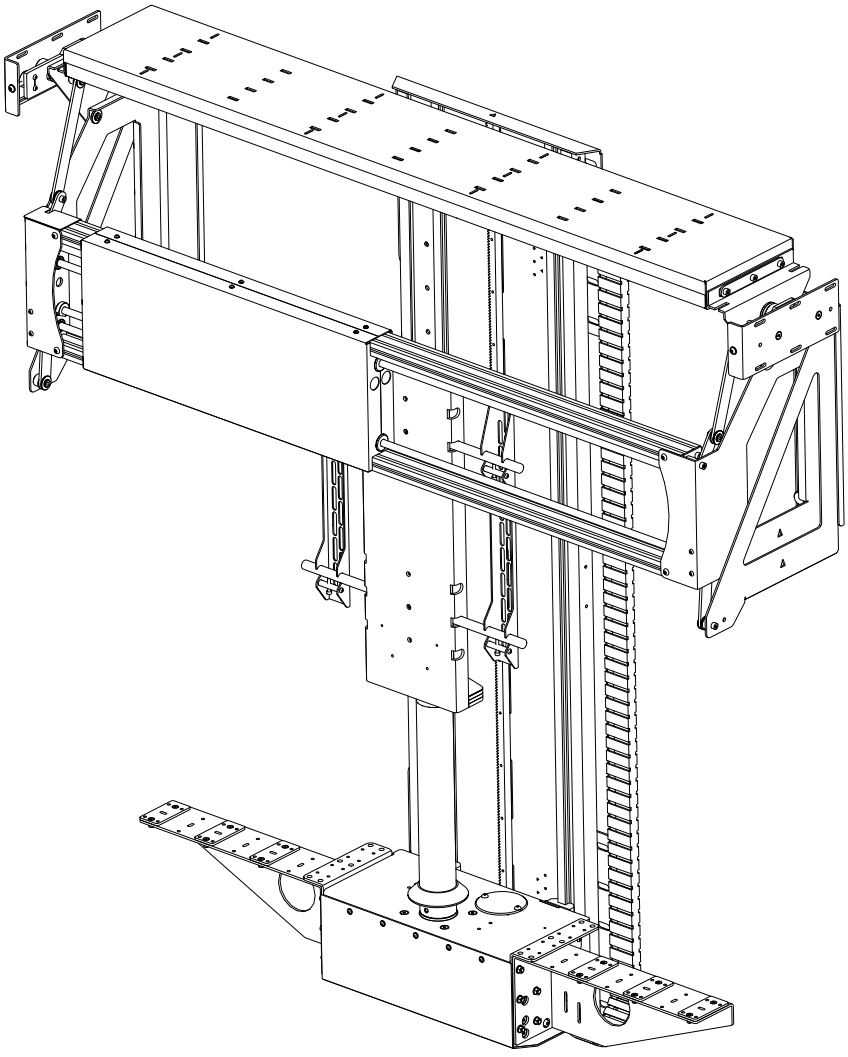
future automation

PLF

FLOOR LIFT WITH DROP & ROLL FLAP



INSTALLATION
INSTRUCTIONS

ISSUE **003**

SAFETY
DISCLAIMER

IMPORTANT SAFETY INSTRUCTIONS BELOW

WARNING: Failure to provide adequate structural strengthening, prior to installation can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure the structure to which the component is affixed can support four times the weight of the component and any additional apparatus mounted to the component.

WARNING: Do not exceed the weight capacity for this product as listed below. This can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure that the total combined weight of all attached components does not exceed that of the maximum figure stated.

WARNING: Risk of death or serious injury may occur when children climb on audio and/or video equipment or furniture. A remote control or toys placed on the furnishing may encourage a child to climb on the furnishing and as a result the furnishing may tip over on to the child.

WARNING: Risk of death or serious injury may occur. Relocating audio and/or video equipment to furniture not specifically designed to support audio and/or video equipment may result in death or serious injury due to the furnishing collapsing or over turning onto a child or adult.

WARNING – RISK OF INJURY!

Only for use with equipment weighing **100KG (220LBS) OR LESS**.
Suitable for flap panels weighing **25KG (55LBS) OR LESS.**

Use with heavier projectors/equipment may lead to instability causing tip over or failure resulting in death or serious injury.

Bracket Suitable for Residential and Commercial Use.

ADDITIONAL WARNINGS:

1. Keep all documentation/instructions after fitting.
2. Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on to the end user and read fully before operation.
3. Do not use near water or outdoors unless the product has been specifically designed to do so.
4. Protect any cables or cords being used near this bracket from being walked on or pinched to prevent damage and risk of injury.
5. Use this product only for its intended purpose as described in the product instructions and only use attachments/ accessories specified by the manufacturer.
6. Do not operate the product if it is damaged in any way, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. Contact the original installer/manufacturer to arrange repair or return.

WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Clean only with a dry cloth and always unplug any electrical items being used in conjunction with this product before cleaning.

Future Sound & Vision trading as Future Automation intend to make this and all documentation as accurate as possible. However, Future Automation makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without prior notice or obligation of any kind. Future Automation makes no representation of warranty, expressed or implied, regarding the information contained herein. Future Automation assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

PRODUCT WARRANTY
& RISK ASSESSMENT

WARRANTY INFORMATION

WARNING - The warranty offered for this product shall be annulled if the product is used improperly or in a way that is in breach of our Terms of Service.

Future Automation provides warranty for the mechanism you purchased for the period of **24 months** from the date of purchase, provided that it isn't used for unintended purposes.

Under the warranty, Future Automation aims to either solve the issue remotely (via telephone or email support) or if the mechanism requires a part, arrange a visit to your premises by a Future Automation approved engineer or send replacement items where appropriate.

Warranty repairs will be carried out as quickly as possible, but subject to parts availability. This warranty period is respectively extended for the period of a repair.

A malfunctioning product must be cleaned and placed into suitable packaging to protect against transit damage before organising delivery to a repair workshop.

All the complaints about defects must be submitted to the vendor/installer that sold this product, rather than directly to the manufacturer.

Any part of your system that needs to be replaced during a warranty repair becomes the property of Future Automation.

The warranty does not cover the following:

- Damages resulting from improper product use or maintenance.
- Repairs carried out by unauthorized persons.
- Natural wear and tear during operation.
- Damages caused by the buyer.
- Accidental damages caused by a customer or damages caused as a result of careless attitude or usage, or damages caused by natural disasters (natural phenomena).
- Any electrical, or other environmental work external to your Future Automation mechanism including power cuts, surges etc.
- Additional items not supplied by Future Automation although they may have been supplied together by the retailer
- Any 3rd party software products controlling your mechanism
- Any transfer of ownership. Warranty is provided only to the initial purchaser.
- Compensation for loss of use of the product, and consequential loss of any kind.

A separate Safety and Servicing Information document is provided with these instructions (additional copies can be found at www.futureautomation.co.uk/safety), and this document **MUST** be filled out by the approved Future Automation Dealer who is installing the product. This Warranty Sheet must be held by the end user for the duration of the products life and will be referred to during servicing or warranty queries.

The Safety and Servicing Information document also contains two Service History Forms that must be filled in by the approved Future Automation dealer who is performing the first required yearly service of this product.

One copy of the Service History Form must be held by the customer (along with the Warranty Sheet) and a duplicate copy must be held by the approved Future Automation dealer that performed the service. Missing and/or mismatching documents may delay or invalidate warranty claims.

Additional Service History Forms can be found on the Future Automation website for further yearly services.

RISK ASSESSMENT INFORMATION

It is the installer's responsibility to perform a risk assessment of installed products. Future Automation can provide guidelines to installers/dealer about what should be included in a risk assessment, but due to the individual nuances of each location/site, Future Automation cannot provide a full list of areas to risk assess.

For full risk assessment and safety information please view our Safety and Servicing guide available at www.futureautomation.net/safety

GUIDE
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- 1.4 - LIFTING BEAM

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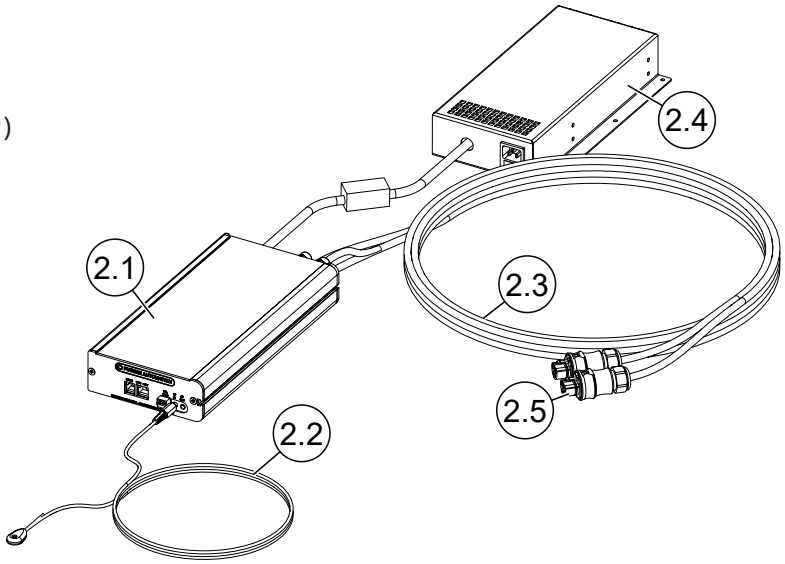
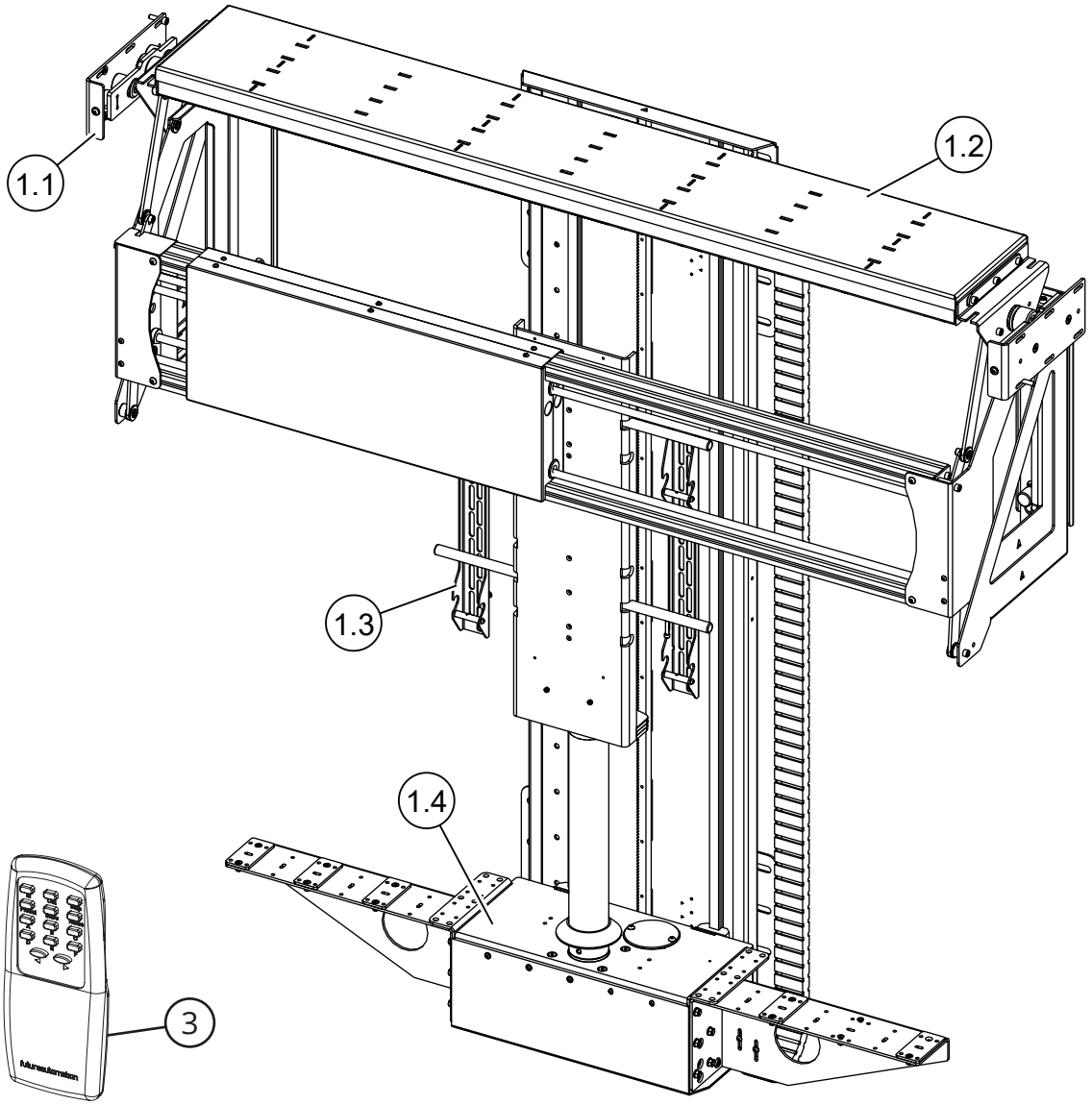
- 2.1 - CONTROL BOX
- 2.2 - IR LEAD
- 2.3 - 3M LONG CABLE LOOM
- 2.4 - POWER SUPPLY UNIT
- 2.5 - CABLE CONNECTORS

3 - INFRARED (IR) REMOTE CONTROL



ITEMS NOT SHOWN ON PAGE

PLF ACCESSORY PACK:
- X2 AAA BATTERIES
- MAINS POWER LEAD
- INFRA-REF CONTROL LEAD
- CAT5 LEAD WITH RJ45 CONNECTOR
- MULTI-PACK OF NUTS, BOLTS AND WASHERS
- STOP KEY



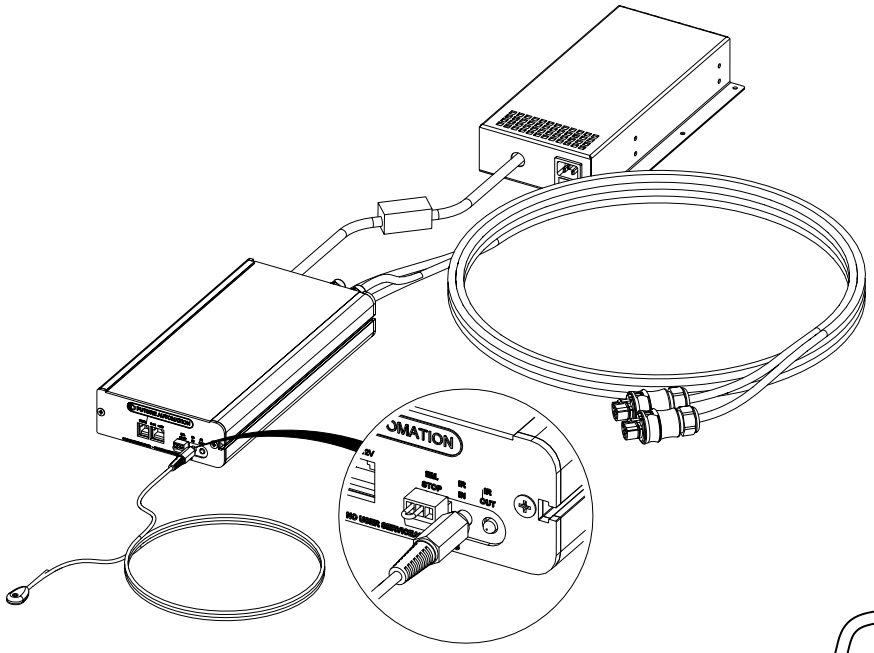
INITIAL
TESTING

Before installing the PLF mechanism:

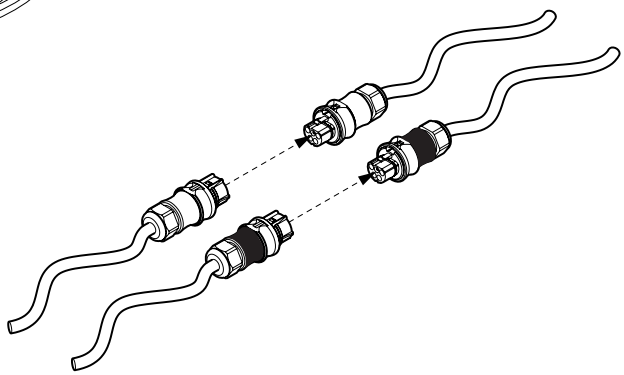
- Remove all red cable ties.
- Check there is no damage to any part of the PLF mechanism, control board, or wiring.
- Check all internal and external mechanism wiring is secure.

WARNING: THE PLF MECHANISM **DOES NOT** HAVE AN ANTI-JAM CAPABILITY.
THE MOTOR DRIVE SYSTEM WILL CONTINUE TO MOVE UNTIL A LIMIT SWITCH IS CONTACTED.
KEEP HANDS AND ANY OBJECTS CLEAR OF THE MECHANISM DURING OPERATION TO REDUCE RISK OF DAMAGE OR INJURY.

1



Connect the control board to the PLF and flap assembly using the mechanism cable connectors at the end of the cable looms. Connect the IR lead into the control box and ensure that the emergency stop is secure.



2

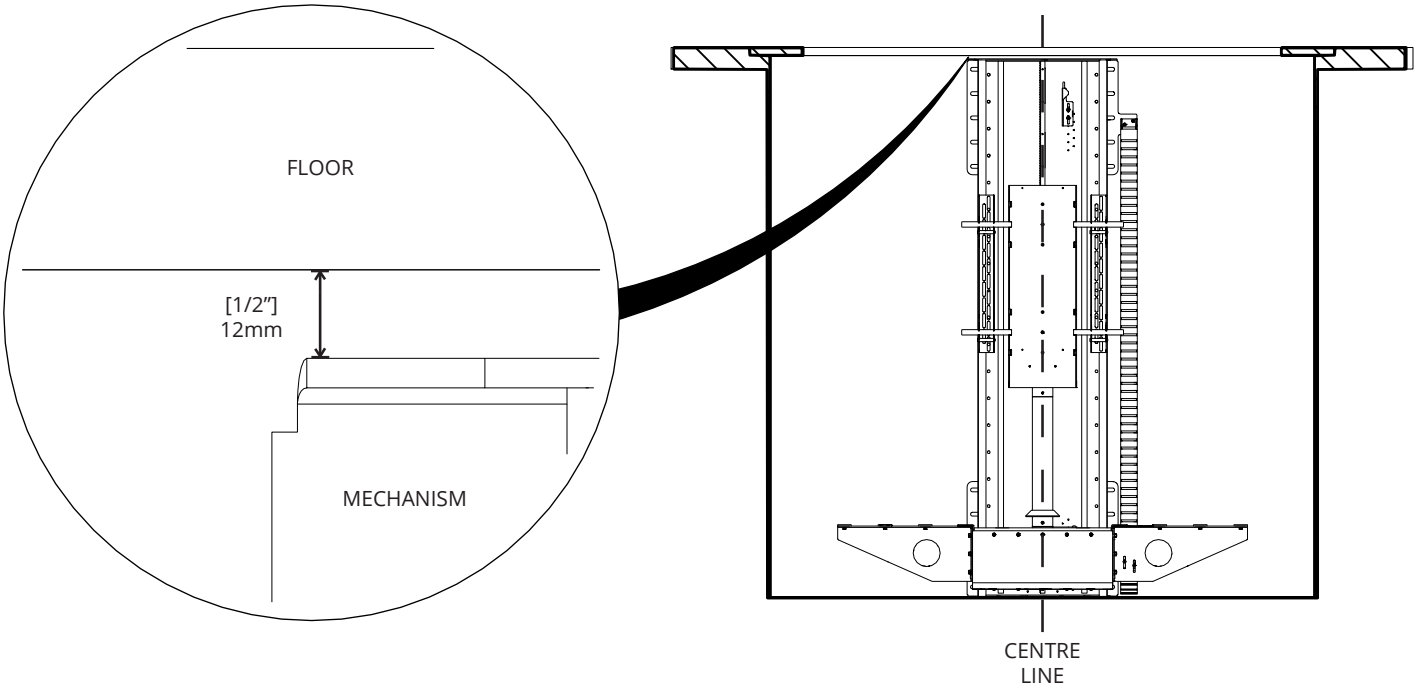
Familiarise yourself with the mechanism.

Pressing **'OUT'** on the IR remote will open the flap panel and raise the lifting beam.

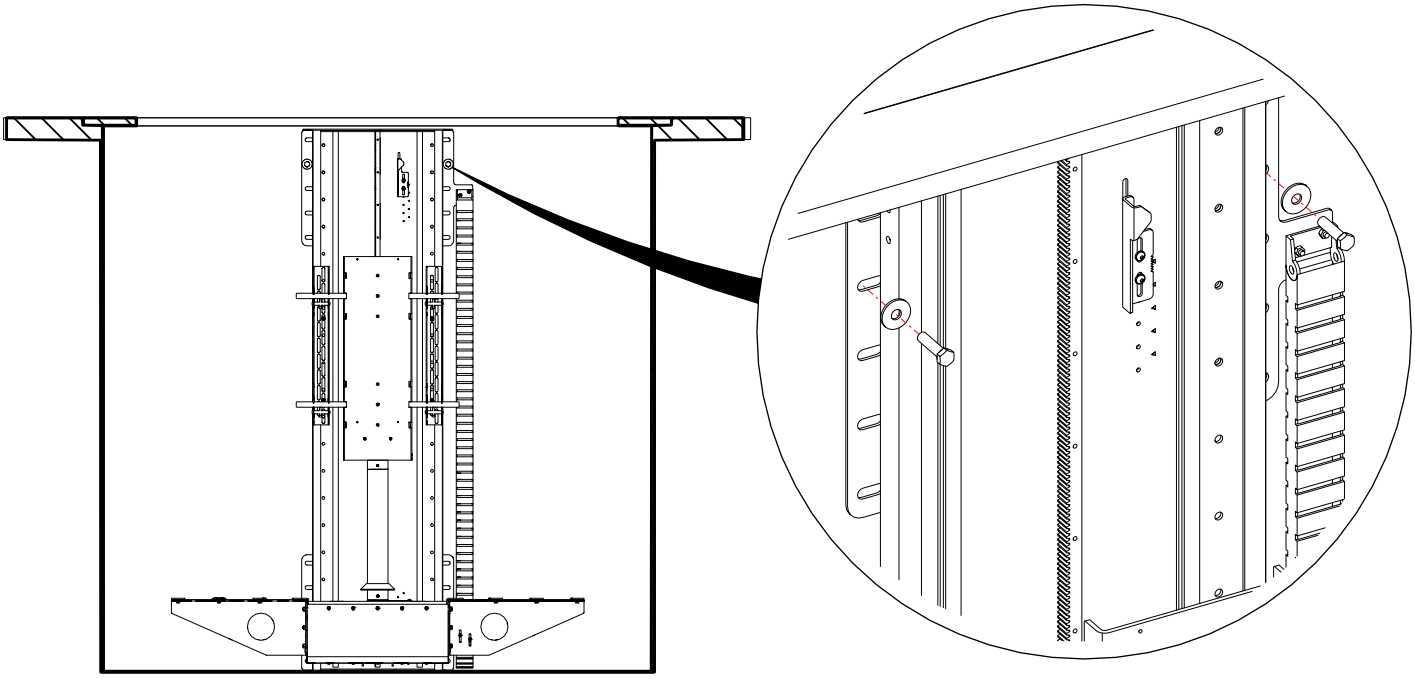
Pressing **'IN'** will lower the lifting beam and close the flap panel.

PLF
FITTING

1 Place the PLF centrally in the pit. Ensure the top of the mechanism is 12mm (1/2”) below the underside of the floor. Use blocks or a plinth to raise the mechanism if necessary.

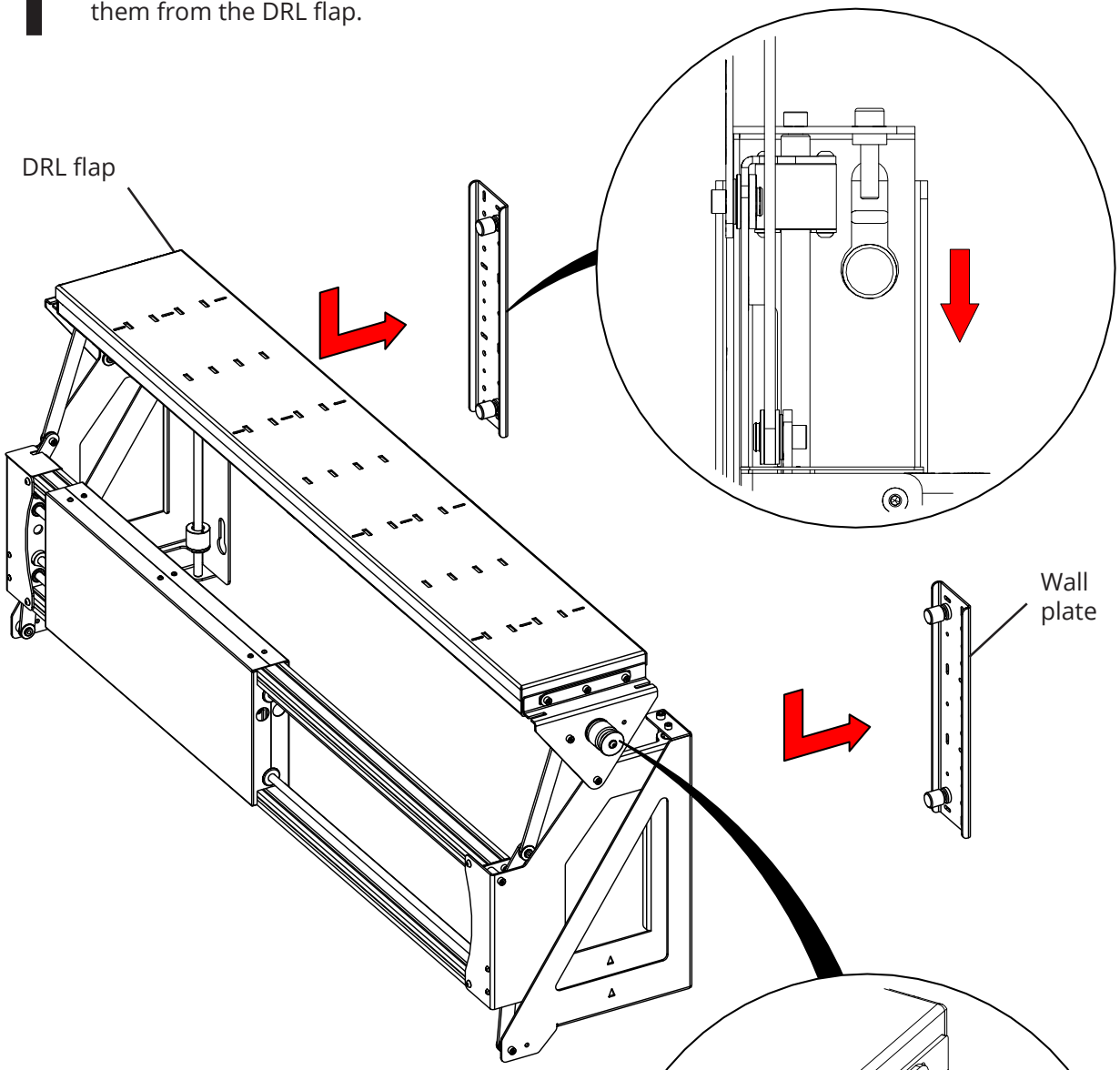


2 Once in the correct position, bolt the mechanism to the pit wall.



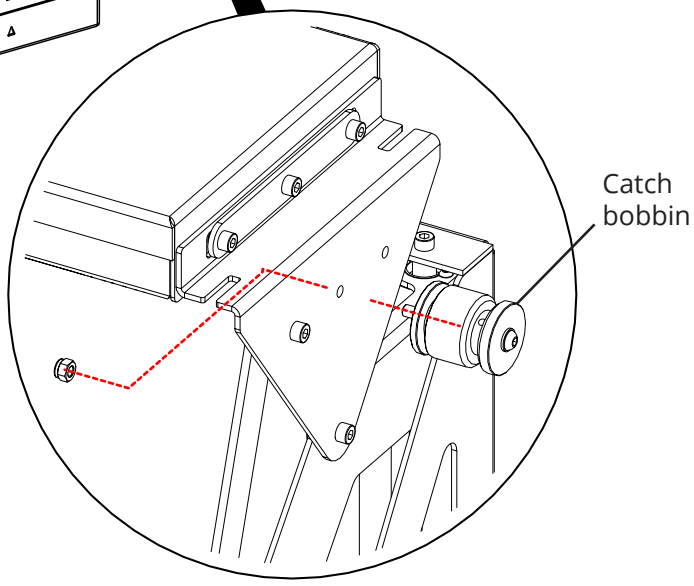
DRL FLAP
FIXINGS

1 Slide the wall plates down and unhook them from the DRL flap.



2

Bolt the catch bobbins to either side of the DRL flap.

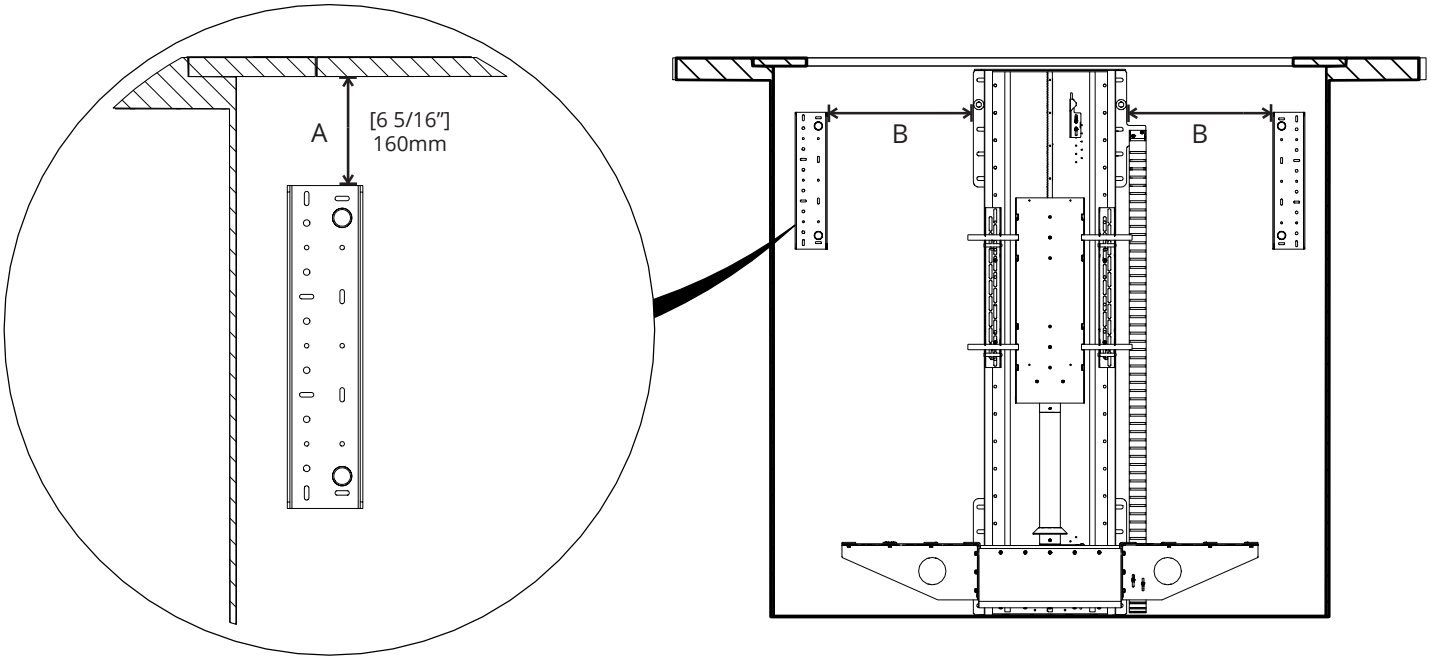


DRL FLAP
FIXINGS CONT.

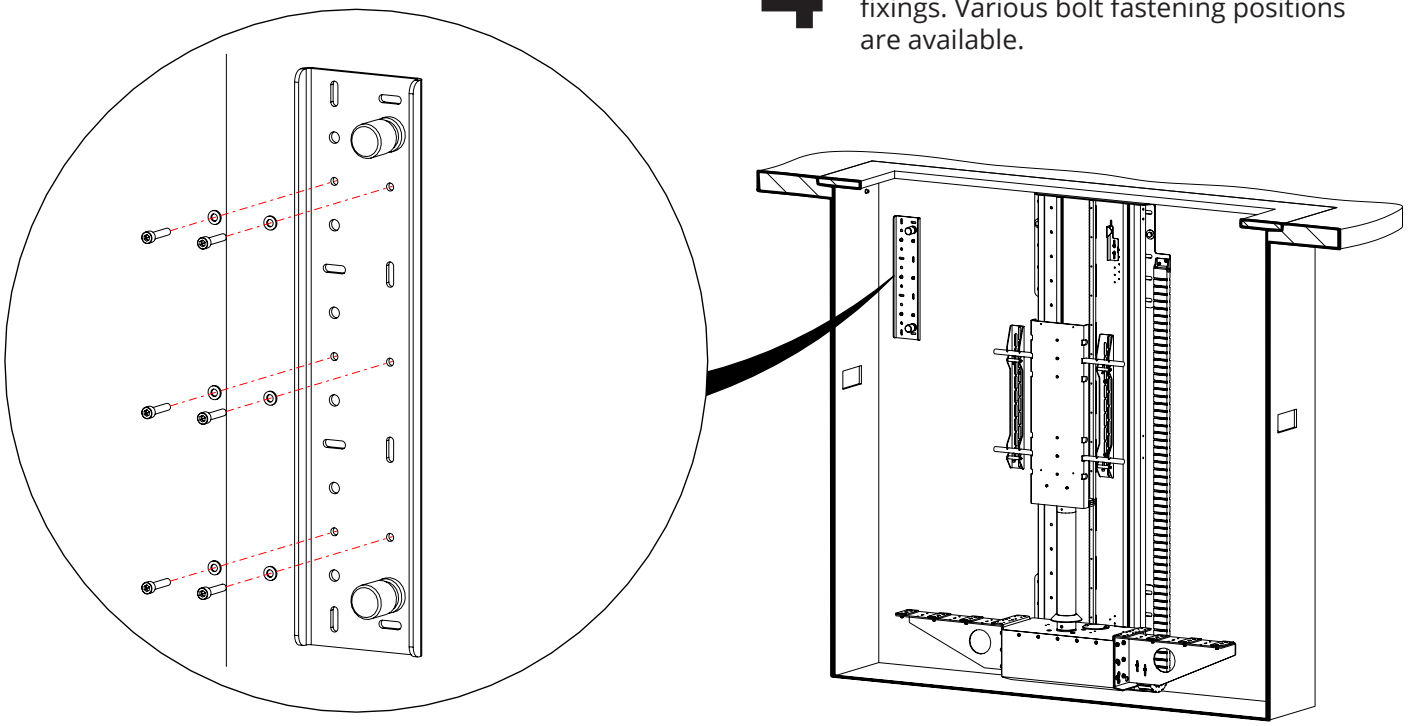
3 Place the wall plates in the pit to the dimensions shown below.

$$B = \frac{\textbf{MECH WIDTH (mm)} - 952}{2}$$

Example: For a mechanism width of 2020mm, B would be 534mm (21”).

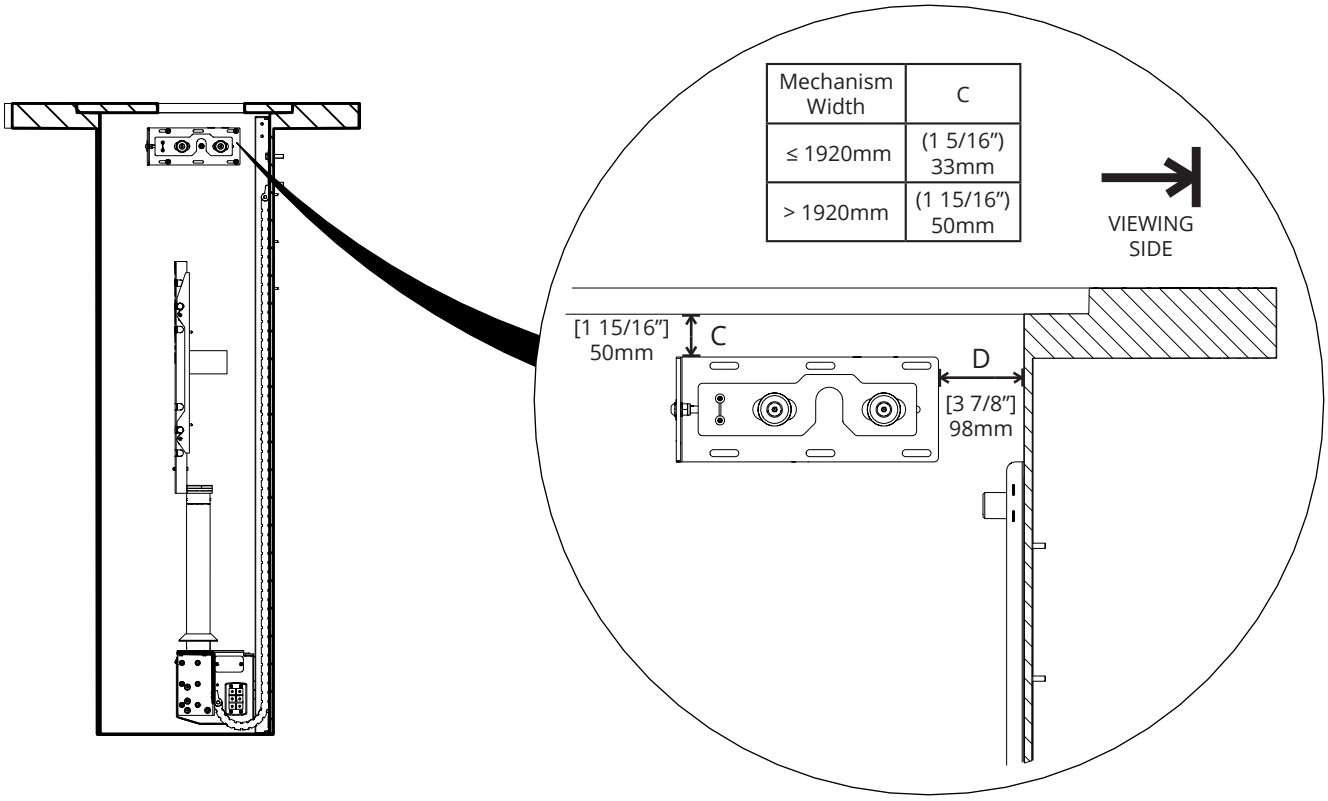


4 Once the wall plates are in place, bolt both to the pit wall using the appropriate fixings. Various bolt fastening positions are available.



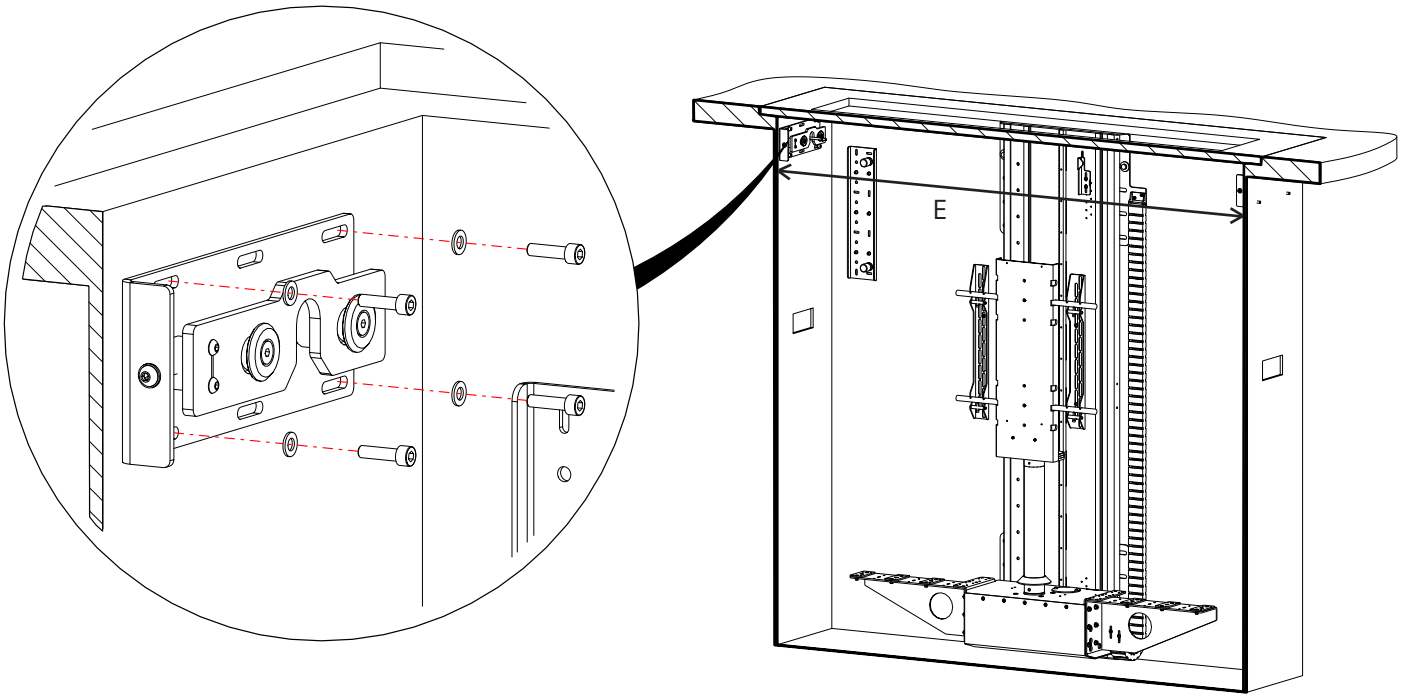
DRL FLAP
FIXINGS CONT.

5 Place the flap catches in the pit to the dimensions shown below.



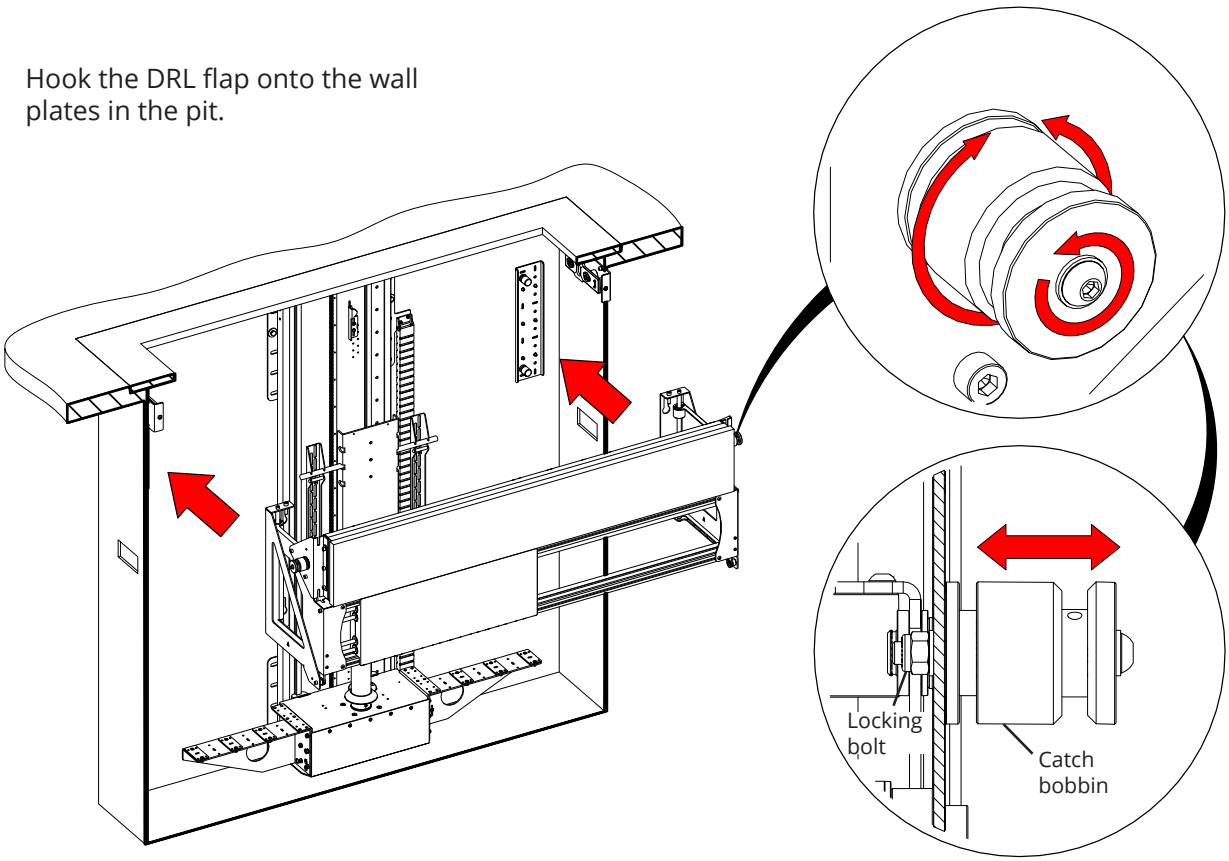
Dimension E is the distance between the flap catches. It must match the **Mechanism Width.** Use blocks to adjust if E is too large.

6 Once the flap catches are in place, bolt them to the pit wall using the appropriate fixings. Ensure to bolt centrally in the slots.



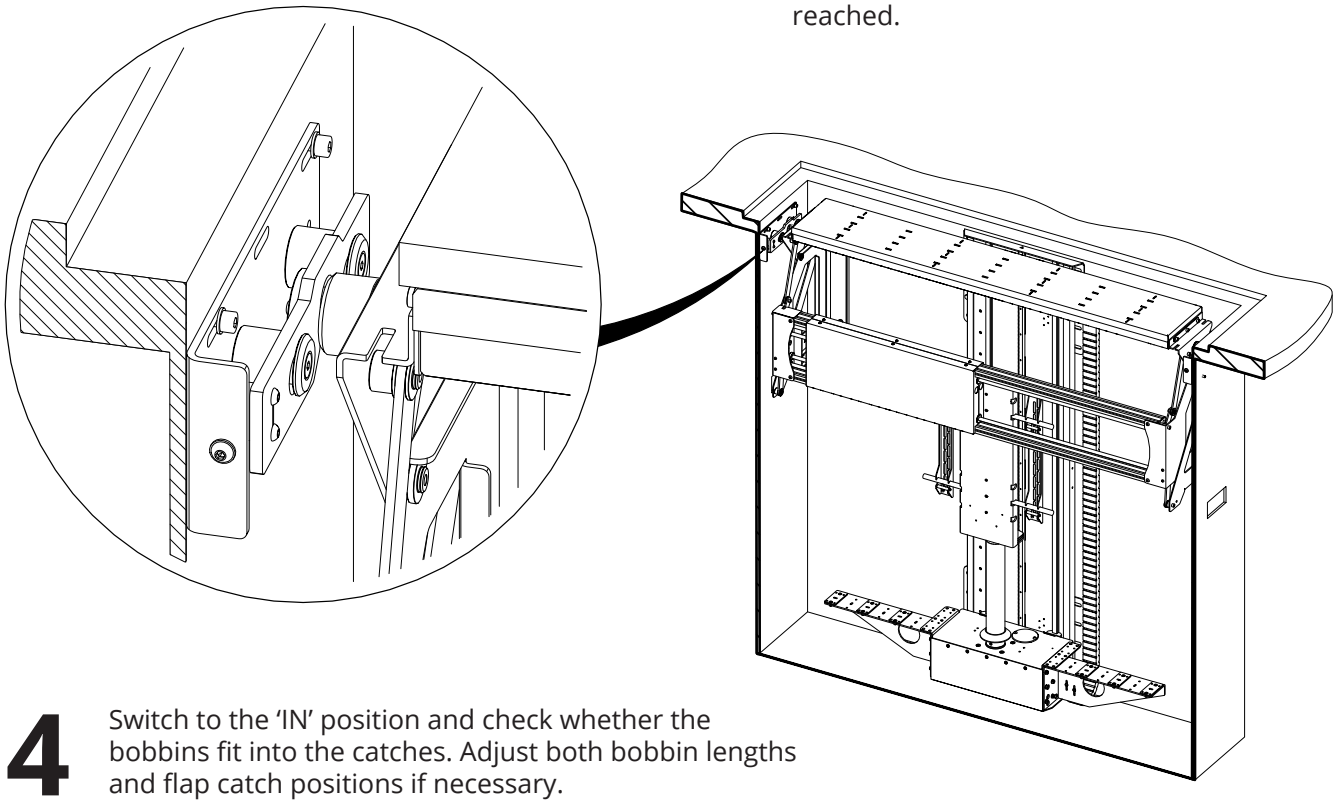
DRL FLAP
FITTING CONT.

2 Hook the DRL flap onto the wall plates in the pit.



Press 'STOP' before reaching the fully 'IN' position to visually check alignment with flap catches.

3 Whilst holding the locking bolt, loosen the bolt shown above and twist the catch bobbins on both sides to adjust their lengths. Retighten the bolts once the required lengths are reached.

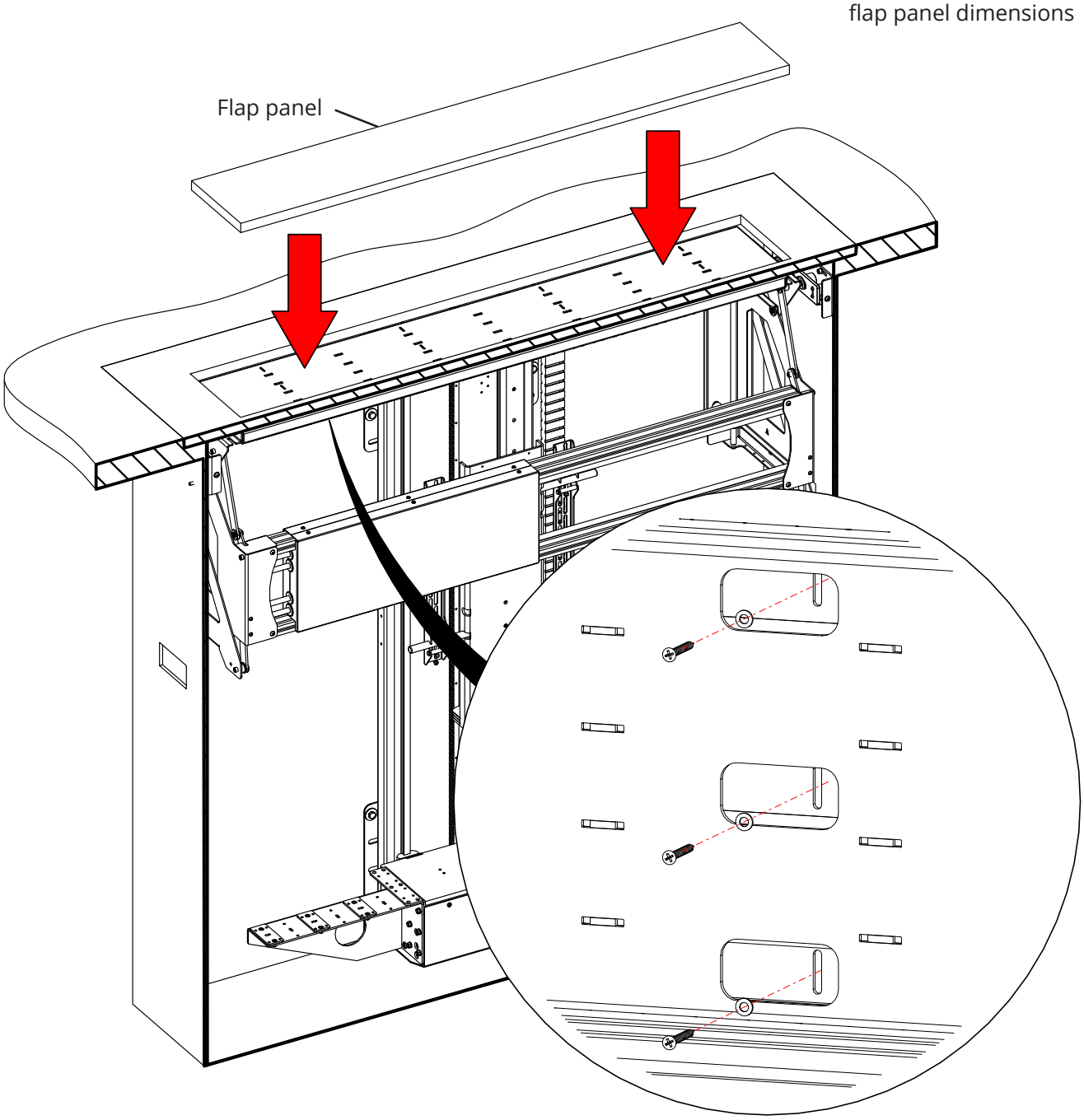


4 Switch to the 'IN' position and check whether the bobbins fit into the catches. Adjust both bobbin lengths and flap catch positions if necessary.

DRL FLAP
FITTING

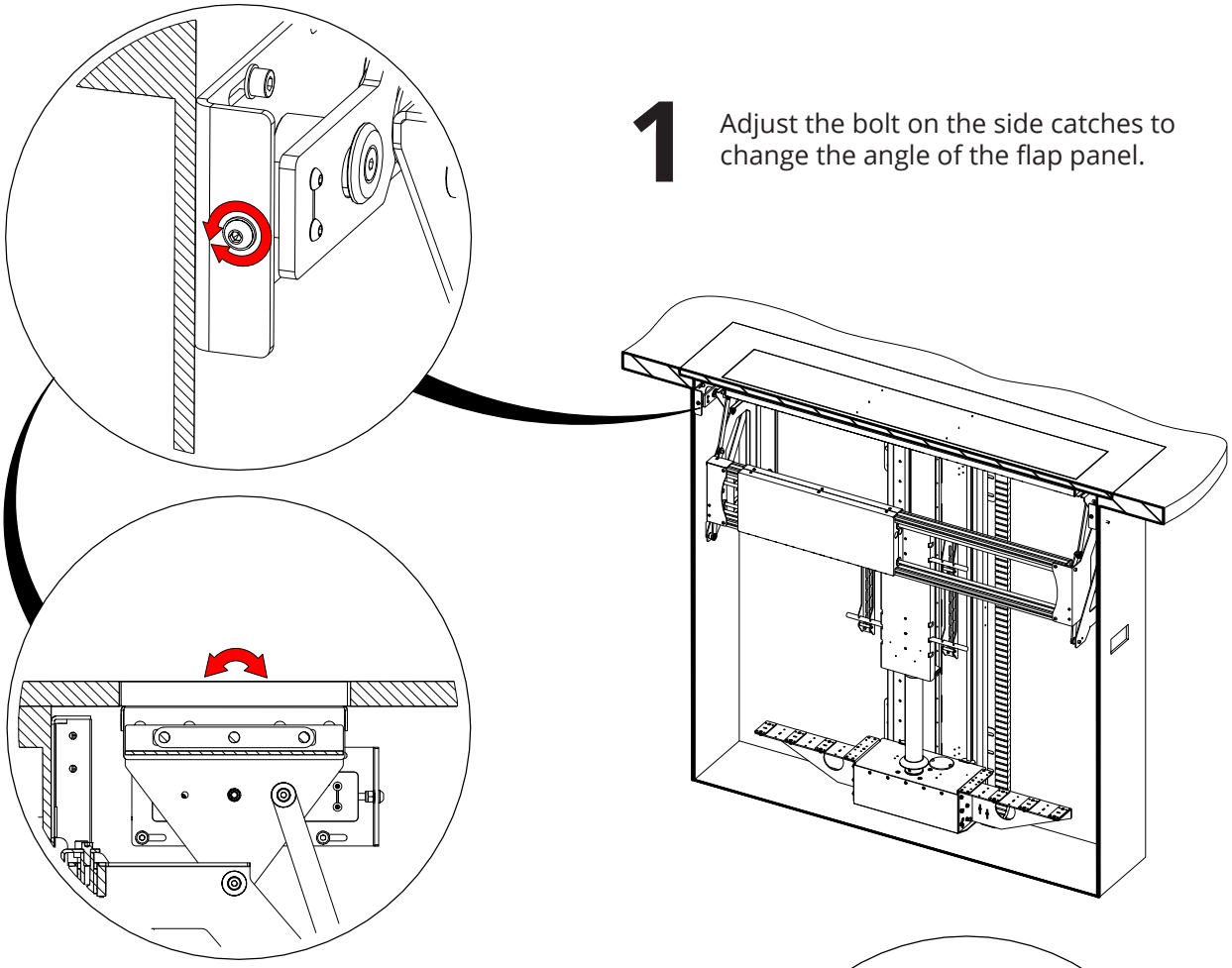
1 Place the flap panel onto the DRL flap. Ensure there is at least a 3mm gap on all sides.

NOTE: See tech sheet for flap panel dimensions

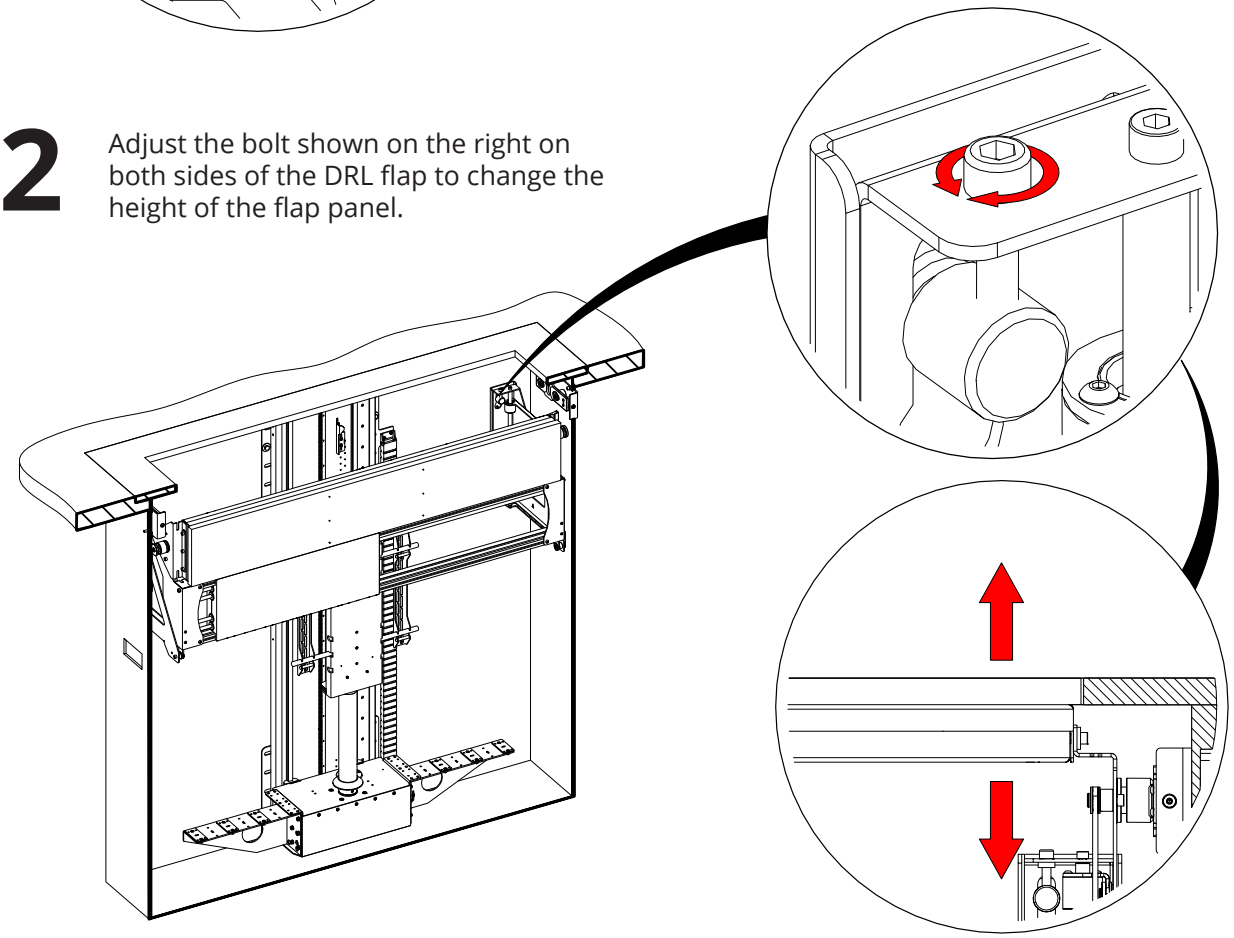


2 From underneath, secure the flap panel to the DRL flap using the appropriate fixings.

DRL FLAP
ADJUSTMENTS



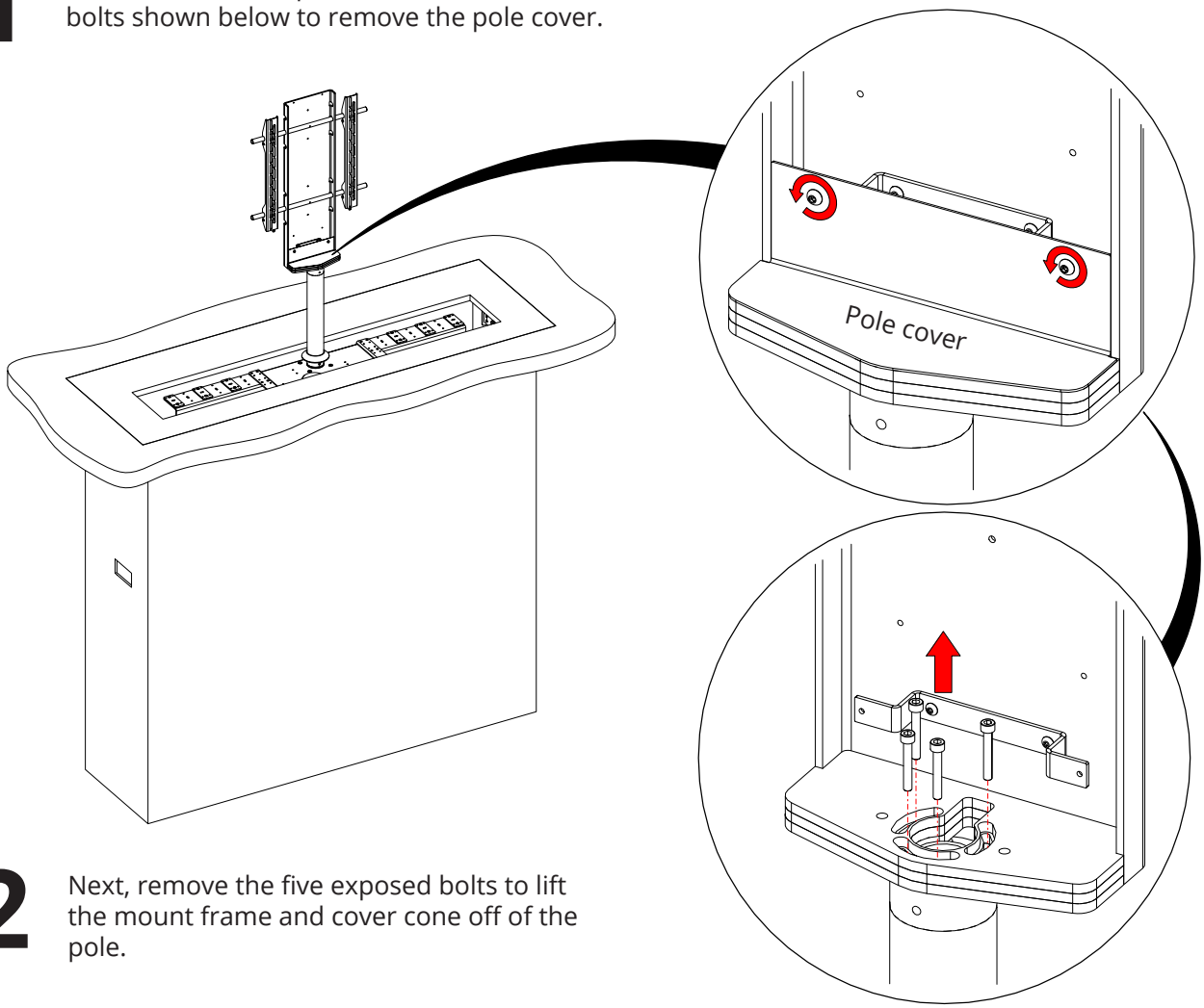
1 Adjust the bolt on the side catches to change the angle of the flap panel.



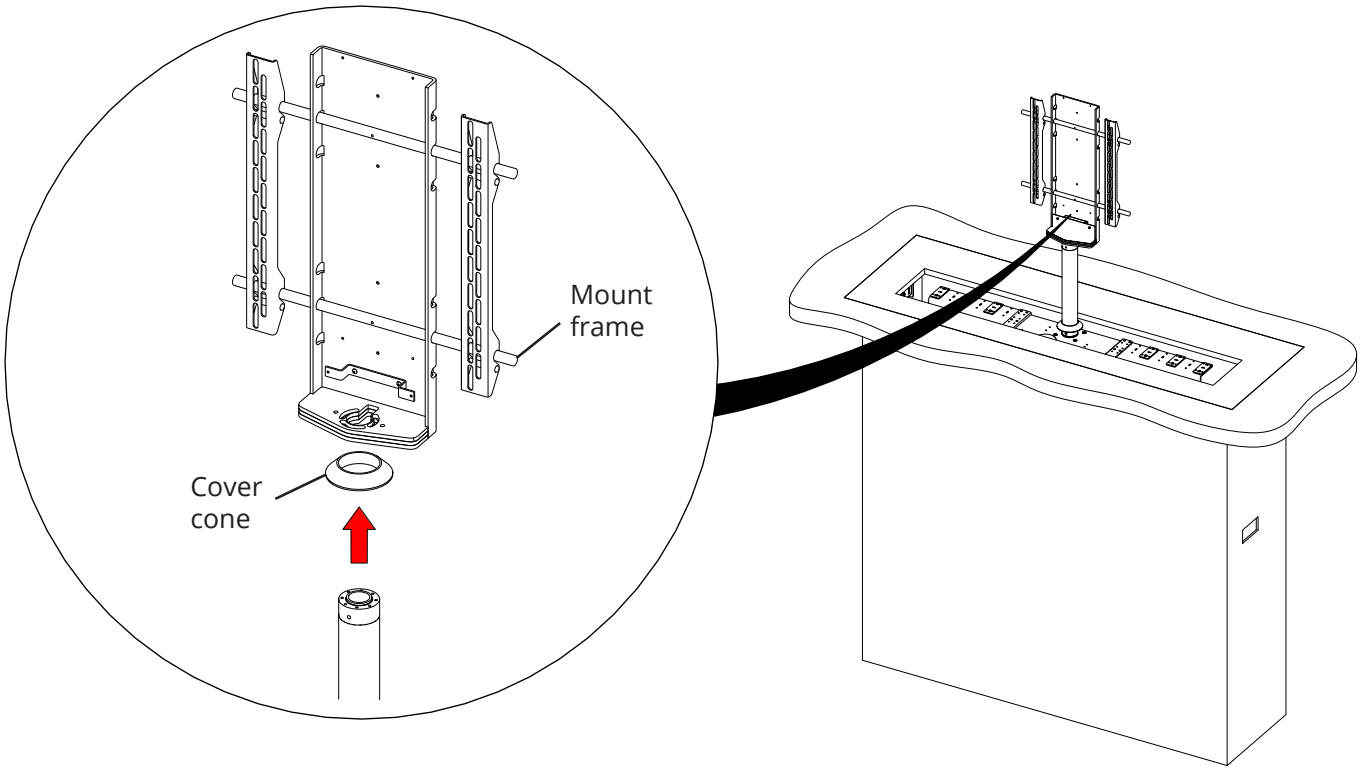
2 Adjust the bolt shown on the right on both sides of the DRL flap to change the height of the flap panel.

BASE PANEL
FITTING

1 Switch to the 'OUT' position and remove the two bolts shown below to remove the pole cover.

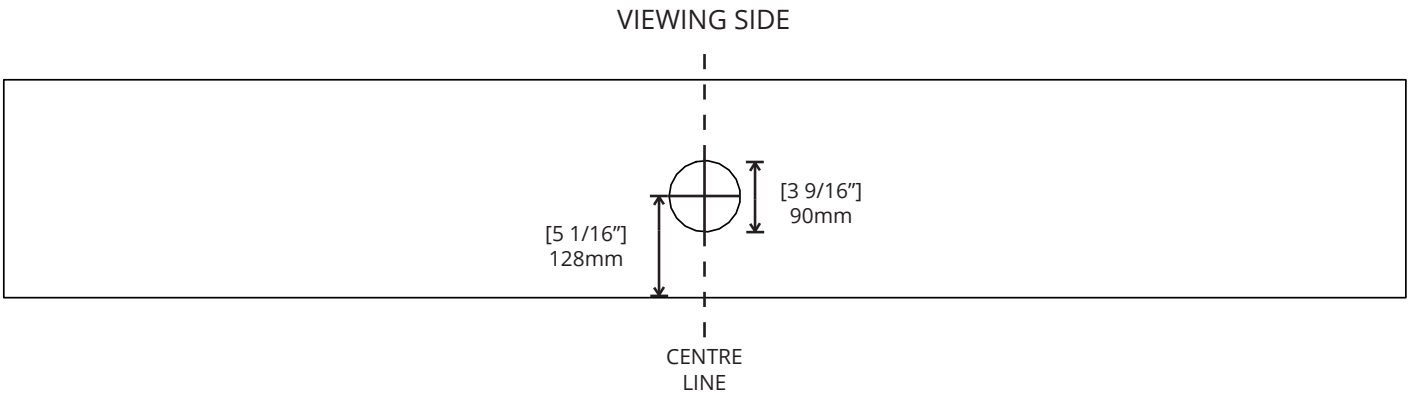


2 Next, remove the five exposed bolts to lift the mount frame and cover cone off of the pole.



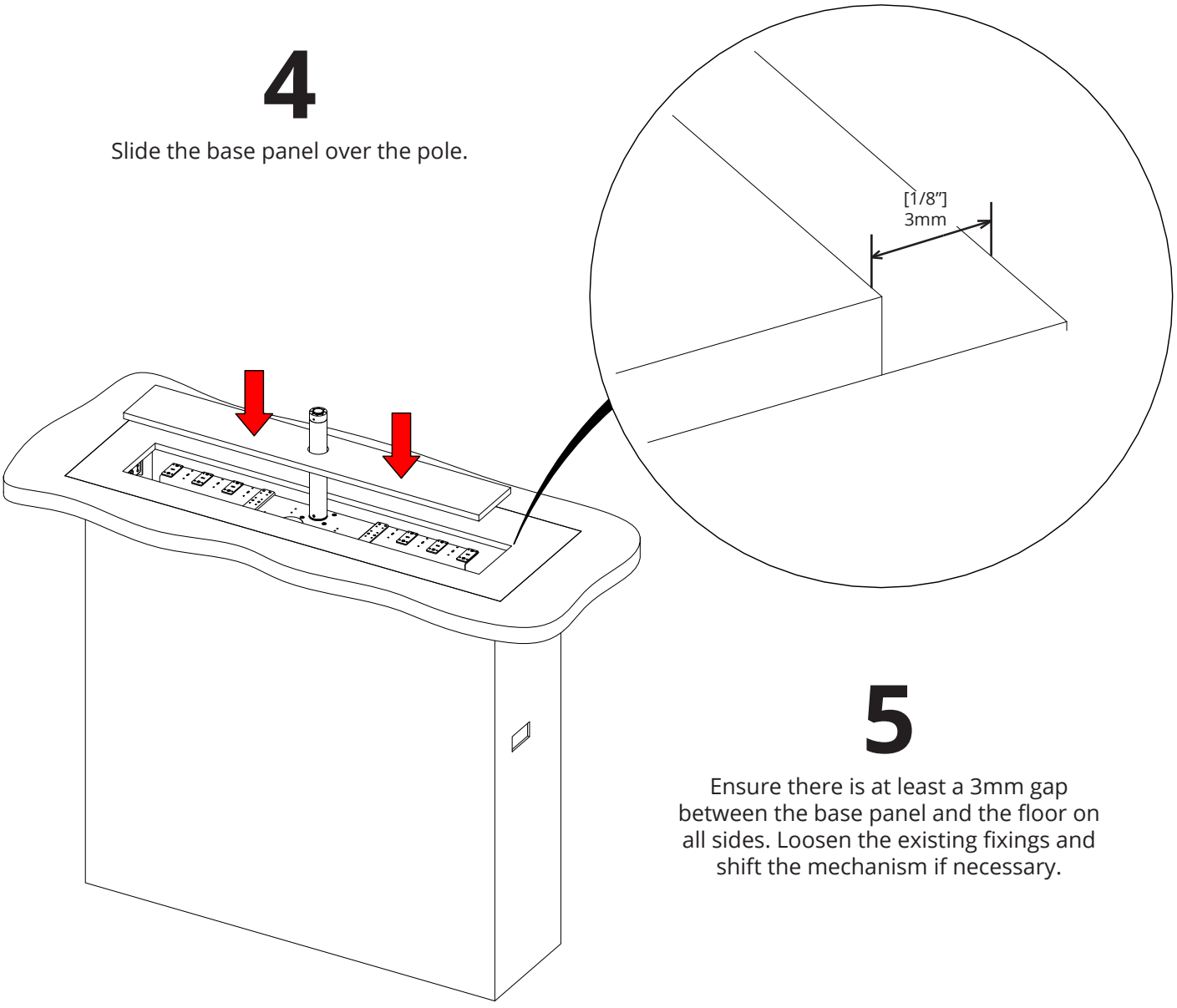
BASE PANEL
FITTING CONT.

3 The base panel requires a cut out detail as shown below.



4

Slide the base panel over the pole.

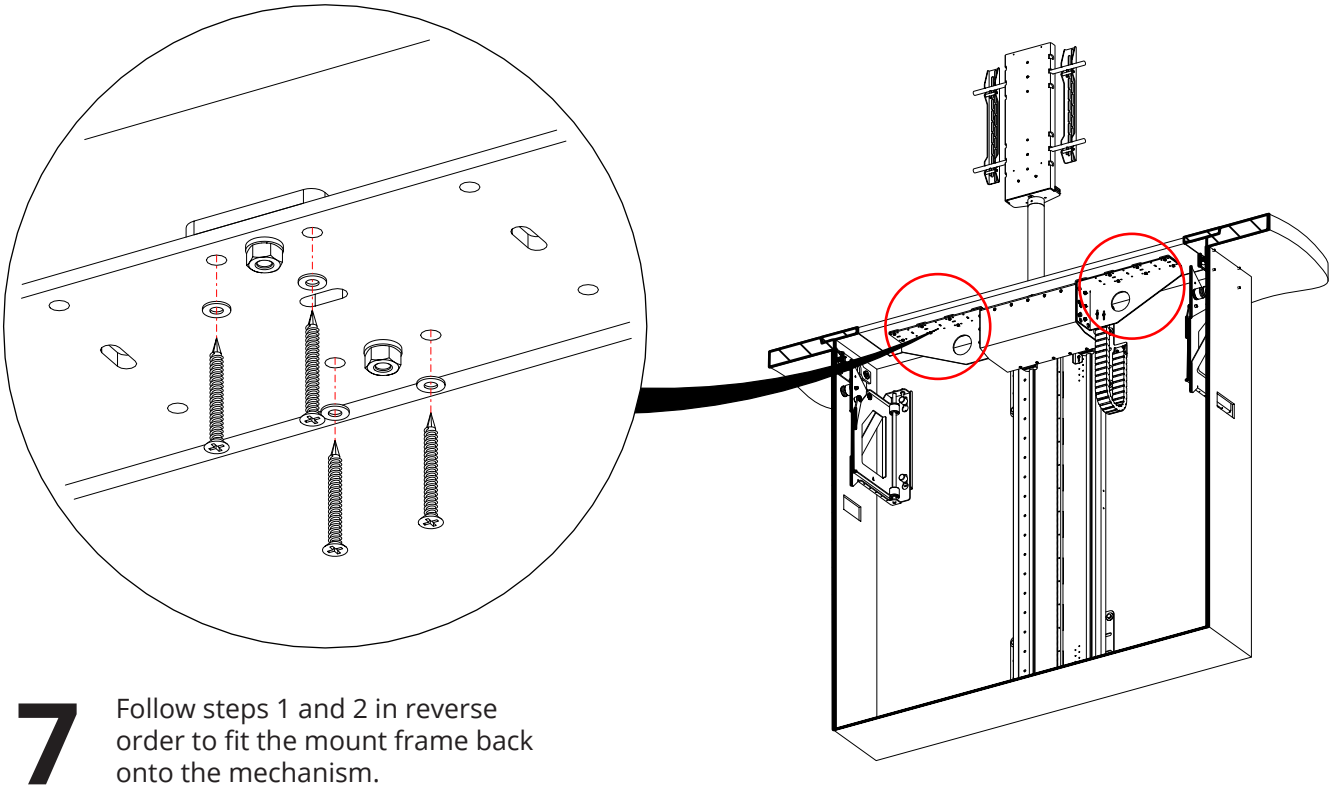


5

Ensure there is at least a 3mm gap between the base panel and the floor on all sides. Loosen the existing fixings and shift the mechanism if necessary.

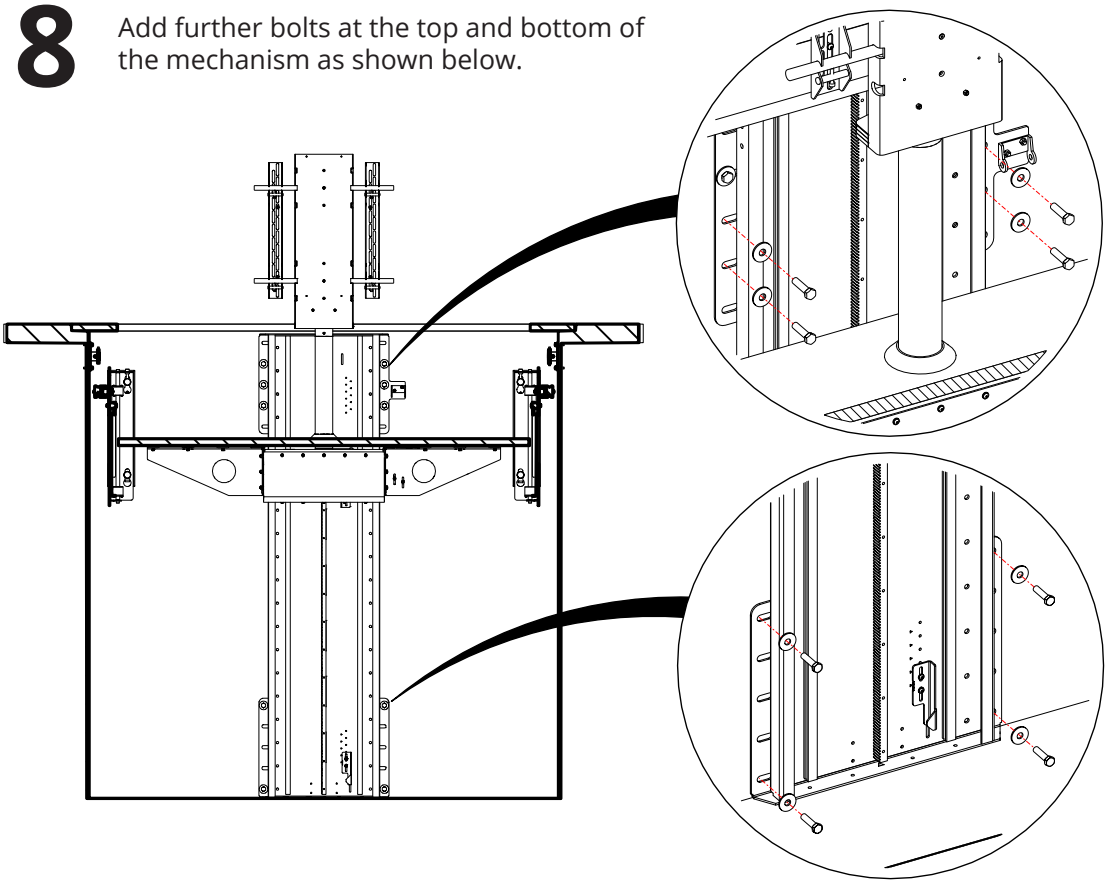
BASE PANEL
FITTING CONT.

6 Using the appropriate fixings, secure the base panel to the mechanism on both sides. Use the IR remote (page 19) to position the lifting beam for easier access.



7 Follow steps 1 and 2 in reverse order to fit the mount frame back onto the mechanism.

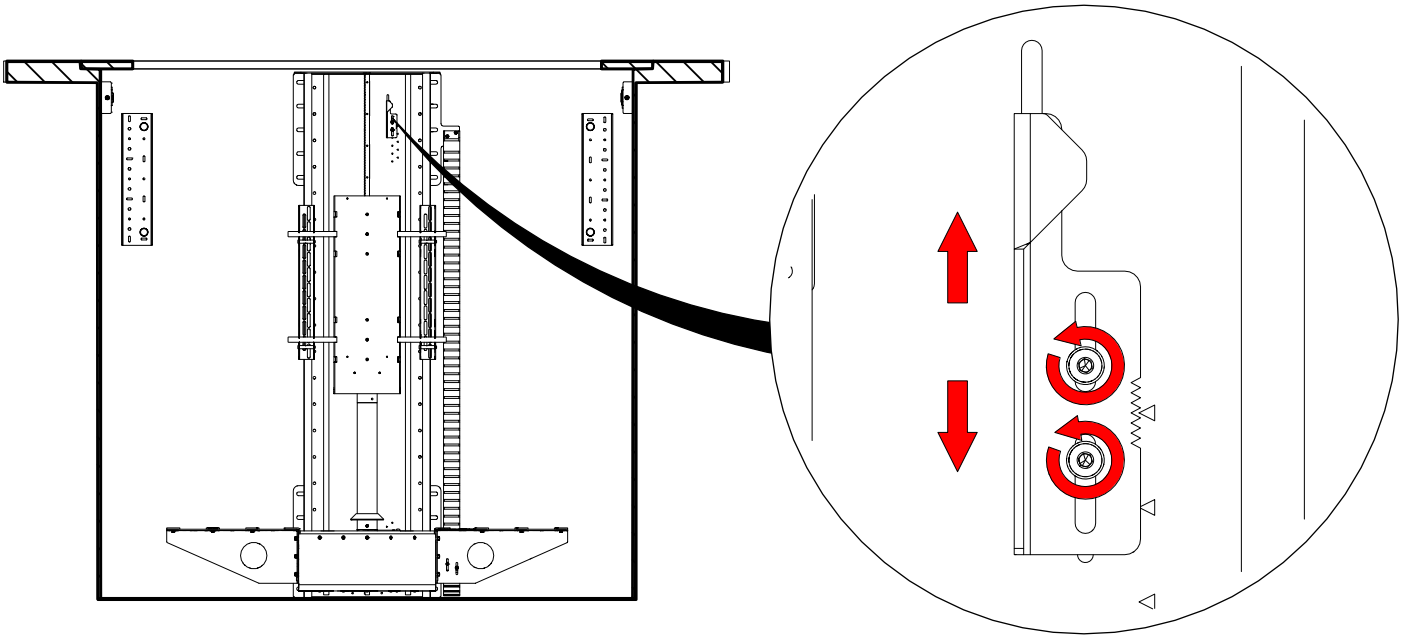
8 Add further bolts at the top and bottom of the mechanism as shown below.



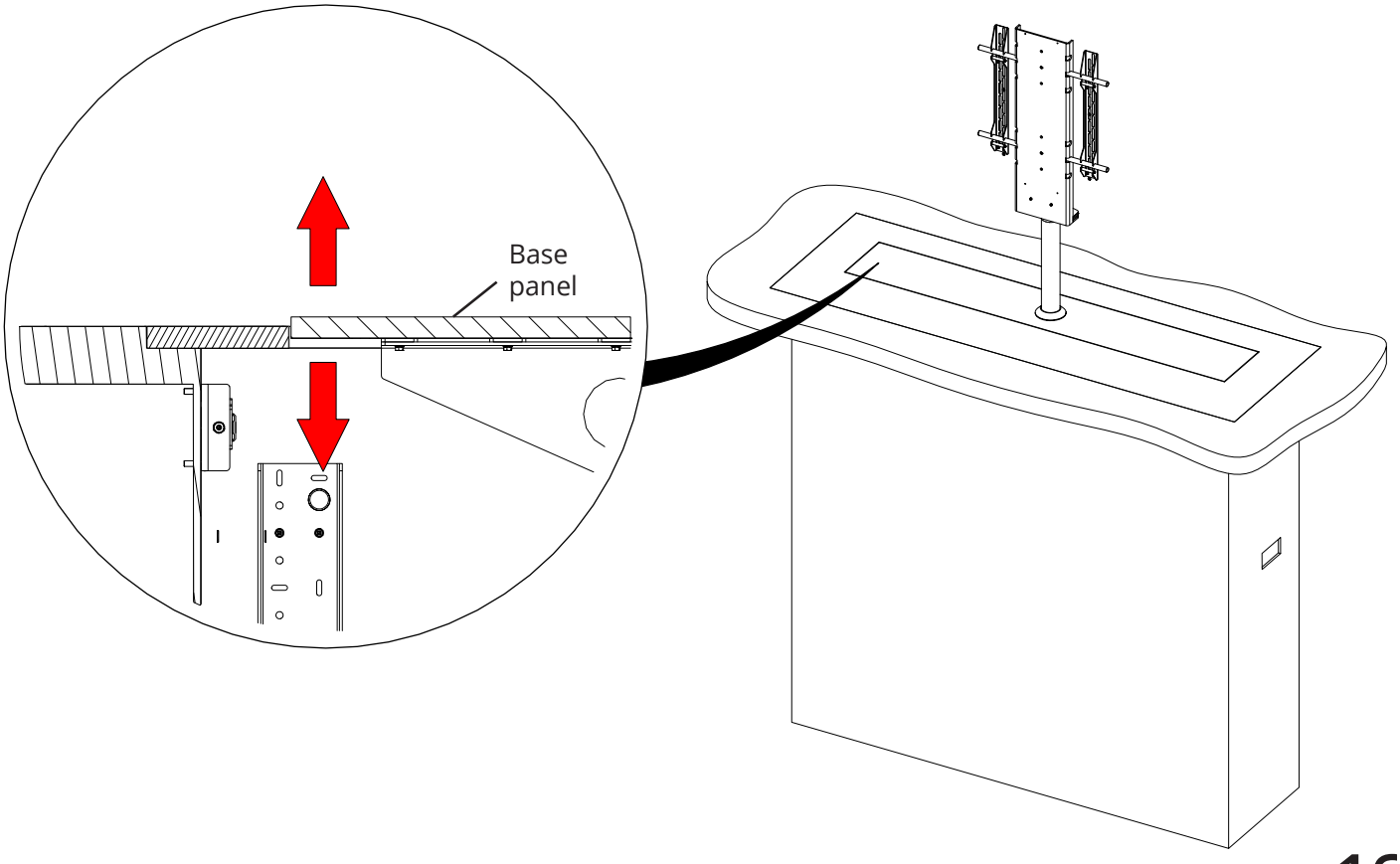
BASE PANEL
ADJUSTMENTS

1 Loosen the bolts shown below to adjust the position of the top switch stop. Use the serrated edge to make small adjustments to change its position. The bottom switch stop is factory set to its lowest position.

Only make small adjusments to top switch to avoid any collisions.

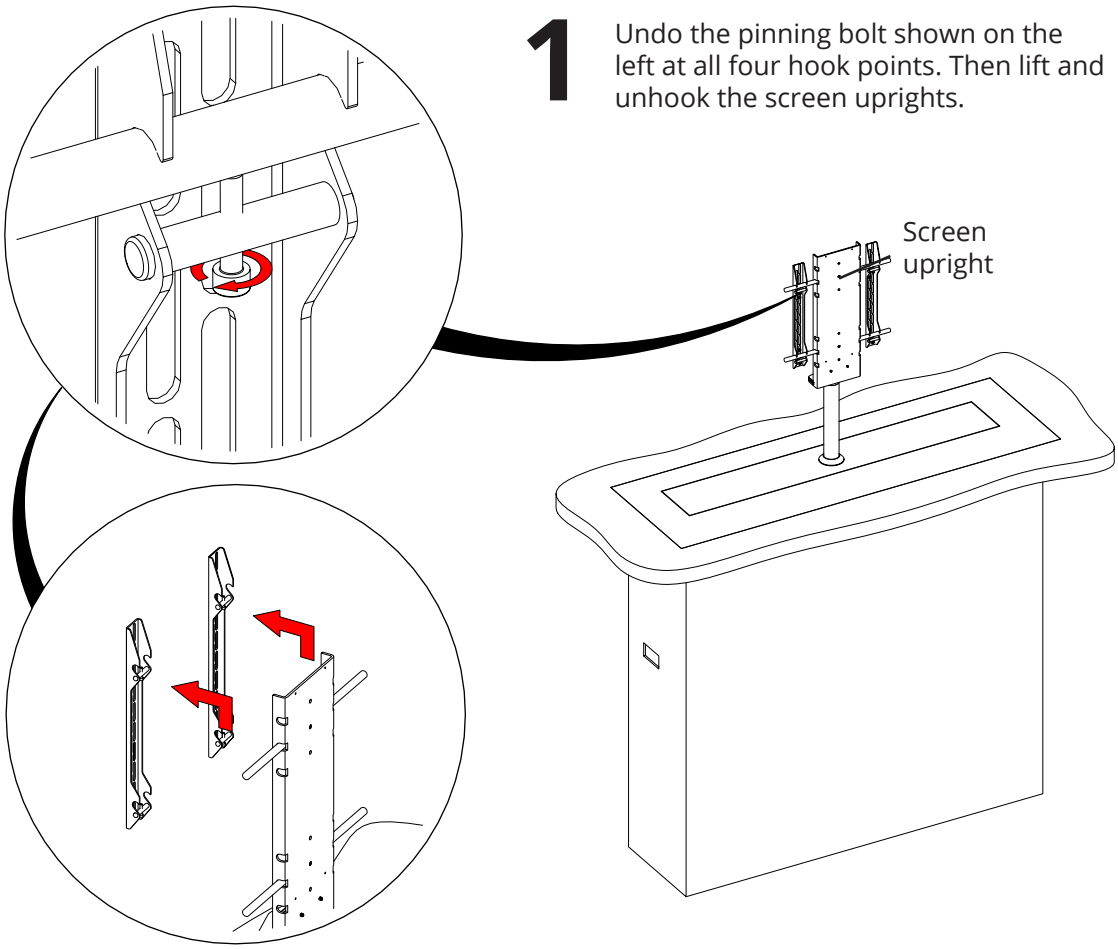


2 Adjust the position of the top switch stop until the base panel is inline with the floor.

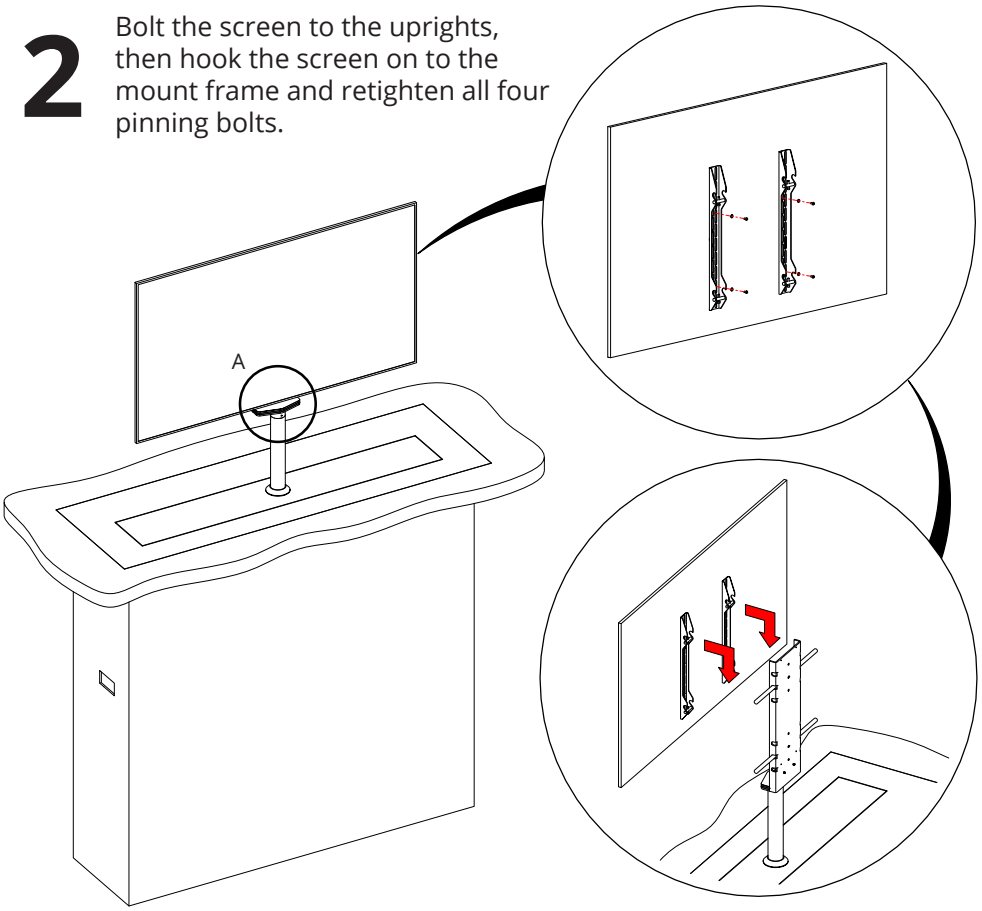


SCREEN
MOUNTING

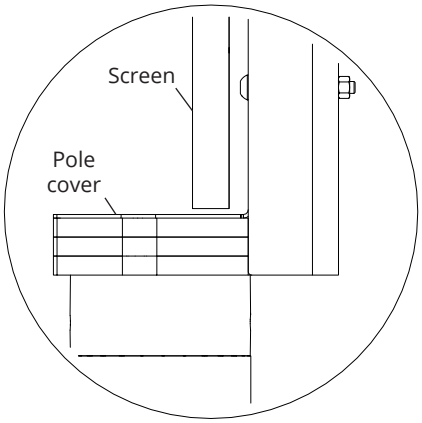
1 Undo the pinning bolt shown on the left at all four hook points. Then lift and unhook the screen uprights.



2 Bolt the screen to the uprights, then hook the screen on to the mount frame and retighten all four pinning bolts.

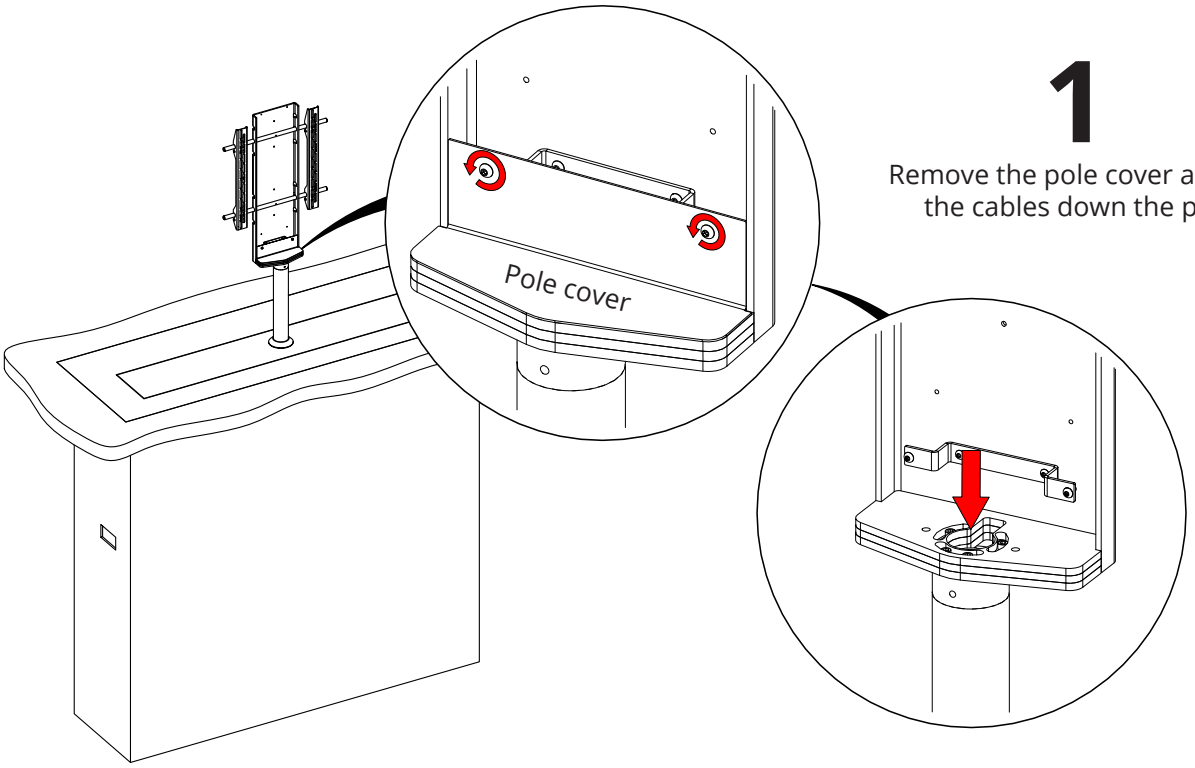


DETAIL A
SIDE VIEW



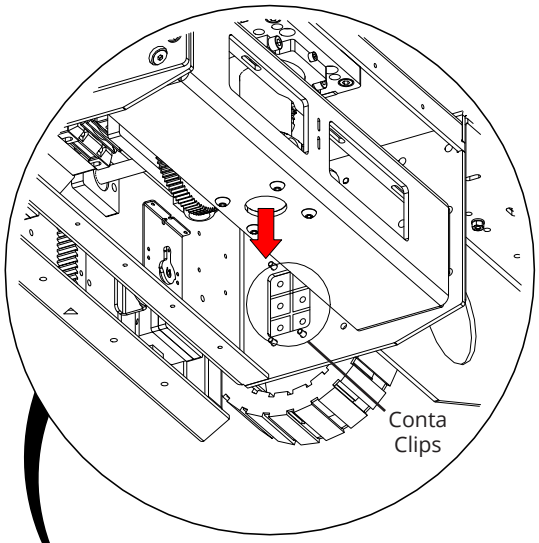
Leave a minimum gap of 5mm between the screen and pole cover.

CABLE
MANAGEMENT



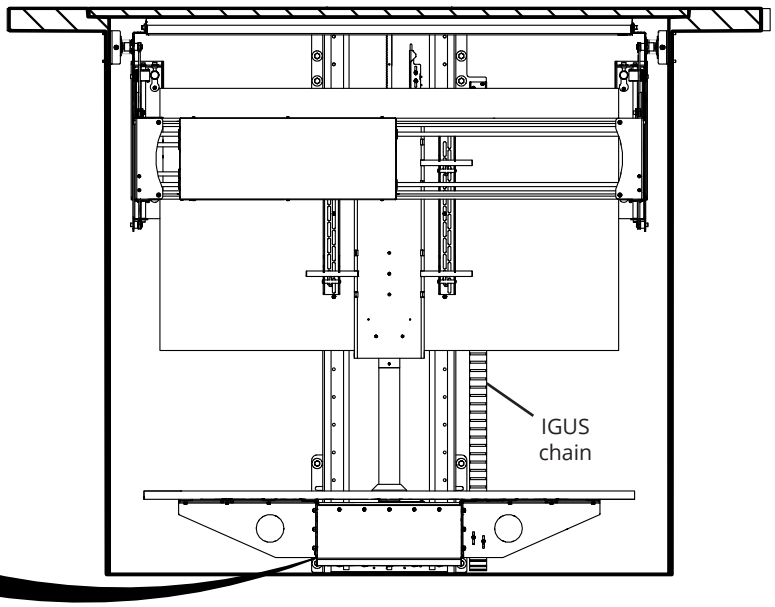
1

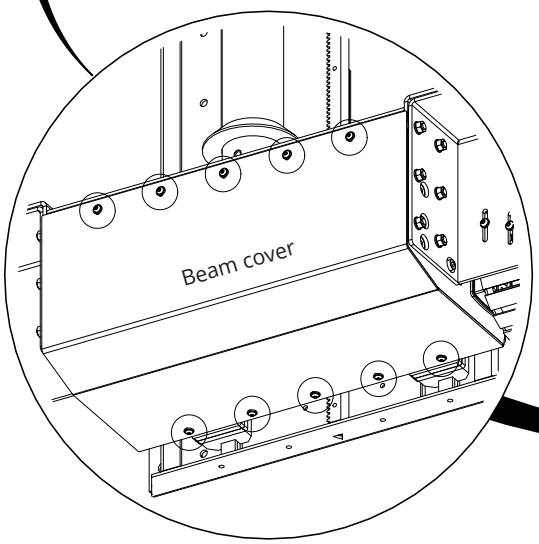
Remove the pole cover and run the cables down the pole.



2 Unsrew the bolts shown below and remove the beam cover and guide the cables through the Conta Clips.

3 Next, guide the cables through the IGUS chain and then to where required. Bolt the pole and beam cover back on.

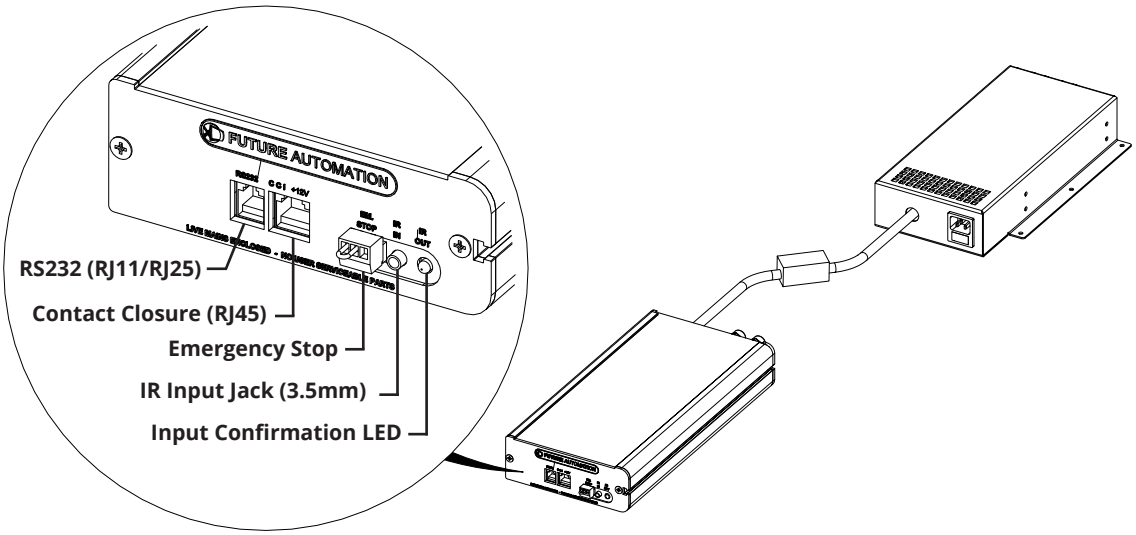




GENERAL
CONTROL

This mechanism has multiple standard control methods, each of which requires a different input method to the control box. For ease, the input sockets on the control board are labelled below.
(Control box size and style may vary to image shown)

CONTROL BOX INPUTS

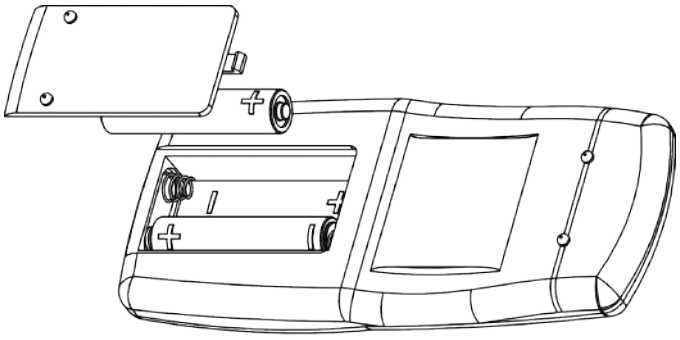


MECHANISM EMERGENCY STOP CONNECTOR

This mechanism features an Emergency Stop Connector, which MUST be plugged into the control box in the connector labelled above for the mechanism to operate. If this connector is not plugged in, the Input Confirmation LED will be permanently lit. As per the red plastic tag attached to the Emergency Stop Connector (and shown below), the small loop of wire in this connector is designed to be replaced by a third party safety mechanism.

REPLACING MECHANISM BATTERIES

The standard Future Automation Infrared (IR) remote control requires x2 AAA batteries to operate. These are provided with the mechanism in the Accessories Pack. These batteries can be replaced as per the image below.



INFRARED
(IR)

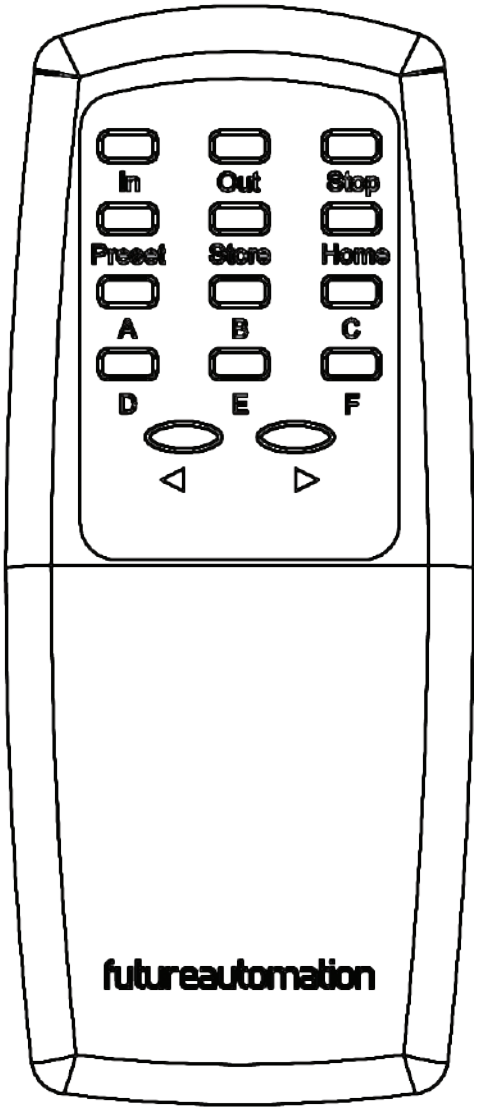
This mechanism can be controlled via the supplied 14 button Infrared (IR) Remote Control, paired with the supplied Infrared (IR) lead and sensor.

The mechanism's functions can be controlled by plugging the Infrared (IR) lead and sensor into the 3.5mm IR Input Jack shown on the General Mechanism Control page.

Confirmation of Infrared (IR) input will be shown by a single flash of the large green LED located on the end of the control box.

As Infrared (IR) control works via line of site, the Infrared (IR) sensor must be directly viewable from the location the remote control is being used from.

Infrared (IR) Remote Control Button Layout



IN - The flap closes and the mechanism is brought fully in.

OUT - Opens the flap and raises the mechanism fully out.

STOP - Stops the operation of the mechanism.

IMPORTANT

Only buttons indicated above are functional with the product. Any other button press will STOP the mechanism.

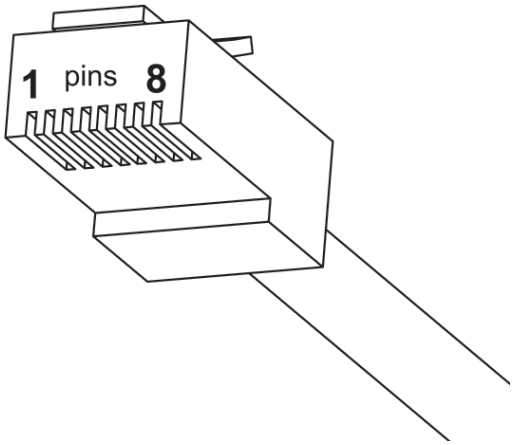
CONTACT CLOSURE

This Mechanism can be controlled via Contact Closure, utilising the 8 Pin RJ45 Connector attached to a length of CAT5 (Type 568A or 568B) cable.

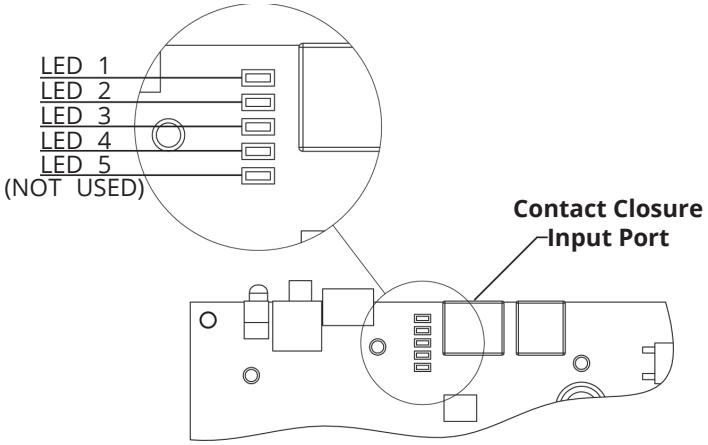
The mechanism's functions can be controlled by plugging this into the RJ45 port on the mechanism control board, then shorting pins 1-8 on this connector as shown in the Contact Closure Input Table below.

Confirmation of Contact Closure input will be shown by a single flash of the large green LED located on the end of the control box, as well as illumination of the corresponding Contact Closure LED on the printed circuit board as shown below.

RJ45 Pin Layout



Contact Closure LED Layout



Contact Closure Input Table

PIN	DESCRIPTION	ACTION
1	12V SUPPLY	12V SUPPLY - CURRENT LIMITED
2	12V LATCH	WHEN 12V ATTACHED, DEVICE WILL GO OUT TO PRESET POSITION. WHEN 12V REMOVED, DEVICE WILL GO IN.
3	GROUND	GROUND
4		
5	DEVICE LATCH	SHORT TO GROUND (PIN 3), DEVICE WILL GO OUT TO PRESET POSITION, REMOVE SHORT DEVICE WILL GO IN.
6	DEVICE STOP	MOMENTARY SHORT TO GROUND (PIN 3), STOPS DEVICE IN CURRENT POSITION.
7	DEVICE OUT	MOMENTARY SHORT TO GROUND (PIN 3), MAKES DEVICE GO OUT.
8	DEVICE IN	MOMENTARY SHORT TO GROUND (PIN 3), MAKES DEVICE GO IN.

WIRE/CABLE TYPE		LED INDICATOR
568A	568B	
W G	W O	
G	O	
W O	W G	
B	B	
W B	W B	LED 4
O	G	LED 3
W BR	W BR	LED 2
BR	BR	LED 1

RS232
CONTROL

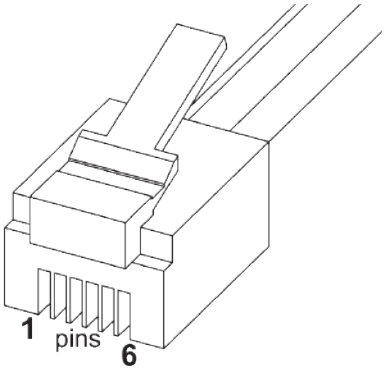
This Mechanism can be controlled via RS232, utilising a 6 Pin RJ11/RJ25 connector OR 9 Pin Serial connector attached to a length of 6 core cable.

The mechanism's functions can be controlled by plugging this into the RJ11/RJ25 port on the mechanism control box, then inputting the RS232 commands shown in the RS232 Input Table below.

Confirmation of Contact Closure input will be shown by a single flash of the large green LED located on the end of the control box.

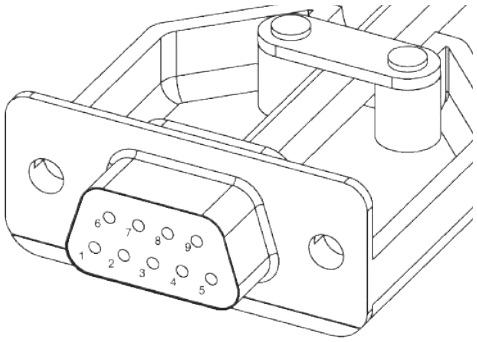
RJ11/RJ25 PIN LAYOUT

PIN 1: TX
PIN 6: RX
PIN 3 & 4: GROUND



SERIAL PIN LAYOUT

PIN 2: RX
PIN 3: TX
PIN 5: GROUND



RS232 PROGRAMMING DETAILS

Baud Rate: 9600

Stop Bit: 1

Parity: None

Databits: 8

RJ11/RJ25	Func.	9 PIN Serial	Colour
PIN 1	TX-RX	PIN 2	Blue
PIN 3	GROUND	PIN 5	Green
PIN 4	GROUND	PIN 5	Red
PIN 6	RX-TX	PIN 3	White

RS232 INPUT TABLE

IMPORTANT - Ensure all protocols are entered exactly as written below, including Carriage Return (ENTER / ASCII 13)

Protocol	Action
fa_in Carriage Return (Enter / ASCII 13)	Device IN
fa_out Carriage Return (Enter / ASCII 13)	Device OUT
fa_stop Carriage Return (Enter / ASCII 13)	Device STOP (At any position)

NOTES

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