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QR code to
Mounting video

Ropox Diagonal, 30-409xx-1

User manual

Mounting instruction

Keep this folder with product at all times!

TF 200.0087_eng / Rev 07 / 01-11-2023

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1. Introduction

Ropox Diagonal is an electric height adjustable frame for wall units.
Diagonal is especially suitable for wheelchair users or persons who normally have difficulties reaching upper shelves in wall units.

This document must ALWAYS accompany the product and be read by and available to users

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.

All users must follow these instructions. It is very important that the instructions have been read and understood prior to operation of the product.

This instruction must be accesseble to the user and keept with the product if it is moved to another place.

If this product is electrically adjustable in height there is a risk of trapping. The product must therefore always be operated by or under the guidance of an experienced adult, who has read and understood the importance of section 12 “Safety in use”

The correct use, operation and inspection are decisive factors for efficient and safe performance.

2. Compliance with EU-Directives and UK-Directives

This product has CE-marking according to the current Machinery, EMC and Low Voltage Directives and thus complies with the basic safety requirements.

This product has UKCA-marking and thus complies with the basic safety requirements.

If these frames are assembled or otherwise connected with other electrical components, this will be considered a new unit. Consequently, the assembled unit must be subject to a risk assessment, after which the CE mark may be awarded.

3. Application

Diagonal is designed to obtain optimum working height for the user. Diagonal has been designed for height adjustment of wall units. Diagonal must NOT be used as a lifting table or person lifter.

The product must be used indoor, under normal room temperatures and humidity as stated in section 4.

The control unit complies with IP32/II and must always be installed in accordance with the national Heavy Current Regulations or corresponding national or international standards.

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4. Technical data

Product name:	**Ropox Diagonal**
Item numbers:	**Item numbers:**
	Width of wall units 40-180 cm / 15,7 – 70,8in :30-409xx-x
Material:	Welded steel tubes St. 37 and various plastic components.
Surface treatment:	Blue chromate, powder coating.
Power supply:	220-230V~ / 50-60Hz, 5,0A
Standby primary:	0,3W
Control voltage:	24VDC
Duty circle.:	Max. 2 min. active then 18 min. pause
Max. load of frame:	120 kg / 264 lb evenly distributed over the frame
Speed:	Approx. 2 $^{mm}/_{sec}$ - Approx. 23 sec for a complete stroke
Temperature:	5-45° C
Air humidity:	5-85% (non-condensing)
Complaints:	See Complaints, page 40
Producer:	Ropox A/S, DK-4700 Naestved, Tlf.: +45 55 75 05 00 E-mail: info@ropox.dk - www.ropox.com

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5. Schematic diagram of frame

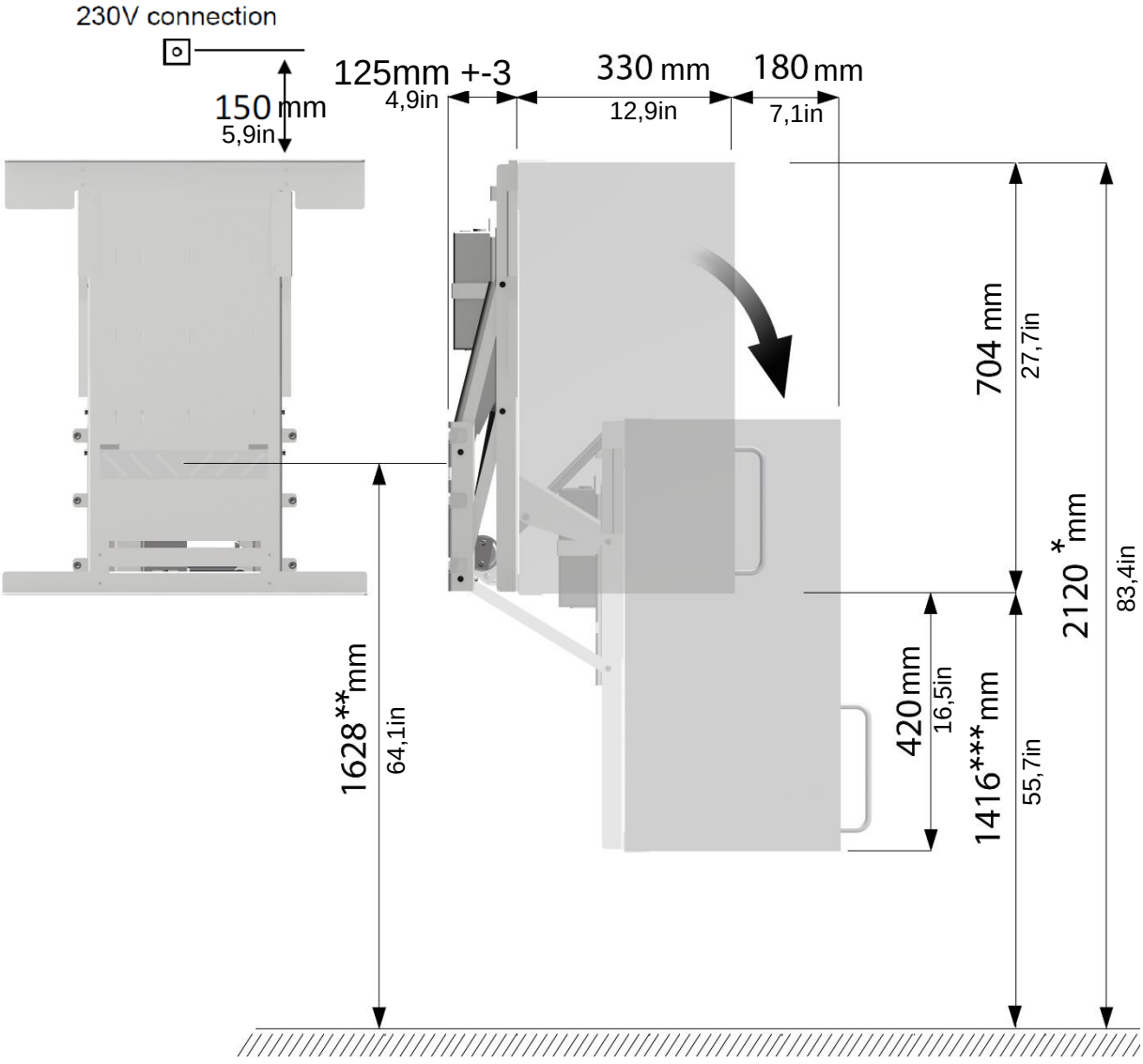
5.1.1 Dimension sketch

It's important that electrical connections to control unit are flexible and can move freely within the range of adjustment of frame.

Conditions for schematic diagram:
Height of wall units = **704 mm / 27,7 in**– (with another height of wall unit regulate diagram accordingly)

(Wall unit heights that can be used, 704-920 mm / 27,7 – 36,2 in)

Height of upper edge of wall unit = **2120 mm / 83,4 in** (if another height required, regulate diagram accordingly)



* Height can be individual adjusted

** Depends of height to top of cabinet

*** Depends of height to top of cabinet and cabinet size

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5.1.2 Construction – see dimensions on the following page

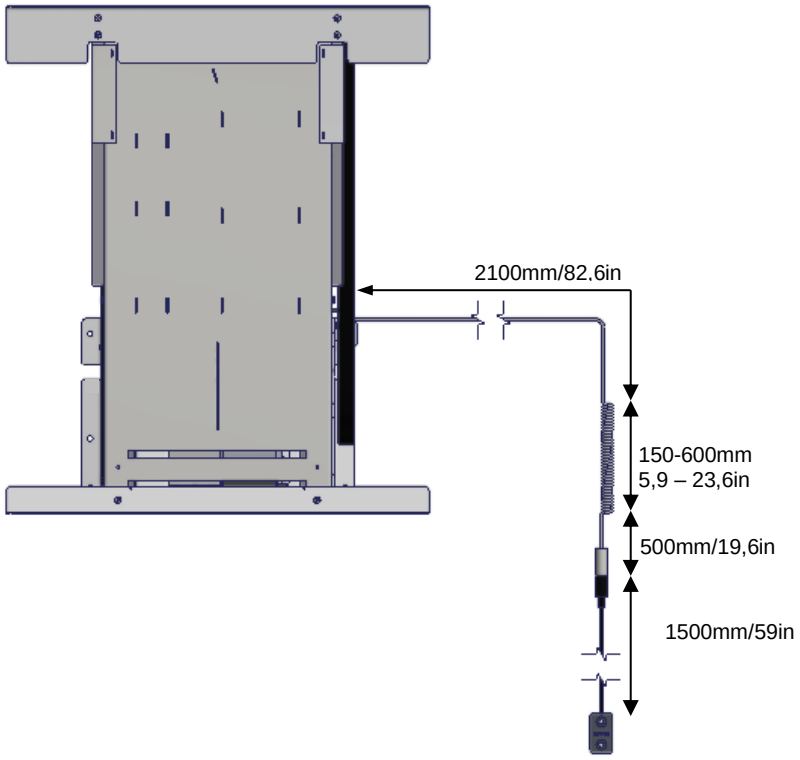
Minimum area for reinforcement of wall. Wall material must be suitable for screw mounting.

Area for electric installation.

Area for conduit.

Pull down cable from wall units to edge of worktop for placement of control button.
We recommend a build-in pipe in wall where the cable can be pulled through (ø3cm).

If a high wall unit is placed right next to a Diagonal, it is an advantage to pull the cable for the control trough wall unit then a pipe in wall can be avoided.



40 – 120 cm / 15,7- 47,2 in
Max. load 120kg / 264 lb evenly distributed, according to DS/EN 12182, based on 10 screws/bolts.

130 – 180 cm / 51,2 – 70,8 in
Max. load 220kg / 485 lb evenly distributed, according to DS/EN 12182, based on 20 screws/bolts.

Minimum load capacity per screw/bolt:
45 kg / 99 lb

The fitter should always consider the material, condition and strength of the wall and use screws and rawlplugs suitable for the specific wall type.

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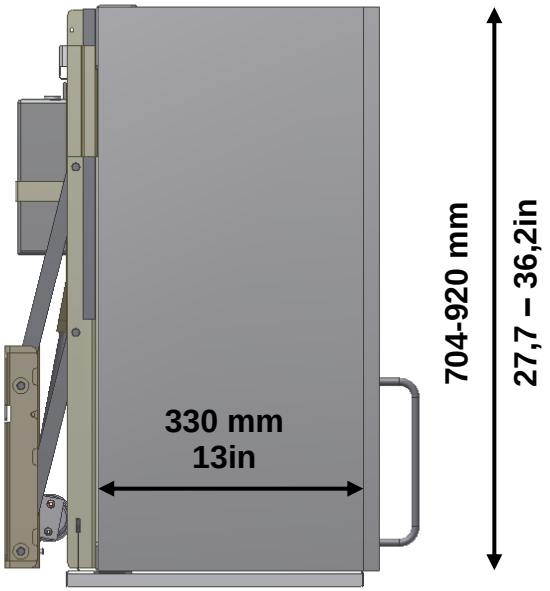
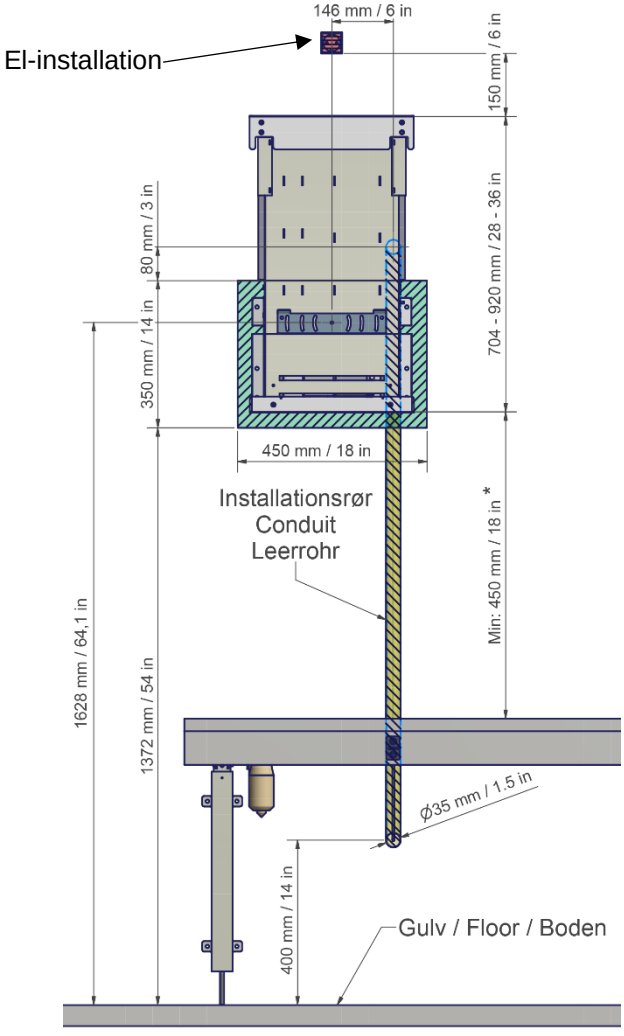
5.1.3 Wall unit sizes

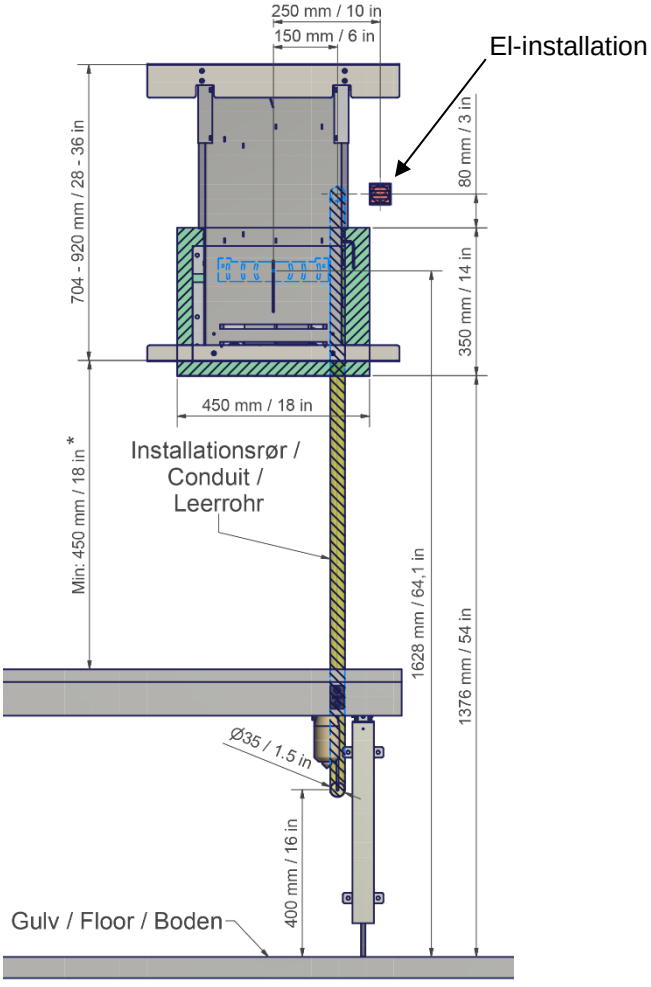


Note! – If Safety stop plate is not being used, wall units with less depth can be used!

Cabinet width 40-50 cm
15,7 – 19,7 in
(30-40904 to 30-40905)



Cabinet width 60-120 cm
23,6 – 47,2 in
(30-40906 to 30-40912)



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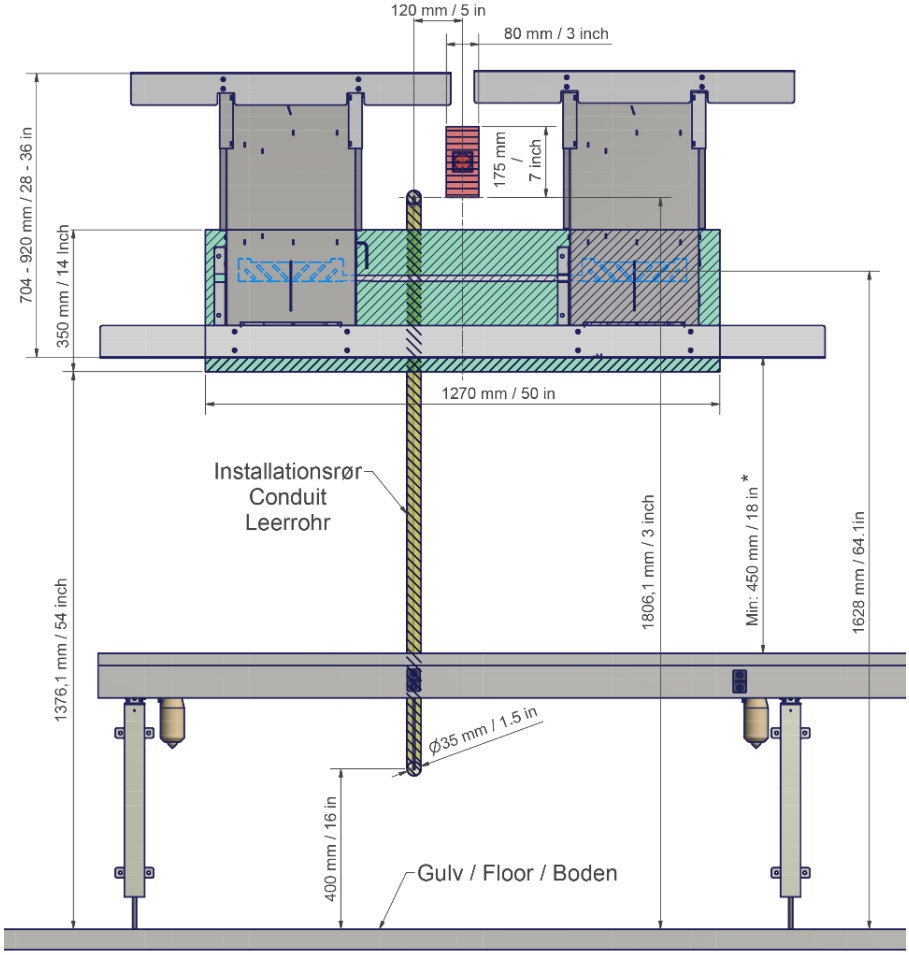
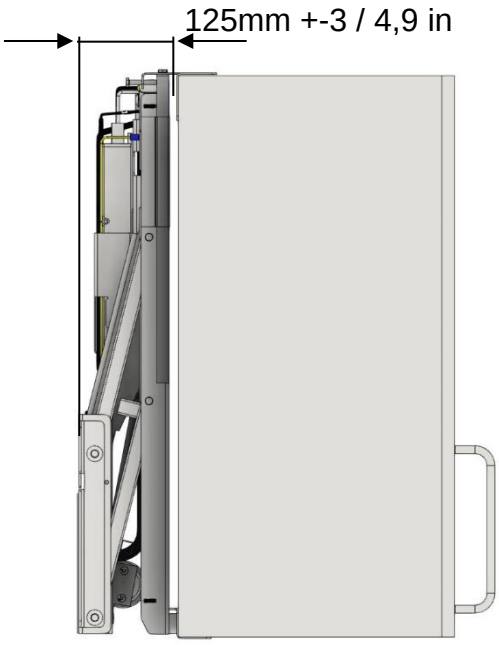
Cabinet width 130-180 cm
51,2 – 70,8 in
(30-40913 to 30-40918)



5.1.4 Fixed cupboards

An Installation of Diagonal frame shifts & places the wall cupboards 115mm +-3mm / 4,5 in out from the wall. If you require/wish for any existing fixed cupboards to be in line with Diagonal we recommend an installation of the Diagonal first. In this way the best result is ensured.



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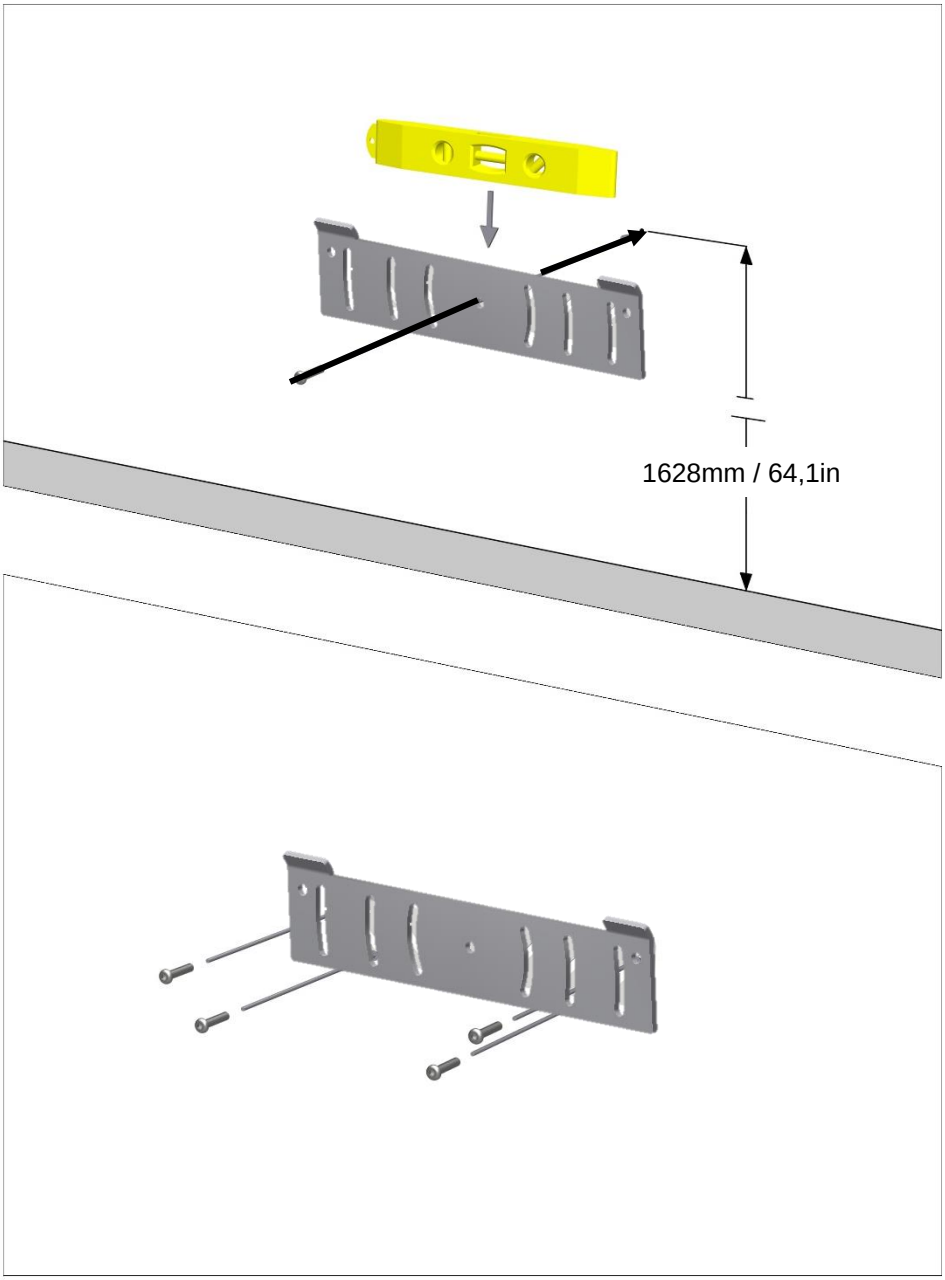
6. Mounting instructions

Assembly must always be carried out by competent personnel

Always consider the integrity of the wall when installing. For particularly soft or unstable walls, it is recommended to use a plywood or OSB sheet backing. We recommend to span the reinforcement across at least two wall studs for optimal stability

Prior to assembly check that all parts have been provided. See list of components, section 9

Height of top wall unit (edge) = 2120 mm / 83,4 in – see schematic diagram page 5



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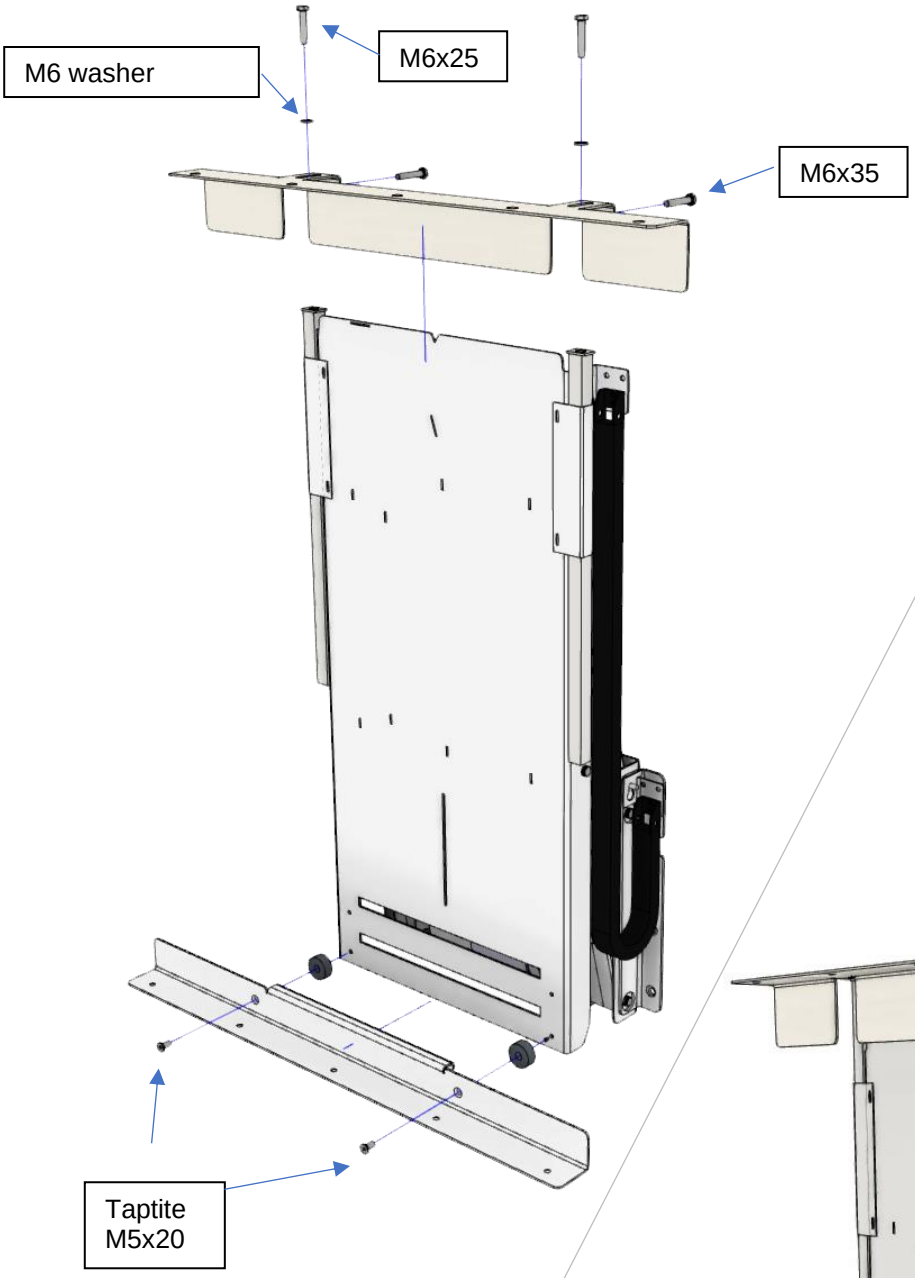

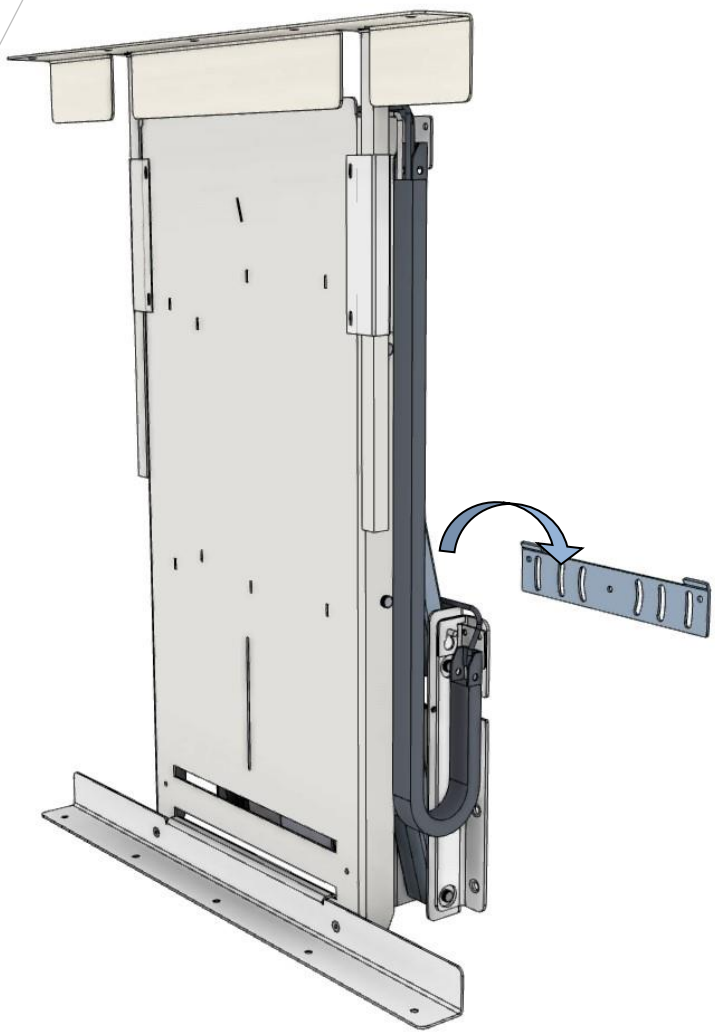

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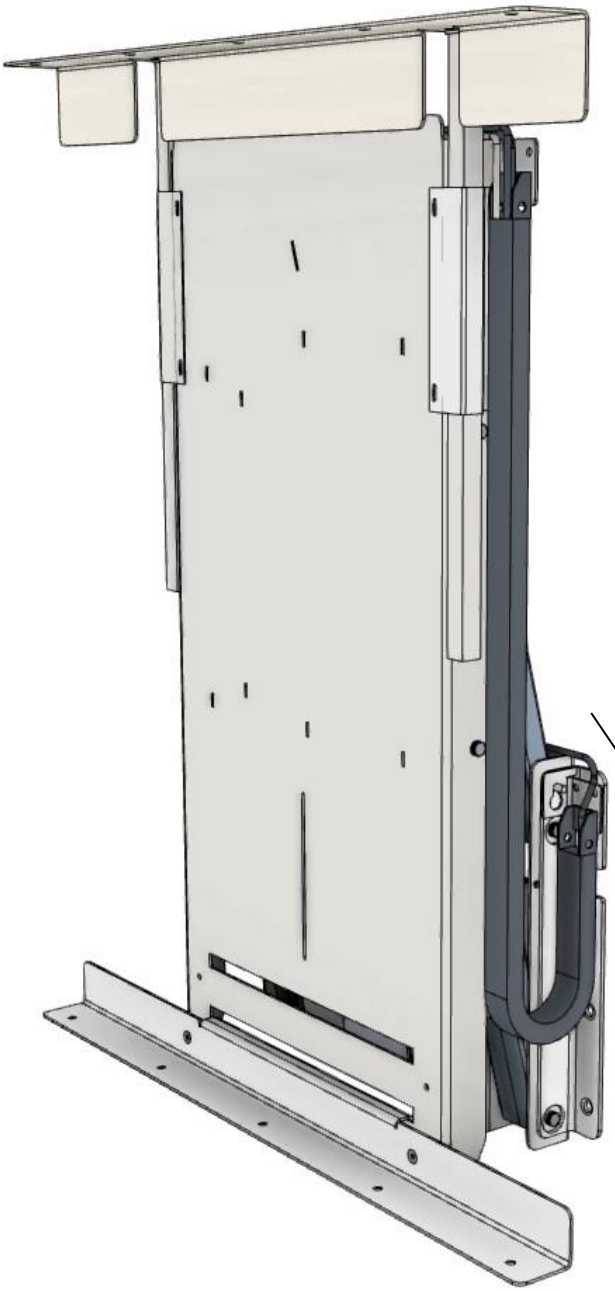
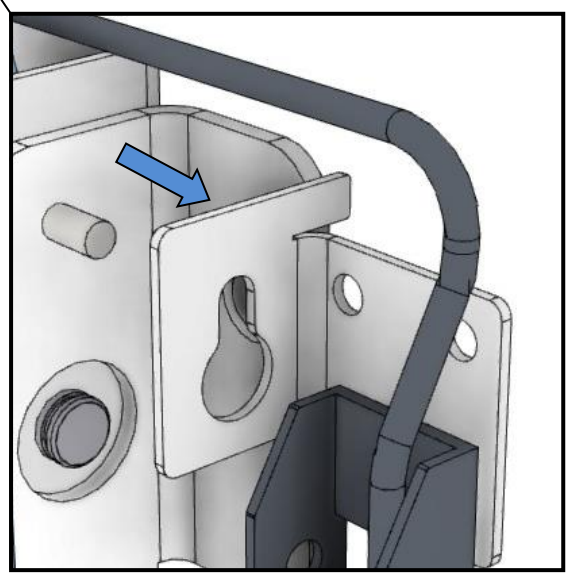


Loosen the nut that keeps the cable track in place, pull cable track aside



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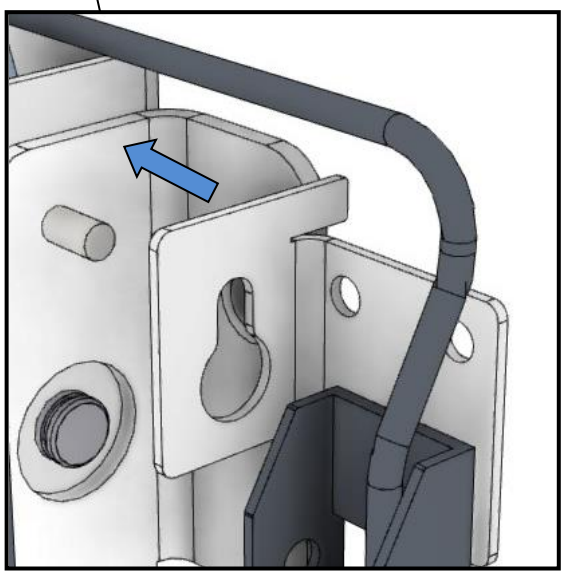

Mount the unit to the wall.

Put the cable track back in place and tighten nut.

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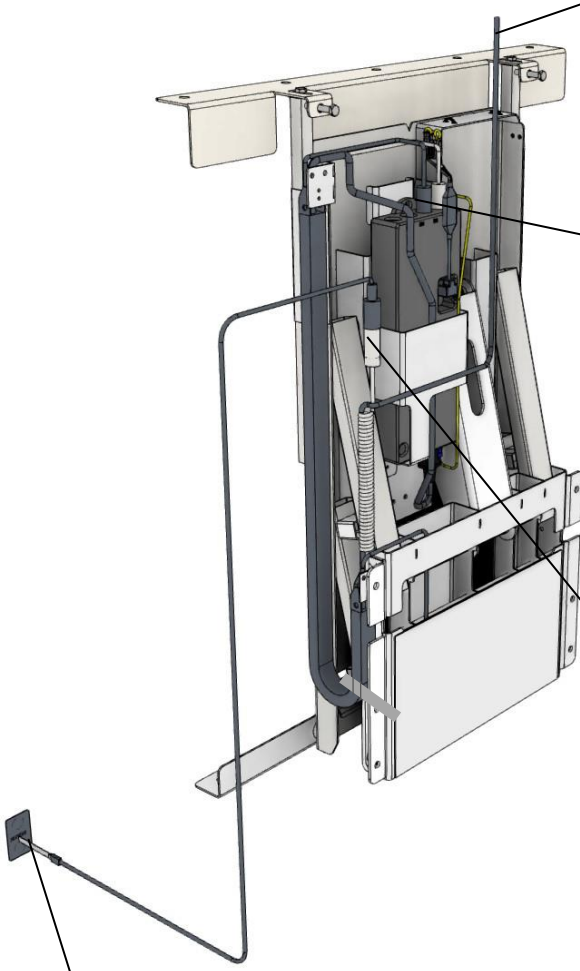
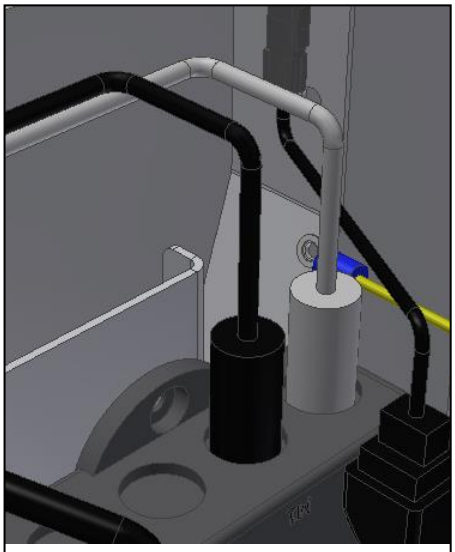
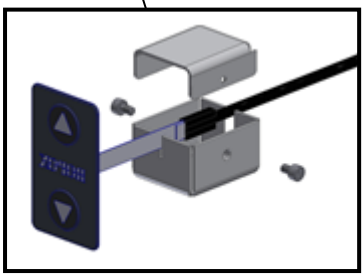
6.1. Connection of cables

1: Connect the net cable and turn on the power

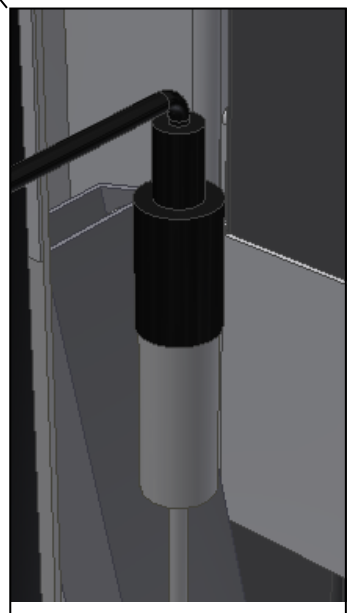




2: Connect the motor cable to M1



When the handswitch is placed at the desired position, Cable support for control switch can be mounted



3: Connect the handswitch to white spiral cable.

Move the frame to top position for reset

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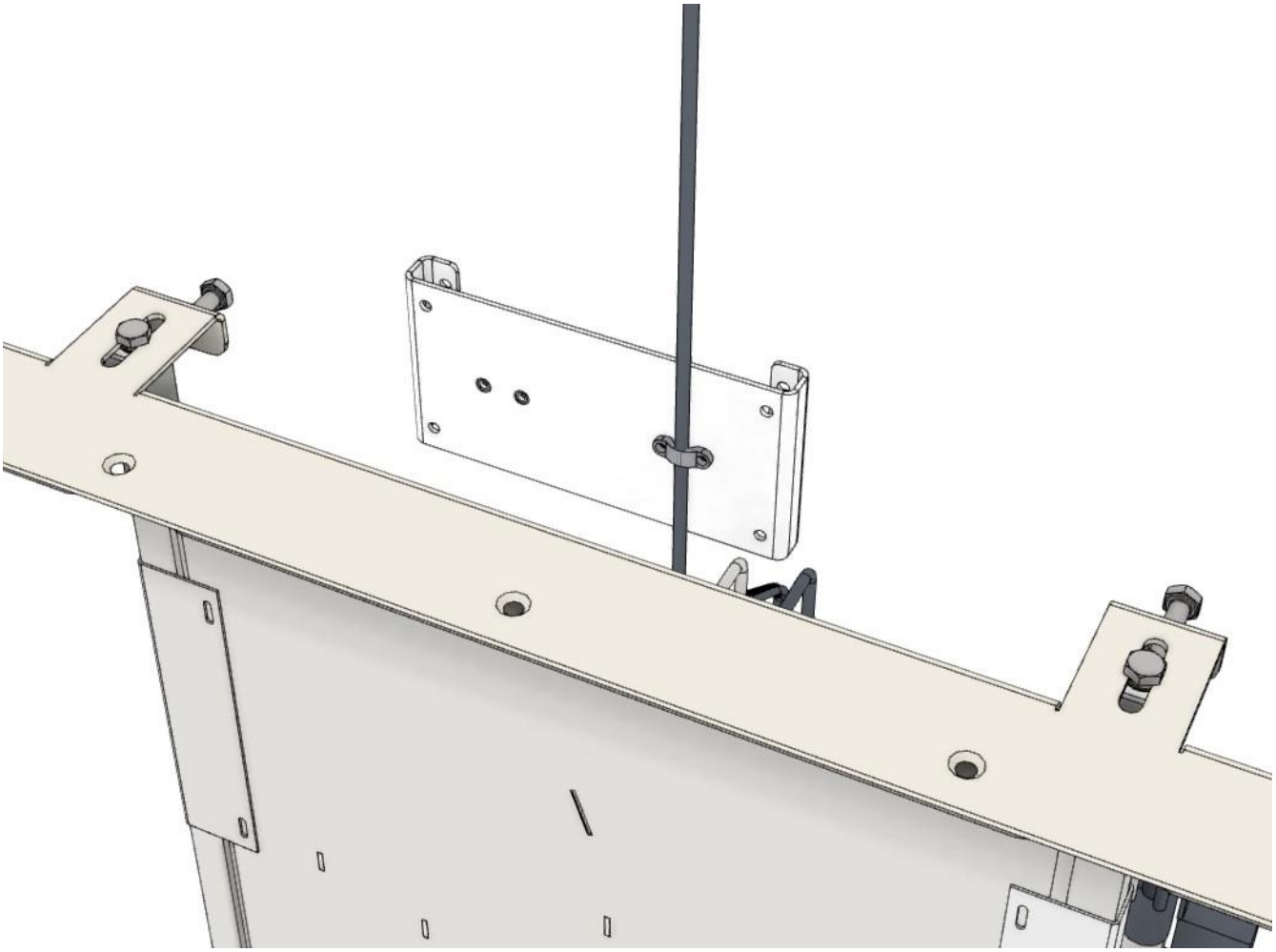
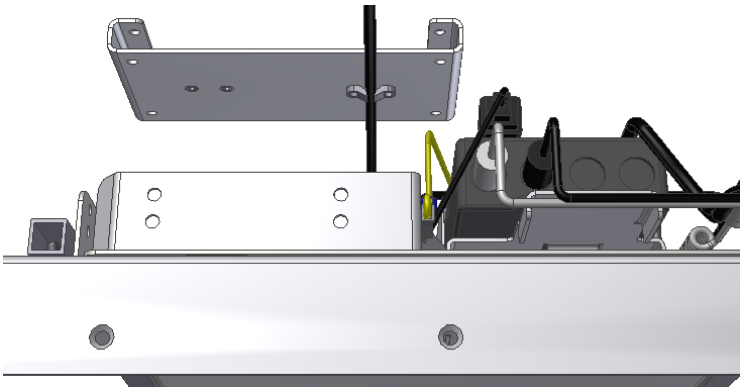
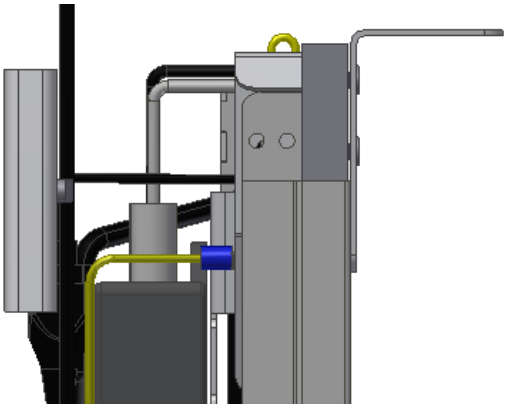
6.2 Mounting of cable support for net cable



Recommended placement, seen from above:
To the left of the box



Recommended placement, seen from side:
Lower than the cabinet plate. The cable support will be hidden in top position



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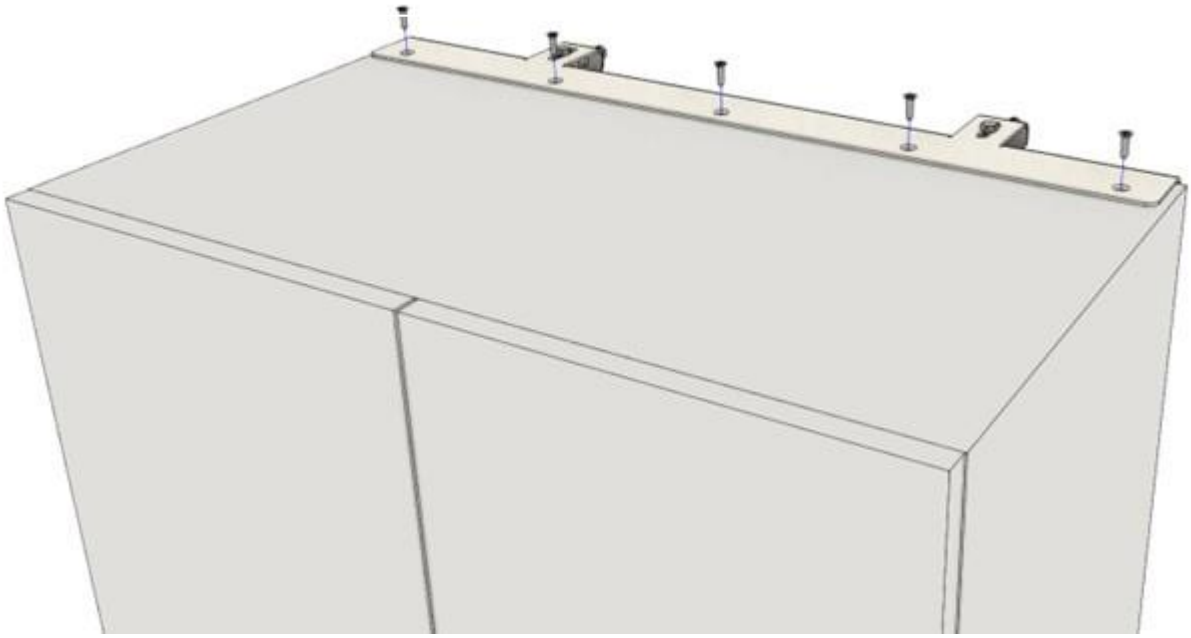
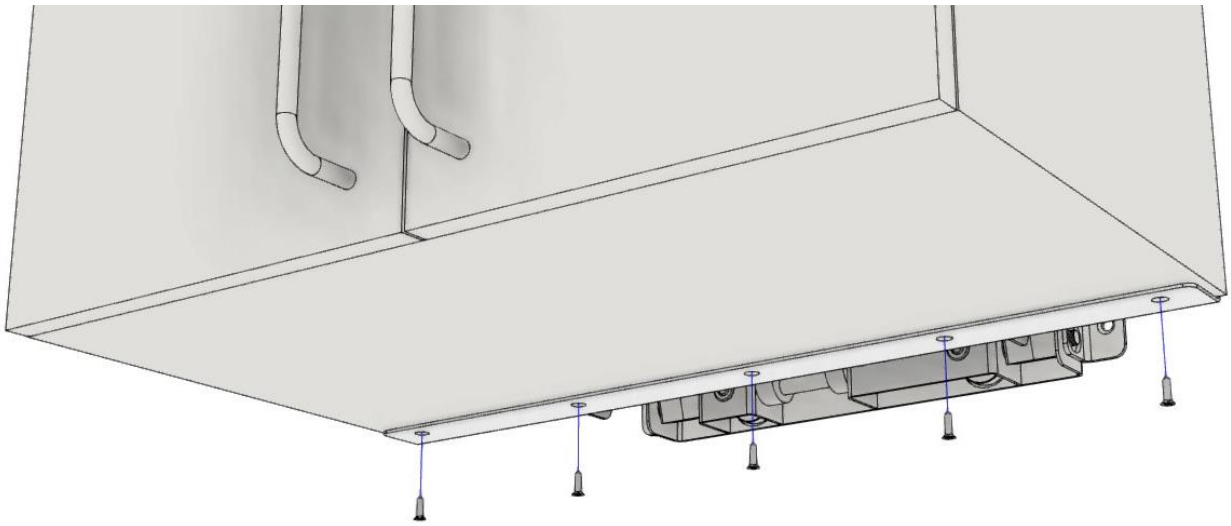
6.3 Mounting of cabinets

Attach cupboards to sliding frame
and fasten





Fasten cupboard at
the bottom

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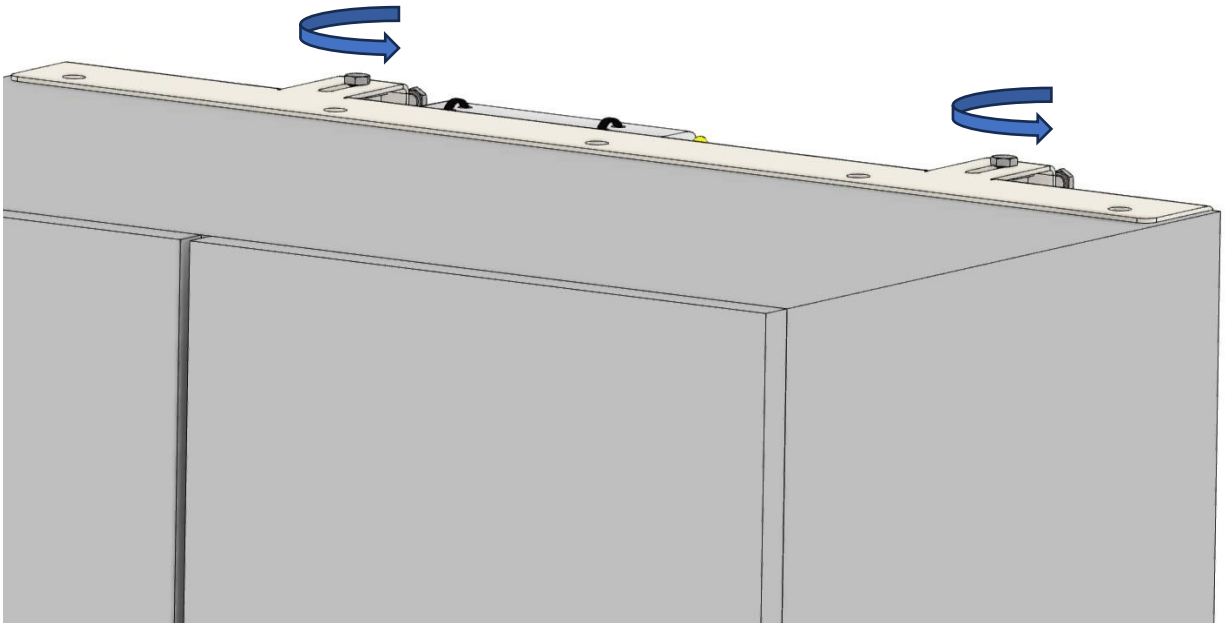
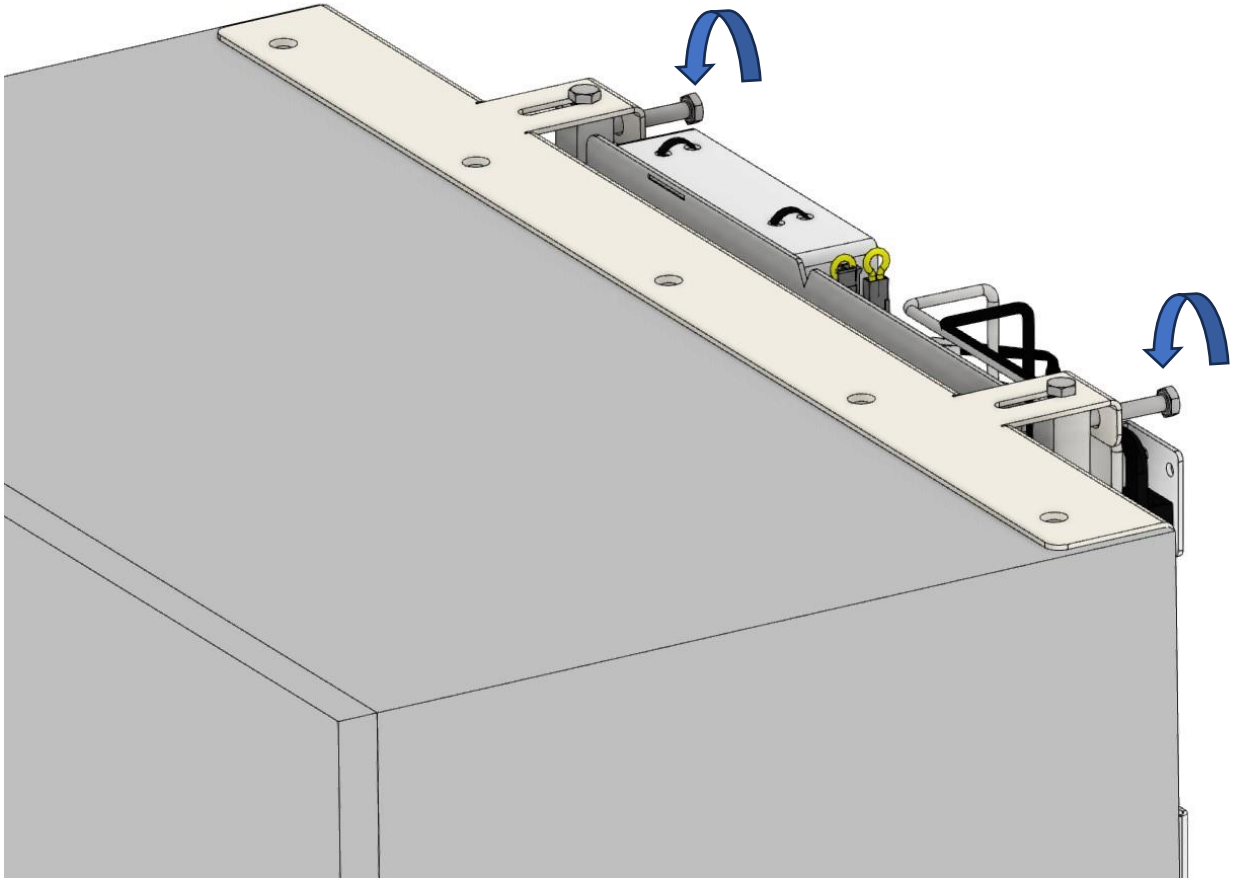
6.4 Leveling cabinet

In case the cabinet is not fully plumb after installation, it is possible to level out the system by performing the following steps:

1. Loosen the two top screws approximately one revolution, to allow them to move freely in the track



2. Adjust the leveling screws from behind the unit



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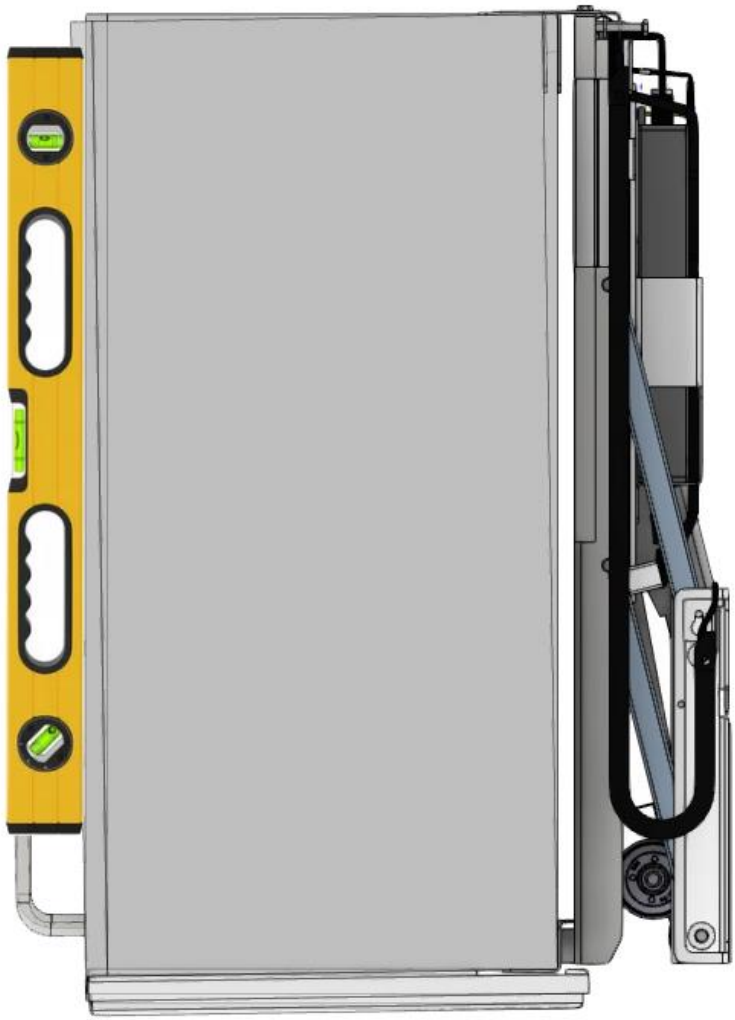
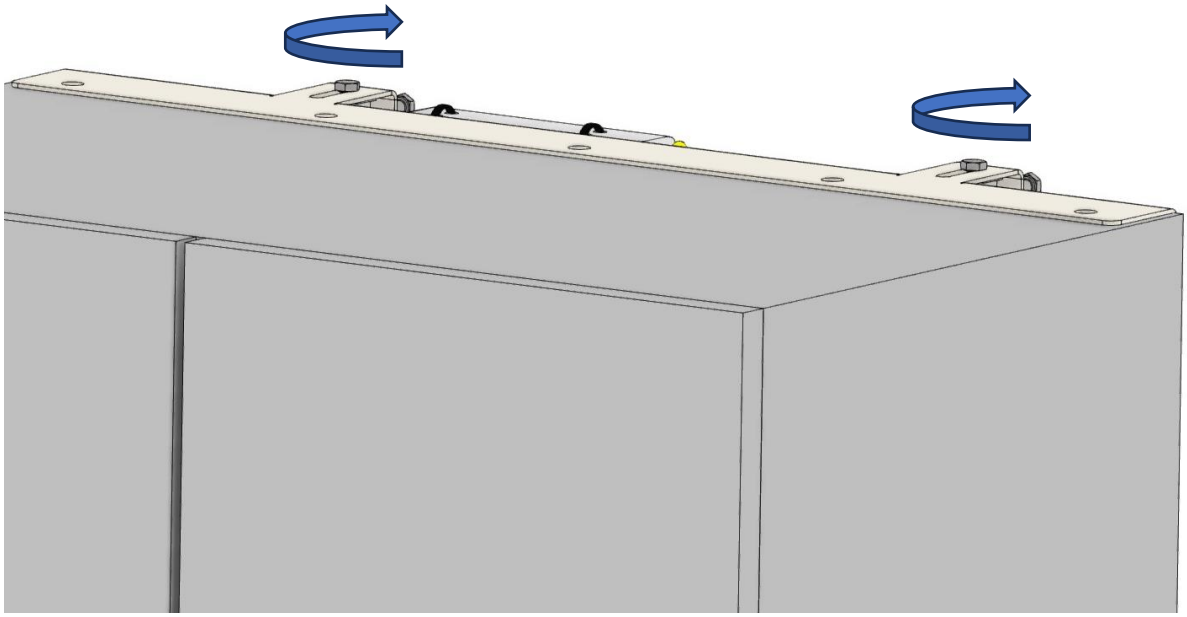
Adjust until the cabinet is plumb



3. Tighten the two top screws again to lock the system



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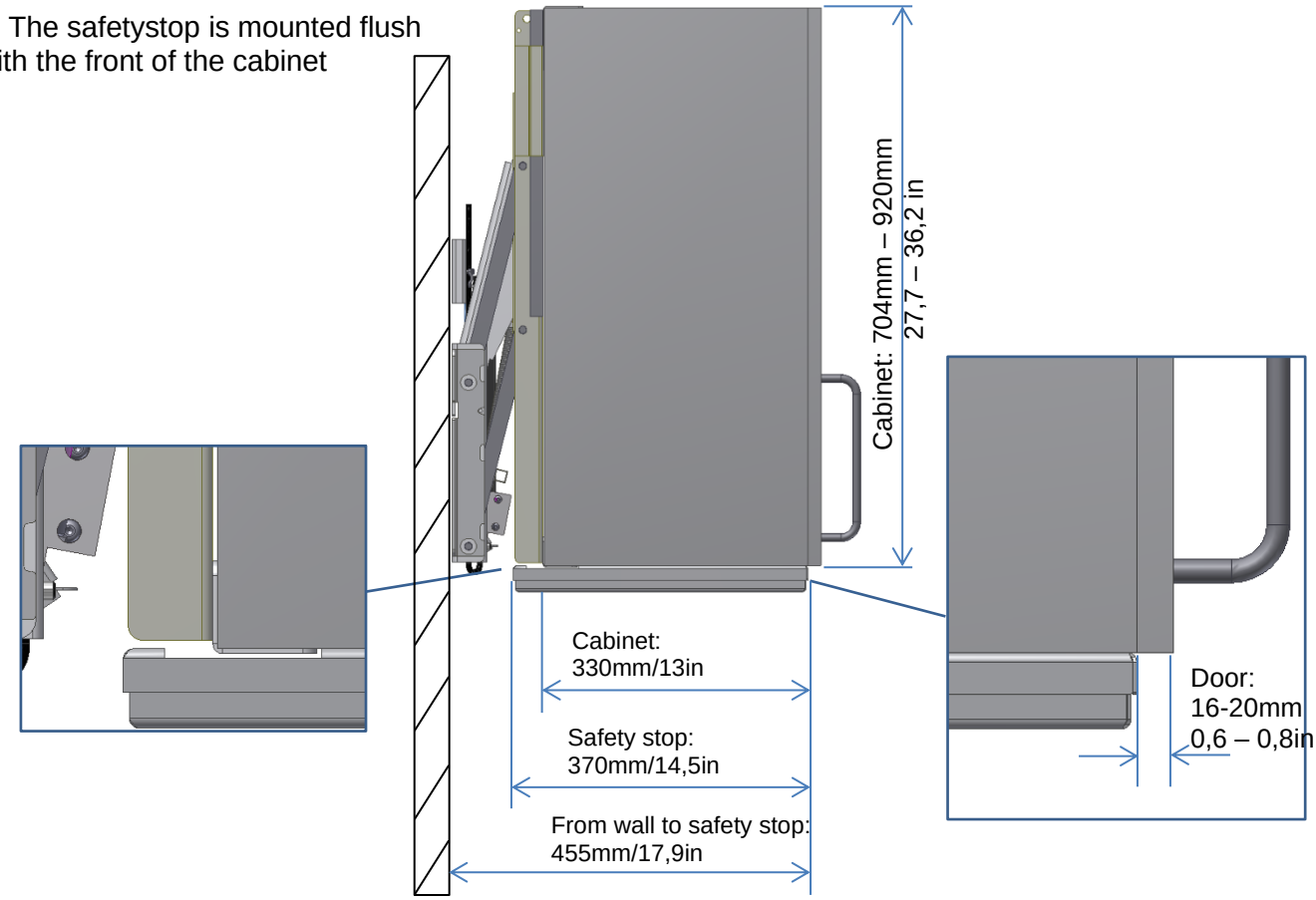
6.5 Mounting of safety stop

Safety Stop is an accessory for diagonal

6.5.1 Placement options

1: The safetystop is mounted flush with the front of the cabinet



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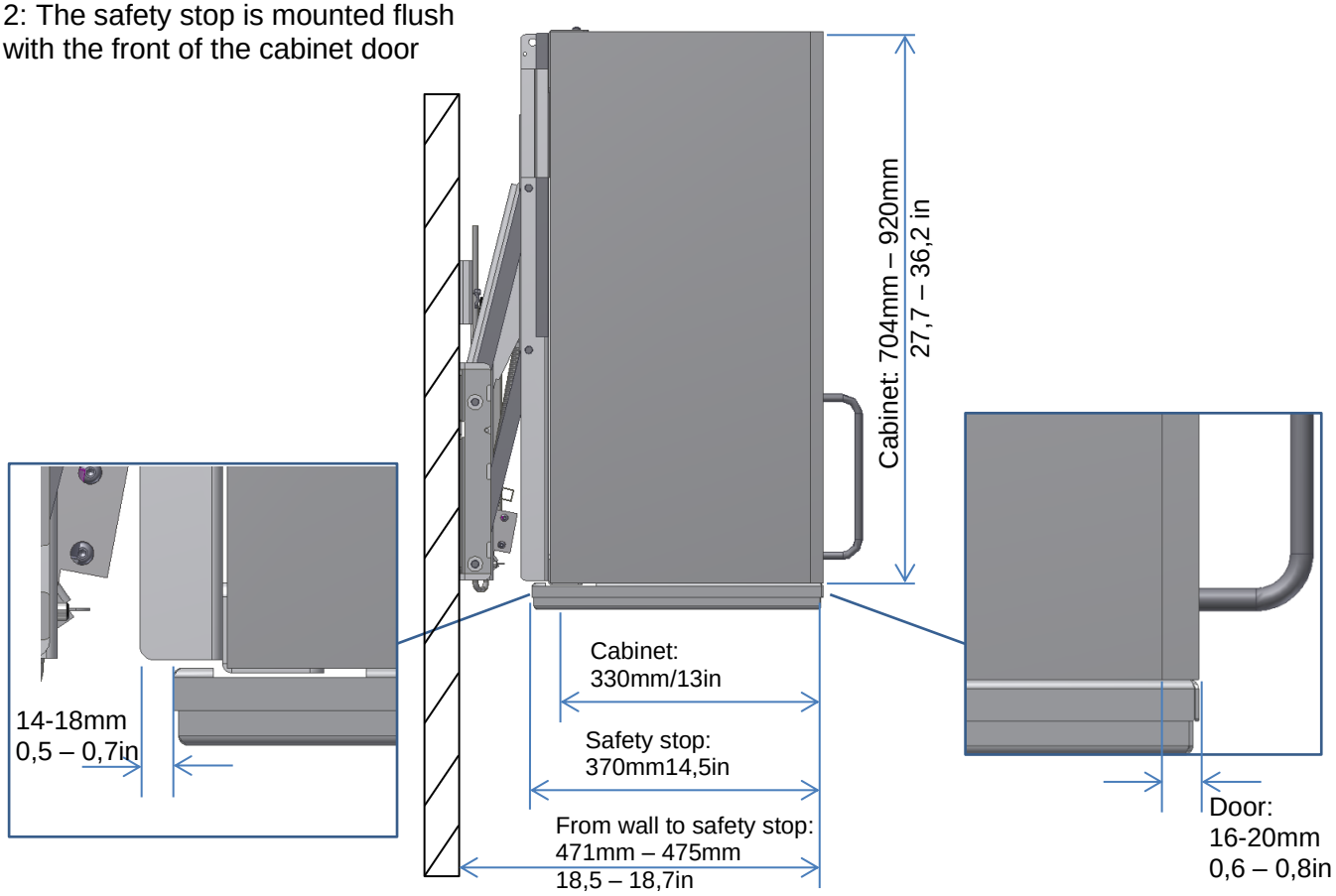
2: The safety stop is mounted flush with the front of the cabinet door



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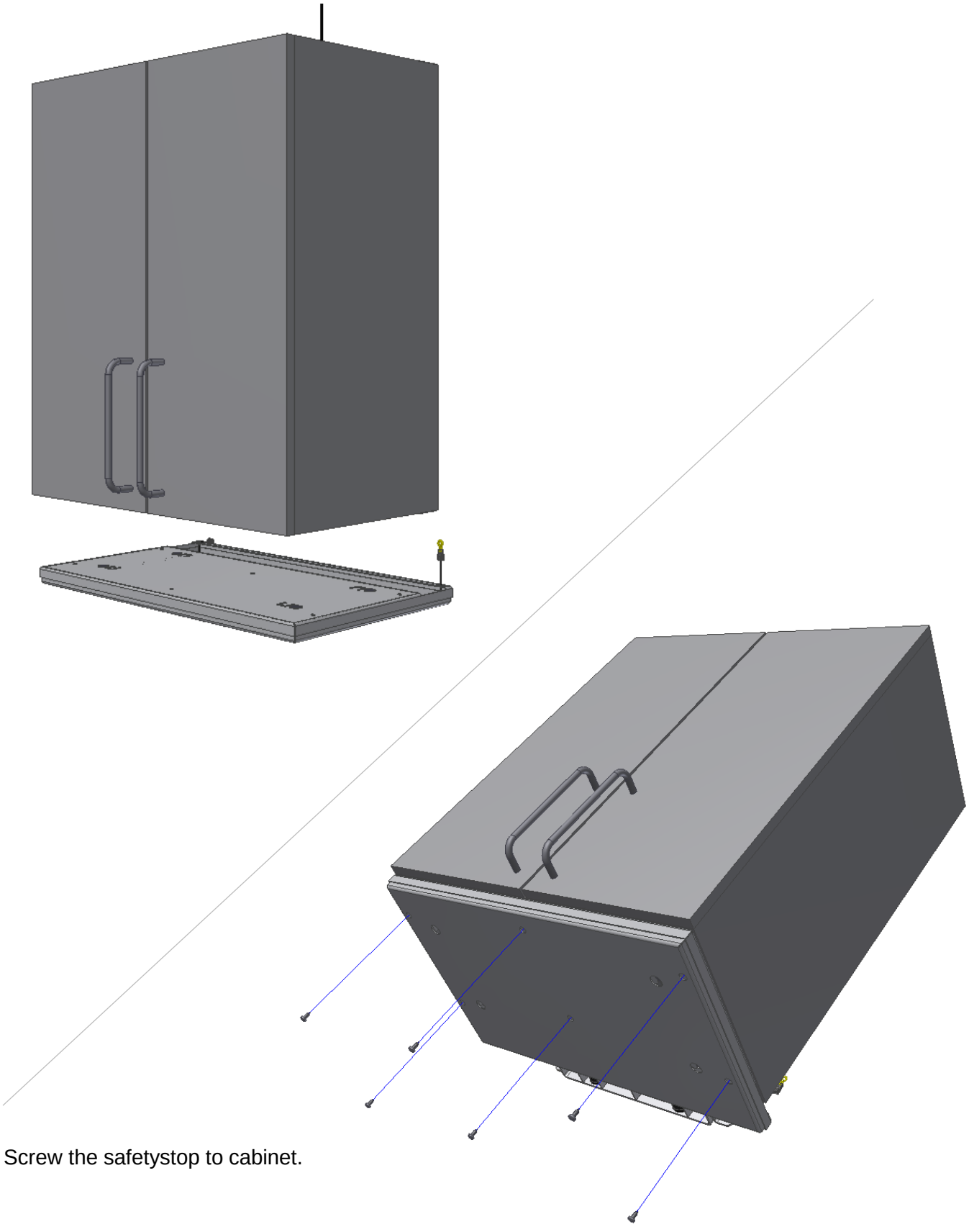
6.5.2 Mounting on cabinet

Place the safety stop in center, under the cabinet. The safety stop can be mounted flush with cabinet or cabinet door. Hold the safety stop in place with a clamp.



Screw the safetystop to cabinet.

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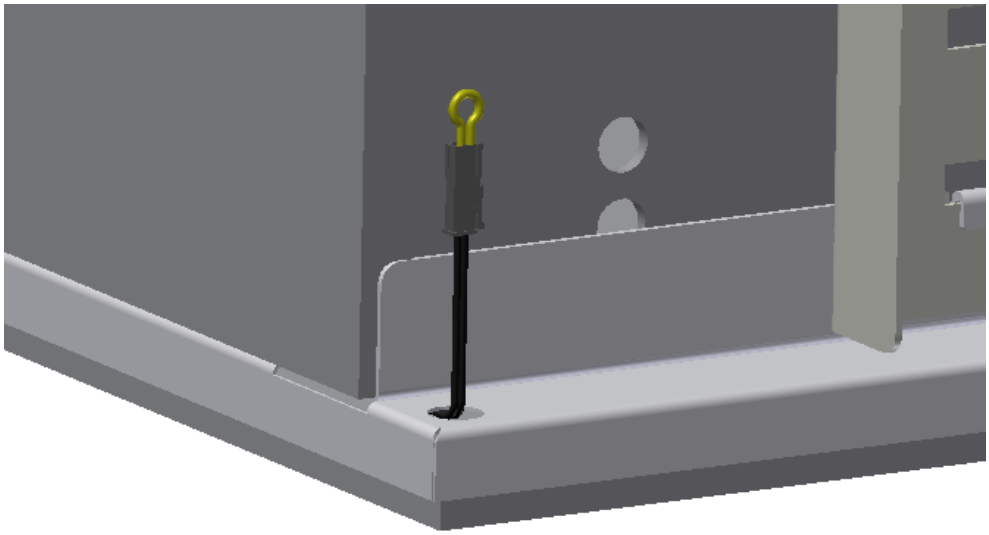
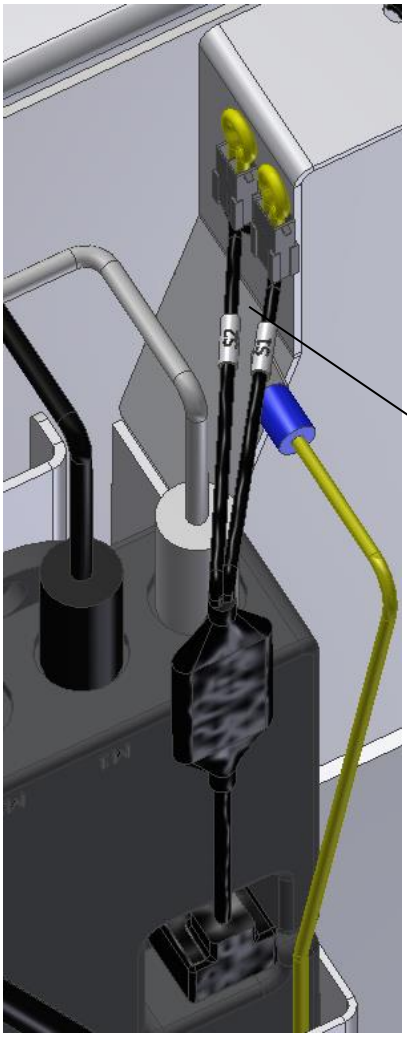
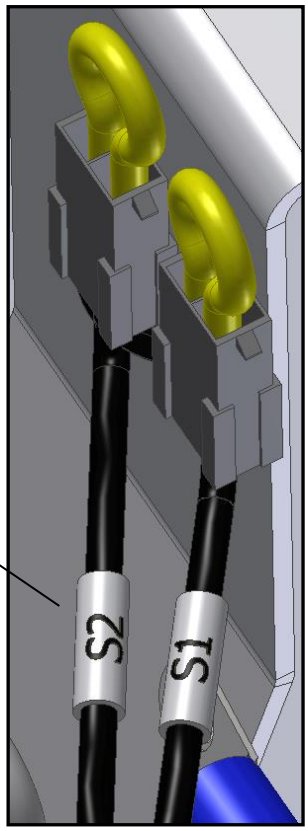
6.6 Connection of safety stop

In the right side of the safety stop there is a yellow 2,2kΩ resistor mounted.





Remove yellow 2,2kΩ resistor from the cord marked S2



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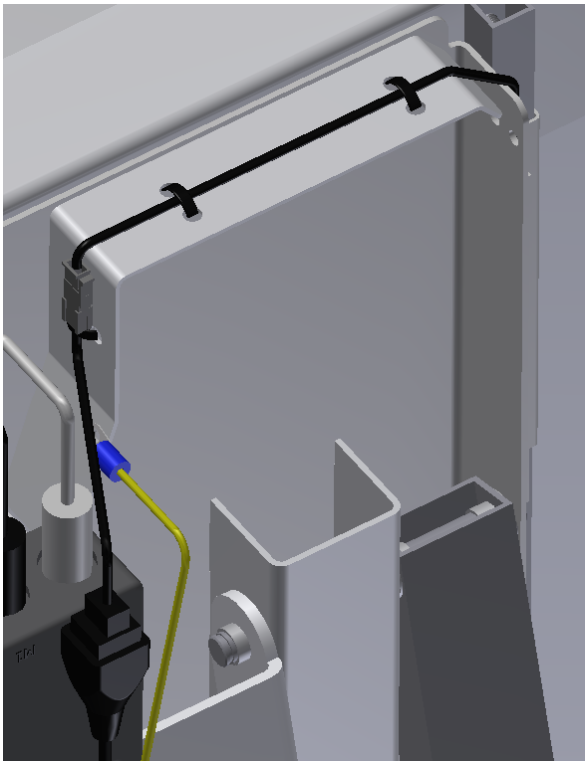
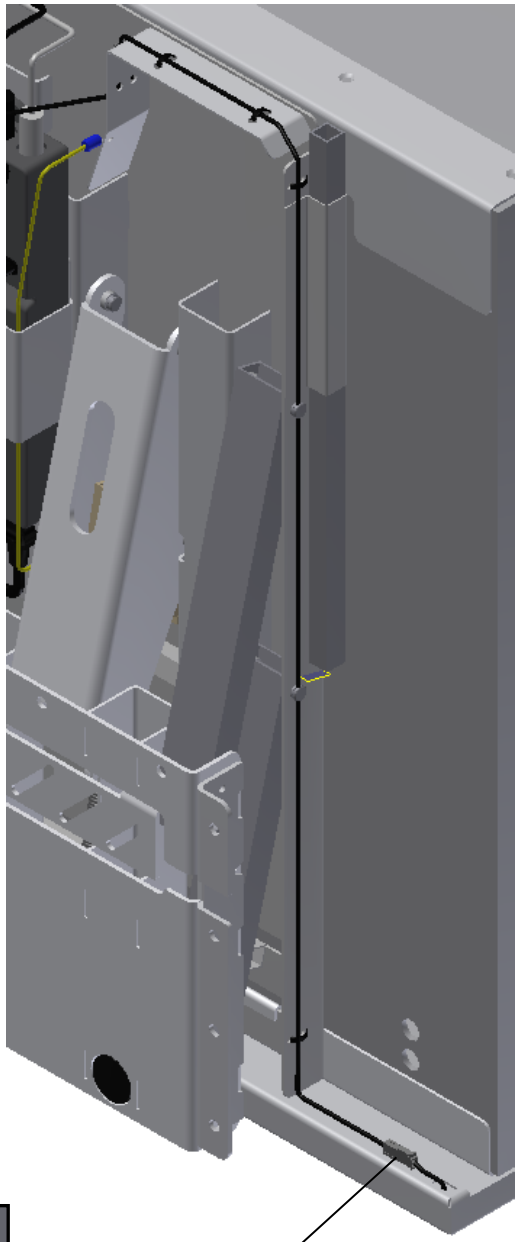
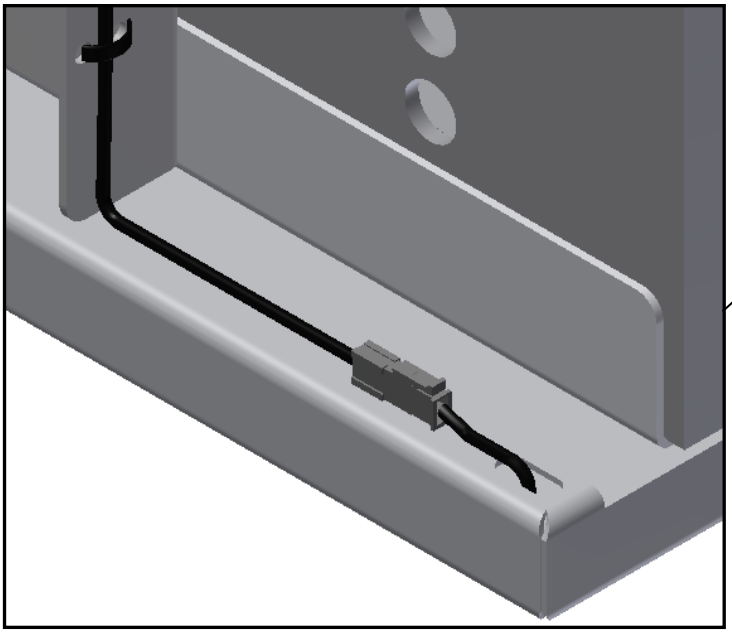
Connect extension cord to the cord marked S2 and fasten it with cable binders as shown.







Connect the extension cord to the safety stop.

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6.7 Mounting the Bluetooth Adapter for Ropox Connect App

6.7.1 Determine the placement of the adapter, then grab the Bluetooth adapter and the split-cable

6.7.2 Insert the split-cable in the plug ”**HS**” in the control box. Then, insert the adapter in one end of the split cable, and the button that came with the product, in the other

6.7.3 If the adapter is to be fixed, it should be done now

6.8 Downloading the Ropox Connect App

As an option to operate certain Ropox products, it’s possible to download the free Ropox Connect App, which makes it possible to operate the product wirelessly. The Ropox Connect App allows you to operate the product upwards or downwards and has the option of saving height settings, allowing users to easily change from a standing height to a sitting height. To see an expanded explanation of functions, accessibility settings, and more, see the enclosed manual, TF 200.0054.
To download the Ropox Connect App, follow the instructions below:

How to download the Ropox Connect App

For iOS
1. Scan the QR code or open the app: App Store.
2. In the App Store, press ‘Search’.
3. Search for ”Ropox Connect”.
4. Find the Ropox Connect App, and press ‘Get’.

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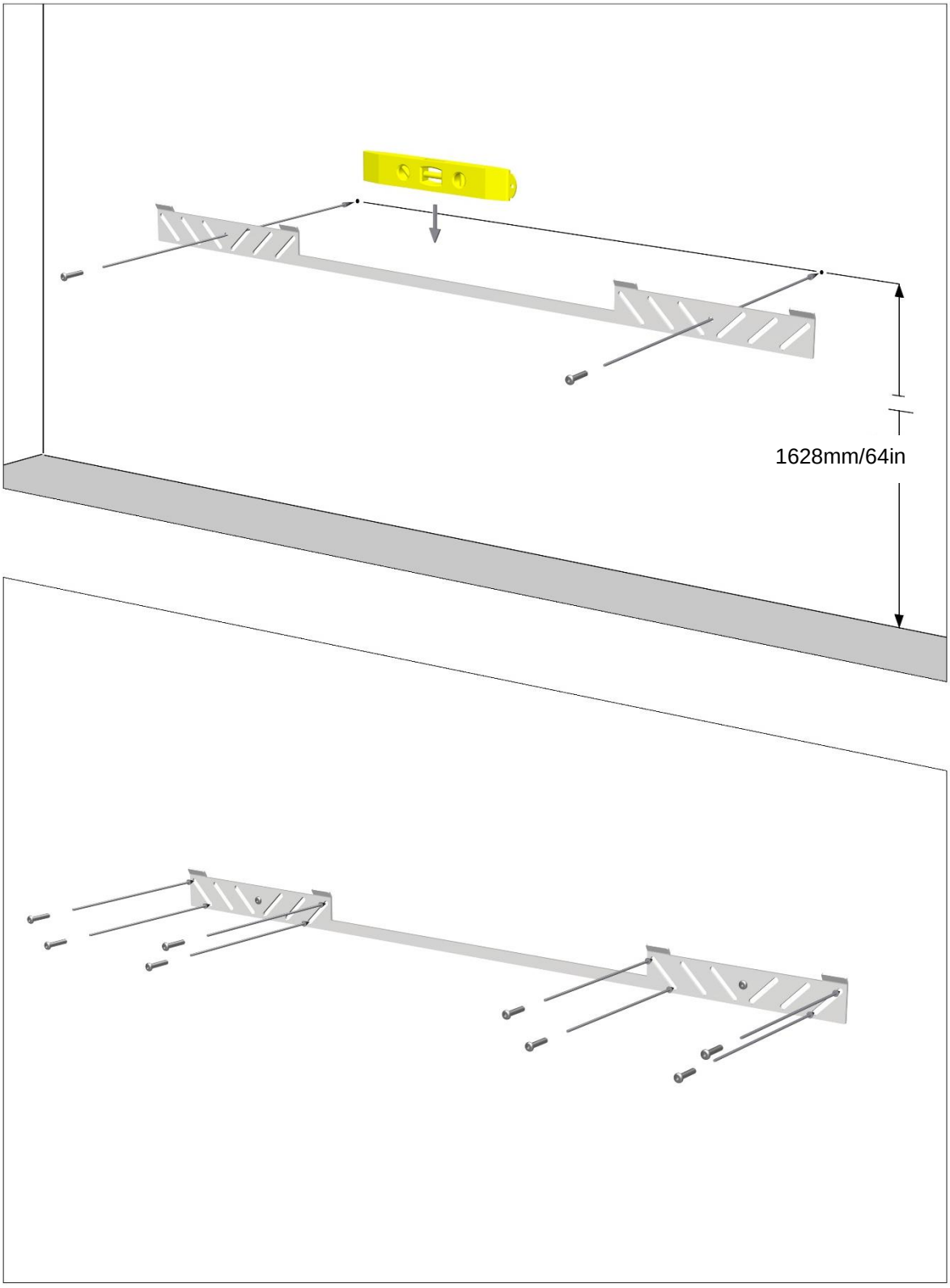
7. Mounting instructions for 2 units



Mount the 2 units as described on page 10-12

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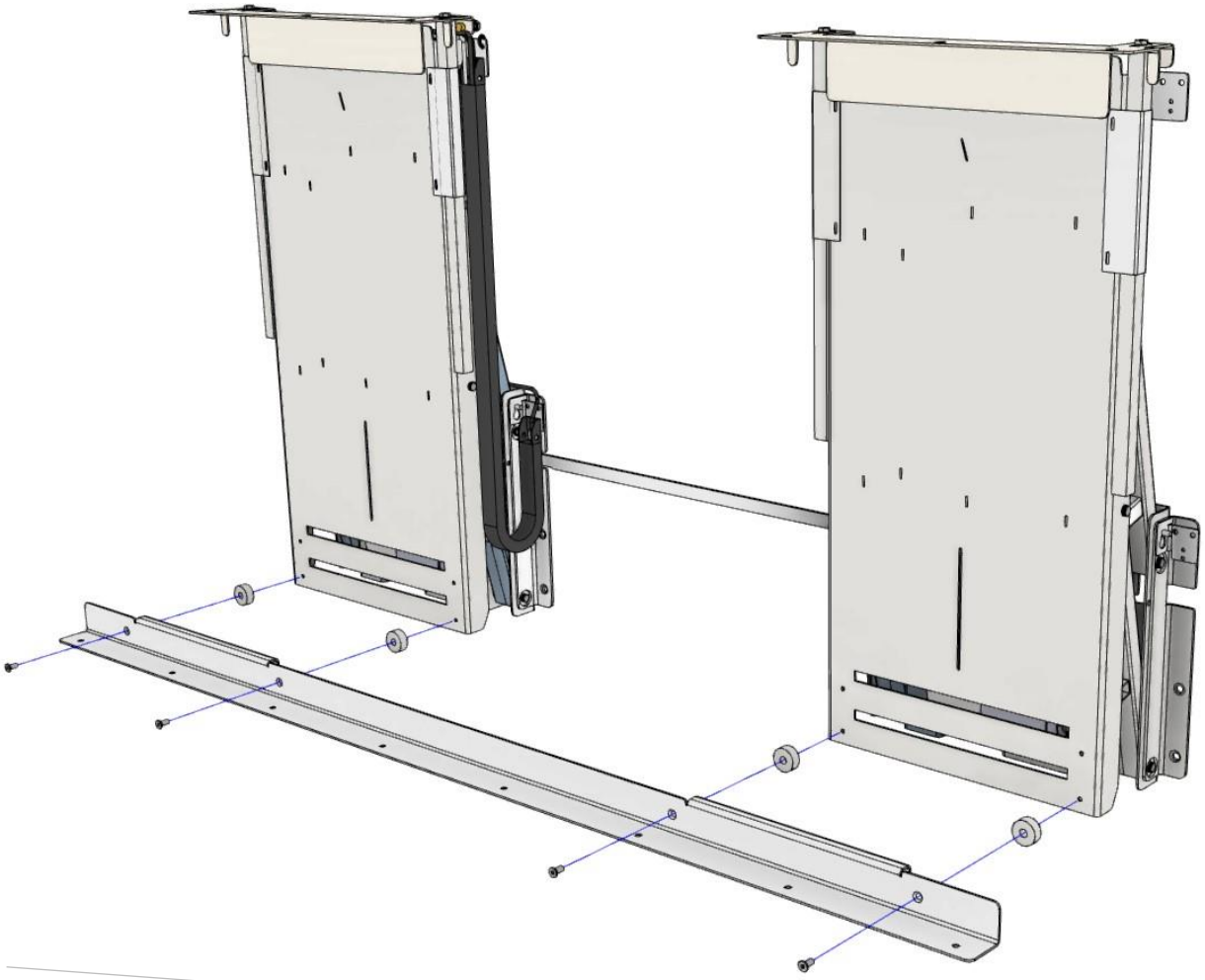

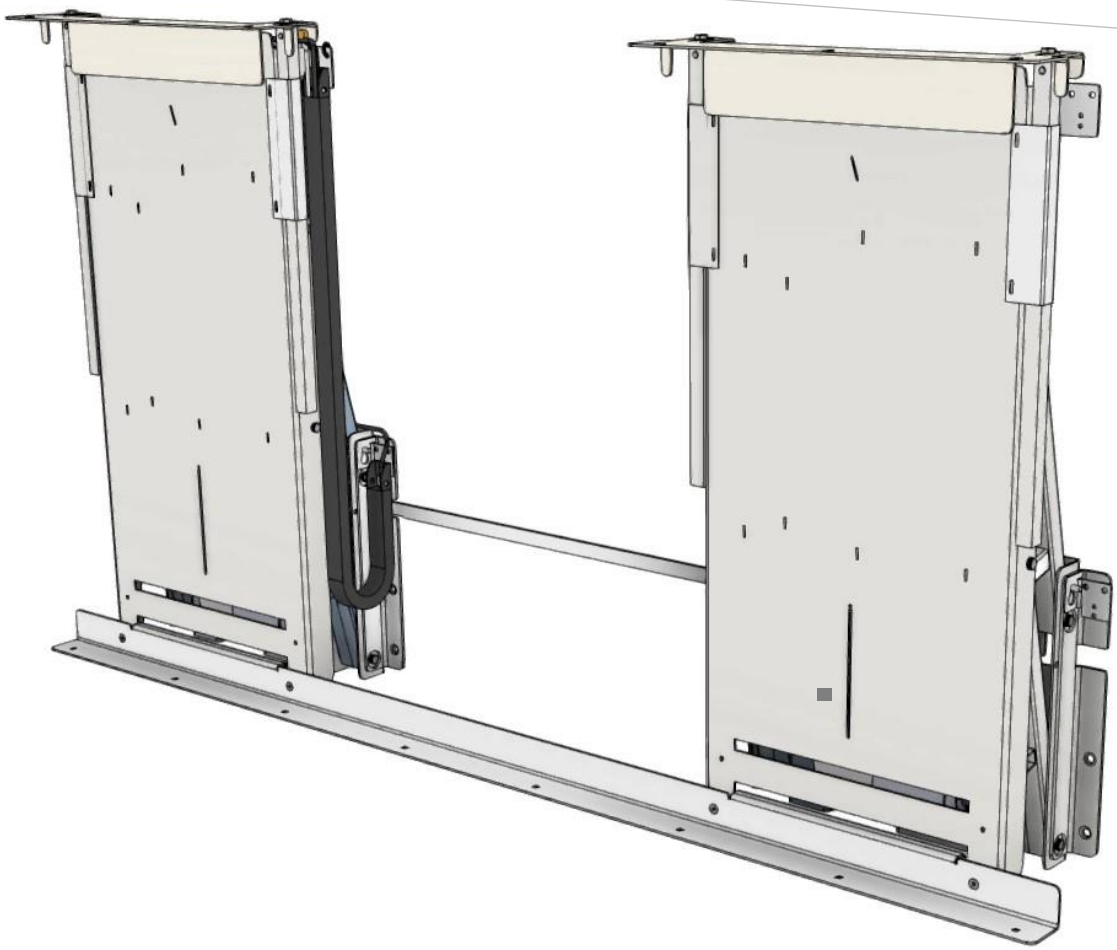

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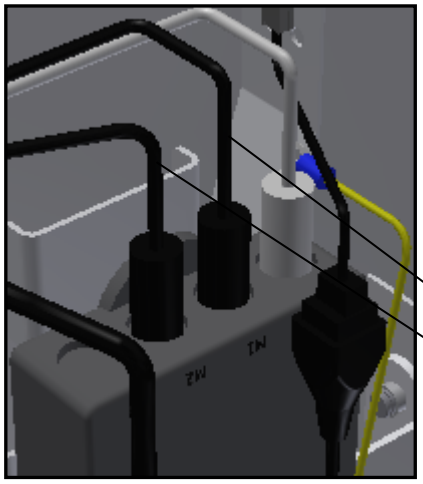
7.1 Connection of cables

1: Connect the net cable
and turn on the power

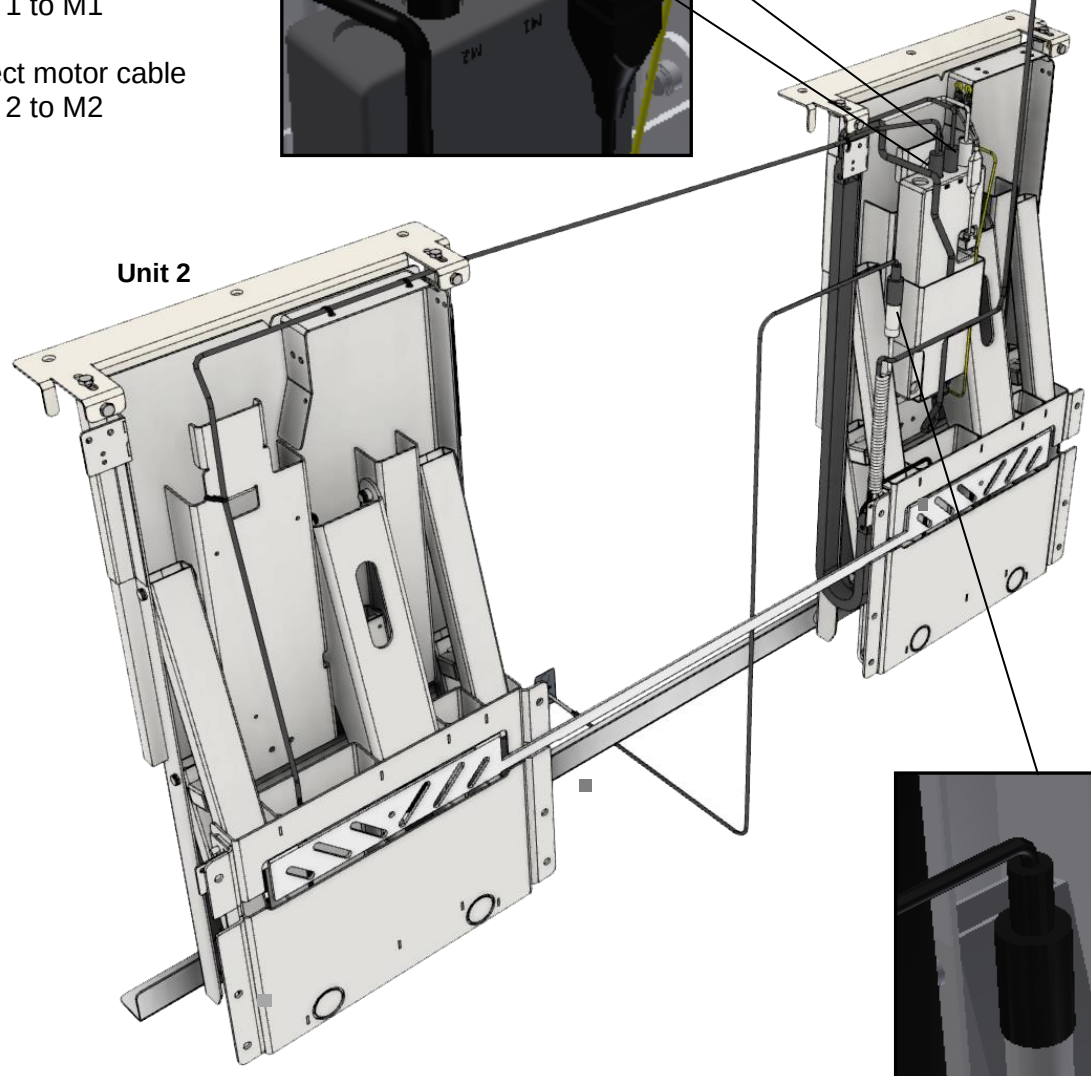


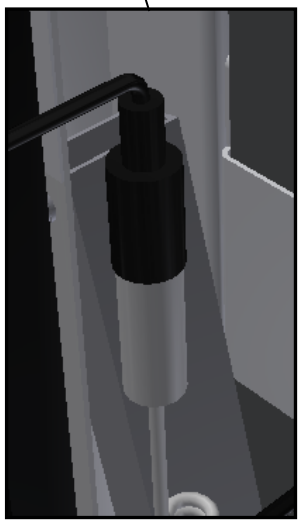
2: Connect motor cable
from unit 1 to M1

3: Connect motor cable
from unit 2 to M2

Unit 1

Unit 2





4: Connect the handswitch
to white spiral cable.

Move the frame to top
position for reset

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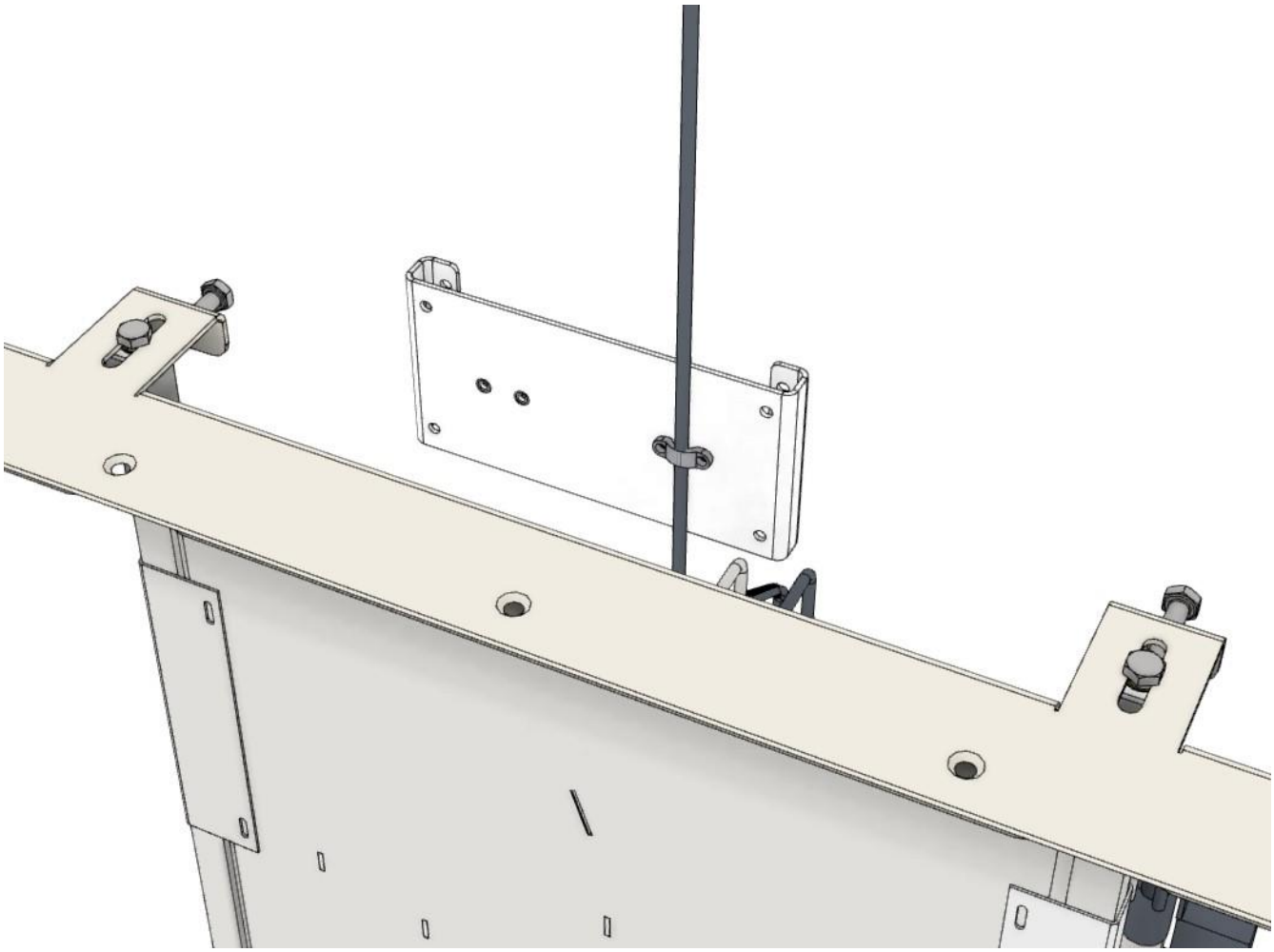
7.2 Mounting of cable support for net cable

See page 14.



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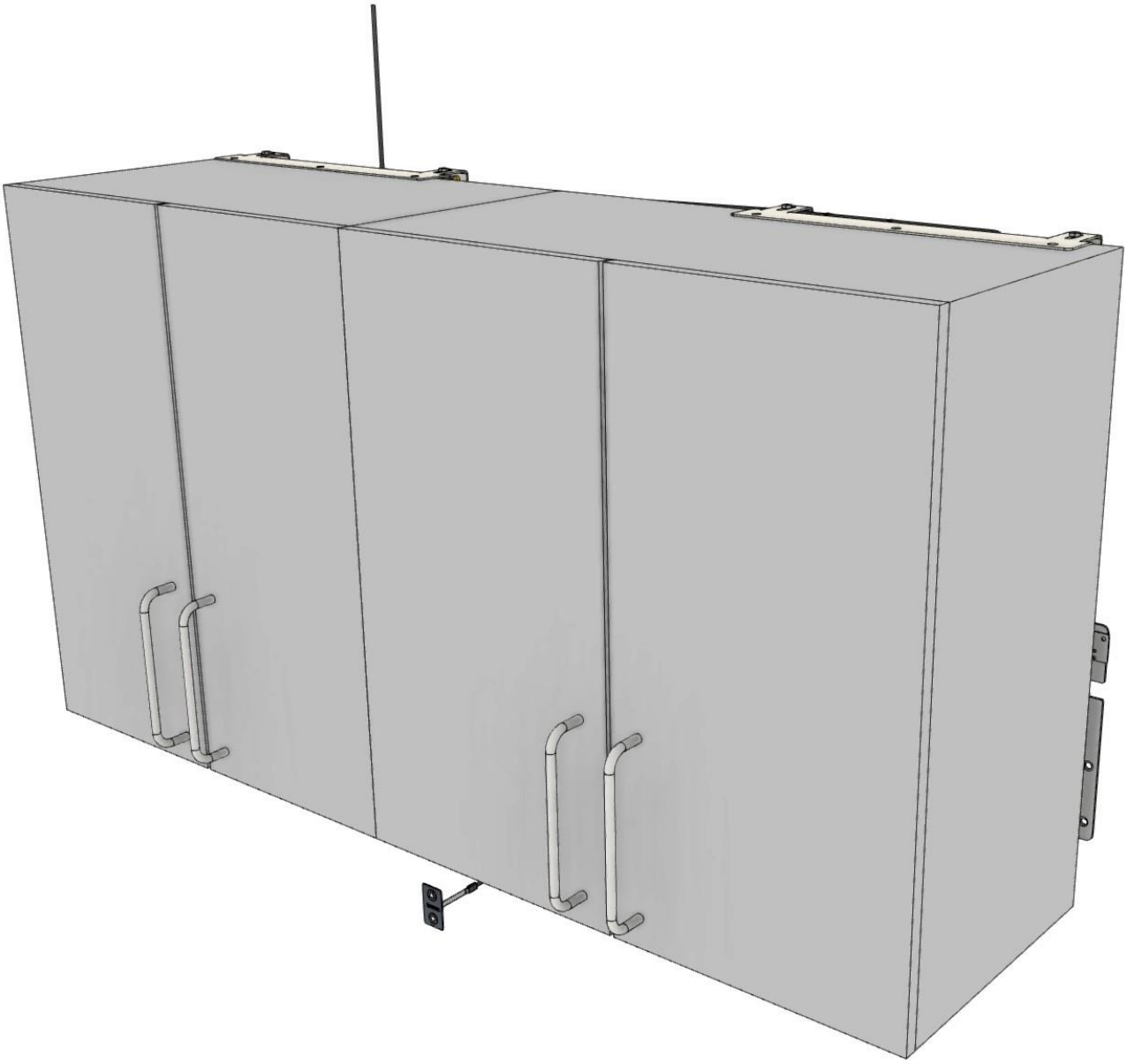
7.3 Mounting of cabinets

See page 15



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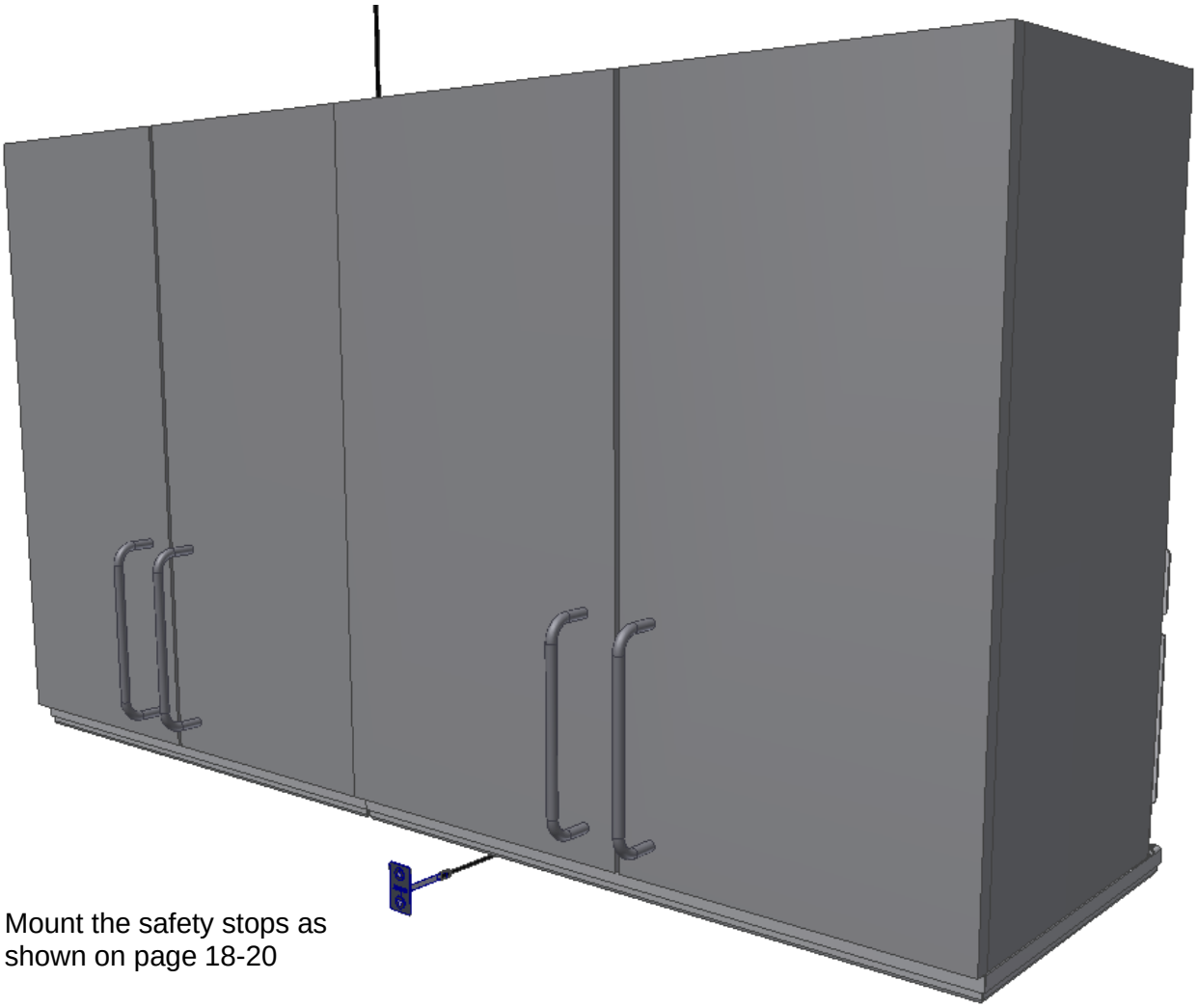
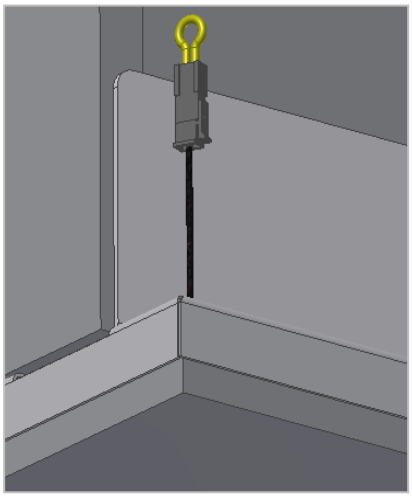
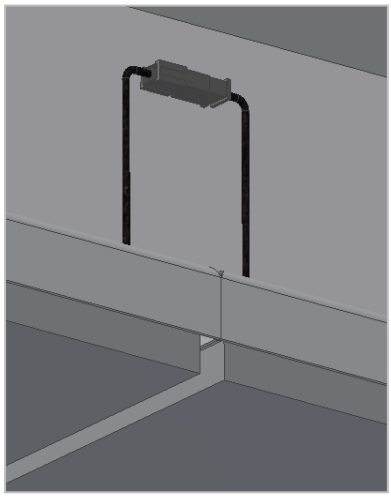
7.4 Mounting of safetystop



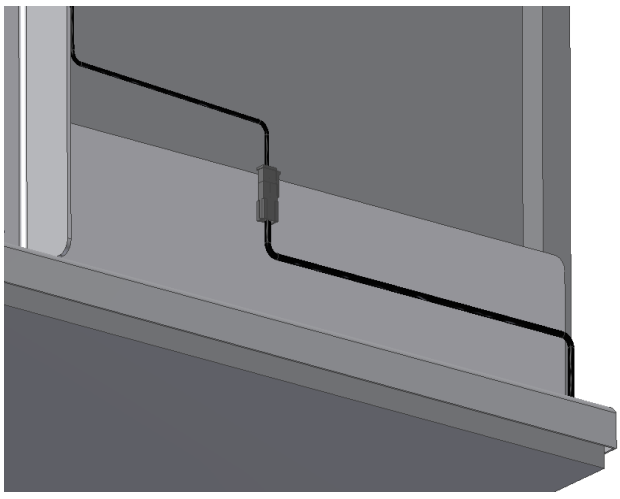
Mount the safety stops as shown on page 18-20



Place plug with yellow 2,2kΩ resistor on the right side of safety stop plate (shown from the front)



Connect the two cables for safety stop plates in the middle



Connect extension cable of control box to safety stop plate on the left side (shown from the front)
and fasten it with cable binders as shown on page 21

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8. Performance test

After installation and prior to use all functions of unit must be tested. The test must be carried out by competent personnel. Subsequently the test shall be carried out once a year.

Testing prior to connection to mains voltage:

1. Check that mounting instructions have been observed
2. Check that all bolts have been tightened.
3. Check that all cables have been connected correctly and that the plugs have been pressed home.
4. Check that there is no load on the frame.
5. Check that there is nothing preventing the frame from moving freely within the height adjustment range.

Start-up Procedure

1. Connect the net cable and turn on the power
2. Connect the motor cables to M1 (M2)
3. Connect the control switch to HS
4. Press DOWN on the control switch, move the frame to bottom position, check that the movement is even and smooth. Make sure that the cable connections follow the movement of the frame and that they do not get squeezed. The frame is now reset.
5. Press UP on the control switch, move the frame to top position and check that the movement is even and smooth. Make sure that the cable connections follow the movement of the frame and that they do not get squeezed.

If safety stop has been mounted under the wall unit it must be tested as follows:

Press DOWN on control switch and let frame move 2-5 cm / 0,7 – 2in downwards, activate the safety stop. The frame must stop downwards movement and move 1-2 cm / 0,4 – 0,7 in upwards and stop.

If a smart box has been mounted – (is used if a FlexiElectric has been mounted below this unit) follow additional instructions for smart box.

If all test are ok, the frame is ready for use. See section 12 “Safety in use”.

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9. List of components for Diagonal, L=40-180cm / 15,7 – 70,8 in

Diagonal unit 30-40904 to 30-40912: 1 pc.

The Diagonal comprises:

30*40999-098	Mounting profile L=40-120cm/15,7 – 47,2in	1 pc.

96001037	Distance pieces	2 pcs.

30*40999-170	Tube for top-profile	2 pcs.

Top profile according to width of cabinets:

30*40999-354	Top profile, cabinet width 40cm/15,7in	1 pc.
30*40999-355	Top profile, cabinet width 50cm/19,6in	1 pc.
30*40999-356	Top profile, cabinet width 60cm/23,6in	1 pc.
30*40999-357	Top profile, cabinet width 70cm/27,5in	1 pc.
30*40999-358	Top profile, cabinet width 80cm/31,5in	1 pc.
30*40999-359	Top profile, cabinet width 90cm/35,4in	1 pc.
30*40999-360	Top profile, cabinet width 100cm/39,3in	1 pc.
30*40999-361	Top profile, cabinet width 110cm/43,3	1 pc.
30*40999-362	Top profile, cabinet width 120cm/47,2	1 pc.

Bottom profile according to width of cabinets:

30*40999-344	Bottom profile, cabinet width 40cm/15,7in	1 pc.
30*40999-345	Bottom profile, cabinet width 50cm/19,6in	1 pc.
30*40999-346	Bottom profile, cabinet width 60cm/23,6in	1 pc.
30*40999-347	Bottom profile, cabinet width 70cm/27,5in	1 pc.
30*40999-348	Bottom profile, cabinet width 80cm/31,5in	1 pc.
30*40999-349	Bottom profile, cabinet width 90cm/35,4in	1 pc.
30*40999-350	Bottom profile, cabinet width 100cm/39,3in	1 pc.
30*40999-351	Bottom profile, cabinet width 110cm/43,3in	1 pc.
30*40999-352	Bottom profile, cabinet width 120cm/47,2in	1 pc.

95091442	Screws for profiles	6 pcs

Diagonal unit 30-40913 til 30-40918: 2 pcs.

The Diagonal comprises:

30*40999-148	Mounting profile L=130-180cm/51,1-70,8in	1 pc.

96001037	Distance pieces	4 pcs.

30*40999-170	Tube for top-profile	4 pcs.

Top profile according to width of cabinets:

30*40999-354	Top profile, cabinet width 130cm/51,1in	2 pc.
30*40999-355	Top profile, cabinet width 140cm/55,1in	2 pc.
30*40999-356	Top profile, cabinet width 150cm/59in	2 pc.
30*40999-357	Top profile, cabinet width 160cm/63in	2 pc.
30*40999-358	Top profile, cabinet width 170cm/66,9in	2 pc.
30*40999-358	Top profile, cabinet width 180cm/70,8in	2 pc.

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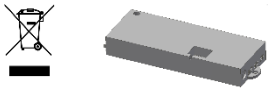
Bottom profile according to width of cabinets:

30*40999-353	Bottom profile, cabinet width 130cm/51,1in	1 pc.
30*40999-364	Bottom profile, cabinet width 140cm/55,1in	1 pc.
30*40999-365	Bottom profile, cabinet width 150cm/59in	1 pc.
30*40999-366	Bottom profile, cabinet width 160cm/63in	1 pc.
30*40999-367	Bottom profile, cabinet width 170cm/66,9in	1 pc.
30*40999-368	Bottom profile, cabinet width 180cm/70,8in	1 pc.

95091442	Screws for profiles	16 pcs.

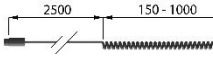
.

Control box for L=40-120cm/15,7-47,2in (26,5x10,5x3,7cm/10,4x4,1x1,5in) 30*40903-025:

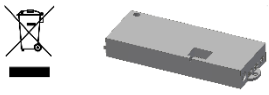


The control box comprises:

96000592	Power cable	1 pc.
96000557	Adapter cable	1 pc.
93000164	Extension cord 350cm/138in + spiral For control switch, white	1 pc.
30-67840	Standard switch, (3x6cm/1,2x2,4in) Incl. 150cm/59in cable	1 pc.
96000155	Adhesive plate	10 pcs.
96000165	Strips black	10 pcs.
95134017	Screw countersink 4x17	35 pcs.

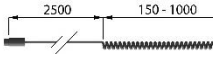


Control box for L=130-180cm/51,2-70,8in (26,5x10,5x3,7cm/10,4x4,1x1,5in) 30*40903-026:



The control box comprises:

96000592	Power cable	1 pc.
96000557	Adapter cable	2 pcs.
93000164	Extension cord 350cm/138in + spiral For control switch, white	1 pc.
30-67840	Standard switch, (3x6cm/1,2x2,4in) Incl. 150cm/59in cable	1 pc.
96000155	Adhesive plate	10 pcs.



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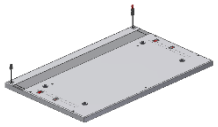
96000165	Strips black	10 pcs.	
95134017	Screw countersink 4x17	35 pcs.	

10. Options for Diagonal

Split cable 96000629:
To be used if more than one control
1 pc.

Large press pad (14x7cm/5,5x2,7in) 30-67841:
For disabled people, incl. 150cm/59in cable
1 pc.

Safety stop plate 30-416xx:
Safety circle with extension cable (cable 250cm/98in)
Steel plate with mounting parts and plate.
1 pc.



Smartbox 30-69002-1:
Option for safety stop plate
To be ordered if Diagonal is mounted above a FlexiElectric
1 pc.

Extension cord 30-67870:
250cm/98in (black) for safety stop
1 pc.

Spiral extension 30-67871:
L =25-100cm/9,8-39,3in (black) for safety stop
1 pc.

Bluetooth Adapter for Ropox Connect App 30-90591:
Option, if the product needs to be remotely controlled via the Ropox Connect App
1 pc.

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Safety stop with LED spot 1W Incl. transformer.
Incl. cables

30-42604 Led for 40cm/15,7in Safety stop	1pc	
30-42605 Led for 50cm/19,7in Safety stop	1pc	
30-42606 Led for 60cm/23,6in Safety stop	1pc	
30-42607 Led for 70cm/27,5in Safety stop	2pc	
30-42608 Led for 80cm/31,5in Safety stop	2pc	
30-42609 Led for 90cm/35,4in Safety stop	2pc	
30-42610 Led for 100cm/39,3in Safety stop	2pc	
30-42611 Led for 110cm/43,3in Safety stop	2pc	
30-42612 Led for 120cm/47,2in Safety stop	2pc	
30-42613 Led for 130cm/51,2in Safety stop	3pc	
30-42614 Led for 140cm/55,1in Safety stop	4pc	
30-42615 Led for 150cm/59in Safety stop	4pc	
30-42616 Led for 160cm/63in Safety stop	4pc	
30-42617 Led for 170cm/66,9in Safety stop	4pc	
30-42618 Led for 180cm/70,8in Safety stop	4pc	

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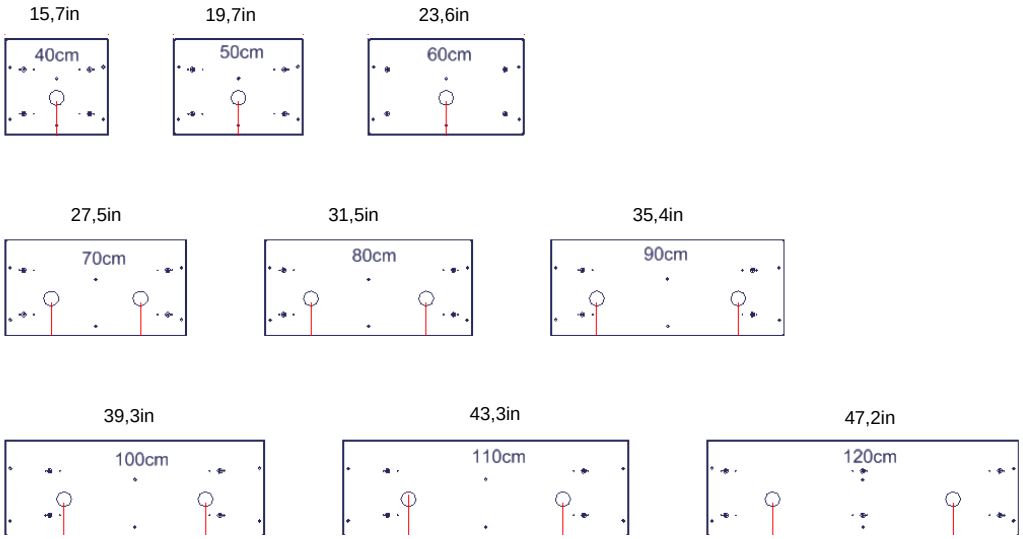
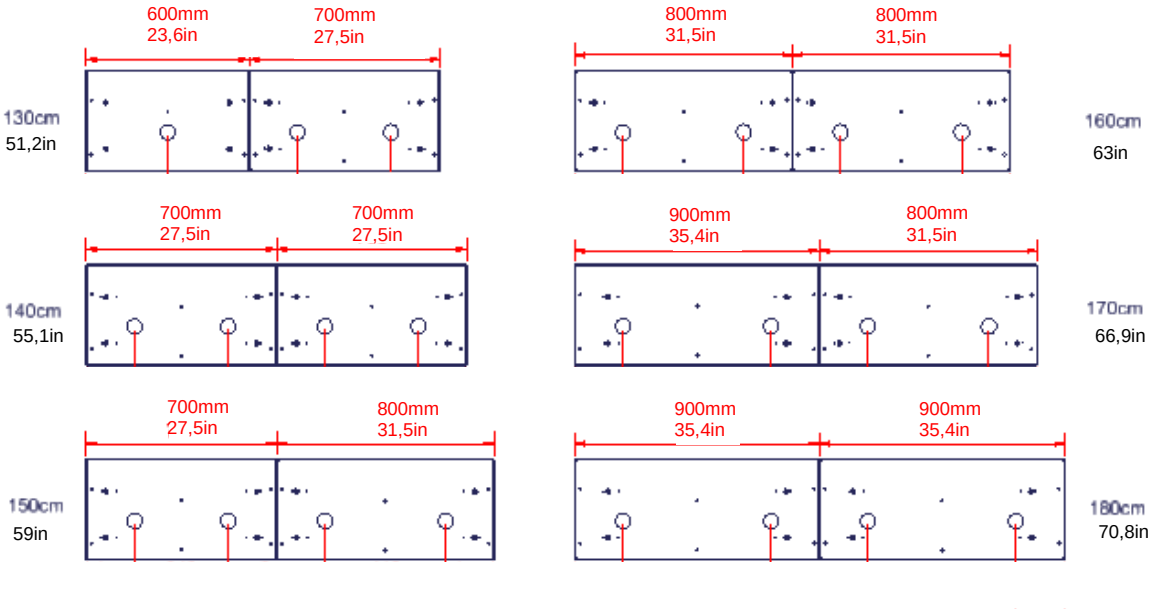
11. Placing of LED spot

If LED spots are purchased, they will be positioned as shown on drawing below.





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12. Safety in use

- The Diagonal should only be used by people who have read and understood these instructions..
- The Diagonal is a height-adjustable frame, and we recommend the filling of a safety stop beneath in order to guard against trapping. Even though a safety stop plate has been mounted always make sure that there are no people, animals or objects under the frame during height adjustment.
- The Diagonal is a wall unit and must not be used as lifting equipment or person lifter.
- Always use the frame so there is no risk of damage to people or property. The person, who operates the frame, is responsible for avoiding damage or injury.
- Children and people with reduced observation must only operate the frame under surveillance.
- If the frame is used in publicly accessible locations where children or people with reduced observation ability may get close to the frame, the person operating the frame must pay sufficient attention in order to prevent dangerous situations.
- Make sure that there is free space above and below the frame to allow height adjustment.
- Do not overload the frame and make sure that the load distribution is correct.
- Do not operate the frame in case of errors or damage.
- Do not use the frame in an explosive environment.
- In case of inspections, service and repairs make sure the frame is not loaded, and that main power is disconnected
- Any modification to the frame, which may influence its operation or construction, is forbidden
- Installation, service and repairs must only be carried out by competent personnel.
- If the frame has not been installed in accordance with these mounting instructions, the guarantee may become void.
- Only use Ropox original spare parts as replacement parts. If other spare parts are used, the guarantee may become void.

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13. Cleaning and maintenance

13.1 Cleaning of frame

The frame must not be connected to the mains voltage during cleaning.
Do not flush electrical components with water

Clean the frame with a damp cloth using lukewarm water and ordinary cleaning agents. Do not use Corrosive/abrasive liquids or abrasive cloths, brushes or sponges.

After cleaning dry the frame.

13.2 Maintenance

Inspections, service and repairs must be carried out by competent personnel

The frame is maintenance-free and moving parts have been lubricated for life. For reasons of safety and reliability we recommend inspection of the frame once a year:

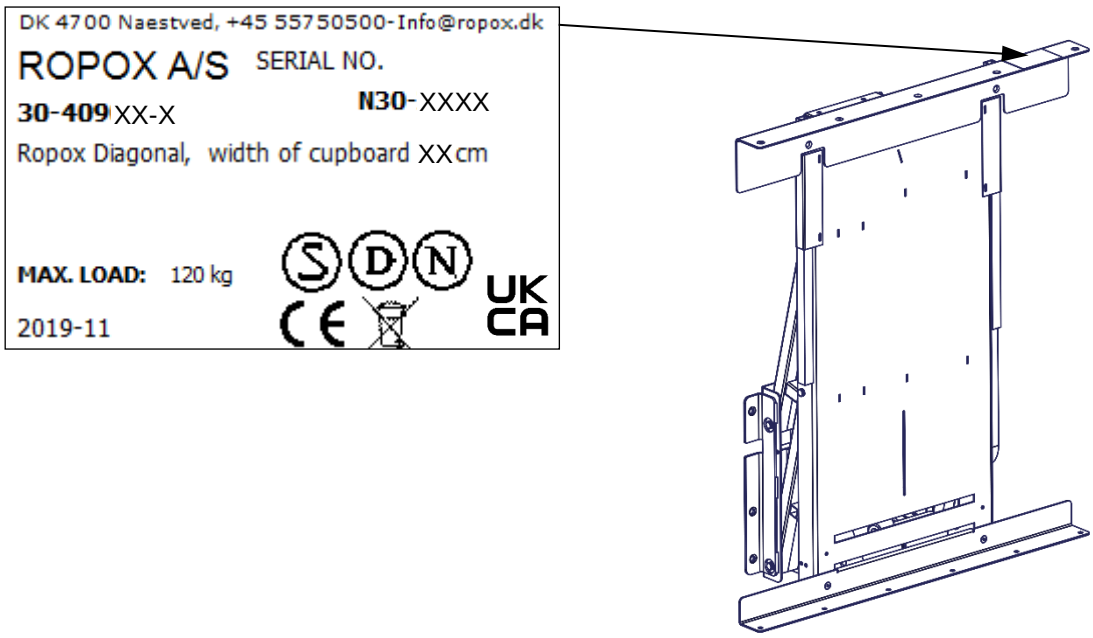
- Check that all bolts have been tightened.
- Check that the frame moves freely from bottom to top position without problems.
- Check that all cables have been fitted correctly and are undamaged..

After each inspection the service schedule shall be filled in.

Only use Ropox original spare parts as replacement parts. If other parts are used, the guarantee may become void

13.3 Label

Each unit has its own label as illustrated. This label contains important information to be stated in connection with inquiries to the supplier. The label is located as illustrated.



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Symbols:

The user manual must be read before use.

Waste must be sorted – if possible, for recycling.

Ropox is the manufacturer of the product in question.

CE marking. This product meets the requirements for *General Safety and Functionality* of the current EU Directives and Standards.

UKCA marking. This product meets the requirements for *General Safety and Functionality* of the current UK Directives and Standards.

13.4 Service schedule, operation and maintenance

Service and maintenance **Serial No.:** **Date:** **Sign:** **Remarks:**	**Service and maintenance** **Serial No.:** **Date:** **Sign:** **Remarks:**
Service and maintenance **Serial No.:** **Date:** **Sign:** **Remarks**:	**Service and maintenance** **Serial No.:** **Date:** **Sign:** **Remarks**:

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14. Trouble shooting

14.1 The height of the frame cannot be adjusted

1. Check mains and voltage to the control unit and that the power is switched on.
2. Check cables and plug-in connections between control box and motors.
3. Check cables and plug-in connections between control box and control switch.
4. Check cable connections between safety stop plate, and control box. (see mounting instructions).
5. Check that safety stop has not been activated.

Reset procedure

6 If none of the above has helped reset the unit:
   - Remove all load from cabinet
   - Disconnect motor cables
   - Disconnect mains cable and wait 5 sec
   - Connect mains cable
   - Connect motor cable
   - Move the unit to bottom position for reset.

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15. Complaints

We refer to our general Terms of sale and delivery on our homepage www.ropox.com

Keep this folder with product at all times

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