

**HANDLING, INSTALLATION, MAINTENANCE AND CARE
INSTRUCTION GUIDE FOR TIMBER WINDOWS AND
DOORS**



Norscot Joinery Limited.

Bower Workshops,

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Caithness.

KW1 4TL

**Please ensure that these instructions are followed at all times, failure to do so may invalidate your Norscot
Joinery Limited guarantee.**

3.0 Health and Safety

It is the responsibility of the organisation or person who is carrying out the handling, installation, maintenance and care of the finished manufactured window and door to ensure that they work in accordance with the latest requirements of the Health and Safety at Work Act.

In common with many activities, there are significant hazards associated with handling, installation, maintenance and care of PVC-U windows and doors such as (but not limited to) :-

- Working at height
- Use of and potential exposure to hazardous substances with the installation, maintenance and care process (e.g. asbestos)
- Safety glazing
- Use of electrically powered equipment
- Manual handling

Before undertaking any activity, the organisation/person should ensure that they familiarise themselves and are fully trained with all Health and Safety requirements. Following a risk assessment appropriate PPE such as hard hats, high visibility clothing, safety footwear, gloves and safety glasses should also be worn if deemed necessary. If in doubt employ the services of competent persons trained in the requirements of handling, installation, maintenance and care of PVC-U windows and doors.

3.1 Safety In Use: Windows

Provisions should be made at the design stage to ensure that windows/doors can be cleaned safely, through incorporating easy clean hinges for instance. Restrictors may also be a requirement on the grounds of safety.

Virtually any type of window can be produced in PVC-U, such as Casement, Tilt and Turn, and Top Swing. When choosing a particular type of window consideration should be given, for instance to the following:-

- Cleaning from inside, safety in use and maintenance. Norscot Joinery Limited recommends that the user familiarises themselves with the relevant Building Regulations/Technical Handbooks, BS 8213-1:2004 Windows doors and rooflights. Design for safety in use and during cleaning of windows, including door-height windows and roof windows and BPF Code of practice, which gives detailed guidance on the selection of appropriate styles and sizes. If fitted load bearing capacity of safety devices must also meet the requirements of EN 14351-1:2006+A1:2010 CLAUSE 4.8.
- Weather performance
- Security
- Safety in case of fire. It is important to ensure that means of escape in case of fire are provided. Ventilation. The Glass and Glazing Federation also produce guidance documents for incorporating ventilation into replacement windows.
- Safety glass.
- Very large opening lights can be manufactured. Refer to hardware manufacturer's recommendations and do not exceed these size and weight limitations or those stated in the relevant VEKA UK Group manufacturing manual.

3.2 Safety In Use: Additional Requirements for Doors

Virtually any type of door can be produced in PVC-U, such as single hinged, double doors, inward or outward opening, in-line sliding and tilt & slide. When choosing a particular type of door, consideration should be given, for instance to the following (including the requirements for windows given in the previous section):-

- Access to buildings and the requirements of low thresholds and size of openings for wheelchair access.
- Safety in case of fire. It is important to ensure that means of escape in case of fire are provided. EN 14351-1:2006+A1:2010 also specifies that fitting of any emergency exit/panic hardware for a locked door on an escape route must comply with clause 4.10.
- The provision of additional security devices such as spyholes and chains need to be specified and agreed.

4.0 Handling and Storage

When transporting glazed or unglazed frames, they should be firmly secured in an upright position on clean resilient packing. This will help prevent scratching of the surface of the profile. Frames stored on site should be treated in the same way and should be carried securely and placed in position without heavy impact, do not rest, lower or drop frames on corners or edges as it may result in permanent damage.

Windows that are delivered pre-glazed should have the glazing packed to ensure correct operation and to minimise distortion and breakage. Windows which have had the frames and glazing delivered separately should be packed in accordance with the recommendations and the latest version of BS 6262 and BS 8213-4.

6.0 Survey and Installation

6.1 General

Norscot Joinery Limited promotes best practice with regard to the survey and installation of windows and external doors. These instructions should be used as a guide only. For more detailed instructions, **Norscot Joinery Limited** recommends that the installer familiarises themselves and works in accordance with British Standard, BS 8213-4:2007 Windows, doors and rooflights. Code of practice for the survey and installation of windows and external doorsets.

NOTE. PVC-U windows and doors are not designed to be load bearing.

Check the openings for any service cables (e.g. TV Aerial cables or telephone lines), mark these on the survey and agree with customer on the method of handling.

Determine the exposure category of the site and ensure that the replacement windows and doors are suitable.

Ensure compliance with Building Regulations or Technical Handbook as these affect both new buildings and refurbishment of existing buildings. Although replacement windows do not require an application to Building Control they must still comply with the current regulations. Particular attention is drawn to the requirements of Section 6 (Energy), Section 4.1 (Access to buildings) and Section 4.8 (Danger from accidents) of the current Technical Standards.

Also, the fitting of replacement windows and doors should not worsen the existing provision in respect of Technical Standards Section 3.14 (Ventilation) and Section 2.9 (Escape). Photographic evidence of existing windows and doors should be considered in respect of queries raised by inspectors etc.

Ensure there are no obstructions, either internally or externally, that will prevent the proposed windows or doors from functioning correctly (e.g. external rainwater pipes or internal taps).

Check that the design of product falls within the following recommended maximum size range.

In the event that protected species (e.g. bats, birds, butterflies, dormice) or plants that could be subject to special protection are found to be present, make a written record and seek professional advice before proceeding with any works. Also ensure that the building/homeowner is informed. Do not proceed with any works that is likely to disturb the species or its habitat unless cleared to do so by a qualified professional.

Take measurement of the width, height and diagonals as shown in Fig 1. The smallest measurement taken determines the right overall width & height sizes. The deductions shown in Table 1 (below) should then be made to allow for expansion and contraction of the new frames. Determine if projecting sub-sills are to be fitted and where included, ensure that a minimum projection of 25mm is provided beyond the structure. The difference between internal and external reveal sizes should be determined and checks made to ensure that the operation of any opening light will not be impeded by plaster, render, check level or tiles etc. The survey should also determine the installation method to be used (e.g. through the frame fixing or with fixing straps).

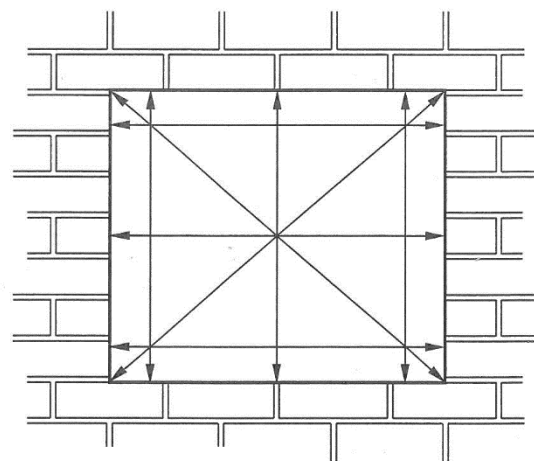


Fig. 1

Table 1.

Width/Height of opening	Timber	Aluminium
Up to 1.5m	5.0mm	10.0mm
1.5m to 3.0m	10.0mm	10.0mm
3.0m to 4.5m	10.0mm	15.0mm
Over 4.5m	10.0mm	20.0mm

These deductions are from the total width or height, and are not “per side”.

When surveying a bay window, make a note of the materials above the window (e.g. brickwork, hanging tiles, tiled roof, etc.) as structural bay windows are required to have jacking poles to prevent any structural movement above the bay window (refer to section Structural Bay Windows for details). For all bay window installations, it is recommended that all bay window installations are load bearing unless there is evidence to prove otherwise.

6.1.1 Removal of Windows

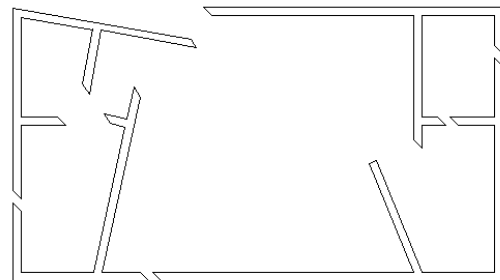
Cover carpets and soft furnishings with dust sheets so as to minimise the possibility of damage

Remove all glass prior to removal of frame, glass must be removed with great care and appropriate protective PPE.

Remove sashes first, by either unscrewing the hinges or levering off with a crow bar. To avoid any damage internal decoration during removal of the frame, it is good practice to break the internal seal by running a knife between the frame and plasterline.

Make two cuts in all stiles slanted and distanced apart enough to insert the hoked claw of a crowbar.

This method of collapsing and folding the frame out of the opening is commonly used, and if carefully done reduces any damage to the internal/external finishes.



6.1.2 Removal of sub-sills

Sub-sills and heads are often ‘horned’ into the fabric of the aperture; great care must be taken when cutting and levering these items to reduce damage to plaster, renders and brickwork. If the DPC is damaged, it must be replaced prior to installation of new frame.

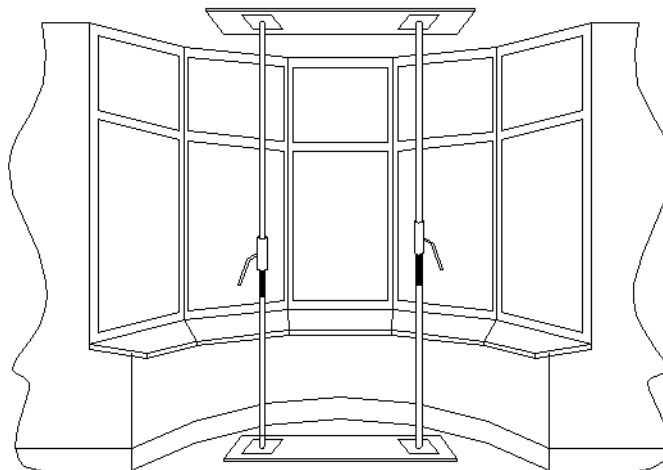
6.1.3 Removal of ‘Box-Sash’ windows

Many box-sash windows pre date cavity walls and are built into the internal reveals of solid brickwork. The sashes are removed fully glazed.

- Remove the mitred beading from around the frame.
- Cut the sash cords to release the weights.
- Remove the bottom sash, then take off the parting bead and take out top sash.
- Cut the outer frame from the aperture, leaving the horns in the structure.
- Remove the counterweights from the sash box.
- Remove the sub-sill, if this is not part of the outer frame.
- Remove the mitred beading from around the frame.

6.1.4 Structural Bay Windows

In order to maintain the structural integrity when replacing a bay window, it is essential that temporary supports are used. They must be placed in a position as to support without causing damage to ceilings or floors. In some cases support will be required externally as well as internally.



Checks should be made with your local building control department or seek the services of a structural engineer if you have any uncertainty regarding this area of an installation.

Please note: Some local authorities require Building Regulations approval when replacing any bay window.

6.2.1 Fixing details

Prior to installation of the frames the damp proof membrane must be checked to ensure it is undamaged and still affective, any making good of the aperture should also be done including prevention of any cavity cold bridging.

There are two principal methods of fixing available, which may be used separately or in combination. These are through frame fixings and lug fixings. The manufacturer's instructions should always be followed.

If lug fixings are used they should be of a suitable material to resist corrosion and, if used externally, they should be secured to the wall using "one-way" or other suitable security screws.

Screws should be sized to penetrate at least 25mm into timber, or 40mm into plugged holes in brick, block, or masonry, unless equivalent demonstrable provision can be made by other means, for example by complying with an appropriate structural code. Connections to steelwork up to 2mm thick such as folded sheet lintels should be made with appropriate thread cutting screws. Connections to steelwork over 2mm thick should be into pre-tapped holes with machine screws of minimum 5mm diameter or alternatively with power-driven hardened self-drilling screws.

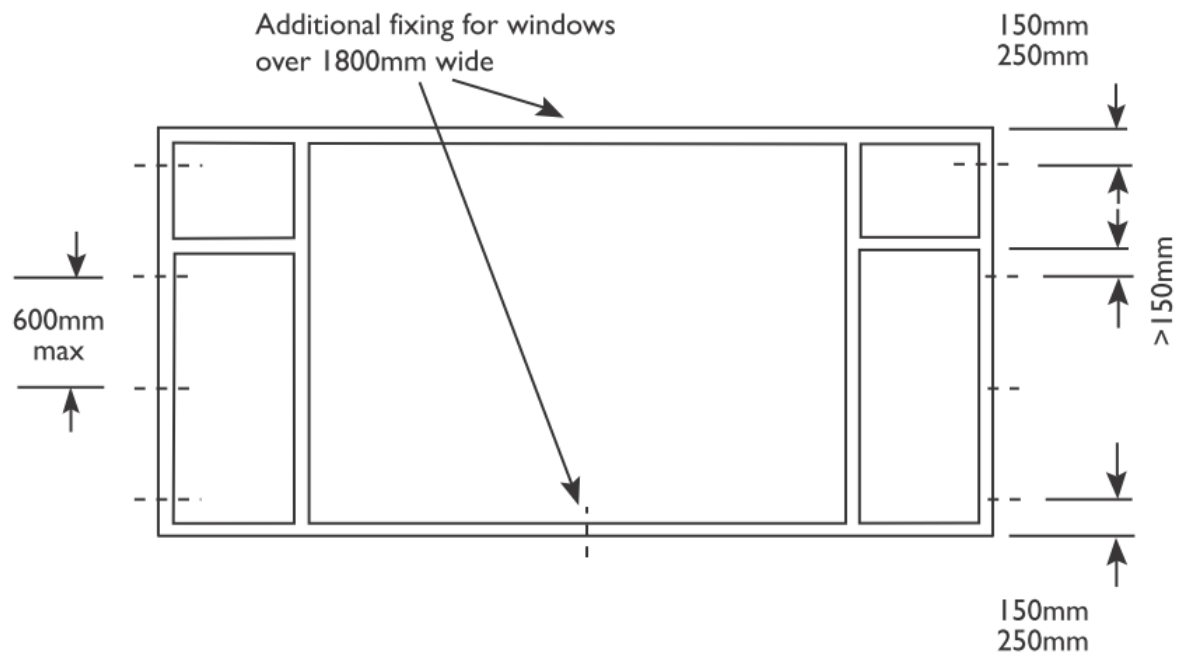
Other proprietary mechanical fixing methods should be assessed for suitability, preferably by obtaining an appropriate third party assessment.

Fixings should be at least as corrosion-resistant as BS EN 1670:1998, Grade 3.

The presence of pre-cast concrete or steel lintels may make it impracticable or pose severe difficulties in achieving the specified fixing distances. In these instances the use of polyurethane foam has proved a useful adjunct to mechanical fixings. However, foam fixings should never be used as the sole method of fixing the entire frame into the reveal.

Where possible, the sides of the frame should be secured as follows:-

- a. Corner jamb fixings should be between 150 mm and 250 mm from the external corner.
- b. Intermediate fixings should be at centres no greater than 600mm.
- c. There should be a minimum of two fixings on each jamb.
- d. On windows over 1800 mm wide, central head and sub-sill fixings should be provided.



Installation packers should be used adjacent to fixing positions to prevent outer frame distortion during installation. Installation packers should be resistant to compression, rot and corrosion. They should span the full depth of the outer frame. The fixings should be tightened so that the frame is held securely against the packers. Over-tightening can lead to distortion and should be avoided.

Where enhanced security is required, additional packers might be necessary adjacent to hinge and locking points.

6.3 Installation of Glass

All glazing should conform to the recommendations given in the relevant part of BS 6262 and in BS 8000-7. In addition, any glass or insulating glass unit manufacturer's instructions should be followed. All insulating glass units should be examined for damage prior to installation and defective units should not be used.

Insulating glass units incorporating safety glass should be oriented with the safety glass on the appropriate side.

It is a legal requirement that the marking on the safety glass remains visible after installation.

Insulating glass units with low emissivity coatings should be oriented in accordance with the manufacturer's instructions. Failure to do so can render the coating less effective.

Many windows and Doorset's are delivered ready-glazed. Alternatively they can be supplied with glass units and pre-formed glazing gaskets to be applied on site in accordance with manufacturer's instructions.

Insulating glass units should be installed in accordance with BS 8000-7, requiring, where appropriate, the correct use of setting and location blocks, distance pieces, frame to glass and bead to glass gaskets, bead to frame air seals, corner sealing blocks, beads and bead end caps, and bedding and capping sealants.

Finishing off and making good

Debris or contaminants should be removed and any drainage paths should be cleared. Internal reveals should be made good as agreed, ready for the purchaser to redecorate if necessary. Any materials such as trims or sealant should not be applied on top of loose material.

Where the replacement product has a smaller front to back dimension than the original, there might be a mastic and/or paint line visible on the substrate which should be removed as much as practicable or covered with a trim.

The method of, and responsibility for, repair to any render should be as agreed with the purchaser.

6.4 Sealing

The purpose of perimeter sealants is to repel water and prevent air leakage in the face of differential movement between the aperture and the window. Suitable sealants exhibit and retain flexibility. Sealants should be compatible with the frame, substrate and other materials with which it may come into contact.

The presence of old oil-based mastics and bituminous DPC's can adversely affect the behaviour or appearance of otherwise correctly specified and applied sealants through the migration of hydrocarbons to the surface of the new sealants. Consequent photo-oxidation of the migrant products can affect sealant performance and produce discoloration. This risk should be avoided by removal of unwanted mastic and by keeping sealant away from DPC's.

Perimeter joints should be sealed on both the outside and the inside, with a sealant appropriate to:

- the frame surface
- the substrate material
- joint size and configuration
- anticipated joint movement
- anticipated exposure to weather.

In situations where sealants rely upon atmospheric moisture to initiate curing, deep filling i.e.

Over 6mm, should be avoided. The sealant should be applied against a firm backing e.g. foamed PE rod, so that it is forced against the sides of the joint during application. To avoid failure in service, the sealant should not adhere to the backing because this would restrict the lateral movement of the joint. This can be achieved through the use of a closed-cell foam strip such as a polyethylene foam tube.

Wherever practicable, an insulating fill should be inserted or injected around the full perimeter of the frame, between the frame and the structural opening. Any such insulation should be sufficiently flexible that it does not interfere with any expansion and contraction of the frame.

7.0 Cleaning, Maintenance and Safety in Use.

Your new **Norscot Joinery Limited** windows and doors are designed manufactured and installed to the highest standards improving not only your home's appearance but making it more secure, warmer and more comfortable.

The windows are extremely durable and long lasting and as a result will only require occasional cleaning and basic maintenance. By following these simple guidelines, they will give you years of trouble free use.

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY INVALIDATE YOUR GUARANTEE

7.1 Vents and Ventilation

Your new windows will be much more efficient and draught proof than your old ones and as a result will prevent heat as well as moisture from escaping.

Where glazed-in or trickle vents are present in the window, they should remain open at all times even where they may be closeable via a shutter or pull cord. This will help prevent mould and condensation forming in the room and on the windows.

WARNING - It is imperative that vents remain open at all times in rooms where there are combustible appliances as to close them or block them up could lead to serious health and safety implications where carbon monoxide could be present.

7.2 Internal condensation

Condensation is caused by a number of factors and is affected by complex interrelationships between heat, moisture, air movement and building layout. The requirement for more efficient use of energy has led to increased levels of thermal insulation and airtightness in both new and refurbished buildings which in-turn can lead to an increase of condensation. This can be a particular problem in rooms where high humidity and water vapour is present such as kitchens and bathrooms. Additional items such as house plants, clothes drying and storage of fire wood can also have an effect.

Norscot Joinery Limited does not guarantee that its products will be free from condensation and does not accept liability for any loss or damage as a result. Condensation is caused by poor ventilation and not by double glazing but because of its superior insulating properties, can contribute to preventing it from escaping. Taking steps to control the amount of moisture created in a room is the most effective solution. Therefore ensure rooms are well ventilated by;

- Opening windows.
- Ensuring trickle vents remain permanently in the open position.
- Use exhaust fans whilst showering and cooking.
- Close doors to other rooms so that the moisture does not migrate.
- Reduce the amount of house plants in the room.
- Do not dry damp clothes in a room when it is not ventilated.



7.3 External condensation

Occasionally you may get condensation forming on the external pane of glass. This is usually visible on cold, clear mornings for instance in frosty weather. This phenomenon occurs because modern glass coatings and gas filled cavities have become so efficient at keeping the heat inside the room that warmth is not able transfer to the external pane to heat it up. This is not a product fault and as the daytime temperature rises the external condensation will disappear.

7.4 Cleaning

7.4.1 Timber Frames

Frames should be washed using a solution of mild detergent in warm water.

7.4.2 Aluminium Frames

The frequency of cleaning will depend on the local conditions, for instance, products installed in an industrially polluted or coastal area tend to require more frequent cleaning, at least every three months. In a relatively cleaner environment every six months should be sufficient.

Wash down with clean warm water containing a non-alkaline liquid detergent (in a concentration which can be handled safely with bare hands) using a non-abrasive cloth, sponge or soft bristle brush. This will remove grime, grease and any excess chalking. All ridges, grooves, joints and drainage channels where salt or other deposits can collect should be well washed out, thus preventing corrosion sites from occurring. Rinse thoroughly with clean water and dry using a soft cloth.

7.4.3 Sealant

The sealant between a frame and the building can be cleaned using mild detergent in warm water, taking care not to break the seal to the frame or substrate.

7.4.3 Glass

Cleaning of glass can be carried out using a solution of detergent in warm water. This method is particularly suitable for more heavily soiled surfaces, such as the external face of the glass.

Alternatively, less heavily soiled glass surfaces can be cleaned using a soft cloth and proprietary glass cleaner, in accordance with the manufacturer's instructions.

Laminated, toughened, leaded or low-E glass, and units containing Georgian bars, can all be cleaned in a similar manner.

The glass used in double glazed units can be easily scratched especially by jewellery and metallic scrapers. It is therefore recommended that hand jewellery is removed prior to cleaning and the use of such scrapers be avoided. Care is required when cleaning leaded lights as excessive pressure can dislodge the lead from the glass surface.

Care should be taken not to damage the seals between the frame and the glass.

Note: Externally exposed lead will oxidise - this is a natural phenomenon and does not indicate a fault with the material.

7.4.3 Hardware

External hardware such as handles, hinges, key cylinders, catches and restrictors have coatings and polished surfaces which can be restored by cleaning with a dry soft duster. Do not use water. Take care not to scratch surfaces with jewellery such as rings, keys or hang items from handles.

7.5 Component Replacement

Replacement components should only be fitted by trained personnel as the correct adjustment of the glazing, gaskets and hardware are critical to the performance of the window/door.

The frequency of replacement will depend on the environment, the level of care and maintenance and the frequency of opening and closing. It is likely that the frames will outlast all other components, such as double glazed units and hardware. These items can be replaced by competent personnel. If a frame is scratched or damaged, it may be possible to affect a repair.

7.6 Maintenance

7.6.1 General

During routine cleaning it is advisable to check for damage such as abrasions, scratches, drainage paths clear of debris, signs of tampering and faulty operation of hardware. Should any damage be found advice should be sought from suppliers or another suitability qualified professional.

7.6.2 Making a complaint

Norscot Joinery Limited pride ourselves on the highest possible standards and will do our best to ensure that you never need to complain about our products or workmanship. However If you do have a complaint about the installation or performance of your new windows and doors, please inform us in writing; (even if you have initially made your complaint verbally or by telephone)

Write to;

Customer Services
Norscot Joinery Limited
Bower Workshops,
Bower,
Wick
Caithness
KW1 4TL

We will investigate your complaint and take the necessary action to resolve and rectify the issue to your satisfaction within a reasonable time frame.

7.6.6 Top Swing Window

Operation

Always keep the window in the closed position when moving the handle and never pull on the window whilst turning the handle.

Opening from the closed position

- Turn the handle 90° from horizontal to vertical and push the window forward, it will click into a restricted open position of approximately 100mm. Some handles may have key locks which must first be released.
- Press the restrictor, located on the centre hinge to disengage, the window can now be fully opened.

Cleaning

- The window can also be fully reversed for cleaning. Once in the fully reversed position the restrictors will engage one again.
- When in the fully open position, if the pivot windows are too loose friction adjustment can be made by tightening the grommet located on the top of each hinge with an Allen key.



- To reverse the window back to its normal position, disengage the restrictor, located on the centre hinge and turn the sash back in the opposite direction. The restrictor may re-engage in the restricted position of approximately 100mm open. Release the restrictor again, pull the window back to the closed position

and
turn
the



handle through 90° from vertical to horizontal.

Maintenance

- Ensure all moving parts are kept free and clear of obstruction. Do not trap or jam items in the window to prevent it from closing

Lubricate all moving parts at least once a year with a light multi-purpose oil or acid-free lubricate (eg. Petroleum jelly). Do not use spray oil or acidic lubricant. To prevent excessive lubrication a lightly oiled cloth can be wiped around all moving parts.



7.6.3 Casement Window

Operation

There are many different locking and hinge options available these guidelines cover the most common multi-point espagnolette and shootbolt locking mechanisms and friction hinges. Casement windows usually incorporate two types of opening lights - top and side hung, both of which operate in the same way.

Opening and Closing

- Turn the handle 90° to release and push the window open. Some handles may have key locks or push buttons which must first be released.



- The friction stay hinge may limit the opening if incorporating a restrictor. Push the button to release the restrictor to allow the window to open fully. The friction hinge may also incorporate an easy-clean facility to facilitate safe cleaning. Never leave open windows unattended and always be sure to re-engage the easy-clean function as soon as cleaning has taken place, particularly where vulnerable people or children use the building.

Night Vent Facility

- Open the window as before but only by approximately 20mm so slightly ajar.
- Turn the handle back to the closed position taking care not to force it and you will feel the lock re-engage into the keeps. If the window has a key it can then be locked in this position.

Maintenance

- Ensure all moving parts are kept free and clear of obstruction. Do not trap or jam items in the window to prevent it from closing. If windows are too loose further adjustment to the windows can be made, this is done by tightening the brass screw located in each friction hinge.
- Lubricate all moving parts at least once a year with a light multi-purpose oil or acid-free lubricate (eg. Petroleum jelly) including the rivet points on stainless steel hinges. Do not use spray oil or acidic lubricant. To prevent excessive lubrication a lightly oiled cloth can be wiped around all moving parts.

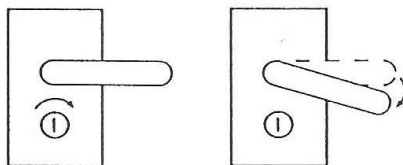


7.6.7 Entrance Door

Operation

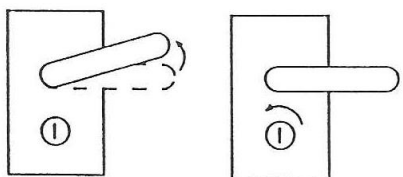
These instructions are relevant for doors that open-inwards or outwards usually as entrance doors. These guidelines are primarily for when a lever handle is fitted on both sides of the door.

Unlocking and Opening



- Insert the key and turn it to unlock.
- Push the handle down and hold to disengage the locking components and open the door.

Closing and Locking



- Push or pull the door closed so that it clicks shut.
- Lift the handle up to engage the locking components.
- Insert the key, turn it to lock and then remove.



Maintenance

- Ensure all moving parts are kept free and clear of obstruction. Do not trap or jam items in the door to prevent it from closing
- Lubricate all moving parts at least once a year with a light multi-purpose oil or acid-free lubricate (eg. Petroleum jelly). Do not use spray oil or acidic lubricant. To prevent excessive lubrication a lightly oiled cloth can be wiped around all moving parts





