Customer Care and Maintenance

This Care and Maintenance manual is your guide to ensure the longevity of your Comar Aluminium Systems

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Contents

Customer Care & Maintenance Manual

Tilt / Turn Windows:




Tilt and Turn windows have two openings:

1. Tilt, the top of the window will open towards you, leaving the bottom closed
2. Turn, opens the window fully into the room, allowing cleaning of the window from the inside.

To tilt the windows, the handle should be grasped and turned to the horizontal, the handle part pointing towards the hinge at 90 degrees, then pull the handle towards yourself to open. This opening method is designed to provide ventilation only, as the window will tilt inward from the bottom (Sill), leaving a restricted opening at the head (top).

To fully open the window, the window should then be pushed into its closed position and the handle closed. The handle is then open fully to 90 degrees, in order to allow cleaning to take place.

Closing of Tilt/Turn Windows

The window should then be pushed closed once more, and the harder rotated back to its vertical position, pointing downwards. This will render the window closed and return it to its original position. For additional security the handle may have a key locking facility, which should be locked, removed and stored in safe location.

It is imperative that the window is returned to its closed position between each operation, as damage will be caused to the window mechanism if forced through the process while open. There is also a possibility of personal injury if the above instructions are not allowed.

Tilt/Turn Hardware & Gearing Maintenance

A 6-monthly check of all operations should be carried out.

The gearing around the sash should be thoroughly cleaned with a damp cloth and soapy water and wiped dry.

- Fixings should be tightened as necessary.
- Moving parts to be lubricated with resin free grease or oil.
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without correct tools or knowledge could result impersonal injury or damage to the mechanism.

The hardware used generally on Comar 5, 5P.i, Tilt & Turn is from two different manufacturers, as specified by the fabricator or installer.

- Sobinco gearing is constructed from black nylon components, and has no-aluminium link bars operating the system
- Siegenia gearing utilities silver aluminium link bars.

The difference is seen when viewing the gearing mounted in the sash stile when the window is in the open position.

Replacement parts for both systems are available from Fibretech. Only Comar spec approved parts can be fitted. Replacements to be fitted only be competent, trained personnel.

Casement windows:

Casement windows can be:

- Top-hung: the vent open out at the bottom of the window
- Bottom hung: the vent opens at the top of the window
- Side -hung: opening the vent along the side of the window

Hinge Type:


The window will be hung on friction stays or butt hinges, which support the weight of the window through open and closing cycles.

Friction Hinges:

The friction hinge can be restricted to an opening size. If a restricted hinge is fitted, there is a button in the friction hinge. Depression (or lifting, depending on hinge type) of the button will allow the sash to open fully for cleaning purposes, and as the sash is closed the restrictor will re-engage. The window may alternatively have additional restrictors fitted, which may or may not be removable, depending on the original specification.

There is a small screw, mounted in the nylon block in the hinge, which can be used to adjust the operation of the window. Tightening the screw will increase the friction, thereby increasing the resistance to wind and operating forces, while loosening the screw will have the adverse effect.

Butt hinge:

Butt hinges have not adjustment and will be visible from the external at the junction between frame and sash. There will be a requirement for a window restrictor with this type of hinge, which may or may not be removeable, depending on specification.

Locking:

Casement windows, whether bottom, side or top hung can have three main methods of locking mechanism.

- Espagnolette locking
- Shoot-bolt locking
- Cockspur locking

Espagnolette Locking:

Espagnolette locking systems, have a single handle mounted in the centre of the horizontal rail or vertical stile, which operates sliding gearing located within the window section. When the handle is closed mushroom heads move into recesses and engage, increasing the locking points on the window. Certain hardware will incorporate a black button, which will not allow the handle to be operated unless pushed with the thumb. The handle is turned through 90 degrees to the open position. The handle will sit in

line with the rail when closed. The sash can be locked securely with a key (Supplied by installer) or can be locked with the same key, partially open, in order to provide trickle ventilation.

Cockspur Locking:

Cockspur locking is surface mounted and engages against a nylon wedge on the visible upstand of the frame. There is no adjustment possible to this part, and the window, when set correctly should work perfectly. There may be two handles on a sash with an open edge over 900mm in width. The handle is again rotated through 90 degrees to the open position.

There is no lockable trickle ventilation when this type of handle is used, the window is either open or closed.

Shoot-bolt Locking

Shoot-bolt locking has the mushroom heads of espagnolette locking but also incorporates shoot-bolts at the corners of the opening vent of the windows that locate into keeps on the outer frame of the window. This is an enhanced security option. Again, in the closed position, move the handle through 90 degrees and the vent will open.

Folding Openers (Cam Stays)

Alternatively, a folding opener may be employed, which are commonly used on high-level windows. This system will have a 'folding cam'system, often linked by rods. There may be a ring fitted to the rod in order to accept a hook, which in turn is fitted to a wooden pole, to ease operation should the window be in a high position.

The rod or cam should be lifted, and the cam will fold outwards, pushing the sash forward. To close the window the rood or cam is lifted again and pushed downward to its original position. There is no adjustment, and no need for lubrication for this type of operator.

Teleflex Operation

'Teleflex@ type system employs a 'winder' cable, concealed within either the cavity of the building/screens, or a conduit fixed to the surface. The operating handle will be mounted on the surface of the wall at the lower level, and maintenance of this system needs to be carried out by a competent contractor.

The opening sash elements will be hung on either friction stays, or butt hinges.

Replacement parts are available from Fibretech. Only Comar approved parts can be fitted. Any replacement work to be undertaken by competent, approved personnel.

Maintenance & Cleaning

When set correctly, the handle and locking mechanism will need no adjustment, apart from occasional lubrication with resin free grease or oil.

A 6-monthly check of all operations should be carried out.

- The hardware around the sash should be thoroughly cleaned with a damp cloth and soapy water and wiped dry.
- Fixings should be tightened as necessary.
- Moving parts to be lubricated with resin free grease or oil.
- A qualified technician MUST carry out all major adjustments or replacements (especially in the case of Teleflex gearing. Any attempt to complete repairs without correct tolls or knowledge could result in personal injury or damage to the mechanism.

Pivot Windows

The function of a pivot window is to provide maximum ventilation as well as allow the external face of the window to reverse through 180 to allow for cleaning. For safety the pivot function is restricted through a storm catch or a lockable key.

Windows can be fastened using cockspur handles or multi-point locking

Horizontal or vertical pivot windows have the pivot mechanism located horizontally or vertically. Horizontal pivots open at the top and bottom and vertical pivots left side and right side.

To open the window the handle should be rotated through 90 degrees and pushed. This will open the window in a restricted position. To release the restriction, there is a storm catch fitted at the opposite side to the handle, which is then pulled, either down or across, depending on whether, it is vertical or horizontal pivot.

The catch can be pulled outward and twisted towards the inside of the building. This allows the window to rotate fully through 180 degrees and lock in position for cleaning purposes. The operation is then repeated to close the window. The storm catch can be spring loaded, and will therefore engage as the window is closed, but can be manually operated.

Cockspur Locking

Cockspur locking is surface mounted and engages against a nylon wedge on the visible upstand of the frame. There is no adjustment possible to this part, and the window, when set correctly should work perfectly. There may be two handles on a sash with an open edge over 900mm in width. The handle is again rotated through 90 degrees to the open position.

There is no lockable trickle ventilation when this type of handle is used, the window is either open or closed.

Shoot-Bolt Locking

Shoot-bolt locking has the mushroom heads of espagnolette locking but also incorporates shoot-bolts at the corners of the opening vent of the windows that locate into keeps on the outer frame of the window. This is an enhanced security option. Again, in the closed position, move the handle through 90 degrees and the vent will open again.

Maintenance & Cleaning

They can have multi point locking or cockspur locking handles. Under both options, the gearing maintenance regimes are the same.

The hinges on pivot windows are generally fully visible from the internal. The hinge can be adjusted in order to make operation easier, or tighter. There is an Allen bolt positioned in the centre on the internal side of the pivot, which can be tightened or loosened with an Allen key. This bolt applies pressure to the mechanism, thereby introducing more or less friction.

Top-Swing (Fully Reversible) Windows.

Function:

The function of a top-swing window is to create ventilation with he ability to swing or reverse the external face of the window to the internal to allow for cleaning in high or difficult locations.

Operation:

The top-swing window can have cockspur or concealed locking systems. To open the window, turn the handle through 90 degrees and reverse the operation to secure the sash in a closed position.

The top-swing hinge mechanism differs from any other window:

- The first stage opens the sash to a restricted position. (PN UNI Gearing ONLY Grorud gearing does not restrict at this point).
- Opening the window will reveal a button to the left-hand hinge in the outer frame
- Depressing the button will allow the sash to rotate through 180 degrees.
- There will be a need to hold the top of the window and pull downwards, the window will then lock in position to allow cleaning of the outside of the pane.
- The button can then be depressed once more, the top of the window lifted, and the sill grasped in order to re-position the opening vent in its original position.

Maintenance & Cleaning

There is no adjustment available to this window, and only periodic lubrication is necessary, with resin free grease or oil. The hinges are supplied as a finished article, and no further maintenance is necessary or advisable. Care should be taken to avoid any contamination by grit or dirt.

Replacement parts are available from Fibretech. Only Comar approved parts can be fitted. Any replacement parts to be fitted by competent, trained personnel.

A 6-monthly check of all operations should be carried out.

- The gearing around the sash should be thoroughly cleaned with damp cloth and soapy water and wiped dry
- Fixings should be tightened as necessary
- Moving parts to be lubricated with resin free grease or oil
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without tools or knowledge could result in personal injury or damage to the mechanism.

Vertical Sliding Windows

Function:

The vertical sliding window is designed to allow maximum ventilation through two opening sashes without projecting either inward or outward. The sashes can also be titled inwards for cleaning purposes. There may be an approved restrictor fitted which can be over-ridden for cleaning purposes.

Operation:

The windows have either one or two catches, depending on frame width, mounted on the central rails. The catches will normally have a key locking facility. Simply grasp the catch between finger and thumb and rotate anti-clockwise to disengage. The lower sash will then slide upwards, or the upper sash will slide downwards, under light hand pressure.

There will be two buttons, positioned on the top rails of each sash. Coloured either white or gold, these buttons slide inward when pulled with he fingers. To tilt the sash for cleaning, simply release the catch, and operate the button as detailed. The sash will then tilt inward, to a restricted position to allow the external pane to be cleaned, and inspection of the seals etc. The sash can then be pushed back to the frame, where the sprung-loaded guides will re-engage into the frame.

The restrictors are located on the vertical stile part of the top sash. These are sprung loaded and can be depressed to allow the sashes to ride over and open fully. As the sashes close again, the sprung loaded catch will re-engage to its original position.

Maintenance & Cleaning

The sashes are retained into the frame by a spring balance. This unit is sealed and requires no maintenance. The spring is pre-tensioned by the supplier and therefore cannot be adjusted. Should the sash not remain in position without catches being engaged, it will be necessary to replace the balance, which is best undertaken by a qualified engineer.

There is no adjustment available to this window, and only periodic lubrication is necessary, with resin free grease or oil. Care should be taken to avoid any contamination by grit or dirt.

Replacement parts are available from Fibretech. Only Comar approved parts to be fitted. Any replacement parts to be fitted by competent, trained personnel.

A 6-Monthly check of all operations should be carried out.

- The gearing around the sash should be thoroughly cleaned with damp cloth and soapy water and wiped dry
- Fixings should be tightened as necessary
- Moving parts to be lubricated with resin free grease or oil
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without tools or knowledge could result in personal injury or damage to the mechanism.

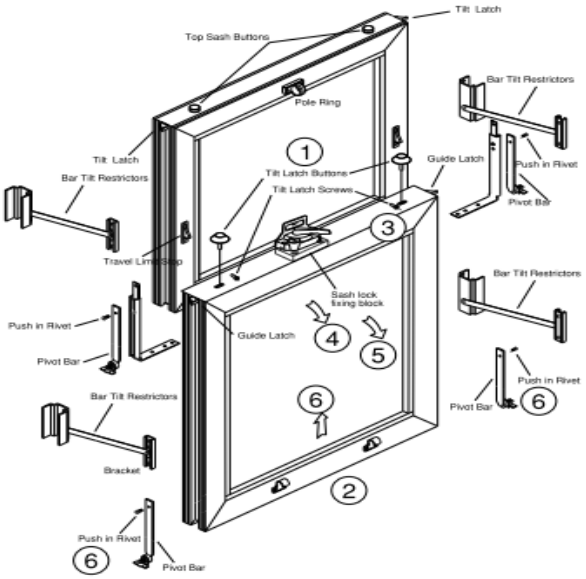
Vertical Sliding Windows

Cleaning the upper sash:

1. Repeat stages 1 to 5 on lower sash
2. Pull down the upper sash fully to the travel stops
3. This unit is heavy so be prepared to fully support it during operation
4. Operate the upper sash tilt latch buttons
5. Allow the upper sash to tilt fully out on its restrictors
6. With a lint free damp cloth and slightly soapy water remove any dirt and grime
7. Lubrication is not required as mechanisms are sealed
8. Push the upper sash fully home until both tilt latches are fully located
9. Test the upper sash is fully home by gently pulling on the sash frame
10. Push lower sash fully home until both tilt latches are fully located
11. Test the lower sash is fully home by gently pulling on the sash frame
12. Ensure the upper sash operates smoothly
13. Raise the upper sash to its closed position
14. Lower the bottom sash to its closed position and lock the window
15. Remove the tilt sash buttons and refit the tilt sash screws

Cleaning the lower sash:

1. While the lower sash is in the closed position remove the screw from the tilt latch and replace with a tilt latch button
2. Unlock the window
3. Raise the lower sash to clear the sill using both finger hooks/pulls
4. This unit is heavy so be prepared to fully support it during operation
5. Operate the lower sash tilt latch buttons
6. Fully supporting the lower sash allow it to tilt fully out on its restrictors
7. With a lint free damp cloth and slightly soapy water remove any dirt and grime
8. Lubrication is not required as the mechanisms are sealed
9. Push the lower sash fully home until both tilt latches are fully located
10. Test the lower sash is fully located home by gently pulling on the sash frame
11. Ensure the lower sash operates smoothly
12. Lower the sash to its fully closed position and lock the window
13. Remove the tilt sash buttons and refit the tilt sash screws



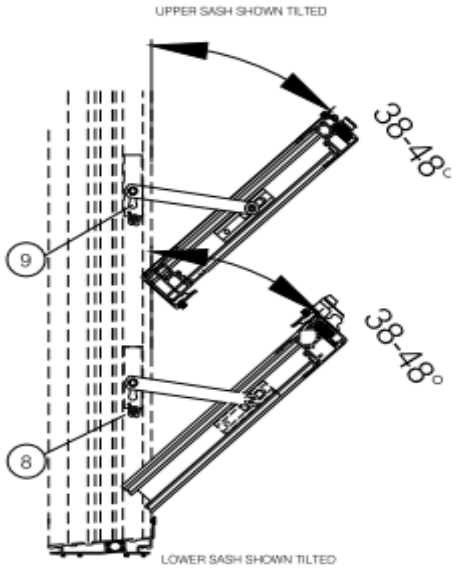
Vertical Sliding Window

Removal of the lower sash:

1. While the lower sash is in the closed position, remove the tilt latch screws and replace with the tilt latch buttons
2. Lift the lower sash to the fully raised position using both finger hooks/pulls
3. Operate the lower sash tilt latch buttons
4. Gently let the lower sash tilt slightly towards you – enough to clear the travel stops
5. The lower sash unit is heavy so be prepared
6. Continue to raise the lower sash past the travel stops to its maximum height
7. Fully supporting the lower sash allow it to tilt fully out on the restrictors
8. Remove the lower sash push in rivets from the pivot bar
9. Remove the quick release caps
10. The restrictor arms can now be released and detached from the slider brackets
11. Tilt the lower sash window to a horizontal position
12. Slide the lower sash away off the pivot arms

Removal of the upper sash:

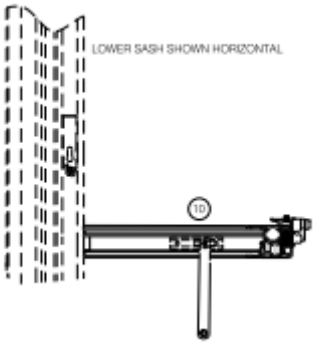
1. The upper sash can be removed in the same way as the lower sash
2. Operate the lower sash tilt latch buttons
3. Gently let the lower sash tilt outwards towards you
4. Operate the upper sash opening latch and lower the sash slightly down
5. Operate the upper sash tilt latch buttons
6. Gently let the upper tilt slightly outwards towards you
7. Raise the upper sash past the travel stops to its maximum height
8. Fully supporting the upper sash allowing it to tilt fully out on the restrictors
9. Remove the upper sash push in rivets
10. Remove the quick release caps
11. Move both restrictor arms down to the locked position
12. The restrictor arms can now be released and detached from the slider brackets
13. Tilt the upper sash window to a horizontal position
14. Lift the upper sash window up and slide away off the pivot arms
15. This unit is heavy so be prepared



Vertical Sliding Window

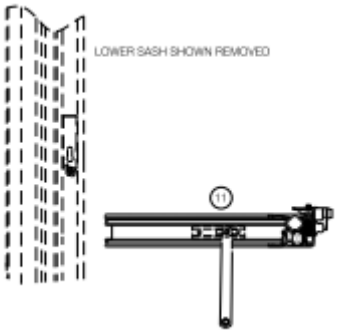
Refitting the upper sash:

1. This unit is heavy so be prepared
2. Place the pivot arms into a horizontal position to lock the spring balances
3. Slide the upper sash onto the pivot arms and support it
4. Tilt the sash to an angle and reconnect the restrictor bars to the brackets
5. Reinsert the quick release caps
6. Reinsert the push in rivets
7. Continue to tilt the sash to an almost vertical position
8. Lower the sash to clear the travel stops
9. Push the sash fully home until both tilt latches fully operate
10. Test the sash is fully located home by gently pulling on the sash frame
11. Raise the sash to its fully closed position
12. Ensure the sash operates smoothly then lock the window



Refitting the lower sash:

1. The lower sash is refitted in the same way as the upper sash
2. Place the pivot arms into a horizontal position to lock the spring balances
3. This unit is heavy so be prepared
4. Slide the upper sash onto the pivot arms and support it
5. Tilt the sash to an angle and reconnect the restrictor bars to the brackets
6. Reinsert the quick release caps
7. Reinsert the push in rivets
8. Continue to tilt the sash to an almost vertical position
9. Lower the sash to clear the travel stops
10. Push the sash fully home until both tilt latches fully operate
11. Test the sash is fully located home by gently pulling on the sash frame
12. Lower the sash to its fully closed position
13. Ensure the sash operates smoothly then lock the window



Horizontal sliding windows

The horizontal sliding window utilizes the same hardware and gearing as the sliding door noted in the door section. It will use either a single point or multi point lock system, in both cases operated by the flush pull described previously.

Glazing gaskets & weather seal:

Glazing gaskets and weather seals are generally manufactured from E.P.D.M, and as such require very little maintenance, other than cleaning in conjunction with glass, and periodic inspection for deterioration. Broken or poor fitting gaskets will affect the weathering of the product and should therefore be replaced. Gaskets and other weathering parts are purpose made items and cannot be replaced with standard items. If replacement gaskets are required, they can be obtained from Fibretech.

Perimeter seals:

Silicone mastics and sealants generally have a shorter lifespan than that of the aluminium frames and finishes, and therefore require periodic inspection. Where the seal has broken down or parted company with the structure it should be raked out and replaced using the same or superior product which is compatible with the surrounding material. Advice on suitable sealants should be obtained from a sealant manufacturer or applicator.

Maintenance:

The installer will set the position of the lock keep and will adjust the wheels to the optimum working position. However, they may require small adjustment. The leaves can be adjusted in height with a 4mm Allen key, which can be inserted into a hole at the bottom of the sliding leaf. It should be remembered that any adjustment carried out here will have an immediate and adverse effect on the locking points, so the height adjustment is best carried out prior to fitting the lock keeps.

Replacement parts are available from Fibretech. Only Comar approved parts to be fitted. Any replacement parts to be fitted by competent, trained personnel.

Curtain Walling (Comar 6 & 6 EFT)

Curtain walling due to its construction is limited in its maintenance and should only be maintained, serviced and cleaned by qualified personnel.

A 6-monthly check of curtain walling structure should be carried out on the inside of the building envelope to check for any rainwater, leakages, damage and insecure fittings to the transoms, mullions and glazing. The outside of the building should also be carefully examined using binoculars to see if there is any damage to the transoms, mullions, glazing, gaskets and weather seals that can be seen.

Windows and doors glazed into curtain walling can be maintained and operated by referencing the other sections.

Non-Thermal Commercial Doors

Non-Thermal Commercial Doors can be in a number if different configurations as follows:

- Rebated door – opens inwardly or outwardly, in one direction only with a rebate which creates high weather proof seal.
- Swing doors – opens/closes inwardly and outwardly, single or double action
- Sliding – slides open along a track
- Sliding/folding – slides along a track and has several hinged doors which fold back against the jamb to maximise the opening.

Rebated Doors:

Rebated doors will be single action, opening either outward or inward only

Comar 7 Tempest doors locking options can be lever/lever handle and latch lock or dead-lock and pull handle. Lever/lever handles are depressed and pushed (open in) or pulled to operate (open out). There will be a need to turn the key in the cylinder to secure the door in a locked position. Alternatively, the lock can be operated by means of combination lock, which works only on the entry of the correct combination from the external.

Emergency exit devices may be fitted to the interior. This is either a push bar or a paddle handle. When the device is depressed, and the door is pushed, the door will open. As the door closes the locks will automatically re-engage, locking the door.



Maintenance:

A 6-Monthly check of all operations should be carried out.

- Door frames and leaf should be thoroughly cleaned with a damp cloth and soapy water and wiped dry
- Fixings should be tightened as necessary
- Locks should be inspected and be lubricated with resin free grease or oil
- No lubrication required to the hinges
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without tools or knowledge could result in personal injury or damage to the mechanism.

Over time the doors opening performance may need adjustment. To ensure correct door action i.e. closing correctly or not scraping floor, rebated doors have surface mounted hinges, which can be adjusted. The hinge pin is located into a nylon bush, which can be removed and rotated to give 1-2 mm of adjustment within the opening.

Non-Thermal Commercial Doors

Swing Doors:

Swing doors hung on concealed closers hang centrally within the frame. This allows the door to be dual action opening in or opening out. However, a swing door can be restricted in either direction with a door strip.

Swing door locking options can be lever/lever handle and latch lock or dead lock and pull handle. In the case of a dead lock, the door will be simply pushed or pulled to operate. For the latch lock the lever/lever handle is depressed and the door pushed or pulled to open, when released, the latch lock will re-engage in and turning the key in the cylinder will secure the door in a locked position. Alternatively, the lock can be operated by means of combination lock, which works only on the entry of the correct combination from the external.

Maintenance:

A 6-Monthly check of all operations should be carried out.

- Door frames and leaf should be thoroughly cleaned with a damp cloth and soapy water and wiped dry
- Fixings should be tightened as necessary
- Locks should be inspected and be lubricated with resin free grease or oil
- No lubrication required to the hinges
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without tools or knowledge could result in personal injury or damage to the mechanism.

Folding/Sliding Doors

Sometimes referred to as Bi-fold doors, are an effective way of providing an unobstructed opening. They have a concertina operation, with the door leaves usually folding against a wall.

Providing the doors are installed in accordance with Comar Manuals and maximum sizes, the doors will work perfectly. The doors must never be taken past 90 degrees, or damage will occur. Care must be taken to avoid the catching of fingers in operation.

Maintenance:

The tracks need to be kept clean and clear of debris. The application of any grease to the tracks will only retain dirt and dust, and shorten the lifespan of the wheels, so it is best avoided.

Non-Thermal Commercial Doors

A 6-Monthly check of all operations should be carried out.

- Door frames and leaf should be thoroughly cleaned with a damp cloth and soapy water and wiped dry
- Fixings should be tightened as necessary
- Locks should be inspected and be lubricated with resin free grease or oil
- Wheels should be lubricated through oil parts in the door
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without tools or knowledge could result in personal injury or damage to the mechanism.

Sliding Doors:

Sliding commercial doors, operate on wheels at the bottom of the door which slide across an aluminium track, all wheels have a sealed bearing, which cannot be adjusted. The doors will be supplied with a 'flush pull', and when the hand is inserted into the pull, the door can be slid open or closed as required.

Sliding doors, two main methods of locking mechanism:

1. Sliding door cross lock – is mounted on the inside face of the door stile and enables the door stiles on the sliding doors to interlock together. The lock incorporates a hook that interlocks with the opposite face plate and is locked in position by a key and cylinder mechanism.
2. Hook lock – operates in the same way as the sliding door cross lock but is mounted on the closing door stile and locks into the outer frame

Flush pull handle – is mounted on the inside or outside face of the door stile to facilitate the manual sliding of the doors.

Maintenance:

The tracks need to be kept clean and clear of debris. The application of any grease to the tracks will only retain dirt and dust, and shorten the lifespan of the wheels, so it is best avoided.

A 6-Monthly check of all operations should be carried out.

- Door frames and leaf should be thoroughly cleaned with a damp cloth and soapy water and wiped dry
- Fixings should be tightened as necessary
- Locks should be inspected and be lubricated with resin free grease or oil
- Wheels should be lubricated through oil parts in the door
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without tools or knowledge could result in personal injury or damage to the mechanism.

Thermal Efficient Doors

Thermal efficient doors can be in several different configurations, as follows:

- Commercial Doors
- Rebated Doors – opens inwardly or outwardly, in one direction only with a rebate which creates high weather proof seal
- Horizontal Sliding Doors – slides open along a track
- Sliding/Folding Doors -slides along a track and has several hinged doors which fold back against the jamb to maximise the opening.

Rebated Doors:

- Rebated doors will be single action, opening either outward or inward only.
- The locking options are locked by multi-pint latch roller bolt or dead bolt.
- There will be a need to turn the key in the cylinder to secure the door in a locked position. Alternatively, the lock can be operated by means of combination lock, which works only on the entry of the correct combination from the external.
- Emergency exit devices may be fitted to interior. This either a push bar or paddle handle. When the device is depressed, and the door will open. As the door closes the locks will automatically re-engage, locking the door.

Maintenance:

A 6-Monthly check of all operations should be carried out.

- Door frames and leaf should be thoroughly cleaned with a damp cloth and soapy water and wiped dry
- Fixings should be tightened as necessary
- Locks should be inspected and be lubricated with resin free grease or oil
- No lubrication required to the hinges
- A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without tools or knowledge could result in personal injury or damage to the mechanism.

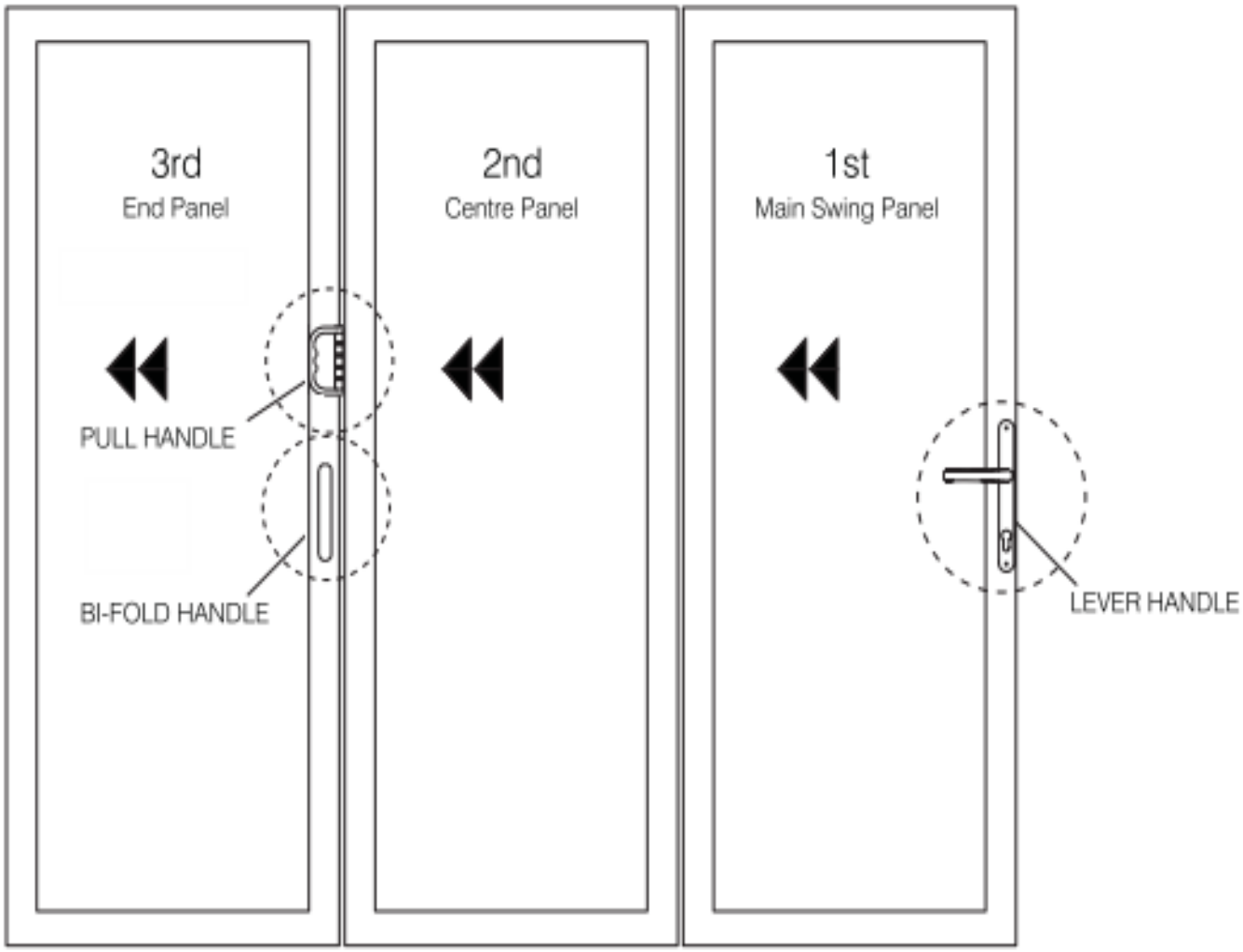
Over time the doors opening performance may need adjustment. To ensure correct door action i.e. closing correctly or not scraping floor, rebated doors have surface mounted hinges, which can be adjusted. The hinge pin is located into a nylon bush, which can be removed and rotated to give 1-2 mm of adjustment within the opening

Thermally Efficient Doors

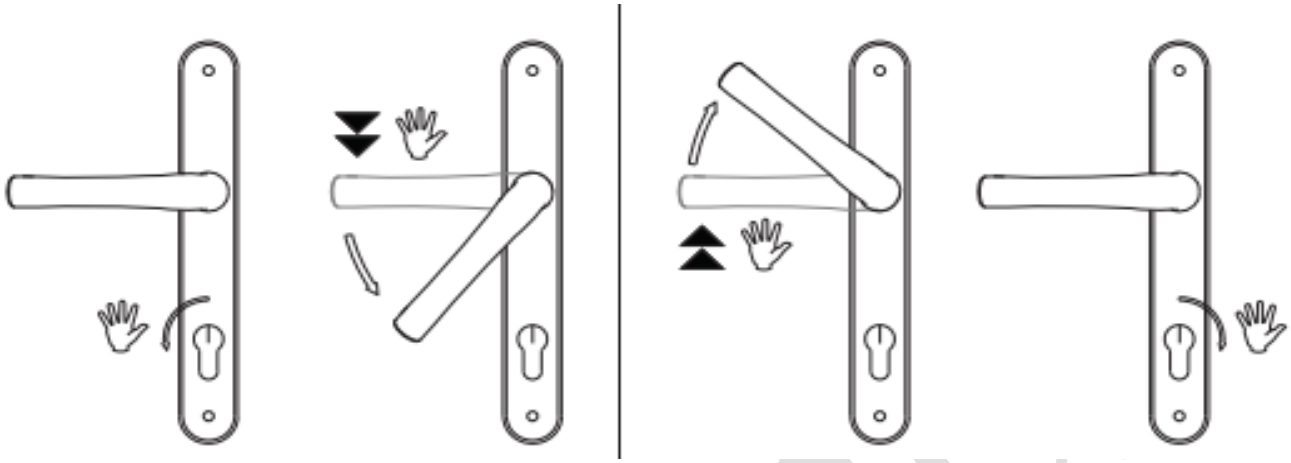
Folding Sliding doors

Left Hand Stacking Outward Opening

**** Important: Remove Keys Prior to Folding Open****



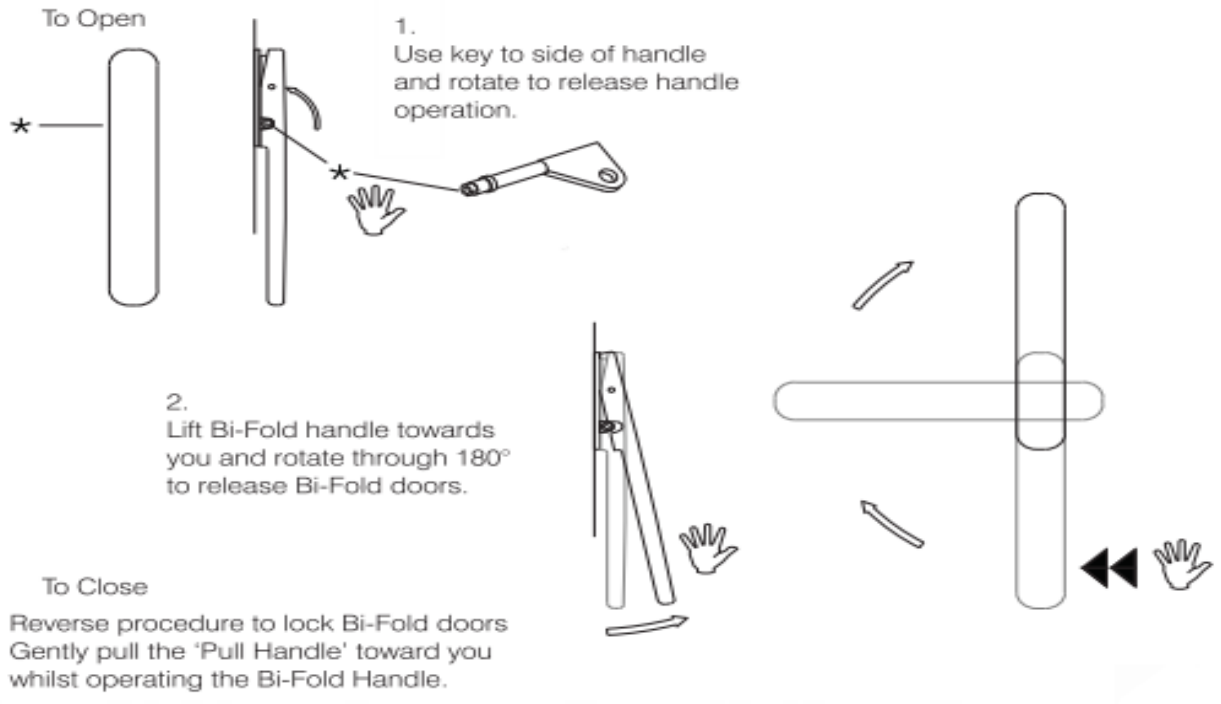
How to Operate the Lever Handle



1. To Unlock **2. To Open** **3. To Close.** **4. To Lock**

Use key to release Handle operation. **Rotate handle to retract locks and push door Open.** **Pull door into frame and rotate handle to Engage locks.** **Use key to prevent handle operation.**

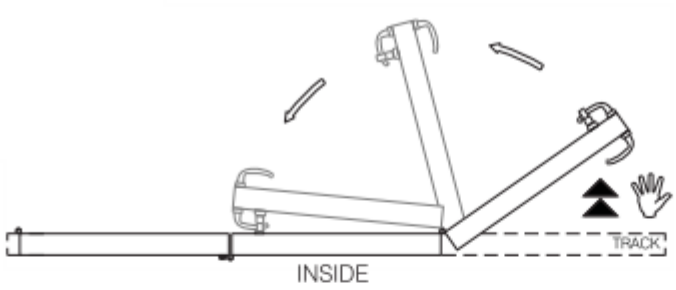
How to Operate the Bi-Fold Handle



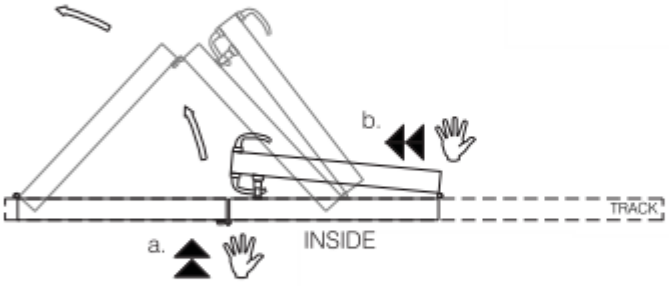
How to Open

Left Hand Stacking Outward Opening

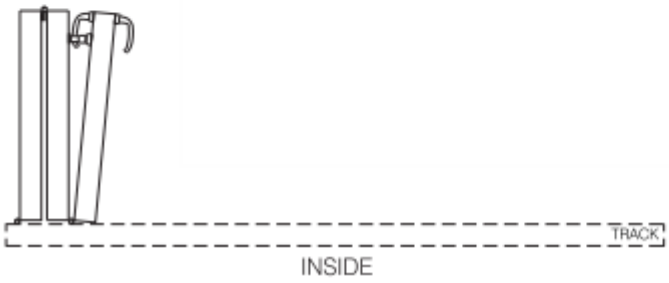
****Remove Keys Prior to Folding Open****



STAGE 1
Main Swing Panel opens first. Ensure that it is fully open.



STAGE 2
a. Push to collapse out.
b. Push from roller side to control door.



STAGE 3
Fully open position.

How to Close

Reverse procedure above.

- **Hold main swing panel and centre panel and pull in direction of the track.**
- **Use pull handle attached to hinge (above Bi-Fold handle) to pull panel in-line with track before operating Bi-Fold Handle**
- **Close and secure the main swing panel.**

Cleaning

Glass:

****NOTE: GLASS IS EASILY SCRATACHED. ENSURE CLOTHS ARE FREE OF DIRT AND GRIT BEFORE CLENAING. REMOVE JEWELLERY BEFORE CLEANING. ****

- External grime to be removed with soap and water.
- Cleaner should not run onto any other surface, as it may damage the materials.
- Household glass cleaner should be used with a soft, clean cloth.

Door Frames & Panels

****NOTE: AVOID ALL ABRASIVE OR SOLVENT BASED CLEANERS.AVOID ALL SILICONE POINTING SEALANTS****

Wash panels and frames with diluted soapy water:

a) At Least every 3 months in areas of industry, heavy traffic or near sea

b) At least every 6 months in rural areas

If necessary, use a soft cloth and non-abrasive cleaner that is suitable for plastic, aluminium or timber.

ANY DAMAGE TO THE PAINT COATING SUCH AS ABRASIONS, CHIPS AND SCRATCHES MUST BE REPAIRED IMMEDIATELY.

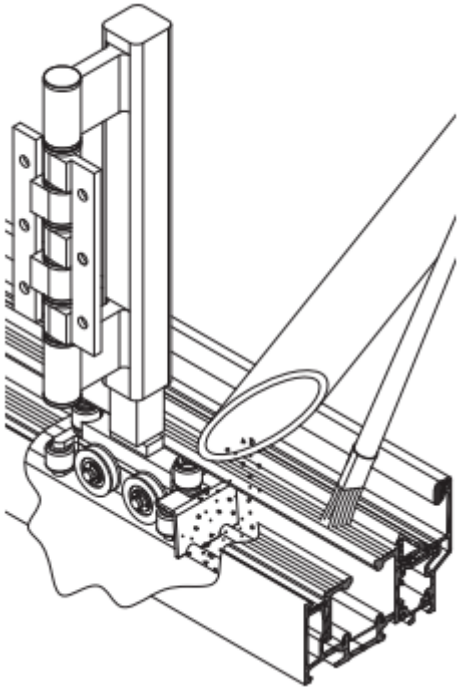
In the event of unusually heavy staining, you are advised to seek advise from your fabricator named on the front cover.

Tracks

****TRACKS MUST BE KEPT CLEAR AND CLEAN AT ALL TIMES****

- Dust and dirt can build up on the roller mechanism and prevent the door from running smoothly.
- To clean the tracks, use a long, nylon-bristled (non-metallic) brush and a vacuum with a narrow nozzle.

****DO NOT APPLY LUBRICANT TO THE TRACK. ****



Rollers

****OILS ALL HINGES AND HINGE PINS WITH TEFLON SPRAY OR A LIOGHTWEIGHT LUBRICANT OIL****

- Thoroughly clean and dry all upper and lower rollers and hinges every 3 to 6 months.
- Apply a generous amount of non-greasy lubricant; such as Teflon spray, to the wheels and bearings on the rollers-but avoiding the track.

**** A QUALIFIED TECHNICIAN MUST CARRY OUT ALL ADJUSTMENT AND REPLACEMENTS****

Maintenance

Glass Scratches

**** REPLACEMENT OF SEALED UNITS MUST BE CARRIED OUT BY A PROFESSIONAL IN ACCORDANCE TO BS6262. UNITS MUST COMPLY WITH BS EN 1279****

If scratches occur, most can be removed with a polishing compound such as 'jewellery rouge'- supplied by local glass supplier.

Alternatively, seek professional advice.

Gaskets

****NOTE: AVOID ALL ABRASIVE OR SOLVENT BASED CLEANERS. AVOID ALL SILICONE POINTING SEALANTS****

- If gaskets are damaged or broken and draughts are felt around the unit, contact the fabricator on the front cover, our team will promptly organise a replacement.
- To clean, use a non-abrasive cloth and light soapy solution. DO NOT USE solvent based cleaning products on the gaskets.
- Annually apply a silicone spray to the gaskets.

Hardware Fittings

- Thoroughly clean and dry all upper and lower rollers and hinges every 3 to 6 months.
- Apply a generous amount of non-greasy lubricant; such as Teflon spray, to the wheels and bearings on the rollers.
- Oil all hinges and hinge pins with lightweight lubricant oil or Teflon spray. Wipe away any excess with non-abrasive cloth once finished.

Handles

No Maintenance required

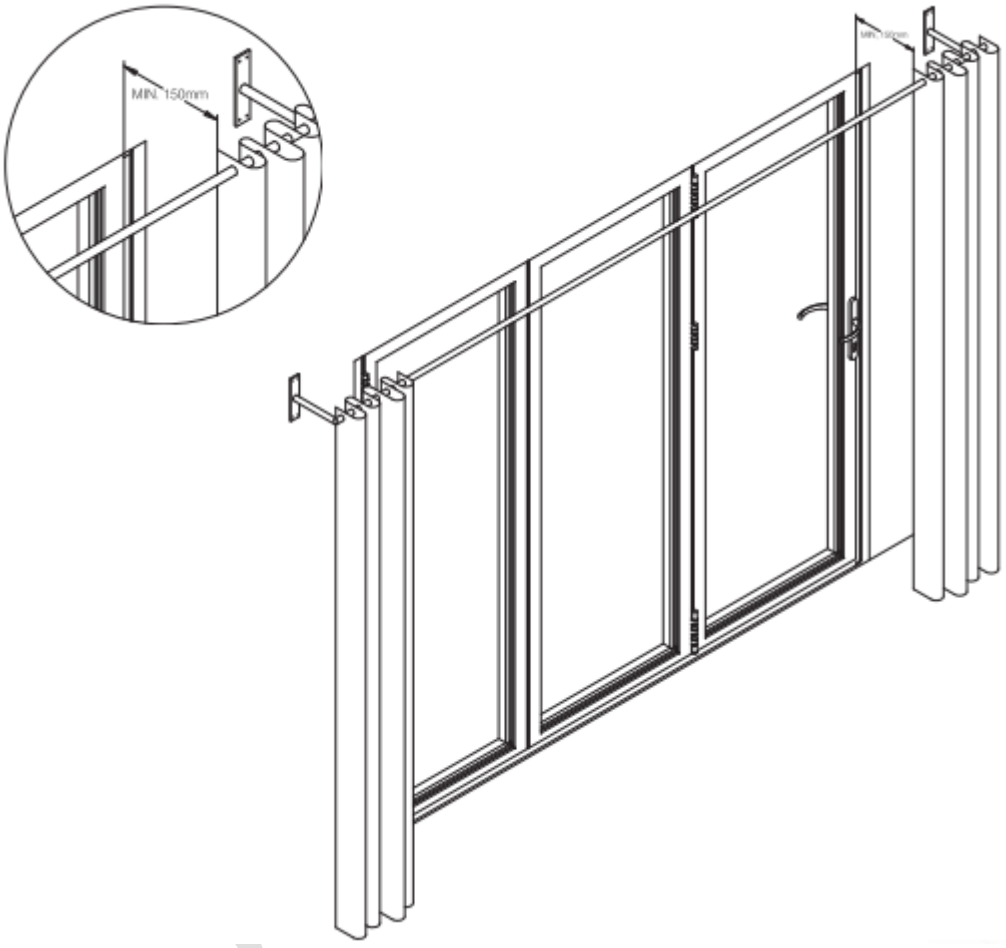
Silicone Seals

****NOTE: SOME DISCOLOURATION OF THE SILICONE POINTING SEALANT IS A NATURAL OCCURRENCE AND CANNOT BE AVOIDED. ****

Condensation

Solutions

- Position any curtains at least 150mm from the glazing to allow room temperature to reach windows.
- Avoid glazed or non-absorbent wall coating where possible.
- It is recommended that wall vents are used if flues are blocked off.
- Open windows each day for a short period to allow for air change.



Kitchen

- Use extractor fans.
- Close doorways to the rest of the house and keep a window open.

Aluminium Frame Finishes

Since mill finish (untreated) aluminium weathers unevenly and unattractively, anodising or organic finished have been used to protect architectural metalworks. Once finished, aluminium is virtually maintenance free. However, regular maintenance will maintain the original appearance for many years.

The accumulation of atmospheric grime makes it necessary to clean the surface of the frames periodically. In areas with high concentrations of saltwater or aggressive emissions from industrial plans, cleaning should take place once every three months. This can usually be carried out with the glass cleaning. In a relatively cleaner rural environments, once every six months should be sufficient.

Providing the recommend frequency is maintained it should not be necessary to use anything more than mild detergent in warm water. A soft cloth can be used to remove accumulated deposits. Where it is necessary to use a stronger cleaner white spirt or a proprietary non scratch cream cleaner may be used. The use of alcohols, acid or alkaline industrial cleaners should never be used. Certain special cleaners may be suitable but should be checked for compatibility in a concealed area which should be checked once the solution had dried.

Cleaned areas must be rinsed well and dried with a soft cloth or leather. A wax polish may be applied once a year to polyester powder coated aluminium to restore gloss.

If small repairs to painted surfaces are required, touch-up paint can be usually obtained through the installation's supplier.

Glazing Gaskets and Weather Seals

Glazing gaskets are generally manufactured from extruded E.P.D.M. as are the weather strips within opening windows. Whereas gaskets are generally maintenance free they should be examined occasionally for deterioration. Broken or poor fitting seals will affect water tightness of the product or allow an increase in air filtration. Specialist gaskets are generally purpose made and can be replaced with standard items. If replacements are required these can be obtained from the installation's supplier.

Perimeter Seals

Generally, mastic and sealants have a shorter life than that of the aluminium frames and therefore will require periodic inspection. Where the seal has deteriorated it should be raked out and be replaced using the same material or superior product compatible with the surrounding materials. Advice on suitable seals should be obtained from a sealant manufacturer.

AXIM

Concealed Overhead Door Closers

Changing the closer unit

With a screwdriver loosen the two-round head pozi screws connection the closer to the jamb bracket. Support the closer and remove the two hexagon head bolts and washers. The closer can not be lowered and removed. Take care not to drop it, the closer weighs 4kgs (8.8lbs)

Whilst the closer is removed check the fixings in the jamb bracket and tighten securely if loose. Check the steel angle bracket is secure within the header bar. Examine the pivot bearing in the threshold or floor plate. The bearing should be able to rotate freely and the ½" bolt should be secure.

To replace the closer reverse the removal procedure and ensure the clamp block screws and lock washers are very tight. If door adjustment is required refer to the section ALIGNMENT.

FAULT DIAGNOSIS

The following notes should enable a competent maintenance manager to rectify any problems that might occur. If In any doubt, please contact the manufacturer as the wrong action could invalidate the warranty.

1. The door does not centre firmly but swings freely perhaps for a centimetre either side of the closed position. This is usually due to the clamp block not being fully tightened. Remove the small aluminium name plate from the door to expose the clamp block and screws. With an Allen key wind in the two or three screws, depending on the arm type, very tightly. Refit the name plate.
2. The door does not centre firmly as in item 1, and has even more free play. If it is possible to clamp block has been too loose for too long and the closer spindle has worn. If this is the case out the remedy as in item 1. If the problem persists the closer and/or top drive arm in the door will need replacing. NOTE> this is not a fault of the closer or accessories but is due to indifferent installation.
3. The door comes to rest firmly but is up to 25mm off centre. Procure a step ladder, or other means, enabling you to look down on to the top of the door. Loosen the hold-down countersunk screw, securing the top arm, with an Allen key. Adjust the hexagon bolts against the sides of the steel channel until the door centres in the correct position. Tighten the hold-down screw and check other fixings.
4. The door drags on the floor/threshold or rubs on the underside of the transom. Procure a step ladder, or other means, enabling you to look down on to the top rail of the door. Loosen the hold-down, countersunk screw, securing the top arm, with an Allen Key and loosen off the hexagon bolts slightly.
    a. Standard top arm type- with the door open use a flat bladed screwdriver to turn the screw clockwise, lifting the door or anticlockwise lowering the door
    b. End load arm or special side loading – loosen the locknut against the upstand of the channel and turn the socket head screw with an Allen key, clockwise, lifting the door or anticlockwise lowering the door. Tighten the hold-down screw and check other fixings.
5. The door moves loosely off centre apparently out of control. The closer has been forced and strained for some reason and the internal parts have been damaged. The closer will need replacing.
6. Oil leaking – Before dispatch each closer is subjected to stringent test to ensure against leaking. If oil appears to be leaking from the closer try to pinpoint the source. If leaking from around the spindle the seal may be damaged. If leaking from around one of the valve crews the same could apply. Providing the closer is within the warranty period and has not been subject to misuse it will be replaced. A frequent cause of oil leaks is due to the closer being drilled by an installer fitting alarms, louvres or fanlights. This being the case the closer will need to be replaced. This will not be under warranty.

Closing speed adjustment

Providing the closing and final latching speeds of the door closer have been correctly set on installation it should not be necessary to re-adjust at a later date. However, after the door closer has completed a short setting in period, minor adjustment may be required. It should be noted that inexperienced tampering with the valve screws could cause irreparable damage. The following notes will enable the operator to make simple adjustments – if any doubt please seek advice.

It is important to realise that the two valve screws will adjust the closing and latching speeds of the door closer, they will not adjust the closing or opening forces in any way. It is very likely the door closer will require only very minor adjustment, perhaps only one half turn of the valve screw. After any adjustment the door closing speed should be checked twice, by opening the door fully and allowing it to close, before proceeding.

Care must be taken not to unscrew the valve head beyond the level of the closer body when increasing the closing speed. Turning the valve passed this limit will allow oil to escape and the closer will need to be replaced. On the other hand, if the valve is turned clockwise, decreasing the closing speed, adjustment must cease when resistance is felt as the valves are manufactured from soft metal and will be damaged along with the oil seal if excessive force is used.

Six monthly maintenance

Detach the door as previously described, remove the cover plate and expose the closer. Tighten all fixings screws and bolts. Inspect the floor bearing and wipe away any debris, check the bearing rotates freely and bolt is secured firmly in the plate or threshold. Lubricate with grease if necessary. Tighten all fixings, including the three screws to the bottom rail of the door securing the pivot shoe. Replace the cover plate and remount the door. Tighten all the top arm fixings, particularly the clamp block screws and clean down the door as per finishes recommendations.

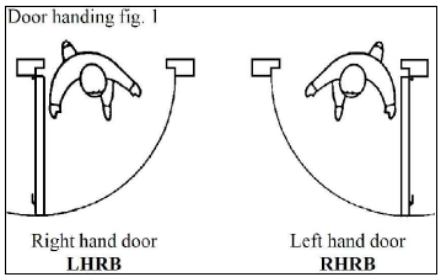
Axim

Panic and emergency exit devices

Axim emergency exit hardware is guaranteed for a period of 30 months from the date of manufacture against defect in material and workmanship. The guarantee is void if the product has been incorrectly installed or damaged in use. The following notes provide information relating to correct specification of hardware and outlines recommended maintenance procedures which should ensure the hardware will operate trouble free for many years.

There are many types of emergency exit devices and this document will cover 3 of those types

1. Emergency exit push handle
2. Concealed panic bolt push bar
3. Panic latch push bar



Some of these types are handed and fig1, explains how to determine the hand. This is most important when quoting hardware and helps eliminate costly mistakes.

Emergency Exit Push Handle/Push Bar with concealed Locking Rods.

Six Monthly maintenance

Check that the emergency hardware operates, and the door can be opened in the correct manner.

Ensure the door operates smoothly and carry out routine maintenance as per door maintenance instructions.

With the door depress the bar or paddle handle and release. The bolts should remain retracted whilst the door is in the open position. The top bolts should clear the underside of the transom by no less than 3mm. In most cases this will be level with the top of the door. With the door still open activate the trip mechanism, positioned at the top of the door on the closing face, the bolts should throw immediately.

It is important that the catch operates correctly, especially in the case of fire doors and alarmed doors which will otherwise remain ajar or unlocked. If adjustment is necessary, remove the screws securing the nylon guide block in place. Take care not to allow it to drop down inside the stile.

Remove the nylon block and lubricate the steel catch until the spring and catch operate freely. If the bolt position require height adjustment, turn the bolt head until the correct position is achieved. Ensure the bolt retracts completely when depressing the panic bar or handle. Refit the guide block by reverse procedure.

Adjustment to the bottom bolt can be carried out in the same way. Check the housing to both door stiles for the push bar type or the housing for the push paddle type. The housing can be removed by slackening the 3no. 15/32”x1/4” set screws with a 3mm Allen key. The active housing can be removed from the door by sliding out the connecting pin from the actuator pin. This will present the 2no. shoulder bolts which should be secured firmly, if an outside rim cylinder has also been fitted 2no. screws should be visible, check these screws are secure taking care not to over tighten. The operating mechanism can be lubricated with spray grease through the actuator pin slot and the housing reinstated by reversing procedure. If faults cannot be rectified using the information above, contact supplier for further advice.

Axim

Panic Exit Latch

The emergency exit panic latch utilities a push bar which operates a latch. This type is designed for use with hollow doors i.e. aluminium, steel or PVCu. For use with timber doors fixing plates must be fabricated to accept the shoulder bolts supplied. The latch type mechanisms are handed and cannot be altered in the field. It is important to realise the internal handles are designed to be pushed in an emergency to release the door and although the handles are used to pull the door closed to reset the hardware. They are not intended to be used in high traffic area where handles are sued to pull doors closed on regular intervals. If installed correctly the hardware requires little maintenance, however, the following instructions will extend the life of the product if carried out on a regular basis.

Six monthly maintenance

Check that the emergency exit hardware operates, and the door can be opened in the correct manner. Ensure the door operates correctly, without binding and carry out routine maintenance as per door manufacturers instructions. With door open depress the bar and release, the latch bolt should be retracted fully and return to it is in this open position. Each housing can be removed by slackening the 3 No. 15/32”x1/4” set screws with 3mm Allen key. With crash bar still attached lift the unit away from the door. With light spray, grease lubricate the 2 No. return springs and internal components. DO NOT remove the 2 No. pozi head screws at the top of the unit. Check the 2 No. shoulder bolts to each door style and secure if necessary. If the door is furnished with an outside cylinder, check to ensure correct operation and lubricate with light graphite lubricant. Do Not Use oil. Reinstate the housing in reverse procedure and tighten the set screws. Lightly oil the pivots through the sided of each housing and wipe clean. Check the bar is fitted tightly between the housings. Apply light lubricant to the roller on the lock keep and adjust position if necessary. Check fixings are all tight. If faults can not be rectified using the information above contact the supplier for further advice.