Operation and Maintenance of Aluminium Windows, Doors Screens and other Glazed products.

Aluminium Windows – Operation

Open-out Windows

To operate an open-out window, unlock with key and depress button. Turn the handle through 90° to disengage the locking mechanism and open the window by pushing outwards.

Tilt and Turn windows

Tilt and turn windows have two modes of operation: a tilt mode for ventilation and a turn mode for cleaning or emergency exit use.

Locking is by a number of cams (espagnolettes) located on a sliding mechanism around the perimeter of a window vent. When the window is shut, with the handle in the closed position, the cams are engaged in keeps fitted around the window frame.

Note that these windows can be supplied in either tilt-before-turn or turn-before-tilt mode. If you are in any doubt as to the sequence of operation, please contact your universal installer.

The handle of a tilt-before-turn window can be placed in three positions:
CLOSED, TILT or TURN.

The window must always be fully shut before changing the handle position,

In the closed position, the handle points vertically downwards.
To TILT the window, turn the handle through 900 until it is horizontal then pull the window inwards. The base of the window remains hinged to the frame whilst the top tilts inwards for ventilation.

To TURN the window from the TILT position, close the window and turn the handle 90° to the vertically upward position and pull the window inwards. The side remains hinged to the frame whilst the window can be opened inwards to any required position.

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Aluminium Doors and Windows –Maintenance

Operating Handles and Locks

Pivot points of handles should be lubricated periodically with light machine oil such as 3 in 1, or WD40.

The tightness of all fixing screws or rivets should be checked periodically.

One year after installation and thereafter annually, the moving parts of locking mechanisms should be lubricated with light machine oil as 3 in 1, or WD40.

Other Hardware

Friction hinges, opening restriction arms and safety catches should be lubricated periodically with light machine oil such as 3 in 1 or WD40. At least every five years the hinges should be cleaned and the pivot joints re-lubricated.

For best performance of friction hinges, any dust or debris must be removed from tracks, sliding shoes and end points.

Espagnolette sliding mechanisms should be kept free of dirt and each slot lubricated with light machine oil such as 3 in 1 or WD40.

Espagnolotte keeps should be lubricated with petroleum jelly from time to time.

Door closers

The closing and latching speeds of mounted or concealed overhead door closers can be adjusted to suit your requirements. Please see the closer manufacturer's leaflet for details.

Checks should be carried out periodically to ensure that the bottom pivot and that the top arm fixings are tight. To do this, it may be necessary to remove the door and we advise you to consult a professional door maintenance company to undertake such work.

Drainage channels

Most window and doorframes have drainage channels and outlet slots located in the sill or base of the frame. These channels and outlet slots must be kept clear to enable free flow and efficient dispersal of any water.

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Polyester Powder coat Paint finishes – Maintenance

Polyester powder coat paint is an organic finish that requires regular cleaning and maintenance to ensure it keeps its decorative and protective qualities.
The frequency of cleaning depends on such factors as:

- The building's surrounding environment (for example, marine alkaline, acid. Industrial etc.)
- The varying levels of atmospheric pollution,
- The prevailing wind direction,
- Exposure to airborne debris such as sand or salt, which may cause erosive wear.

Cleaning frequency also depends on the desired standard of appearance and also the need to remove deposits, which could cause damage after prolonged contact with the finish.

In an industrial environment, the normal interval between cleaning should not be more than every three months, Where there is a high degree of industrial pollution or a hazardous atmosphere, the periods between cleaning should be reduced.

If the atmosphere is non-hazardous (for example in rural or normal urban locations), the period between cleaning can be extended to a maximum of 18 months (or more frequently if heavy soiling occurs),

Where a site is subjected to any unusual environment factors, or is close to salt water, your Universal installer should be consulted for specialist advice.

Powder coat paint finishes should be kept clean by regular washing using a solution of warm water and a mild detergent. Use a soft cloth or sponge and never use anything harsher than a natural bristle brush.
Where atmospheric pollution has caused heavy soiling of the powder coat paint, use white spirit for cleaning. Under no circumstances should abrasive cleaners or any cleaner containing ketones, esters or alcohols be used.

Anodised Aluminium finishes –Maintenance

Anodised Aluminium finishes need regular maintenance to obtain their original appearance. This is best undertaken as part of the regular window cleaning contract, but not less then every three months. All that should be required is a mild detergent in warm water.
Accumulated deposits can be removed carefully with a nylon brush or super fine Scotchbrite type pad.
As with all aluminium products, acid or alkaline industrial cleaners should never be used. Certain specialist abrasives or non-etch chemical cleaners may be used in certain instances. These should be tested on a concealed area of aluminium prior to use. White spirit, turpentine or kerosene can be used on any areas contaminated with acid or alkaline additives.

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Glass - General information

Certain imperfections in the glass in double glazed units cannot be avoided - even in the most carefully controlled manufacturing processes. Minor imperfections are inherent in all double-glazing and are acceptable within industry standards.

The glass and Glazing Federation's Standard Document states the following:

"The transparent glass used in the manufacture of double glazed units is identical to that used in traditional style single glazing and will therefore have a similar level of quality".

Both panes of a double glazed unit should be viewed from the room side, standing at a distance of two meters in natural daylight and not in direct sunlight. The area to be viewed is the normal vision area, with the exception of a 50mm wide band around the perimeter of the unit.

Flat transparent glass shall be deemed acceptable if the following phenomena are neither obtrusive nor bunched:

A) Totally enclosed seeds
B) Bubbles or blisters
C) Hairlines or blobs
D) Fine scratches not more than 25mm long
E) Minute embedded particles

"Obtrusiveness of blemishes shall be judged by looking through the glass and not at it, under normal lighting conditions as described above."

Universal installers use only the highest quality float glass, whether laminated, toughened or annealed, which conforms to the requirements of BS 6262.

Double glazed units produced to BS 5713 conform to the highest manufacturing standards, quality controls and inspection routines.

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Glass - Cleaning

The glass in windows, doors and screens should be kept clean to maintain clear vision through the glazing and to prevent the reduction of daylight through the accumulated dirt.

The appearance of wall masonry or other facing materials may also be defaced by dirt washed from the glazing by rain.

The frequency of glass cleaning varies from, for example, the daily cleaning of shop windows to the occasional cleaning of a factory - as required by Section 1 of the Factories Act, 1961.

Glass may become soiled by pollutants, which include dust, grit, smoke, gas (particularly sulphur dioxide) and acid or alkaline deposits. Pollution in towns is caused by the burning of fossil fuels, diesel fumes and the fumes form industrial processes.

Glazing becomes soiled to a varying degree according to the locality, the inclination of the glass surface, its texture and whether it is exposed to he washing action of rain. Rain, however, is never in itself sufficient to keep the exterior clean. Atmospheric pollution influences the exterior soiling of glazing, whilst the internal surfaces can be soiled by pollution generated from the building, This can become a major factor in some industrial locations.

The glass used in most double glazed units can be easily scratched so we recommend that rings etc. be removed prior to cleaning.

Glazing can often be cleaned satisfactorily using clean water. Apply liberally with a swab of leather off and finish with scrim. Squeegees can be used and long handled squeegees can be used for larger or inaccessible windows. Note however that the use of long handled squeegees horizontally is not recommended.

Where squeegees are frequently used to clean internal glass surfaces in commercial building, designers should take account of the greater degree of wetting involved when selecting internal finishes.

If windows face busy roads the may suffer from soiling due to traffic fumes. Detergent may be added to the cleaning water in small quantities. Although paraffin can speed up the cleaning process, the glazing will soon develop a rainbow-like discoloration.

If the glazing is very soiled, it may require treatment with a dilute solution of ammonia or soda. Checks should be made to see if it will be necessary to provide overhead protection for passers-by or whether the cleaning materials will have an adverse effect on the fabric of the building. After cleaning with these products, wash down the areas with clean water.

Scratches can usually be removed with jeweller’s rouge or a similar rubbing compound.

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When cleaning glazing, ensure that any weather seals do not become dislodged from their grooves. If this happens, slide the seal back into position immediately to avoid possible damage when the window is closed.
If any weather seals are damaged, or if draughts are felt around the glazing, ensure prompt replacement by contacting your Universal installer.

Condensation

Water vapour is continually present in the atmosphere and in the home this natural water content is increased by day-to-day activities which create steam such as cooking, bathing, washing, boiling water etc.

This water vapour is undetectable when carried in warm air, but it condenses into water droplets when it comes into contact with cold surfaces such as glass. Normally, water vapour is controlled through natural ventilation via airbricks; chimneys etc. but conservation measures have lead to more efficient sealing of buildings. This may result in trapped water vapour and increasing problems with condensation.

Condensation is best controlled by ventilation and this is achieved by opening windows, fitting extraction units or by fitting wall vents to provide airflow.

Some heat should always be maintained in the building during cold weather. The temperature may be increased in areas where condensation is a particular problem.

If possible, internal doors to kitchens and bathrooms should be kept closed and sealed against draughts to prevent excessively moist air being transferred to other areas.

Bedroom windows should have night ventilation facilities to provide air circulation.

Curtains should be a minimum of 150mm away from the window to ensure airflow, with suitable gaps at the top and bottom to allow circulation.