



DOLPHIN
ALAVO

INSTALLATION GUIDE

VOL I

COMPLIANCE

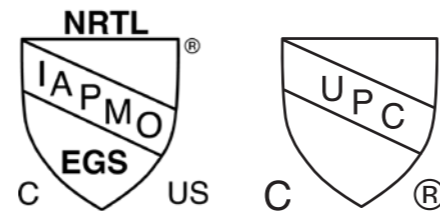
MODEL NUMBER: UK/EU
APPROVALS

- WRAS Approved
- CE Marked



MODEL NUMBERS STARTING: ALV
LISTED BY IAPMO R&T to

- IGC 127 Combined Hand-Washing Systems
ASMEA I12.18.1/CSA B125.1
- Uniform Plumbing Code (UPC)
- National Plumbing Code of Canada
- International Plumbing Code (IPC)
- UL 1951, 2nd Edition
- CAN/CSA C22.2 No. 68-18
- CAN/CSA C22.2 No. 14-18
- UL 962, 4th Edition



MODEL NUMBERS STARTING: ALV
COMPLY with

- ADA
- NSF/ANSI 372 (Lead Free)
- CEC testing (California Energy Commission)
- DOE testing (Department of Energy)(USA)
- Water Efficiency and Sanitation Standard (IAPMO USA)
- California Green Building Standards
- LEED v4.1
- ICC 700 (National Green Building Standard®)
- R-2000 (Natural Resources Canada)
- ANSI/GBI (Green Globes® Assessment Protocol for Commercial Buildings)



CONTENTS

Contact Us	4
INSTALLATION INSTRUCTIONS	
Parts and Fixings List	6
Pre-Installation	8
Water and Power Requirements	10
Installing Modules	12
Fitting Mirrors	16
Installation Check List	24

IMPORTANT

Ensure you have read through and understood this document fully before attempting to install an Alavo system.

DOCUMENT REVISION F



When space is at a premium, and energy-efficiency is a priority, this modular, touch-free, behind-mirror handwash system from Dolphin has got all the answers - quick to install, easy to replenish, and a pleasure to use.

At Dolphin we are always happy to help. Simply pick up the phone, pop in to see the team or drop us an email.

It's a Dolphin thing...

CONTACT US

Dolphin

Southpoint, Compass Park

Junction Road, Bodiam

TN32 5BS

United Kingdom

T +44 (0)1424 202 224

E info@dolphinsolutions.co.uk

W dolphinsolutions.co.uk

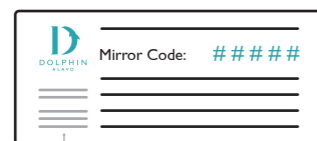
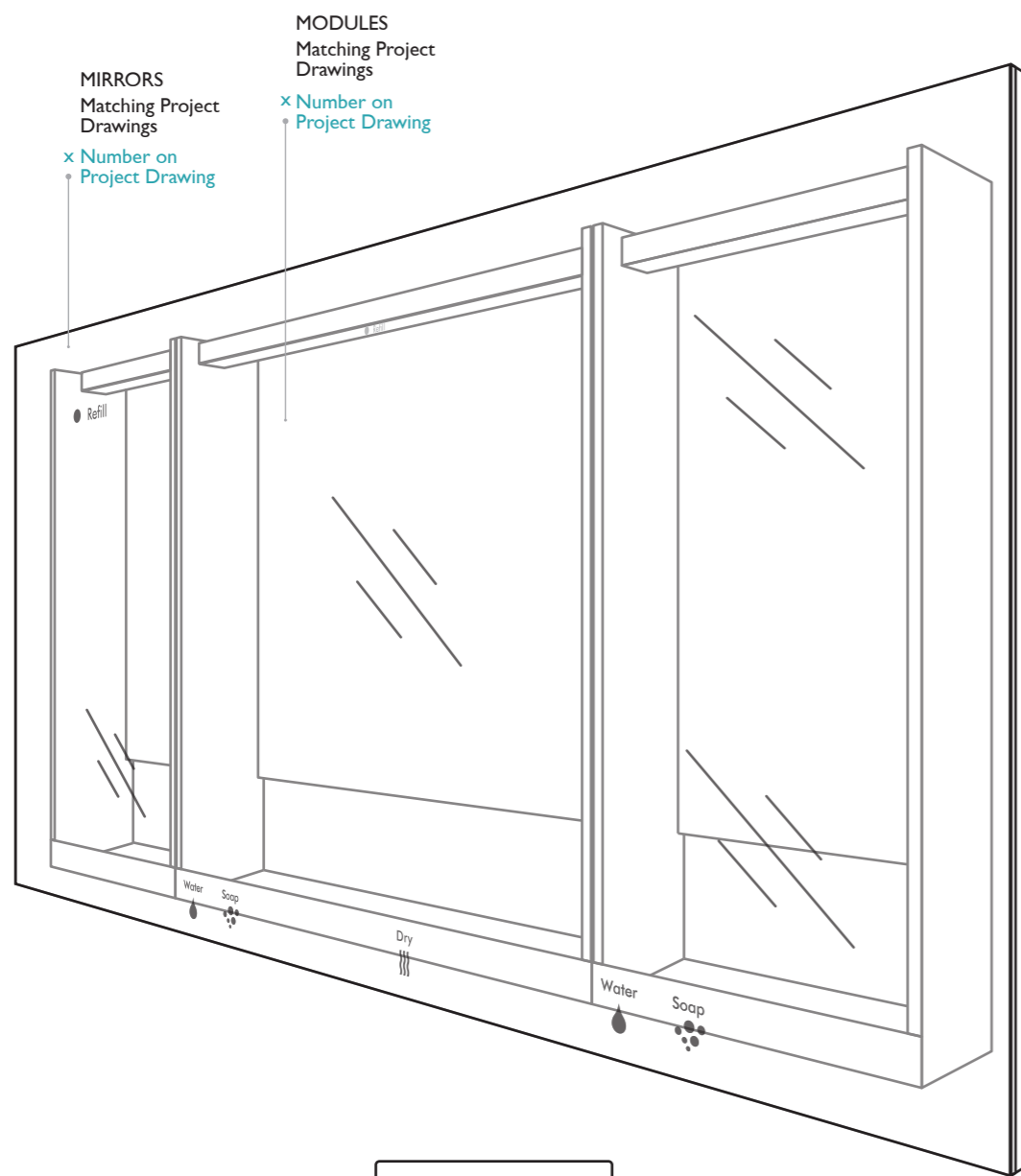
© Dolphin Solutions Ltd.



PARTS AND FIXINGS LIST

PARTS AND FIXINGS INCLUDED WITH ALAVO

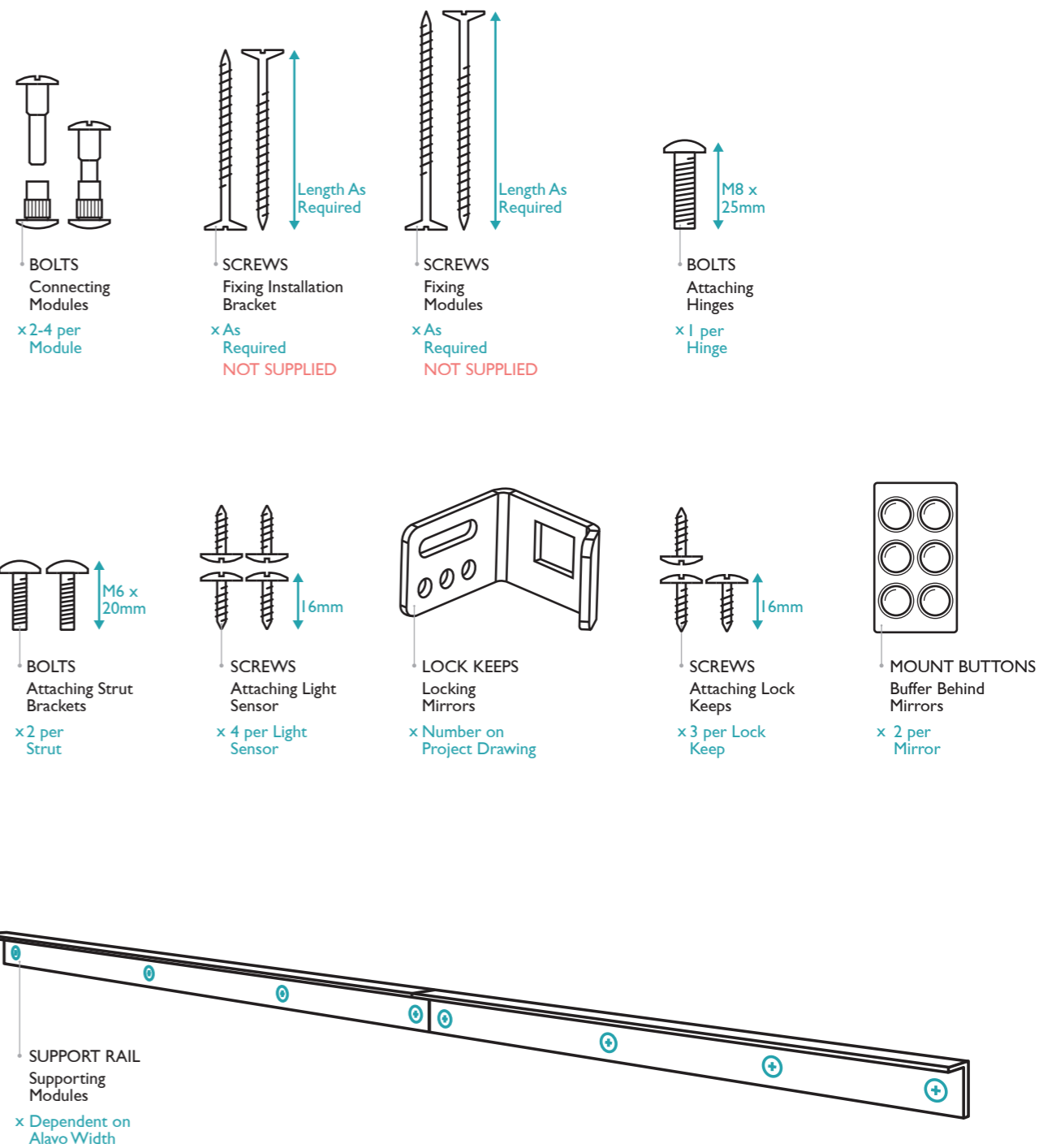
Please ensure you are in possession of all parts and fixings listed below.



MIRROR LABELS
Identifying Mirrors
x 1 per Mirror
ON MIRRORS



MODULE LABELS
Identifying Modules
x 1 per Module
ON MODULES



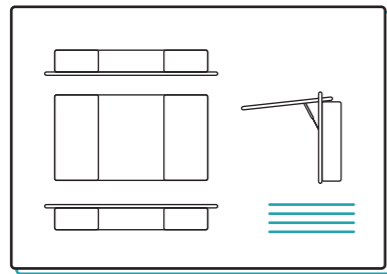
PRE-INSTALLATION

KEY STEPS BEFORE INSTALLING

Please ensure all steps have been completed before fixing the Alavo system in your washroom.

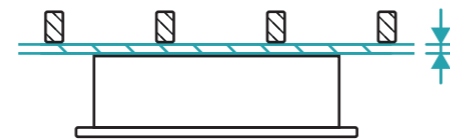
01 PROJECT DRAWINGS

Ensure you have the correct Dolphin Alavo project drawings marked with your project reference.



02 FOR STUD WALLS

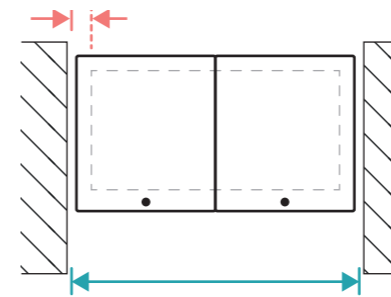
Stud walls require a minimum of 18mm thick plywood cladding before Alavo is installed. All brackets must be installed directly to a structural lining, not on a decorative finishing board.



NOTE
It is essential to achieve full penetration of the fixing screws through the 18mm cladding.

05 INSTALLATION WIDTH

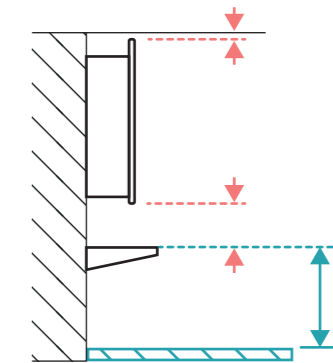
Measure location / recess against project drawings to ensure sufficient width for the system.



NOTE
See project drawing and account for overhang of mirrors from modules.

06 INSTALLATION HEIGHT

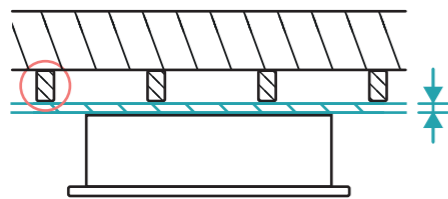
Measure height from finished floor level to top of trough / basin to ensure correct positioning.



NOTE
See project drawings for recommended dimensions between floor, trough, Alavo and ceiling.

03 FOR MASONRY WALLS

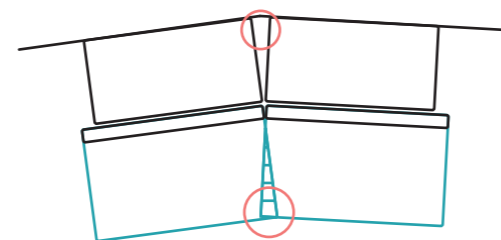
Masonry walls require a minimum of 18mm thick plywood on studs before Alavo is installed. All brackets must be installed directly to a structural lining, not on a decorative finishing board.



NOTE
It is essential to achieve full penetration of the fixing screws through the 18mm cladding.

04 WALL TOLERANCE

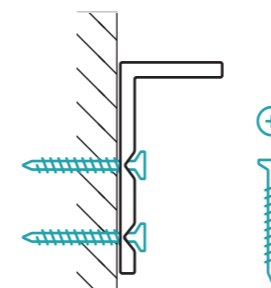
Check wall is flat and plumb to +/- 2mm to ensure correct module alignment, reliable electrical connections and to prevent mirrors from conflicting.



NOTE
The recommendation of 18mm plywood is the best way to achieve the flat surface required to install Alavo.

07 SUPPORT RAIL

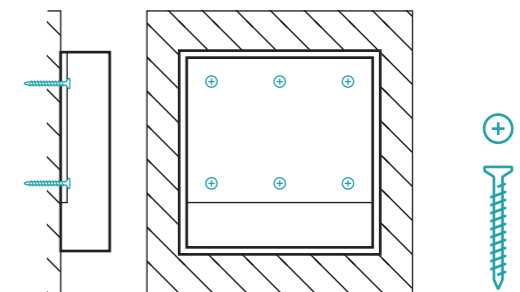
Fix the support rail using a recommended screw diameter of 5mm.



NOTE
If two systems are being installed adjacent to each other follow project drawings for support rail datums.
If adjacent systems vary in height, the support rails will have different horizontal datums.

08 FIXING SCREWS

Use fixing holes to secure Alavo to the wall using a minimum screw diameter of 5mm. Extra holes can be drilled as required.



**** IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THERE IS SUFFICIENT STRENGTH IN THE WALL AND FIXINGS TO SUPPORT ALAVO ****

WATER AND POWER REQUIREMENTS

WATER REQUIREMENTS

Plumbing and pressure requirements when installing the Alavo system.

IT IS THE RESPONSIBILITY OF THE PLUMBER:

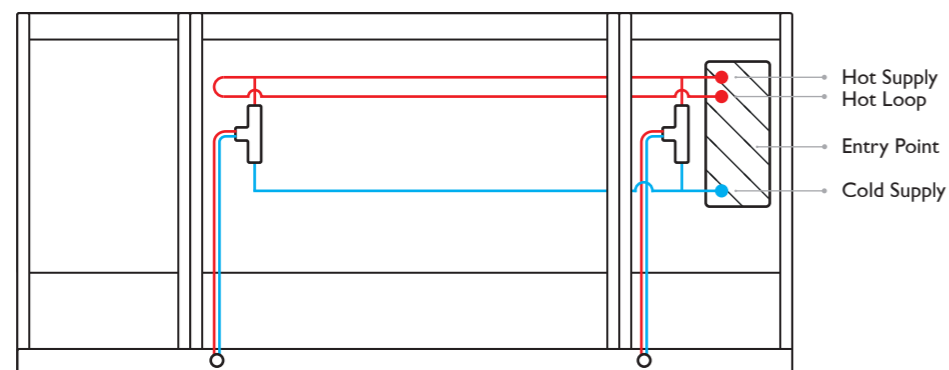
- To connect the system according to regulations and industry standards, and to adjust the plumbing if required.

CONNECTIONS

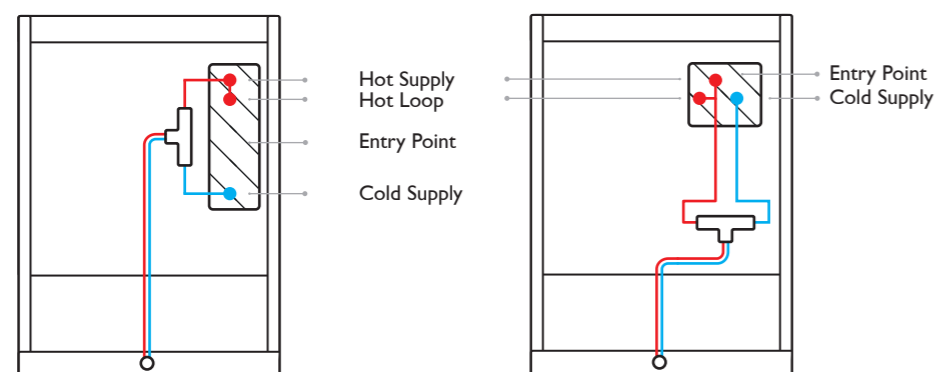
A hot loop is provided and should be isolated if not required.

The entry point positioning of the water supply is critical and can be found on the Alavo project drawings.

TWO WASHSTATIONS OR MORE - Hot loop run in and through modules



SINGLE WASHSTATION (2 CONFIGURATIONS) - Branch off hot loop directly before entering module

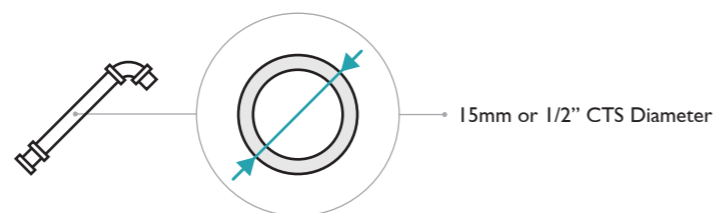


NOTE

Connections should be carried out by a qualified plumber.

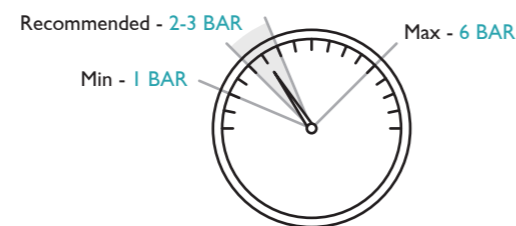
FEED DIAMETER

Depending on the model of Alavo, fittings accept / connect to either 15mm or 1/2" CTS (copper tube size) feeds.



PRESSURE

A pressure of 1 to 6 bar is required, and for best results 2 to 3 bar is recommended. The hot and cold supplies should be balanced.



POWER REQUIREMENTS

Wiring and power requirements when installing the Alavo system.

IT IS THE RESPONSIBILITY OF THE ELECTRICIAN:

- To connect the system according to regulations. Connections should be carried out by a qualified electrician.

CONNECTIONS & SUPPLY

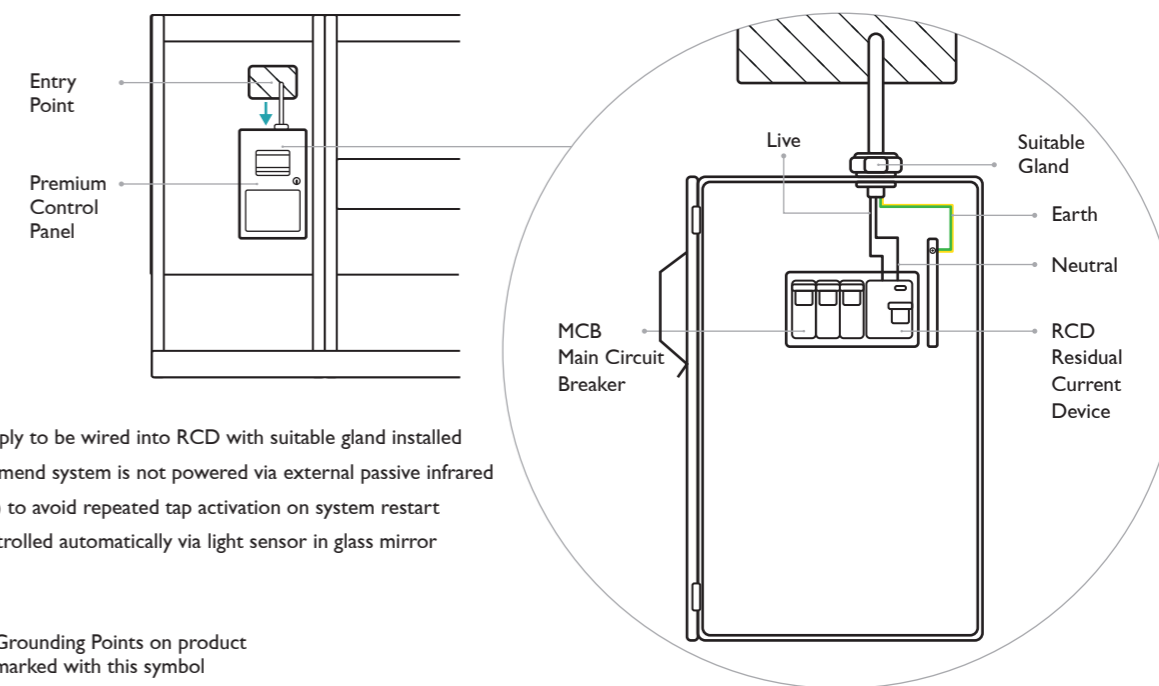
The entry point positioning for the power supply is critical and can be found on the Alavo project drawings.

Cable/conductor insulation colour scheme to be used in accordance with the local regulations.

Standard local mains input voltage of either 110V or 230V AC ~ single phase supply is required.

For specific power and supply feed requirements see individual Alavo system drawing.

PREMIUM MODEL

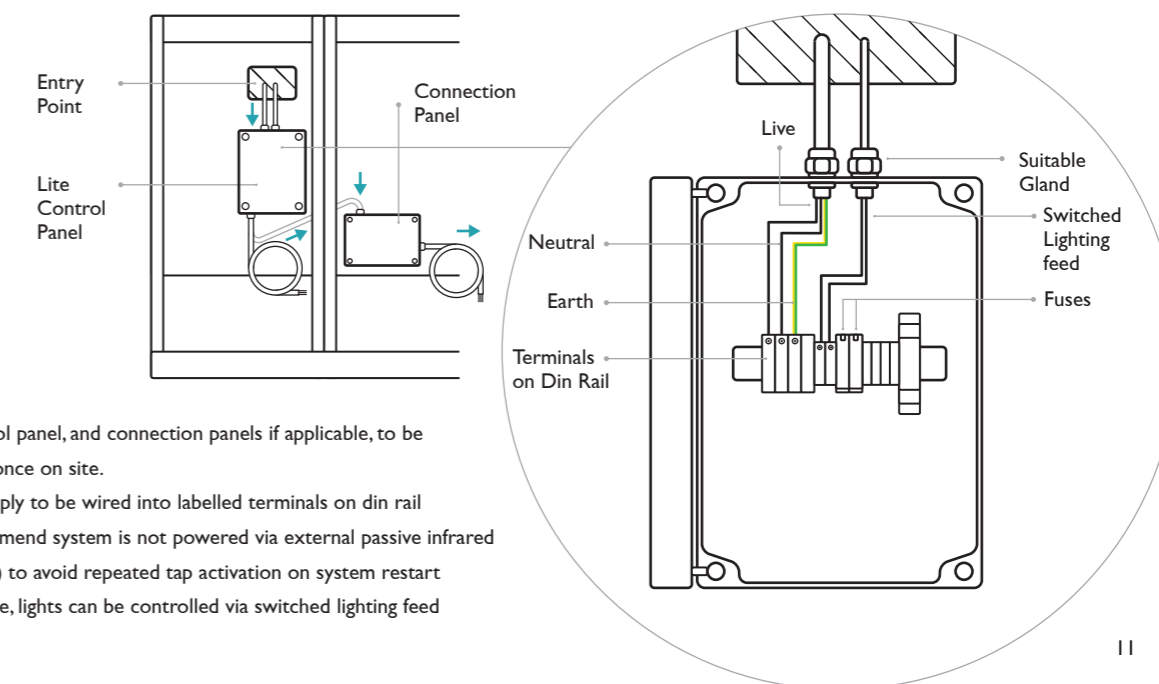


NOTE

- Power supply to be wired into RCD with suitable gland installed
- We recommend system is not powered via external passive infrared sensor (PIR) to avoid repeated tap activation on system restart
- Lights controlled automatically via light sensor in glass mirror

Grounding Points on product marked with this symbol

LITE MODEL



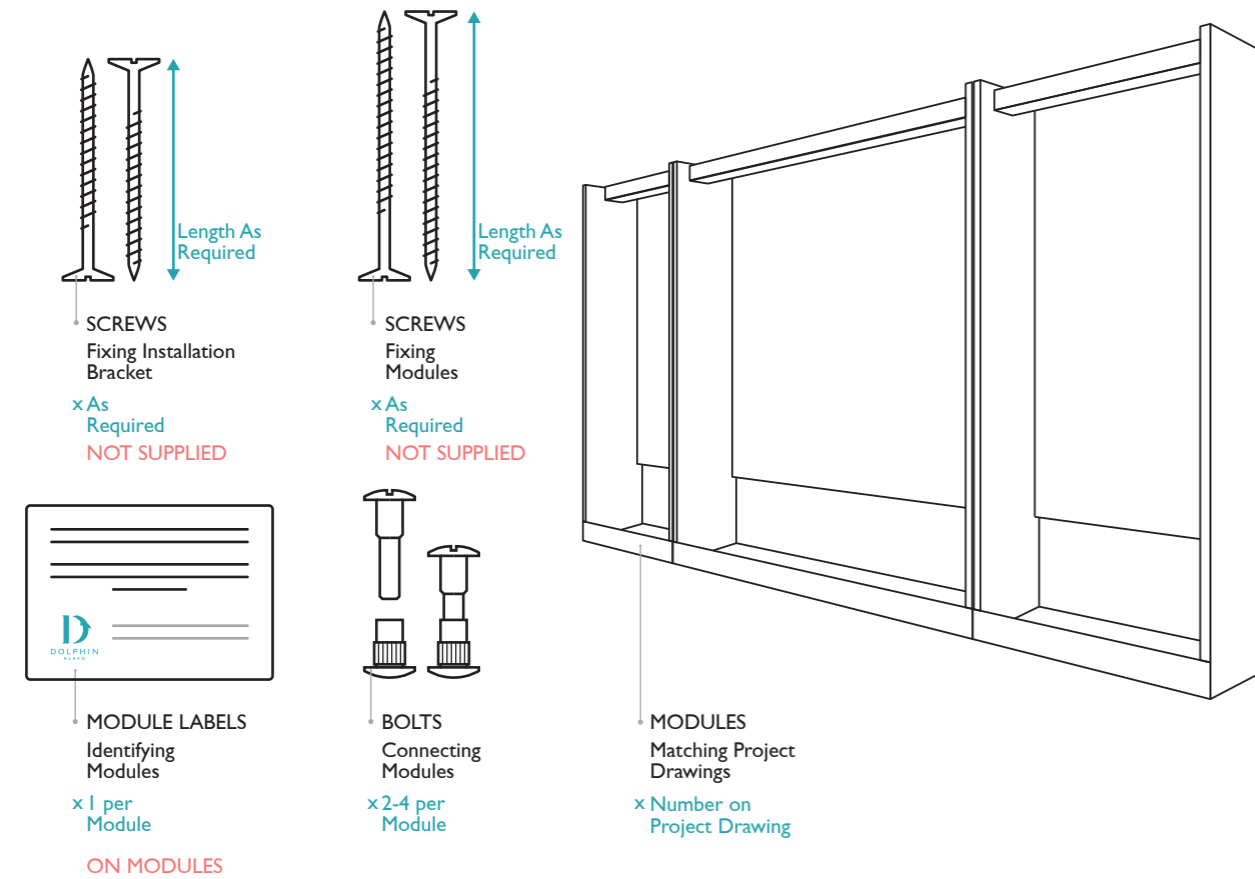
NOTE

- Lite control panel, and connection panels if applicable, to be connected once on site.
- Power supply to be wired into labelled terminals on din rail
- We recommend system is not powered via external passive infrared sensor (PIR) to avoid repeated tap activation on system restart
- If applicable, lights can be controlled via switched lighting feed

INSTALLING MODULES

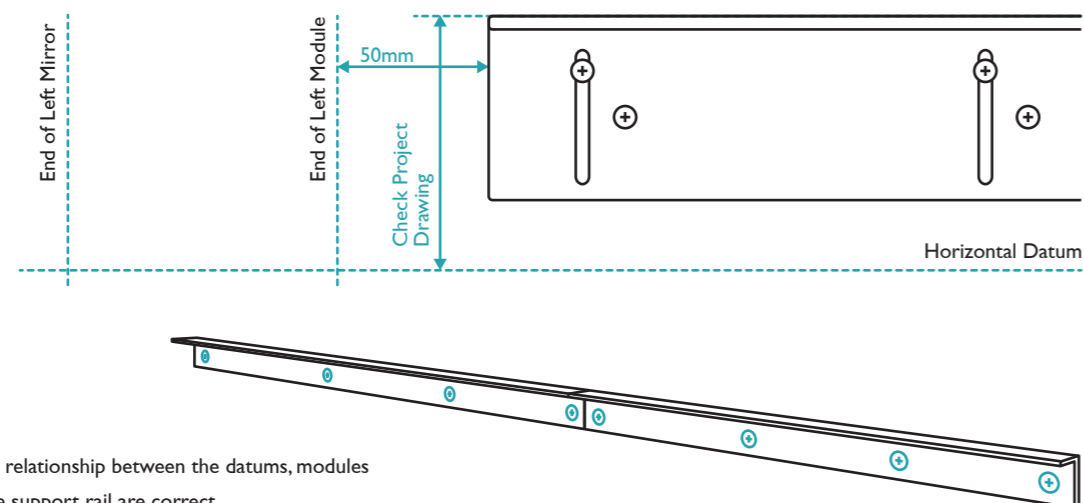
BEFORE YOU START

Ensure you have the correct modules for the Alavo system. Each module will be labelled and must match the project drawings. Ensure you have all of the parts and fixings listed below.



01 FIX THE SUPPORT RAIL

Mark all datums on the wall and fix the support rail in the correct location as shown below. A recommended screw diameter of 5mm should be used. Check all brackets that make up the rail are level and secure.



**** MINIMUM OF TWO OPERATIVES SHOULD BE UTILISED FROM HERE ON ****

System weighs 60KG per metre

02 DETERMINE NUMBER OF MODULES

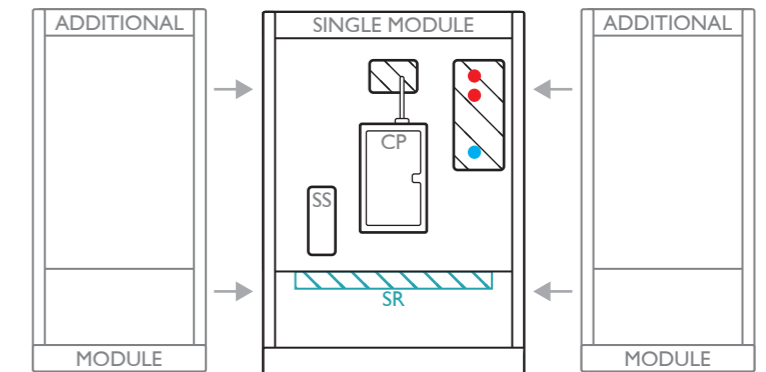
Determine number of modules on the project drawing and follow the respective instructions below. If the system has additional modules (AM), either to the left of the control panel (CP) or to the right of the soap system (SS), these should be installed last and do not require a support rail (SR).

SINGLE MODULE:

Lift single module onto the support rail and fix securely to the wall using all screw holes.

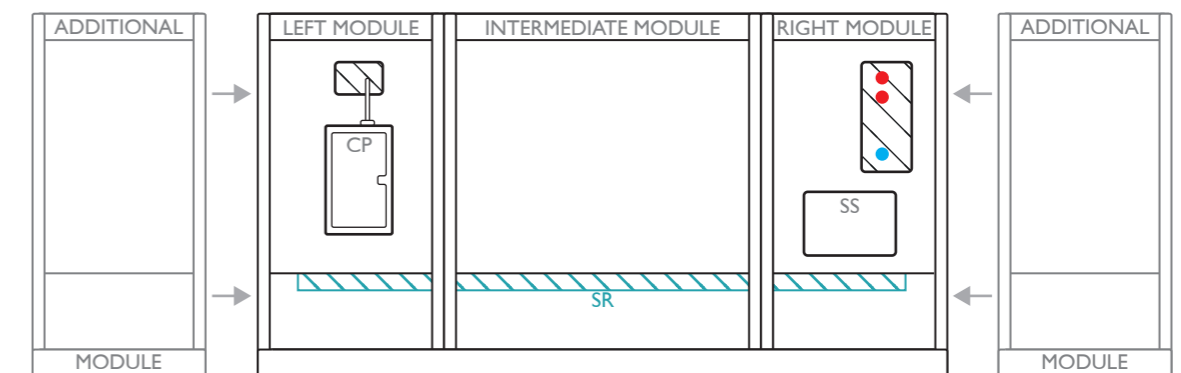
If the system has additional modules, align and fix to each end. These are not placed on the support rail.

Continue to Fitting Mirrors on Page 16.

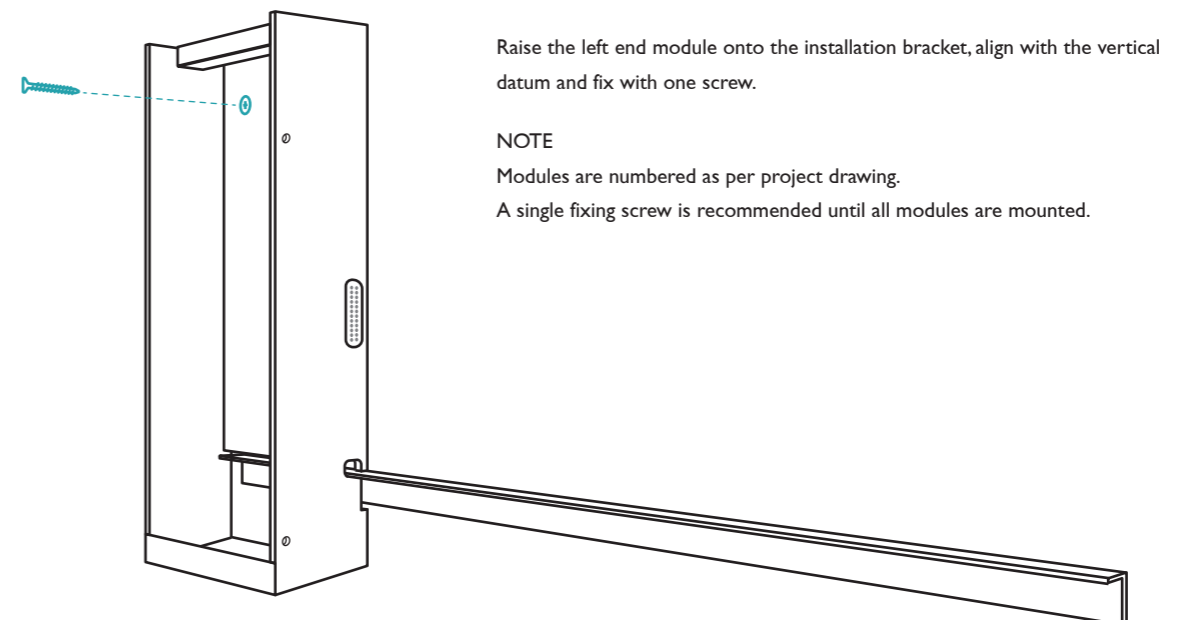


TWO MODULES OR MORE:

Continue to step 03 below. If the system has additional modules, either to the left of the control panel or to the right of the soap system, these should be installed last and do not require a support rail.

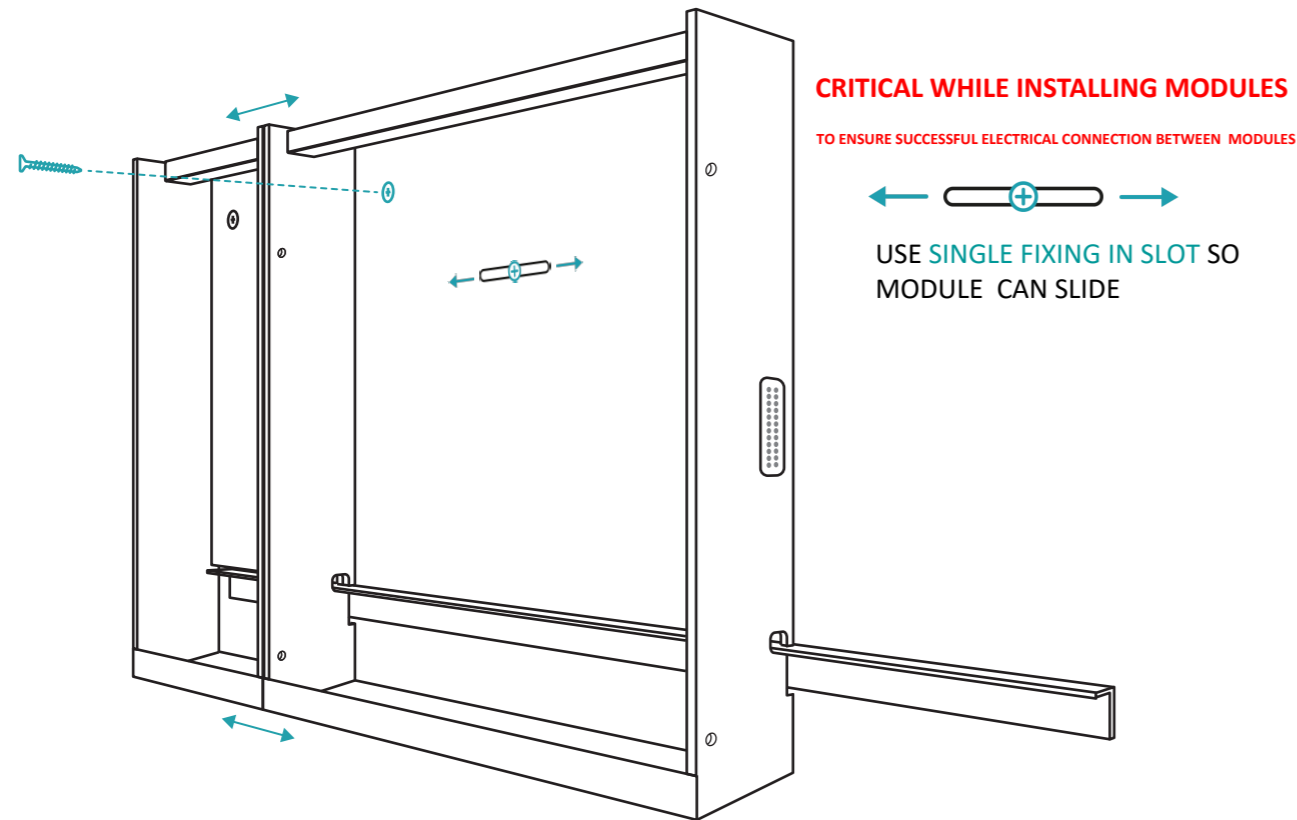


03 POSITION LEFT HAND MODULE



04 POSITION NEXT MODULE

Lift the next module onto rail and slide carefully up to the previous module. Ensure the 24 pin plug, soap tube and water pipes are fed through and connected.



05 SLIDE, PULL TIGHT, BOLT THEN FIX

Use the two-part connecting bolts through the cheeks to connect the modules and pull them tight together. Only after the modules are tight should you then fix the module to the wall. A single fixing screw is recommended until all modules are mounted.

SLIDE



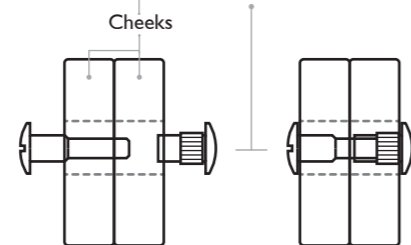
PULL TIGHT



BOLT



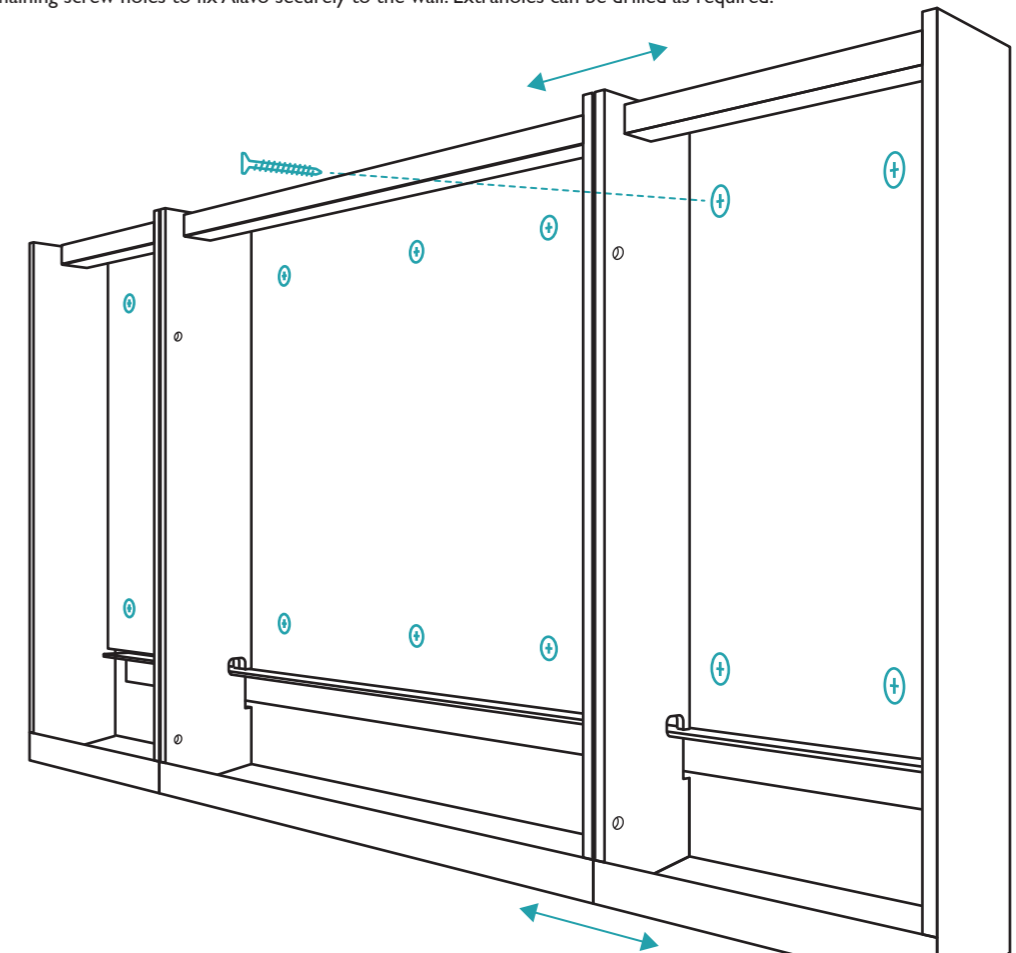
FIX



** REPEAT STEP 04 - 05 FOR ALL SUBSEQUENT INTERMEDIATE MODULES **

06 POSITION RIGHT MODULE

Lift the right module onto rail and repeat step 05. Once all the modules are tight against each other and level on the support rail, use all remaining screw holes to fix Alavo securely to the wall. Extraholes can be drilled as required.



NOTE

If the system has additional modules, align and fix to respective ends.

These do not require a support rail. See Page 13, step 03.

If lighting is installed on additional modules, these must be plugged into the adjacent modules.

07 CONNECT THE SOAP PLUMBING

Make the plumbing connection for the soap taking care to ensure the tube runs behind the vertical pipe that feeds the tap. The tube must be pushed fully home inside the fitting ensuring the depth marker lines up with the edge.

CONNECT



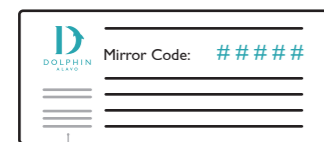
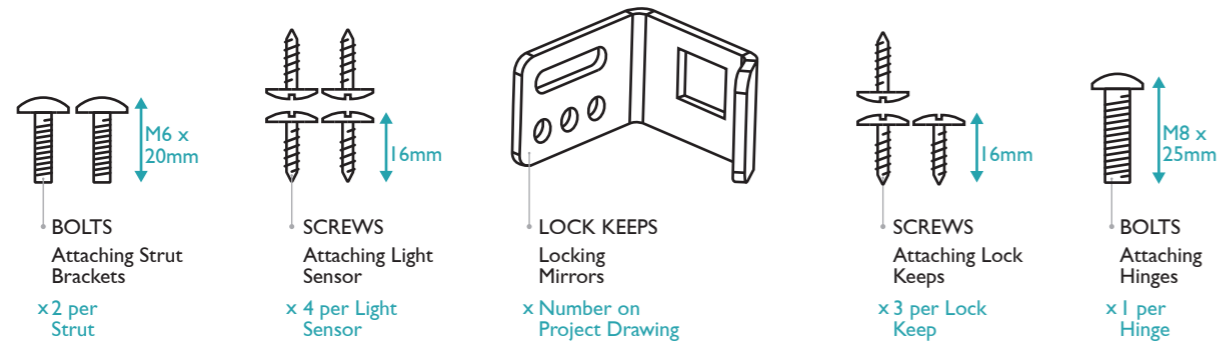
PUSH TIGHT



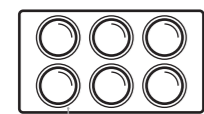
FITTING MIRRORS

BEFORE YOU START

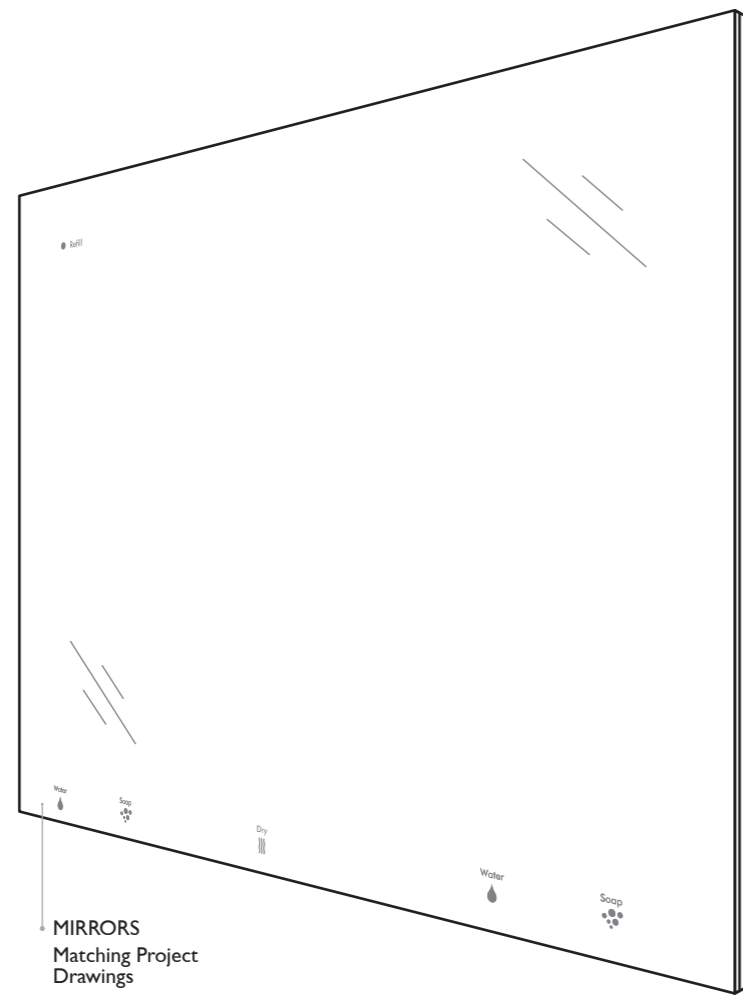
Ensure you have the correct mirrors for the Alavo system. Each mirror will be labelled and must match the project drawings.
Ensure you have all of the parts and fixings listed below.



MIRROR LABELS
Identifying Mirrors
x 1 per Mirror
ON MIRRORS



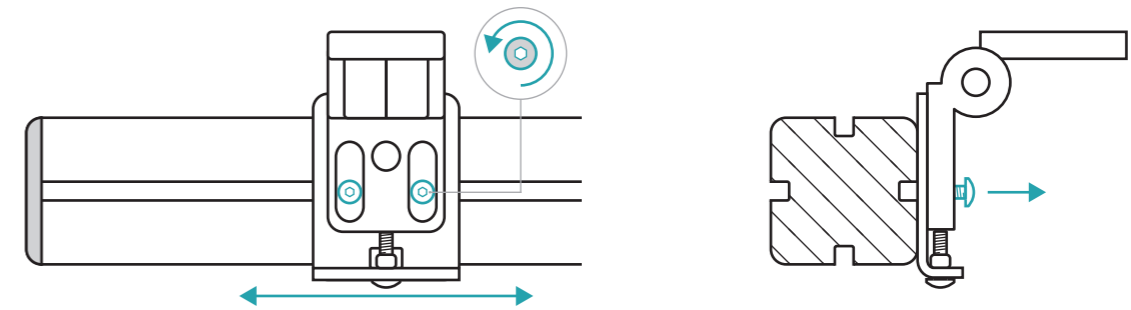
MOUNT BUTTONS
Buffer Behind Mirrors
x 2 per Mirror



MIRRORS
Matching Project Drawings
x Number on Project Drawing

01 SLACKEN MIRROR HINGES

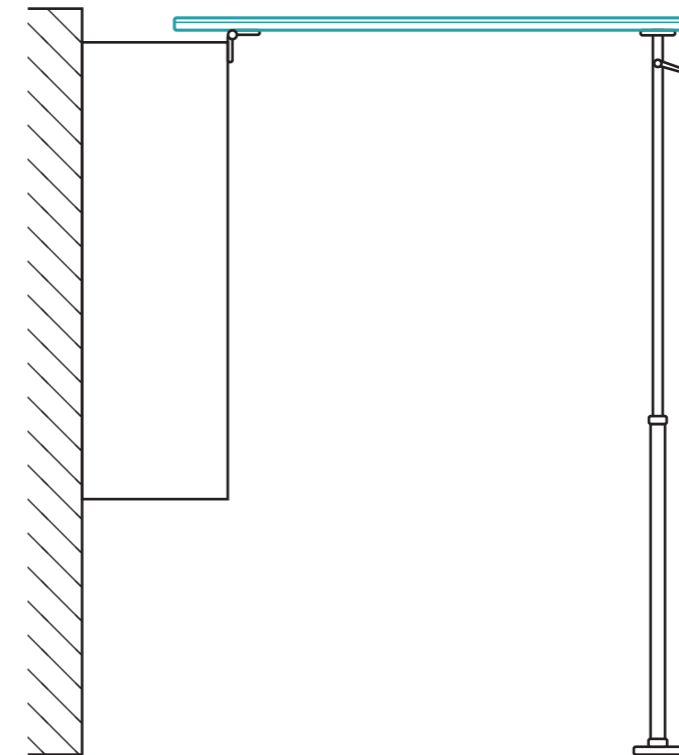
Slacken the bolts on the mirror hinges to allow them to slide easily along the rail. The hinges will already be attached to the hinge rail on the modules.



**** MINIMUM OF TWO OPERATIVES SHOULD BE UTILISED FROM HERE ON ****
**** KEEP TOP AND BOTTOM BATTENS ON MIRROR WHILST INSTALLING ****

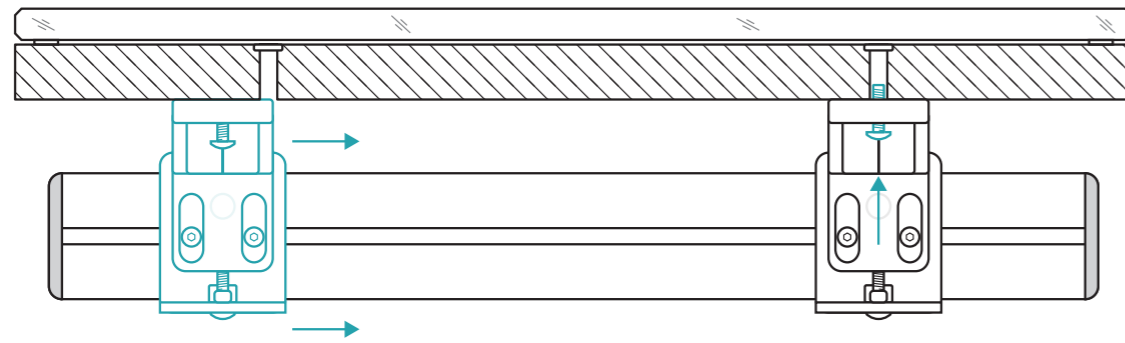
02 LIFT FIRST MIRROR INTO PLACE

Lift mirror to horizontal and move into position on the Alavo system. Hold or prop the mirror open as shown below.



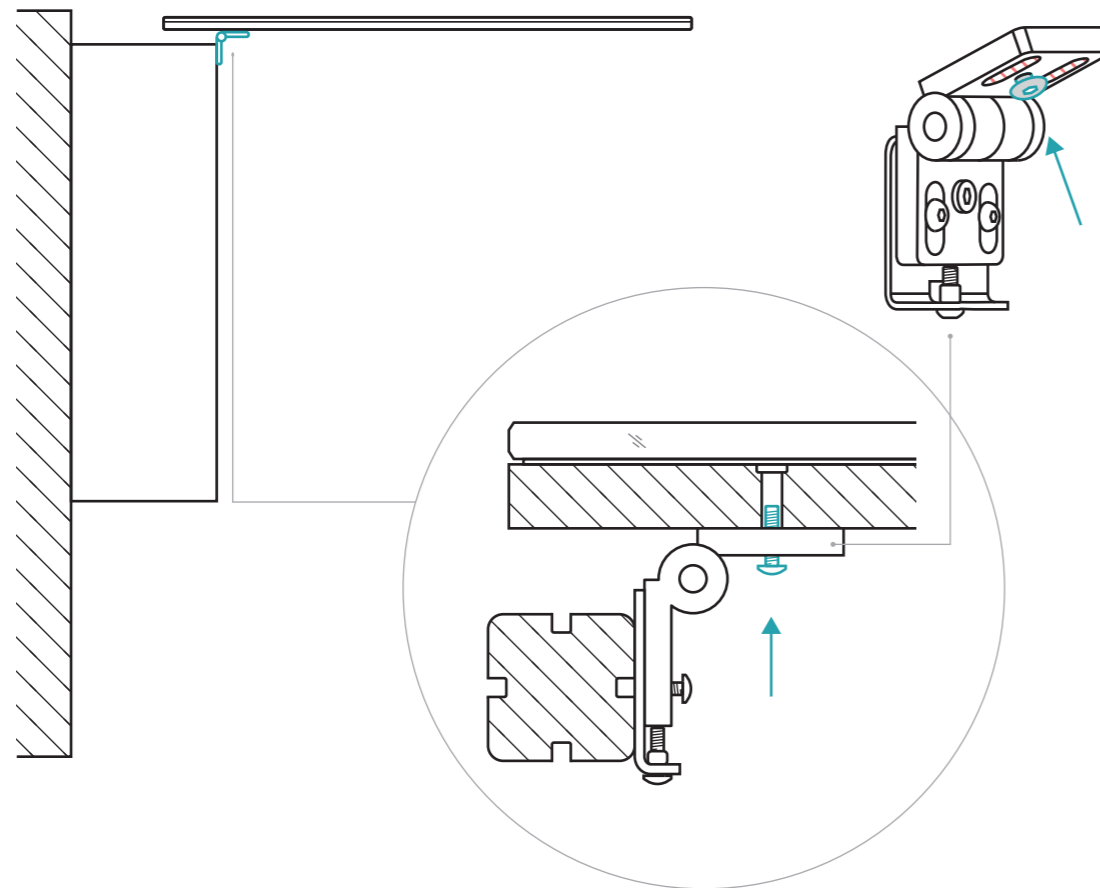
03 SLIDE HINGES INTO POSITION

Slide hinges into position to line up with mirror fixing holes.



04 ATTACH HINGES ONTO MIRROR

Use attached bolts to fix hinges to the mirror.



NOTE

Bolt must be inserted into round hole, not into slotted holes.

Take care not to cross thread the bolt as its counterpart insert cannot be replaced.

05 CLOSE MIRROR AND ALIGN

Remove prop and close the mirror. Then slide mirror along rail and line up with the alignment notch in the metal bottom plate as shown below. If there is only one mirror, align as per Project Drawings.

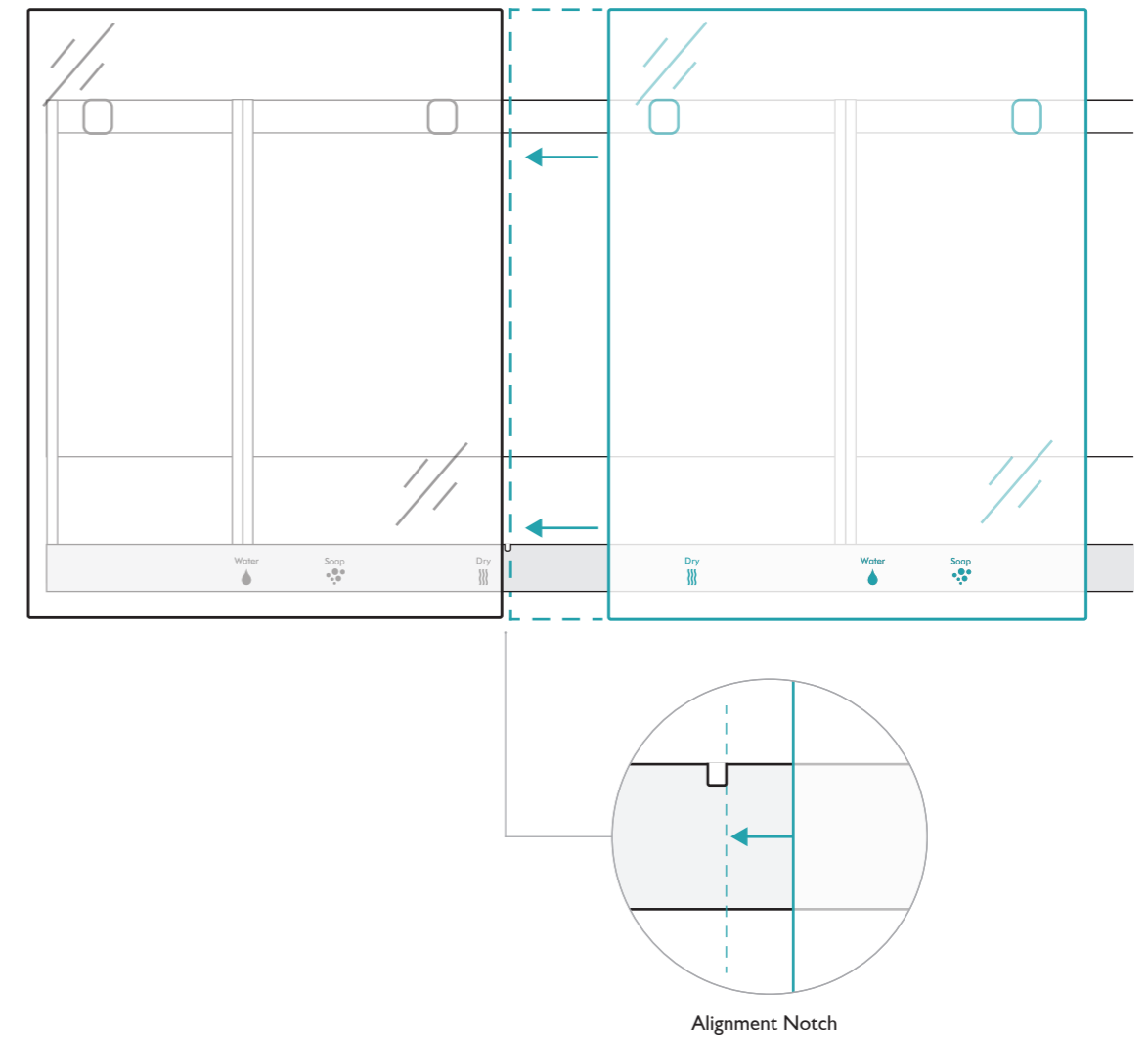
NOTE

For the left hand mirror, the right hand edge should be aligned with the left hand edge of notch.

For all other mirrors, the left hand edge should be aligned with the right hand edge of notch.

This is to allow for the correct spacing of 3mm between mirrors.

**** TAKE CARE TO ENSURE MIRRORS DO NOT COLLIDE ****



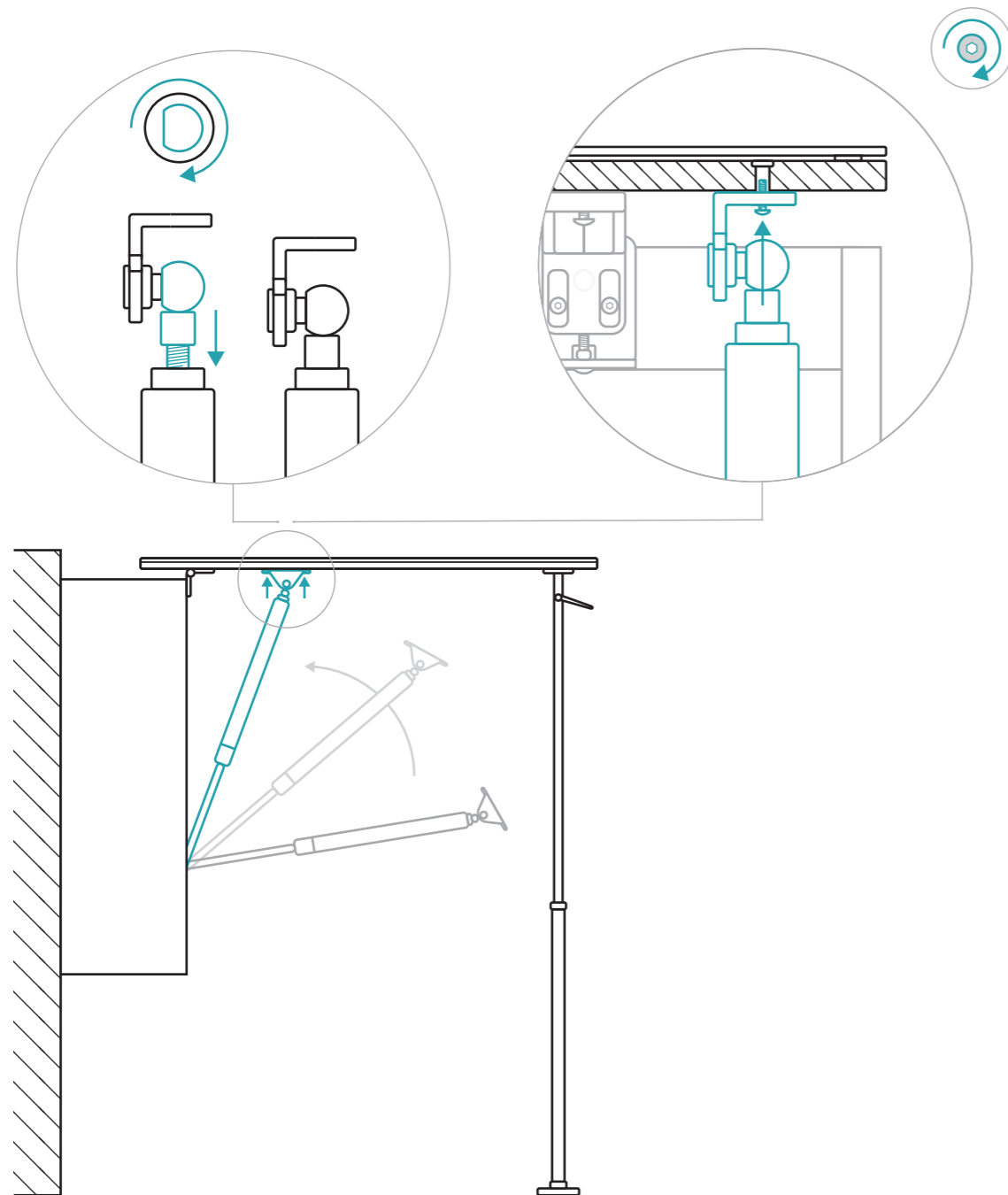
06 ATTACH GAS STRUTS ONTO MIRROR

Open the mirror to horizontal and prop open again. Ensure the ball joint is fully tightened against the strut at both ends. Then attach the gas strut to the mirror using the 90 degree bracket and bolts provided. Test by removing props whilst manually supporting the mirror to ensure gas struts are holding all the weight.

NOTE

The struts will already be attached to the correct module, with the chamber at the top.
The 90 degree bracket will already be attached to the gas strut.
Check that the ball joint on the 90 degree bracket is facing towards the nearest module cheek.
Take care not to cross thread the bolt as its counterpart insert cannot be replaced.

**** OPEN MIRRORS SLOWLY AND WITH CAUTION AT THIS STEP AS GAS STRUTS WILL BE FULLY CHARGED - THIS COULD RESULT IN THE MIRRORS OPENING WITH EXCESSIVE FORCE UNTIL ADJUSTED AS PER STEP 07 ****



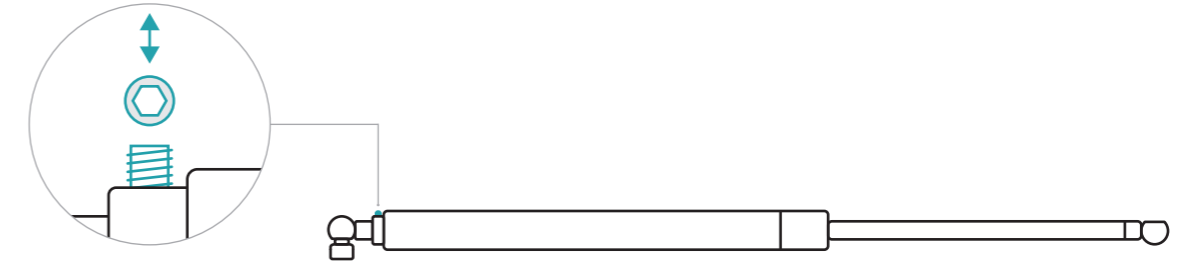
07 ADJUST PRESSURE IN GAS STRUT

To adjust gas pressure, slacken grub screw in short bursts, and maintain equal pressure between strut pairs.

NOTE

Test mirror weight repeatedly to ensure sufficient gas remains.
Do not over-tighten grub screw.

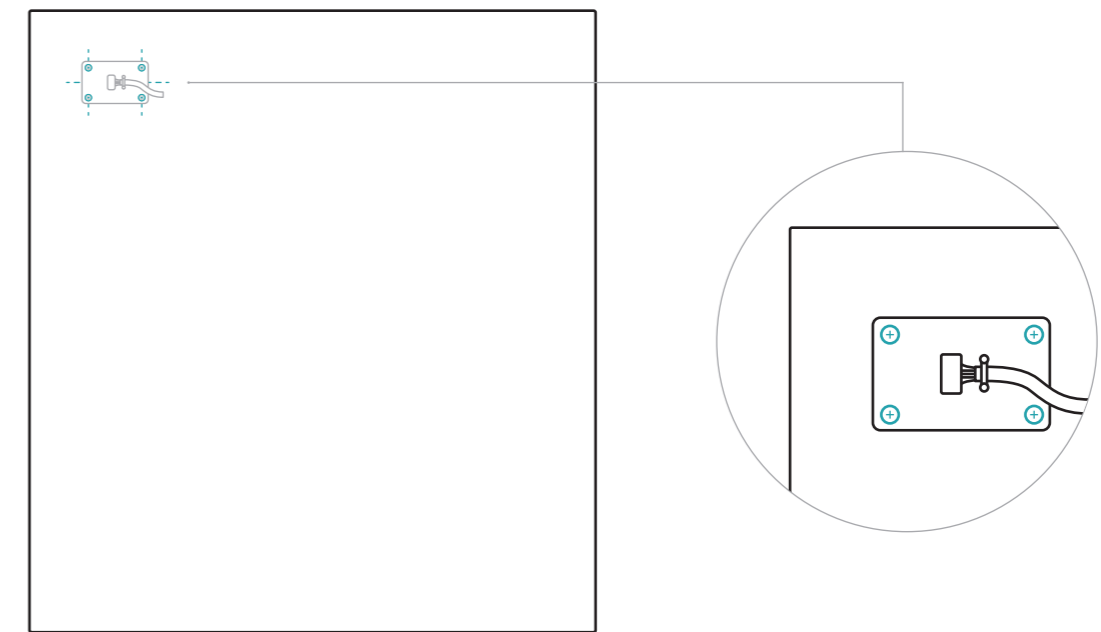
**** RELEASE GRUB SCREW IN SHORT BURSTS AND WITH CAUTION ****



**** REPEAT STEPS 01 - 07 FOR ALL SUBSEQUENT MIRRORS ****

08 FIX REFILL LIGHT BOARD TO MIRROR

Position refill light board onto back of mirror by locating the pilot holes which are indicated on the project drawings. Fix the board to the mirror using the screws provided.

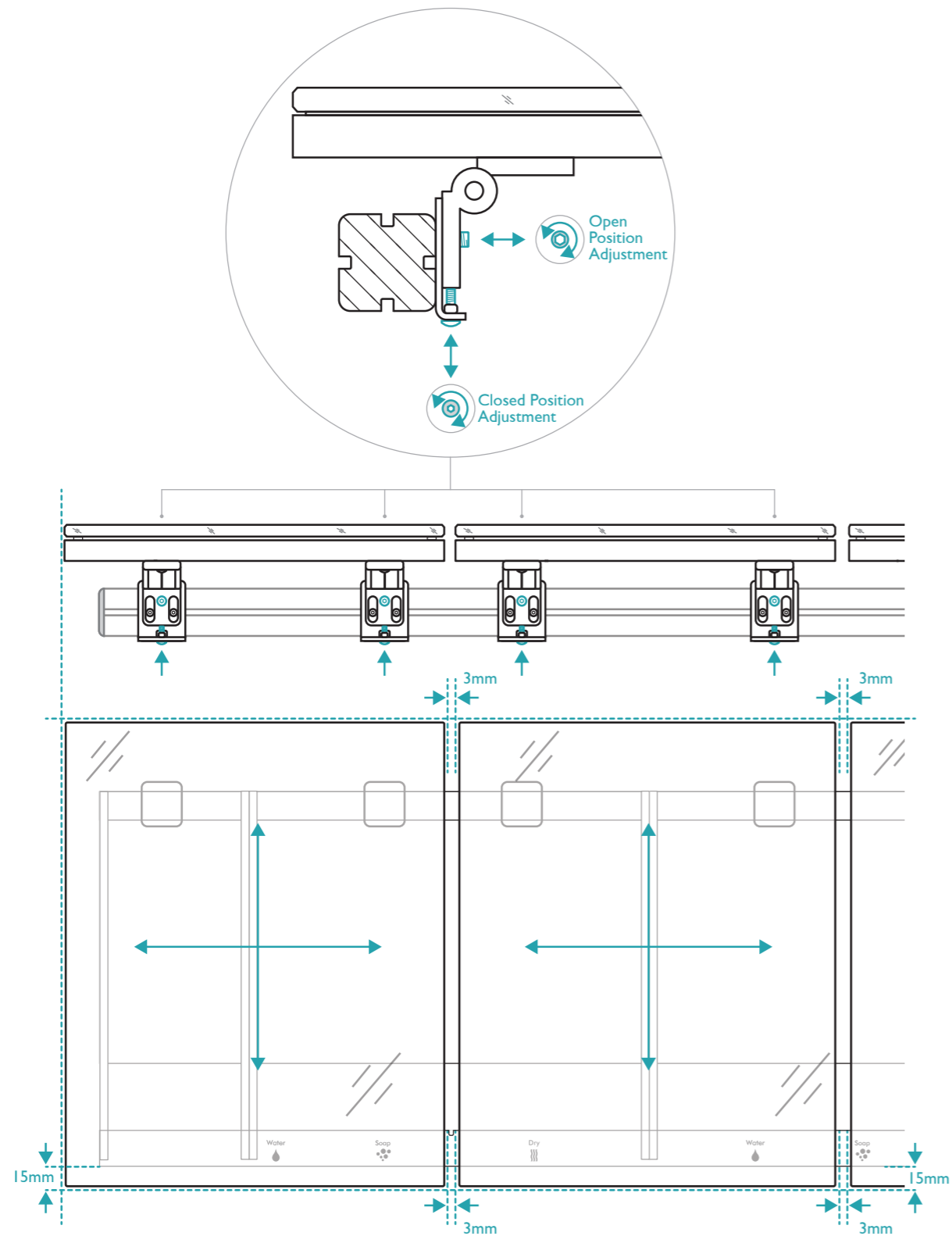


09 ADJUST MIRROR POSITIONS

Check all mirrors align with equal gaps both in the closed and open positions. Use the bolts on the hinges to adjust as necessary. Then tighten all hinge bolts and recheck all mirrors are level with equal gaps.

NOTE

Ensure hinge fixing bolts are slack before adjusting mirrors.
Mirrors should be opened carefully ensuring edges do not conflict.

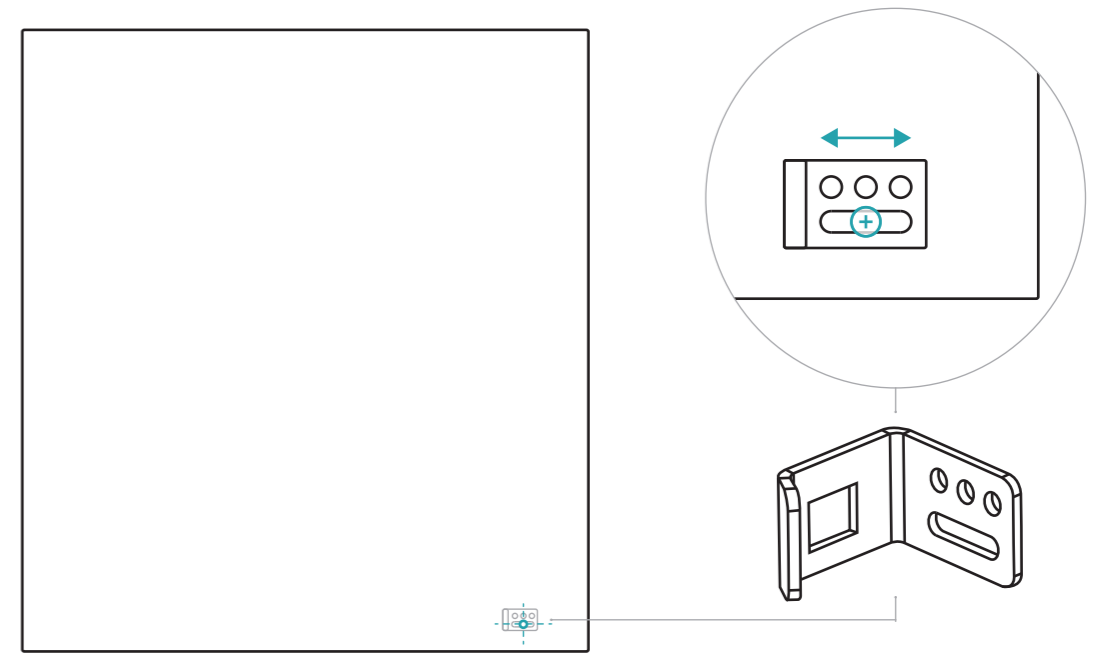


10 FIX LOCK KEEP ONTO MIRROR

Locate lock keep onto back of mirror by finding the pilot hole which will be indicated on the project drawings. First fix one screw centrally in the slotted hole to allow for adjustment.

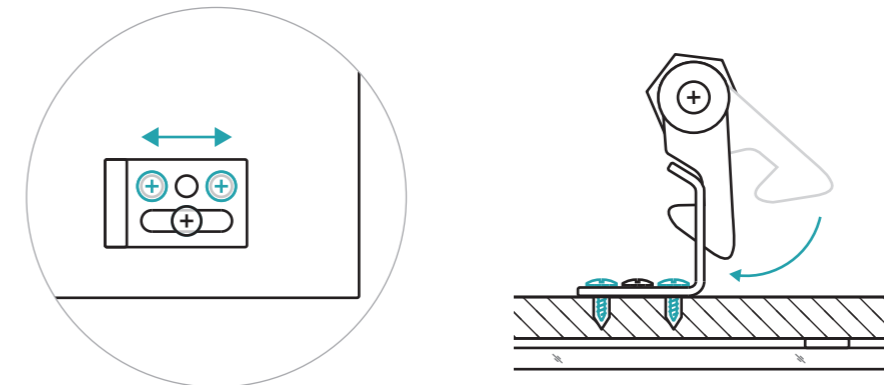
NOTE

Ensure the slotted hole is nearest to the bottom of the mirror.



11 ADJUST AND SECURE LOCK KEEP

Close the mirror and check the lock latches automatically with its counterpart. Adjust as necessary and fix in place with remaining screws.



12 STICK MOUNT BUTTONS ON MIRROR

Stick mount buttons on back of mirror where the module and the mirror make contact. This creates a soft close buffer when shutting the mirrors



INSTALLATION AND COMMISSIONING CHECKLIST

VISUAL AND FUNCTIONAL CHECKS

Ensure all visual and functional checks have been carried out to check Alavo has been delivered and installed successfully.

01 PROJECT DETAILS

Project reference number:

System number:

Location:

02 VISUAL CHECKS

- Mirror condition is excellent
- Mirror alignment is correct - 3mm gaps between mirrors and all mirrors align with their corresponding alignment notch
- All plumbing and soap connections are pushed up to depth markers
- Soap tubing is straight and level across system without undulations
- Foaming soap solution is supplied - [important not to use liquid soap](#)

03 ACTIVATE ALAVO SYSTEM

Turn on power supply to the system

Turn on water supply to the system and check for leaks

Activate Alavo by turning on the RCD and the MCB switches

Wait 30 seconds for system to initialise

All taps will discharge momentarily to show they have been activated

04 FUNCTIONAL CHECKS

- There is a 3mm clearance between all mirrors when in the open position
- All mirrors latch and lock securely
- Gas struts support weight of mirrors

- Light sensor is operating correctly - circle located at the top left of Alavo [Cover with hand to check - lighting will turn off](#)
[See O&M guide for light sensor adjustment](#)
- Soap/paper refill light is illuminated [See O&M guide for refill light details](#)
- Service key switch is working [In service mode taps and soap dispensers will be disabled - refill light will be red](#)

- All icon lights are illuminated [If installed](#)
- All halo lights are illuminated [If installed](#)
- All through mirror lights are illuminated [If installed](#)
- Colour and brightness of lights - can be adjusted [See O&M guide for light adjustment](#)

- All hand dryers activate when hands placed under sensor
- All soap dispensers discharge when hands placed under sensor
- All taps discharge when hands placed under sensor
- Water output temperature from TMV is correct and conforms to regulations [See O&M guide for adjusting TMV](#)
[TMV - Thermostatic Mixing Valve](#)

05 ACTIONS

Cleaners/facilities staff familiarised with Alavo and the relevant instructions for cleaning and maintenance

Cleaners/facilities staff shown how to put unit into service mode with key-switch for cleaning and maintenance

Cleaners/facilities staff advised to refill Alavo with foaming soap solution [ONLY](#) and not liquid soap

06 SIGN OFF

Commission completed by:

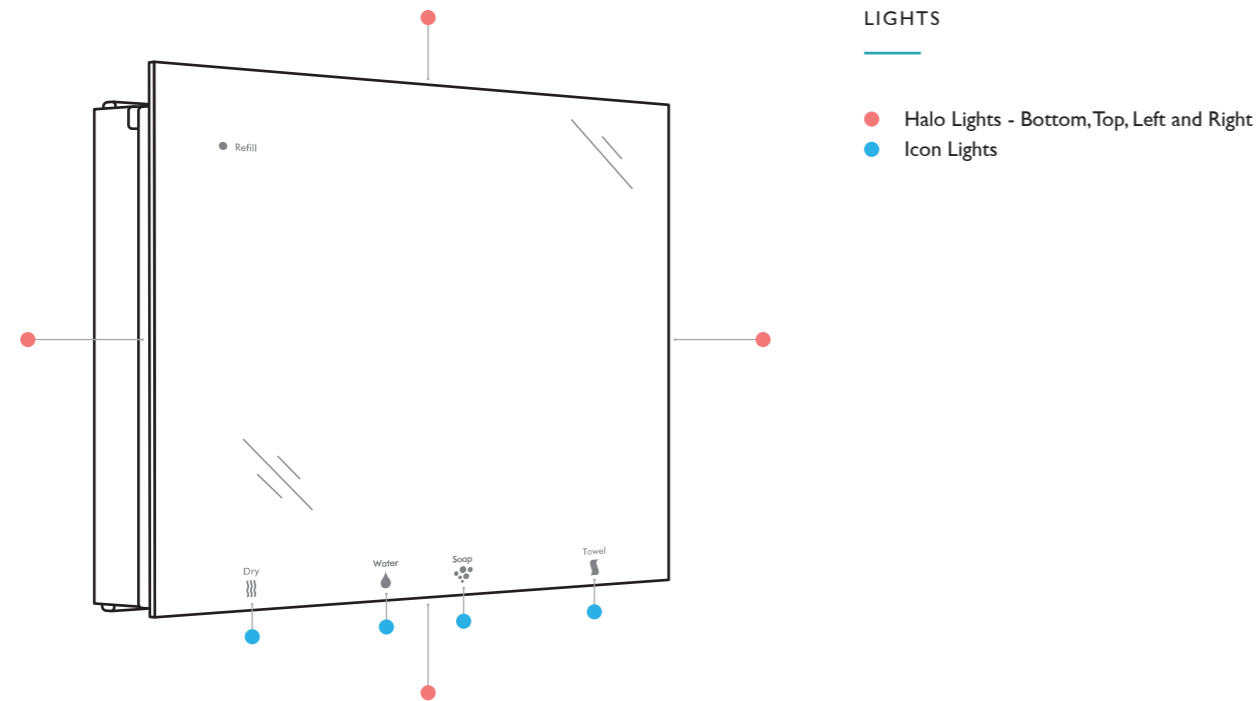
Signed:

Date:

LIGHT CONTROL

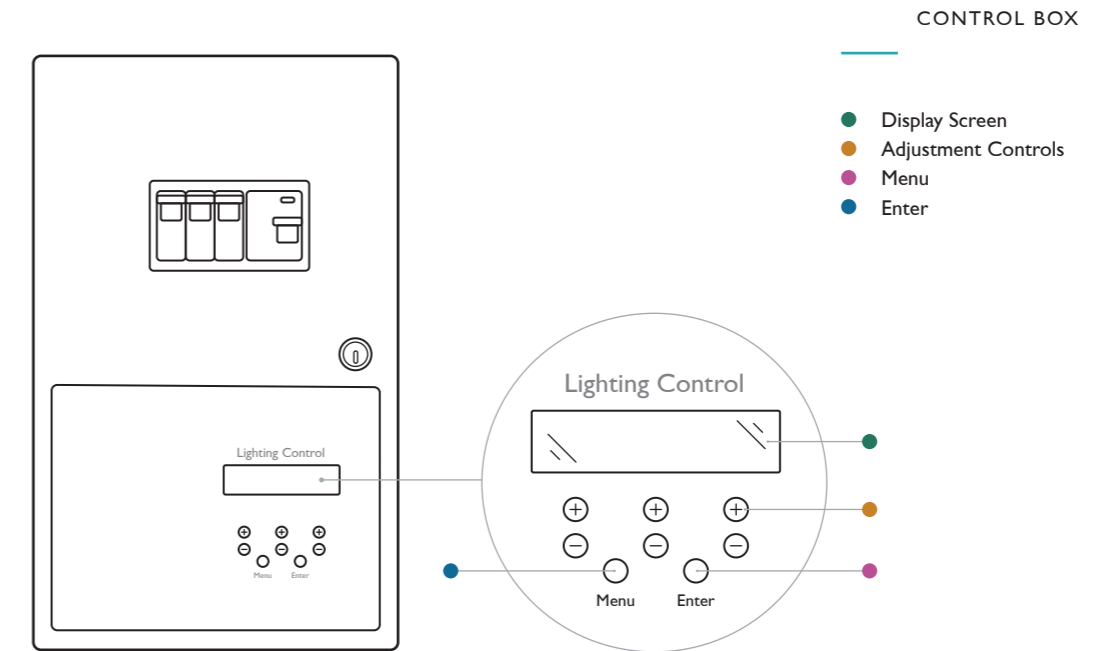
LIGHTS ON ALAVO

The lights integrated into the Alavo system are displayed below.



HOW TO ADJUST LIGHTS

Locate light adjustment controls on the front of the Alavo control box as displayed below.



01 PRESS MENU

To activate screen

02 PRESS MENU TO SCROLL OPTIONS

- Halo lights
- Icon lights
- White balance
- Copy side colour to front
- Reset to default values

03 PRESS ENTER

On the option to be adjusted.

04 USE TO ADJUST

To desired values.

05 PRESS ENTER

To confirm values and return to options

Dolphin,
Southpoint, Compass Park,
Junction Road, Bodiam
TN32 5BS
United Kingdom
T +44 (0)1424 202 224
info@dolphinsolutions.co.uk
dolphinsolutions.co.uk

© Dolphin Solutions Ltd.