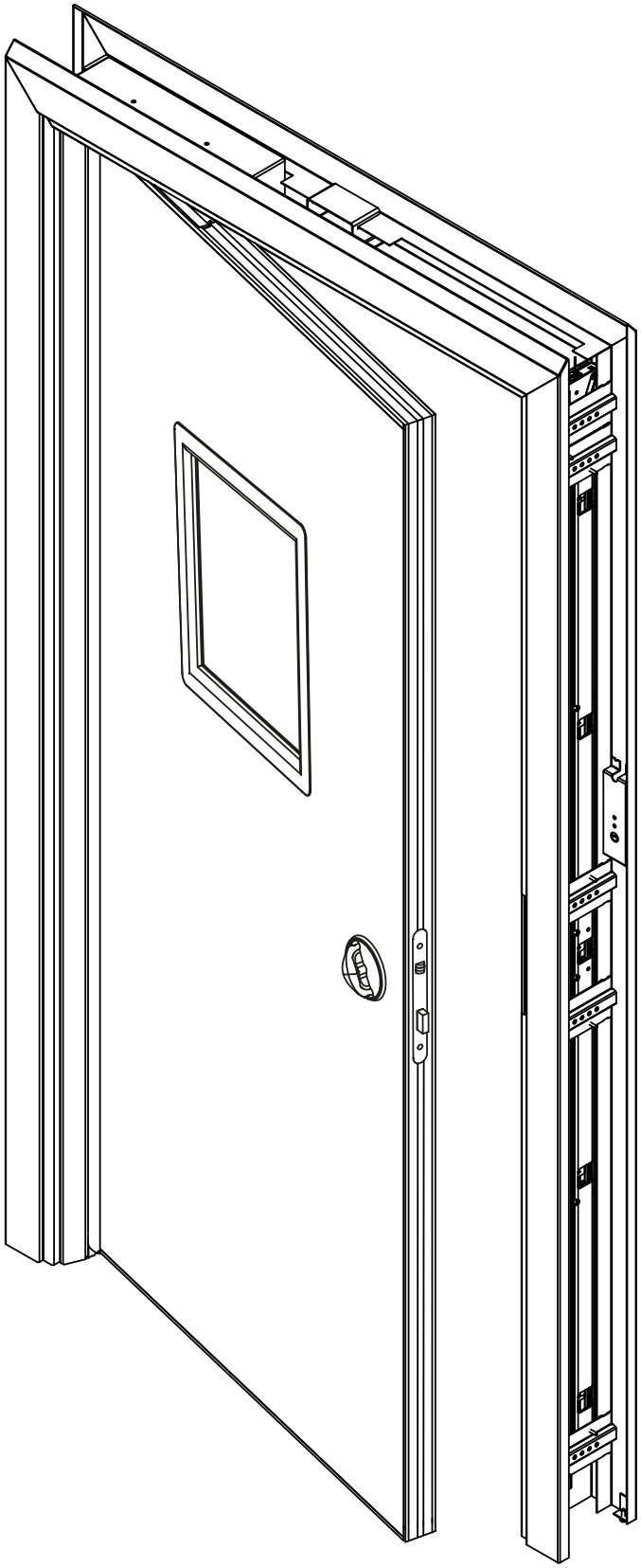
Swiftfit RAPID-INSTALLATION DOOR FRAME
&
Swiftstop COLLAPSIBLE ANTI-BARRICADE DOORSTOP AND FRAME

Installation Instructions REV3 July 2020



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Essential Tools

Installation tool kit available to order - SHC82-990 Doorset Tool Kit, Complete (includes variants of all items marked*)

Image example	Tool type	Description	Purpose
	Spanner *	10mm spanner	Door head adjustment
	Spanner *	Adjustable spanner	Door closer / bottom pivot adjustment
	Driver *	Small flat blade screwdriver	Door closer speed adjustments
	Driver *	Multi-bit screwdriver	Bit holder
	Bits *	Set including: PZ2, PZ3, PH2, TX10, TX15, TX20, TX25, TX30, TX35, TX40, 2mm hex, 3mm hex, 5mm hex	All main fixings *spare bits recommended!
	Bits	7mm masonry drill	Bottom pivot floor fixings
	Level	Laser Level	Frame levelling *green beam preferred
	Level	Mini spirit level, magnetic	Frame levelling
	Power Tool	Cordless drill driver with variable speed / torque settings	General fixings *do not use impact drivers, *do not use on doors components

Essential Tools (steel frame specific)

	Bits *	8mm socket bit driver	Steel frame self -drill fixings
	Adhesive *	Super glue	Steel frame cover caps

Useful Tools (or installer preference)

	Level	Large spirit level	Frame levelling *not recommend for steel frame
	Knife	Stanley Knife with retractable blade	Cutting mastic / existing frame removal
	Chisels	Multi-chisel set	Existing frame removal, additional mortise work
	Saws	Handsaw	Existing frame removal
	Saws	Hacksaw	Spindle / bolt cutting
	Clamp	Rubber faced large hand clamp, 12”/300mm capacity	Holding steel frame during fixing
	Files	Multi-file set	Additional easing
	Mastic Gun	Adjustable mastic gun	Mastic application
	Drill	SDS drill	Masonry drilling, cordless preferred
	Keys	5mm hex key	Door top arm, door closer force adjustment

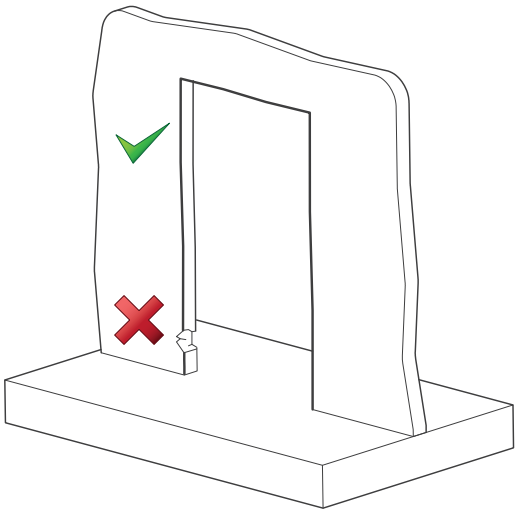
Accessories:

	Packers *	Plastic horseshoe packers	Steel frame packing/levelling (typical 20+ per frame)
	Mastic	Anti-pick mastic	Mandatory for fire rated steel frame perimeter

STEP 1 – Opening condition and inspection

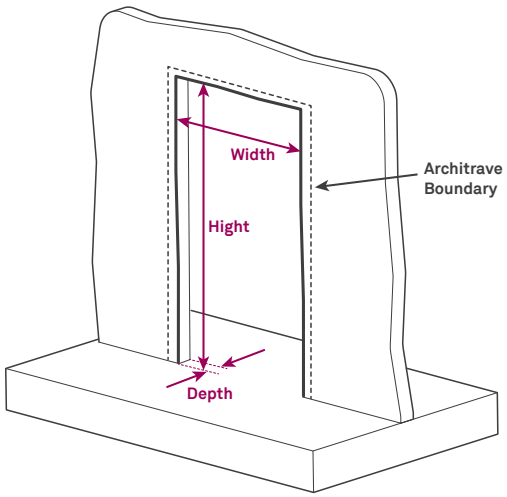
1.1 – Opening preparation

1. Remove existing door frame if required.
2. Remove Floor Springs and fill cavities with cement.
3. Identify opening material and suitability for fixing. It is recommended to fill any large cavities with hard set expanding foam.



1.2 – Pre Installation Survey

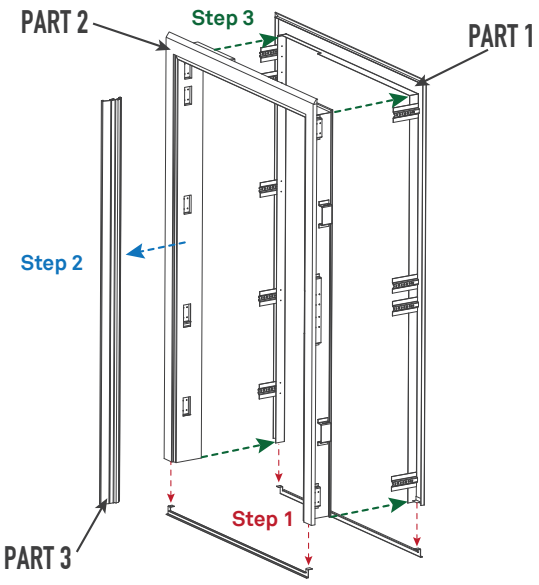
1. Check that the opening width, height and wall depth comply with the frame being installed.
2. Ensure the architrave boundary area is clear from debris as well as floor and wall fixtures.



1.3 – Frame Preparation

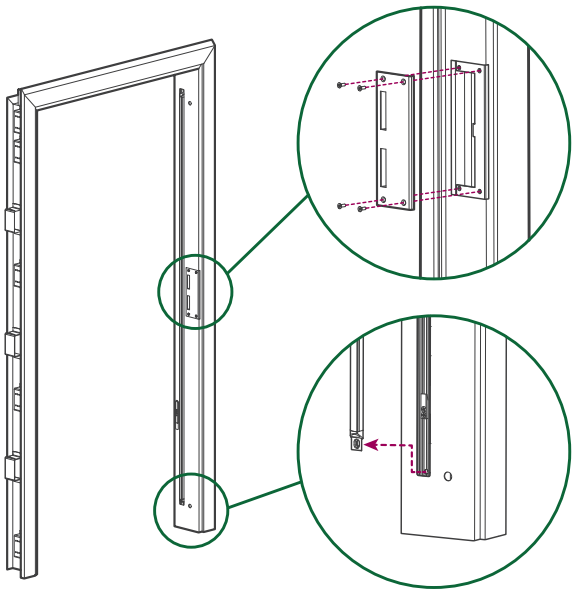
Lay the frame on trestles or flat surface with Part 2. on the bottom taking care not to scratch the frame.

1. Using a 8mm Hex drive remove the two bottom leg braces on **Part 1** and **Part 2**.
2. Remove the **Part 3** by removing the 5No 5mm hex screws located in the intumescent cavity.
3. Carefully separate the two frame sections by lifting **Part 2** away from **Part 1**.



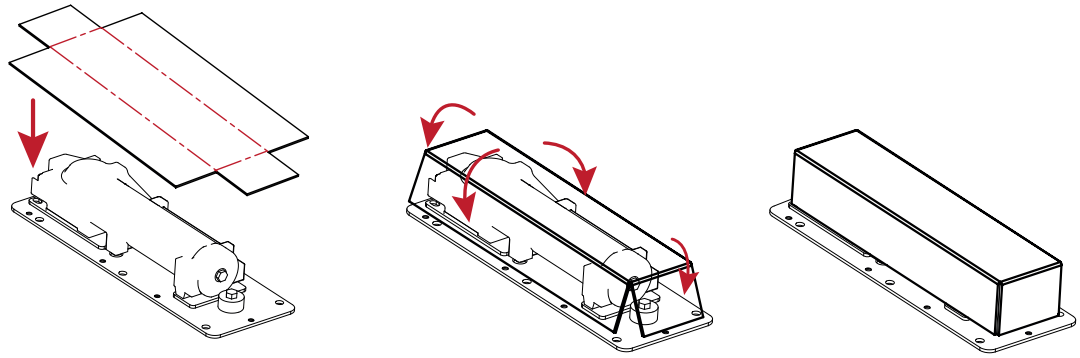
1.4 – Frame Preparation continued

1. Remove the strike plate from **Part 2** by removing the 4No Tx20 security screws.
2. Remove the collapsible stop from **Part 2** by removing the 1No Tx25 security screw located at the bottom of the stop.
3. If factory fitted, remove the frame head closer cover plate. 6no. Tx25 security screws



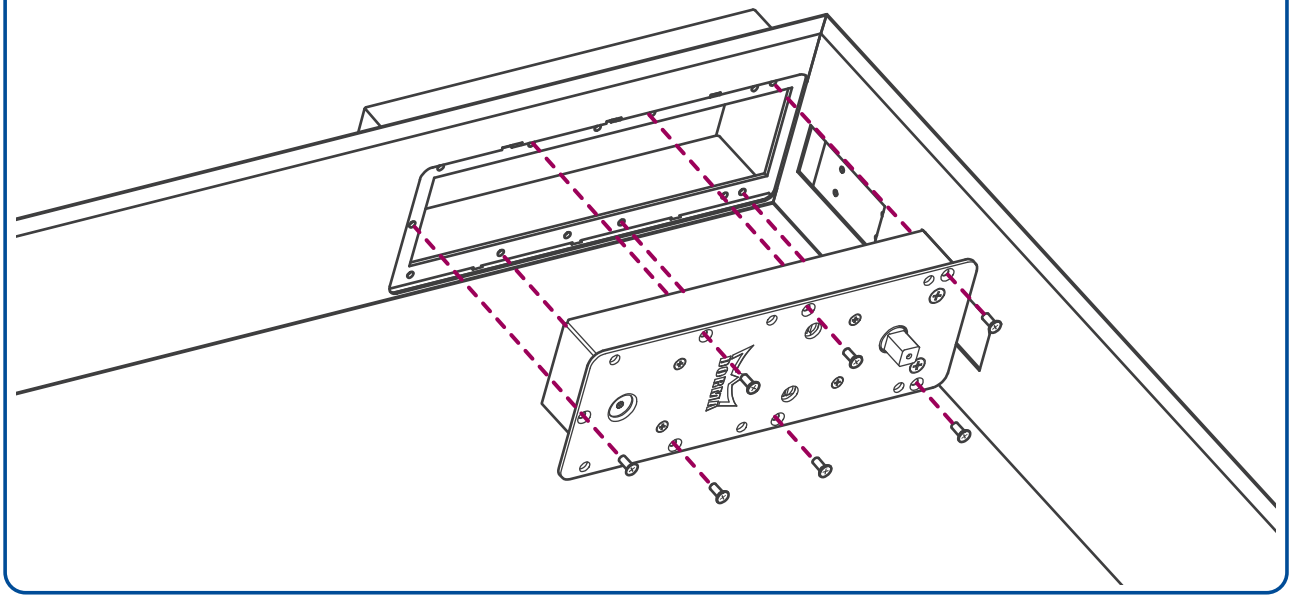
1.5 – Closer Preparation – Typically factory fitted

1. Remove the adhesive backing from the Closer intumescent wrap.
2. Initially apply the intumescent to the top of the closer body and proceed to carefully fold the intumescent wrap sides downwards to enclose the body of the closer.
3. Care should be taken to ensure that none of the wrap covers the fixing holes on the closers base plate.



1.6 – Fitting the Closer – Typically factory fitted

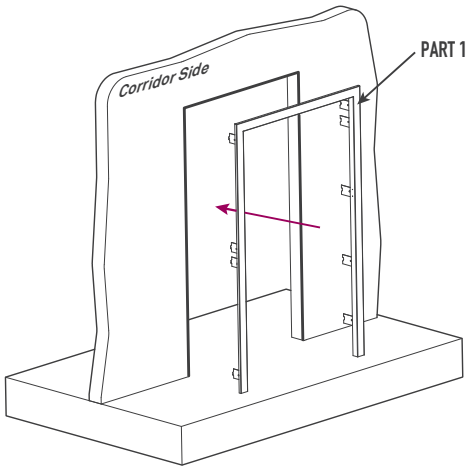
1. Using the 7No Countersunk M5 x 10 No2 Pozi machine screws, fix the closer into the frame as shown. The closer has matching countersunk holes to accept the screws.



STEP 2 – Fitting Part 1

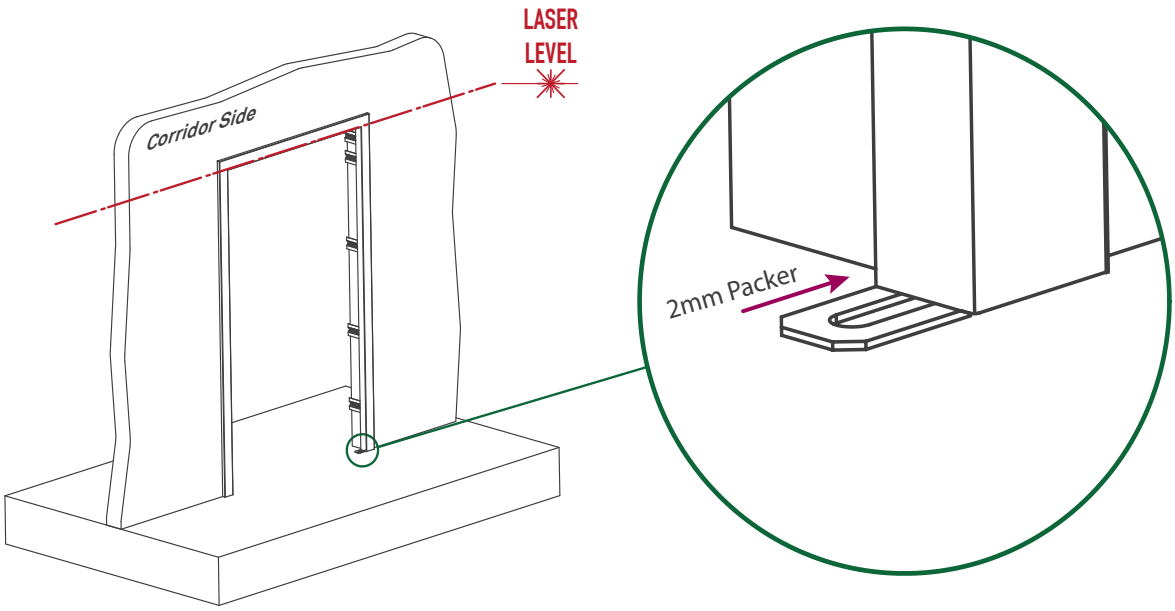
2.1 – FIRST FIT

1. Offer PART 1 up to the structural opening. The frame should fit within the opening with a clearance of 5-10mm at each jamb.
2. Inspect the fixing locations to ensure a suitable fixing can be secured. If fixing is not possible further preparation to the opening may be required.



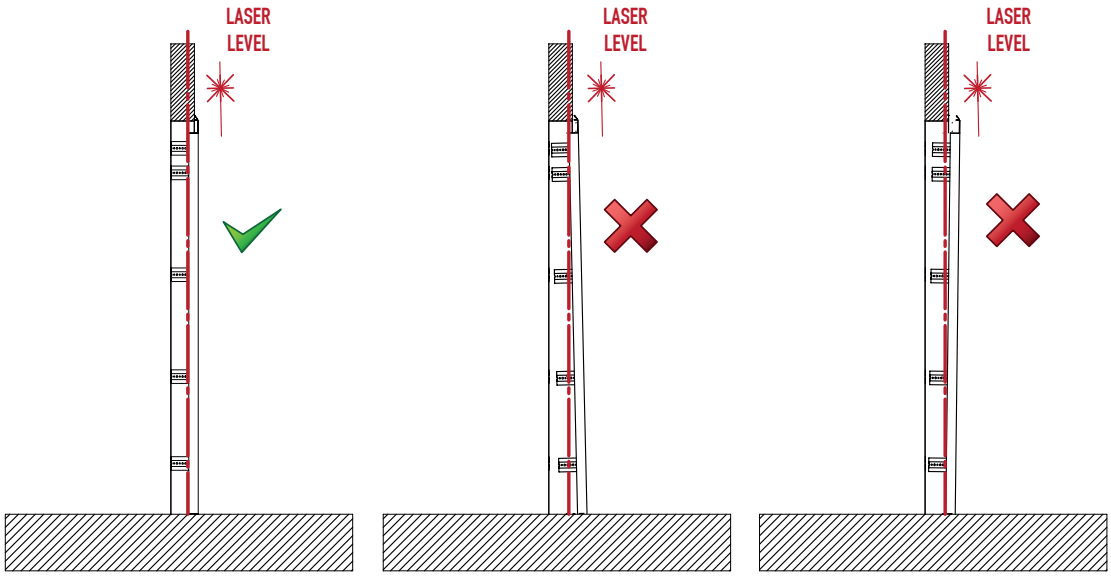
2.2 – Offering PART 1 in to Opening

1. With the frame in place slide a 2mm packer under the closing and hanging jamb to begin with. This will allow frames to slide together with ease.
2. Align the laser level with the head of the frame as shown. Adjust the packers as required to level the frame. Leave a minimum of 2mm of packers.



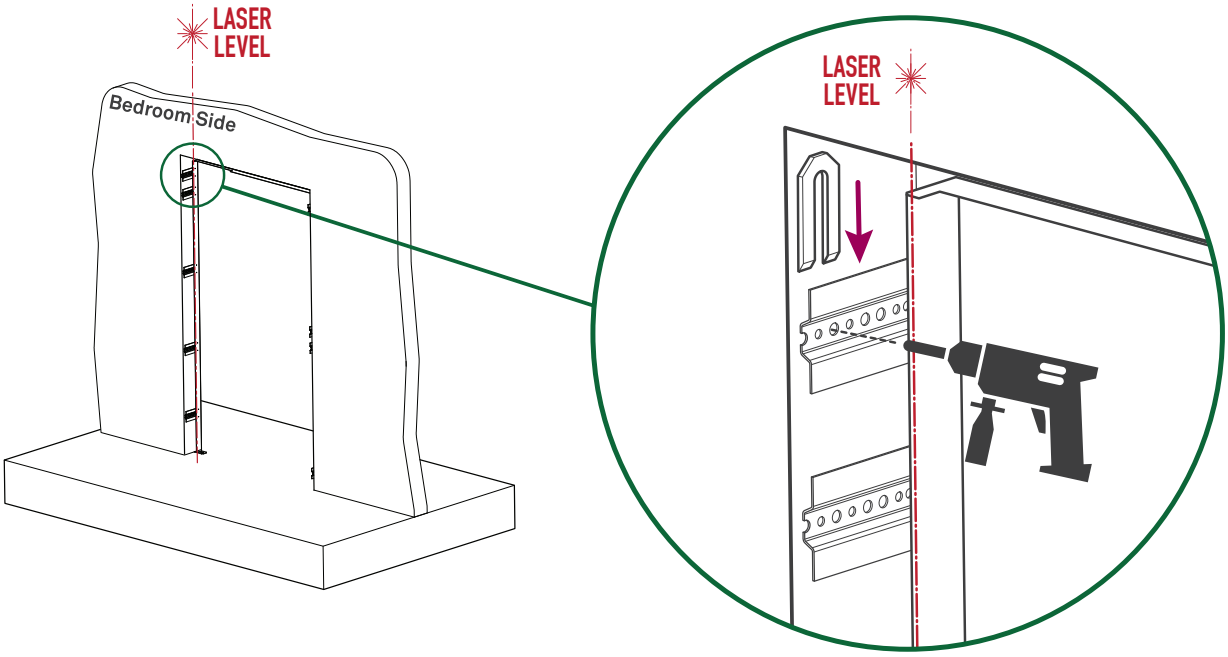
2.3 – Vertically Level PART 1

1. Position the laser level in the door opening. Align the laser with the edge of PART1 on the hanging side.
2. Ensure the frame is in line with the laser. Depending on the level of the wall surface the architraves may not make contact with the wall consistently. The architrave should make contact with the wall at one point at least.



2.4 – FIRST FIX PART 1 IN TO OPENING

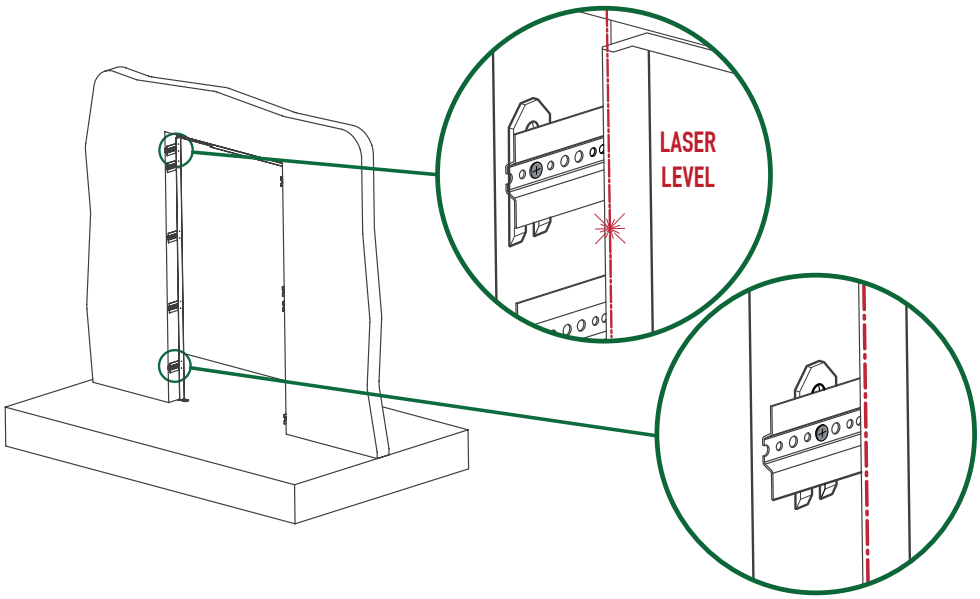
1. While holding the frame in place in line with the laser as shown (clamps may be required). Select the hole on the fixing bracket which has the best fixing opportunity. Pilot or drill the opening depending on its construction and fixing.
2. Insert a 5mm packet behind the bracket. This will be used for adjustment later.
3. Fix using an appropriate fixing.



2.5 – Vertically Level PART 1

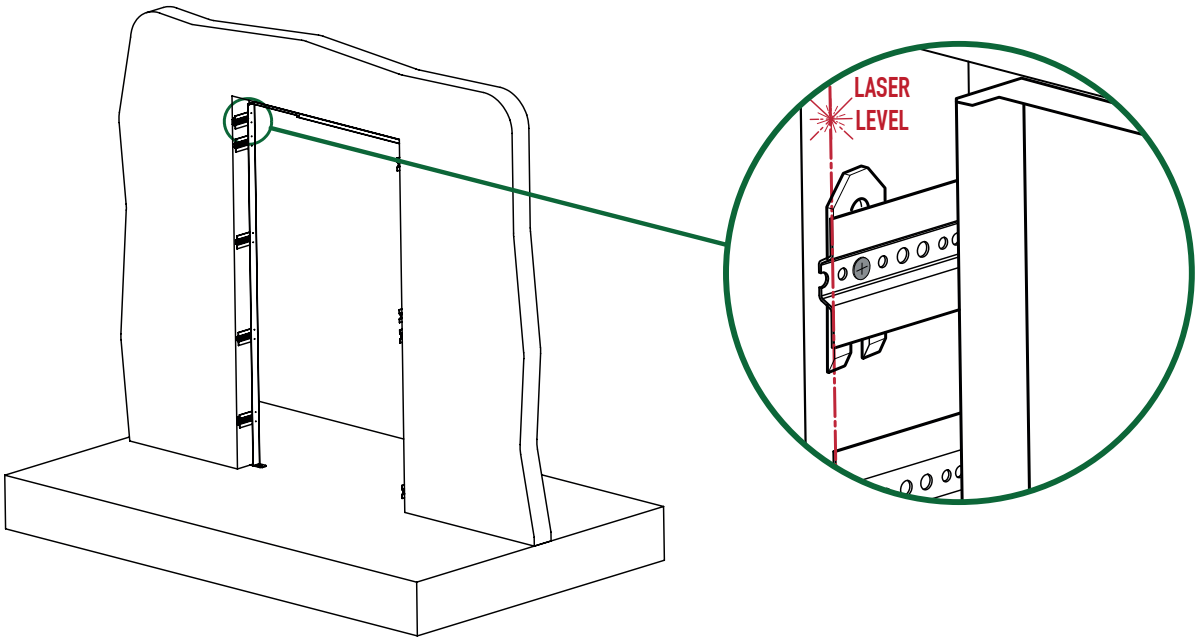
Repeat the fixing process shown in step 2.4, this time with the bottom bracket.

Ensure the edge of **PART 1** is aligned with the laser level as before.



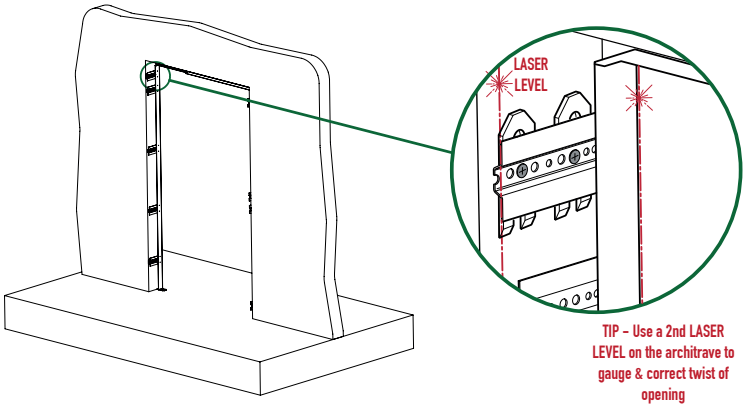
2.6 – Align and fix Brackets

1. To ensure the frame jamb is installed straight the brackets must be in-line. This is critical to the correct operation to the door.
2. Align the Laser level with the TOP bracket end on as shown.



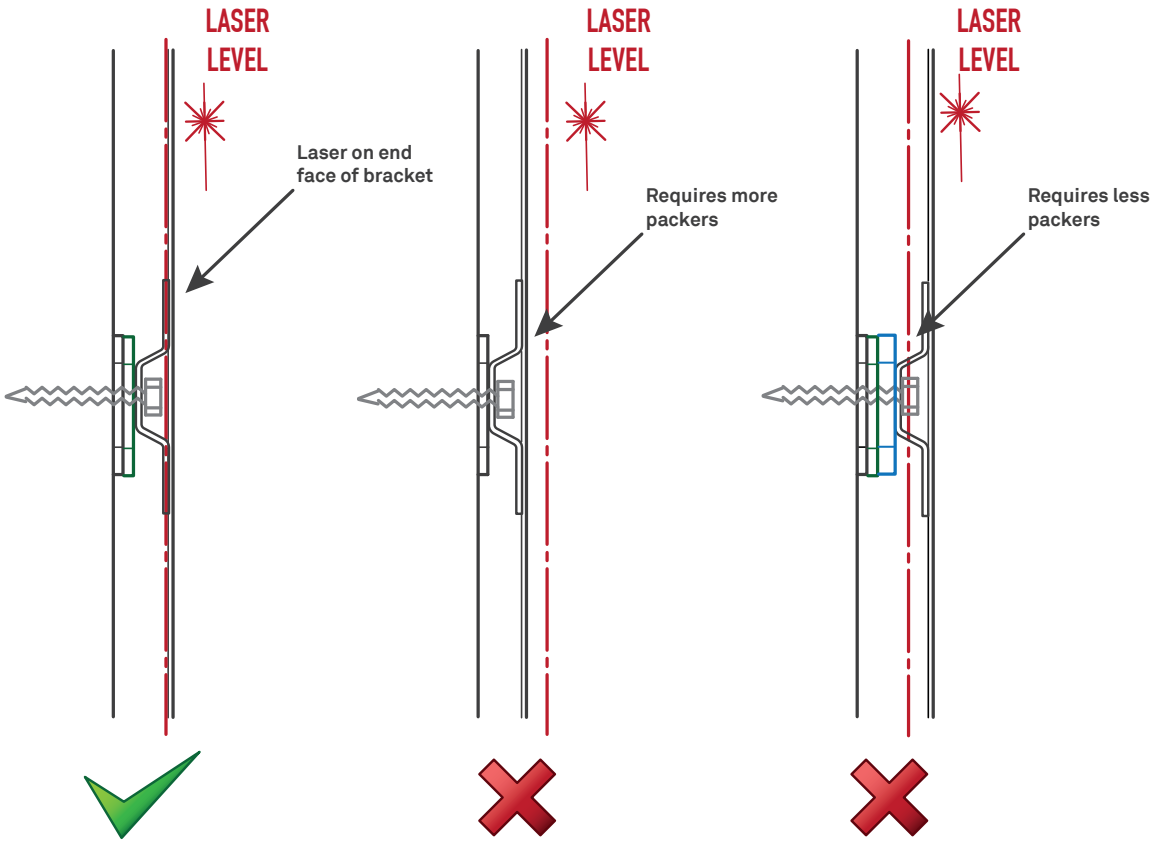
2.7 – Align and fix Brackets: deep walls

1. If the wall is greater than 150mm deep, add a second packer to ensure the frame jamb is installed straight and in-line. This is critical to the correct operation to the door.
2. Align the Laser level with the TOP bracket end on as shown.



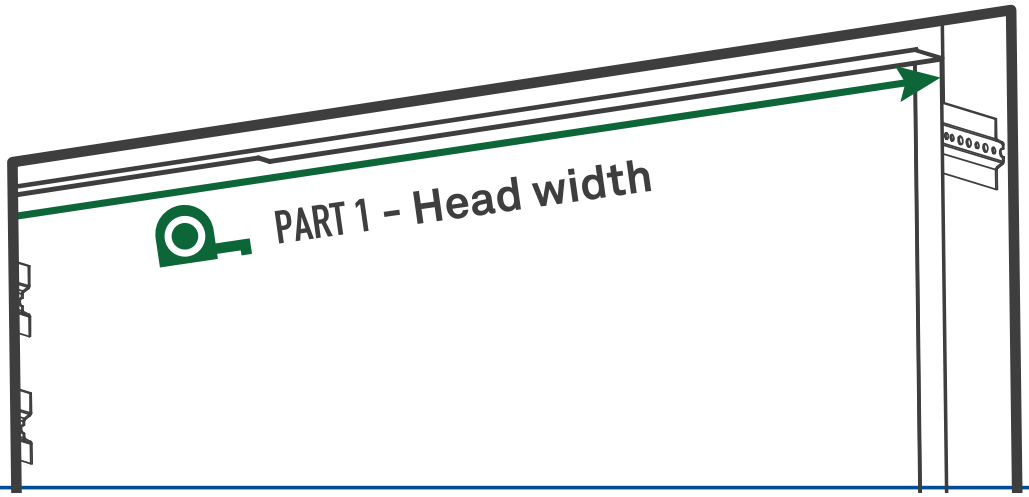
2.8 – Align and fix Brackets Continued

1. Working from the top bracket downward, insert fixings at the bracket locations. **DO NOT TIGHTEN YET**.
2. Apply the correct size of packer between each bracket and the opening so that the laser line lands on the end of the bracket.
3. Once all bracket ends are in-line tighten the fixings.



2.9 – Measure PART 1 Head Width

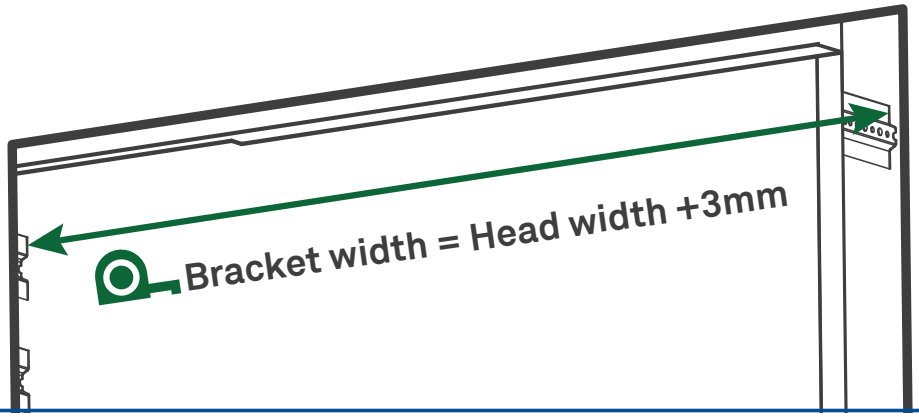
1. Measure the opening width of **PART 1** as close to the head as possible. This dimension will be used to calculate the correct bracket spacing.



2.10 – Setting The Correct Top Bracket Width

1. Starting with the top bracket, insert packers and apply fixing, **DO NOT TIGHTEN YET**.
2. Using the measurement taken in step 2.9, **ADD 3MM ON TO THIS**.
   This is the desired distance from the hanging side bracket to the closing side bracket.
   This will ensure the opening width of the finished frame is correct.

ANY INCORRECT INSTALLATION AT THIS POINT MAY RESULT IN INCORRECT DOOR GAP SIZES.



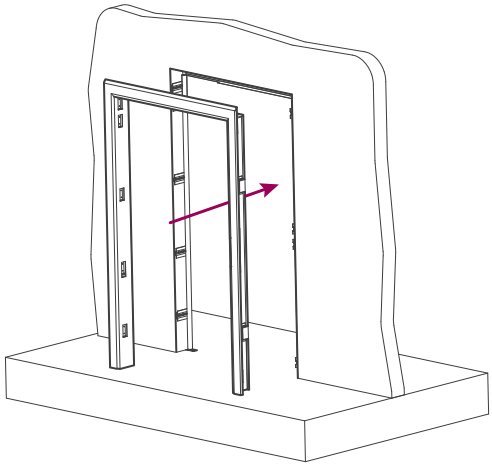
2.11 – Level Frame and align brackets – Closing side.

1. Repeat Steps 2.5 to 2.7 on the closing side brackets.
2. At this point check to ensure the **PART 1** opening width is consistent and brackets are correctly spaced. **THIS CAN BE ACHIEVED BY USING A LASER MEASURE** or by cutting a piece of timber to the opening width dimension and offering it up to the frame at multiple heights.

STEP 3 – Fitting PART 2

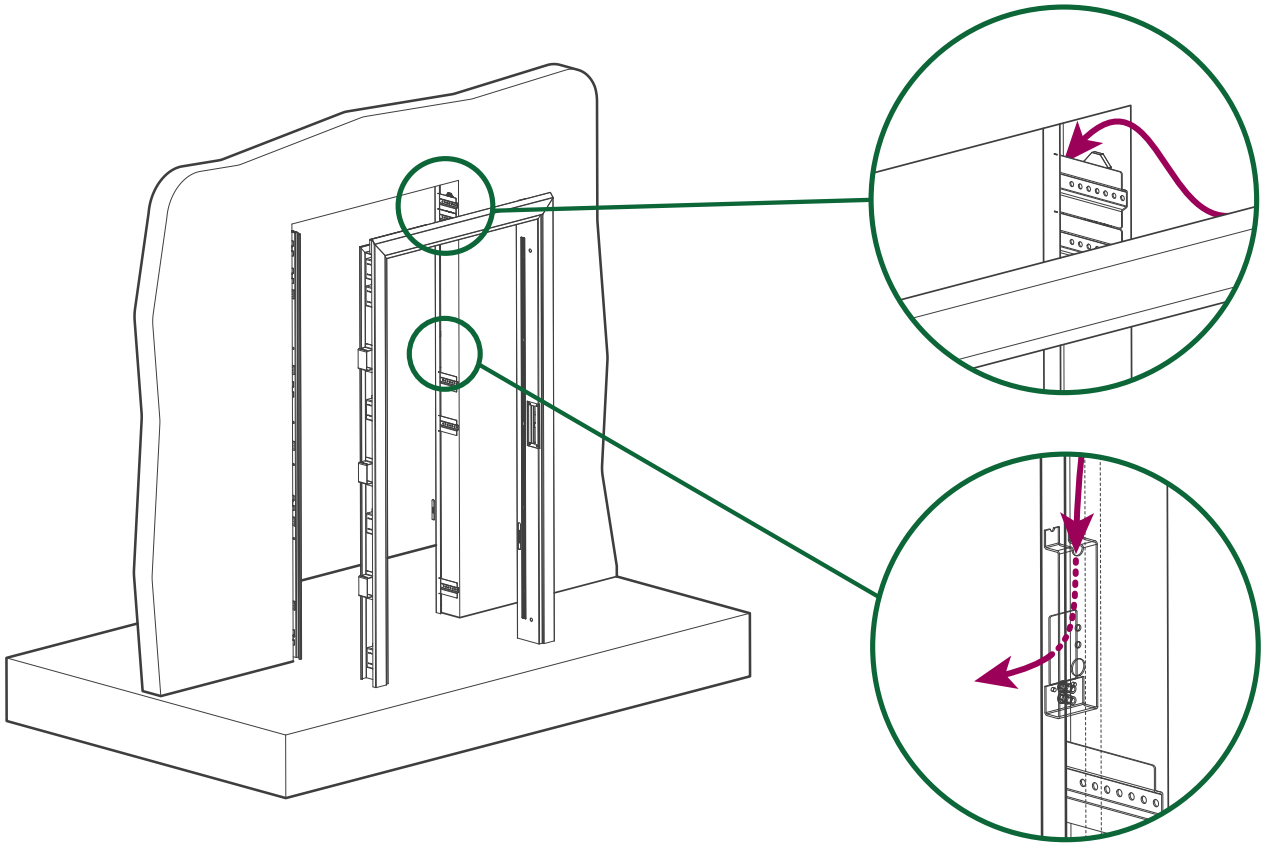
3.1 – Offer up PART 2

1. Offer up **PART 2** of the frame.
2. Slowly insert **PART 2** into **PART 1** ensuring all brackets are engaging. Brackets on PART 2 should sit inbound of the brackets on **PART 1**.
3. Installation of **PART 2** should not require clamps or excessive force.



3.2 – Positioning the cable

1. Position part 2 close to the opening
2. Withdraw the bowden cable from behind part 2 and feed the loose end over the uppermost anchor bracket.
3. Slide the cable behind part 1 architrave and pass down through the cut out as shown. The cable must be visible and free to move.
4. Slide part 2 into the opening, avoiding cable snagging.



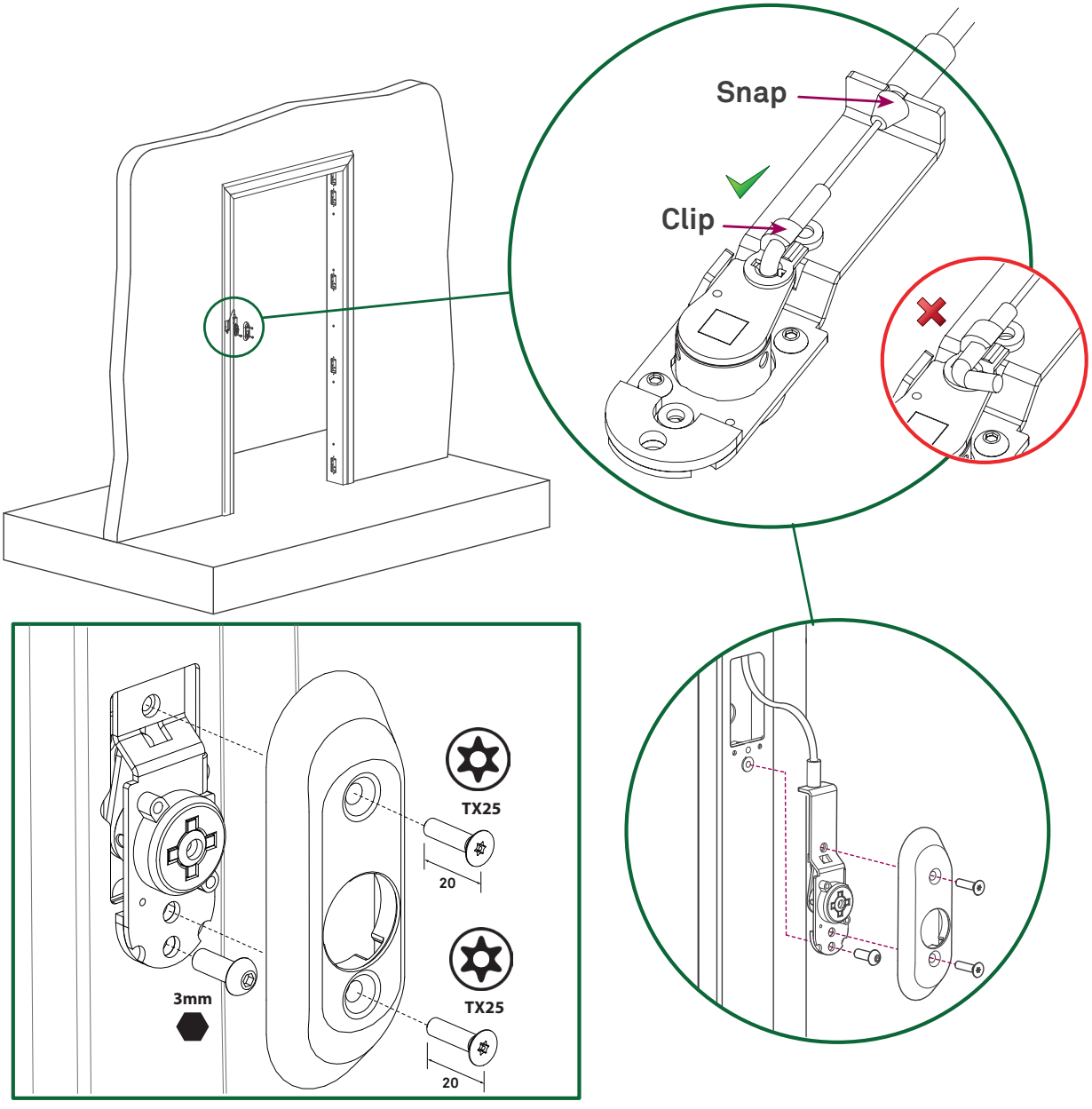
3.2 – POSITIONING THE CABLE CONTINUED

5. Locate the cable L-fitting into the plastic retainer clip.

6. Snap the black cable fitting into the bracket as shown.

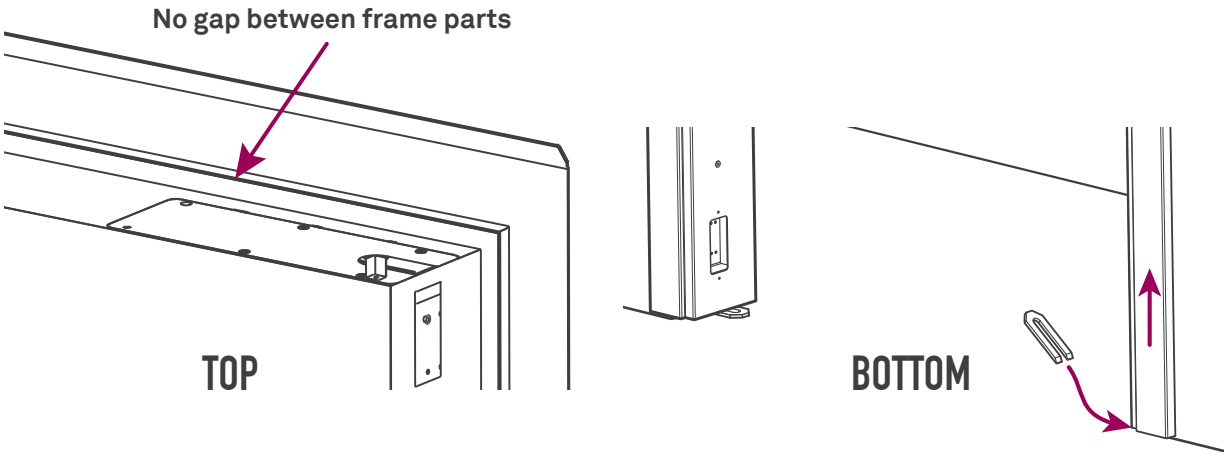
7. Slide the assembly up into the frame and secure with the 3mm button head machine screw in the lower threaded insert.

8. Fit the cover plate with 2no. 20mm csk Tx25 machine screws



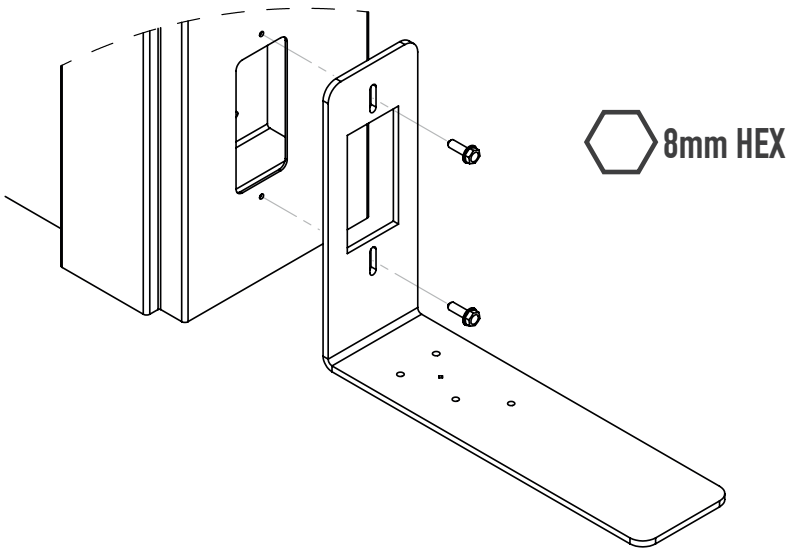
3.3 – Check Frame Horizontal level

1. Once **PART 2** is fully inserted there should be no gap between **PART 1** and **PART 2** at the frame head.
2. If a gap is present adjust the packers at the bottom of the frame jambs to raise **PART2** and level the frame.



3.4 – Fit floor plate template

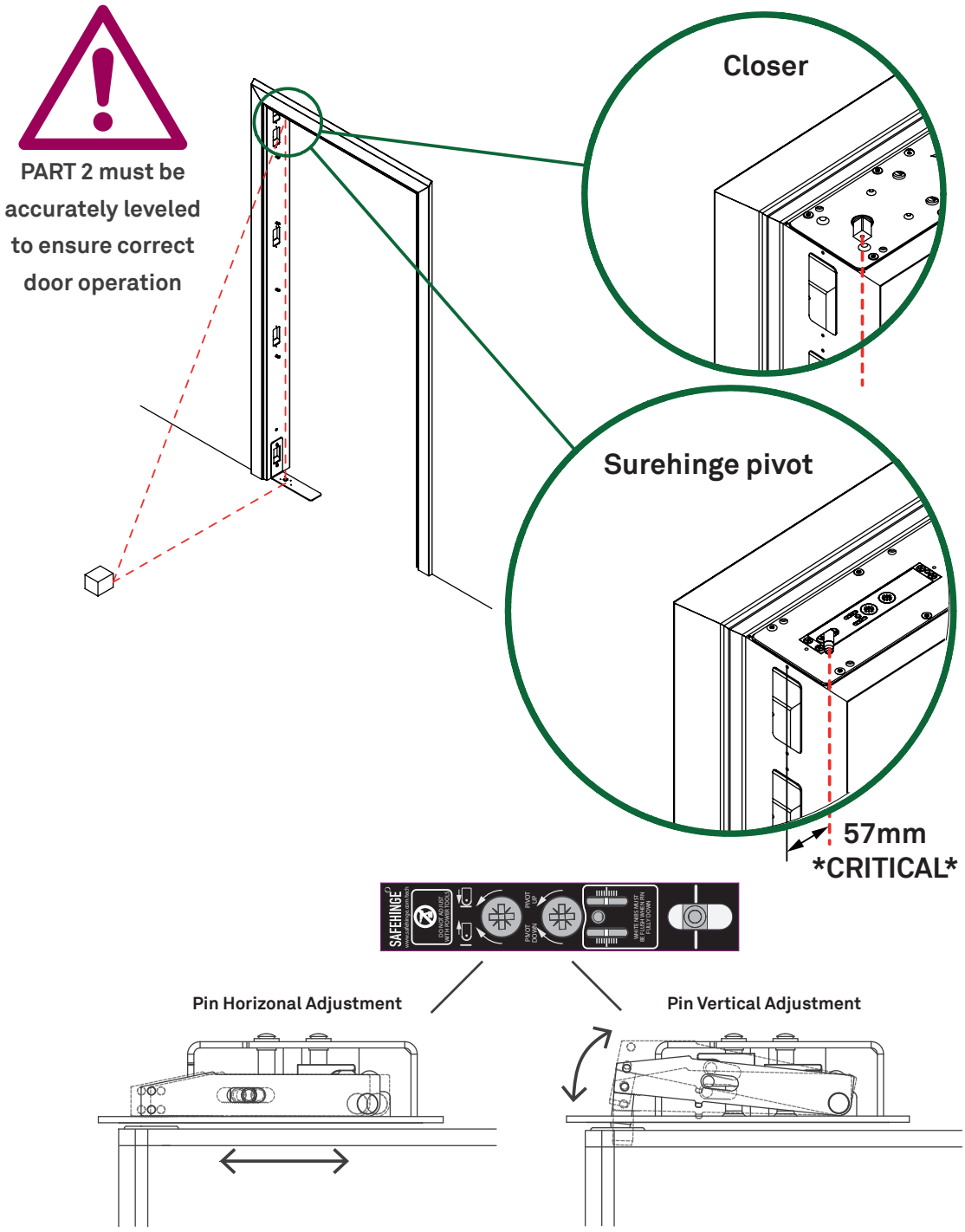
1. Insert **PART 2** until the architraves meet the wall surface.
2. Fit SHC70-801 Floor plate drilling template to the bottom of the hanging side frame leg. Secure using 2no. 8mm hex drive self drilling fixings. Ensure template meets the floor.



PART 2 must be accurately leveled to ensure correct door operation

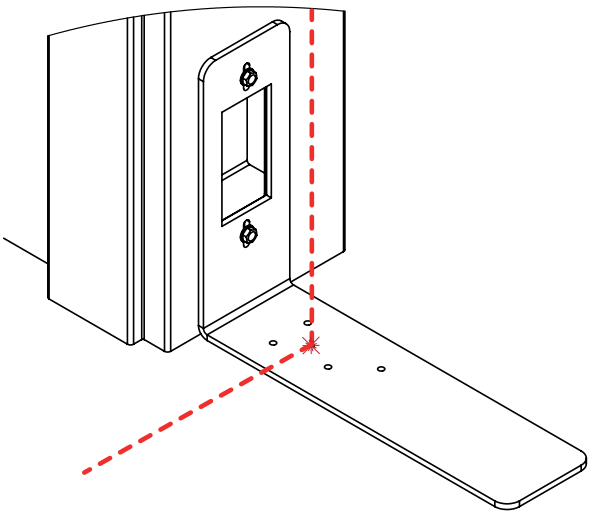
3.5 – Level PART 2 Hanging side

1. Set laser level perpendicular to frame and align with closer spindle centre OR Surehinge pivot pin.
   NOTE: Pivot pin MUST be adjusted to **57mm** offset from frame.



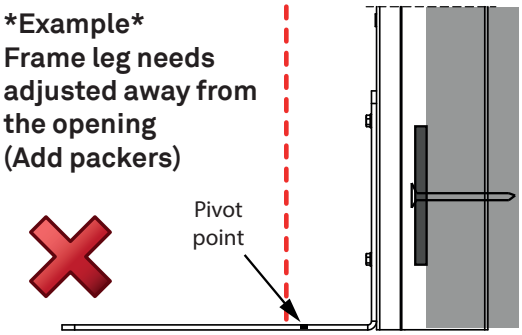
3.5 – Level PART 2 Hanging side – Continued

2. Check if the laser aligns with the 'pivot point' on the template. If not, adjust the frame leg in or out by removing or adding part 1 packers

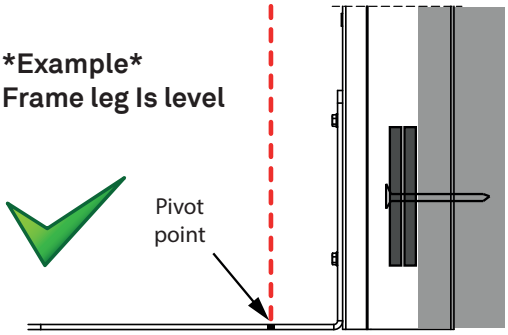


PART 2 must be accurately leveled to ensure correct door operation

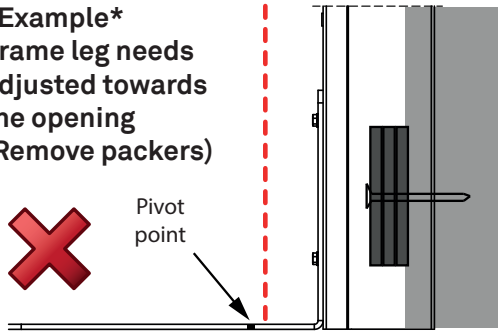
Example
Frame leg needs adjusted away from the opening (Add packers)



Example
Frame leg Is level

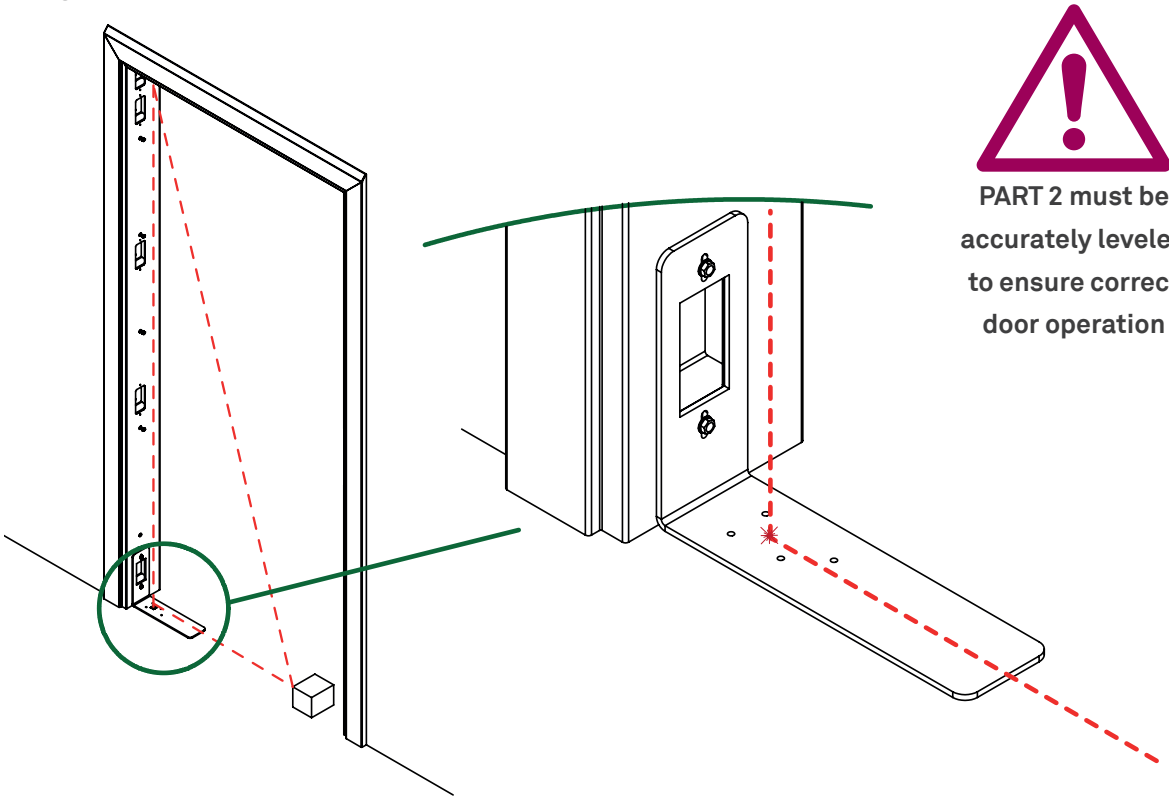


Example
Frame leg needs adjusted towards the opening (Remove packers)



3.5 – Level PART 2 Hanging side – Continued

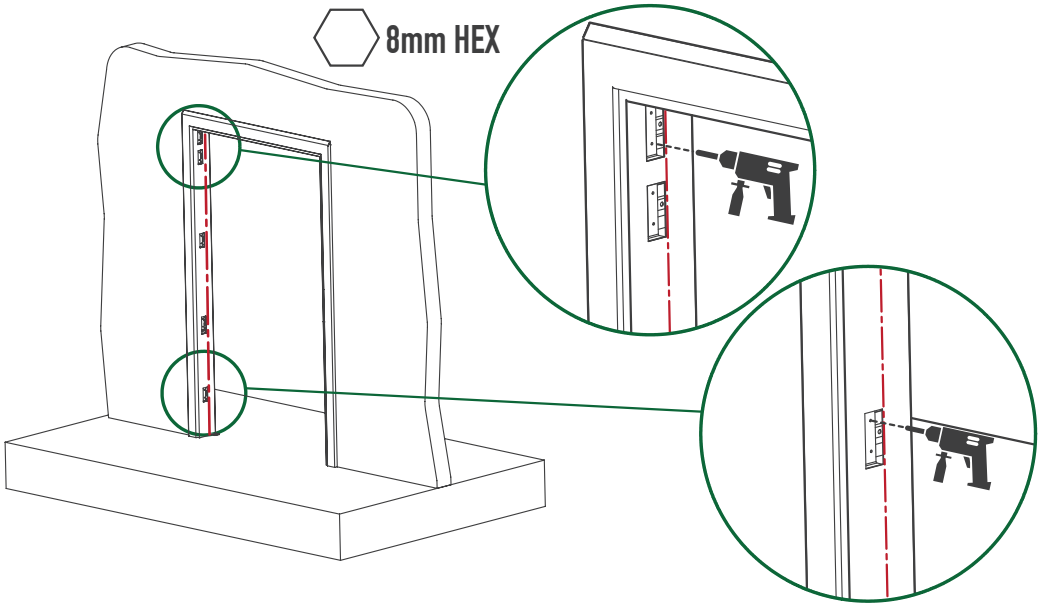
3. Move laser level into the frame opening and align again on the top pivot point.
4. Check if the laser aligns with the 'pivot point' on the template. If not, adjust the frame leg left or right.



PART 2 must be accurately leveled to ensure correct door operation

3.6 – Fix PART 2 Hanging side

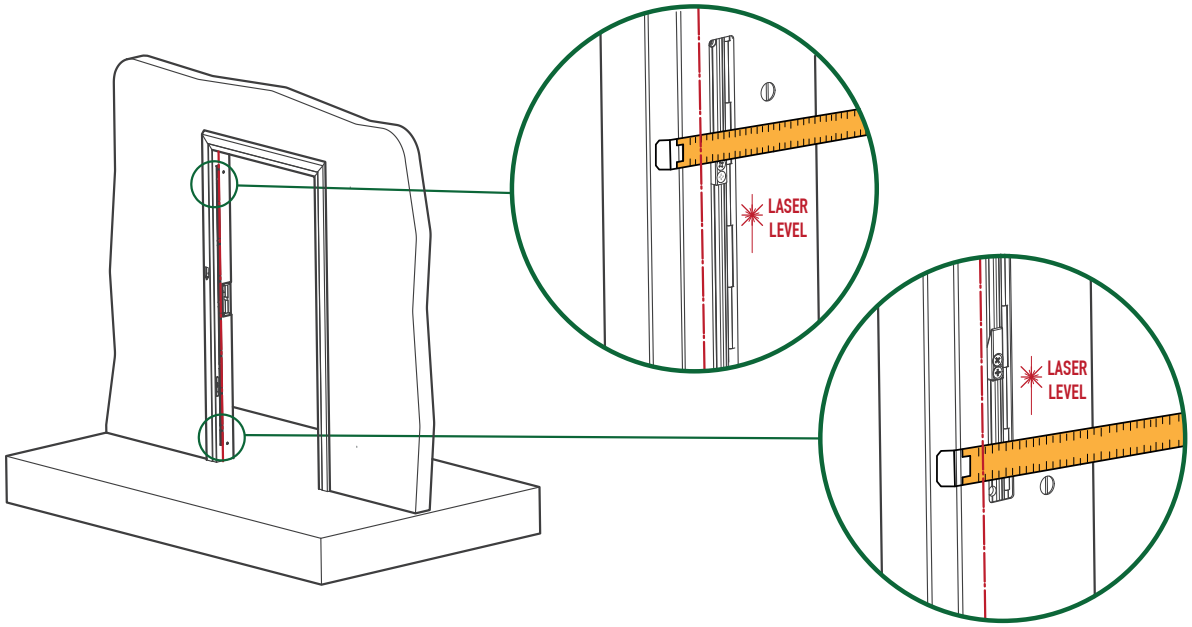
1. With the frame correctly positioned and no gaps present between **PART 1** and **PART 2,** apply a 8mm hex drive self-drilling fixing to each of the 5 bracket locations. This will fix the position of the frames therefore care must be taken to ensure its correct position.



3.7 – Level PART 2 closing side

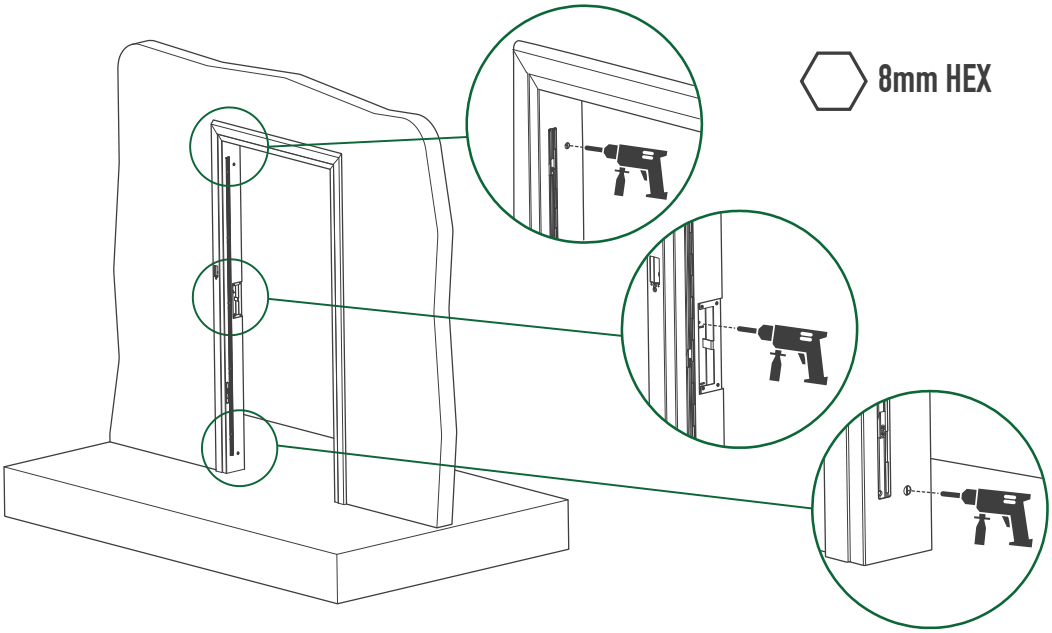
TIP: For frames with integral stops, wait until the door is hung before inserting all fixings - using the door to gauge level against the stop face

1. Level the closing side using the door stop cut out for reference
2. NOTE: If the steel frame does not have the integral door stop, use a tape measure as a reference.



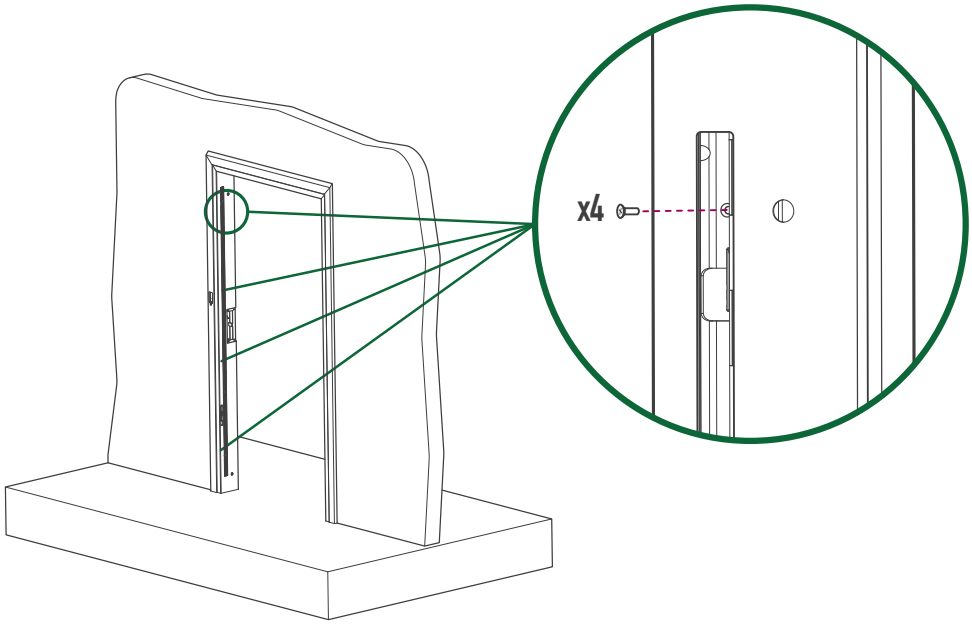
3.8 – Fix PART 2 closing side

1. Ensuring the frame remains level, fix the closing side top and bottom with 2No 8mm hex drive self-drilling fixings. Pilot holes have been predrilled in the bracket on **PART2** of the frame. The fixings should be located into these pilots to ensure correct location.
2. Add central fixing behind the strike plate - 1no. 8mm hex drive self drill
3. Care should be taken not to damage the frames during the fixing process.



3.9 – Fix PART 2 closing side – Behind the door stop

1. Further fixings points are located behind the integral door stop. Rotate the stop inward to access.
2. Fix using 4no. PH2 csk self drilling fixings.



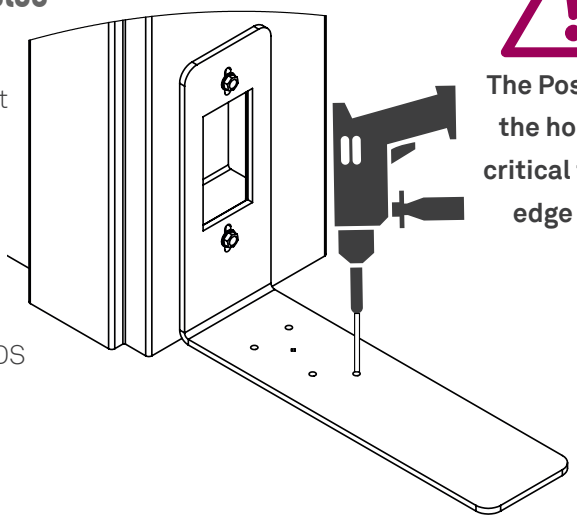
STEP 4 – Fitting the Floor plate

4.1 – Drill the floor plate fixing pilot holes

1. Final verification on laser level pivot point
2. Kneel/stand on template and drill 4no. pilot holes

Timber floor = 3.5mm pilot holes

Concrete = 4mm pilot holes (non SDS masonry drill bit). Pilot holes will reduce the risk of an SDS drill wandering.

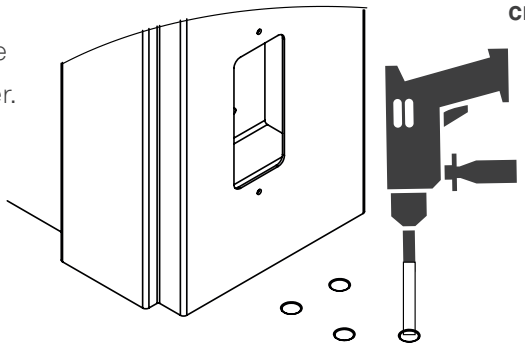


The Position of the holes are critical for door edge gaps.

4.2 – Drill the floor plate fixing plug holes

1. Remove and retain floor plate template
2. If fixing to concrete, Open the 4 holes up to 7mm to a depth of 40mm.

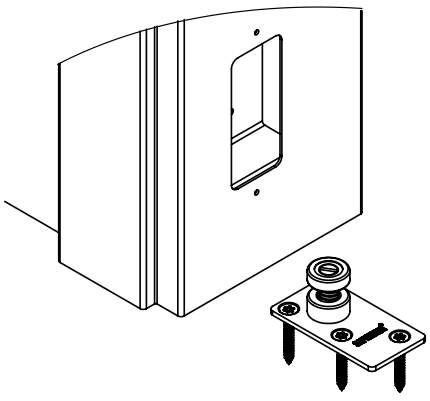
TIP: If in doubt, drill 2 holes initially, offers the opportunity to re-position the floor plate later.



The Position of the holes are critical for door edge gaps.

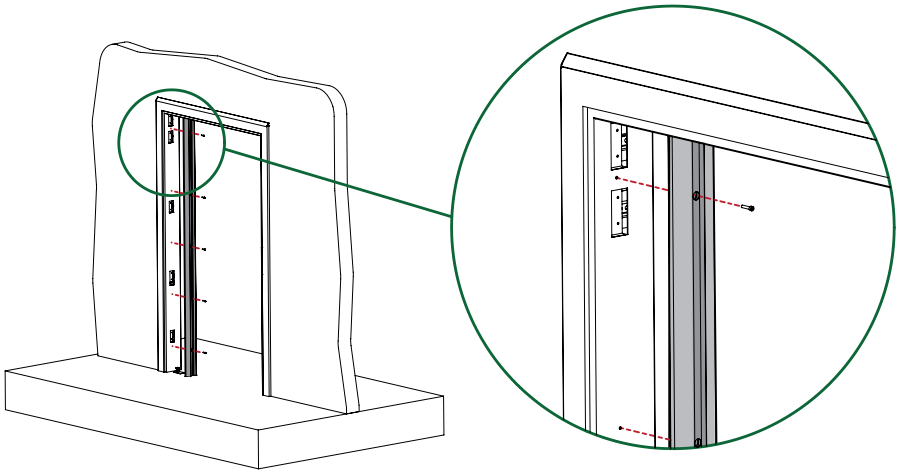
4.3 – Fix the floor pivot

1. Fix the floor pivot with the plugs and screws provided. (Tx30)
2. Fit the bearing assembly. If the extended bearing is being used a clearance hole may be required in the floor to allow for full adjustment.



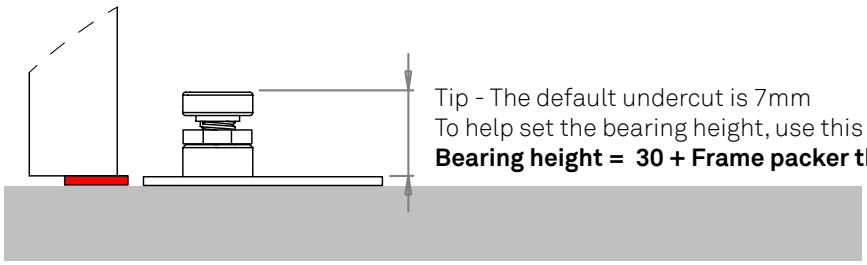
4.4 – Refit PART 3

1. With the cover plate held in place offer up PART 3 and loosely fix by inserting the four M5x20mm Hex screws.
2. To fix **PART 3** lift the component upwards so it makes firm contact with the cover plate of the closer and tighten the fixing screws.
3. Remove the closer cover plate and install the 20x4mm smoke seal intumescent in the channel on **PART3**.

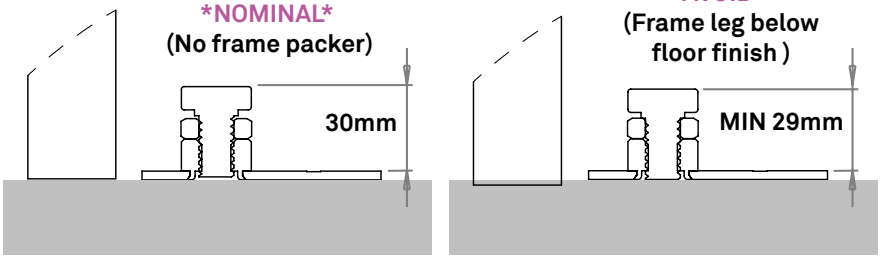


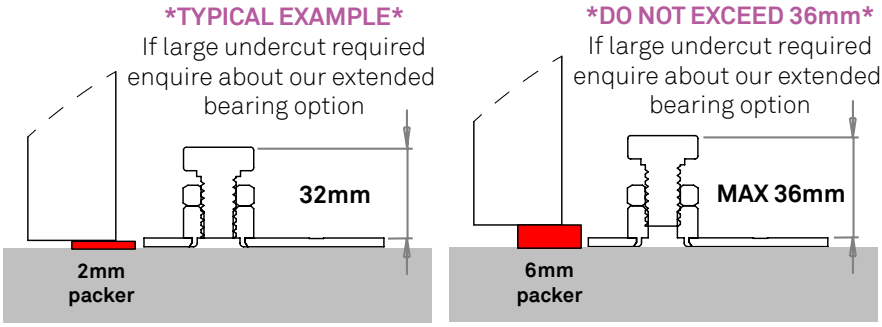
4.5 – Setting the floor pivot height

1. To avoid lifting the door on and off, the pivot height can be calculated by measuring the bearing extension as below. This method will typically get within a few mm of the correct height where the frame head gap is 2-4mm

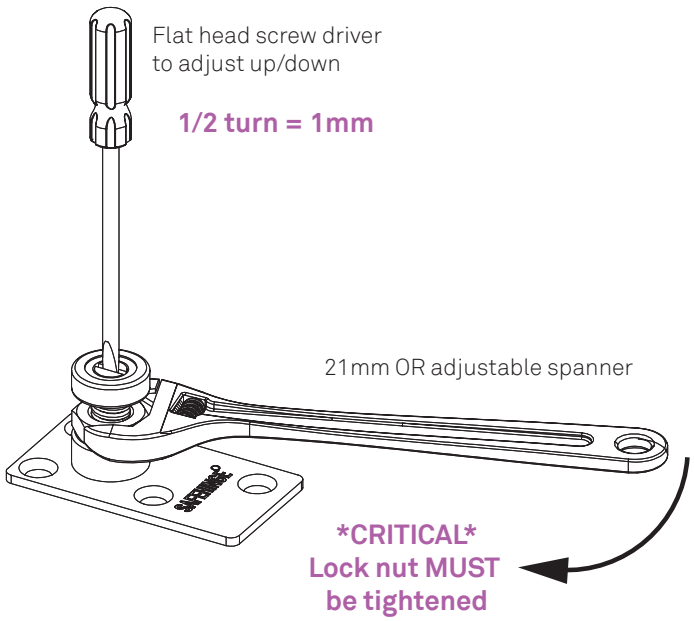


Tip - The default undercut is 7mm
To help set the bearing height, use this calculation
Bearing height = 30 + Frame packer thickness



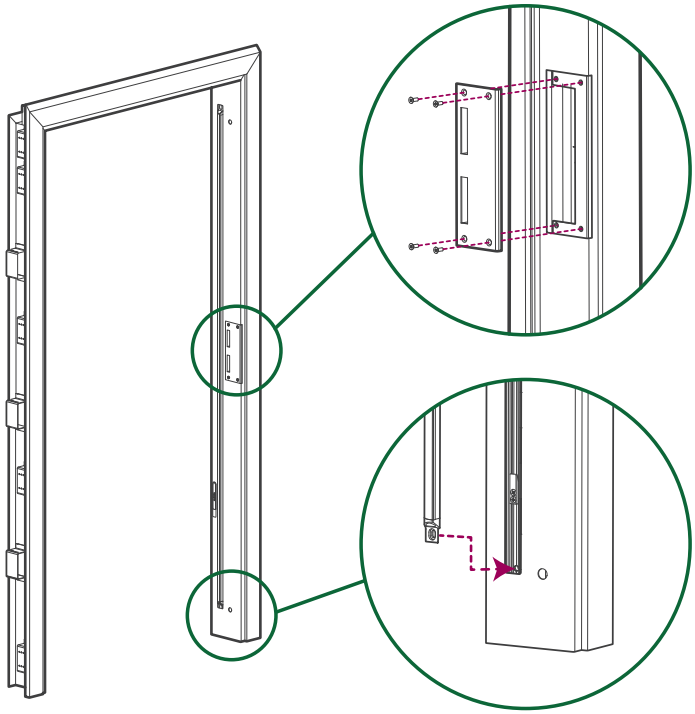


2. Adjust the bearing up and down to the desired height
3. Use an adjustable spanner to tighten the lock nut - This is essential for door rotation and stability



4.3 – REFIT STRIKE PLATE & STOP

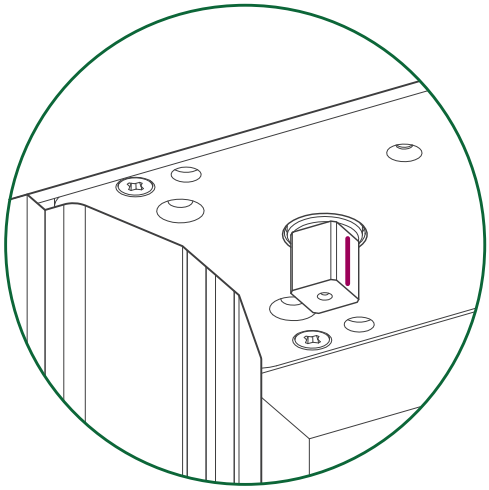
1. Re-fit the strike plate using the M4 Tx20 csk fixings provided.
2. Re-fit the door stop using the M5 Tx25 button head machine screw provided.



STEP 5 – Door installation

5.1 – Mark Spindle Zero Position

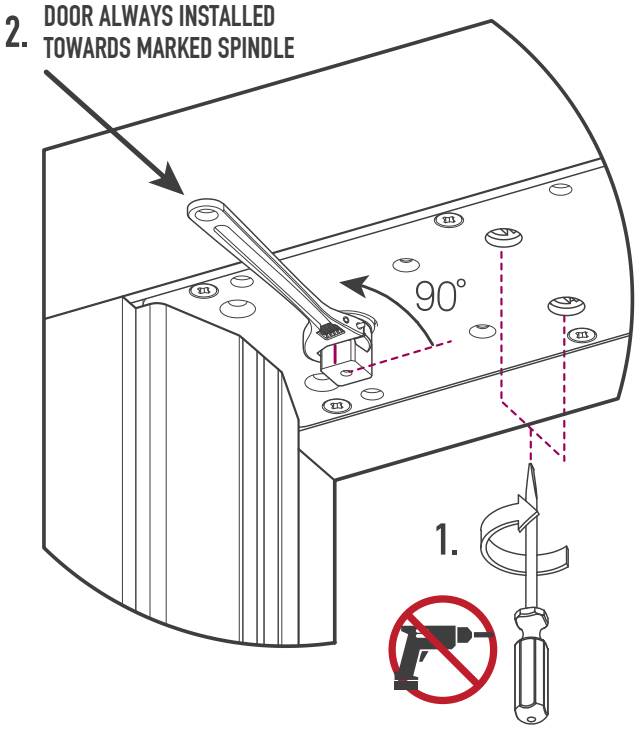
1. Mark the spindle zero position with a permanent pen - this will help ensure the spindle is in the correct orientation relative to the door.



5.2 – Crank the Spindle

1. Tighten the closing speed valves using a small flat head screw driver.
   DO NOT USE A POWER TOOL.
2. Using a 14mm or adjustable spanner, crank the spindle approximately 90° in direction of door hanging. The spindle can creep back slowly so keep an eye on the zero position marked earlier on the spindle.

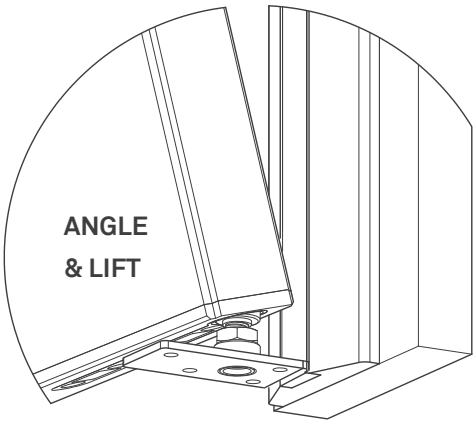
   TIP: It is normally easier to install the door in the direction of closer offset.



5.3 – Mounting the door

1. Remove aluminium profiles from the door to access the end load top strap.

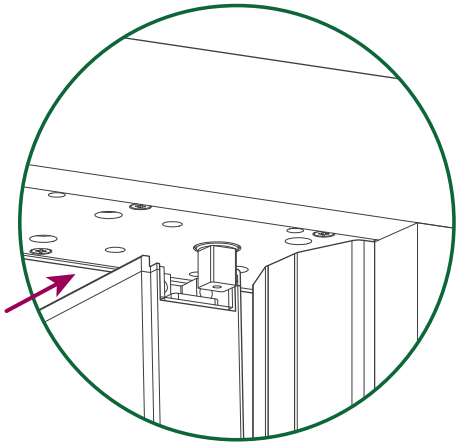
   CAUTION: HEAVY DOOR
   2 PERSON OPERATION
2. Position the door at 90° to the frame. Angle the door inside the frame and lift onto the bottom pivot.
   AVOID excessive door angle as this can damage the bottom pivot bearing.



5.4 – Guiding on the door

1. Guide the door onto the closer spindle. Remember to install towards the marked spindle.

   TIP: One person hold the door and the second guide the door while instructing angle correction.

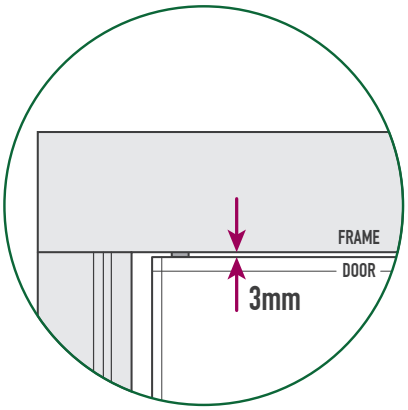


5.5 – Check the head gap

1. Check the head gap and adjust the bottom pivot bearing if necessary.

   The gap MUST = 3mm (2-4mm allowed)

2. Adjust the bottom bearing if required (See step 4.5)

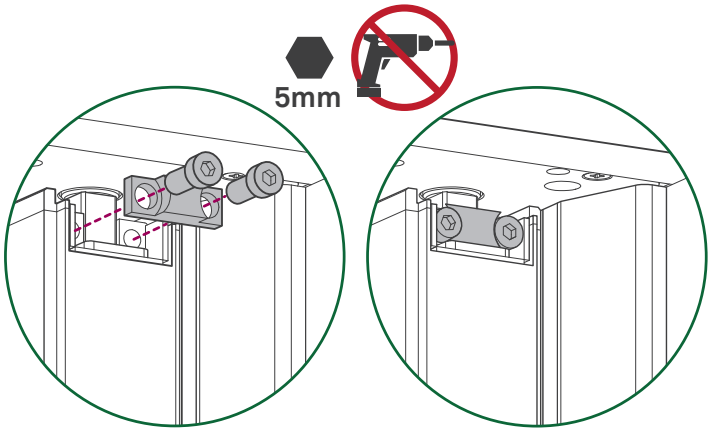


5.6 – Secure the door

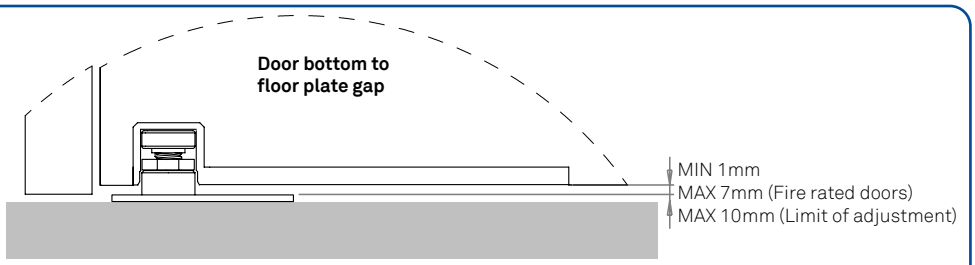
1. Lock the door in place with the end cap and black machine screws, using a 5mm allen key.

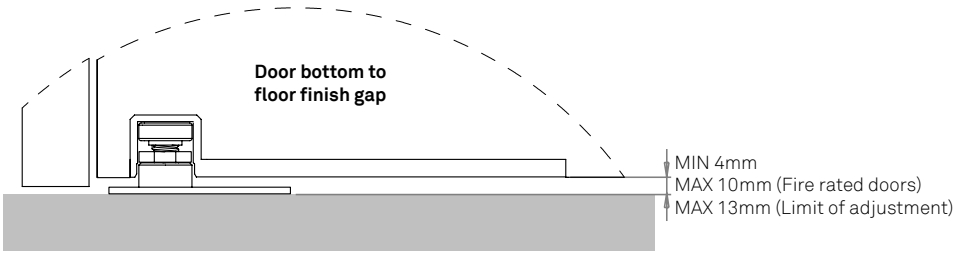
   DO NOT USE A POWER TOOL

2. Slacken the closing speed valves to allow the door to close. See step 5.2



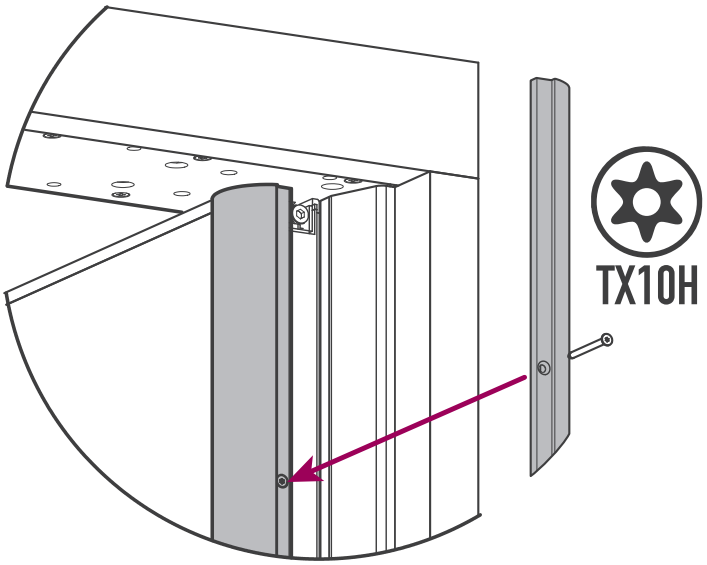
5.7 – Check the threshold gap





5.8 – Installing the profiles

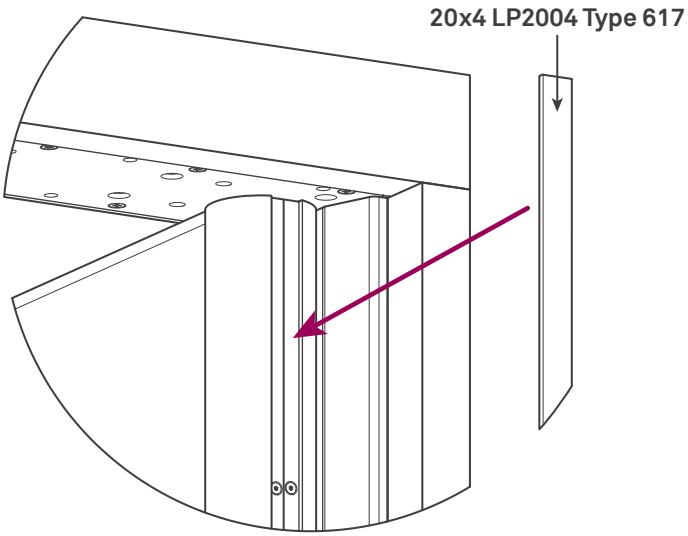
1. With the door open, re-install the aluminium profiles.
2. Fix the profiles with the supplied:
   12 x No.6 x 1 1/4" pin torx screws



5.9 – Installing Intumescent

1. Clean the profile rebate before installing the 20x4 self-adhesive intumescent strip.
   NOTE: Length = Door Height

DO NOT FIT A SMOKE SEAL ONTO THE PROFILE



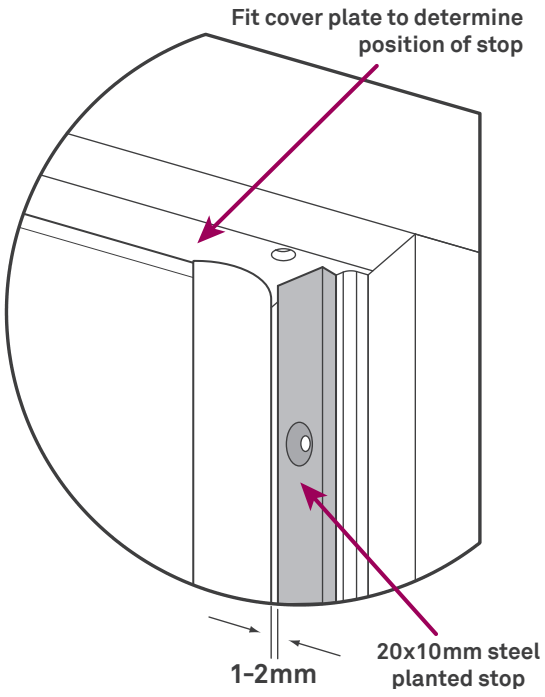
5.10 – Installing the Planted Stop

NOTE: Not required on corridor doors.

1. Align the stop with the top of PART 3
2. Fix at pre-defined locations using 5no. pan head self drilling fixings

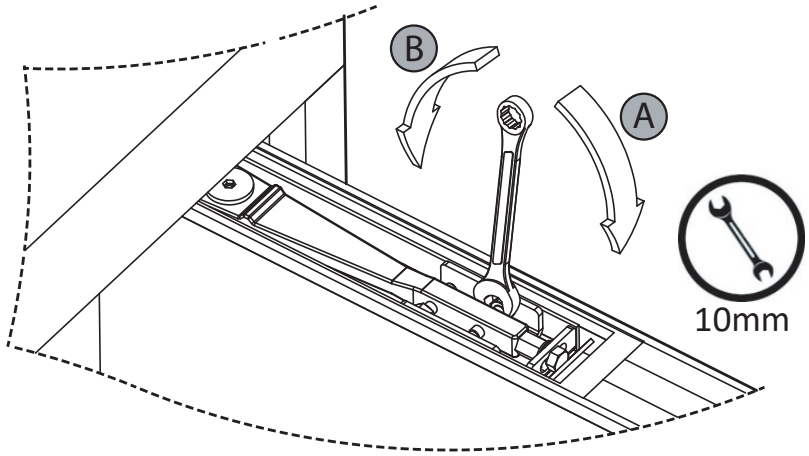
Tip: Temporarily fit closer cover plate and position the stop up to meet it. This will ensure the cover plate has the correct clearance to allow an accurate final fit later on.

Tip: Use a 1-2mm packer to space away from profiles. Use the packer to protect the profiles at fixing locations.



Closing angle adjustment – step by step

NOTE: ONLY IF REQUIRED

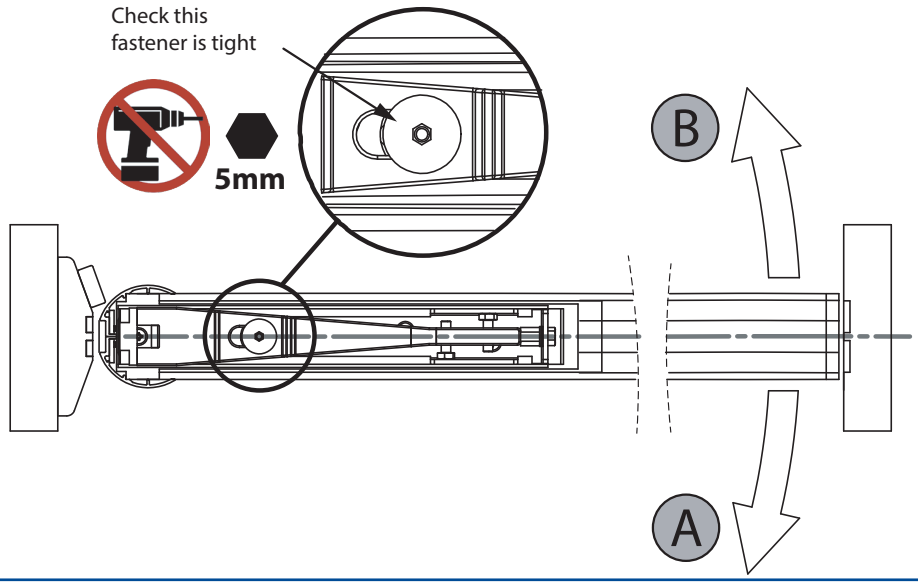


Step 1
Remove top strap cover plate if already fitted.

Step 2
Slacken 10mm bolt at the end of the arm

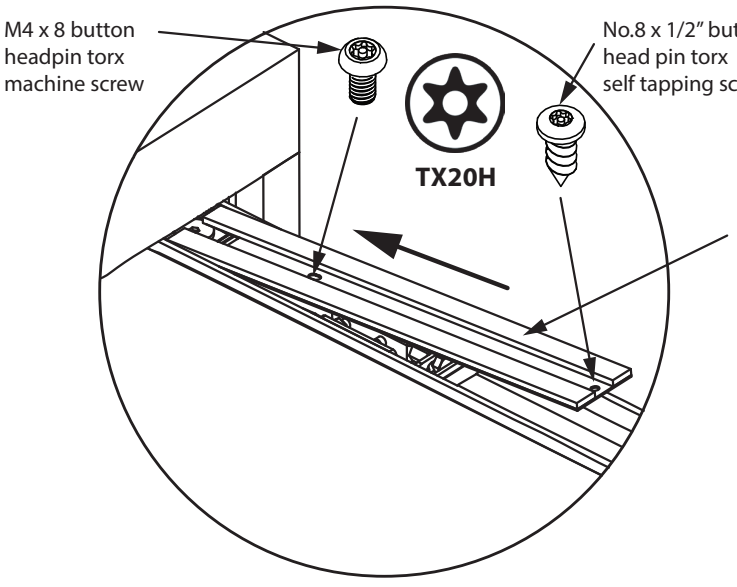
Never adjust the length of the arm as this will interfere with door rotation

Step 3
Adjust the 10mm bolts in/out to rotate the arm around the spindle.



Step 4
Allow the door to close and check zero position of lock OR against door stop

Step 5
Tighten all fixings



Step 6
Refit/install top strap cover plate
MUST be installed with intumescent seals pre-fitted
NOTE: for FD30/60 the door head MUST have continuous seals:
15x4 LP1004DS Type 617 (smoke seal)
15x4 LP1004 Type 617

Closing speed & force adjustment

5.13 – Closing Speed

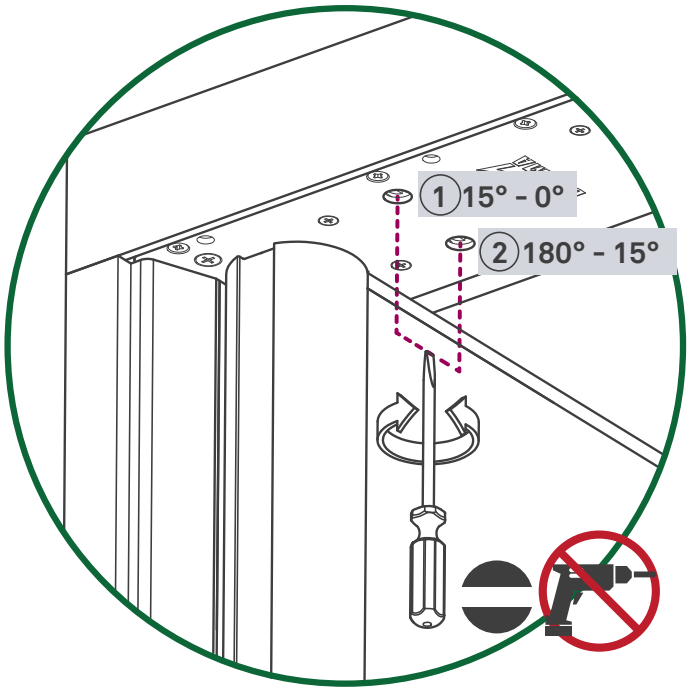
Adjust the opening / closing valves.

1. Latching speed 15º - 0º
2. Closing speed 180º - 15º

Note: Smoke seals add friction so it is best to adjust after all seals are installed.

Electronic closers do not have latching speed adjustment.

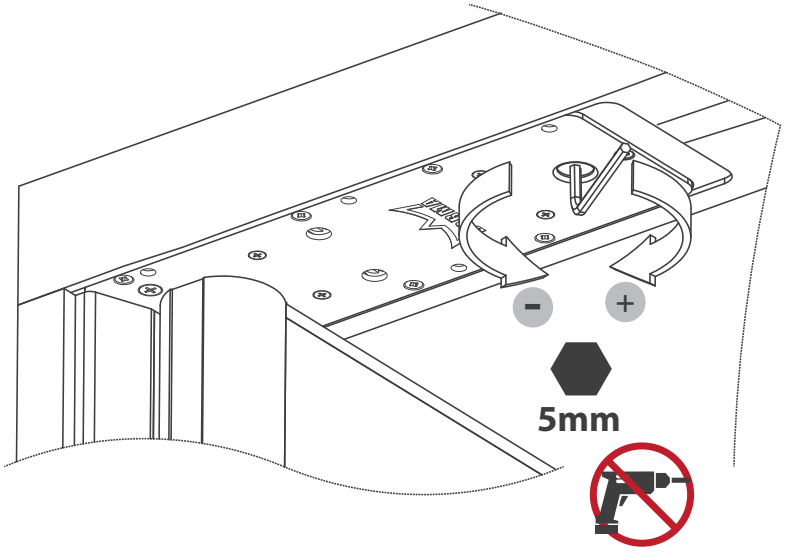
THIS WILL FORM PART OF THE MAINTENANCE PROCEDURE



5.14 – Closing Force

Note: Only applies to standard closer (S87).

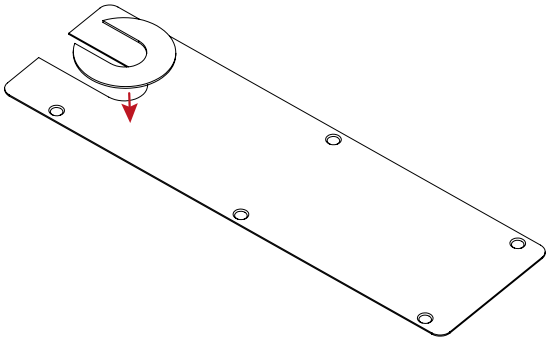
1. Adjust by tightening / loosening the closer spring using a 5mm allen key.
2. The closer is factory set at EN3 power but can be adjusted from EN1-EN4.
   Note: Minimum EN3 rating is required for fire performance.
3. For doors 950mm wide, adjustment might not be necessary, however opening forces must be considered along with adverse air pressure.
4. For doors 1100mm wide, Safehinge Advise increasing the spring force to ensure the door closes from any angle. Again, opening forces must be considered along with adverse air pressure.



Step 6 – Final fit

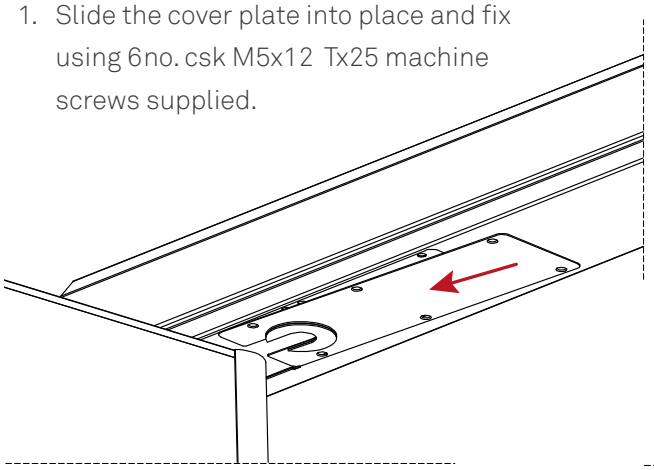
6.1 – Fit ANTI-LIGATURE WASHER/S To closer cover plate

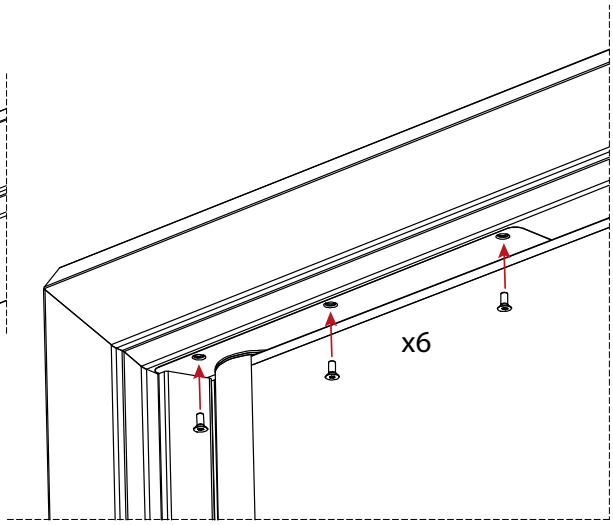
1. To close the gap between frame and door, fit 1 or 2 1.5mm thick self adhesive anti-ligature washers to the closer cover plate.



6.2 – Fit closer cover plate

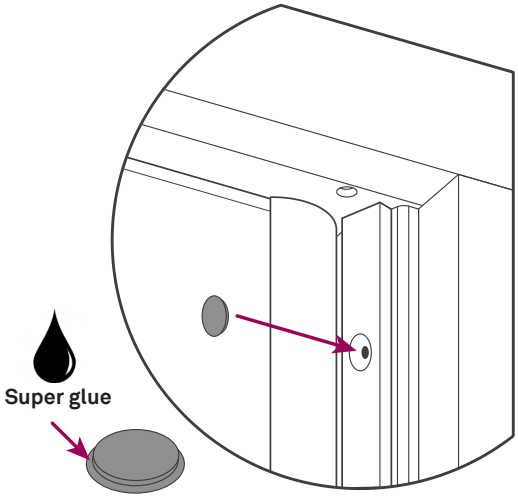
1. Slide the cover plate into place and fix using 6no. csk M5x12 Tx25 machine screws supplied.





6.3 – Fit cover caps

1. Locate cover caps - supplied in bags of 8 (7 required per single frame, 10 per double frame).
2. Apply a small amount of super glue to the lip of cover cap.
3. Offer up and hammer in place using a block of wood to avoid paint damage.



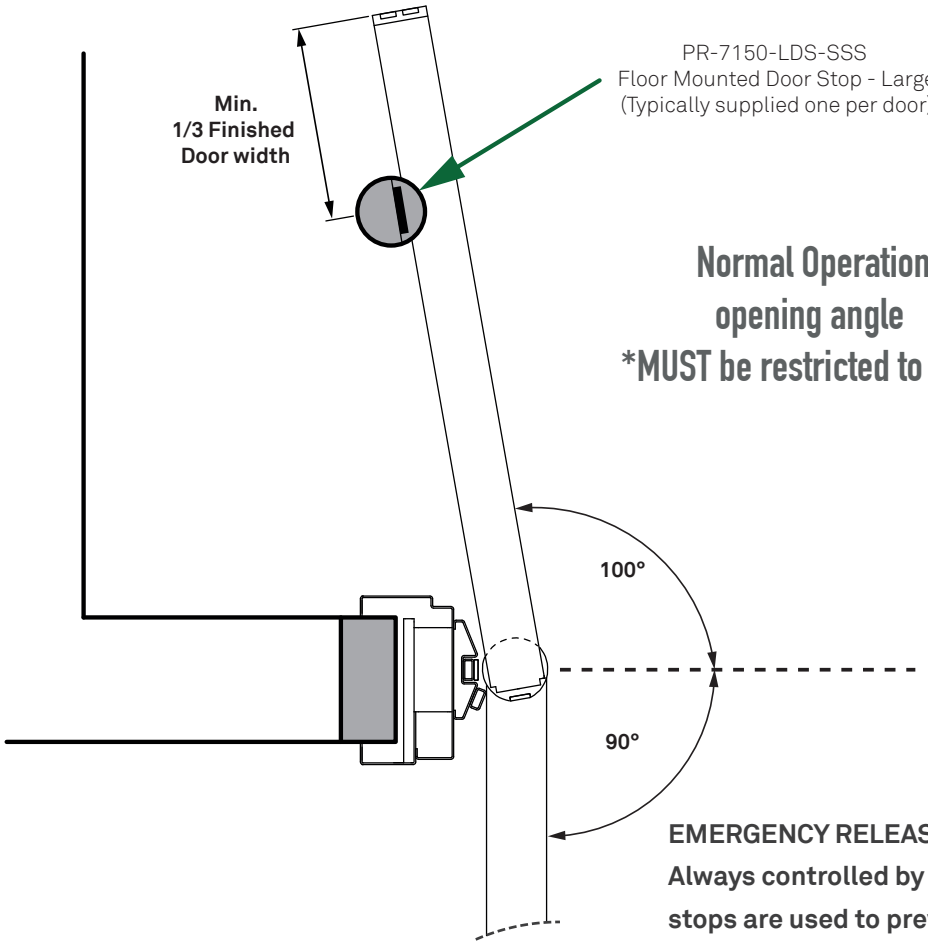
6.4 – Apply anti-pick mastic

1. For FD30 and FD60 fire performance, apply a bead of anti-pick mastic between the architrave boundary and wall face. It must be applied to the exposed face as a minimum but both sides recommended.

Opening angle – *MUST be restricted to 100°*

***NOTE* All pivot doors have a maximum opening angle beyond which they will "bind" on the door frame. Binding exerts extreme forces on the door, frame and ironmongery and may lead to damage/failure. Sureclose with back check will typically result in a more controlled door however it is critical that measures are taken to prevent binding from occurring. A typical emergency release bedroom door is shown below.**

Maximum opening angle 100°



EMERGENCY RELEASE OPERATION
Always controlled by staff members - Anti barricade stops are used to prevent service users opening the door outwards.

Maximum opening angle: 90° before bind.
Door must be protected manually from binding as unconstrained in this direction.