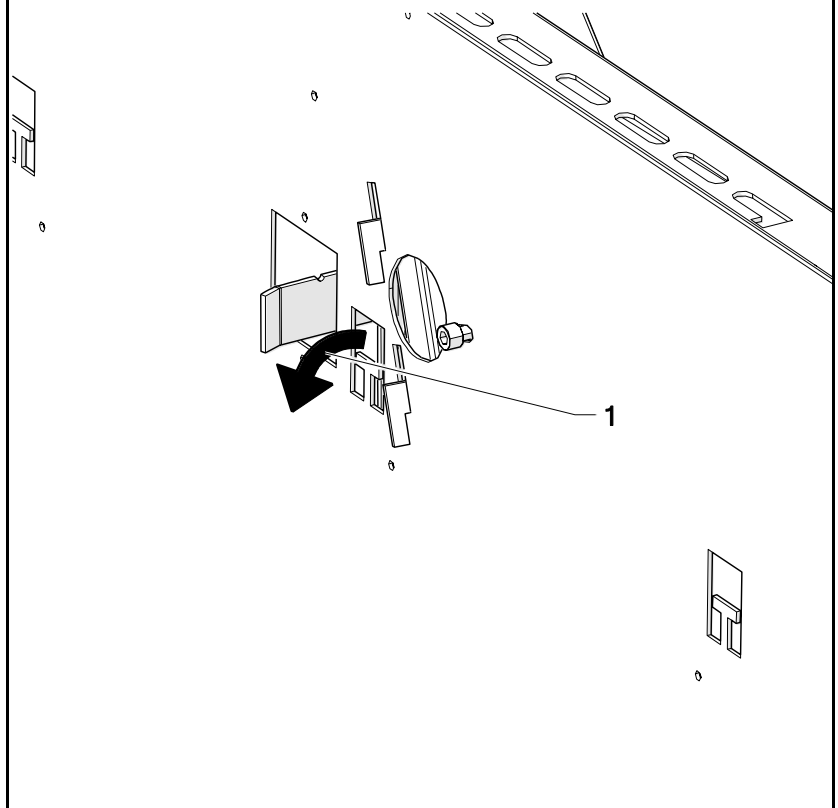
Attach the traveling cable

1. Thread the traveling cable through the hole (1) and fix it with the cable clamp 730764, use 1x 100132.
2. Note, no cables are visible in this illustration.



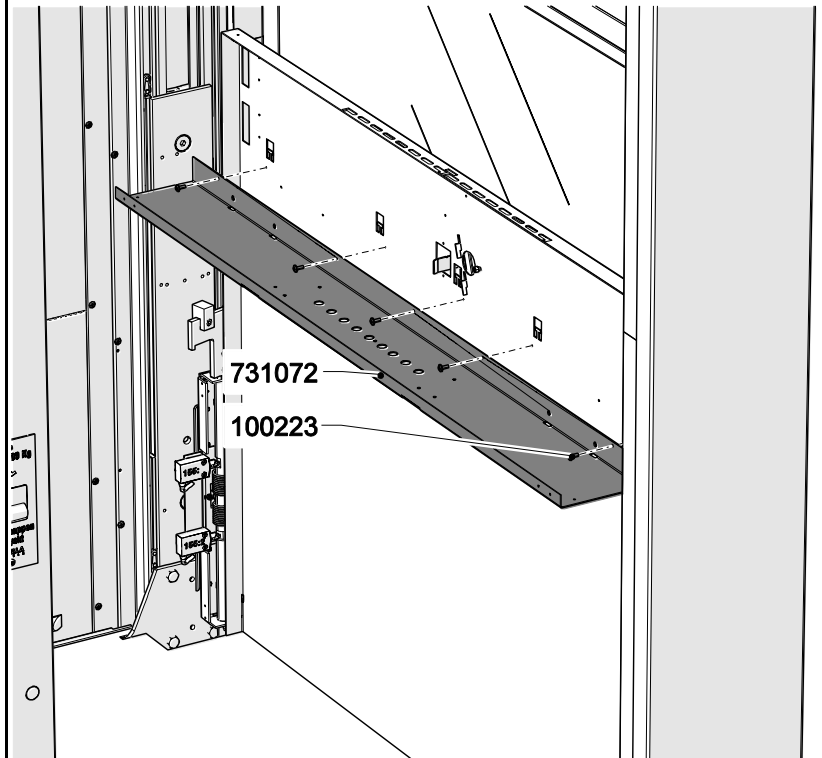
Sensitive edge cable

1. Thread the cable from the floor sensitive edge contacts through the hole. Stretch it and lock it with a cable tie.
2. Note, no cables are visible in this illustration.



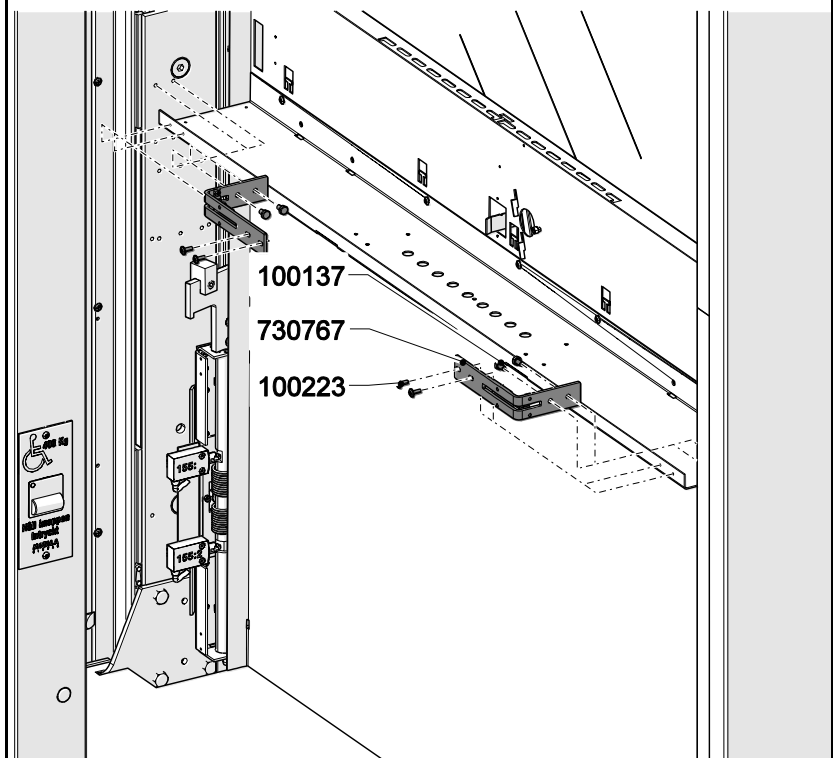
Fit the shelf

1. Fit the shelf 731072, use 5x 100223.



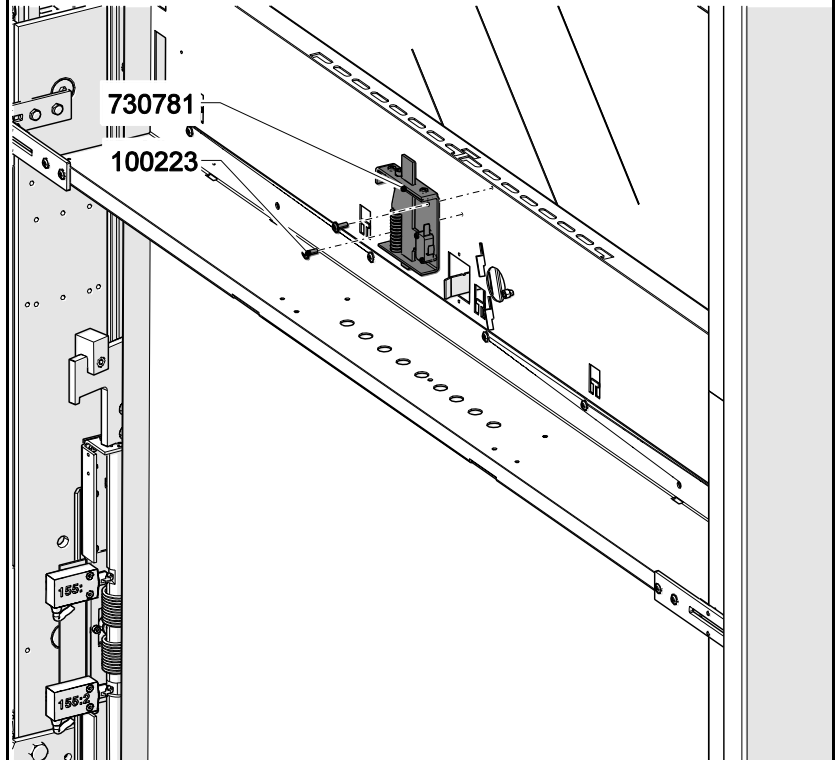
Fit the angle brackets

1. Fit the angle brackets 2x 730767, one on the left and one on the right side, use 4x100137 and 4x 100223.
2. Route the cables from the magnet sensors, end limit switch and retiring ramp together with the fixings.



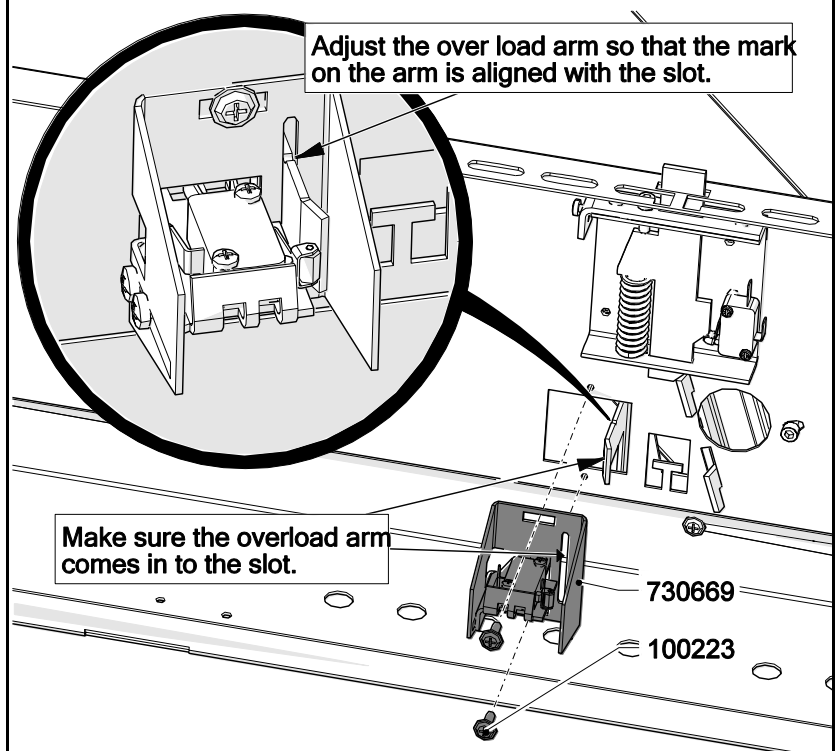
Install the switch unit for the upper sensitive edge

1. Fit the unit 730781, use 2x 100223.



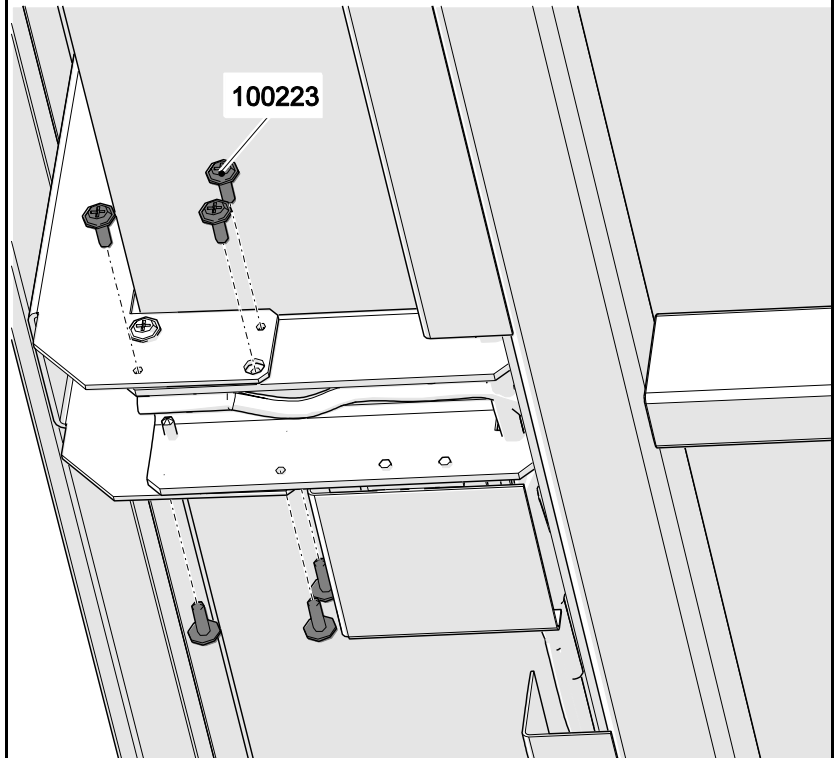
Fit the switch for the over load device

1. Fit the switch unit 730669, use 2x 100223.



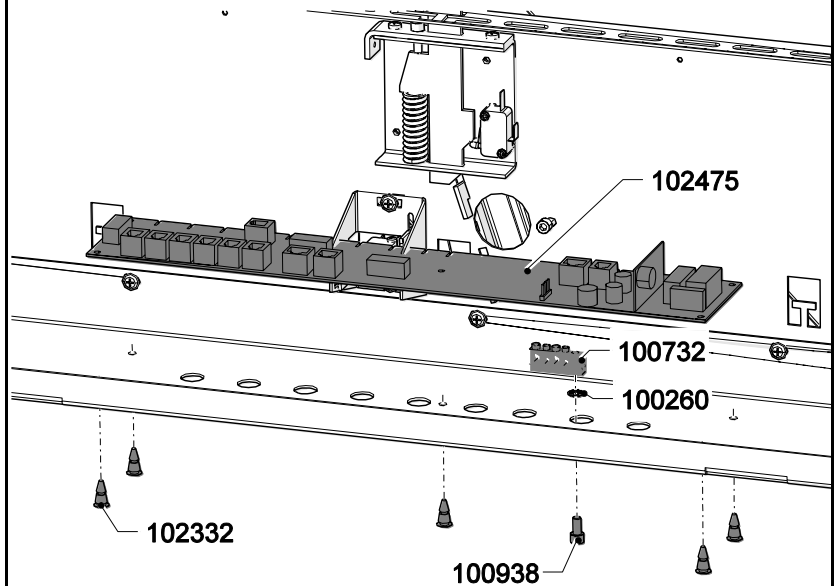
Fix the overload arm

1. Fix the overload arm, use 6x 100223.



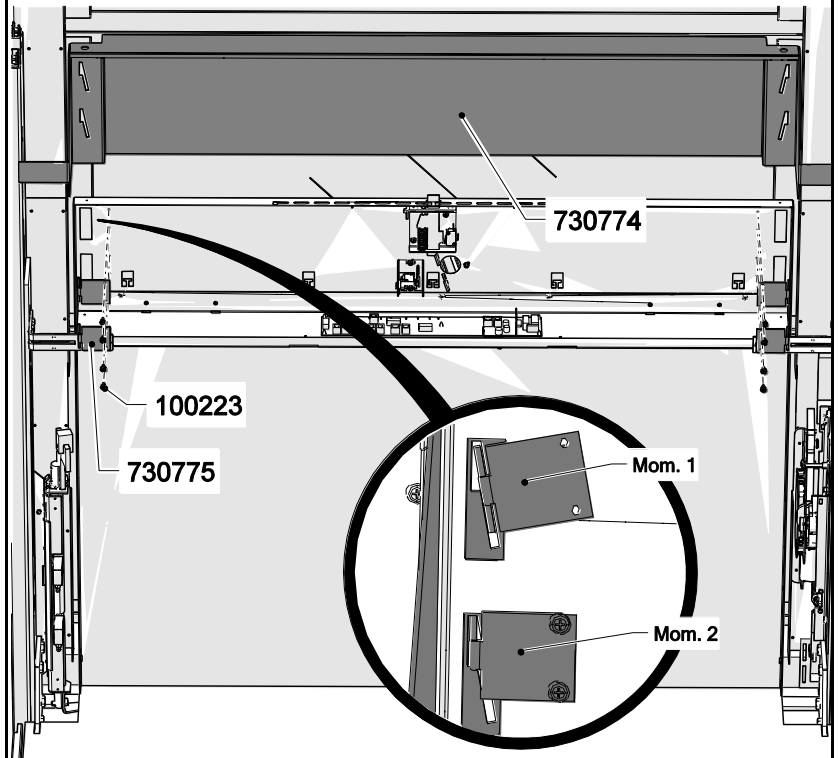
Fit the earth terminal and circuits board

1. Fit the earth terminal 100732, use 1x 100260 and 1x 100938.
2. Fit fasteners for circuit boards, 6x 102332 on the shelf.
3. Fit the circuit board 102475.
4. Connect the cables to the PCB terminals. See electrical drawings for connection points.



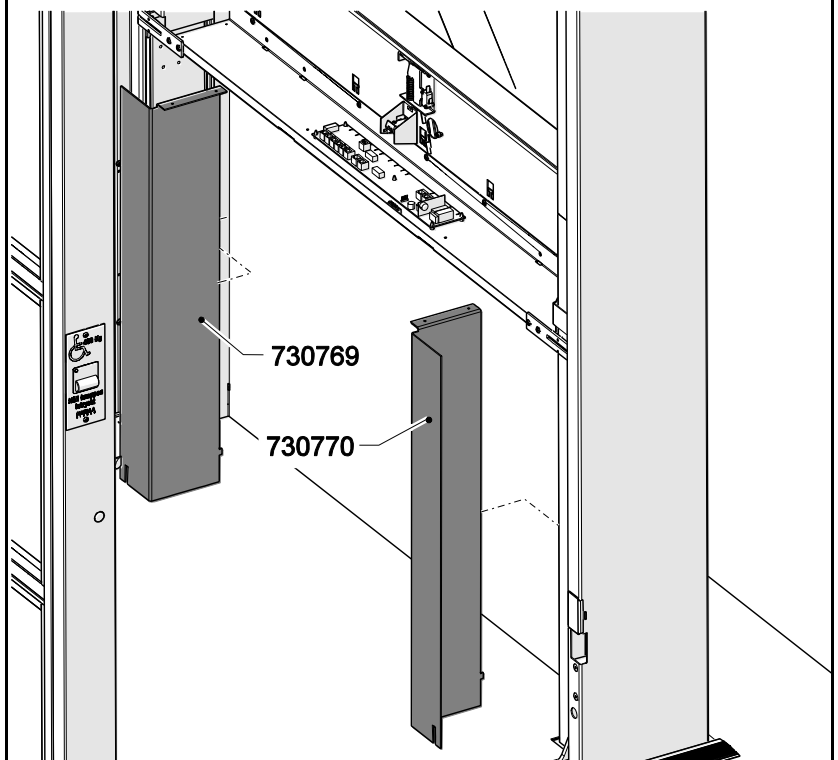
Fit the upper sensitive edge

1. Fit the upper sensitive edge 730774, use 4x 730775 and 8x 100223. Se Mom. 1 and Mom. 2.



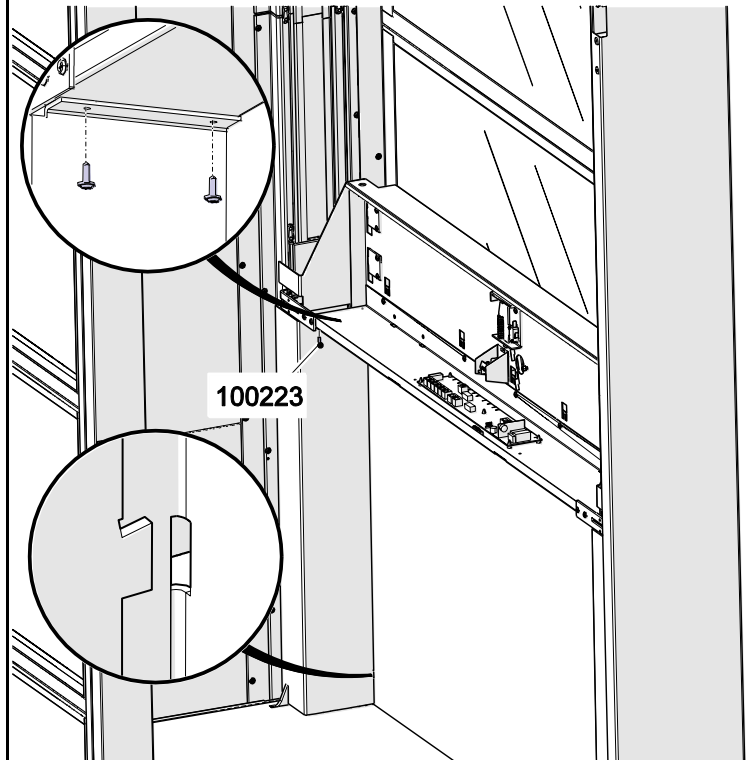
Place the side panels

1. Place the left 730769 and right 730770 side panel after that you are satisfied with floor magnets, limit and lock arm positions. Note! If you want to drive and adjust from the platform COP you may have to fit these panels temporary for getting the COP etc in right place.



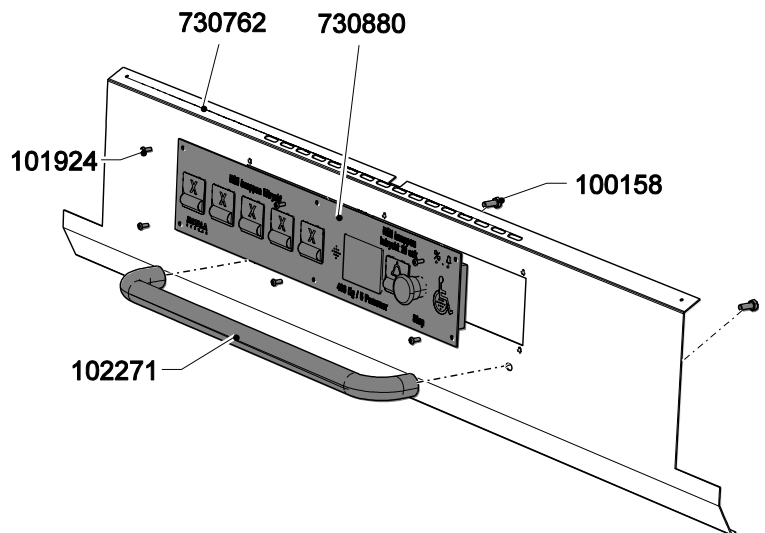
Fix the side panels

1. Insert the hook into the groove.
2. Fasten the side panels, use 4x 100223.



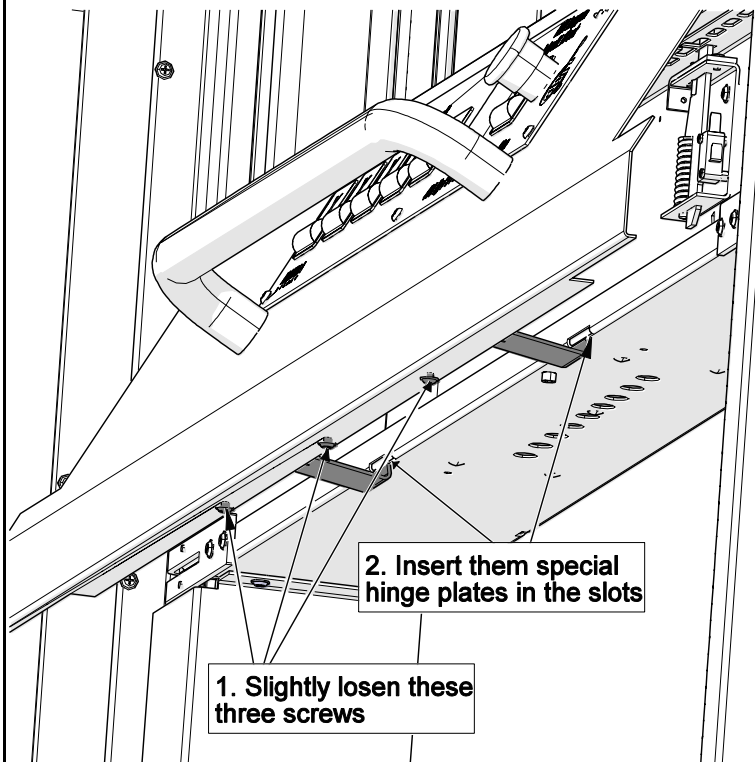
Fit the COP and handrail

1. Fit the COP 730880 on the panel 730762, use 6x 101924.
2. Fit the hand rail 102271, use 2x 100158.



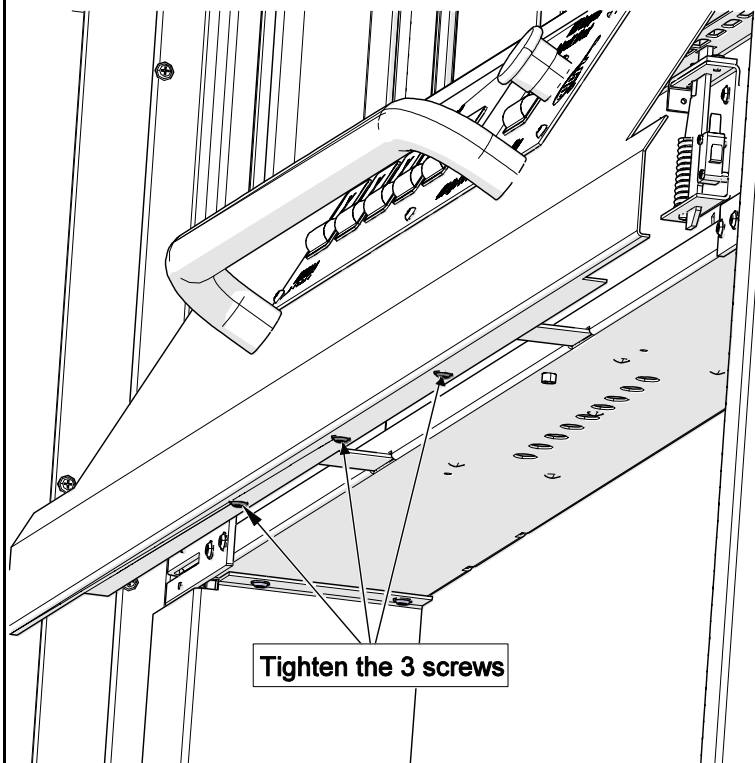
Install the COP panel step 1

1. Slightly loosen the 3 screws under the COP panel.
2. Insert them special hinge plates in the slots.



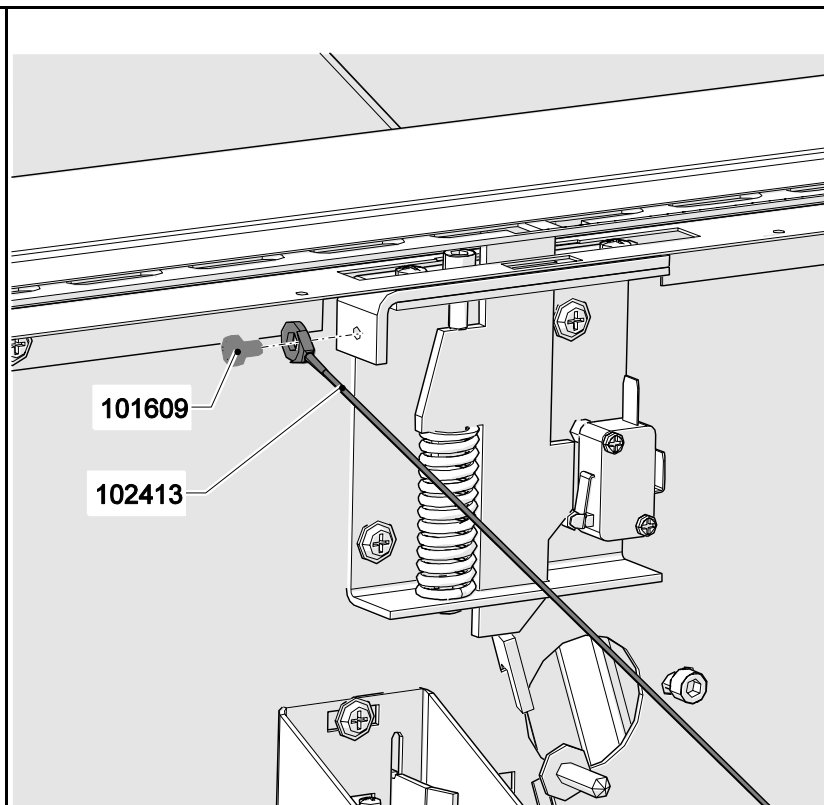
Install the COP panel step 2

1. Tighten the 3 screws.



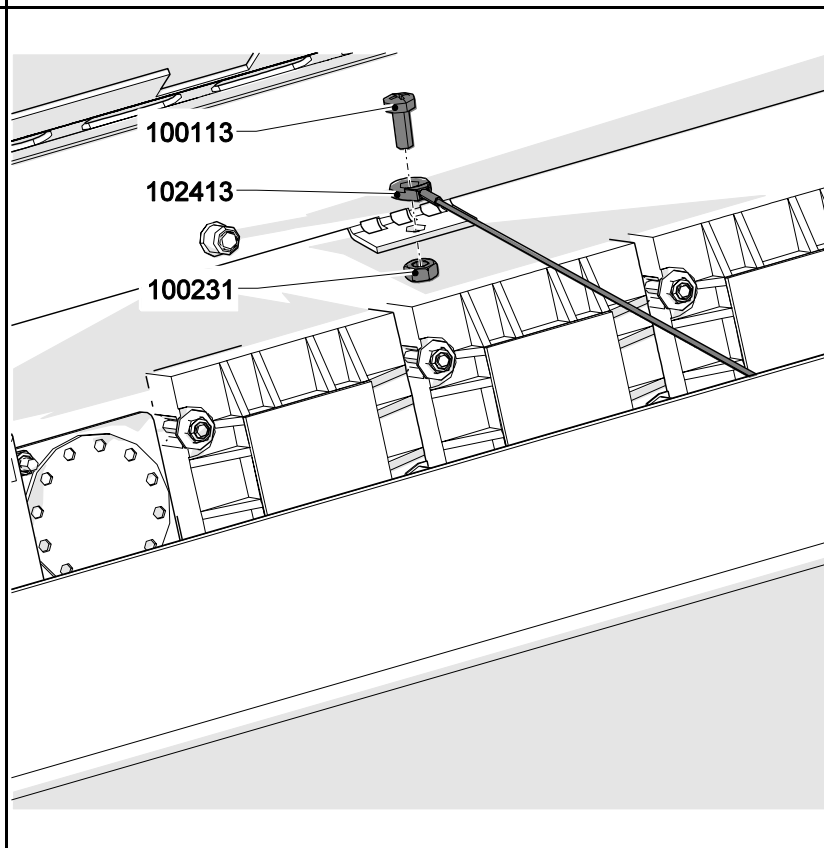
Install the COP panel step 3

1. Apply one end of the wire 102413 to the wall, use 1x 101609.



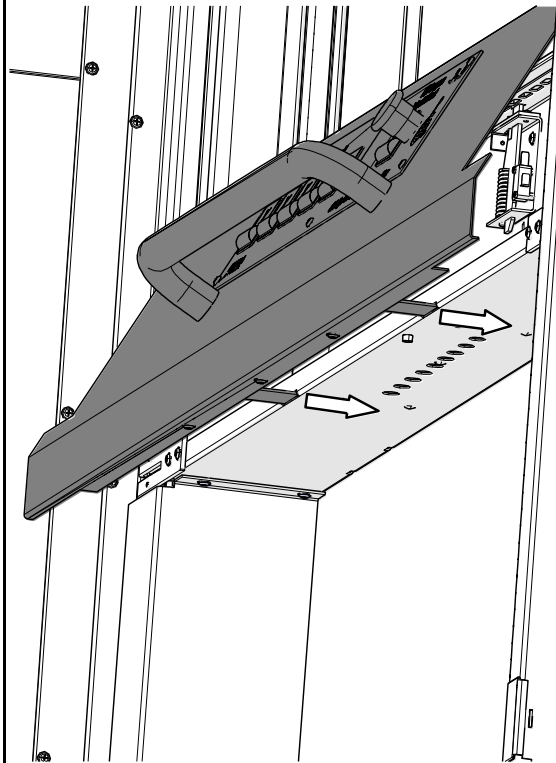
Install the COP panel step 4

1. Apply the other end of the wire 102413 to the COP, use 1x 100113 and 1x 100231 .
2. Connect the cables from the COP to the PCB terminals. See electrical drawings for connection points.



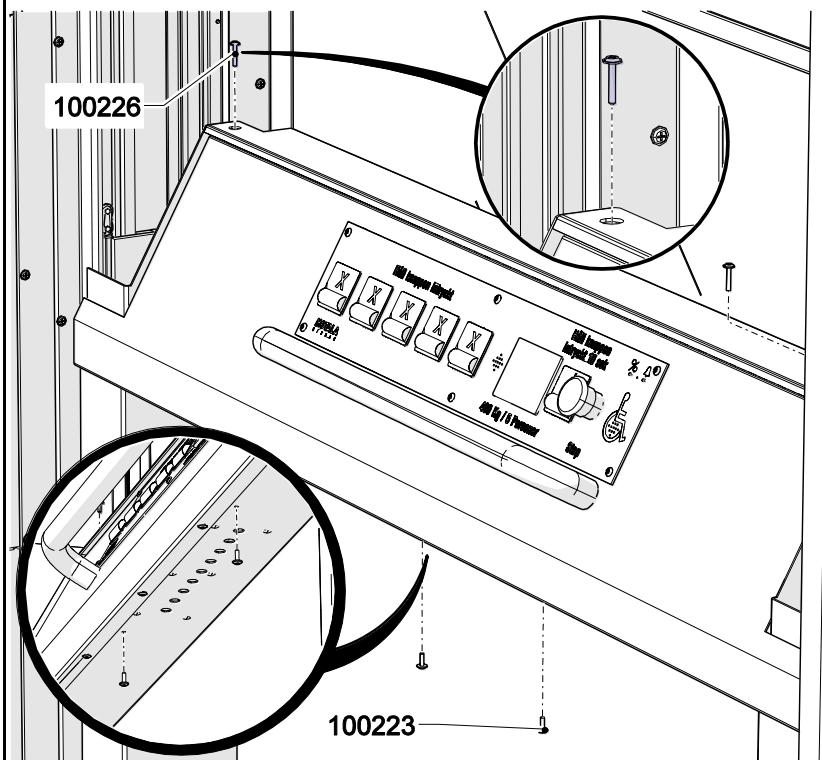
Install the COP panel step 5

1. Slide in the COP in until it stops, let the edge of the plate slide in under the sensitive edge.



Install the COP panel step 6

1. Fix the COP, use 2x 100226 and 2x 100223.



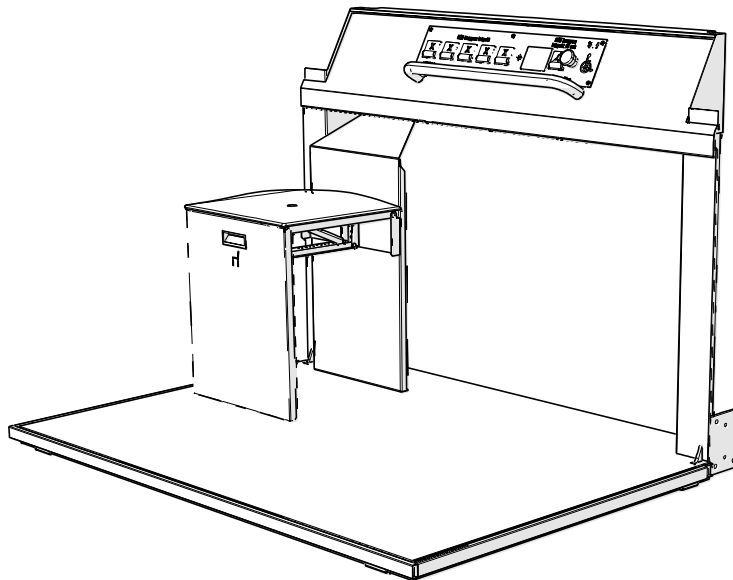
5. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2012-09-26	Draft 1.0	9340	Niklas Adell	Ari Nieminen
A	2013-01-15	Modified to fit Kinds equipment	9340	Niklas Adell	Ari Nieminen
B	2013-02-21	Added information about electrical connections,	9340	Johan Strömberg	Ari Nieminen
C					

MC2000 - Flip chair on the platform

Rev. -



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1. GENERAL

This flip chair is special designed to fit on MC2000 platform. Follow this instruction carefully to ensure an efficient and trouble-free installation.

Related documents



This instruction is to be used with the MC2000 installation instruction and IQ56-04 Updated version of the platform wall MC2000 installation instruction.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

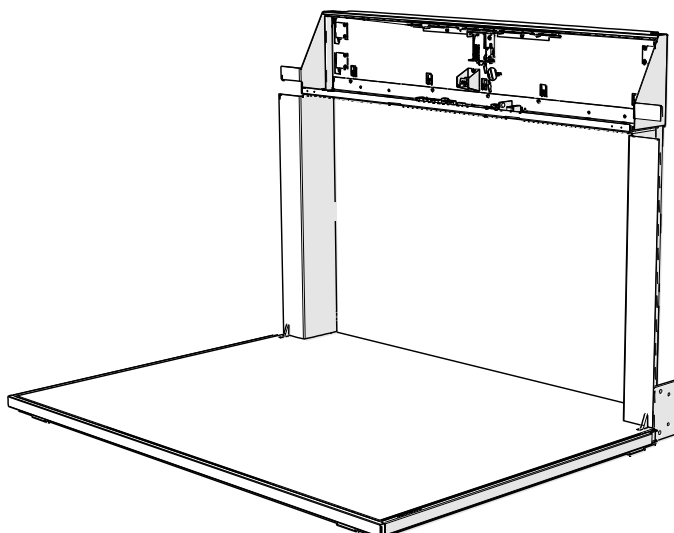
3. Fasteners used in the installation instruction

Number	Description	View
100223	Staps 4,2x14 CS Ph2	
101725	RXK B8x9 FZB	

4. Installation

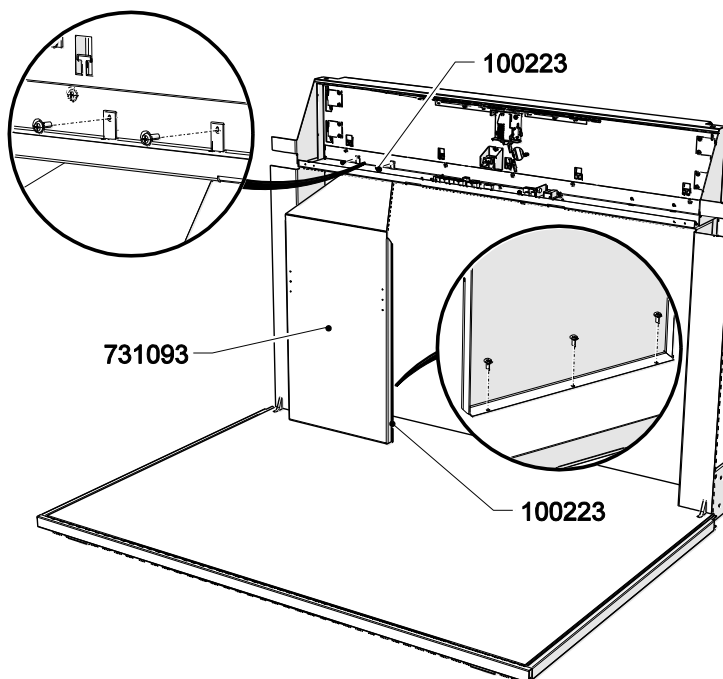
Remove the COP

1. Remove the COP to be able to install the consol for the flip chair. Refer to document IQ56-04 Updated version of the platform wall MC2000 installation instruction.



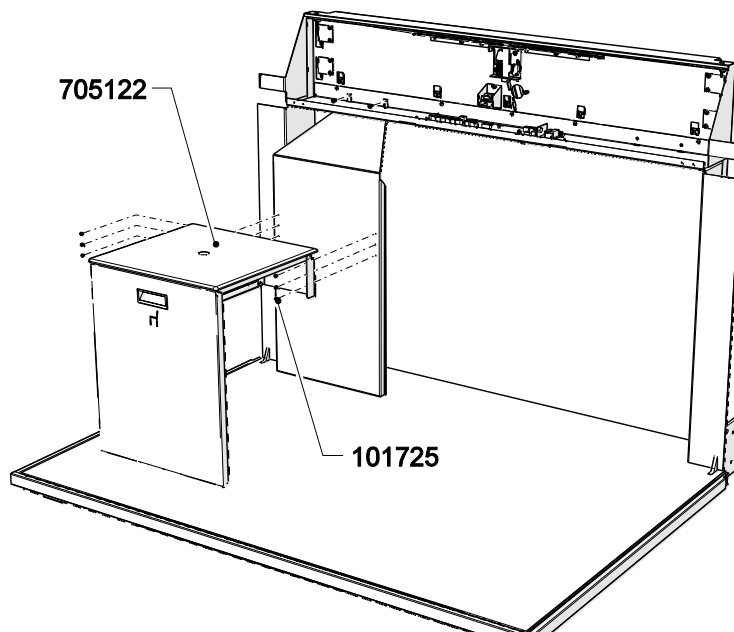
Fit the consol

1. Fit the consol 731093 by using 2x 100223 in the pre-drilled holes in the platform wall.
2. Make sure the consol is vertical by using a spirit level before fitting the lower part of the consol by using 3x 100223. (you might have to mark and drill holes before fitting the screws in the platform floor).



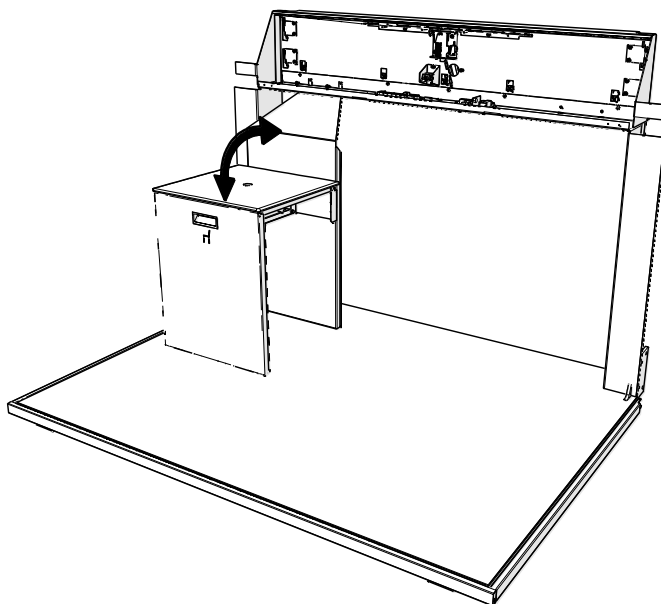
Mount the flip chair

1. You have to tension the flip chair apart to be able to fit the screws, use 6x 101725. It is easier to be two persons doing this phase of the installation.



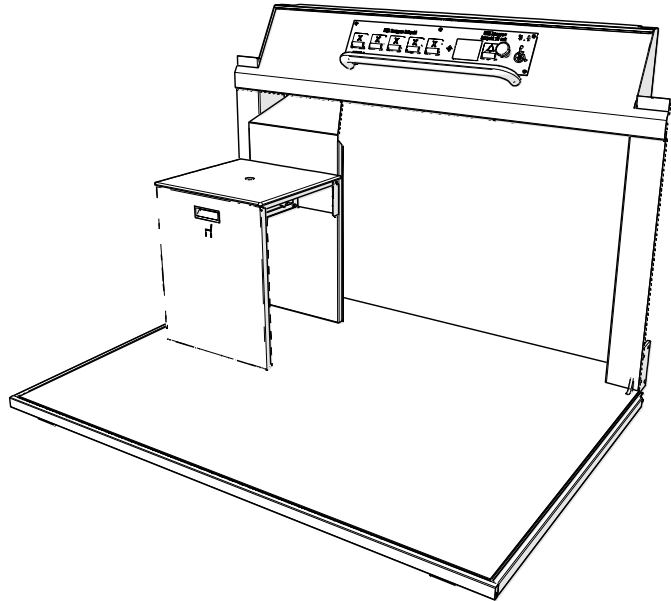
Test the flip chair

1. Test the flip chair by pull it out and push all the way to the floor.
2. Then test that the gas spring brings the flip chair up again.
3. In the upper retracted position the flip chair must be hold in position by the magnets.



Refit the COP and make a function test of the COP

1. Refit the COP in its original position, se document IQ56-04 Updated version of the platform wall MC2000 installation instruction.
2. Test the function of the COP.
3. Installation is finished.



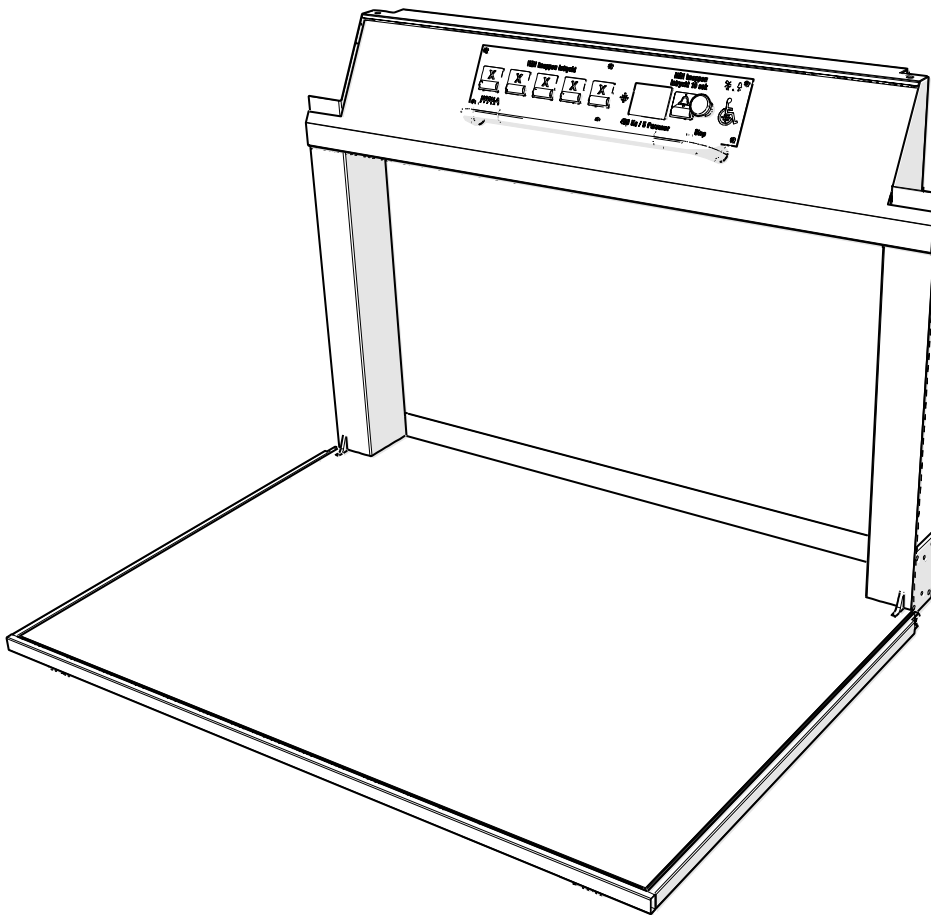
5. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2013-01-18	First edition	13337	Niklas Adell	Ari Nieminen
A					
B					
C					

MC2000 - Exclusive option for the platform

Rev. -



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1. GENERAL

This exclusive option is special designed to fit on MC2000 platforms. Follow this instruction carefully to ensure an efficient and trouble-free installation.

Related documents

This instruction is to be used with the MC2000 installation instruction and IQ56-04 Updated version of the platform wall MC2000 installation instruction.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

3. Fasteners used in the installation instruction

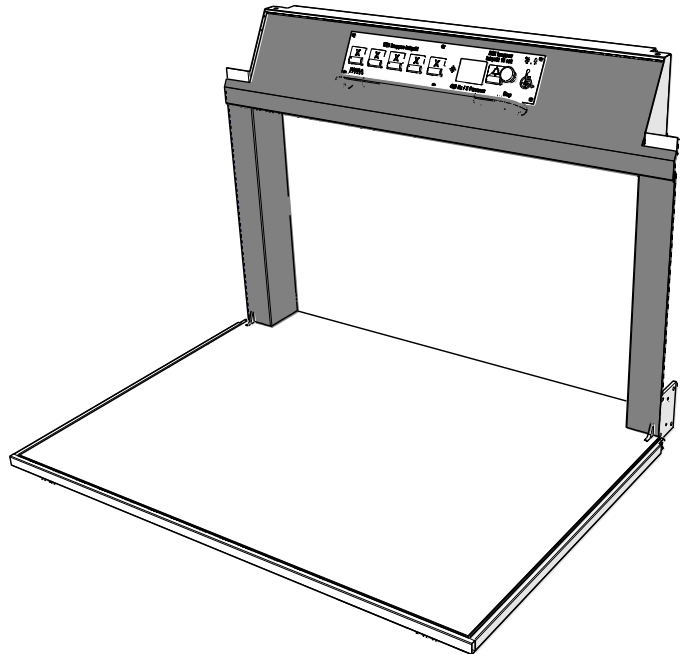
Number	Description	View
-	-	-

See document IQ56-04 Updated version of the platform wall MC2000 installation instruction.

4. Installation

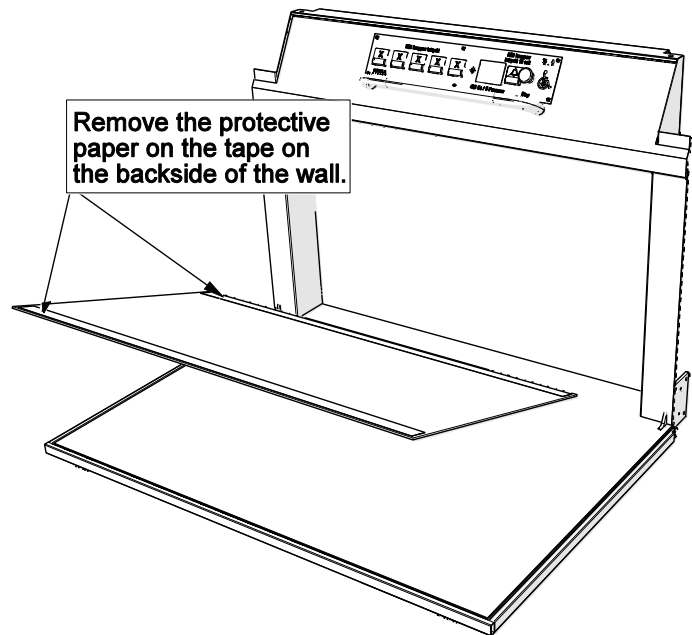
Fit side panels and COP

1. Remove the plastic cover from the stainless steel plates and check for scratches. Fit the side panels (stainless steel), handrail (stainless steel or oak) and the COP (stainless steel). Se document IQ56-04 Updated version of the platform wall MC2000 installation instruction



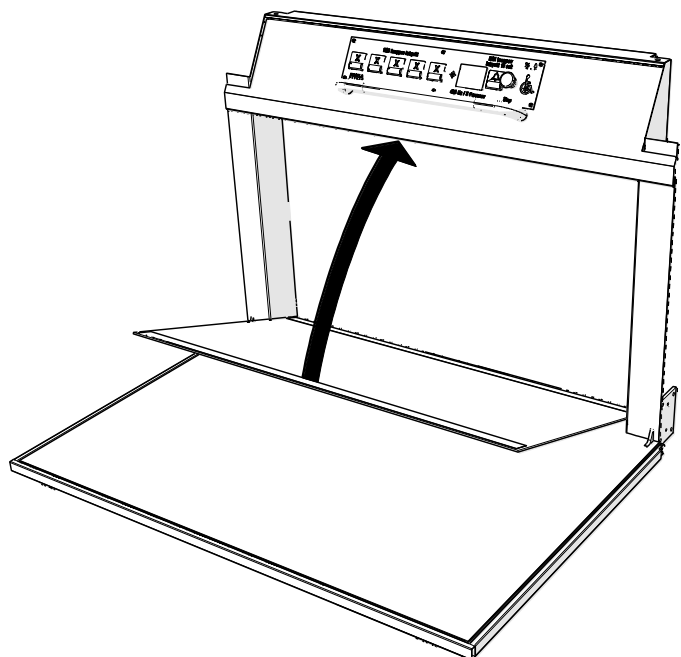
Fit the exclusive wall step 1

1. Remove protective paper from tape.



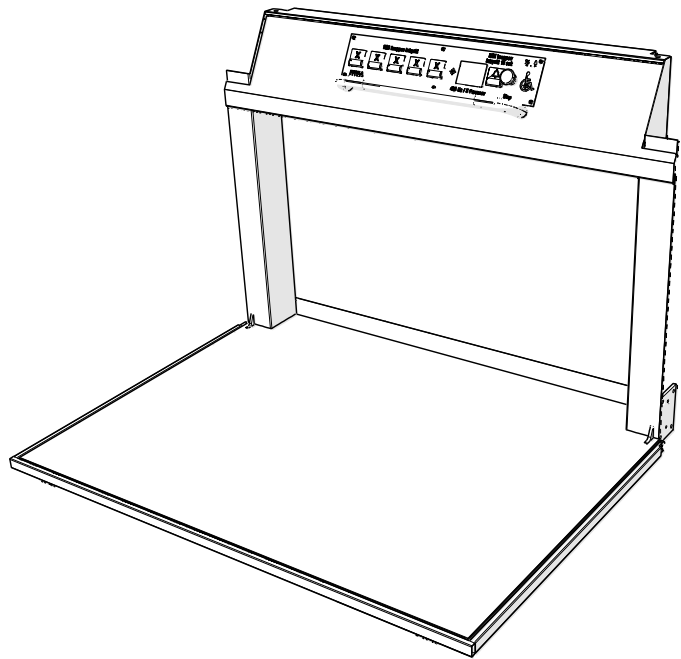
Fit the exclusive wall step 2

1. Fit the lower part of the exclusive wall in the corner of the floor and the wall and tape it to the wall of steel.



Final check

1. Check the installation for scratches.
2. Wash away fingerprints and other dirt from the platform before leaving the site.



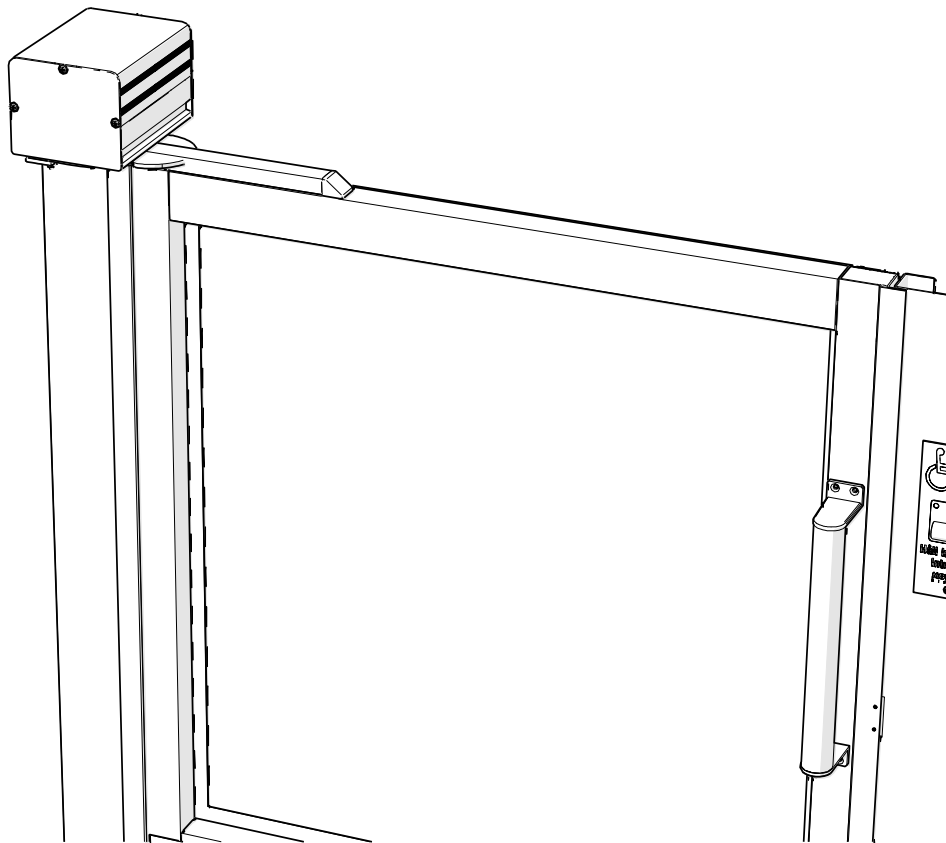
5. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2013-01-21	First edition	13339	Niklas Adell	Ari Nieminen
A					
B					
C					

MC2000 – Automatic door operator – Headroom 1300 mm (half door)

Rev. -



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1. GENERAL

This automatic door operator is specially designed to fit on MC2000 door's when headroom height is 1300 mm, that means it's for the option with half door in the topmost floor. Follow this instruction carefully to ensure an efficient and trouble-free installation.

Related documents


This instruction is to be used with the MC2000 installation instruction and IQ80-02E Swing door slow speed.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

3. Fasteners used in the installation instruction

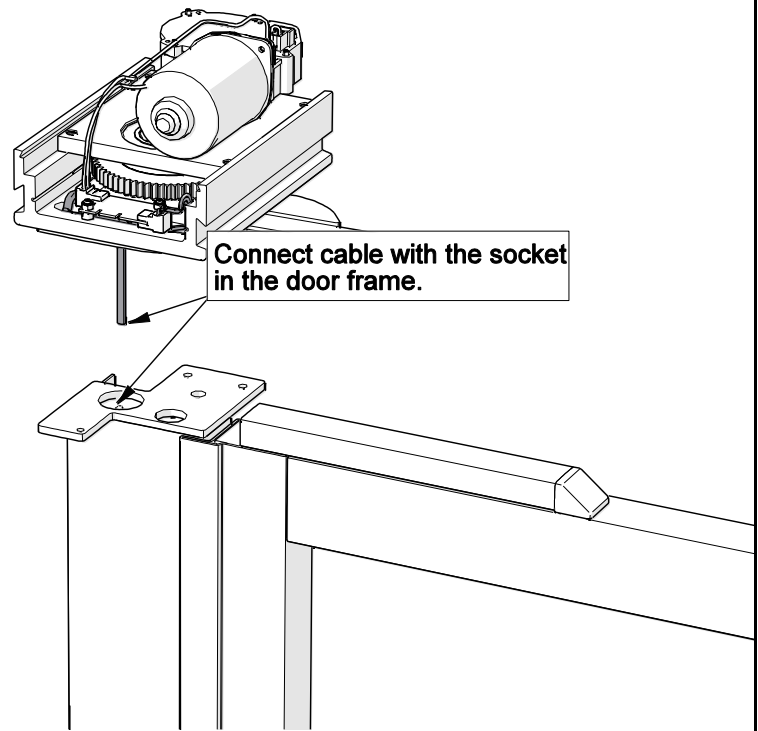
Number	Description	View
101696	MC6S M6x30 FZB	

5. Installation

This instruction shows the installation of a automatic door operator part no. 730955 on a left-hinged door. For right-hinged door use automatic door operator part no. 731059.

Connect cables

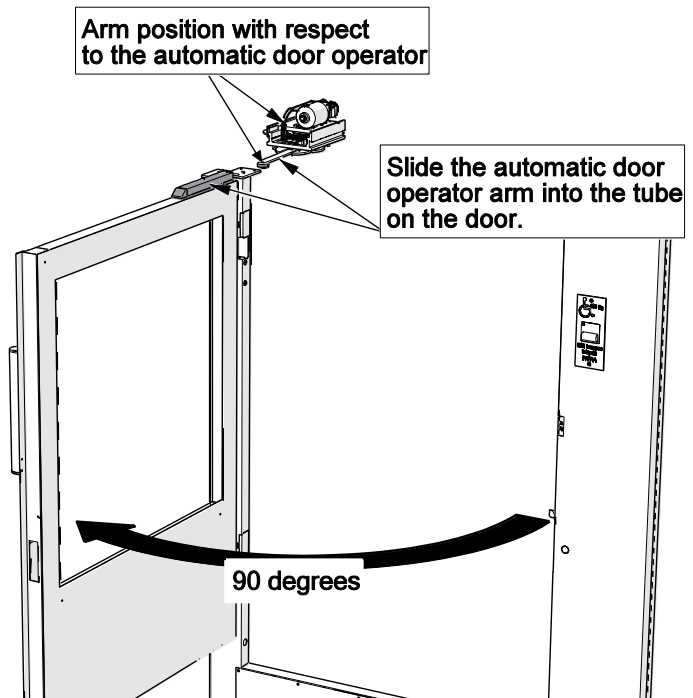
1. Remove the cover on the automatic door operator.
2. Connect the cable from the motor unit to the socket in the door frame.
3. Not. All cables are not correct shown in this illustration.



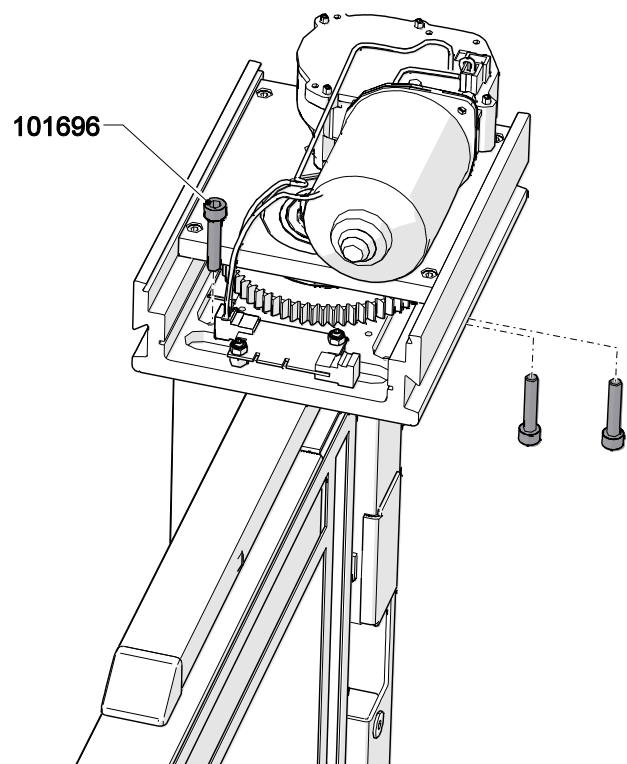
Instruction

Prepare to fit the automatic door operator

1. In some cases there can be a wall at the side of the lift witch prevent to slide the automatic door operator arm in to the tube on the closed door, then follow step 2 and 3.
2. Turn the arm on the automatic door operator so that it points at the direction to the outside of the door frame.
3. Open the door 90 degrees so that it points in the same direction as the arm on the automatic door operator. *Warning! Don't open the door more than 90 degrees, it can damage the door frame. Be careful not to damage the cable.*
4. Not. All cables are not correct shown in this illustration.

**Fit the automatic door operator**

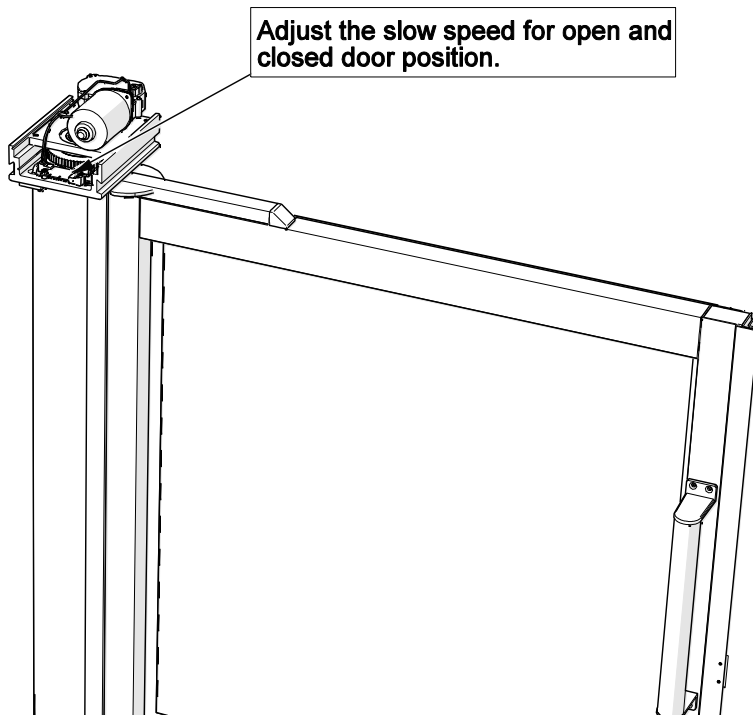
1. Fit the automatic door operator, use 3x101696.



Instruction

Adjust the slow speed

1. How to adjust the slow speed, use instruction in document IQ80-02E Swing door slow speed.
2. Fit the cover on the automatic door operator.



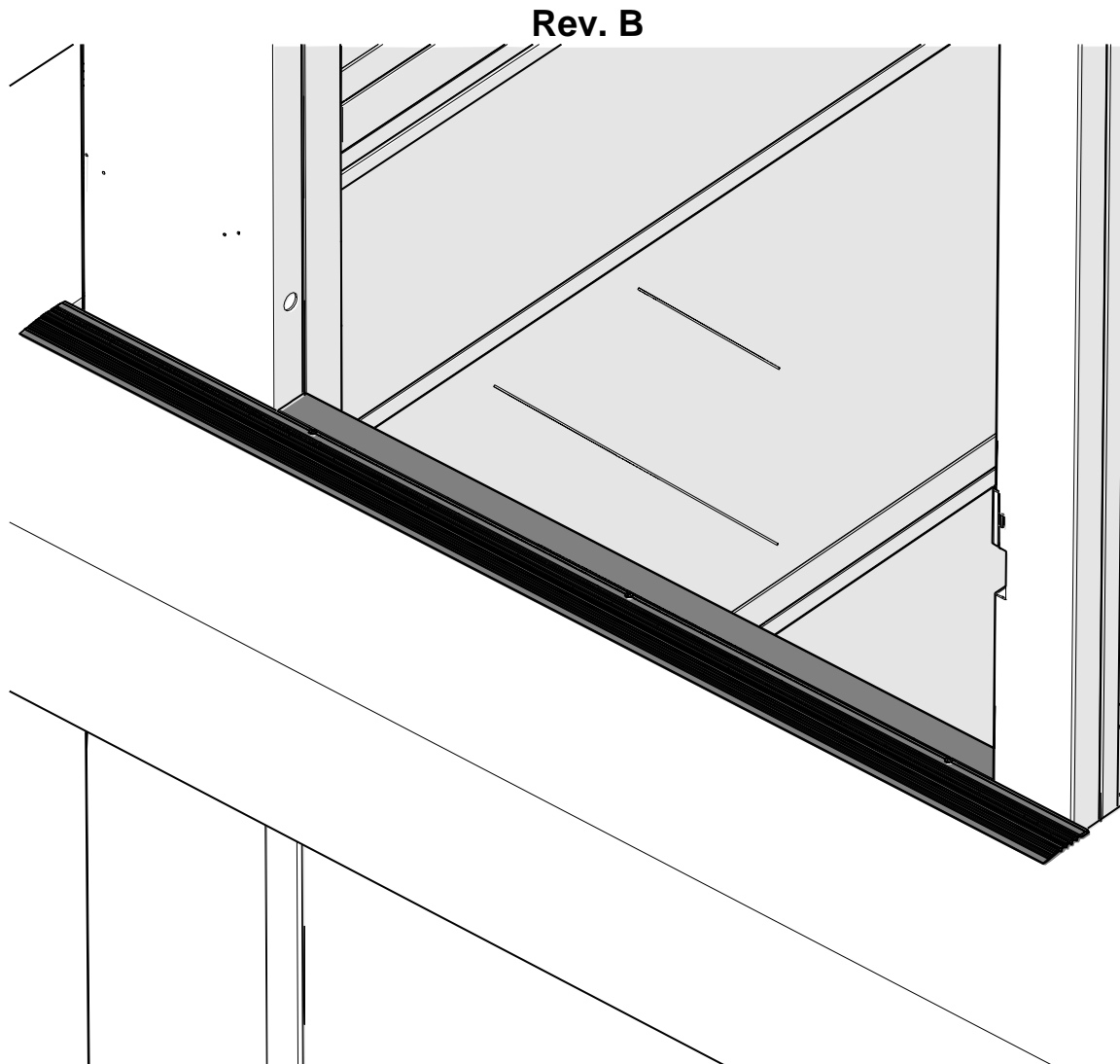
6. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2013-02-12	First edition	13185	Niklas Adell	Ari Nieminen
A					
B					
C					

Threshold

Installation instruction



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5.2.4 FITTING THE INNER PART	5
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1. GENERAL

This Threshold is special designed to fit on Motala Lifts. Follow this instruction carefully to ensure an efficient and trouble-free installation.

Note! In this illustration the shaft door´s are left out to easier illustrate the steps of the installation. Normaly all shaft door´s should be in place and closed, just the door where the threshold is being installed should be opened.

Note! This threshold is to be fitted only when the gap between the lift and the finished floor is maximum 30 mm. Otherwise a special solution must be provided.

1.1 RELATED DOCUMENTS

- This instruction is to be used with the MC2000 installation instruction.
- The principle of the installation method of the threshold can also be used to install the thresholds on elevator M6000, M6000 LS and ProSpace, then the instruction is to be used with respectively elevator installation instruction.

2. SAFETY

Personal safety precautions for fitters.

Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.

Follow the safety precautions in the MC2000, M6000, M6000 LS or ProSpace installation instruction depending on which elevator the threshold is installed on.

3. SITE REQUIREMENTS AND TOOLS

3.1 SITE REQUIREMENTS

To fit the thresholds the floor must be finished, otherwise the fitter can not complete the installation of the threshold.

Note! If the floor **is not finished** at the time of the lift installation the threshold must be fitted **by the builder** after the lift is installed and the floor is finished (see **5.1.1** and **5.1.2**). The fitter of the lift must have a dialog with the builder and explain how to make a proper installation before leaving the installation site.

3.2 TOOLS

Aluminum saw, electrical screwdriver, pop rivet tool, drilling machine and spirit level.


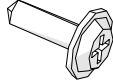
3.3 CHECK DELIVERY

Check that the inner stainless steel plate and the outer aluminum profile are not damaged or have scratches. Check the length of the inner and outer part. Pop rivets for fix the outer part to the inner part is in the screw package for the lift. Note! The screws to fit the outer part of the threshold to the finished floor **is not** included (see **5.1.2**)

3.4 STANDARD SIZES

To fit different shaft sizes the aluminum profile must be adjusted in length. The inner steel plate depends on the door width and has the correct width from factory.

4. Fasteners used in the installation instruction

Number	Description	View
100268	Pop rivet 3,2x13,1 Stainless	
100223	Staps 4,2x14 CS Ph2	

5. INSTALLATION

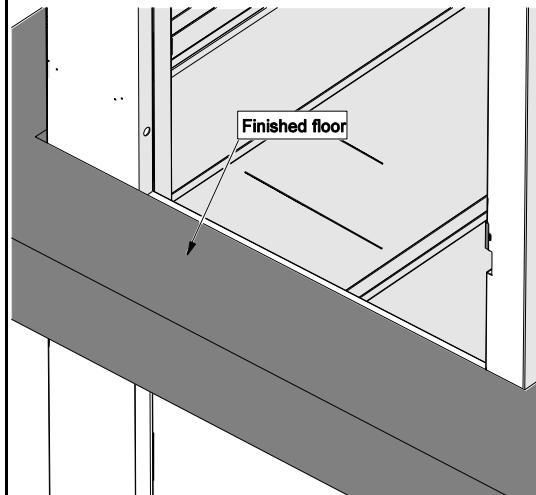
The threshold is divided in two parts, one inner part (stainless steel) and one outer part (aluminum profile).

5.1 Preparation

5.1.1 Finished floor

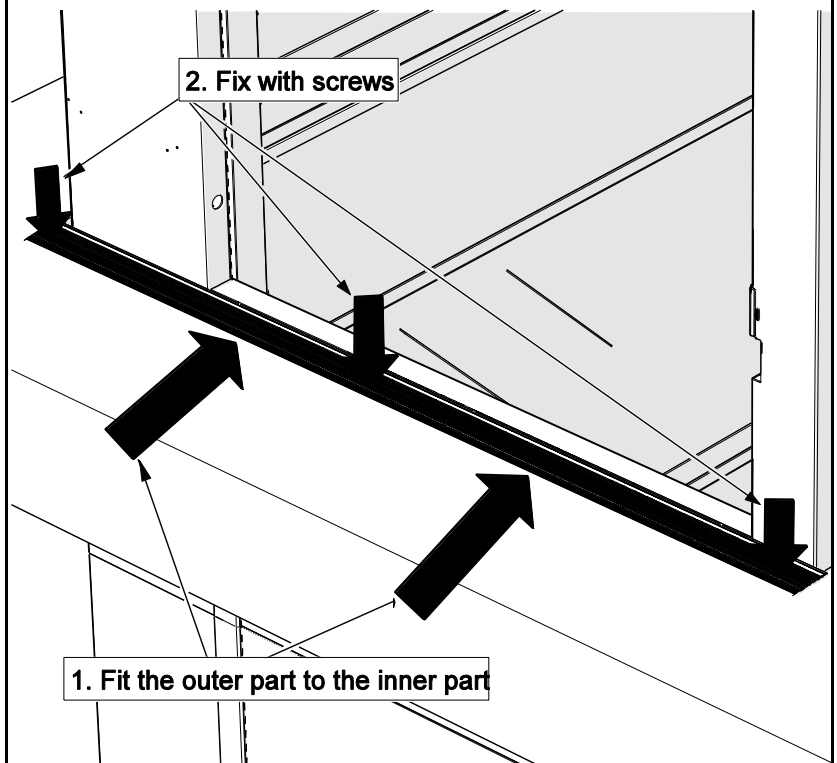
Make sure the floor outside the lift is finished. Otherwise the inner part of the threshold has to be adjusted in height by a fitter after the floor is finished.

For alternative installation method if the floor is not finished at the time of the lift installation see 3.1 and 5.1.2.



5.1.2 If the floor is not finished.

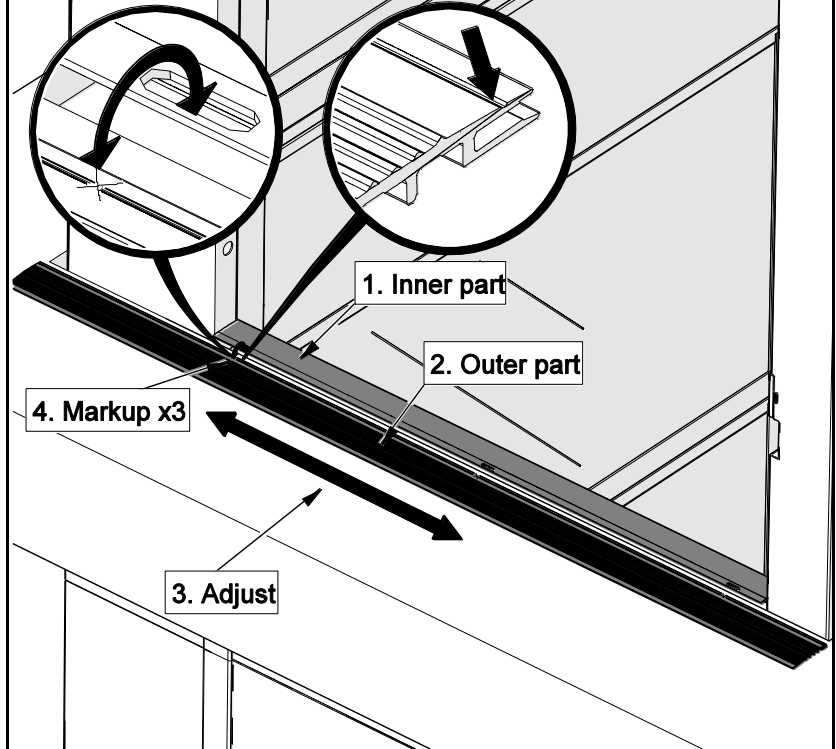
- Note!** If the floor is not finished, **do not** make marks for screws on the outer part of the threshold as described in 5.2.1. Get the finished floor level height from the builder and fix the inner part of the threshold at the right height (use a spirit level). **(1)** Then, when the floor is finished the builder must slide on the outer part of the threshold on to the inner part of the threshold. **(2)** Drill 3 holes through the threshold to fix the outer part to the floor. Use **countersunk** screws or **flat head** screws to fix the threshold to the floor. **The builder must supply the proper screw for the finished floor and make sure the fitting looks neat and proper!**



5.2 Fitting the threshold

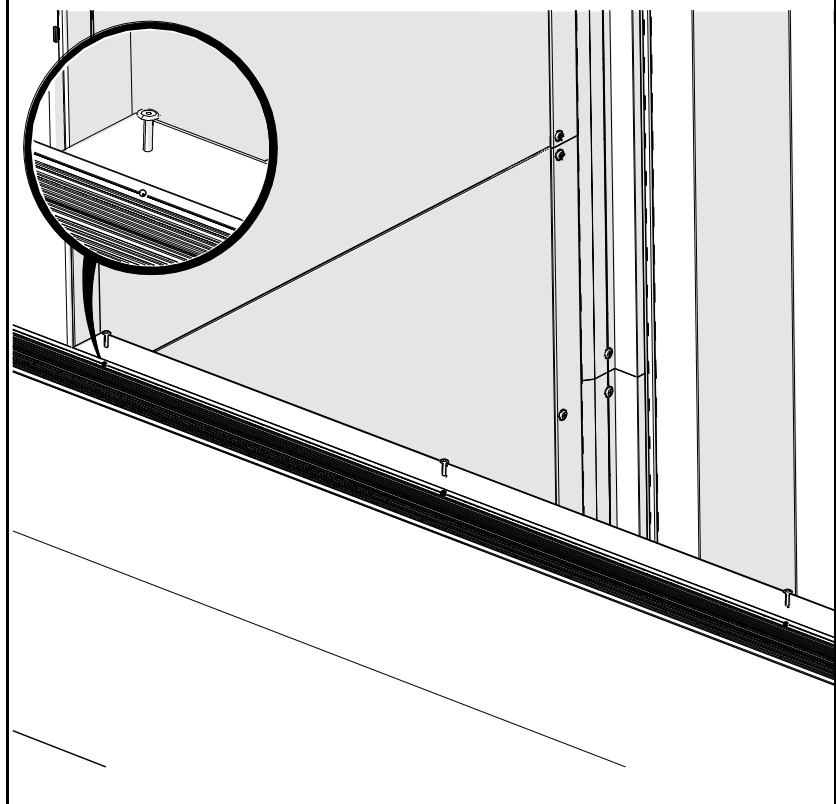
5.2.1 Markup for pop rivets

1. Temporarily put the inner part of the threshold in place by holding it with one of your hands.
2. With your other hand put the outer part on the floor.
3. Adjust the outer part sideways to the right position.
4. In center of each of the 3 grooves in the inner part make a mark for screws in the groove of the outer part.



5.2.2 Fit the outer part to the inner part.

1. Slide the outer part on to the inner part.
2. Drill 3x 3,3mm holes through the whole aluminum profile at the markings.
3. Fit the outer part to the inner part, use 3x 100268.



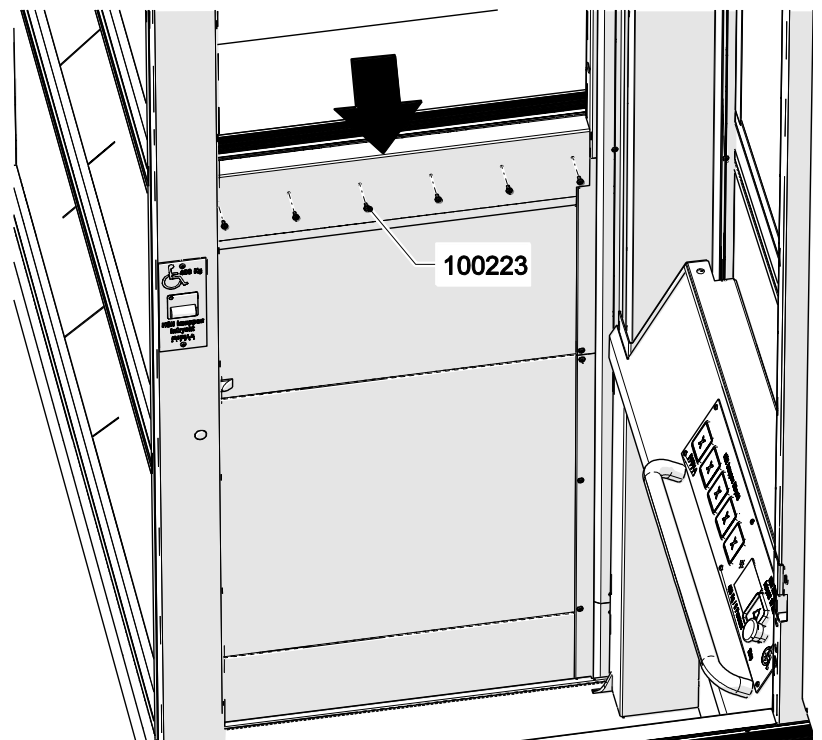
5.2.3 Working position

1. To get a good and comfortable working position you can lower the platform about 1-1,5m under finished floor.



5.2.4 Fitting the inner part

1. To fit the inner part of the threshold, push down the threshold so that the outer part is firmly pressed to the finished floor. **Note!** If the floor is not finished see **3.1** and **5.1.2** you must use a spirit level when you fix the inner part.
2. Fix the threshold from inside, use 8x 100223.
3. Installation is finished.



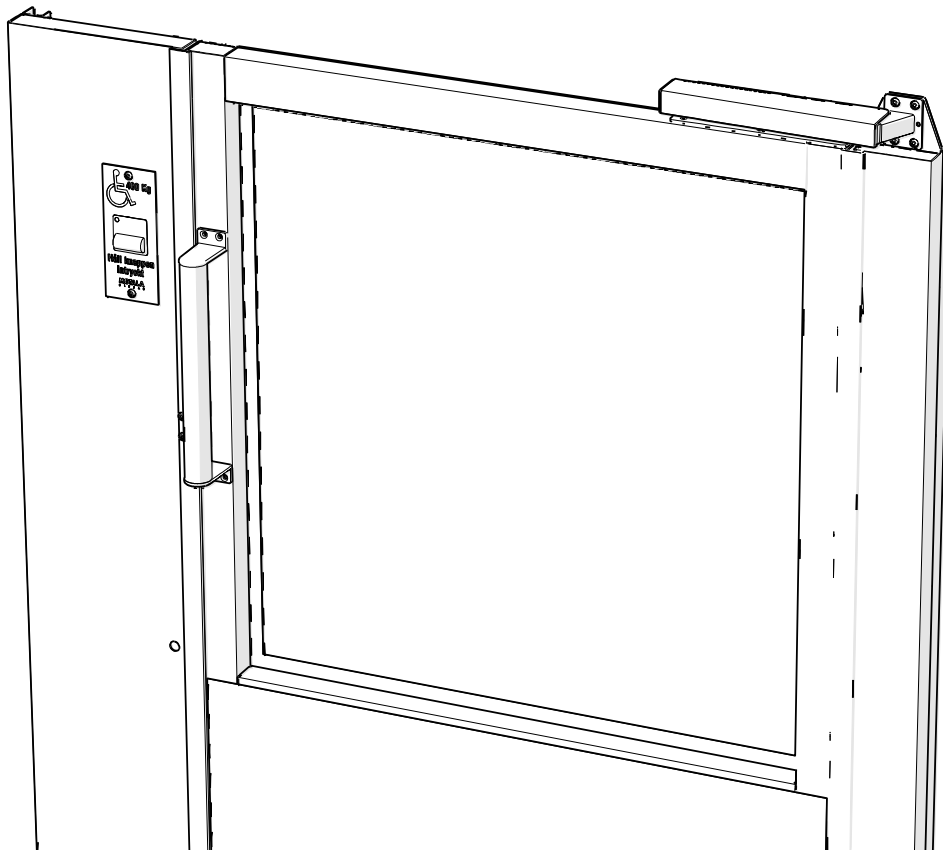
6. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Approved by
-	2013-05-07	First edition	-	Ari Nieminen
A	2013-05-22	If there is no finished floor	-	Ari Nieminen
B	2015-02-12	Changed to fix outer part with pop rivets	18021	Stefan Westin

MC2000 – Manual door closer – Headroom 1300 mm (half door)

Rev. -



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6. APPROVALS AND VERSION HISTORY	6

1. GENERAL

This manual door closer is to be used when headroom height is 1300 mm, that means it's for the option with half door in the topmost floor. Follow this instruction carefully to ensure an efficient and trouble-free installation.

Related documents



This instruction is to be used with the MC2000 installation instruction. For more details about the door closer functions, see the documentation as follows with the door closer delivery.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

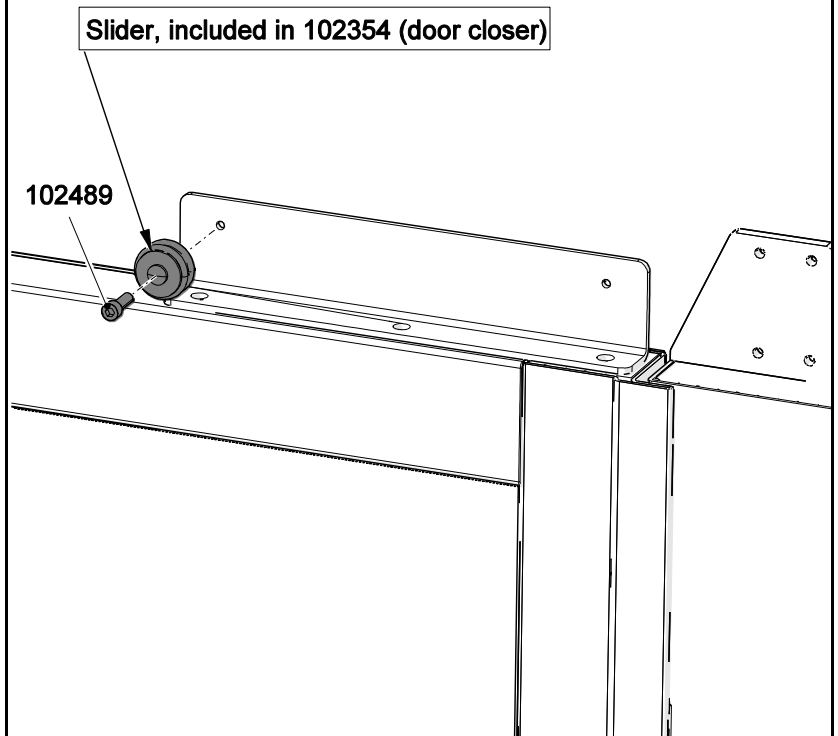
3. Fasteners used in the installation instruction

Number	Description	View
101528	M6x10 K6S RF A2 ISO 7380	
102489	M5x16 MC6S FZB	

5. Installation

Fit slider

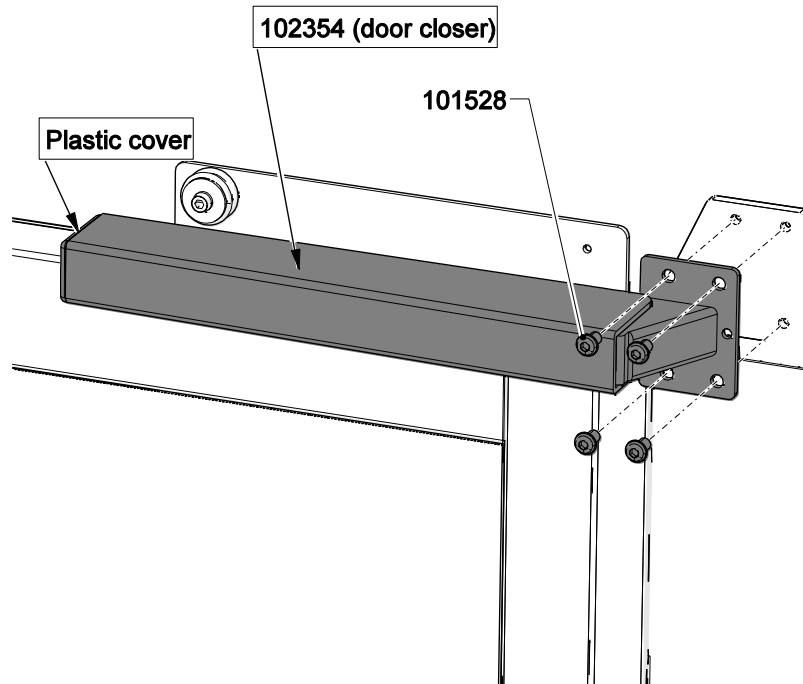
1. Fit the slider on the door, use 1x 102489.



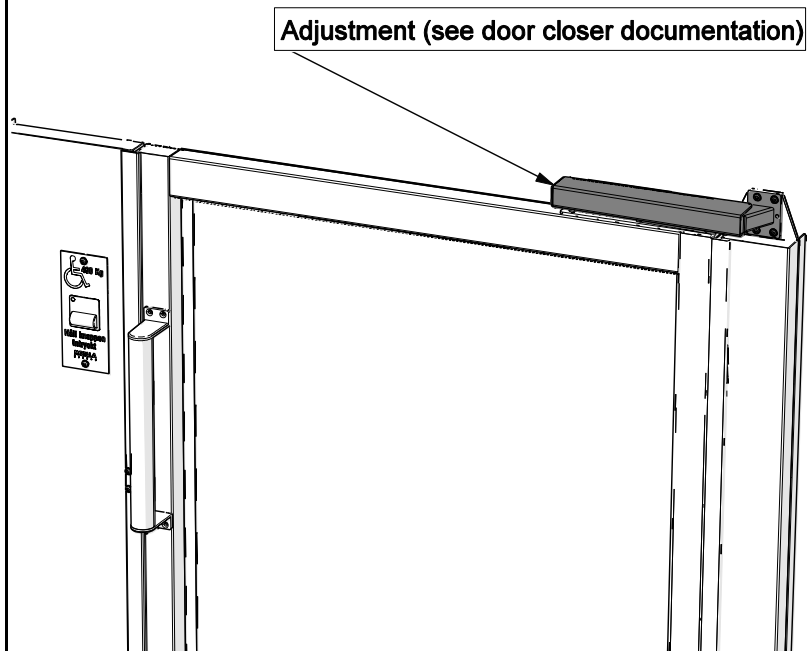
Instruction

Fit door closer

1. Remove the plastic cover and push the closer 102354 onto the slider. Fix the closer, use 4x 101528. Put the plastic cover back on the door closer.

**Adjustment**

1. Adjust the closer, see documentation that comes with the closer.
2. Before leaving the site check several times that the door closes nice and smoothly.
3. Installation is complete.



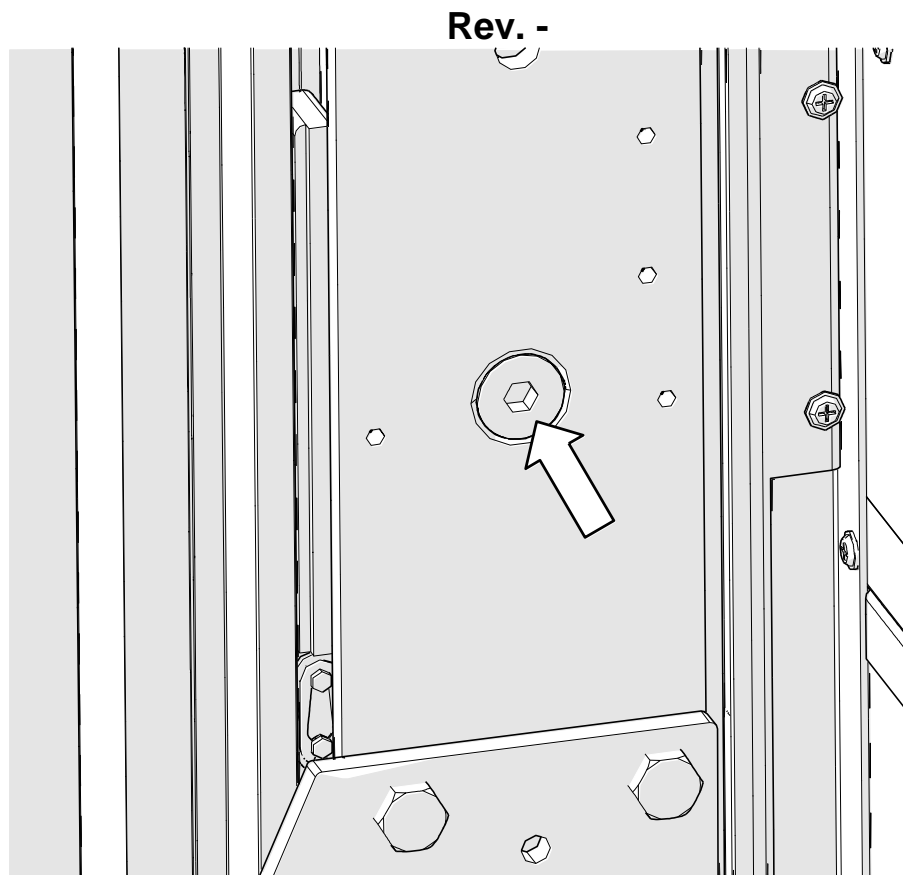
6. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2013-04-22	First edition	13882	Niklas Adell	Ari Nieminen
A					
B					
C					

Adjustment method for platform and gliding shoes

instruction



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1 GENERAL

This instruction is used to avoid vibrations on the platform.

1.1 RELATED DOCUMENTS

This instruction is to be used with the MC2000 installation instruction.

2 SAFETY

Personal safety precautions for fitters.

Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.

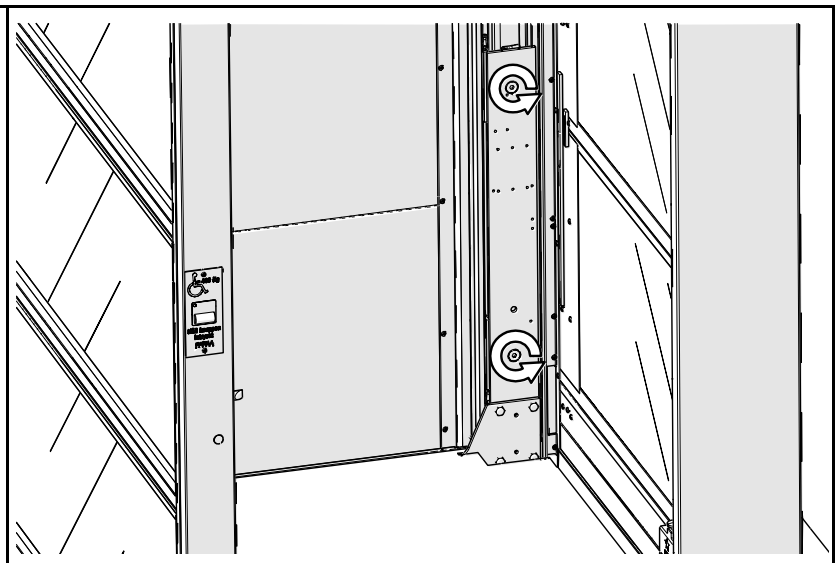
Follow the safety precautions in the MC2000 installation instruction.

3 ADJUSTMENT METHOD

3.1 Adjustment

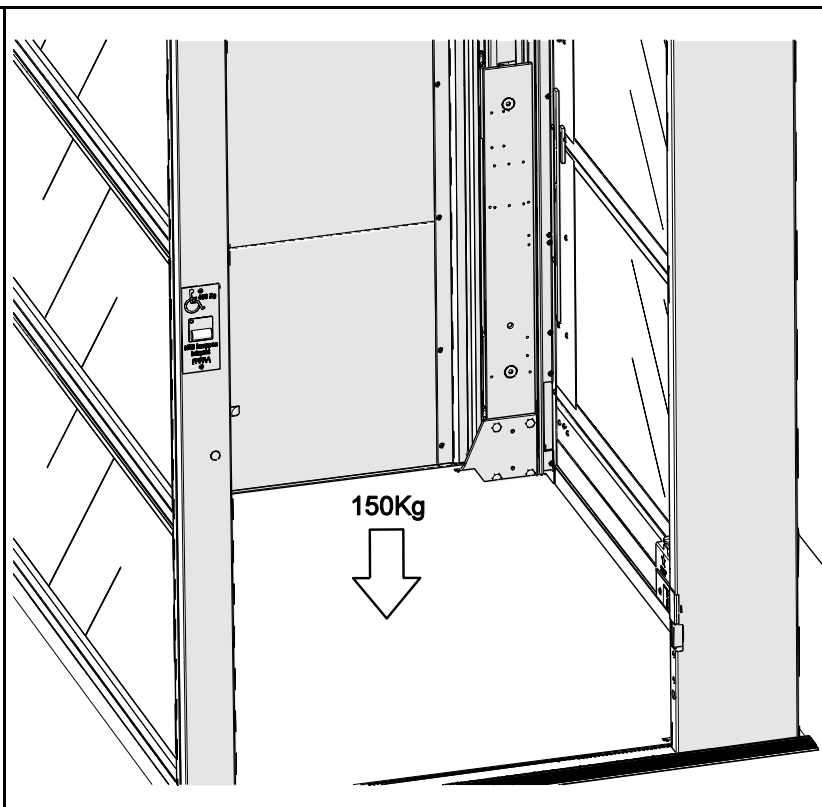
3.1.1 Loosen the screws

Slightly loosen the screws to the gliding shoes on both left and right side of the platform.



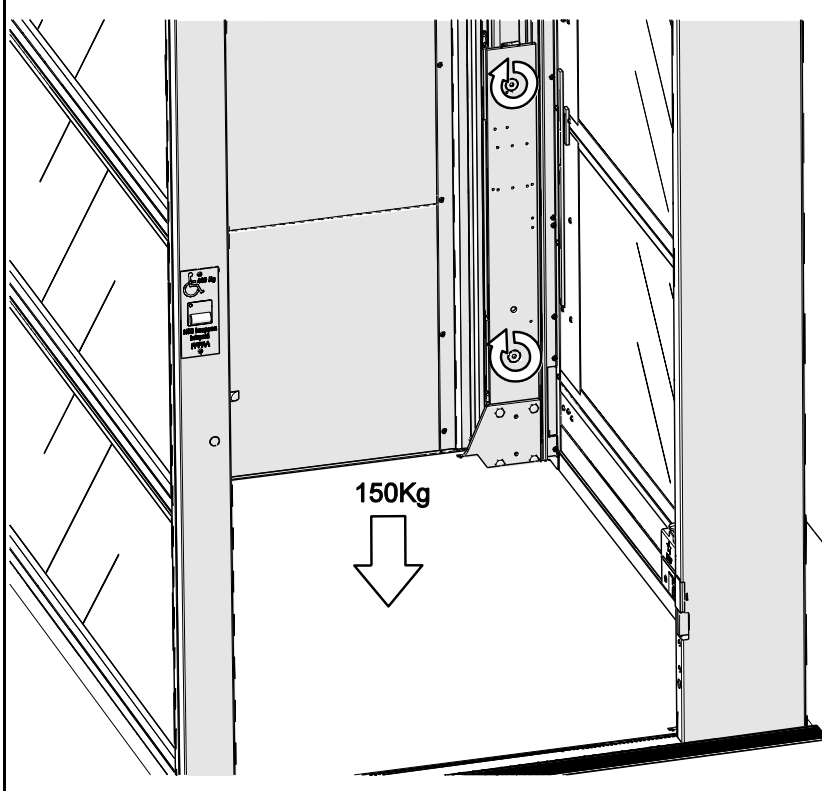
3.1.2 Load the platform

Load 150kg on the platform.



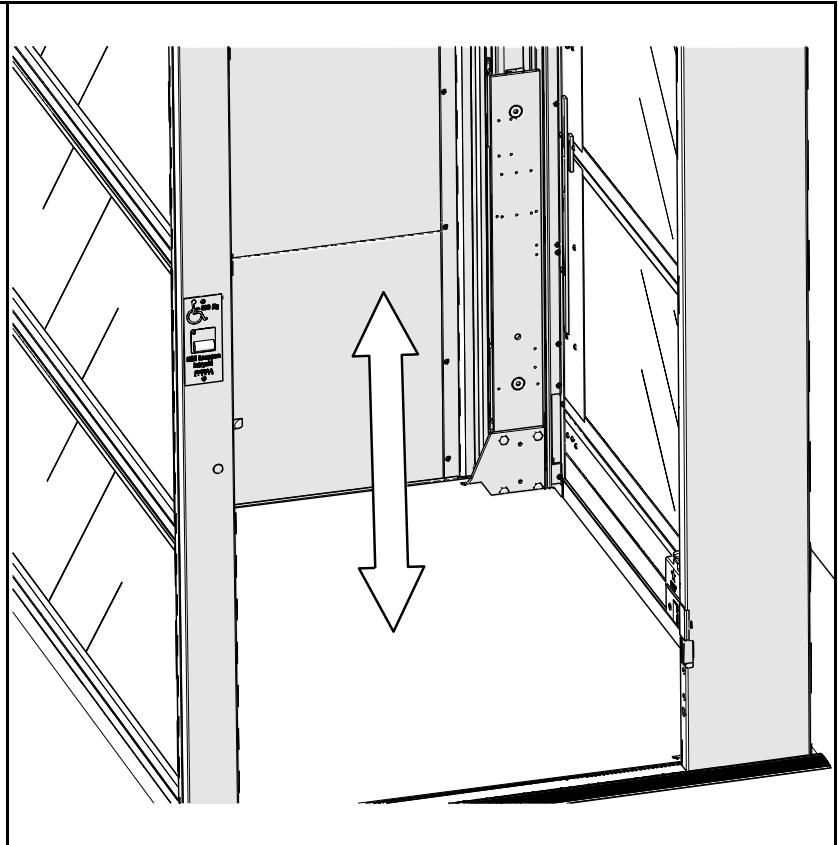
3.1.3 Tighten screws

Tighten screws on left and right side, torque = 30-40Nm.



3.1.4 Test for vibrations

Test drive the platform **with** and **without** load and check for vibrations.



4 APPROVALS AND VERSION HISTORY

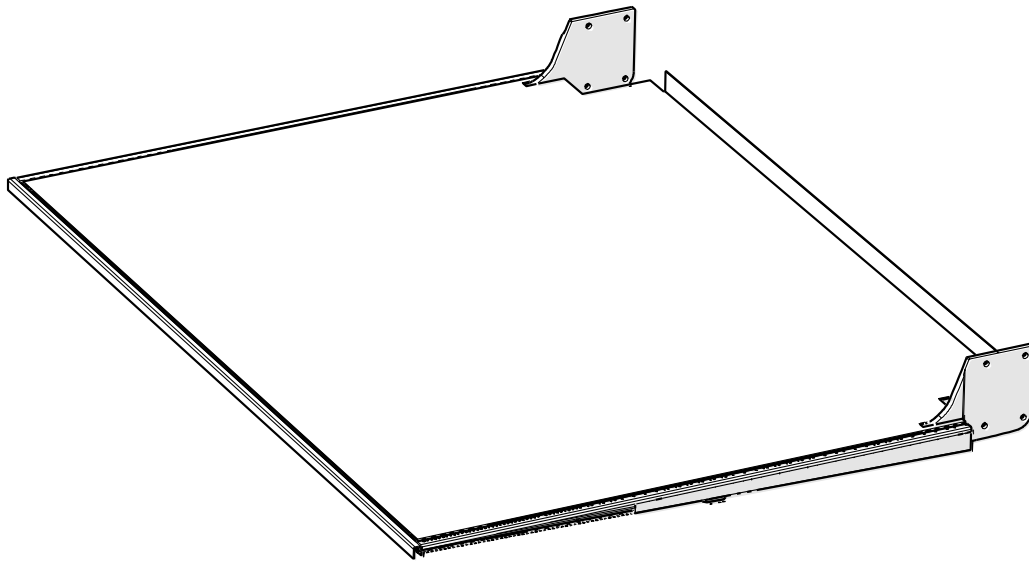
Compiled by: Designer/Ronnie Sundström

<i>Rev</i>	<i>Date</i>	<i>Description of change</i>	<i>Ref CR</i>	<i>Checked by</i>	<i>Approved by</i>
-	2013-05-29	First edition	14102	Niklas Adell	Ari Nieminen
A					
B					
C					

Platform floor

Installation instruction

Rev. (B)



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1. GENERAL

This platform floor is special designed to be fitted on MC2000. Follow this instruction carefully to ensure an efficient and trouble-free installation.

1.1 RELATED DOCUMENTS

This instruction is to be used with the MC2000 installation instruction, the IQ56-03 Mechanical blocking device in the pit MC2000.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

3. SITE REQUIREMENTS AND TOOLS



3.1 TOOLS

- Fastening rod (telescopic)
- Winch or telpher, min 100kg
- 2x lifting tool 731953
- Hand tools.

3.2 CHECK DELIVERY

Check that the deliver is complete and not damaged.

3.3 Fasteners used in the installation instruction

Number	Description	View
100179	M6S M10x16	
101998	ST 4,2x9,5 RTK	

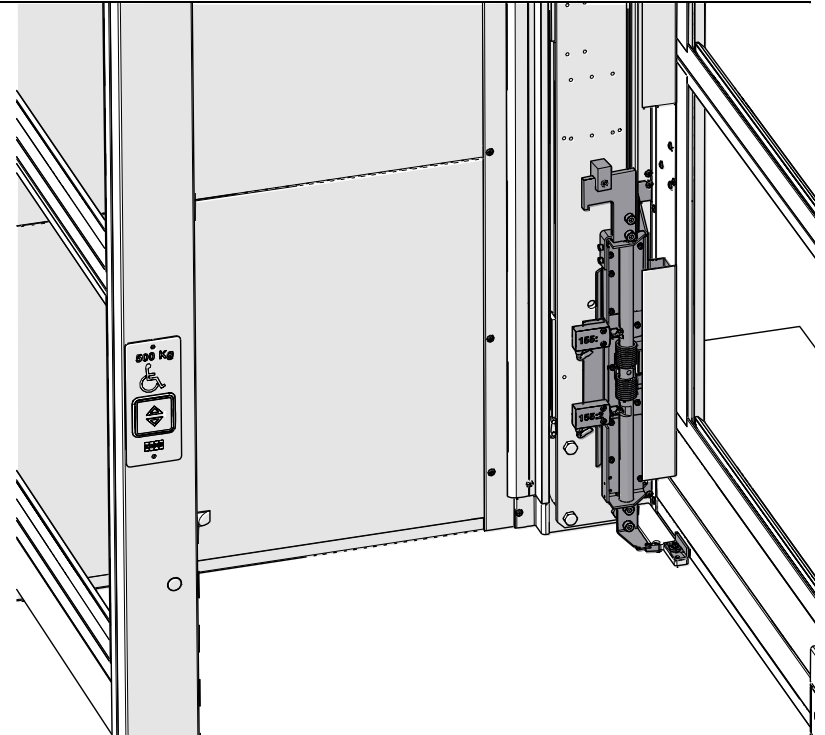
4. INSTALLATION

4.1 Preparation

Prepare for the installation of the platform floor.

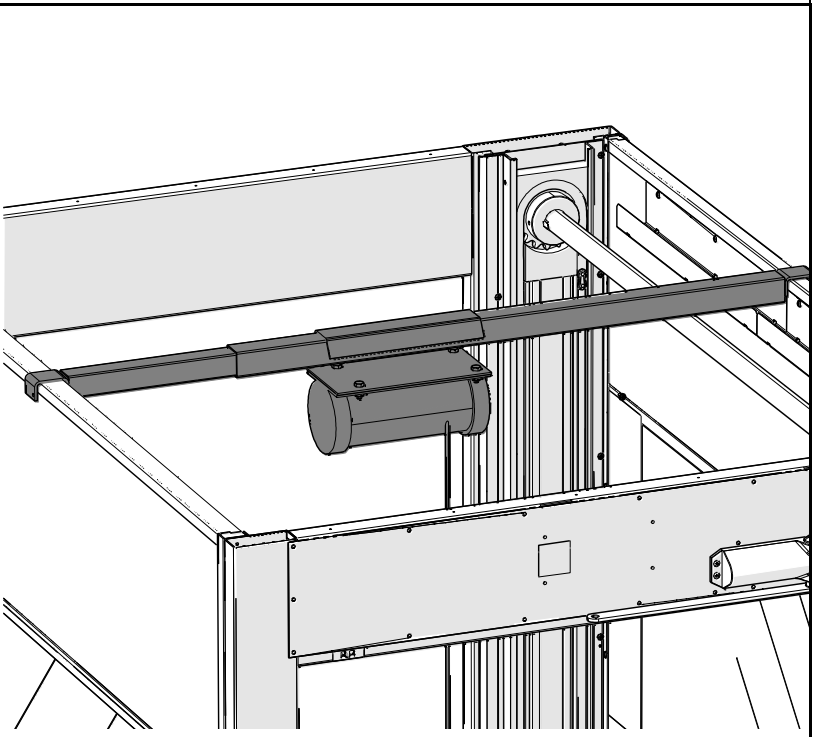
4.1.1 Fit the mechanical blocking device

Fit the mechanical blocking device, see related documentation IQ56-03 Mechanical blocking device in the pit MC2000 for installation instruction.



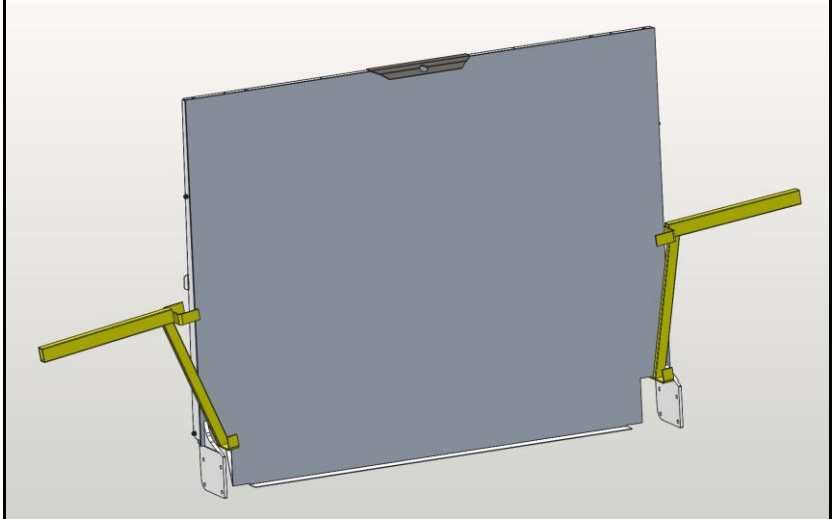
4.1.2 Lifting tool

Place the lifting rod and the winch in the top off the lift shaft.



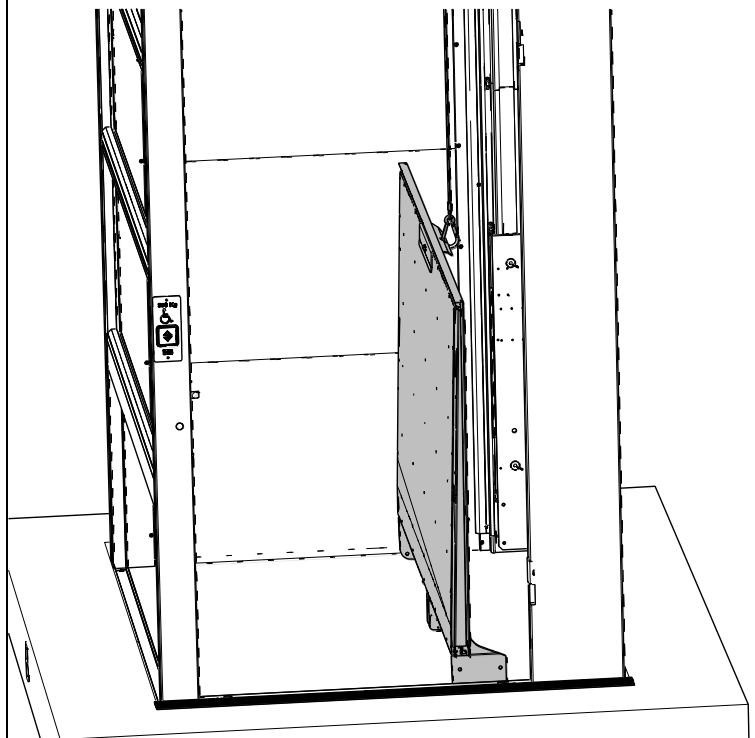
4.1.3 Lift the platform into the well

Two persons is needed to lift the platform into the lift well. Use 2x lifting tool 731953.



4.1.4 Connect the winch to the platform lifting eye

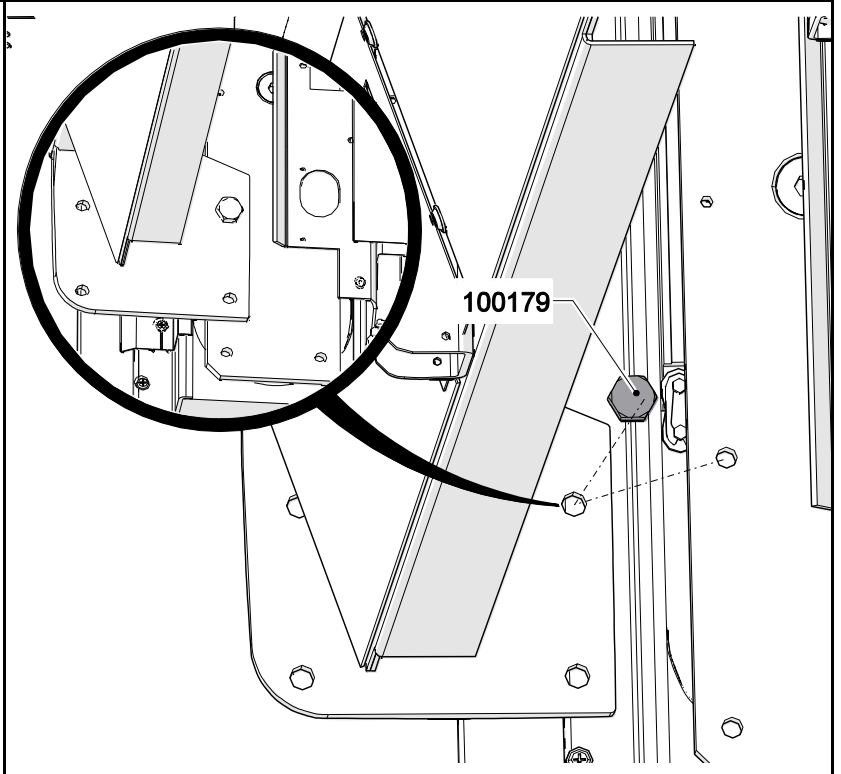
Connect the winch hook to the lifting eye on the platform. Check that the screws for the lifting eye is firmly tighten.



4.2 Fit the platform

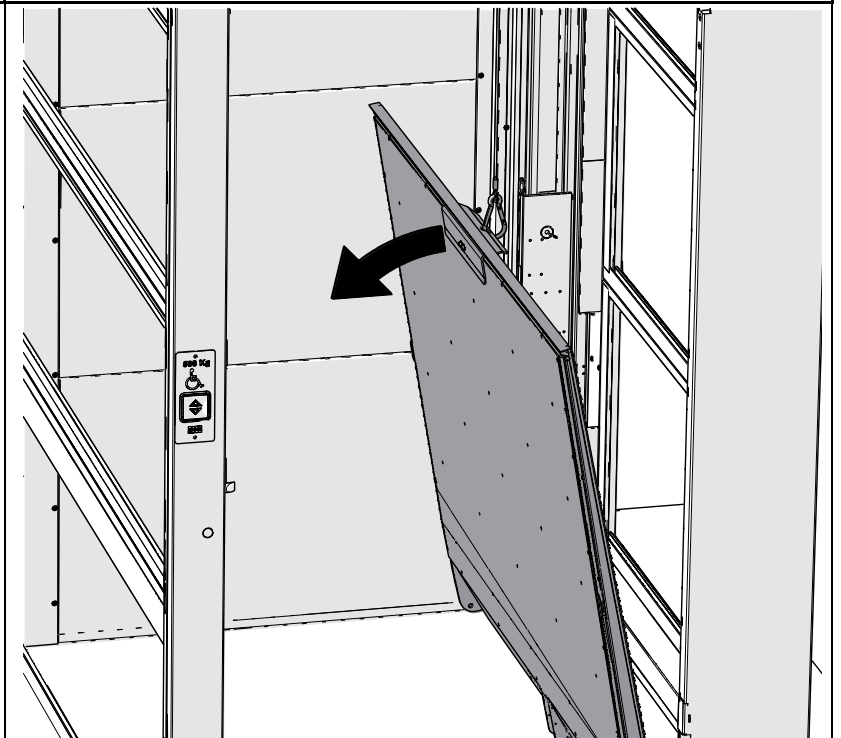
4.2.1 Prepare to lower the platform

Use the winch to put the platform in the right position. Be careful not to damage or make scratches in the lift well. Fix the platform in the outer upper hole with a loose screw, use 1x 100179 on each side.



4.2.2 Lowering the platform to horizontal position

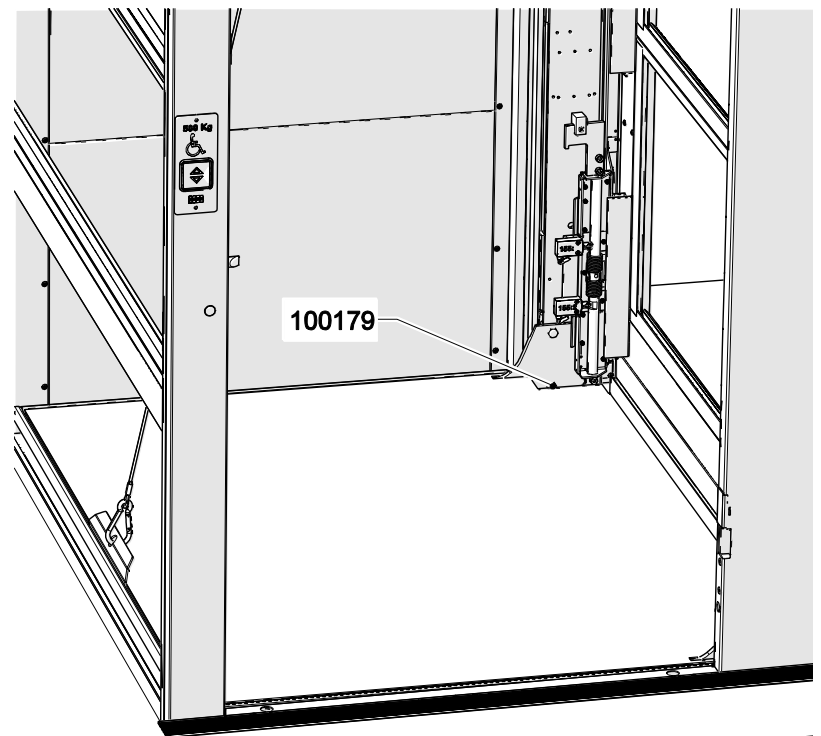
Use the winch to lower the platform to horizontal position.



4.2.3 Fix the platform

Adjust position so that the holes in the sledge and fixings of the platform floor is aligned.

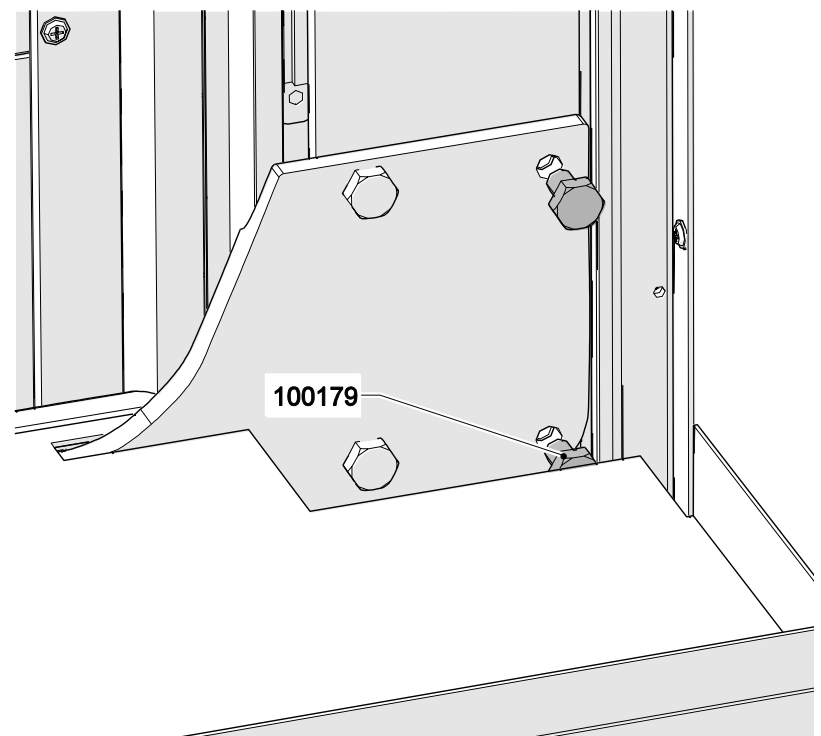
Fix the platform with screws in the holes below the first screw, use 2x 100179. Tighten the screws.



4.2.4 Finalize the fixing of the platform

Raise the platform above the **mechanical blocking device** and **activate it**.

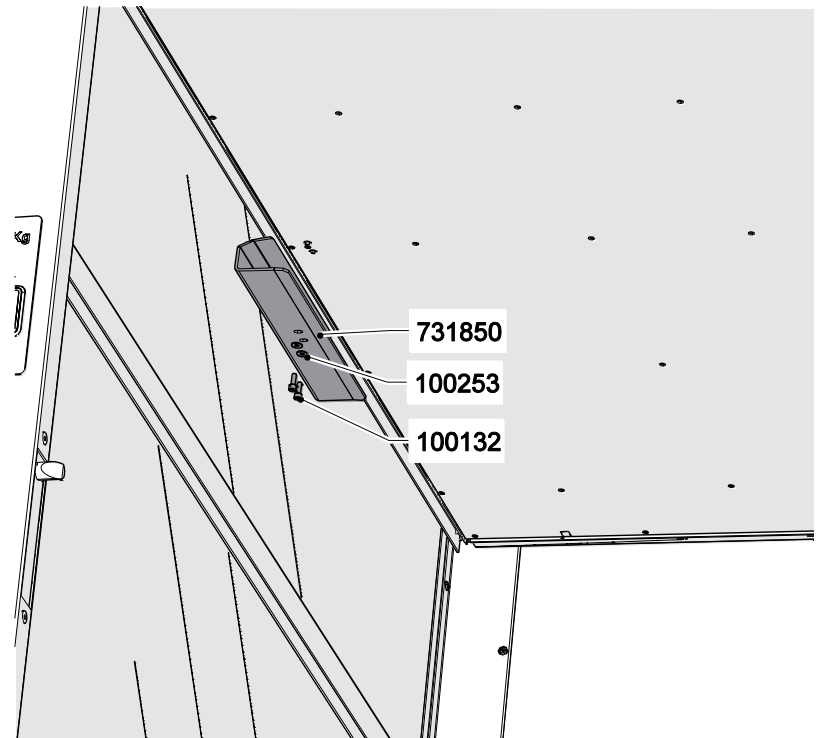
Finalize the fixing of the platform by fitting the remaining two screws on each side, use 2x 100179. Tighten the screws.



4.2.5 Remove the lifting eye

Make sure the **mechanical blocking device are still activated.**

Remove the lifting eye and put it with screws and washers in a place where it can be found for use later on if it's necessary to remove the platform for maintenance.



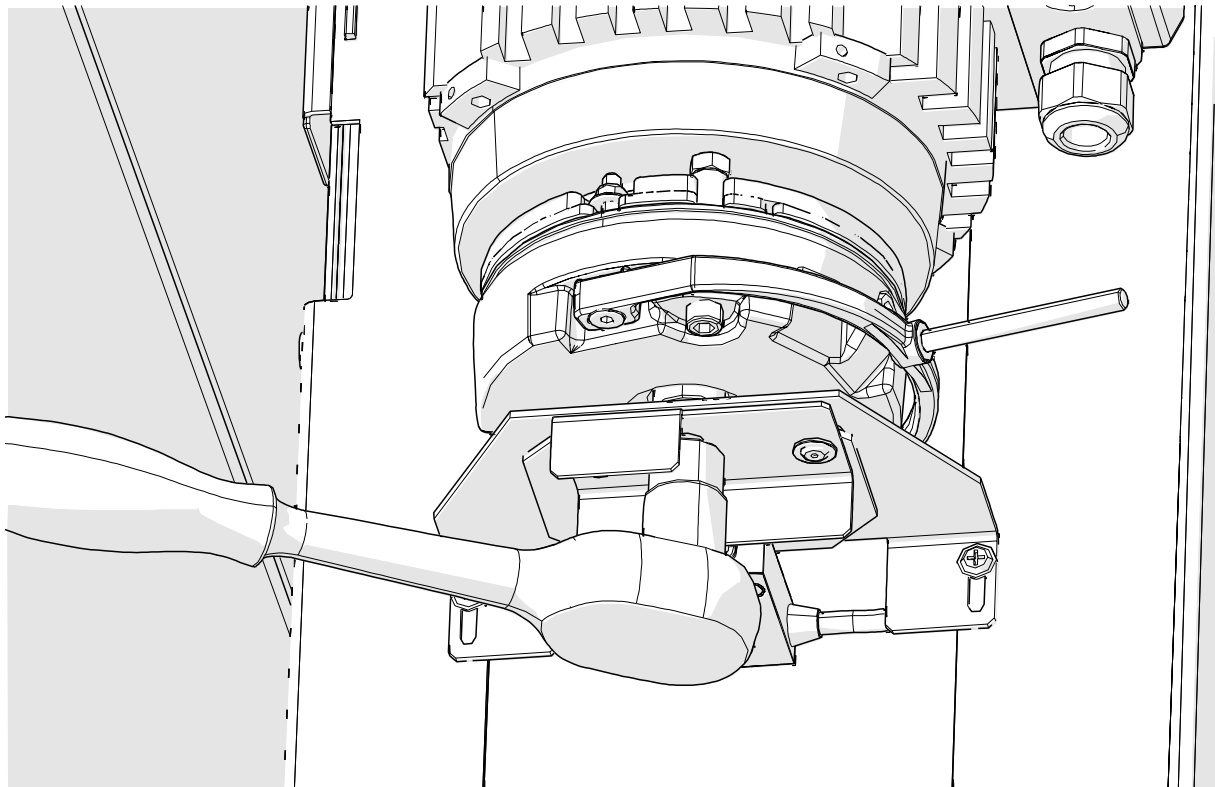
5. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2013-07-11	Draft 1.0	13454	Niklas Adell	Ari Nieminen
A	2014-12-17	Installed plf with factory installed safety edge	17668	Niklas Adell	Ari Nieminen
B	2015-01-23	The order of fitting the fixing screws	17913	Niklas Adell	Ari Nieminen
C					

Emergency lowering Installation instruction

Rev. -



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1. GENERAL

This emergency lowering is special designed to be fitted on MC2000. Follow this instruction carefully to ensure an efficient and trouble-free installation.

1.1 RELATED DOCUMENTS

This instruction is to be used with the MC2000 installation instruction.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

3. SITE REQUIREMENTS AND TOOLS

3.1 TOOLS

Hand tools.

3.2 CHECK DELIVERY

Check that the deliver is complete and not damaged.

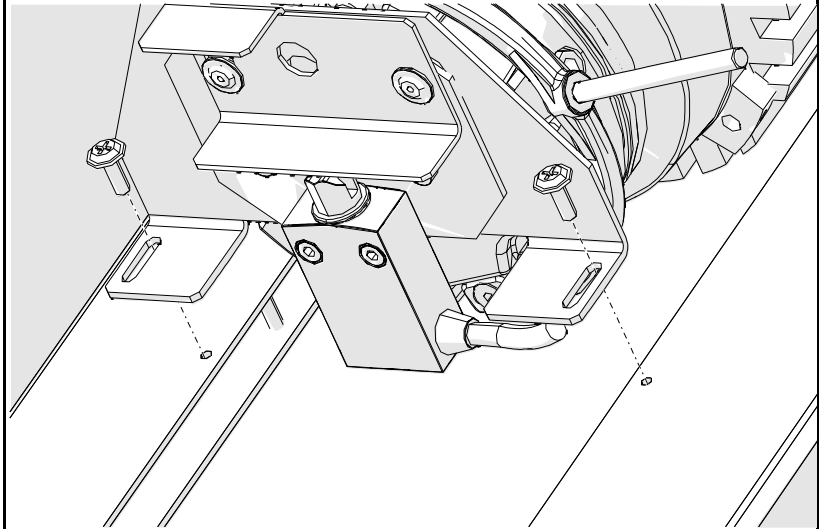
4. INSTALLATION

4.1 Preparation

Install motor.

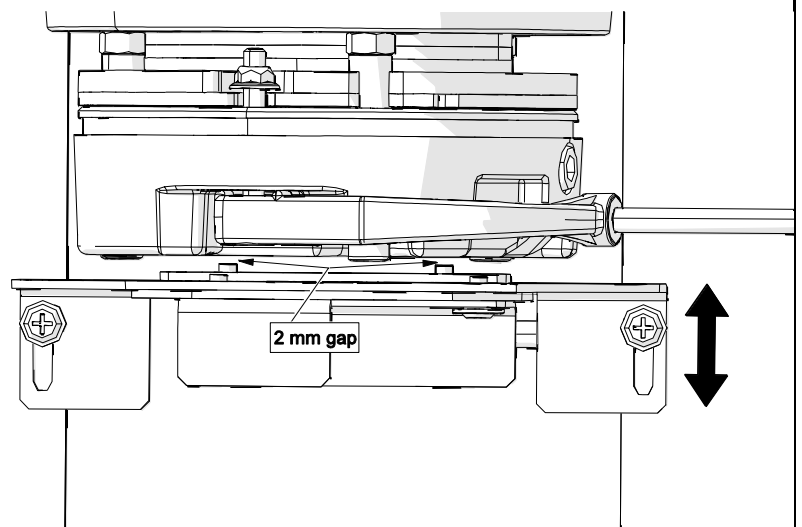
4.1.1 Fit the bracket unit

Fit the bracket unit in the 2 pre-drilled holes in the door frame under the motor.



4.1.2 Adjust bracket unit

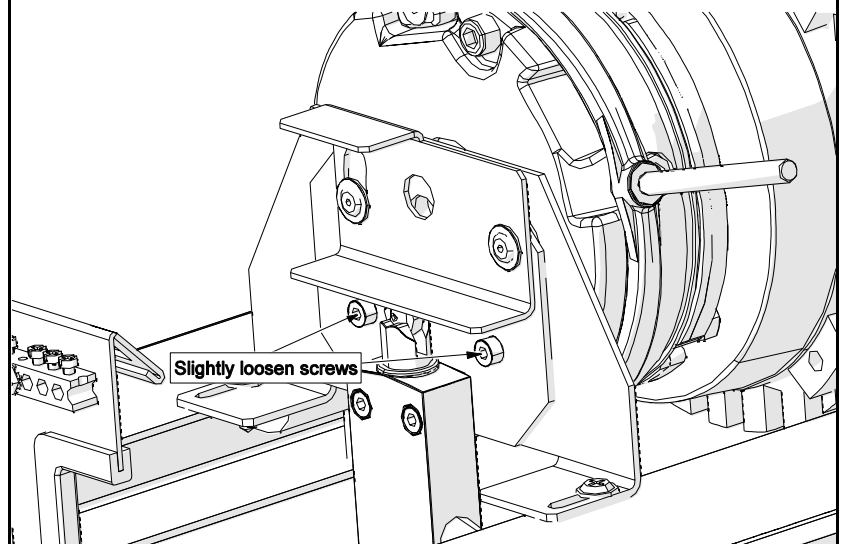
Adjust bracket unit and tighten screws. Make sure there is a small gap between bracket and brake to avoid vibration noise.



4.2 Center entrance hole for lowering tool

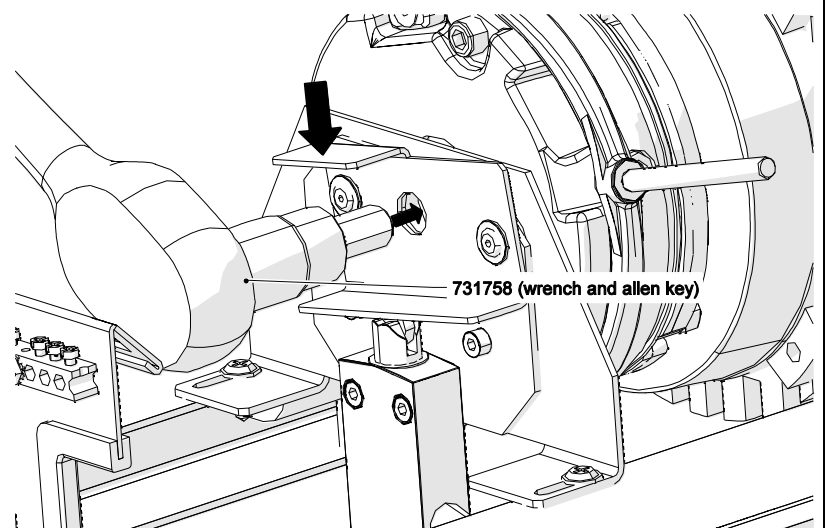
4.2.1 Loosen screws

Slightly loosen screws



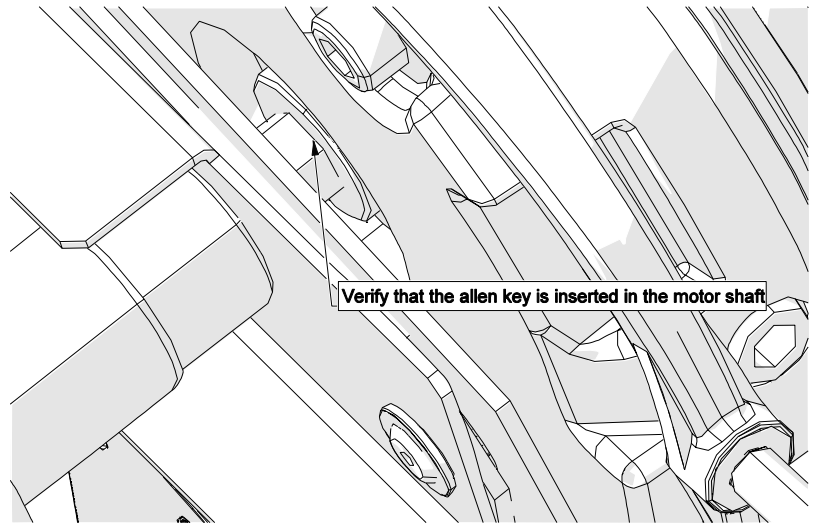
4.2.2 Fit the lowering tool

Press the hatch so that the emergency lowering tool can be inserted in to the hole.



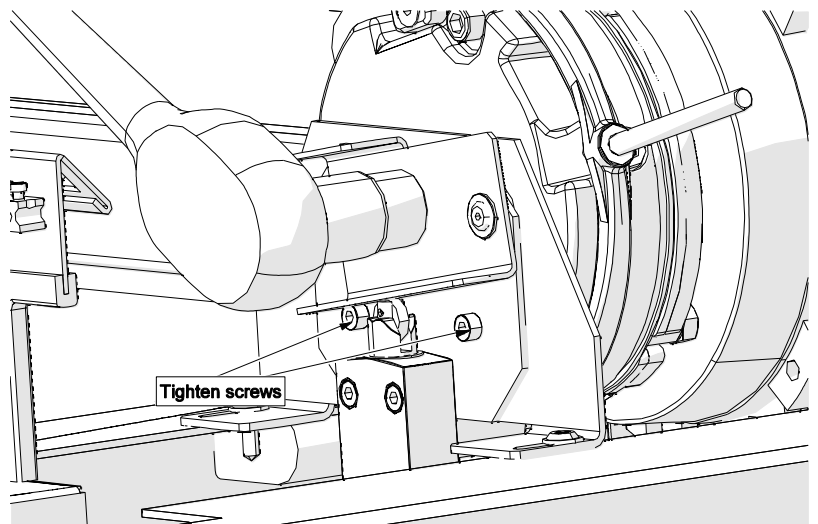
4.2.3 Insert the allen key in the motor shaft

Verify that the allen key is inserted in the motor shaft.



4.2.4 Fix the adjusted hatch

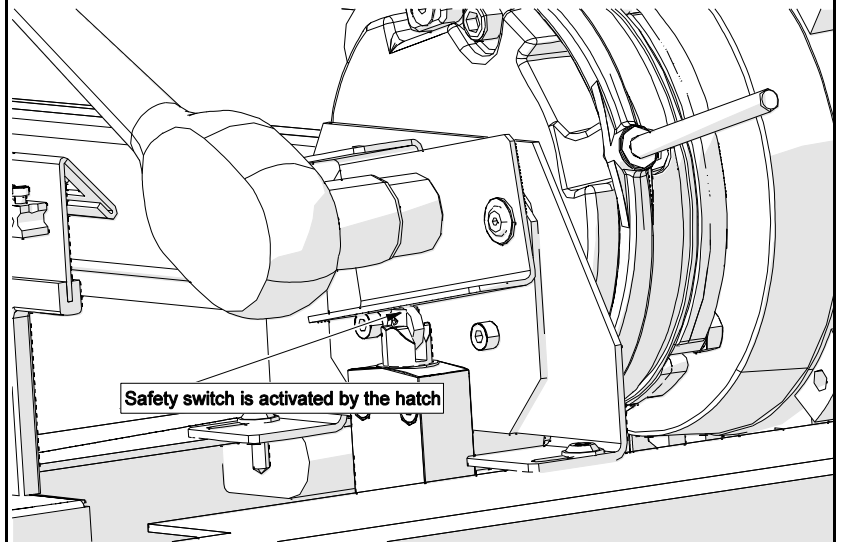
Tighten screws



4.3 Verify function

4.3.1 Safety circuit

Check that the safety circuit is broken when the emergency lowering tool is inserted in the motor shaft.



5. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

<i>Rev</i>	<i>Date</i>	<i>Description of change</i>	<i>Ref CR</i>	<i>Checked by</i>	<i>Approved by</i>
-	2013-12-03	Draft 1.0	13944	Niklas Adell	Ari Nieminen
A					
B					
C					

Wall installation - How to fit glass panel-screws into sandwich panel

Installation instruction

Rev. -

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1. GENERAL

This installation instruction is showing how to join glasspanel-screw (female side) to sandwich panel (male side).

1.1 RELATED DOCUMENTS

This instruction is to be used with the MC2000 installation instruction.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

3. SITE REQUIREMENTS AND TOOLS

3.1 TOOLS

Hand tools.

3.2 CHECK DELIVERY

Check that the deliver is complete and not damaged.

4. INSTALLATION

4.1 Preparation

4.1.1 Check witch screws are not going in to the sandwich panel.

Make a mark on the sandwichpanel for each screw that don't goes in to the panel because of the sheet metal flange.



4.1.2 Modify sandwich panel

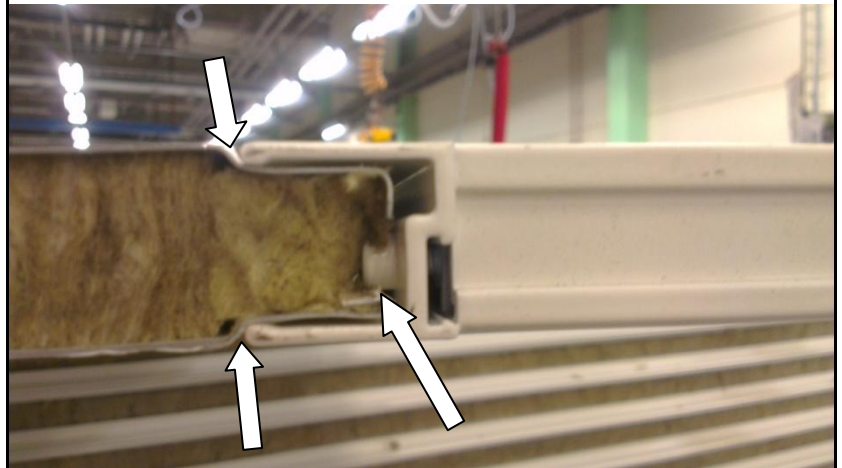
Modify the sandwich panel flange so that the screw head can pass by into the wool.



4.2 Check fitting

4.2.1 Check fitting of the glass panel and the sandwich panel

Before installing the sandwich panel and the glass panel, check that the sandwich panel male fits in the bottom of the glass panel female.



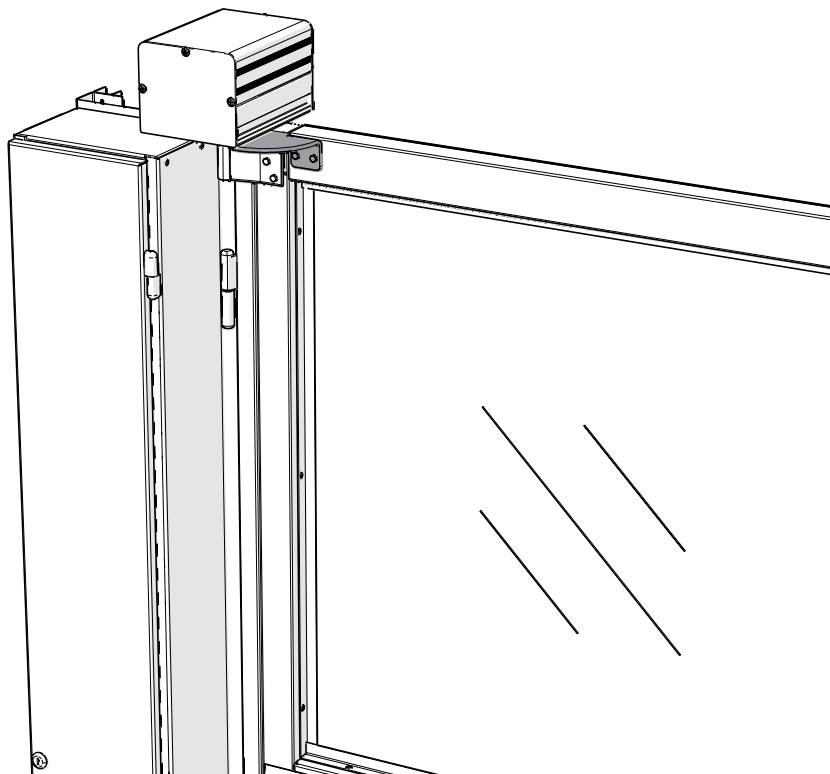
5. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

<i>Rev</i>	<i>Date</i>	<i>Description of change</i>	<i>Ref CR</i>	<i>Checked by</i>	<i>Approved by</i>
-	2013-12-05	Draft 1.0	13728	Niklas Adell	Ari Nieminen
A					
B					
C					

MC2000 – Clamp protection – Automatic door operator – ST1300 mm (half door)

Rev. -



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INSTALLATION IS FINISHED	6
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1. GENERAL

This clamp protection device should be fitted on old elevators to avoid clamping accidents.

Related documents


-

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

3. Fasteners used in the installation instruction

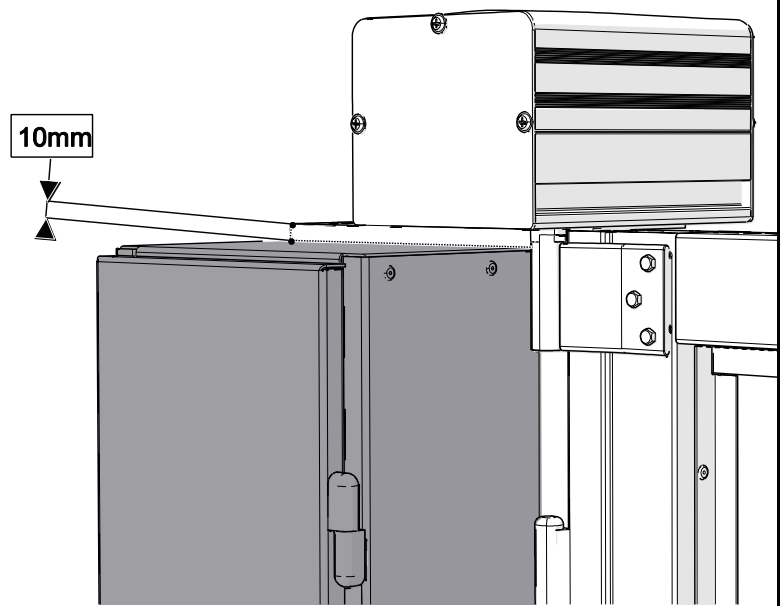
Number	Description	View
102155	M6S M5x12 FZB	

5. Preperation

This instruction shows the installation of a automatic door operator clamp protection part no. 731886 on a left-hinged door. For right-hinged door use automatic door operator clamp protection part no. 731960.

Lower engine cabinet

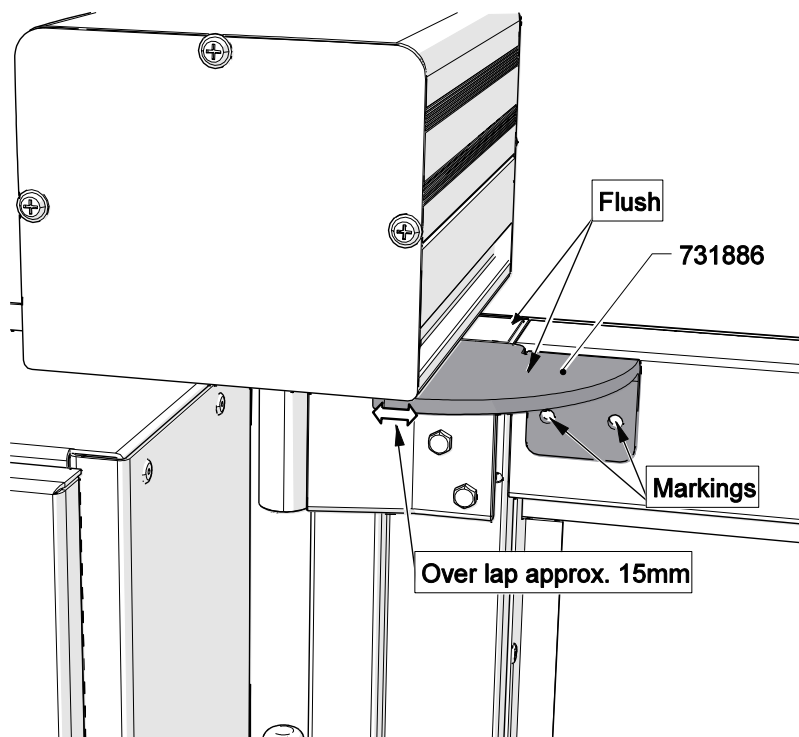
If there is a engine cabinet at the same side as the clamp protection is to be fitted it has to be lowered 10mm.



Instruction

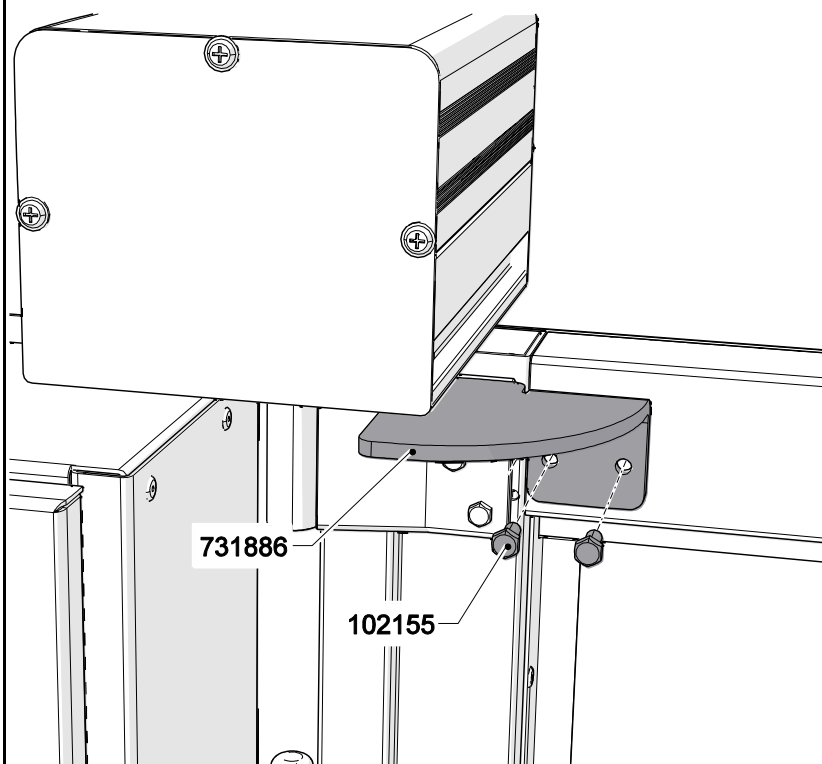
Markings for holes

Hold the clamp protection as in the picture and make markings at the holes.



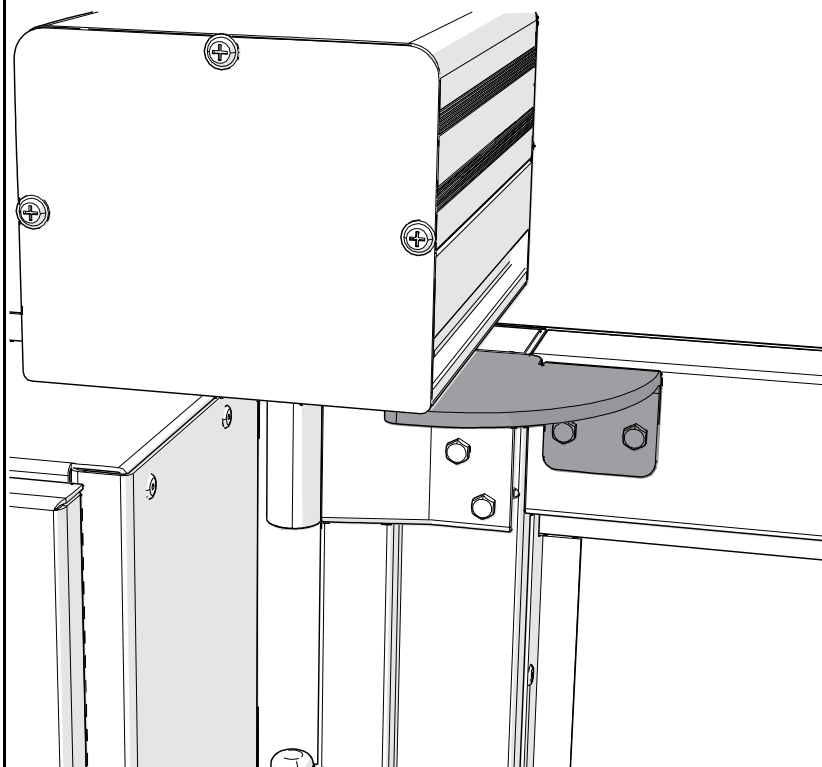
Fit the clamp protection

Make 2x M5 holes at the markings and fit the clamp protection with 2x 102155



Instruction

Installation is finished



6. APPROVALS AND VERSION HISTORY

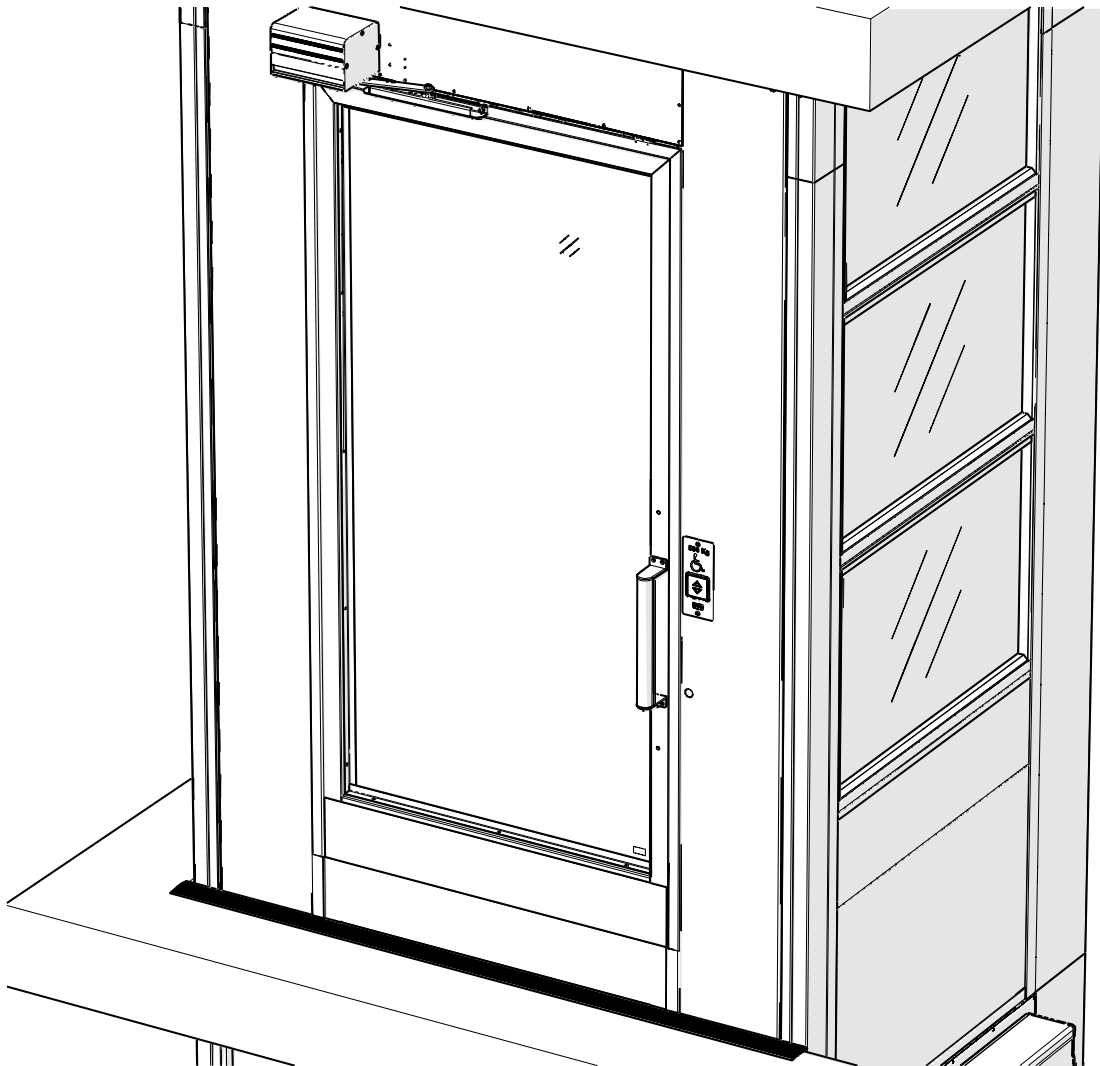
Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Checked by	Approved by
-	2014-12-17	First edition	16918	Niklas Adell	Ari Nieminen
A					
B					
C					

Hidden hinge cable protection

Installation instruction

Rev. -



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4.2	FIT RUBBER BLOCK	2
4.3	RUBBER BLOCK PLACEMENT	3
4.4	INSTALL THE LANDING DOOR	FEL! BOKMÄRKET ÄR INTE DEFINIERAT.
5.	APPROVALS AND VERSION HISTORY	3

1. GENERAL

This cable protection is necessary to eliminate the risk of damaging the cables in the door frame when the hidden hinge door is closing.

1.1 RELATED DOCUMENTS

This instruction is to be used with the MC2000 installation instruction.

2. SAFETY

Personal safety precautions for fitters.

- Always use Personal Protective Equipment (PPE). Always use Head protection, Eye protection, Foot protection, Hand protection, Protective clothing, Face shield and Safety harness.
- Follow the safety precautions in the MC2000 installation instruction.

3. SITE REQUIREMENTS AND TOOLS

3.1 TOOLS

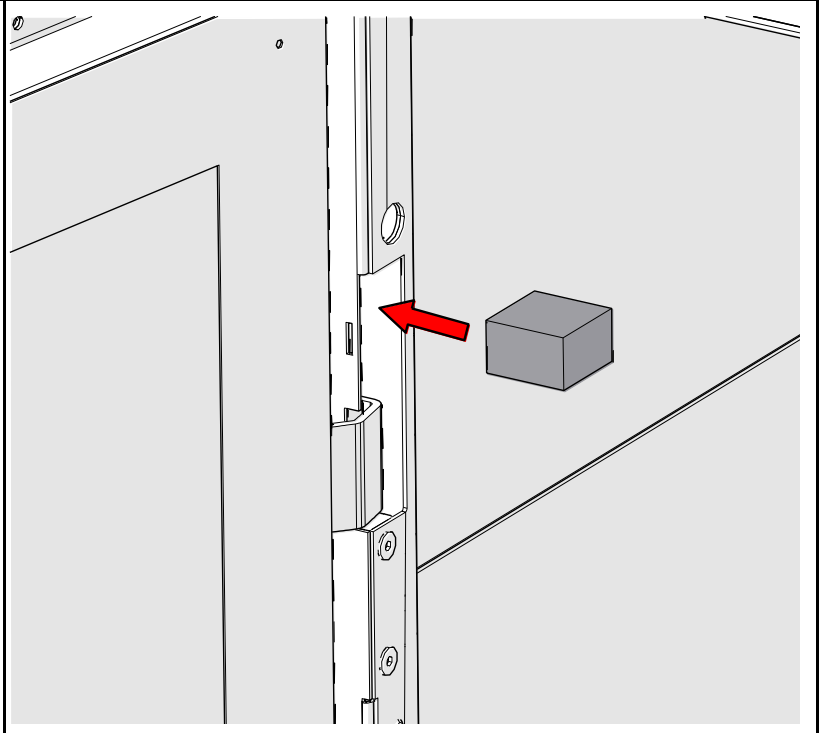
No tools needed

4. Install hidden hinge cable protection

4.1 Fit rubber block

After the door frame is installed make sure necessary cables are routed in the door frame. Then install the door.

Fit the rubber block, part number 732082, on both the upper and the lower hinge. Squeeze the rubber block in to the door frame.



<p>4.2 Rubber block placement</p> <p>Make sure the rubber block is firmly squeezed in to place above the hinge in the door frame.</p>	
<p>4.3 Fit the plastic cover</p> <p>Fit the plastic cover before closing the landing door.</p>	

5. APPROVALS AND VERSION HISTORY

Compiled by: Designer/Ronnie Sundström

Rev	Date	Description of change	Ref CR	Approved by
-	2015-03-05	First edition	18148	Stefan Westin
A				
B				
C				

Issued of: Johan S
Approved of:
Date 2012-10-20

Swing door slow speed PCB

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The option slow speed PCB takes down the speed in the end of opening and closing cycle.

Function:

There is one position magnet fitted on the lamella disc under the big cog wheel. The magnet shall activate the sensor on the board when the door opener arm is pointing straight out from the short side of the housing. On which side the arm shall be fitted depends on door hanging. Example: Right hinged door = the arm is pointing in the same direction as the PCB is fitted.

There are different potentiometers where you can adjust the time delay before the low speed shall start in open and in closing direction. You can also adjust the slow speed.

However the door machine is now delivered with the arm not fitted and the magnet position is just at the sensor. Just follow the instruction on the next page.



Instruction mechanic:

1. Make sure there is no power to the swing doors Turn of the main switch!
2. When it's time to fit the swing door machine, fit the machine on the door frame without the arm and track fitted when the swing door is in closed position.
3. When the machine is fitted, install the arm on the machine. The arm shall point in the direction opposite the hinge side.
4. Tread the track on the arm wheel, open the door a little and fit the track on the door. (if necessary, move or install the mechanical stop to correct side as usual)

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Approved of:
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Instruction electrical:

1. Connect the cable from the door frame to the PCB terminal S1 or S2 (50-50 that the supply polarization is right from the beginning)
2. Close all doors manually.
3. Now turn the power ON and give the controller signal to open the door on the actual floor you want to adjust. Now watch what light is illuminated, red or green. (Do not care about what direction the door is moving at in this step)
4. When the control panel intend to open the swing door, the green LED shall always be active! If the red is active! Swap the S1/S2 supply plug. (Do not care about what direction the door is moving at in this step either)
5. Now when the supply polarization is right, you have to check the motor polarization. If the door is closing when the green LED is illuminated you only have to move the motor terminal connected to M1 or M2 one step.

Instruction adjusting the slow speed time delays and slowspeed:

1. Turn up the opening time on the main controller so the door for sure opens 90 degrees.
2. Adjust the time delay before the slow speed is activated in the opening direction on the potentiometer P2 (Above green LED) Clockwise increase the time delay. The slow speed shall start just a little before fully open door.
3. You can if necessary adjust the slow speed on potentiometer P2 (Above blue LED)
4. Adjust the time delay before the slow speed is activated in the closing direction on the potentiometer P3 (Above red LED) Clockwise increase the time delay. The slow speed shall start just a little before the door hits the door frame.
5. When you are happy with the speeds adjust the opening time again on the main controller. The time shall not be much longer than it takes to open the door fully.

Meaning of the Potentiometers:

Red LED = Door is closing

Green LED = Door is opening

Blue LED flashing = Sensor has been activated. Timer count down before slows peed has started

Blue LED = Slow speed

Yellow LED = Sensor activated by the magnet. Normally when the door arm is in parallel position compared to the door frame.

P1 = Low speed adjustment

P2 = Delay before slow speed after the magnet has passed the sensor in open direction. 4 - 10 sec

P3 = Delay before slow speed after the magnet has passed the sensor in closing direction. 0 - 1.5 sec

Cable collectors and travel cable fixing

Placement for cable collectors and travel cable fixing in the top of the lift shaft. Cable collectors can be one or two dependent on lift shaft depth.

