



AUSTRALIAN
GLASS & WINDOW
ASSOCIATION

AUSTRALIAN GLASS AND WINDOW ASSOCIATION GUIDE SERIES

A GUIDE TO RESIDENTIAL INSTALLATION



AN INDUSTRY GUIDE TO THE
CORRECT INSTALLATION OF
WINDOWS AND DOORS

VERSION 4
JULY 2020

CONTENTS

FOREWORD		
AUSTRALIAN GLASS AND WINDOW ASSOCIATION		
INDUSTRY GUIDE OBJECTIVE		
ACKNOWLEDGEMENT		
DISCLAIMER		
RESPONSIBILITIES		
THE NATIONAL CONSTRUCTION CODE INSTALLATION		
IDENTIFICATION OF SITE RATINGS		
CARE & MAINTENANCE		
PRE-INSTALLATION CARE		
POST-INSTALLATION CARE		
Door Tracks and Sills		
General Soiling		
Acid Spills		
Glass		
Hardware		
Use of Hose		
FLASHING		
SILL FLASHING		
SPECIAL CARE		
JAMB FLASHING		
HEAD FLASHING		
INSTALLATION		
COMMON INSTALLATION PROBLEMS		
CORRECT INSTALLATION OF FRAMES		
CONSTRUCTION TYPES		
TYPE A: CAVITY VENEER		
TYPE B: CAVITY MASONRY		
TYPE C: SINGLE SKIN VENEER		
TYPE D: SOLID MASONRY		
3 HOW TO USE THIS GUIDE	15	
MATERIALS KEY		15
3 CAVITY VENEER CONSTRUCTION	16	
ALUMINIUM WINDOW INSTALLATION		16
ALUMINIUM SLIDING DOOR INSTALLATION		18
UPVC WINDOW INSTALLATION		20
UPVC SLIDING DOOR INSTALLATION		22
TIMBER WINDOW INSTALLATION		24
TIMBER SLIDING DOOR INSTALLATION		26
4 CAVITY MASONRY CONSTRUCTION	28	
ALUMINIUM WINDOW INSTALLATION		28
ALUMINIUM SLIDING DOOR INSTALLATION		30
UPVC WINDOW INSTALLATION		32
UPVC SLIDING DOOR INSTALLATION		34
TIMBER WINDOW INSTALLATION		36
TIMBER SLIDING DOOR INSTALLATION		38
7 SINGLE SKIN VENEER CONSTRUCTION	40	
ALUMINIUM WINDOW INSTALLATION		40
ALUMINIUM SLIDING DOOR INSTALLATION		42
UPVC WINDOW INSTALLATION		44
UPVC SLIDING DOOR INSTALLATION		46
TIMBER WINDOW INSTALLATION		48
TIMBER SLIDING DOOR INSTALLATION		50
12 SOLID MASONRY CONSTRUCTION	52	
ALUMINIUM WINDOW INSTALLATION		52
ALUMINIUM SLIDING DOOR INSTALLATION		54
UPVC WINDOW INSTALLATION		56
UPVC SLIDING DOOR INSTALLATION		58
TIMBER WINDOW INSTALLATION		60
TIMBER SLIDING DOOR INSTALLATION		62

FOREWORD

As part of its commitment to raising the built performance standard of glass, windows and doors in Australian Glass and Window Association (AGWA) is pleased to provide this Industry Guide to the correct installation of windows and doors.

AUSTRALIAN GLASS AND WINDOW ASSOCIATION

AGWA is the peak association representing over 1000 member companies covering window manufacturers, glass manufacturers, glass processors, merchants, glaziers and suppliers of supporting machinery, services and materials. We endorse compliant, sustainable and fit-for-purpose products and provide services to members that support their efforts to operate successfully.

AGWA delivers access to expertise for all members and stakeholders in key areas including:

- Technical support
- Training
- Accreditation
- Communication
- Workplace Health and Safety
- Marketing
- Events

INDUSTRY GUIDE OBJECTIVE

This industry guide to the installation of windows and doors sets out to provide the basic handling and installation instructions for windows and doors in residential buildings. By providing this resource as an instruction guide it is hoped that windows and doors supplied to residential buildings remain valuable and easy to install and maintain during the construction process.

This guide is designed to be used in conjunction with the AGWA Industry Guide to Fixing.

ACKNOWLEDGEMENT

The AGWA gratefully acknowledges those member companies whose contribution of materials and continued support to the AGWA Technical Committee and its sub committees have made this guide possible.

DISCLAIMER

This guide has been developed to provide general guidance, awareness and education to AGWA members, stakeholder groups and consumers. It should not be viewed as a definitive guide. While every effort has been made to ensure the information is accurate, the AGWA expressly disclaims all and any liability to any person for anything done in reliance on this publication. No responsibility is accepted by the AGWA for any mistakes, errors or omissions in this publication.

RESPONSIBILITIES

THE NATIONAL CONSTRUCTION CODE

The National Construction Code (NCC) is produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government and each State and Territory Government.

Under the NCC, the Building Code of Australia (BCA) is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia. It allows for variations in climate and geological or geographic conditions.

Under Part 3.0, Section 3.6.0 of Volume 2 of the BCA, performance requirements (P2.1 and P2.2.2) are satisfied if windows are designed and constructed in accordance with AS 2047. For glazed assemblies not covered by AS 2047 compliance to AS 1288 is required.

Under Section B and Section F of Volume 1 of the BCA, performance requirements are satisfied if windows are designed and constructed in accordance with AS 2047. For glazed assemblies not covered by AS 2047, compliance to AS 1288 is required.

AS 2047 Windows and External Glazed Doors in Buildings

AS 1288 Glass in Buildings: Selection and Installation

INSTALLATION

At all times manufacturer's installation instructions will be the predominant procedure for the installation of proprietary windows. Installers should ensure that manufacturer's instructions are adopted.

The practices outlined in this guide are not intended to supersede manufacturer's

instructions but provide basic and generic guidelines in the absence of such.

Approved personal protective equipment (PPE) should be worn at all times when handling windows.

Special consideration needs to be given to window and door systems designed specifically for acoustics and energy efficiency. Reference must be made to the building designer or installer for installation details.

IDENTIFICATION OF SITE RATINGS

Extract from Appendix C AS 2047:2014

Nomination of window ratings or design wind pressures for each window and door assembly should be as follows:

- For housing, the purchaser should nominate —
 - the window rating;
 - the window exposure classification; and
 - whether the window is a corner window when ordering the window assemblies.
- For other residential buildings, the purchaser should nominate the design wind pressures when ordering the window assemblies.
- For commercial buildings, the purchaser should nominate the design wind pressures for the window assemblies when ordering the windows.
- The manufacturer of the window assemblies should verify the window assemblies meet the window rating or design wind pressures as provided by the purchaser.

RESPONSIBILITIES

Extract from AS 2047:2014 – Section 8

8.1 GENERAL

Window assemblies for housing shall be labelled in accordance with Clause 8.2. Timber windows for housing and window assemblies for other than housing shall be labelled in accordance with Clause 8.2, or a certificate in accordance with Clause 8.3 shall be provided.

Note: Where windows for housing are supplied as incomplete assemblies, a certificate and a label giving manufacturer's identification marks, window rating and water penetration resistance should be provided with the window.

8.2 LABELLING

The label shall be so positioned that the window can be identified when viewed in situ.

Each window shall have the following information marked anywhere on the window assembly, except on the glazing (the application of rating labels on fixed glazed timber windows is permitted):

- The manufacturer's identification mark.
- The Serviceability Limit State wind pressure.
- The Ultimate Limit State wind pressure.
- The water penetration resistance.

8.3 CERTIFICATE

A certificate indicating the manufacturer's identification, the Serviceability Limit State wind pressure, the Ultimate Limit State wind pressure and the water penetration resistance shall be provided with window assemblies.

When making a statement of compliance with this Australian Standard on a product, packaging or promotional material related to

that product, it shall be ensured that such compliance is capable of being verified.

When making a statement of compliance with this Australian Standard on a variation to a tested sample, it shall be ensured that such compliance is capable of being verified.

Figure 1 Performance Label



Figure 2 Compliance Certificate

COMPLIANCE CERTIFICATE

is a participating member of the **AWA Accreditation Program**, provides a **6 Year Guarantee** against faulty workmanship and materials (see to Manufacturer's Warranty), is committed to the **Industry Code of Conduct** and has met the requirements of the annual **AWA Compliance Audit**.

The manufacturer certifies that the windows and doors supplied to:

Delivery address: _____

Delivered on: _____

have been manufactured to comply with the Australian Window Standard AS 2047 and Glass Standard AS 1288 including human impact requirements as specified in the order. The windows and doors have been manufactured to comply with NCC energy efficiency and bushfire requirements as specified by the purchaser.

The windows have been manufactured to comply with:

Housing				Other Construction			
	SLS Pa	ULS Pa	WPR Pa		SLS Pa	ULS Pa	WPR Pa
N1	400	600	150	C1	600	1800	150
N2	400	900	150	C2	800	2700	200
N3	600	1400	150	C3	1200	4000	300
N4	900	2000	200	C4	1600	6300	450
N5	1200	3000	300				
N6	1600	4000	450				

Note: For corner windows, the next highest rating pressure applies.

Energy Performance Ratings, AFRC Results: U Value, U _____
Solar Heat Gain Co efficient, SHGC, _____
Refer to attached schedule

Bushfire Rating: BAL 12.5 _____ BAL 19 _____ BAL 29 _____
BAL 40 _____ BAL F2 _____ Not Required/Specified

Methodology: Tested (AS 1500.8.1) _____ Tested (AS 1500.8.2) _____ Prescriptive (AS 3059) _____

Fall Prevention: Windows Restricted to max. 125 mm _____ Fall Prevention Screens _____
Not Required _____ Item Numbers _____

Signed: _____ Date: _____
Window Company _____

The builder/installer certifies that the windows and doors supplied have been installed correctly in accordance with the requirements of the National Construction Code and the human impact glass located in the correct openings.

Signed: _____ Date: _____
Builder/Installer _____
Inspection Agency Number _____

CARE & MAINTENANCE

PRE-INSTALLATION CARE

Windows and doors should be stored in a clean, dry area away from cement, lime, paint, acid etc. and must be protected from building materials and loose debris such as wet plaster, mortar, paint and welding splatter.

- Store in a dry location, under cover where possible, to protect against damage.
- Carry windows in the vertical position with sashes locked.
- Do not rack frames out of square.
- Prevent exposure to moisture particularly pooling and ponding.
- Do not remove any bands (if fitted) from double hung windows until after installation.
- Do not remove corner bracing (if fitted) until after installation.
- Do not remove flashing elements (if fitted).

Handle and stack frames carefully on site. Stand them upright on their sills (bottom of the window as installed), raised off the ground on pieces of timber or bricks. Stand them against a flat, vertical surface such as a shed and tie firmly in position, as in Figure 3.

Do not lean windows against a tree or post as they can be subject to permanent damage until installed into the building envelope. If the site is bare, lay frames flat on top of each other with weight evenly distributed to avoid buckling and distortion, as shown in Figure 4.

POST-INSTALLATION CARE

Door Tracks and Sills

Door tracks and window sills should be protected from planks, scaffolding and barrows, as shown in Figure 5.

Figure 3 Stacking Windows Onsite

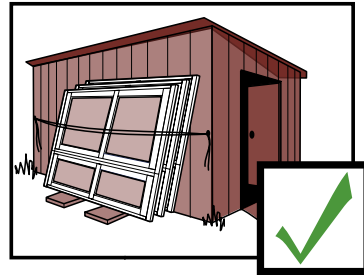
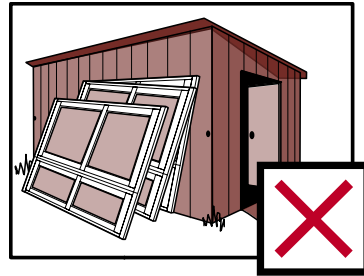
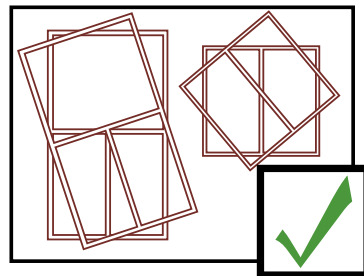
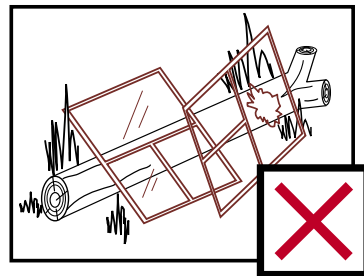


Figure 4 Flat Onsite Storage



CARE & MAINTENANCE

Figure 5 Door Tracks and Sills

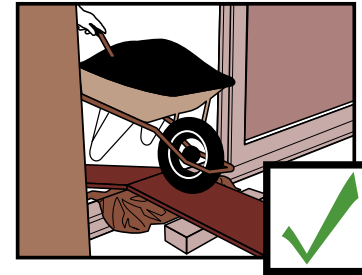
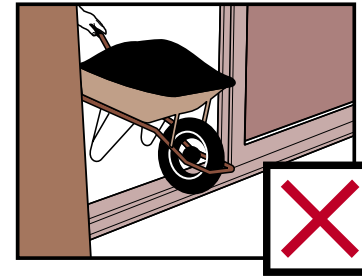
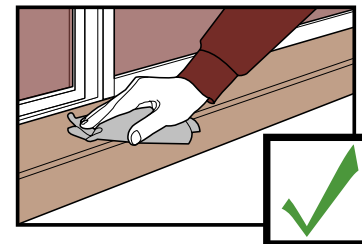
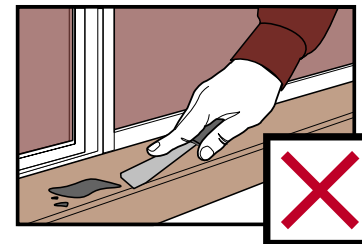


Figure 6 Soiling



General Soiling

If removal of debris is delayed and scraping becomes necessary the finish may be damaged. Remove cement, mortar and other droppings immediately, using ample clean water and a sponge or rag to avoid permanent staining of finished surfaces, as in Figure 6.

Acid Spills

Acid used for cleaning brickwork MUST be prevented from making contact with powdercoated or anodised aluminium windows and door surfaces. If any acid or similar corrosive material does come into contact with window or door surfaces those areas must be washed IMMEDIATELY with large quantities of clean water.

Glass

To clean glass, simply wipe over the surface with a few drops of methylated spirits on a damp cloth and then polish the surface dry with a lint free cloth. Ensure that all cleaning cloths are free of any abrasive substances.

Proprietary glass cleaners are not recommended as some can cause damage to the silver backing on mirrors and the interlayer in laminated glass. Avoid causing extreme temperature changes as this may lead to thermal fracture of the glass (ie. do not direct hot or cold water onto glass).

Hardware

Regular maintenance is required for all hardware, even stainless steel, as they are moving parts. In most environments maintenance is recommended every six (6) months and every three (3) months in marine and industrial environments.

CARE & MAINTENANCE

Exposed surfaces should first be wiped down with warm soapy water and a soft rag, and then rinsed clean before applying preventative.

Hangers, pivots and brackets should be given a light spray of a corrosion preventative (such as CRC Marine 66, Innox or WD40) followed by a light wipe with a dry cloth to remove excess.

Visible surfaces of hinges should be wiped down with warm soapy water on a soft rag and then rinsed off by wiping with a clean damp rag. Application of a thin film of light machine oil or one of the corrosion preventative sprays mentioned above will help to maintain the original lustre of the metal finish.

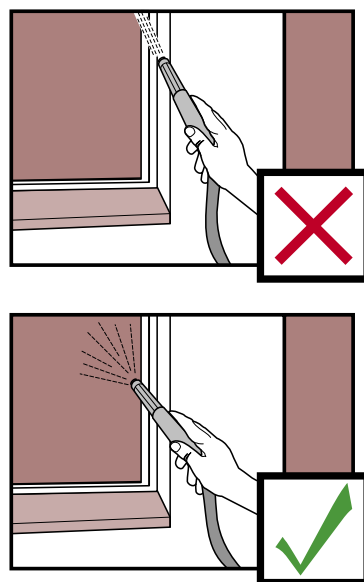
Be careful not to get these compounds on timberwork or anodised surfaces as they may cause staining.

Drop bolts should be sprayed with a lubricant such as those mentioned above at the sliding pin inside the bolt and to the lock cylinder. A tube attached to the nozzle will help to concentrate the spray where you want it to go.

Use of Hose

If using a hose or similar apparatus to clean windows and/or doors ensure the hose nozzle/jet fitting is set to a fine spray as shown in the diagram. At NO time should a window or door be hit with a full force of a hose, nozzle/jet setting as this may damage window seals and adversely affect air infiltration and water penetration performance. Figure 7.

Figure 7 Use of Hose



FLASHING

Flashing is essential to achieve proper weatherproofing of any wall openings, particularly around windows and doors. It is the builder or installers responsibility to ensure that windows and doors are installed in such a way that water does not penetrate from the outer skin to the inner skin of the building envelope. The extent of the flashing required depends on local weather conditions, the exposure of the window to the elements, the type of construction and other design requirements. For further information please refer to the relevant sections of the NCC.

There are three types of flashing: Sill, Jamb and Head. Flashing must be installed from bottom to top, in the following order, so that each layer overlaps the one below:

1. Sill flashing
2. Jamb Flashing
3. Head Flashing

The sarking above the window overlaps the head flashing. Overlap is vital to ensure that, at each transition, water is directed onto the element below.

Drainage must be provided below the window or door, so that any water captured has the ability to escape to the outside of the wall.

SILL FLASHING

Sill flashing must be installed to prevent water wetting the inner skin and entering the cavity under the window or door. Sill flashing also collects run off from the jamb flashing and directs it outside the building envelope.

- Must project a minimum of 150 mm both sides past the opening.
- Must be made of approved materials and comply with AS/NZS 2904.

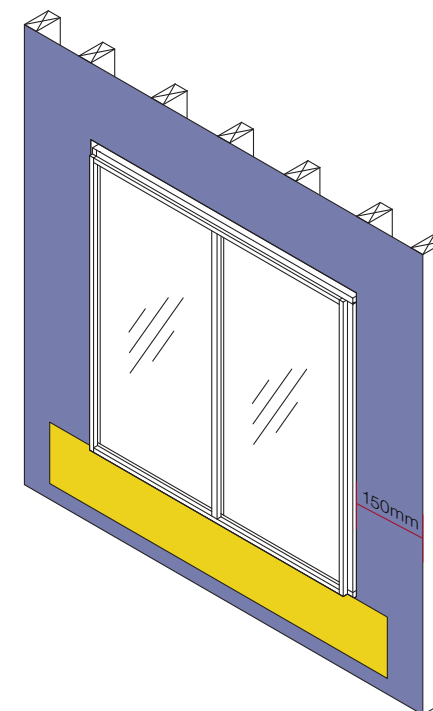
- Must be provided with weepholes to let the water out. Maximum weephole spacing is 1200 mm from centres.
- In cavity construction:
 - Must be smooth and not sag into cavity where it could collect water.
 - Must not extend more than half the width of the outside brick skin.

SPECIAL CARE

Special care is required on windows with undersill drainage used in a non cavity situation such as single skin block work.

Where a subsill is used stop ends must be fitted and sealed.

Figure 8 Window Sill Flashing



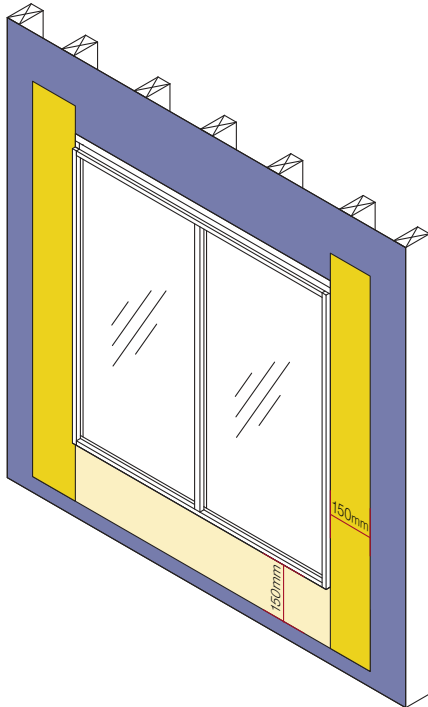
FLASHING

JAMB FLASHING

Jamb flashing is required in high wind locations to ensure that water which enters between the jamb and the outer skin is drained into the sill flashing.

- Where jamb flashing overlaps sill flashing, the overlap should extend the full depth of the sill flashing.
- Must extend the full depth of the sill flashing and project vertically a minimum of 150 mm above the opening.
- Must project horizontally a minimum of 150 mm both sides past the opening.
- Must be made of approved materials and comply with AS/NZS 2904.

Figure 9 Jamb Flashing

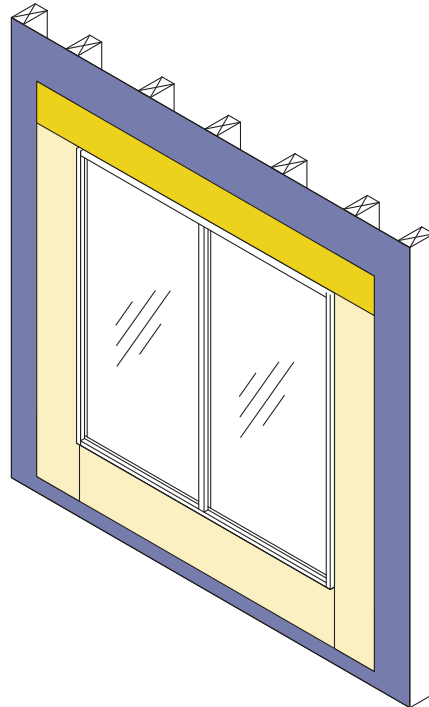


HEAD FLASHING

Head flashing must be installed to stop water wetting the inner skin by bridging across the window or door head.

- Must be installed above any wall penetrations not specifically designed to stop water reaching the inner skin (for example, exhaust fans and ventilation ducts).
- Must project horizontally a minimum of 150 mm both sides past the opening.
- Must project vertically a minimum of 150 mm above the opening.
- Must be made of approved materials and comply with AS/NZS 2904.

Figure 10 Head Flashing



FLASHING

- Must be provided with weepholes to let the water out. Maximum weephole spacing is 1200 mm from centres.
- In cavity masonry construction, head flashing must be built into the inner skin a minimum of 30 mm.

INSTALLATION

COMMON INSTALLATION PROBLEMS

Installation problems are the prime cause of leaks in window assemblies. Contributing factors include omission or incorrect fitting of flashing, smothered or missing weepholes, or the loss of continuity in the water barrier.

The severity of wind exposure is the most important factor in the specification and installation of windows and doors. Components and installation practices acceptable in sheltered situations may quickly fail when exposed to the full force of the wind and rain.

CORRECT INSTALLATION OF FRAMES

1. Fit flashing to window surround as required.
2. Measure the frame opening to ensure that there is sufficient room for the product and additional packing.

Stud Opening

Height = O/A reveal size + adequate clearance

Width = O/A reveal size + adequate clearance

Clearance dimensions vary between manufacturer's products. For adequate clearance, refer to instructions.

3. Frame must be packed plumb, square and not twisted between the openings. Ensure the sill is fully supported. Failure to do so may result in sill roll on sliding windows.

Sills on all windows and doors must be straight and level and should be packed and secured.

To ensure the satisfactory long term performance of sliding doors, the sill should be fully supported. Where the sill projects during construction the sill should be fully supported.

4. Keep sashes closed whilst installing frames.
5. Secure frames with a fixing of a gauge and spacing appropriate for the wind load.

In brick veneer constructions, aluminium frames should be secured by nailing or screwing through reveal into stud work.

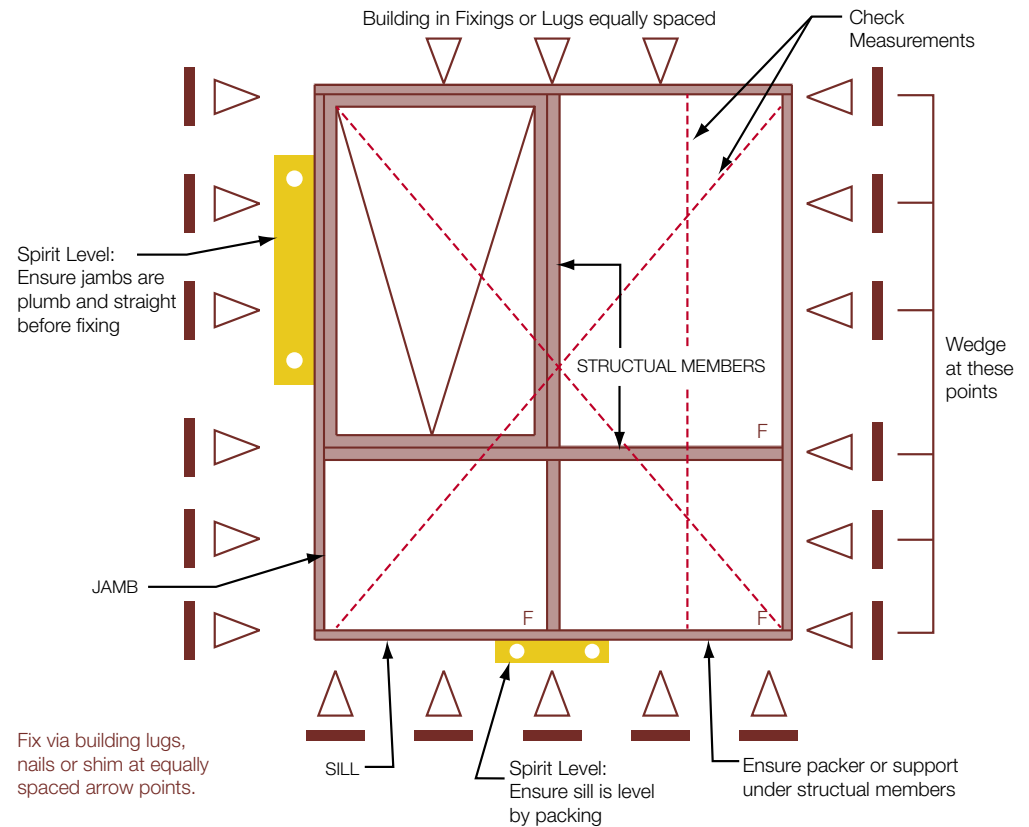
Timber windows should be secured by back nailing through stud, not face of frame stud. If it is not possible to backnail, wedges should be installed between the window and the building frame to prevent opening of the frame joints when nailing is carried out.

In cavity brick construction use galvanized building lugs located at 450 mm maximum centres.

6. Sill/head bricks should be at least 10 mm clear of window frame to allow settlement in brick veneer construction.
7. Do not permit weight of eaves or arch bars to bear on any window or door frame. **Windows and doors are not load bearing.**

INSTALLATION

Figure 11 Installation Summary



8. Do not stand on the windows or doors, or use them as a support for scaffolding, or slide material through the frame. It is important to prevent any damage to windows and doors during construction.
9. Remove cement mortar and plaster droppings from windows immediately, taking care to avoid scratching glass and, or frames, as permanent damage can result. Immediately wash off with water before material sets.

CONSTRUCTION TYPES

There are many different forms of construction in use throughout Australia. Most commonly, houses are built using either timber or steel frames with a variety of external cladding finishes, brick veneer or double brick construction. Larger building such as residential apartment blocks and commercial buildings are typically constructed using either one or a combination of construction types such as filled concrete blockwork, tilt slab or slab on pier methods.

Though there a wide variety of construction techniques, these can broadly be categorised into four types:

	Veneer	Masonry
Cavity	A	B
Single Skin	C	D

TYPE A: CAVITY VENEER CONSTRUCTION

The most common form of type A construction is brick veneer and is popular for houses and small buildings. The internal frame, usually timber or steel is built with a single outer skin of bricks that are tied to the frame for structural stability. Between the internal frame and outer brickwork is a cavity of about 40- 50 mm which acts as a natural barrier to water ingress.

TYPE B: CAVITY MASONRY CONSTRUCTION

Double-skin masonry, typically double brick, is a more traditional style of construction still favoured in hot, dry climates due to its

superior thermal insulation characteristics. It features an inner and outer skin of bricks separated by a cavity, usually 50 mm, with the inner and outer skins tied together for structural stability

TYPE C: SINGLE SKIN VENEER CONSTRUCTION

Clad construction is a simple, cost effective construction technique featuring either a timber or steel frame over which an external cladding is fixed directly. There are many different types of cladding that are popular including masonry fibre sheeting, shiplap, timber, PVC and composites. Cladding systems do not typically have a cavity in the wall, and require a higher degree of diligence and workmanship to achieve an adequate seal.

TYPE D: SOLID MASONRY CONSTRUCTION

Solid masonry walls are sometimes seen in residential constructions, though are common in commercial applications. Blockwork is a form of masonry construction popular in low-rise constructions. It is usually constructed using hollow concrete blocks. These blocks can be left hollow, however to improve structural stability, the hollow core is often reinforced with steel and filled with concrete. Another form of solid masonry wall construction is Tilt Slab which has become prevalent in the last two decades. Concrete wall sections are pre-fabricated in a factory, transported to site and assembled. Generally the individual concrete panels are tied to a steel frame however they may be free-standing.

HOW TO USE THIS GUIDE

This guide is divided into four sections based on the four main construction types:

- Cavity veneer construction
- Cavity masonry construction
- Single skin veneer construction
- Solid masonry construction

The installation diagrams are then collated by frame material type as follows:

Construction type

- Aluminium Window Installation
- Aluminium Sliding Door Installation
- uPVC Window Installation
- uPVC Sliding Door Installation
- Timber Window Installation
- Timber Sliding Door Installation

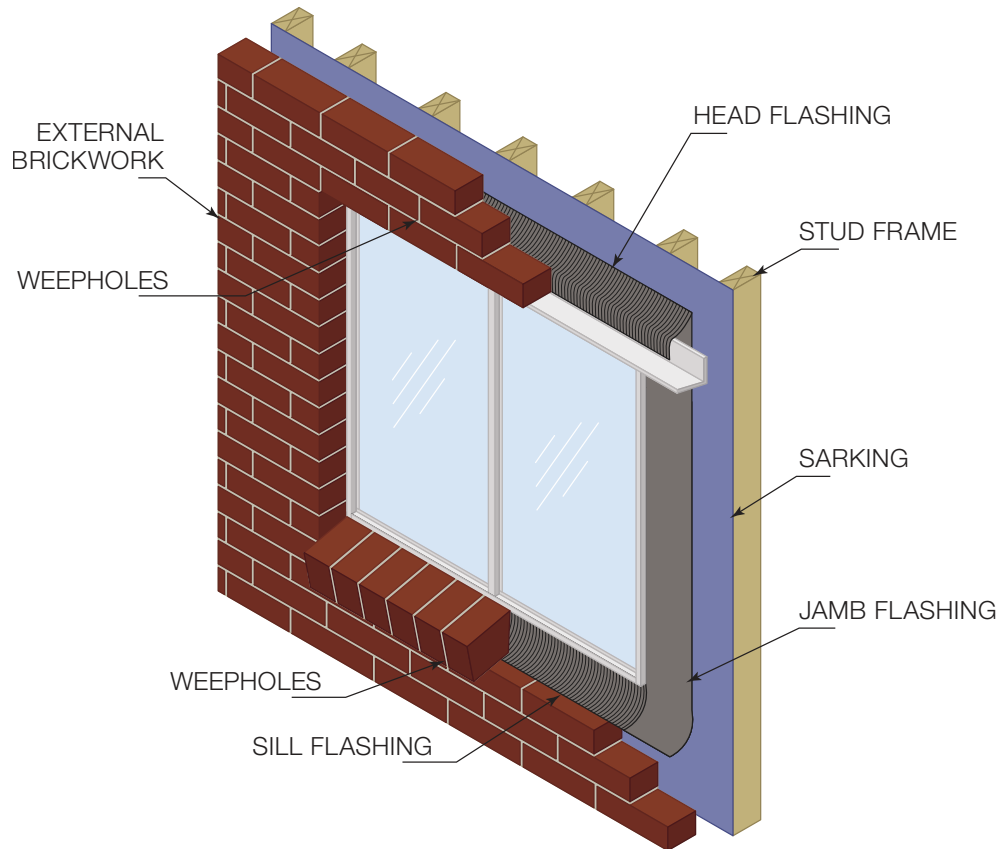
This guide is designed to be used in conjunction with the AGWA Industry Guide to Fixing to ensure that windows and doors are fixed with an appropriate gauge and spacing for the site specific wind loads.

KEY

- aluminium
- brick
- cladding
- fixing
- flashing
- glass/glazing
- impervious film
- packer
- masonry/concrete
- masonry plug
- mortar
- sarking
- metal (lintel, steel reinforcement)
- sealant/caulk
- stud frame
- timber (frame, reveal, architrave)
- uPVC

CAVITY VENEER CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

Separate the window sill and outside brick skin with an isolating material to prevent possible reaction between brick/mortar and the aluminium framing. Contact can lead to extensive corrosion.

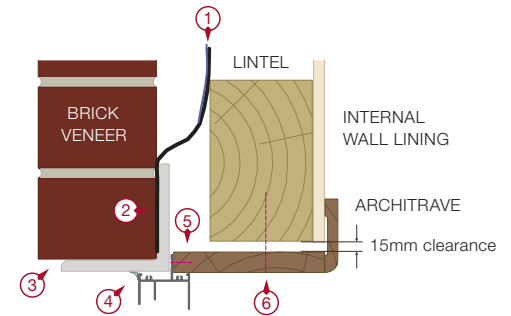
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY VENEER CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION

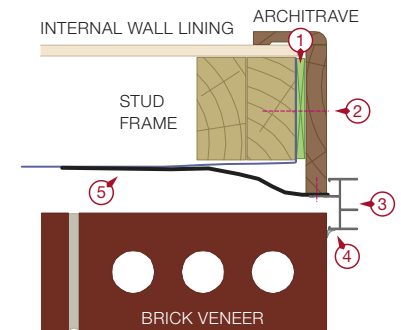
Head

1. Sarking overlaps head flashing.
2. Head flashing (mandatory) goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Sealant (exterior).
5. Window head fitted to timber reveal.
6. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



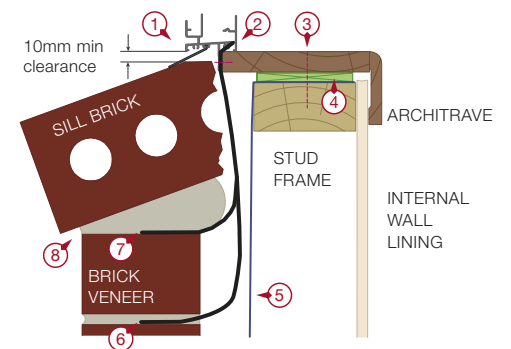
Jamb

1. Packer.
2. Fix reveal to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
3. Jamb flashing attached to the window or wall framing.
4. Sealant (exterior).
5. Jamb flashing overlaps sarking.



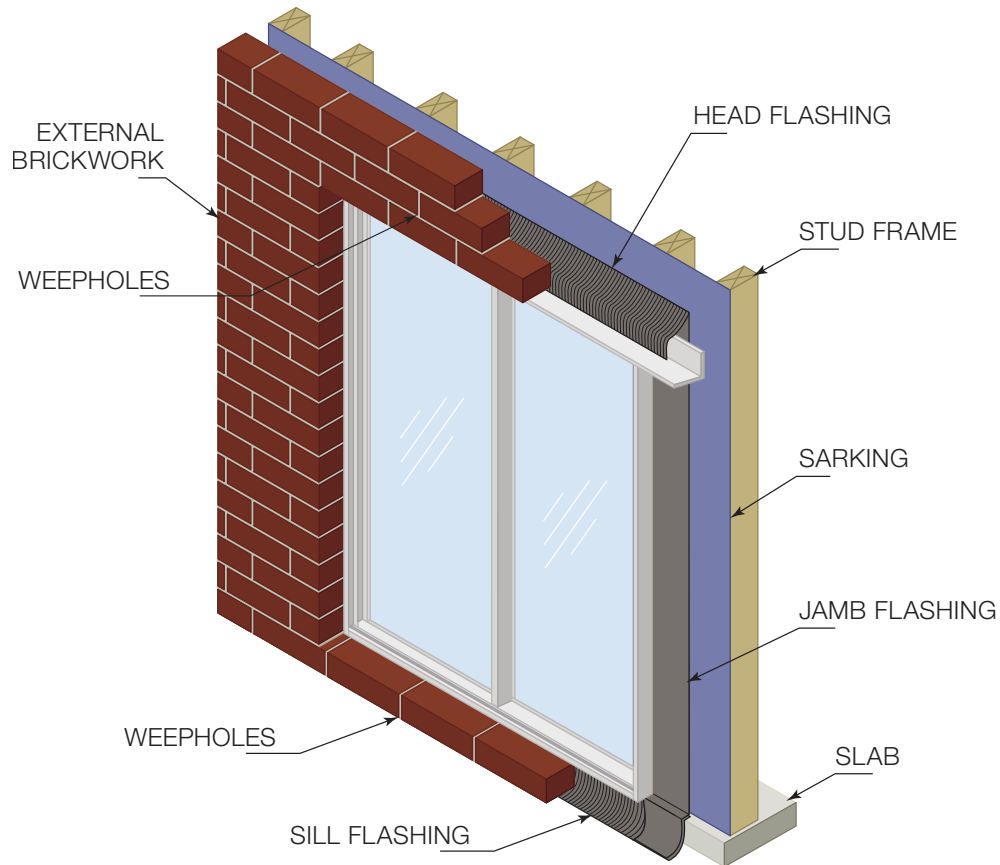
Sill

1. Mandatory sill clearance of 10 mm. Shown with optional sill flap.
2. Sill flashing (mandatory) sandwiched between fixing fin and rereveal.
3. Fix reveal to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
4. Pack sill level where required.
5. Sarking.
6. Preferred flashing position (one brick course down).
7. Alternate flashing position.
8. Weepholes in brickwork must be above flashing. Max spacing is 1200 mm (from centres).



CAVITY VENEER CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

Separate the Sill and outside brick skin with an isolating material to prevent possible reaction between brick/mortar and the aluminium framing. Contact can lead to extensive corrosion.

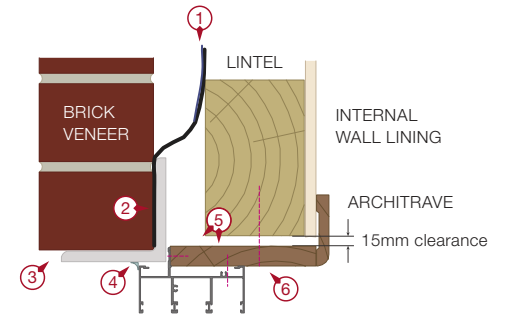
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY VENEER CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION

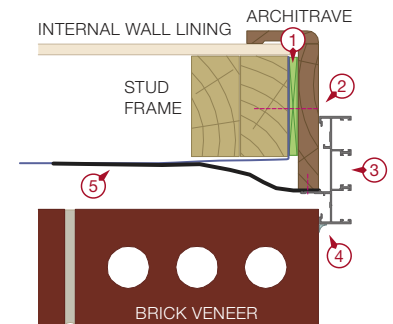
Head

1. Sarking overlaps head flashing.
2. Head flashing (mandatory) goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Sealant (exterior).
5. Door head fitted to timber reveal.
6. Fix reveal to stud lintel with a fixing of a gauge and spacing appropriate for the wind load.



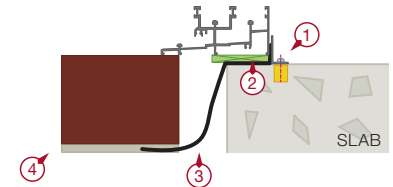
Jamb

1. Packer.
2. Fix reveal to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
3. Jamb flashing attached to the door or wall framing
4. Sealant (exterior).
5. Jamb flashing overlaps sarking.



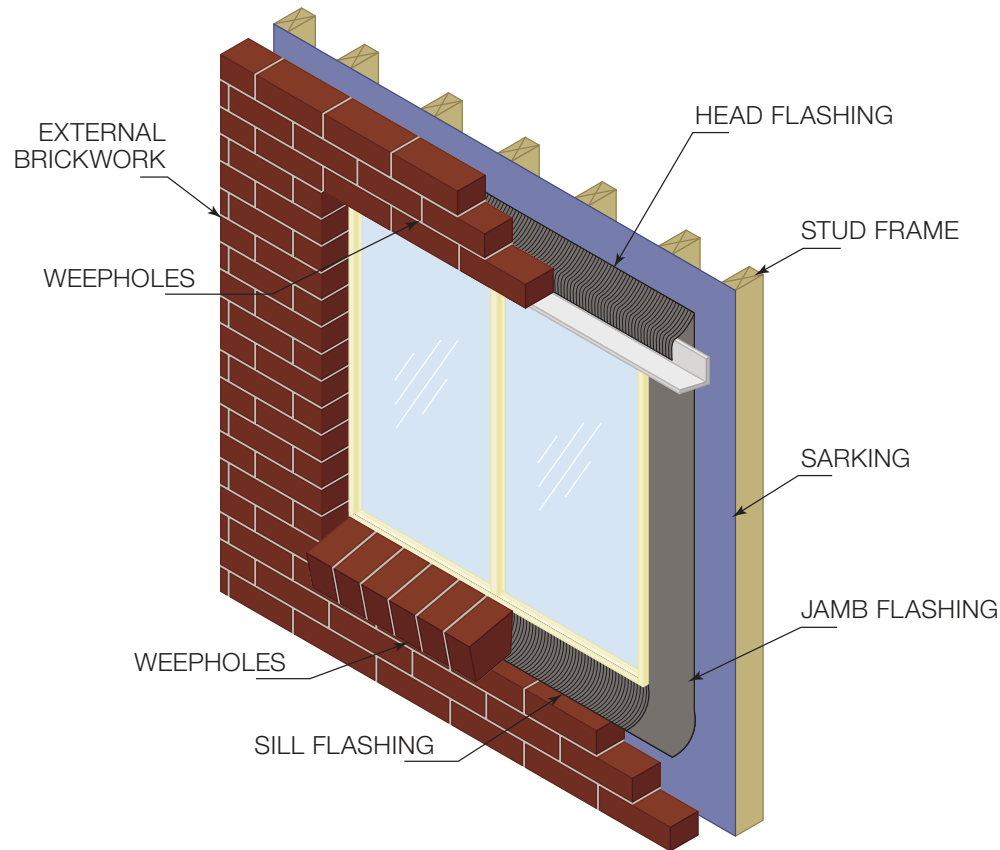
Sill

1. Angle trim sealed to structure and door sill (with masonry plug where required).
2. Pack sill to level where required.
3. Sill flashing tray (mandatory) turned up and sealed at each end.
4. Weepholes must be above sill flashing. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).



CAVITY VENEER CONSTRUCTION

UPVC WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

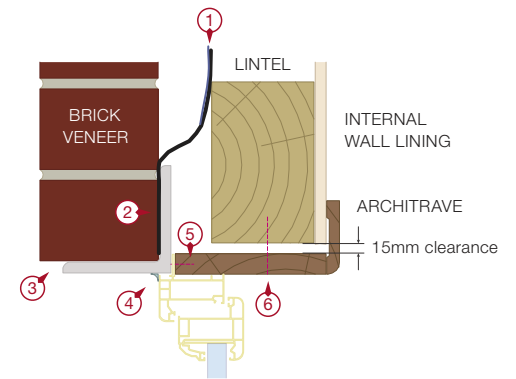
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY VENEER CONSTRUCTION

UPVC WINDOW INSTALLATION

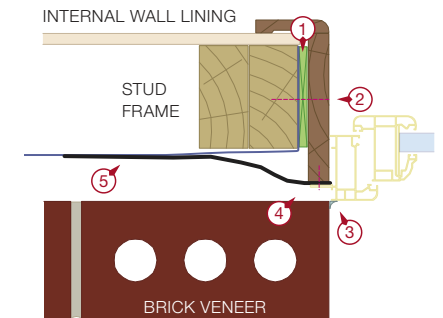
Head

1. Sarking overlaps head flashing.
2. Head flashing (mandatory) goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Sealant (exterior).
5. Window fitted to timber reveal.
6. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



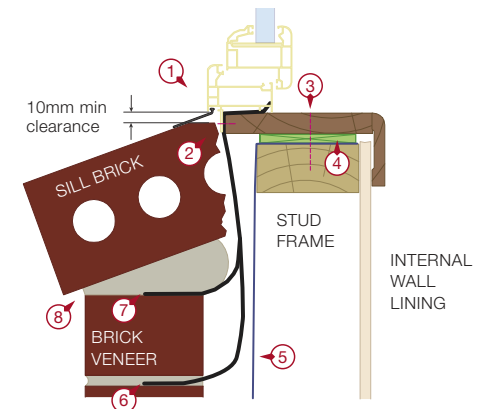
Jamb

1. Packer.
2. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.
3. Sealant (exterior).
4. Jamb flashing attached to the window or wall framing.
5. Jamb flashing overlaps sarking.



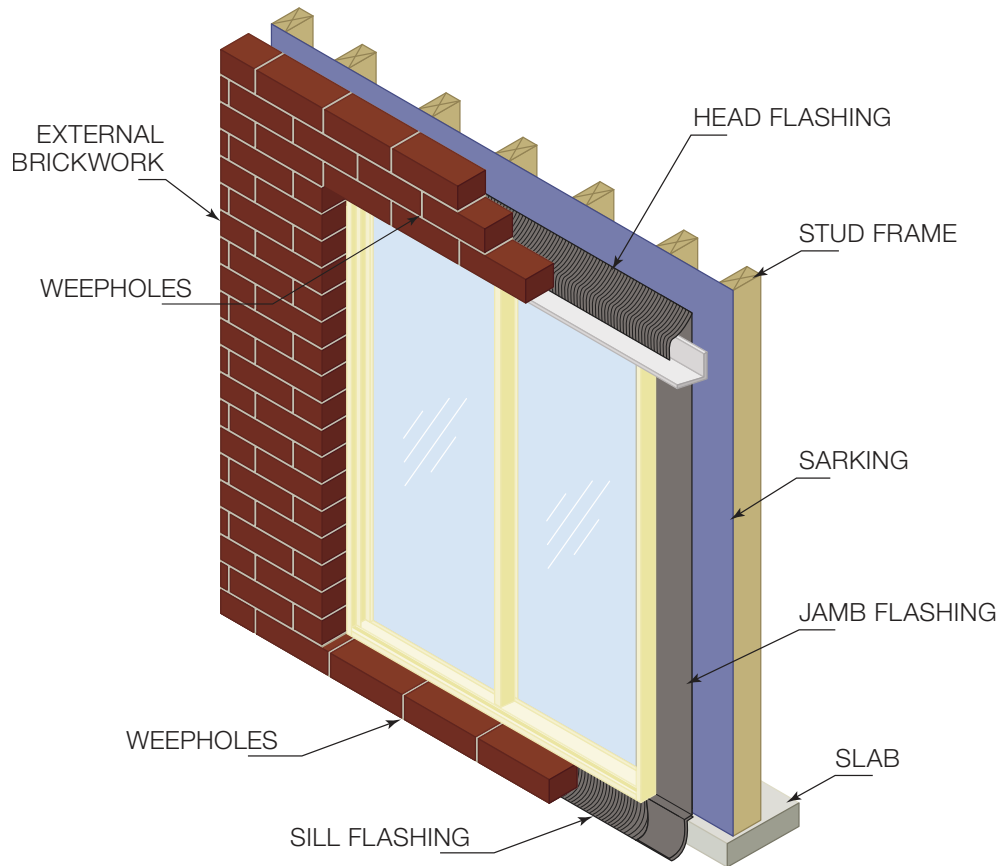
Sill

1. Mandatory sill clearance is 10 mm. Shown here with optional sill flap.
2. Sill flashing (mandatory) sandwiched between window fixing fin and reveal.
3. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.
4. Pack sill to level where required.
5. Sarking.
6. Preferred flashing position.
7. Alternate flashing position.
8. Maximum spacing for weepholes in brickwork is 1200 mm (from centres). Keep weepholes above flashing.



CAVITY VENEER CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

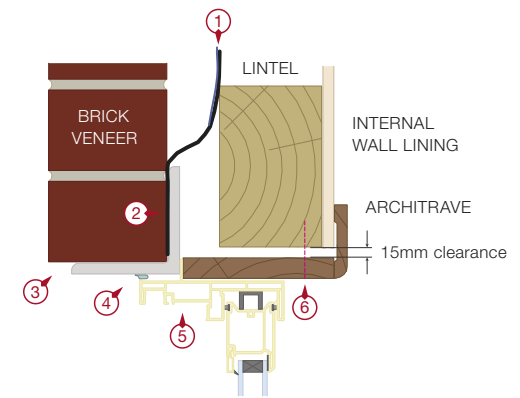
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY VENEER CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION

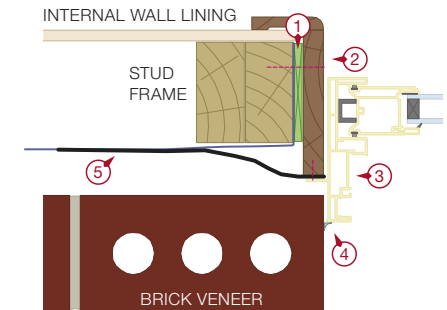
Head

1. Sarking overlaps head flashing.
2. Head flashing (mandatory) goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Sealant (exterior).
5. Door head fitted to timber reveal.
6. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



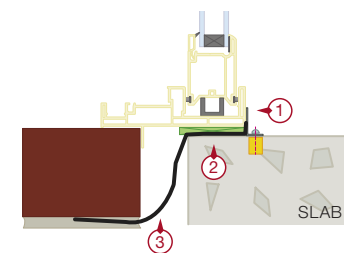
Jamb

1. Packer.
2. Fix reveal to studwork with a fixing of a gauge and spacing appropriate for the wind load.
3. Jamb flashing attached to the door or wall framing.
4. Sealant (exterior).
5. Jamb flashing overlaps sarking.



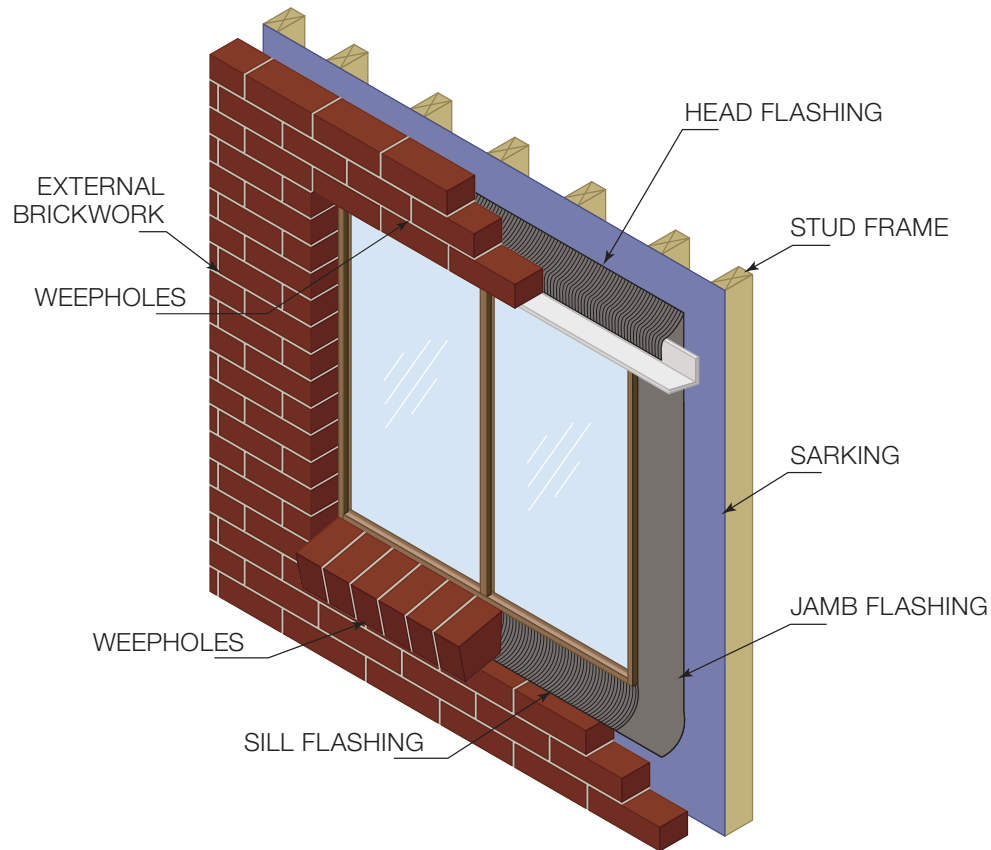
Sill

1. Angle trim sealed to structure and door sill (with masonry plug).
2. Pack sill to level where required.
3. Sill flashing tray (mandatory) turned up and sealed at each end.
4. Maximum spacing for weepholes in brickwork is 1200 mm (from centres). Keep weepholes above flashing.



CAVITY VENEER CONSTRUCTION

TIMBER WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

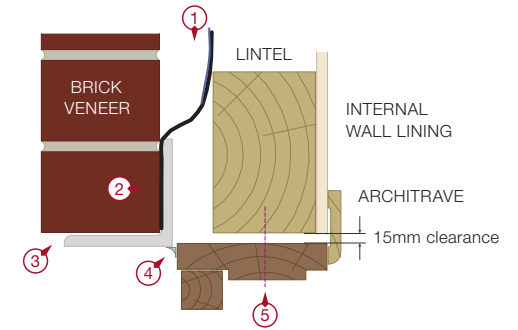
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY VENEER CONSTRUCTION

TIMBER WINDOW INSTALLATION

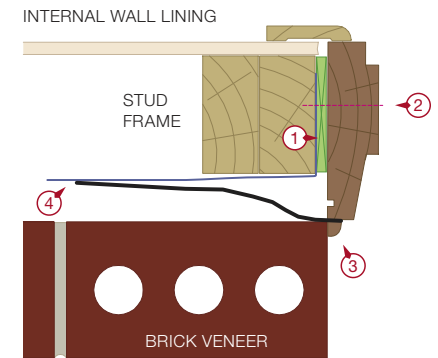
Head

1. Sarking overlaps head flashing.
2. Head flashing goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Sealant (exterior).
5. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



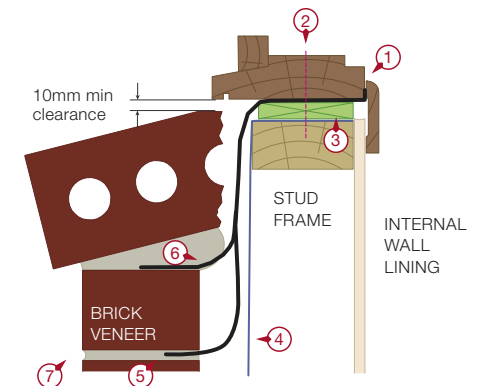
Jamb

1. Packer.
2. Fix reveal to studwork with a fixing of a gauge and spacing appropriate for the wind load.
3. Storm Mould or Sealant (exterior).
4. Jamb flashing attached to the window or wall framing.



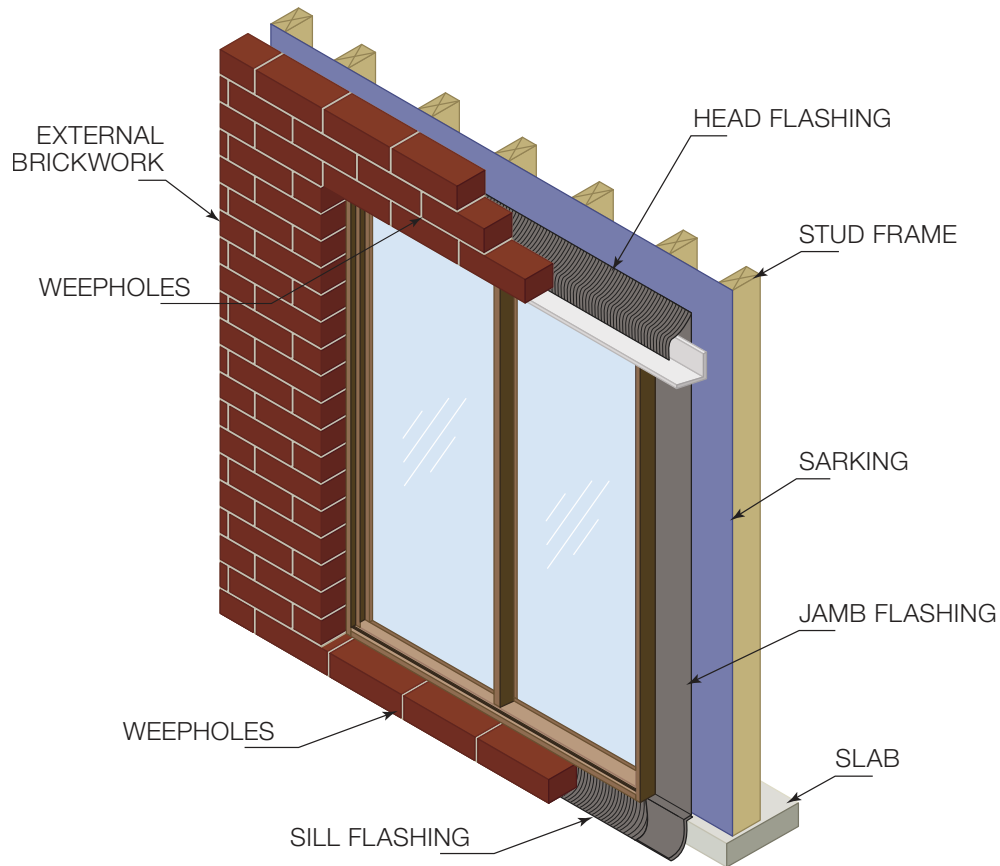
Sill

1. Sill flashing (mandatory) sandwiched between window frame and architrave.
2. Fix reveal to studwork with a fixing of a gauge and spacing appropriate for the wind load.
3. Pack sill to level where required.
4. Sarking.
5. Preferred flashing position.
6. Alternate flashing position.
7. Maximum spacing for weepholes in brickwork is 1200 mm (from centres). Keep weepholes above flashing.



CAVITY VENEER CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

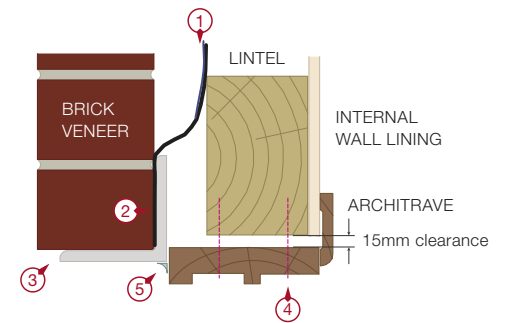
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY VENEER CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION

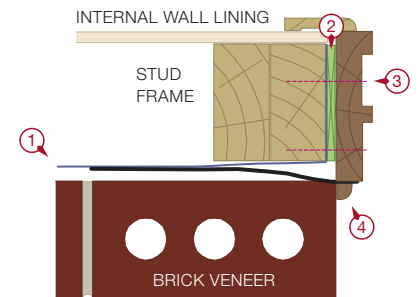
Head

1. Sarking overlaps head flashing.
2. Head flashing goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.
5. Sealant (exterior).



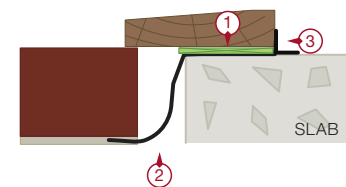
Jamb

1. Jamb flashing attached to the window or wall framing.
2. Packer.
3. Fix reveal to studwork with a fixing of a gauge and spacing appropriate for the wind load.
4. Storm Mould or Sealant (exterior).



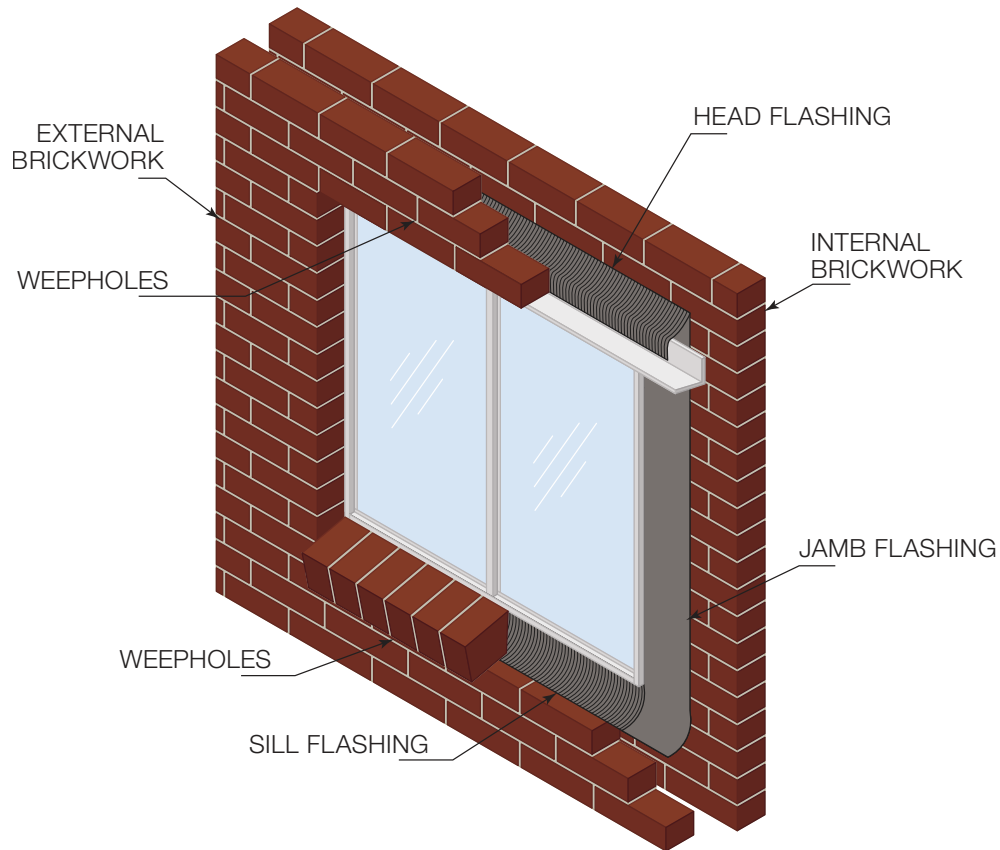
Sill

1. Pack sill to level where required.
2. Sill flashing tray (mandatory) turned up and sealed at each end.
3. Angle trim sealed to structure and door sill (with masonry plug where required).



CAVITY MASONRY CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

Separate the Sill and outside brick skin with an isolating material to prevent possible reaction between brick/mortar and the aluminium framing. Contact can lead to extensive corrosion.

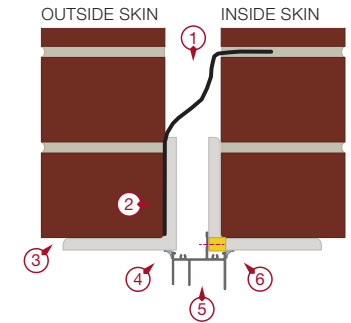
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY MASONRY CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION

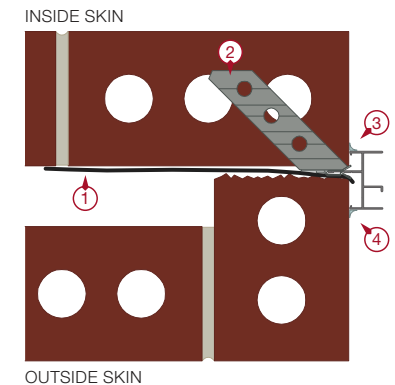
Head

1. Head flashing (mandatory) built into inner skin a minimum of 30 mm.
2. Head flashing goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Sealant (exterior).
5. Window screwed to lintel or fixed with galvanised strap.
6. Sealant (interior).



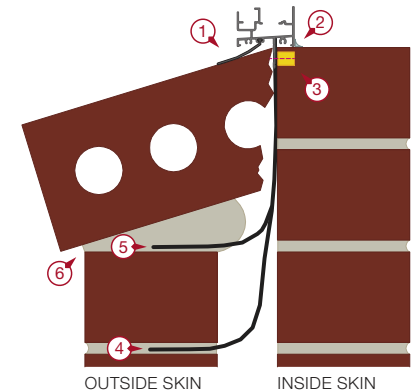
Jamb

1. Jamb flashing in front of window fixing fin.
2. Brick lug clipped to fixing fin at spacing appropriate for the wind load. Ensure lugs 'tie in' with the mortar.
3. Sealant (interior).
4. Sealant (exterior).



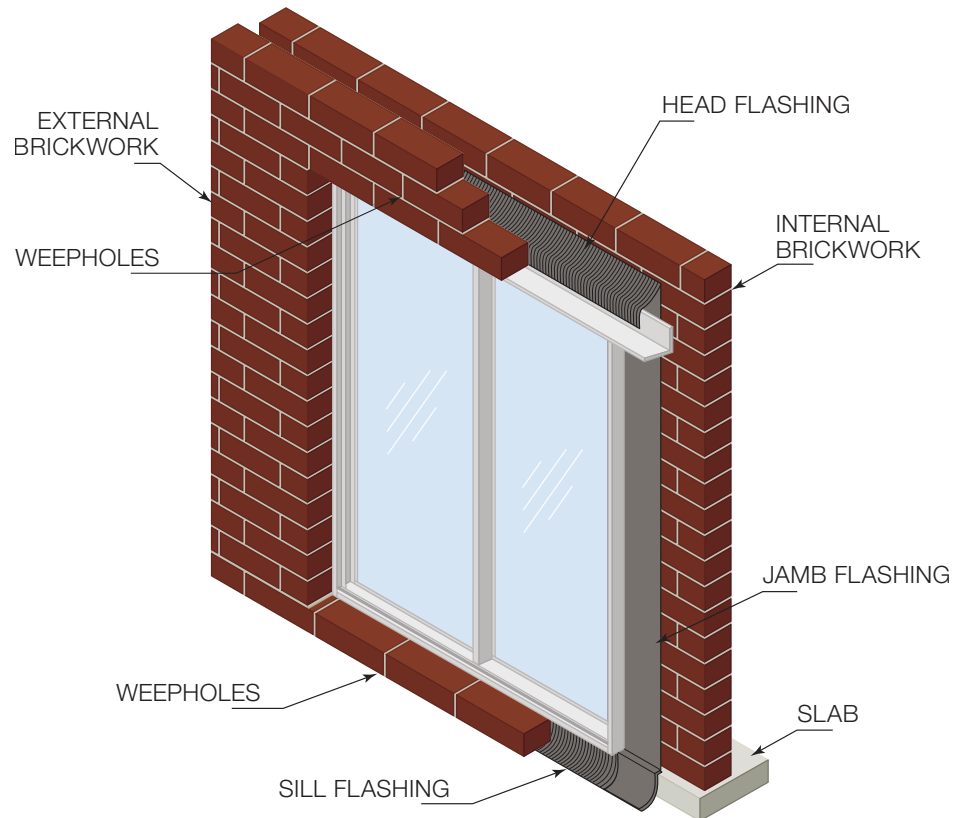
Sill

1. Sill flap (optional).
2. Sealant (interior).
3. Sill flashing (mandatory) sandwiched behind window fixing fin.
4. Preferred flashing position (one brick course down).
5. Alternate flashing position.
6. Weepholes must be above flashing. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).



CAVITY MASONRY CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

Separate the Sill and outside brick skin with an isolating material to prevent possible reaction between brick/mortar and the aluminium framing. Contact can lead to extensive corrosion.

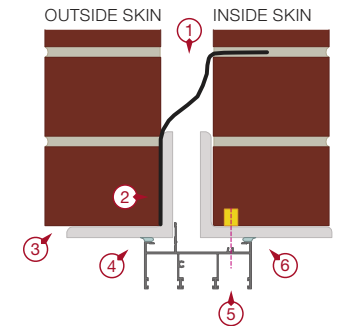
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY MASONRY CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION

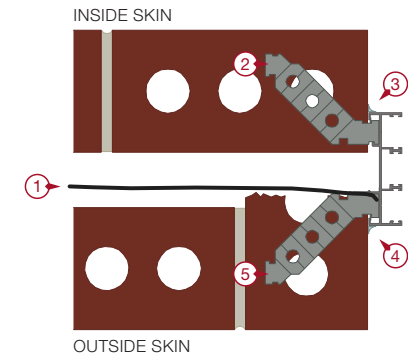
Head

1. Head flashing (mandatory) built into inner skin a minimum of 30 mm.
2. Head flashing goes into, or one course above, external lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Sealant (exterior).
5. Fix door frame to internal lintel with a fixing of a gauge and spacing appropriate for the wind load.
6. Sealant (interior).



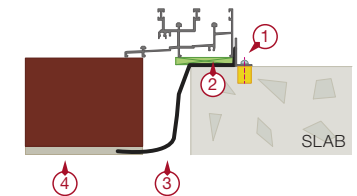
Jamb

1. Jamb flashing in front of door fixing fin.
2. Brick lug clipped to fixing fin at spacing appropriate for the wind load. Ensure lugs 'tie in' with the mortar.
3. Sealant (interior).
4. Sealant (exterior).
5. Brick lug clipped to fixing fin.



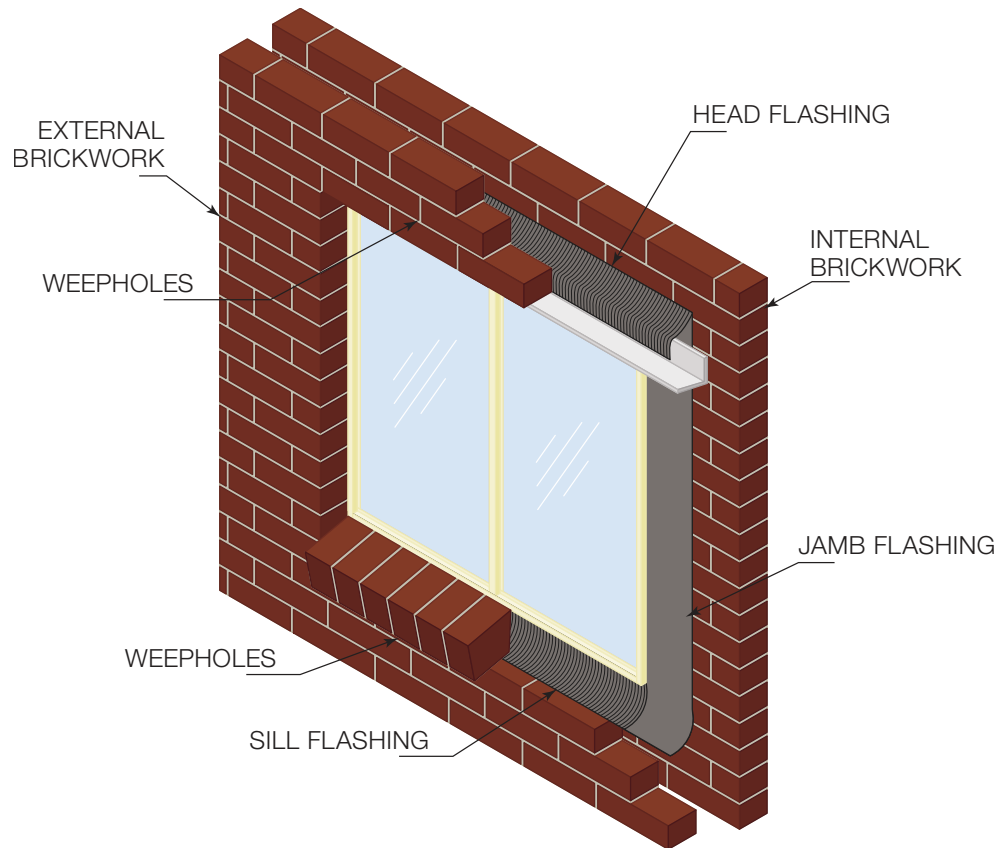
Sill

1. Angle trim sealed to structure and door sill (with masonry plug where required).
2. Pack sill to level where required.
3. Sill flashing tray (mandatory) turned up and sealed at each end.
4. Weepholes must be above flashing. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).



CAVITY MASONRY CONSTRUCTION

UPVC WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

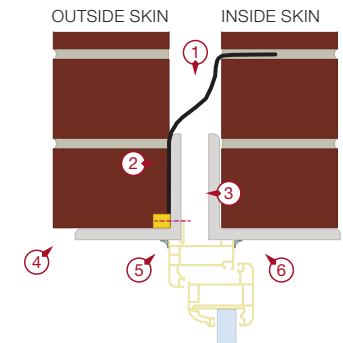
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY MASONRY CONSTRUCTION

UPVC WINDOW INSTALLATION

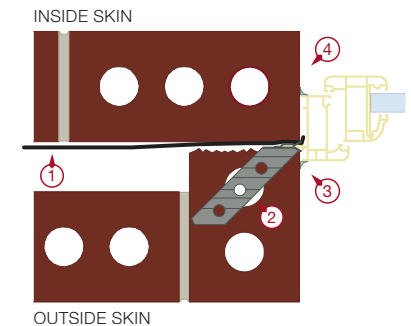
Head

1. Head flashing (mandatory) built into inner skin a minimum of 30 mm.
2. Head flashing goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Window screwed to lintel or fixed with galvanised strap.
4. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
5. Sealant (exterior).
6. Sealant (interior).



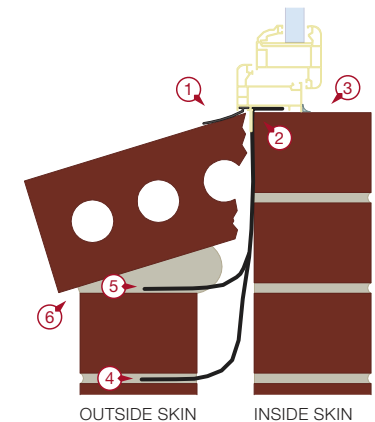
Jamb

1. Jamb flashing in front of window fixing fin.
2. Brick lug clipped to fixing fin at spacing appropriate for the wind load. Ensure lugs 'tie in' with the mortar.
3. Sealant (exterior).
4. Sealant (interior).



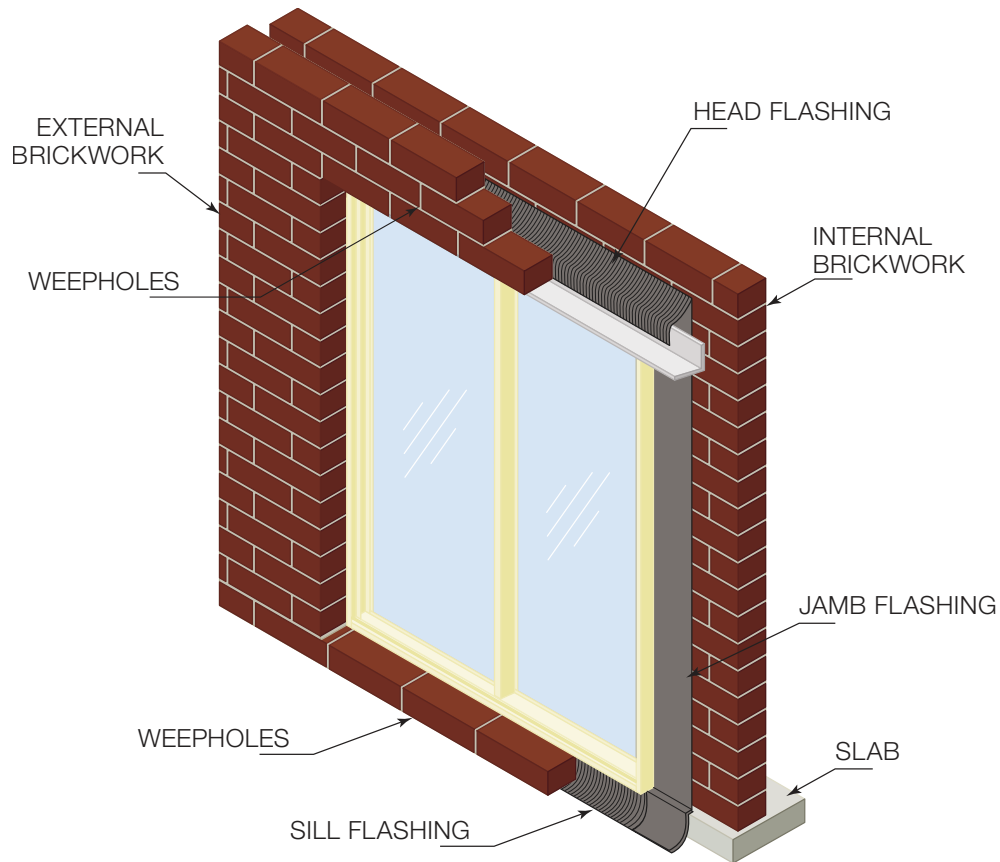
Sill

1. Sill flap (optional).
2. Sill flashing (mandatory) behind window fixing fin.
3. Sealant (interior).
4. Preferred flashing position (one course down).
5. Alternate flashing position.
6. Maximum spacing for weepholes in brickwork is 1200 mm (from centres). Keep weepholes above flashing.



CAVITY MASONRY CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

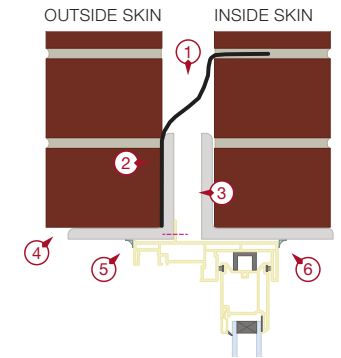
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY MASONRY CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION

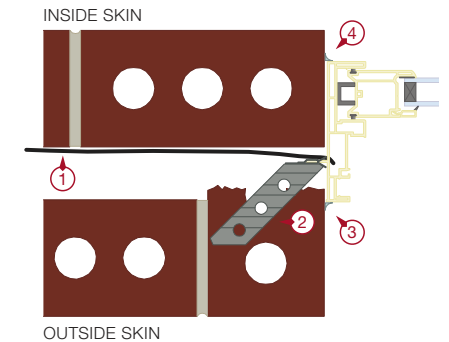
Head

1. Head flashing (mandatory) built into inner skin a minimum of 30 mm.
2. Head flashing goes into, or one course above, lintel. Head flashing goes over jamb flashing.
3. Window screwed to lintel or fixed with galvanised strap.
4. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
5. Sealant (exterior).
6. Sealant (interior).



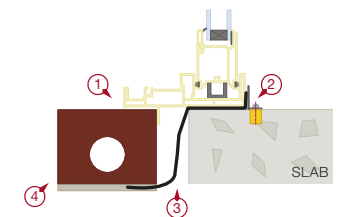
Jamb

1. Jamb flashing.
2. Brick lug clipped to fixing fin at spacing appropriate for the wind load. Ensure lugs 'tie in' with the mortar.
3. Sealant (exterior).
4. Sealant (interior).



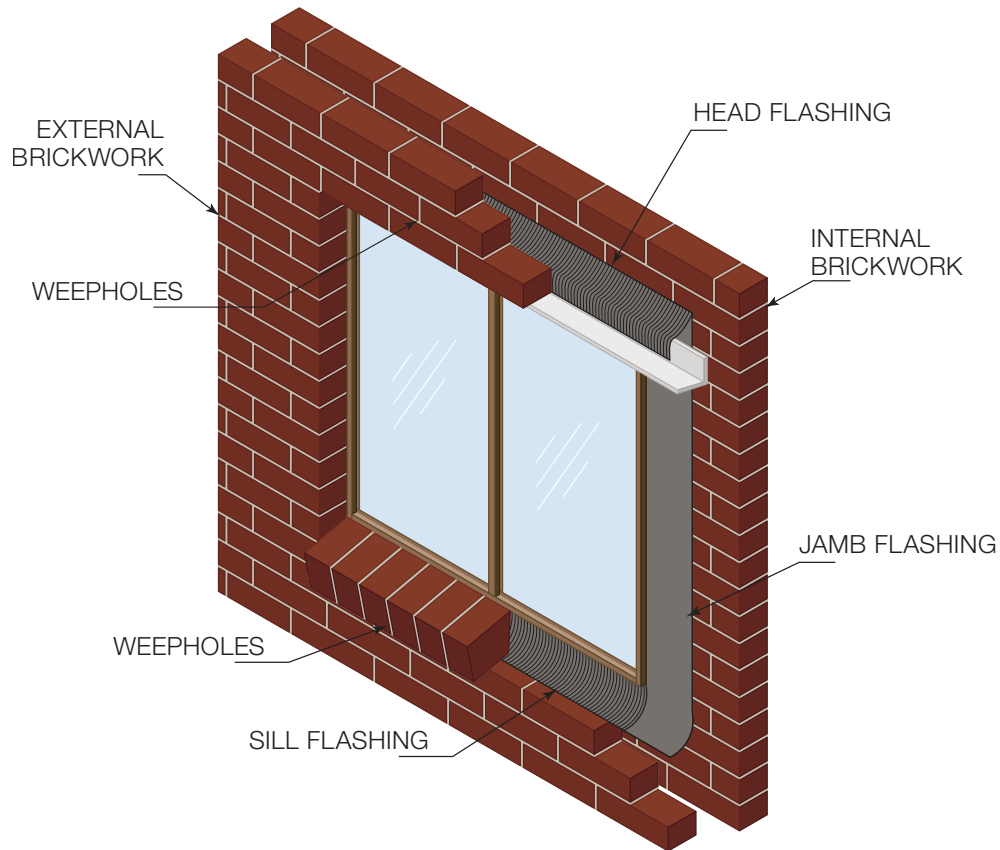
Sill

1. Sill supported.
2. Angle trim sealed to structure and door sill (with masonry plug where required).
3. Sill flashing tray (mandatory) turned up and sealed at each end.
4. Maximum spacing for weepholes in brickwork is 1200 mm (from centres). Keep weepholes above flashing.



CAVITY MASONRY CONSTRUCTION

TIMBER WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

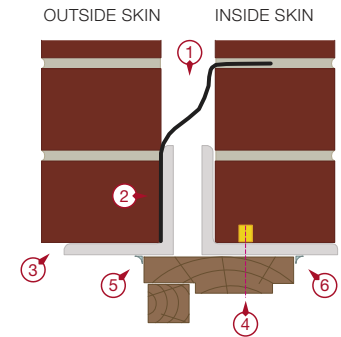
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY MASONRY CONSTRUCTION

TIMBER WINDOW INSTALLATION

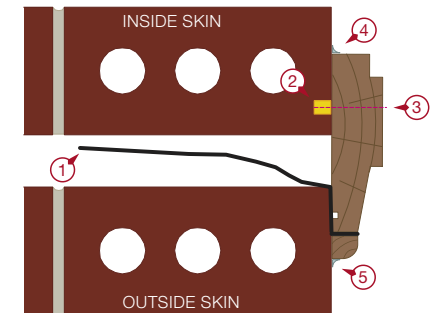
Head

1. Head flashing (mandatory) built into inner skin a minimum of 30 mm.
2. Head flashing goes into, or one course above, external lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.
5. Sealant (exterior).
6. Sealant (interior).



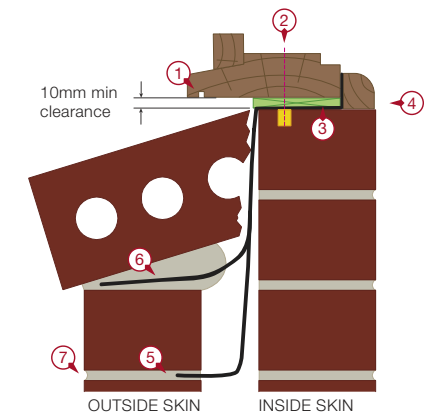
Jamb

1. Jamb flashing attached to outer course storm mould with flashing sandwiched between it and window frame.
2. Masonry plug.
3. Fix reveal to brickwork with a fixing of a gauge and spacing appropriate for the wind load.
4. Sealant (interior).
5. Storm Mould or Sealant (exterior).



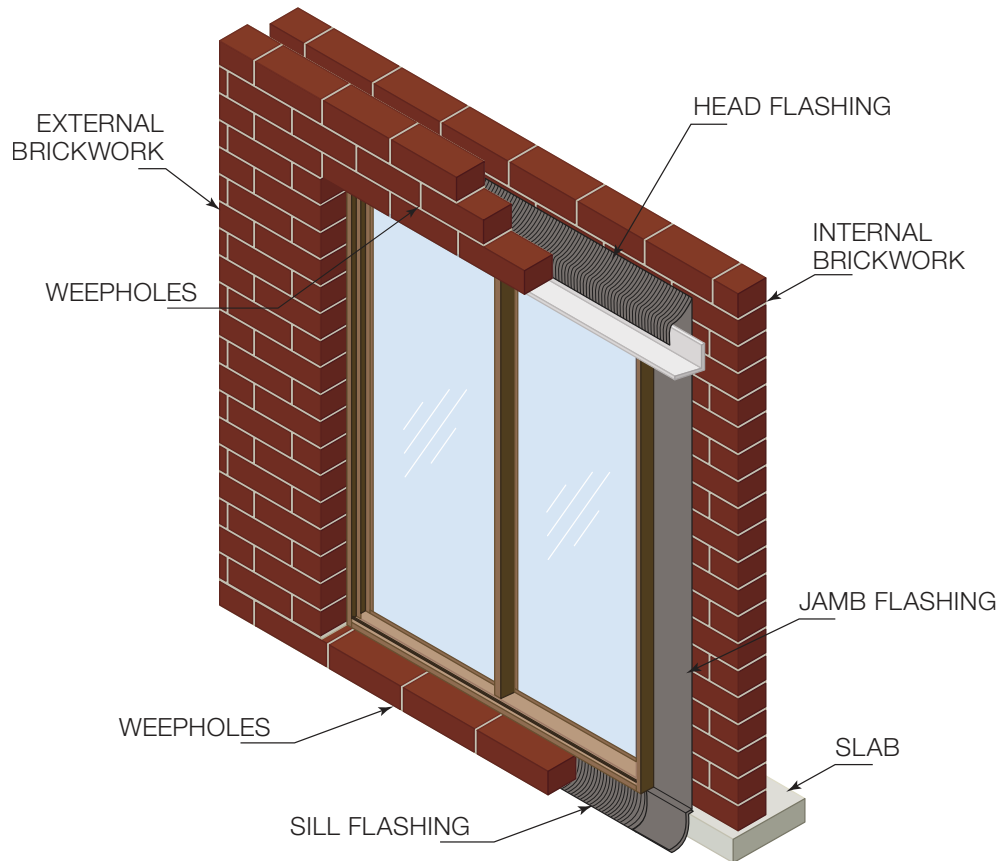
Sill

1. Mandatory 10 mm sill clearance.
2. Fix frame with a fixing of a gauge and spacing appropriate for the wind load.
3. Pack sill to level where required.
4. Sill Flashing Tray behind sill trimmer.
5. Preferred flashing position (one course down).
6. Alternate flashing position.
7. Weepholes must be above flashing. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).



CAVITY MASONRY CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

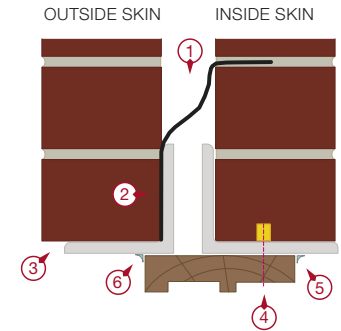
Sill must be level side to side and front to back, and fully supported at all times.

CAVITY MASONRY CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION

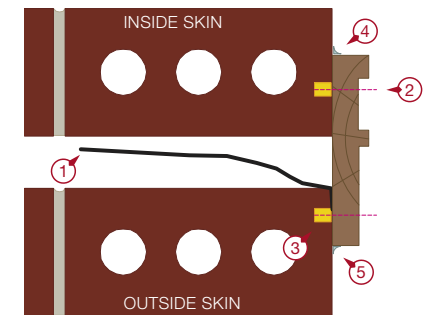
Head

1. Head flashing (mandatory) built into inner skin a minimum of 30 mm.
2. Head flashing goes into, or one course above, external lintel. Head flashing goes over jamb flashing.
3. Maximum spacing for weepholes in brickwork is 1200 mm (from centres).
4. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load with masonry plugs where required.
5. Sealant (interior).
6. Sealant (exterior).



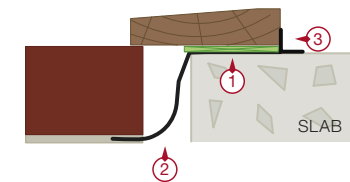
Jamb

1. Jamb flashing attached to outer course storm mould with flashing sandwiched between it and window frame.
2. Fix window frame with a fixing of a gauge and spacing appropriate for the wind load.
3. Masonry plug.
4. Sealant (interior).
5. Storm Mould or Sealant (exterior)



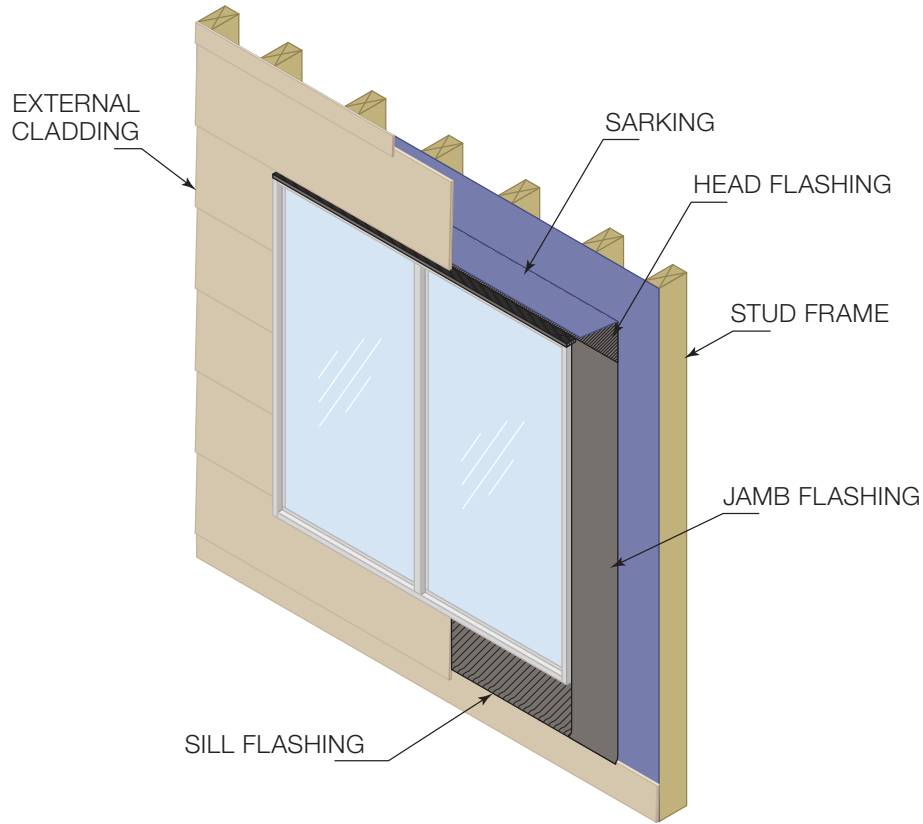
Sill

1. Pack sill to level where required.
2. Sill flashing tray (mandatory) turned up and sealed at each end.
3. Angle trim sealed to structure and door sill (with masonry plug where required).



SINGLE SKIN VENEER CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

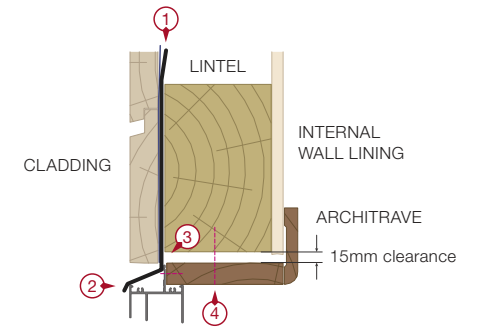
Sill must be level side to side and front to back, and fully supported at all times.

SINGLE SKIN VENEER CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION

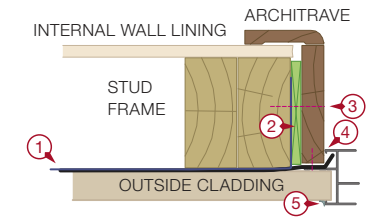
Head

1. Sarking overlaps head flashing.
2. Pressed metal head flashing. Head flashing goes over jamb flashing and head and extends past window reveal by 150mm either side minimum.
3. Window fitted to timber reveal.
4. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



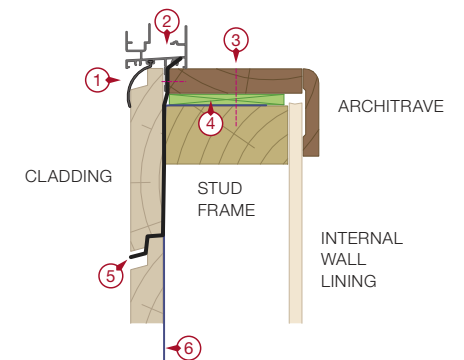
Jamb

1. Jamb flashing overlaps sarking.
2. Packer over sarking.
3. Fix reveal to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
4. Jamb flashing attached to the window and wall framing.
5. Sealant (external).



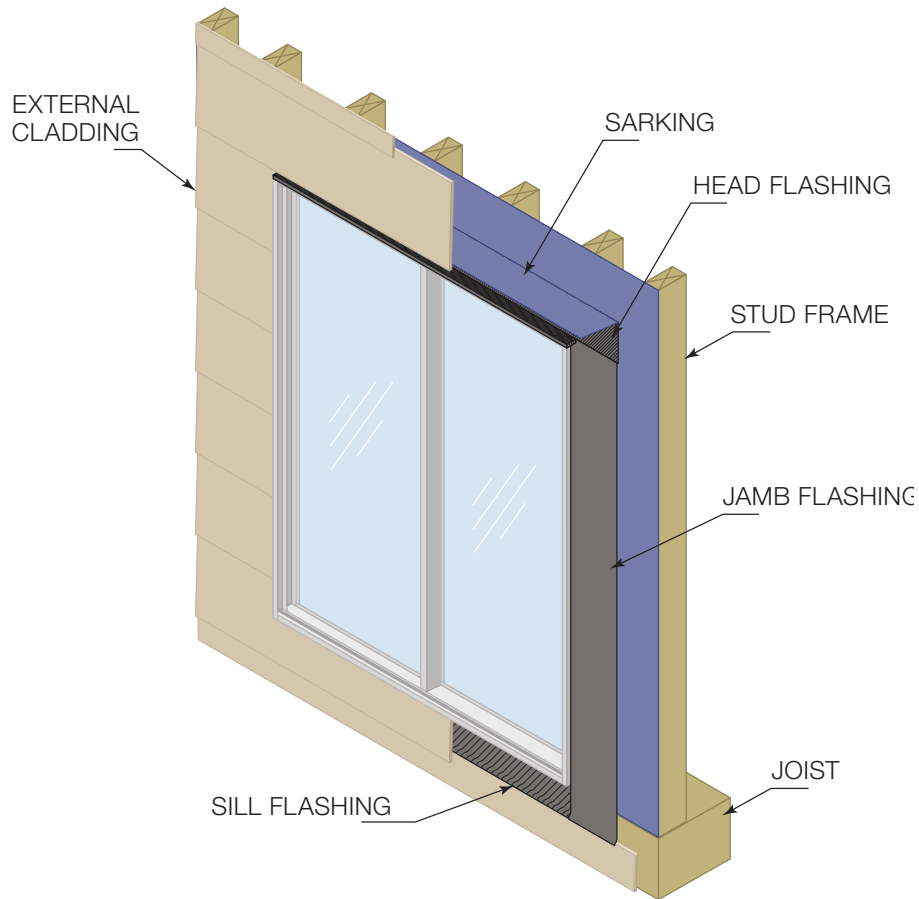
Sill

1. Sill flap (optional).
2. Sill flashing sandwiched between window fixing fin and reveal (mandatory).
3. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.
4. Pack sill to level where required.
5. Sill flashing drains to outside.
6. Sarking.



SINGLE SKIN VENEER CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

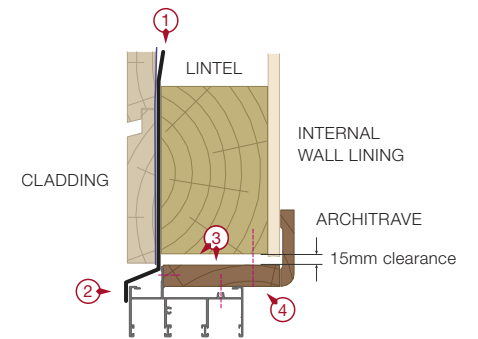
Sill must be level side to side and front to back, and fully supported at all times.

SINGLE SKIN VENEER CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION

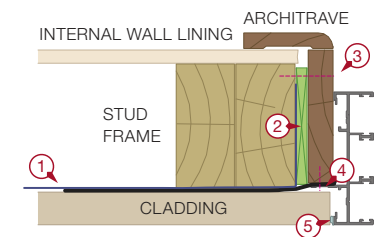
Head

1. Sarking overlaps head flashing.
2. Pressed metal head flashing. Head flashing goes over jamb flashing and head and extends past window reveal by 150mm either side minimum.
3. Door head fitted to timber reveal.
4. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



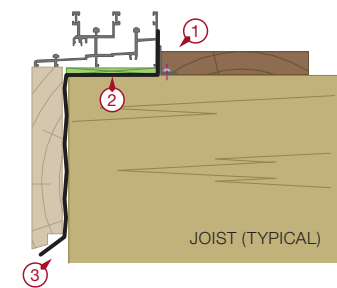
Jamb

1. Jamb flashing overlaps sarking.
2. Packer over sarking.
3. Fix reveal to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
4. Jamb flashing (mandatory) attached to the door and wall framing.
5. Sealant (external).



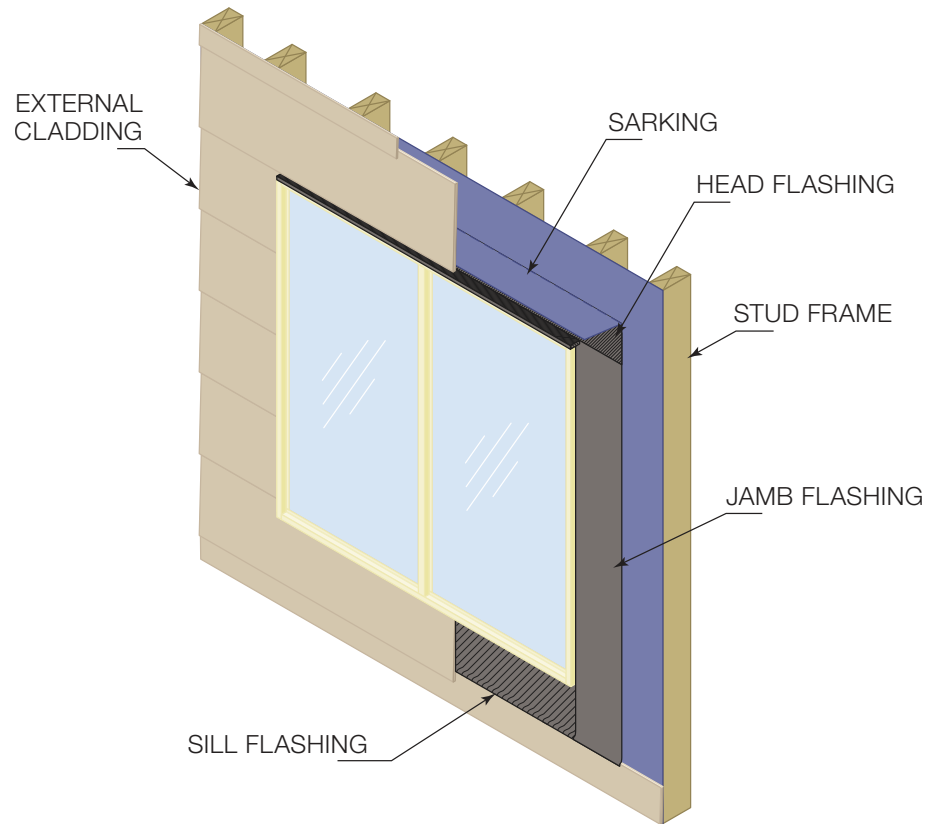
Sill

1. Angle trim sealed to structure and door sill (shown under flooring).
2. Pack sill to level where required.
3. Sill flashing tray (mandatory) turned up and sealed at each end.



SINGLE SKIN VENEER CONSTRUCTION

UPVC WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

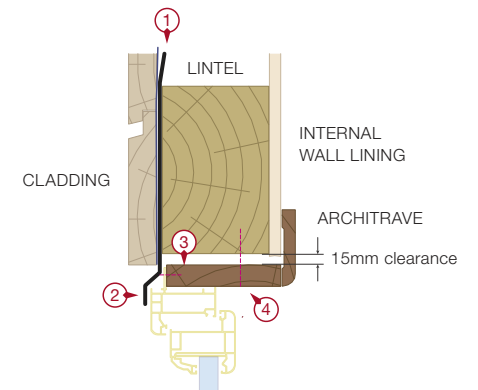
Sill must be level side to side and front to back, and fully supported at all times.

SINGLE SKIN VENEER CONSTRUCTION

UPVC WINDOW INSTALLATION

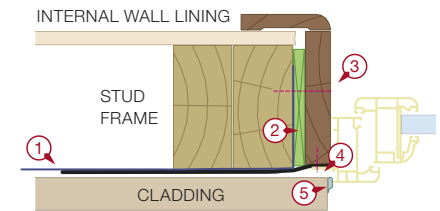
Head

1. Sarking overlaps head flashing.
2. Pressed metal head flashing. Head flashing goes over jamb flashing and head and extends past window reveal by 150mm either side minimum.
3. Window head fitted to timber reveal.
4. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



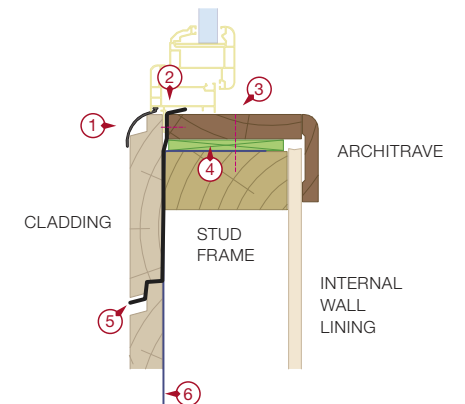
Jamb

1. Jamb flashing overlaps sarking.
2. Packer over sarking.
3. Fix reveal to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
4. Jamb flashing (mandatory) attached to the window and wall framing.
5. Sealant (external).



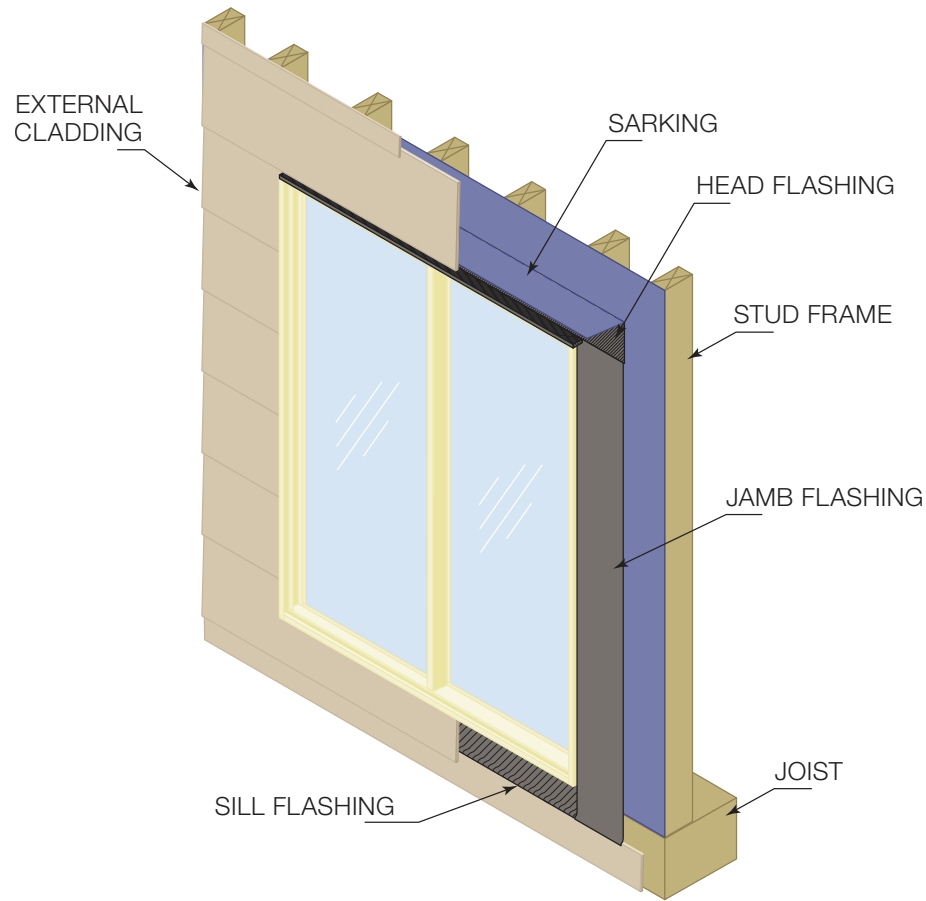
Sill

1. Sill flap (optional).
2. Sill flashing sandwiched between window fixing fin and reveal.
3. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.
4. Pack sill to level where required. Packer on top of sarking.
5. Sill flashing drains to outside.
6. Sarking.



SINGLE SKIN VENEER CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

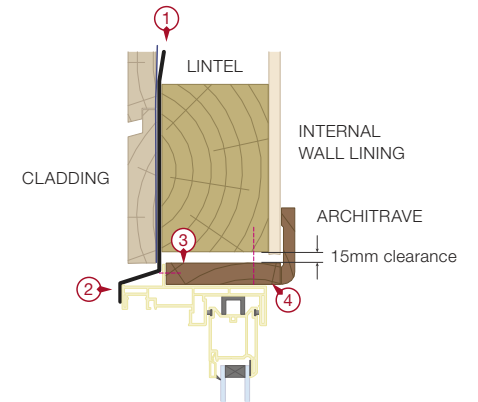
Sill must be level side to side and front to back, and fully supported at all times.

SINGLE SKIN VENEER CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION

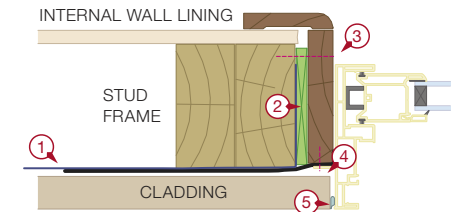
Head

1. Sarking overlaps head flashing.
2. Pressed metal head flashing. Head flashing goes over jamb flashing and head and extends past window reveal by 150mm either side minimum.
3. Door head fitted to timber reveal.
4. Fix reveal to lintel with a fixing of a gauge and spacing appropriate for the wind load.



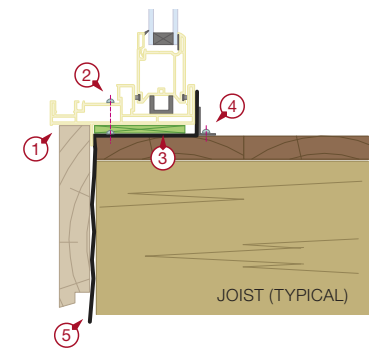
Jamb

1. Jamb flashing overlaps sarking.
2. Packer over sarking.
3. Fix reveal to studwork with a fixing of a gauge and spacing appropriate for the wind load.
4. Jamb flashing (mandatory) attached to the door and wall framing.
5. Sealant (external).



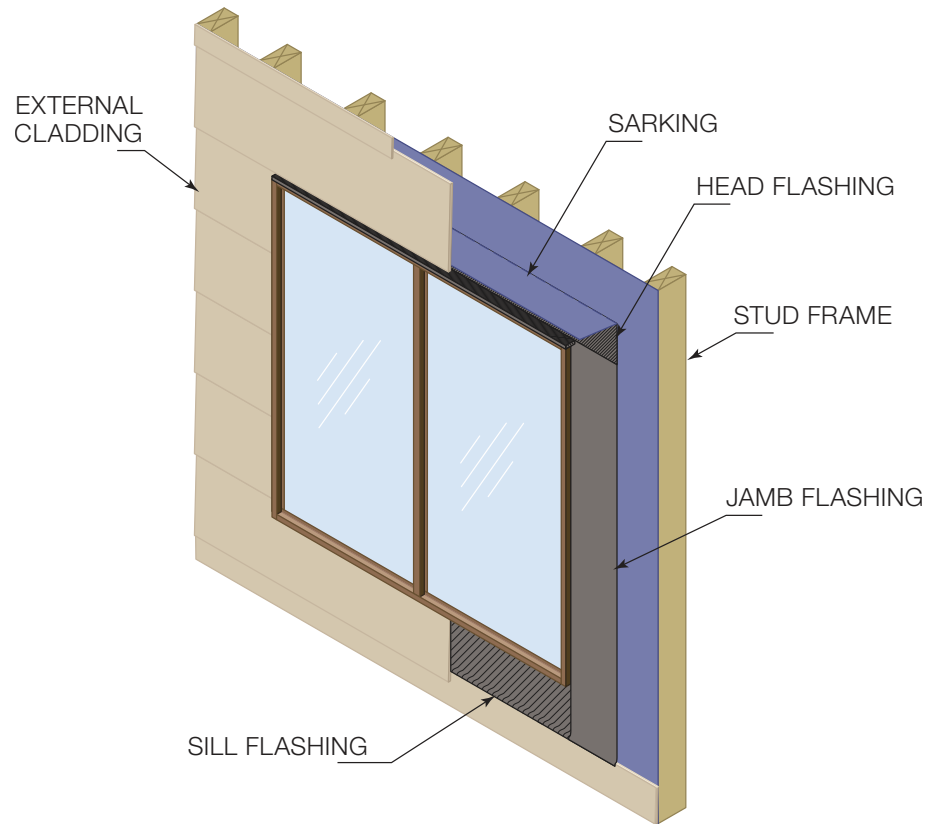
Sill

1. Sill supported.
2. Sealant over head of fixing. Fixing also set in sealant to reinsatate flashing.
3. Pack sill to level where required.
4. Angle trim sealed to structure and door sill (shown over flooring).
5. Sill flashing tray (mandatory) turned up and sealed at each end.



SINGLE SKIN VENEER CONSTRUCTION

TIMBER WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

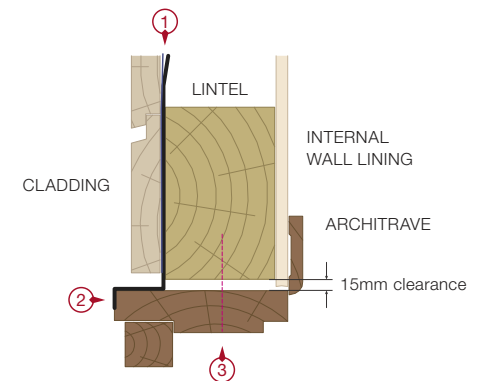
Sill must be level side to side and front to back, and fully supported at all times.

SINGLE SKIN VENEER CONSTRUCTION

TIMBER WINDOW INSTALLATION

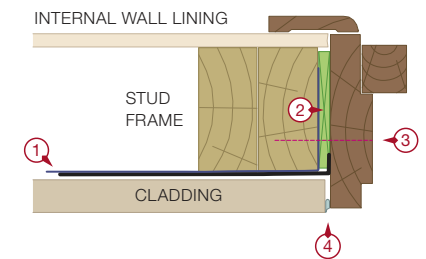
Head

1. Sarking overlaps head flashing.
2. Pressed metal head flashing. Head flashing goes over jamb flashing and head and extends past window reveal by 150mm either side minimum.
3. Fix window frame to lintel with a fixing of a gauge and spacing appropriate for the wind load.



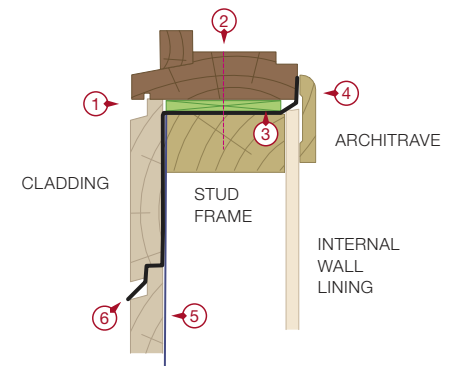
Jamb

1. Jamb flashing (mandatory) attached to the window and wall framing.
2. Packer over sarking.
3. Fix window to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
4. Sealant (external).



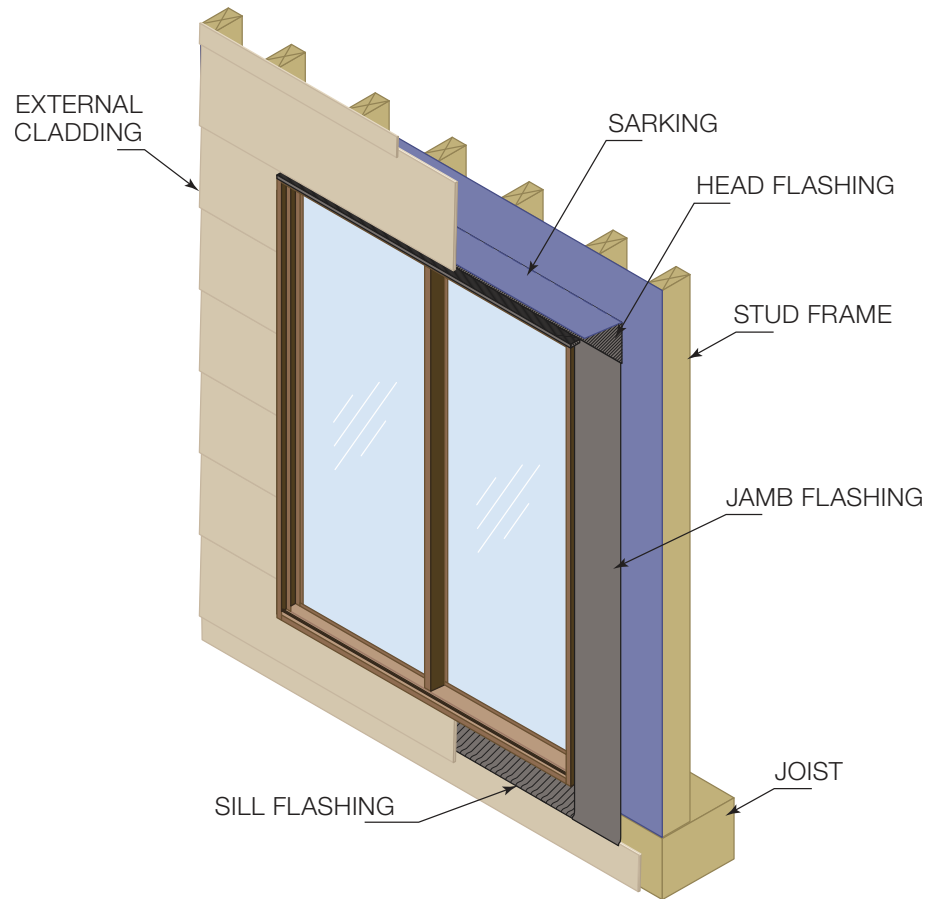
Sill

1. Sill supported.
2. Fix window to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
3. Pack sill to level where required over sarking.
4. Flashing goes behind architrave.
5. Sarking.
6. Sill flashing tray (mandatory) overlaps sarking. Sill flashing drains to outside.



SINGLE SKIN VENEER CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

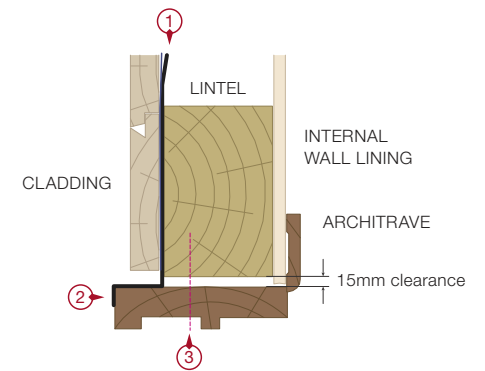
Sill must be level side to side and front to back, and fully supported at all times.

SINGLE SKIN VENEER CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION

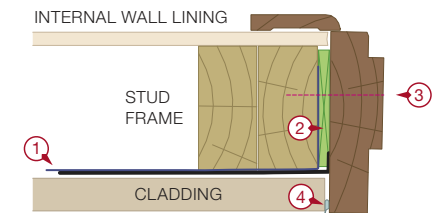
Head

1. Sarking overlaps head flashing.
2. Pressed metal head flashing. Head flashing goes over jamb flashing and head and extends past window reveal by 150mm either side minimum.
3. Fix door frame to lintel with a fixing of a gauge and spacing appropriate for the wind load.



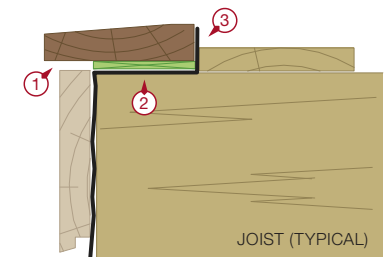
Jamb

1. Jamb flashing (mandatory) attached to the door and wall framing.
2. Packer over sarking.
3. Fix door frame to stud frame with a fixing of a gauge and spacing appropriate for the wind load.
4. Sealant (external).



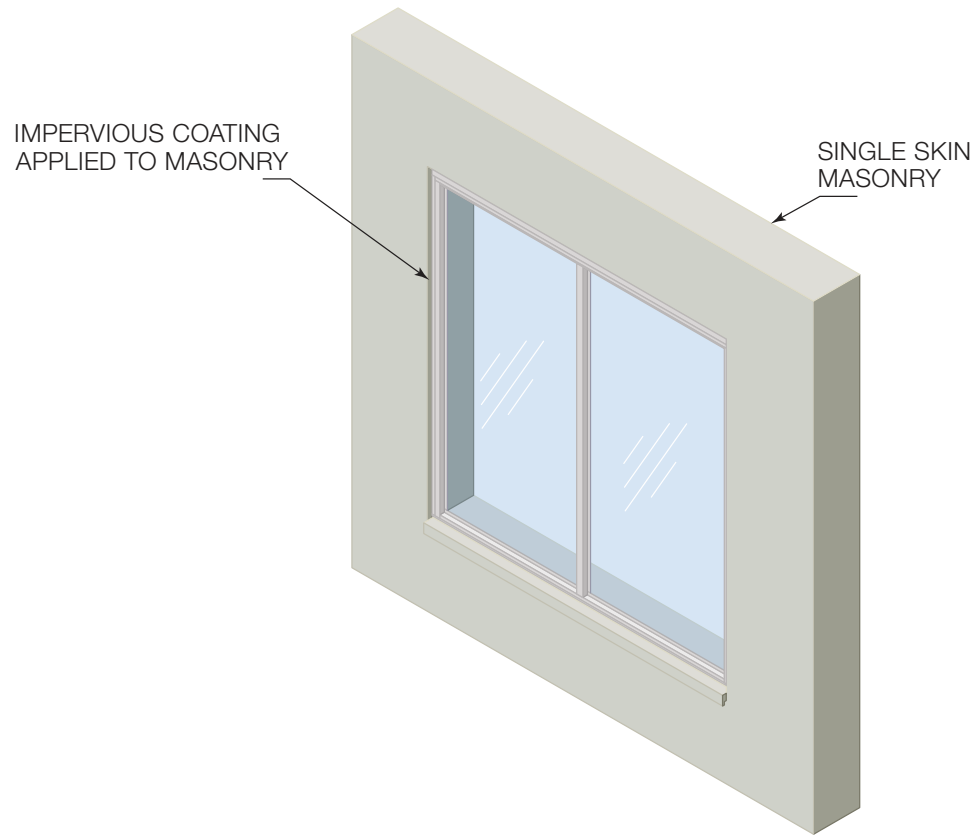
Sill

1. Sill supported.
2. Pack sill to level where required.
3. Sill flashing tray (mandatory) turned up and sealed at each end.



SOLID MASONRY CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

Separate the Sill and outside brick skin with an isolating material to prevent possible reaction between blockwork/mortar and the aluminium framing. Contact can lead to extensive corrosion.

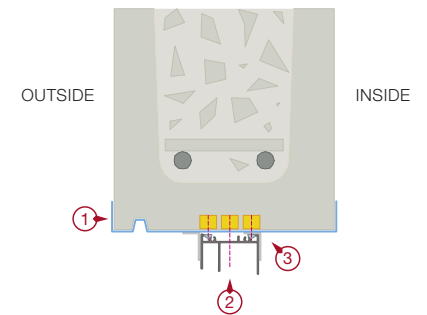
Sill must be level side to side and front to back, and fully supported at all times.

SOLID MASONRY CONSTRUCTION

ALUMINIUM WINDOW INSTALLATION

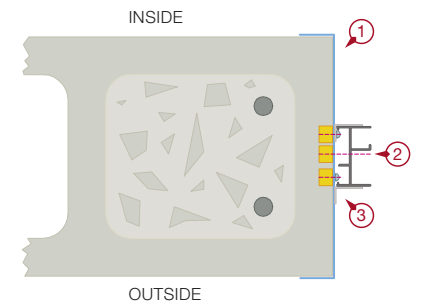
Head

1. Water-proof membrane applied to opening before fixing window.
2. Fix window with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
3. Angle trim sealed to structure and window (interior and exterior).



Jamb

1. Water-proof membrane applied to opening before fixing window.
2. Fix window with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
3. Angle trim sealed to structure and window.



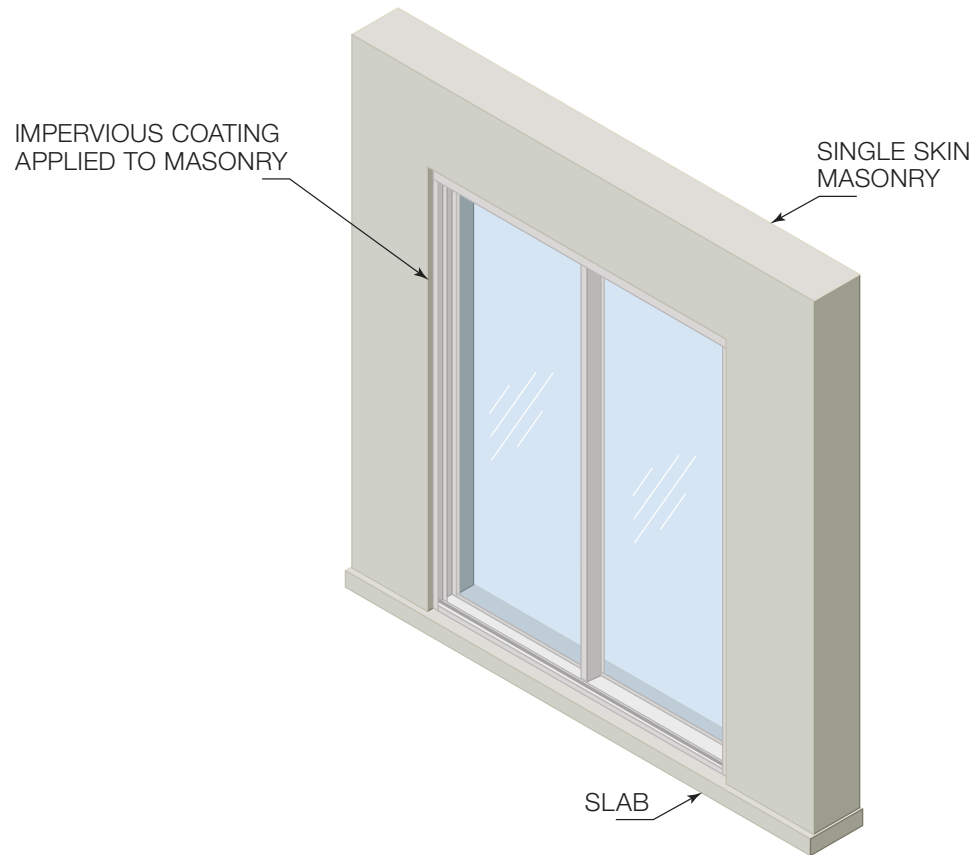
Sill

1. Water-proof membrane applied to opening before fixing window.
2. Do not block drainage holes (with render or tiles for example).
3. Angle trim sealed to structure and window.



SOLID MASONRY CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

Separate the Sill and outside brick skin with an isolating material to prevent possible reaction between blockwork/mortar and the aluminium framing. Contact can lead to extensive corrosion.

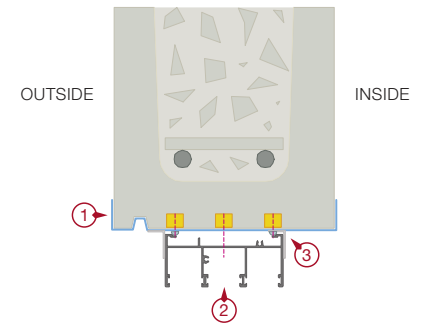
Sill must be level side to side and front to back, and fully supported at all times.

SOLID MASONRY CONSTRUCTION

ALUMINIUM SLIDING DOOR INSTALLATION

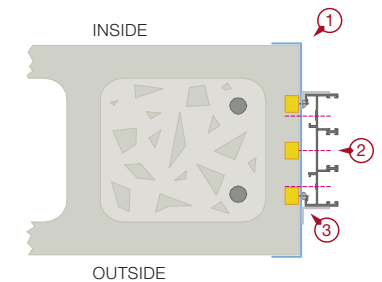
Head

1. Water-proof membrane applied to opening before fixing door.
2. Fix door with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
3. Angle trim sealed to structure and door (interior and exterior).



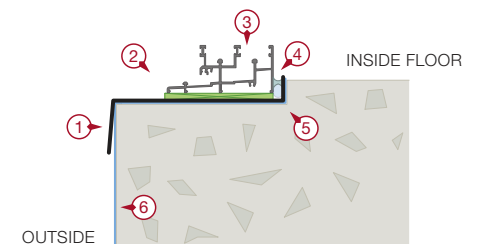
Jamb

4. Water-proof membrane applied to opening before fixing door.
5. Fix door with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
6. Angle trim sealed to structure and door (interior and exterior).



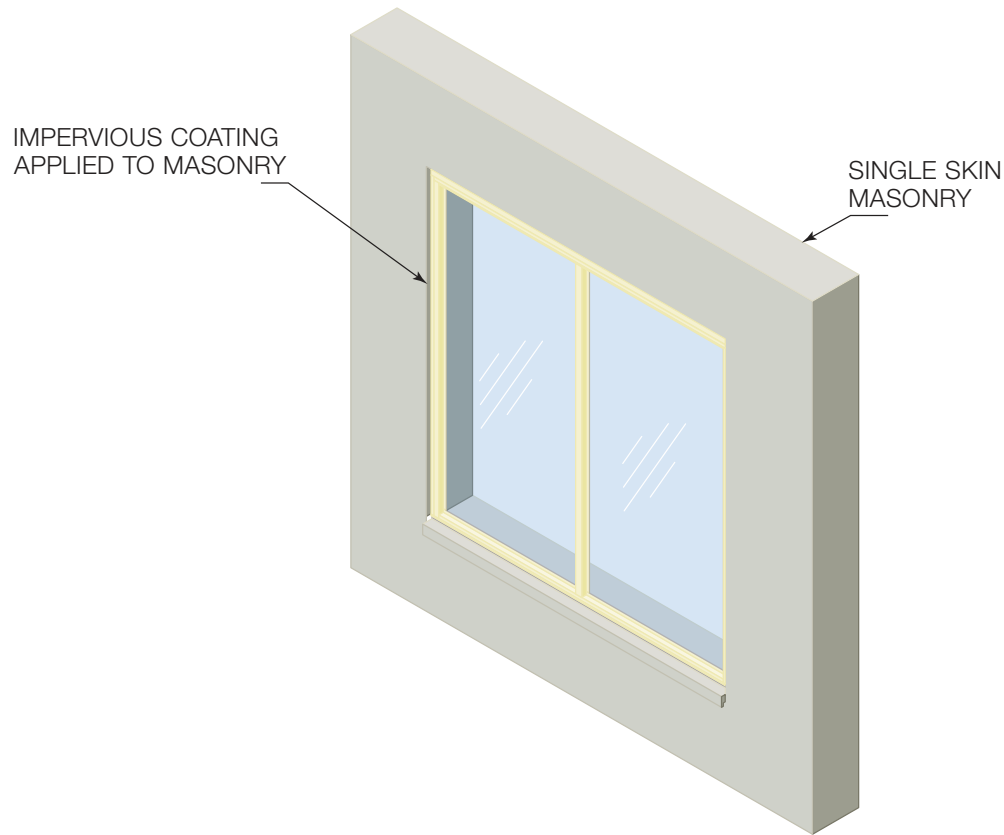
Sill

1. Sill flashing tray (mandatory).
2. Do not block drainage holes (with render or tiles for example).
3. Sealant over head of fixings. Fixings also set in sealant to waterproofing membrane.
4. Inside of door frame caulked to sill rebate and flashing tray.
5. Rebate in edge of concrete slab
6. Water-proof membrane applied to opening before fixing door.



SOLID MASONRY CONSTRUCTION

UPVC WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

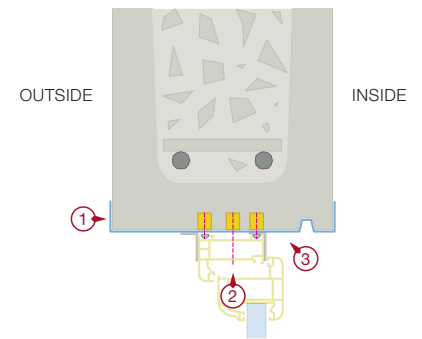
Sill must be level side to side and front to back, and fully supported at all times.

SOLID MASONRY CONSTRUCTION

UPVC WINDOW INSTALLATION

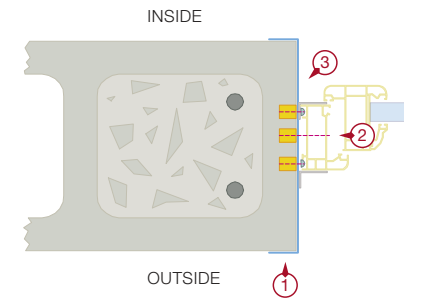
Head

1. Water-proof membrane applied to opening before fixing window.
2. Fix window with a fixing of a gauge and spacing appropriate for the wind load. Use masonry plugs.
3. Angle trim sealed to structure and window (both interior and exterior).



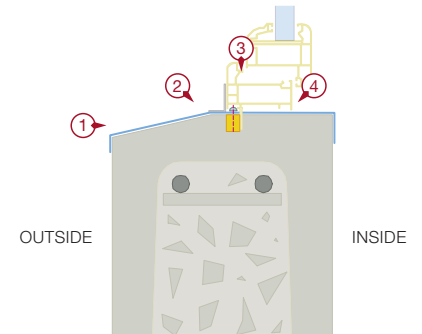
Jamb

1. Water-proof membrane applied to opening before fixing window.
2. Fix window with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
3. Angle trim sealed to structure and window (both interior and exterior).



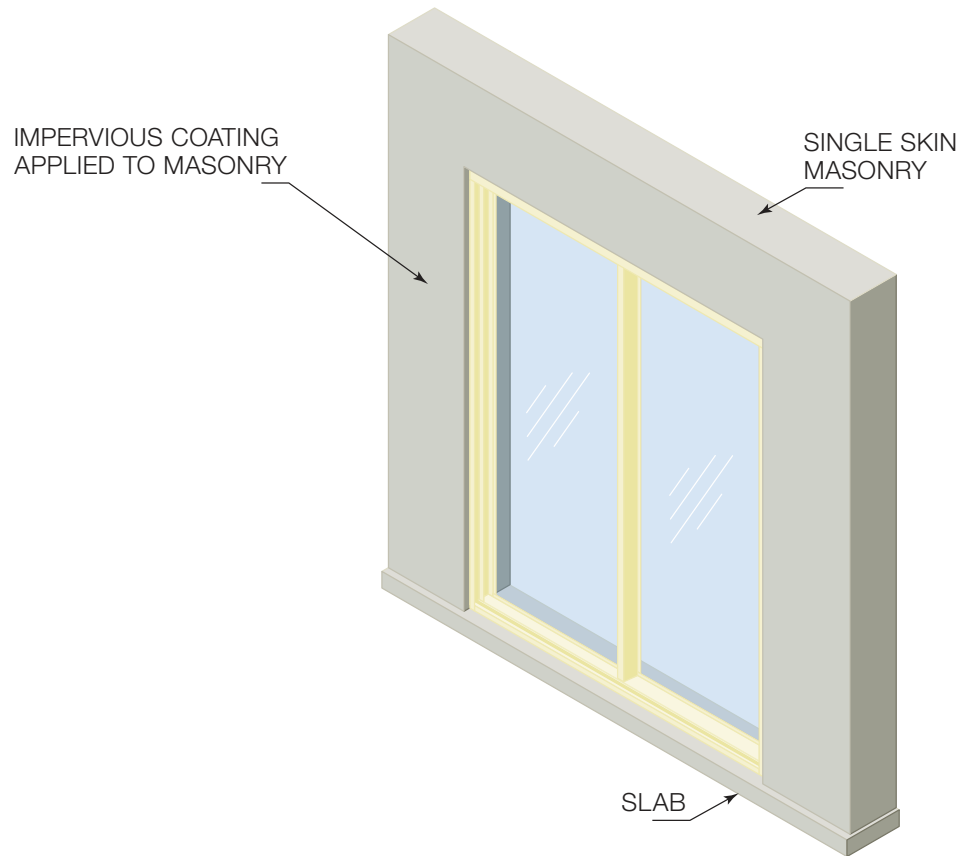
Sill

1. Water-proof membrane applied to opening before fixing window.
2. Do not block drainage holes (with render or tiles for example).
3. Sealant over head of fixings. Fixings also set in sealant to waterproofing membrane.
4. Angle trim sealed to structure and window (interior only).



SOLID MASONRY CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

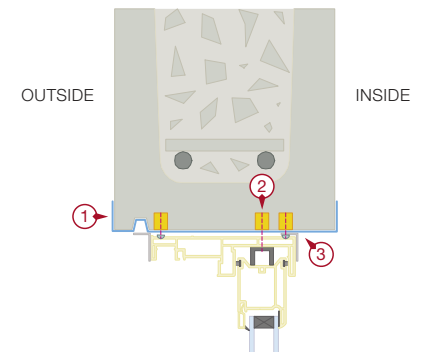
Sill must be level side to side and front to back, and fully supported at all times.

SOLID MASONRY CONSTRUCTION

UPVC SLIDING DOOR INSTALLATION

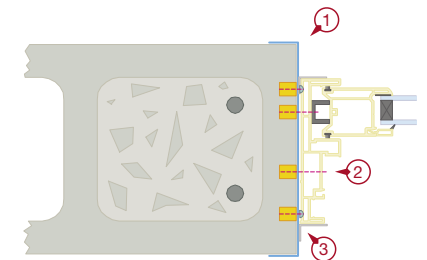
Head

1. Water-proof membrane applied to opening before fixing door.
2. Fix door with a fixing of a gauge and spacing appropriate for the wind load. Use masonry plugs.
3. Angle trim sealed to structure and door (both interior and exterior).



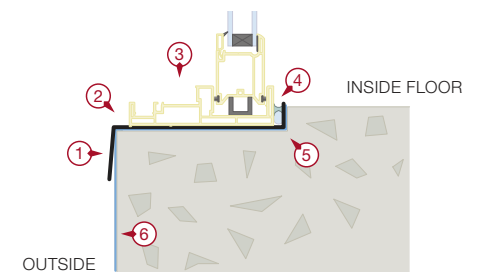
Jamb

1. Water-proof membrane applied to opening before fixing door.
2. Fix door with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
3. Angle trim sealed to structure and door.



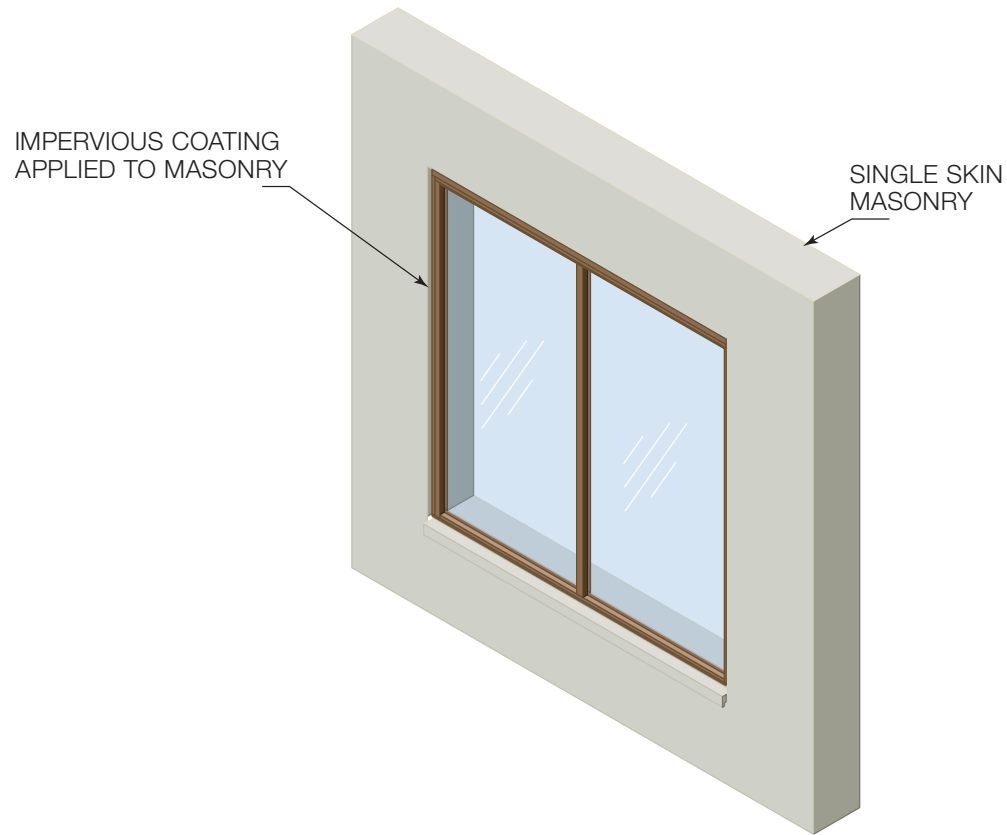
Sill

1. Sill flashing tray (mandatory).
2. Do not block drainage holes (with render or tiles for example).
3. Sealant over head of fixings. Fixings also set in sealant to waterproofing membrane.
4. Inside of door frame caulked to sill rebate and flashing tray.
5. Rebate in edge of concrete slab.
6. Water-proof membrane applied to opening before fixing door.



SOLID MASONRY CONSTRUCTION

TIMBER WINDOW INSTALLATION



IMPORTANT

Ensure building loads do not bear on window.

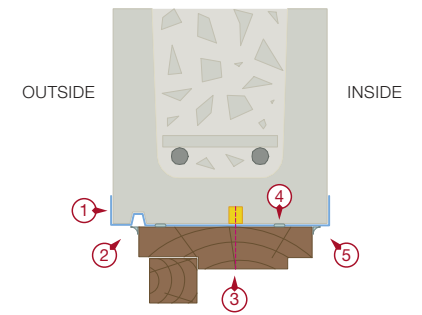
Sill must be level side to side and front to back, and fully supported at all times.

SOLID MASONRY CONSTRUCTION

TIMBER WINDOW INSTALLATION

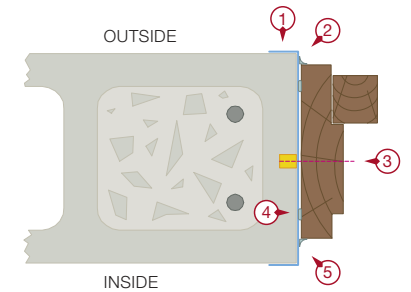
Head

1. Water-proof membrane applied to opening before fixing window.
2. Sealant (exterior).
3. Fix window with a fixing of a gauge and spacing appropriate for the wind load. Use masonry plugs.
4. Adhesive applied between head and masonry.
5. Sealant (interior).



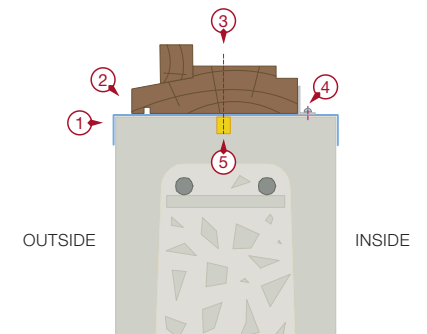
Jamb

1. Water-proof membrane applied to opening before fixing window.
2. Sealant (interior).
3. Fix window with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
4. Adhesive applied between jamb and masonry.
5. Sealant (exterior).



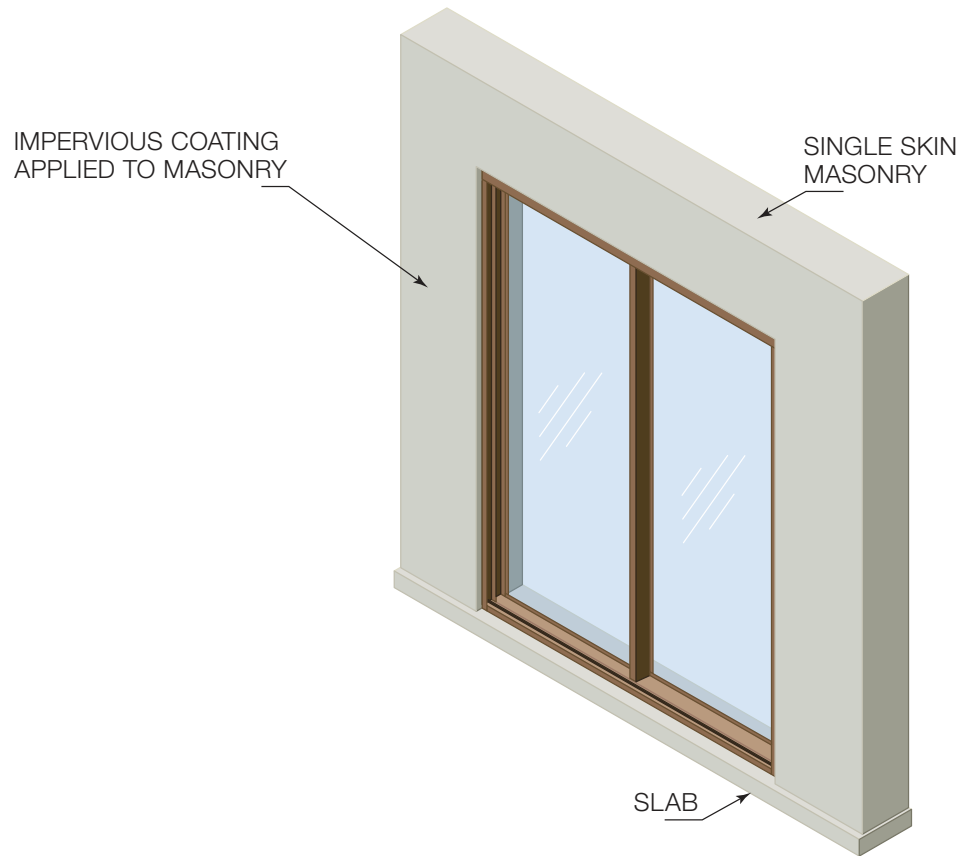
Sill

1. Water-proof membrane applied to opening before fixing window.
2. Do not block drainage holes (with render or tiles for example).
3. Sealant over head of fixings. Fixings also set in sealant to waterproofing membrane.
4. Angle trim sealed to structure and window.
5. Masonry plugs.



SOLID MASONRY CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION



IMPORTANT

Ensure building loads do not bear on door.

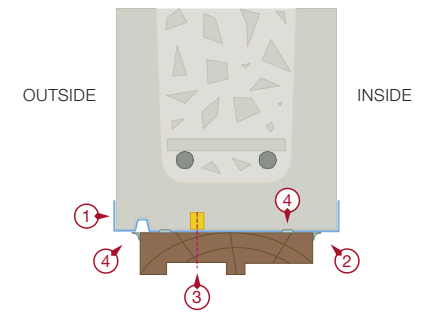
Sill must be level side to side and front to back, and fully supported at all times.

SOLID MASONRY CONSTRUCTION

TIMBER SLIDING DOOR INSTALLATION

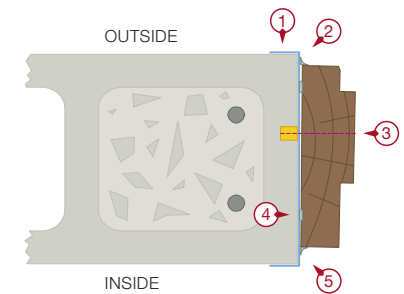
Head

1. Water-proof membrane applied to opening before fixing door.
2. Sealant (interior).
3. Fix door with a fixing of a gauge and spacing appropriate for the wind load. Use masonry plugs.
4. Sealant (exterior).



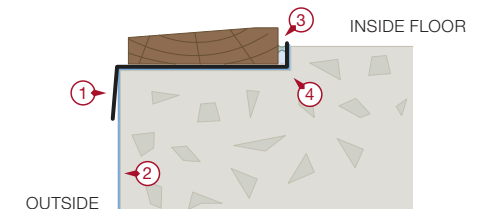
Jamb

1. Water-proof membrane applied to opening before fixing door.
2. Sealant (interior).
3. Fix door with a fixing of a gauge and spacing appropriate for the wind load (use masonry plugs).
4. Adhesive applied between jamb and masonry.
5. Sealant (exterior).



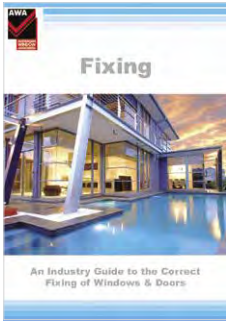
Sill

1. Sill flashing tray (mandatory).
2. Water-proof membrane applied to opening before fixing door.
3. Inside of door frame caulked to sill rebate and flashing tray.
4. Rebate in edge of concrete slab.



AGWA GUIDE SERIES

Fixing



Energy Efficiency



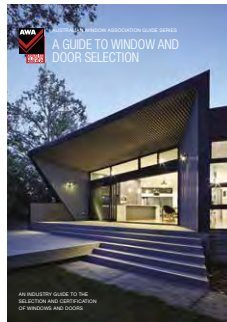
Bushfire Areas



Glass & Glazing



Window & Door Selection



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Document No. AGWA2018/INSV3

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a: Pymble Corporate Centre, Suite 1, Level 1, Building 1, 20 Bridge Street, Pymble NSW 2073

t: +61 2 9498 2768 f: +61 2 9498 3816 e: info@agwa.com.au w: www.agwa.com.au



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AUSTRALIAN GLASS AND WINDOW ASSOCIATION

WINDOW & DOOR FIXING GUIDE



AN INDUSTRY GUIDE TO
THE CORRECT FIXING OF
WINDOWS AND DOORS

VERSION 2
MAY 2021



CONTENTS

BACKGROUND	4
FOREWORD	4
AUSTRALIAN GLASS AND WINDOW ASSOCIATION	4
INDUSTRY GUIDE OBJECTIVE	4
ACKNOWLEDGEMENT	4
DISCLAIMER	4
RESPONSIBILITIES	5
THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA	5
INSTALLATION	5
LABELLING	6
COMPLIANCE CERTIFICATE	6
FIXING FRAMES CORRECTLY	7
HOW TO USE THIS GUIDE	8
EMBEDMENT DEPTH	8
ASSUMPTIONS	9
FIXING SIZE GUIDE	10
TIMBER FRAME BUILDINGS	10
Nail Capacity	11
Screw Capacity	22
BRICK & BLOCKWORK BUILDINGS	42
Masonry Anchors	43
LIGHTWEIGHT STEEL FRAME BUILDINGS	74
Screw Capacity	76
AGWA GUIDE SERIES	96

BACKGROUND

FOREWORD

The Australian Glass and Window Association is pleased to present this Industry Guide for the Fixing of Windows and Doors as part of its commitment to raising the standard of the built performance of windows and doors. This guide is a recommendation as to the fixings to be used and is based on the various Australian Standards that are relevant for determining fixing numbers for timber structures, masonry structures and lightweight steel structures.

AUSTRALIAN GLASS AND WINDOW ASSOCIATION

The AGWA is a co-operative of window manufacturers, glaziers and their suppliers.

The Australian Glass and Window Association (AGWA) aims are:

- To promote and advance the awareness of windows and glass as a major architectural component in building design.
- To establish and self regulate minimum benchmark standards through Australia.
- To facilitate the education and marketing of these standards throughout the industry and wider community.
- To provide a national voice when representing the industry in discussion and negotiation with government, local authorities, business and trade associations and organisations, and the private sector.
- To promote and encourage ethical conduct and sound business practice in the industry.

OBJECTIVE

The fixing numbers for the AGWA Industry Guide to Correct Fixing of Windows and Doors has been revised to align with the latest pressures in AS 2047-2014 as well as to update the tables within the guide to incorporate the latest changes in other relevant standards. Australian Standards (AS) referenced for calculating the fixing numbers are:

AS 2047:2014 – Windows and external glazed doors in buildings

AS 1720.1:2010 – Timber Structures, Part 1- Design Methods

AS 4100:2020 – Steel Structures

AS 4600:2018 – Cold-formed steel structures

AS 4055:2012 – Wind loads for housing.

This Industry Guide to the Fixing of Windows and Doors provides the minimum fastening number and sizes for fixing windows and doors into buildings that are classified as housing as per Australian Standard AS 4055. By providing this resource as a guide it is hoped that windows and doors supplied to majority of the Australian housings remain structurally sound.

ACKNOWLEDGEMENT

The AGWA gratefully acknowledges those member companies whose contributions and continued support to the AGWA Technical committees and its sub-committees have made this guide possible.

DISCLAIMER

The information contained is for use on windows and doors up to a maximum height of 3000 mm. For all sizes larger than the sizes prescribed in this guide, an engineered solution is required. Refer to the system supplier.

While the AGWA has made every effort to ensure that the material within this guide is accurate, the Australian Glass and Window Association will not be liable for any mistakes, errors or omissions arising as a result of information contained in this guide.

This Fixing Guide is designed to be used in conjunction with the “Installation - An Industry Guide to the Correct Installation of Windows & Doors” published by AGWA.

THE NATIONAL CONSTRUCTION CODE

The National Construction Code (NCC) is produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government and each State and Territory Government.

The NCC is a performance-based document and sets out minimum performance requirements for the design and construction of buildings and other structures throughout Australia. It allows for variation in climate and geological or geographic conditions.

Under part 3.6 section 3.6.0 of Volume Two of the NCC 2019, performance requirements (P2.1 & P2.2.2) are satisfied if windows are designed and constructed in accordance with AS 2047. For glazed assemblies not covered by AS 2047 compliance to AS 1288 is required.

AS 2047 - Windows in buildings: Selection and Installation

AS 1288 - Glass in buildings: Selection and Installation

INSTALLATION

At all times manufacturer’s installation instructions will be the predominant procedure for the installation of proprietary windows.

Installers should ensure that manufacturer’s instruction are adopted.

The practices outlined in this guide are not intended to supersede manufacturer’s instructions but provide basic and generic guidelines in the absence of them.

Approved PPE (personal protective equipment) should be worn at all times when handling windows.

Special consideration needs to be made for windows and doors systems designed specifically for acoustic and energy efficiency and reference must be made to the building designer or installer for installation details.

REFERENCE FROM AS 2047 APPENDIX C

For buildings that are classified as housing under the Australian Standard AS 4055, the purchaser (building designer or builder) should nominate the wind rating (N or C) for the window assemblies when ordering the windows.

The manufacturer of window assemblies should verify the window ratings or design wind pressures as provided by the purchaser.

RESPONSIBILITIES

LABELLING

The label should be positioned so that the window can be identified when viewed in situ and have the following information marked on the frame:

- (a) Housing:
 1. Manufacturer's identification mark
 2. Window rating and water penetration resistance
- (b) Residential other than housing:
 1. Manufacturer's identification mark.
 2. Serviceability limit state residential ratings
 3. Ultimate limit state residential ratings
 4. Water penetration resistance
- (c) Commercial:
 1. Manufacturer's identification mark
 2. Serviceability limit state commercial ratings
 3. Ultimate limit state commercial ratings
 4. Water penetration resistance.

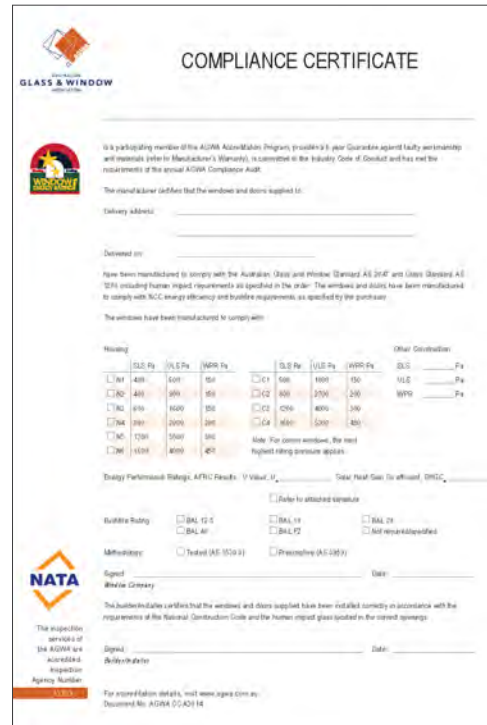
Figure 1 Performance Label



CERTIFICATE

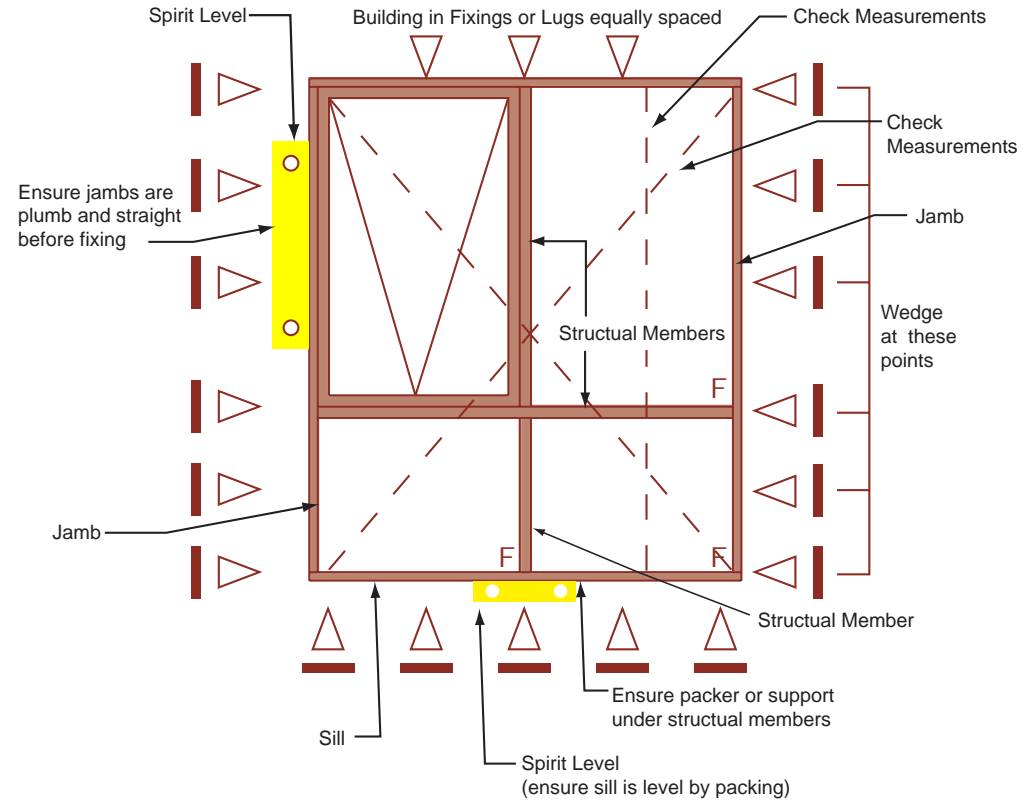
Certificates, indicating window performance can be provided for window assemblies in residential applications. The manufacturer of the window assembly would normally provide this certificate.

Figure 2 AGWA Compliance Certificate



FIXING FRAMES CORRECTLY

Figure 3 Fixing Frames



* Fix via building lugs, nails or shim at equally spaced arrow points.

HOW TO USE THIS GUIDE

The tables within this guide determine the number of nails or screws needed for appropriate fixing of windows and doors.

The number of nails or screws needed are dependent on the:

- Wind Classification (as provided by AS 4055)
- ULS Wind Pressure (as provided in Table 2.5 of AS 2047)
- Diameter of Nail or Screw Size
- Window Width
- Window Height

Fixings would normally be evenly spaced but some specific product types and/or wind loading conditions may require specialised placement. Refer to the system supplier if unsure.

EXAMPLE ULS WIND PRESSURE: 900 PA, NAIL DIAMETER: 2.5 MM

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	6	8	8
	900	4	4	4	6	6	8	8	8	10	10	12
	1200	4	4	6	6	8	10	10	12	12	14	14
	1500	4	6	6	8	10	12	12	14	16	18	18
	1800	4	6	8	10	12	14	14	16	18	20	22
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	12	14	18	20	22	24	26	28
	2700	6	8	12	14	16	20	22	24	28	30	32
	3000	6	10	12	16	18	22	24	28	30	34	36

For a window 2100 mm (h) x 1500 mm (w) to be fixed into a home built in a N1 Wind Classification zone (with a ULS Wind Pressure of 900 Pa) and using a 2.5 mm nail: 12 Nails are to be used to fix this window.

EMBEDMENT DEPTH

Embedment Depth into timber and masonry

$$p \geq 10D$$

p = penetration
D = diameter of nail or screw

Example:

- Using a 2.5 mm nail, penetration should be at least 25 mm
- Using a 6 Gauge Screw, penetration should be at least 34.5 mm. This is because the shank diameter (D) of a 6 Gauge screw is 3.45 mm as per AS 1720.1-2010.

ASSUMPTIONS

1. The following tables for nails, screws and masonry anchors set a guidance for the minimum number of fasteners required to hold a window into a timber frame, brick, blockwork or lightweight steel frame.
2. These tables have been derived by using the following Australian Standards:
 - AS 2047:2014 - Windows and external glazed doors in buildings
 - AS 1720.1:2010 - Timber Structures, Part 1- Design Methods
 - AS 4100:2020 - Steel Structures
 - AS 4600:2018 - Cold-formed steel structures
 - AS 4055:2012 - Wind loads for housing.
3. All tables for timber frame and lightweight steel frame buildings are calculated using **corner window ULS pressures** from Table 2.5 of AS 2047. It is our recommendation to reduce the **fixing numbers by 30%** if this guide is used for general windows. Please note a minimum of 4 fixings are required even if the fixing numbers for general windows is less than 4 after a 30% reduction.
4. **For the purpose of this guide only, N1C means N1 corner pressure, N2C means N2 corner pressure and likewise.**
5. Please note there is no change to the minimum number of fasteners (anchors) required to hold a window into a brick or blockwork opening. The anchor numbers for brick or blockwork remains the same as in the previous edition of the AGWA Industry Guide to Fixing of Windows and Doors.
6. The sizes of nails considered for the following tables are 2.5 mm, 2.8 mm and 3.15 mm. Sizes of screws considered are 4 Gauge, 6 Gauge, 8 Gauge, 10 Gauge and 12 Gauge. Please refer to AS 1720.1 for the shank diameters for different screw sizes.
7. ULS wind pressures are as per AS 2047-2014 Windows in Buildings and AS 4055-2012 Wind loads for housing.
8. Windows must be packed between the reveals and frame (except at lintels). Failure to do so will greatly reduce the strength of the fasteners used.
9. It is assumed that the load is distributed equally to all fasteners.
10. Manufacturers generally recommend that windows be fastened through the jambs. Wide windows may need to be fastened through the sill.
11. Wide windows and doors may also need extra consideration to the head to resist windloads. The head cannot take any of the vertical load through the lintel.

FIXING SIZE GUIDE

TIMBER FRAMED BUILDINGS

The following tables for nails and screws sets a guidance for the minimum number of fasteners required to hold a window into a timber frame.

These tables have been derived from AS 1720.1-2010 Timber Structures (Design Methods). Section 4.2 - Design of nailed joints and Section 4.3 - Design of screwed joints of the standard have been adopted to determine the fixing numbers for timber framed buildings. Timber studs considered for the purpose of this guide are seasoned pine species with a **joint group of JD4** as per AS 1720.1.

The sizes of nails considered for the following tables are 2.5 mm, 2.8 mm and 3.15 mm. Sizes of screws considered are 4 Gauge, 6 Gauge, 8 Gauge, 10 Gauge and 12 Gauge. Please refer to AS 1720.1 for the shank diameters for different screw sizes.

ULS wind pressures are as per AS 2047-2014 Windows and External Glazed Doors in Buildings and AS 4055-2012 Wind Loads for Housing.

Windows must be packed between the reveals and frame (except at lintels). Failure to do so will greatly reduce the strength of the fasteners used.

It is assumed that the load is distributed equally to all fasteners.

Manufacturers generally recommend that windows be fastened through the jambs. Wide windows may need to be fastened through the sill.

Wide windows and doors may also need extra consideration to the head to resist windloads. Windows are not load bearing. The head cannot support any of the vertical load through the lintel.

For more information, refer to the AGWA Guide for Installation.

TIMBER FRAME NAIL CAPACITY

N1C / 900 PA ULS

ULS WIND PRESSURE: 900 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	6	8	8
	900	4	4	4	6	6	8	8	8	10	10	12
	1200	4	4	6	6	8	10	10	12	12	14	14
	1500	4	6	6	8	10	12	12	14	16	18	18
	1800	4	6	8	10	12	14	14	16	18	20	22
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	12	14	18	20	22	24	26	28
	2700	6	8	12	14	16	20	22	24	28	30	32
	3000	6	10	12	16	18	22	24	28	30	34	36

ULS WIND PRESSURE: 900 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	6	6	6	6
	900	4	4	4	4	6	6	6	8	8	8	10
	1200	4	4	4	6	6	8	8	10	10	12	12
	1500	4	4	6	6	8	10	10	12	12	14	16
	1800	4	6	6	8	10	12	12	14	16	16	18
	2100	4	6	8	10	12	12	14	16	18	20	22
	2400	4	6	8	10	12	14	16	18	20	22	24
	2700	6	8	10	12	14	16	18	20	22	24	26
	3000	6	8	10	12	16	18	20	22	24	28	30

ULS WIND PRESSURE: 900 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	6	6
	900	4	4	4	4	4	6	6	6	6	8	8
	1200	4	4	4	4	6	6	8	8	8	10	10
	1500	4	4	4	6	6	8	8	10	10	12	12
	1800	4	4	6	6	8	10	10	12	12	14	16
	2100	4	6	6	8	10	10	12	14	14	16	18
	2400	4	6	8	8	10	12	14	16	16	18	20
	2700	4	6	8	10	12	14	16	16	18	20	22
	3000	4	6	8	10	12	14	16	18	20	22	24

N2C / 1300 PA ULS

ULS WIND PRESSURE: 1300 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	6	8	8	10	10	12
	900	4	4	6	8	8	10	12	12	14	14	16
	1200	4	6	8	10	12	12	14	16	18	20	22
	1500	6	8	10	12	14	16	18	20	22	24	26
	1800	6	8	12	14	16	18	22	24	26	28	32
	2100	6	10	12	16	18	22	24	28	30	34	36
	2400	8	12	14	18	22	24	28	32	34	38	42
	2700	8	12	16	20	24	28	32	36	38	42	46
	3000	10	14	18	22	26	30	34	38	44	48	52

ULS WIND PRESSURE: 1300 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	6	8	8	8	10
	900	4	4	6	6	8	8	10	10	12	12	14
	1200	4	6	6	8	10	10	12	14	14	16	18
	1500	4	6	8	10	12	14	14	16	18	20	22
	1800	6	8	10	12	14	16	18	20	22	24	26
	2100	6	8	10	14	16	18	20	22	26	28	30
	2400	6	10	12	14	18	20	24	26	28	32	34
	2700	8	10	14	16	20	22	26	28	32	36	38
	3000	8	12	14	18	22	26	28	32	36	38	42

ULS WIND PRESSURE: 1300 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	8	8
	900	4	4	4	6	6	6	8	8	10	10	12
	1200	4	4	6	6	8	8	10	12	12	14	14
	1500	4	6	6	8	10	10	12	14	16	16	18
	1800	4	6	8	10	12	12	14	16	18	20	22
	2100	4	6	8	10	12	14	16	18	20	22	24
	2400	6	8	10	12	14	16	20	22	24	26	28
	2700	6	8	12	14	16	18	22	24	26	30	32
	3000	6	10	12	16	18	20	24	26	30	32	34

N3C / 2000 PA ULS

ULS WIND PRESSURE: 2000 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	8	8	10	12	12	14	16	16
	900	4	6	8	10	12	14	16	18	20	22	24
	1200	6	8	12	14	16	20	22	24	26	30	32
	1500	8	10	14	18	20	24	26	30	34	36	40
	1800	8	12	16	20	24	28	32	36	40	44	48
	2100	10	14	20	24	28	32	38	42	46	50	56
	2400	12	16	22	26	32	38	42	48	52	58	64
	2700	12	18	24	30	36	42	48	54	60	66	70
	3000	14	20	26	34	40	46	52	60	66	72	78

ULS WIND PRESSURE: 2000 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	8	10	10	12	12	14
	900	4	6	8	8	10	12	14	16	16	18	20
	1200	6	8	10	12	14	16	18	20	22	24	26
	1500	6	8	12	14	16	20	22	24	28	30	32
	1800	8	10	14	16	20	24	26	30	32	36	40
	2100	8	12	16	20	24	28	30	34	38	42	46
	2400	10	14	18	22	26	30	34	40	44	48	52
	2700	10	16	20	24	30	34	40	44	48	54	58
	3000	12	16	22	28	32	38	44	48	54	60	64

ULS WIND PRESSURE: 2000 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	8	10	10	12
	900	4	4	6	8	8	10	12	12	14	16	16
	1200	4	6	8	10	12	14	14	16	18	20	22
	1500	6	8	10	12	14	16	18	20	22	24	28
	1800	6	8	12	14	16	20	22	24	28	30	32
	2100	8	10	14	16	20	22	26	28	32	34	38
	2400	8	12	14	18	22	26	28	32	36	40	42
	2700	8	12	16	20	24	28	32	36	40	44	48
	3000	10	14	18	22	28	32	36	40	44	48	54

N4C / 3000 PA ULS

ULS WIND PRESSURE: 3000 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	20	22	24
	900	6	10	12	16	18	22	24	28	30	34	36
	1200	8	12	16	20	24	28	32	36	40	44	48
	1500	10	16	20	26	30	34	40	44	50	54	60
	1800	12	18	24	30	36	42	48	54	60	66	70
	2100	14	22	28	34	42	48	56	62	68	76	82
	2400	16	24	32	40	48	56	64	70	78	86	94
	2700	18	28	36	44	54	62	70	80	88	98	106
	3000	20	30	40	50	60	68	78	88	98	108	118

ULS WIND PRESSURE: 3000 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	16	16	18	20
	900	6	8	10	12	16	18	20	22	24	28	30
	1200	8	10	14	16	20	24	26	30	32	36	40
	1500	8	12	16	20	24	28	32	36	40	44	48
	1800	10	16	20	24	30	34	40	44	48	54	58
	2100	12	18	24	28	34	40	46	52	56	62	68
	2400	14	20	26	32	40	46	52	58	64	72	78
	2700	16	22	30	36	44	52	58	66	72	80	86
	3000	16	24	32	40	48	56	64	72	80	88	96

ULS WIND PRESSURE: 3000 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	8	8	10	12	12	14	16	16
	900	4	6	8	10	12	14	16	18	20	22	24
	1200	6	8	12	14	16	20	22	24	28	30	32
	1500	8	10	14	18	20	24	28	30	34	36	40
	1800	8	12	16	20	24	28	32	36	40	44	48
	2100	10	14	20	24	28	34	38	42	46	52	56
	2400	12	16	22	28	32	38	42	48	54	58	64
	2700	12	18	24	30	36	42	48	54	60	66	72
	3000	14	20	28	34	40	46	54	60	66	72	80

N5C / 4500 PA ULS

ULS WIND PRESSURE: 4500 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	10	12	16	18	22	24	28	30	34	36
	900	10	14	18	22	28	32	36	40	44	50	54
	1200	12	18	24	30	36	42	48	54	60	66	70
	1500	16	22	30	38	44	52	60	66	74	82	88
	1800	18	28	36	44	54	62	70	80	88	98	106
	2100	22	32	42	52	62	72	82	92	102	114	124
	2400	24	36	48	60	70	82	94	106	118	130	140
	2700	28	40	54	66	80	92	106	120	132	146	158
	3000	30	44	60	74	88	102	118	132	146	162	176

ULS WIND PRESSURE: 4500 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	16	18	20	22	24	28	30
	900	8	12	16	18	22	26	30	34	36	40	44
	1200	10	16	20	24	30	34	40	44	48	54	58
	1500	12	18	24	30	36	42	48	54	60	66	72
	1800	16	22	30	36	44	52	58	66	72	80	86
	2100	18	26	34	42	52	60	68	76	84	92	102
	2400	20	30	40	48	58	68	78	86	96	106	116
	2700	22	34	44	54	66	76	86	98	108	120	130
	3000	24	36	48	60	72	84	96	108	120	132	144

ULS WIND PRESSURE: 4500 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	20	22	24
	900	6	10	12	16	18	22	24	28	30	34	36
	1200	8	12	16	20	24	28	32	36	40	44	48
	1500	10	16	20	26	30	36	40	46	50	54	60
	1800	12	18	24	30	36	42	48	54	60	66	72
	2100	14	22	28	36	42	50	56	62	70	76	84
	2400	16	24	32	40	48	56	64	72	80	88	96
	2700	18	28	36	46	54	62	72	80	90	98	106
	3000	20	30	40	50	60	70	80	90	100	108	118

N6C / 6000 PA ULS

ULS WIND PRESSURE: 6000 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	12	16	20	24	28	32	36	40	44	48
	900	12	18	24	30	36	42	48	54	60	66	70
	1200	16	24	32	40	48	56	64	70	78	86	94
	1500	20	30	40	50	60	68	78	88	98	108	118
	1800	24	36	48	60	70	82	94	106	118	130	140
	2100	28	42	56	68	82	96	110	124	136	150	164
	2400	32	48	64	78	94	110	126	140	156	172	188
	2700	36	54	70	88	106	124	140	158	176	194	210
	3000	40	60	78	98	118	136	156	176	196	214	234

ULS WIND PRESSURE: 6000 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	10	14	16	20	24	26	30	32	36	40
	900	10	16	20	24	30	34	40	44	48	54	58
	1200	14	20	26	32	40	46	52	58	64	72	78
	1500	16	24	32	40	48	56	64	72	80	88	96
	1800	20	30	40	48	58	68	78	86	96	106	116
	2100	24	34	46	56	68	80	90	102	112	124	134
	2400	26	40	52	64	78	90	102	116	128	142	154
	2700	30	44	58	72	86	102	116	130	144	158	172
	3000	32	48	64	80	96	112	128	144	160	176	192

ULS WIND PRESSURE: 6000 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	12	14	16	20	22	24	28	30	32
	900	8	12	16	20	24	28	32	36	40	44	48
	1200	12	16	22	28	32	38	42	48	54	58	64
	1500	14	20	28	34	40	46	54	60	66	72	80
	1800	16	24	32	40	48	56	64	72	80	88	96
	2100	20	28	38	46	56	66	74	84	92	102	110
	2400	22	32	42	54	64	74	84	96	106	116	126
	2700	24	36	48	60	72	84	96	106	118	130	142
	3000	28	40	54	66	80	92	106	118	132	144	158

C1C / 2700 PA ULS

ULS WIND PRESSURE: 2700 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	14	16	18	20	22
	900	6	8	12	14	16	20	22	24	28	30	32
	1200	8	12	14	18	22	26	28	32	36	40	42
	1500	10	14	18	22	28	32	36	40	44	50	54
	1800	12	16	22	28	32	38	42	48	54	58	64
	2100	14	20	26	32	38	44	50	56	62	68	74
	2400	14	22	28	36	42	50	56	64	70	78	84
	2700	16	24	32	40	48	56	64	72	80	88	96
	3000	18	28	36	44	54	62	70	80	88	98	106

ULS WIND PRESSURE: 2700 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	12	12	14	16	16	18
	900	6	8	10	12	14	16	18	20	22	24	26
	1200	6	10	12	16	18	22	24	26	30	32	36
	1500	8	12	16	18	22	26	30	34	36	40	44
	1800	10	14	18	22	26	32	36	40	44	48	52
	2100	12	16	22	26	32	36	42	46	52	56	62
	2400	12	18	24	30	36	42	46	52	58	64	70
	2700	14	20	26	34	40	46	52	60	66	72	78
	3000	16	22	30	36	44	52	58	66	72	80	86

ULS WIND PRESSURE: 2700 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	16
	900	4	6	8	10	12	14	16	16	18	20	22
	1200	6	8	10	12	16	18	20	22	24	26	30
	1500	6	10	12	16	18	22	24	28	30	34	36
	1800	8	12	16	18	22	26	30	32	36	40	44
	2100	10	14	18	22	26	30	34	38	42	46	50
	2400	10	16	20	24	30	34	38	44	48	52	58
	2700	12	16	22	28	32	38	44	48	54	60	64
	3000	12	18	24	30	36	42	48	54	60	66	72

C2C / 4000 PA ULS

ULS WIND PRESSURE: 4000 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	12	14	16	20	22	24	26	30	32
	900	8	12	16	20	24	28	32	36	40	44	48
	1200	12	16	22	26	32	38	42	48	52	58	64
	1500	14	20	26	34	40	46	52	60	66	72	78
	1800	16	24	32	40	48	56	64	70	78	86	94
	2100	20	28	38	46	56	64	74	82	92	100	110
	2400	22	32	42	52	64	74	84	94	104	114	126
	2700	24	36	48	60	70	82	94	106	118	130	140
	3000	26	40	52	66	78	92	104	118	130	144	156

ULS WIND PRESSURE: 4000 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	16	18	20	22	24	26
	900	8	10	14	16	20	24	26	30	32	36	40
	1200	10	14	18	22	26	30	34	40	44	48	52
	1500	12	16	22	28	32	38	44	48	54	60	64
	1800	14	20	26	32	40	46	52	58	64	72	78
	2100	16	24	30	38	46	54	60	68	76	82	90
	2400	18	26	34	44	52	60	68	78	86	94	102
	2700	20	30	40	48	58	68	78	86	96	106	116
	3000	22	32	44	54	64	76	86	96	108	118	128

ULS WIND PRESSURE: 4000 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	14	16	18	20	22
	900	6	8	12	14	16	20	22	24	28	30	32
	1200	8	12	14	18	22	26	28	32	36	40	42
	1500	10	14	18	22	28	32	36	40	44	48	54
	1800	12	16	22	28	32	38	42	48	54	58	64
	2100	14	20	26	32	38	44	50	56	62	68	74
	2400	14	22	28	36	42	50	56	64	70	78	84
	2700	16	24	32	40	48	56	64	72	80	88	96
	3000	18	28	36	44	54	62	70	80	88	96	106

C3C / 5900 PA ULS

ULS WIND PRESSURE: 5900 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	12	16	20	24	28	32	36	40	44	46
	900	12	18	24	30	36	42	46	52	58	64	70
	1200	16	24	32	40	46	54	62	70	78	86	92
	1500	20	30	40	48	58	68	78	86	96	106	116
	1800	24	36	46	58	70	82	92	104	116	128	138
	2100	28	42	54	68	82	94	108	122	134	148	162
	2400	32	46	62	78	92	108	124	138	154	170	184
	2700	36	52	70	86	104	122	138	156	172	190	208
	3000	40	58	78	96	116	134	154	172	192	212	230

ULS WIND PRESSURE: 5900 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	10	14	16	20	22	26	30	32	36	38
	900	10	16	20	24	30	34	38	44	48	52	58
	1200	14	20	26	32	38	44	52	58	64	70	76
	1500	16	24	32	40	48	56	64	72	80	88	94
	1800	20	30	38	48	58	66	76	86	94	104	114
	2100	22	34	44	56	66	78	88	100	110	122	132
	2400	26	38	52	64	76	88	102	114	126	138	152
	2700	30	44	58	72	86	100	114	128	142	156	170
	3000	32	48	64	80	94	110	126	142	158	174	188

ULS WIND PRESSURE: 5900 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	12	14	16	18	22	24	26	30	32
	900	8	12	16	20	24	28	32	36	40	44	48
	1200	12	16	22	26	32	36	42	48	52	58	62
	1500	14	20	26	34	40	46	52	58	66	72	78
	1800	16	24	32	40	48	54	62	70	78	86	94
	2100	18	28	36	46	54	64	72	82	90	100	108
	2400	22	32	42	52	62	72	84	94	104	114	124
	2700	24	36	48	58	70	82	94	106	116	128	140
	3000	26	40	52	66	78	90	104	116	130	142	156

C4C / 8000 PA ULS

ULS WIND PRESSURE: 8000 PA, **NAIL DIAMETER: 2.5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	12	16	22	26	32	38	42	48	52	58	64
	900	16	24	32	40	48	56	64	70	78	86	94
	1200	22	32	42	52	64	74	84	94	104	114	126
	1500	26	40	52	66	78	92	104	118	130	144	156
	1800	32	48	64	78	94	110	126	140	156	172	188
	2100	38	56	74	92	110	128	146	164	182	200	218
	2400	42	64	84	104	126	146	166	188	208	228	250
	2700	48	70	94	118	140	164	188	210	234	258	280
	3000	52	78	104	130	156	182	208	234	260	286	312

ULS WIND PRESSURE: 8000 PA, **NAIL DIAMETER: 2.8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	10	14	18	22	26	30	34	40	44	48	52
	900	14	20	26	32	40	46	52	58	64	72	78
	1200	18	26	34	44	52	60	68	78	86	94	102
	1500	22	32	44	54	64	76	86	96	108	118	128
	1800	26	40	52	64	78	90	102	116	128	142	154
	2100	30	46	60	76	90	106	120	134	150	164	180
	2400	34	52	68	86	102	120	136	154	170	188	204
	2700	40	58	78	96	116	134	154	172	192	212	230
	3000	44	64	86	108	128	150	170	192	214	234	256

ULS WIND PRESSURE: 8000 PA, **NAIL DIAMETER: 3.15 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	12	14	18	22	26	28	32	36	40	42
	900	12	16	22	28	32	38	42	48	54	58	64
	1200	14	22	28	36	42	50	56	64	70	78	84
	1500	18	28	36	44	54	62	70	80	88	96	106
	1800	22	32	42	54	64	74	84	96	106	116	126
	2100	26	38	50	62	74	86	98	110	124	136	148
	2400	28	42	56	70	84	98	112	126	140	154	168
	2700	32	48	64	80	96	110	126	142	158	174	190
	3000	36	54	70	88	106	124	140	158	176	192	210

N1C / 900 PA ULS



ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	8	8	8
	900	4	4	4	6	6	8	8	10	10	12	12
	1200	4	4	6	8	8	10	12	12	14	16	16
	1500	4	6	8	10	10	12	14	16	18	20	20
	1800	4	6	8	10	12	14	16	18	20	22	24
	2100	6	8	10	12	14	18	20	22	24	26	28
	2400	6	8	12	14	16	20	22	24	28	30	32
	2700	6	10	12	16	18	22	24	28	30	34	36
	3000	8	10	14	18	20	24	28	30	34	38	40

ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	8	8	8	10	10	12
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	12	12	14	16	16
	2100	4	6	8	8	10	12	14	14	16	18	20
	2400	4	6	8	10	12	14	14	16	18	20	22
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	26

ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	6	6	6	6
	1200	4	4	4	4	4	6	6	6	8	8	8
	1500	4	4	4	4	6	6	8	8	8	10	10
	1800	4	4	4	6	6	8	8	10	10	12	12
	2100	4	4	6	6	8	8	10	10	12	12	14
	2400	4	4	6	8	8	10	10	12	14	14	16
	2700	4	6	6	8	10	10	12	14	14	16	18
	3000	4	6	8	8	10	12	14	14	16	18	20

N1C / 900 PA ULS



ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	6
	1200	4	4	4	4	4	4	4	6	6	6	6
	1500	4	4	4	4	4	6	6	6	6	8	8
	1800	4	4	4	4	6	6	6	8	8	8	10
	2100	4	4	4	6	6	6	8	8	10	10	10
	2400	4	4	4	6	6	8	8	10	10	12	12
	2700	4	4	6	6	8	8	10	10	12	12	14
	3000	4	4	6	6	8	10	10	12	12	14	14

ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	6	6
	1500	4	4	4	4	4	4	4	6	6	6	6
	1800	4	4	4	4	4	4	6	6	6	8	8
	2100	4	4	4	4	4	6	6	6	8	8	8
	2400	4	4	4	4	6	6	6	8	8	10	10
	2700	4	4	4	6	6	6	8	8	10	10	10
	3000	4	4	4	6	6	8	8	10	10	12	12

N2C / 1300 PA ULS



ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	12	12
	900	4	6	6	8	10	10	12	14	16	16	18
	1200	4	6	8	10	12	14	16	18	20	22	24
	1500	6	8	10	12	16	18	20	22	24	28	30
	1800	6	10	12	16	18	20	24	26	30	32	36
	2100	8	10	14	18	20	24	28	30	34	38	40
	2400	8	12	16	20	24	28	32	36	40	42	46
	2700	10	14	18	22	26	30	36	40	44	48	52
	3000	10	16	20	24	30	34	40	44	48	54	58

ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	8	8	8
	900	4	4	4	6	6	8	8	10	10	12	12
	1200	4	4	6	8	8	10	12	12	14	14	16
	1500	4	6	8	8	10	12	14	16	16	18	20
	1800	4	6	8	10	12	14	16	18	20	22	24
	2100	6	8	10	12	14	16	18	20	22	26	28
	2400	6	8	12	14	16	18	22	24	26	28	32
	2700	6	10	12	16	18	20	24	26	30	32	34
	3000	8	10	14	16	20	22	26	30	32	36	38

ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	8	8	8	10	10	12
	1500	4	4	6	6	8	8	10	10	12	14	14
	1800	4	4	6	8	8	10	12	12	14	16	16
	2100	4	6	8	8	10	12	14	14	16	18	20
	2400	4	6	8	10	12	14	16	16	18	20	22
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	24	26	28

N2C / 1300 PA ULS



ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	6
	900	4	4	4	4	4	4	6	6	6	6	8
	1200	4	4	4	4	6	6	6	8	8	8	10
	1500	4	4	4	6	6	6	8	8	10	10	12
	1800	4	4	6	6	8	8	10	10	12	12	14
	2100	4	4	6	6	8	10	10	12	12	14	16
	2400	4	6	6	8	10	10	12	14	14	16	18
	2700	4	6	8	8	10	12	14	14	16	18	20
	3000	4	6	8	10	12	12	14	16	18	20	22

ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	6	6	6
	1200	4	4	4	4	4	4	6	6	6	6	8
	1500	4	4	4	4	6	6	6	8	8	8	10
	1800	4	4	4	6	6	6	8	8	10	10	10
	2100	4	4	4	6	6	8	8	10	10	12	12
	2400	4	4	6	6	8	8	10	10	12	12	14
	2700	4	4	6	8	8	10	10	12	14	14	16
	3000	4	6	6	8	10	10	12	14	14	16	18

N3C / 2000 PA ULS



ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	12	12	14	16	18	18
	900	6	8	10	12	14	16	18	20	22	26	28
	1200	6	10	12	16	18	22	24	28	30	34	36
	1500	8	12	16	20	22	26	30	34	38	42	44
	1800	10	14	18	22	28	32	36	40	44	50	54
	2100	12	16	22	26	32	36	42	48	52	58	62
	2400	12	18	24	30	36	42	48	54	60	66	72
	2700	14	20	28	34	40	48	54	60	66	74	80
	3000	16	22	30	38	44	52	60	66	74	82	88

ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	12	12
	900	4	6	6	8	10	12	12	14	16	16	18
	1200	4	6	8	10	12	14	16	18	20	22	24
	1500	6	8	10	14	16	18	20	22	26	28	30
	1800	6	10	12	16	18	22	24	26	30	32	36
	2100	8	12	14	18	22	24	28	32	34	38	42
	2400	8	12	16	20	24	28	32	36	40	44	48
	2700	10	14	18	22	26	32	36	40	44	48	52
	3000	10	16	20	26	30	34	40	44	50	54	58

ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	6	8	8	8	10
	900	4	4	6	6	8	8	10	10	12	12	14
	1200	4	6	6	8	10	10	12	14	14	16	18
	1500	4	6	8	10	12	12	14	16	18	20	22
	1800	6	8	10	12	14	16	18	20	22	24	26
	2100	6	8	10	12	16	18	20	22	24	28	30
	2400	6	10	12	14	18	20	22	26	28	32	34
	2700	8	10	14	16	20	22	26	28	32	34	38
	3000	8	12	14	18	22	24	28	32	36	38	42

N3C / 2000 PA ULS



ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	6	8
	900	4	4	4	4	6	6	8	8	8	10	10
	1200	4	4	6	6	8	8	10	10	12	12	14
	1500	4	4	6	8	8	10	12	12	14	16	16
	1800	4	6	8	8	10	12	14	14	16	18	20
	2100	4	6	8	10	12	14	16	18	20	20	22
	2400	6	8	10	12	14	16	18	20	22	24	26
	2700	6	8	10	12	14	18	20	22	24	26	28
	3000	6	8	12	14	16	20	22	24	26	30	32

ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	6	8	8	10	10	10
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	10	12	14	14	16
	2100	4	6	6	8	10	12	12	14	16	16	18
	2400	4	6	8	10	10	12	14	16	18	20	20
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	26

N4C / 3000 PA ULS



ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	16	18	20	22	26	28
	900	8	10	14	18	20	24	28	30	34	38	40
	1200	10	14	18	22	28	32	36	40	44	50	54
	1500	12	18	22	28	34	40	44	50	56	62	66
	1800	14	20	28	34	40	48	54	60	66	74	80
	2100	16	24	32	40	48	54	62	70	78	86	94
	2400	18	28	36	44	54	62	72	80	88	98	106
	2700	20	30	40	50	60	70	80	90	100	110	120
	3000	22	34	44	56	66	78	88	100	110	122	132

ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	12	12	14	16	16	18
	900	6	8	10	12	14	16	18	20	22	24	26
	1200	6	10	12	16	18	22	24	26	30	32	36
	1500	8	12	16	20	22	26	30	34	38	40	44
	1800	10	14	18	22	26	32	36	40	44	48	52
	2100	12	16	22	26	32	36	42	46	52	56	62
	2400	12	18	24	30	36	42	48	52	58	64	70
	2700	14	20	26	34	40	46	52	60	66	72	78
	3000	16	22	30	38	44	52	58	66	74	80	88

ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	8	10	10	12	12	14
	900	4	6	8	8	10	12	14	14	16	18	20
	1200	6	8	10	12	14	16	18	20	22	24	26
	1500	6	8	12	14	16	18	22	24	26	30	32
	1800	8	10	14	16	20	22	26	28	32	34	38
	2100	8	12	16	18	22	26	30	34	36	40	44
	2400	10	14	18	22	26	30	34	38	42	46	50
	2700	10	14	20	24	28	34	38	42	48	52	56
	3000	12	16	22	26	32	36	42	48	52	58	62

N4C / 3000 PA ULS



ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	8	8	8	10	10
	900	4	4	6	6	8	10	10	12	12	14	14
	1200	4	6	8	8	10	12	14	14	16	18	20
	1500	4	6	8	10	12	14	16	18	20	22	24
	1800	6	8	10	12	14	18	20	22	24	26	28
	2100	6	10	12	14	18	20	22	26	28	30	34
	2400	8	10	14	16	20	22	26	28	32	34	38
	2700	8	12	14	18	22	26	28	32	36	40	42
	3000	8	12	16	20	24	28	32	36	40	44	48

ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	8	8	8
	900	4	4	4	6	6	8	8	10	10	12	12
	1200	4	4	6	8	8	10	10	12	14	14	16
	1500	4	6	8	8	10	12	14	14	16	18	20
	1800	4	6	8	10	12	14	16	18	20	22	24
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	14	16	18	20	24	26	28	30
	2700	6	10	12	14	18	20	24	26	28	32	34
	3000	8	10	14	16	20	22	26	28	32	34	38

N5C / 4500 PA ULS



ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	10	14	18	20	24	28	30	34	38	40
	900	10	16	20	26	30	36	40	46	50	56	60
	1200	14	20	28	34	40	48	54	60	66	74	80
	1500	18	26	34	42	50	58	66	76	84	92	100
	1800	20	30	40	50	60	70	80	90	100	110	120
	2100	24	36	48	58	70	82	94	104	116	128	140
	2400	28	40	54	66	80	94	106	120	132	146	160
	2700	30	46	60	76	90	104	120	134	150	164	178
	3000	34	50	66	84	100	116	132	150	166	182	198

ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	16	18	20	22	24	26
	900	8	10	14	18	20	24	26	30	34	36	40
	1200	10	14	18	22	26	32	36	40	44	48	52
	1500	12	18	22	28	34	38	44	50	56	60	66
	1800	14	20	26	34	40	46	52	60	66	72	78
	2100	16	24	32	38	46	54	62	70	76	84	92
	2400	18	26	36	44	52	62	70	78	88	96	104
	2700	20	30	40	50	60	70	78	88	98	108	118
	3000	22	34	44	56	66	76	88	98	110	120	130

ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	14	16	18	20
	900	6	8	10	12	14	18	20	22	24	26	28
	1200	8	10	14	16	20	22	26	28	32	34	38
	1500	8	12	16	20	24	28	32	36	40	44	48
	1800	10	14	20	24	28	34	38	42	48	52	56
	2100	12	18	22	28	34	38	44	50	54	60	66
	2400	14	20	26	32	38	44	50	56	62	68	74
	2700	14	22	28	36	42	50	56	64	70	78	84
	3000	16	24	32	40	48	54	62	70	78	86	94

N5C / 4500 PA ULS



ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	14
	900	4	6	8	10	12	14	14	16	18	20	22
	1200	6	8	10	12	14	18	20	22	24	26	28
	1500	6	10	12	16	18	22	24	28	30	32	36
	1800	8	12	14	18	22	26	28	32	36	40	42
	2100	10	14	18	22	26	30	34	38	42	46	50
	2400	10	14	20	24	28	34	38	42	48	52	56
	2700	12	16	22	28	32	38	42	48	54	58	64
	3000	12	18	24	30	36	42	48	54	58	64	70

ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	12	12
	900	4	6	6	8	10	10	12	14	14	16	18
	1200	4	6	8	10	12	14	16	18	20	22	24
	1500	6	8	10	12	14	18	20	22	24	26	28
	1800	6	10	12	14	18	20	24	26	28	32	34
	2100	8	10	14	18	20	24	26	30	34	36	40
	2400	8	12	16	20	24	26	30	34	38	42	46
	2700	10	14	18	22	26	30	34	38	42	46	50
	3000	10	14	20	24	28	34	38	42	48	52	56

N6C / 6000 PA ULS



ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	10	14	18	22	28	32	36	40	44	50	54
	900	14	20	28	34	40	48	54	60	66	74	80
	1200	18	28	36	44	54	62	72	80	88	98	106
	1500	22	34	44	56	66	78	88	100	110	122	132
	1800	28	40	54	66	80	94	106	120	132	146	160
	2100	32	48	62	78	94	108	124	140	154	170	186
	2400	36	54	72	88	106	124	142	160	176	194	212
	2700	40	60	80	100	120	140	160	178	198	218	238
	3000	44	66	88	110	132	154	176	198	220	242	264

ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	10	12	16	18	22	24	26	30	32	36
	900	10	14	18	22	26	32	36	40	44	48	52
	1200	12	18	24	30	36	42	48	52	58	64	70
	1500	16	22	30	38	44	52	58	66	74	80	88
	1800	18	26	36	44	52	62	70	78	88	96	104
	2100	22	32	42	52	62	72	82	92	102	112	122
	2400	24	36	48	58	70	82	94	104	116	128	140
	2700	26	40	52	66	78	92	104	118	130	144	156
	3000	30	44	58	74	88	102	116	130	146	160	174

ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	16	18	20	22	24	26
	900	8	10	14	16	20	22	26	28	32	34	38
	1200	10	14	18	22	26	30	34	38	42	46	50
	1500	12	16	22	26	32	36	42	48	52	58	62
	1800	14	20	26	32	38	44	50	56	62	68	74
	2100	16	22	30	36	44	52	58	66	72	80	88
	2400	18	26	34	42	50	58	66	74	84	92	100
	2700	20	28	38	48	56	66	74	84	94	102	112
	3000	22	32	42	52	62	72	84	94	104	114	124

N6C / 6000 PA ULS



ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	14	16	18	20
	900	6	8	10	12	14	18	20	22	24	26	28
	1200	8	10	14	16	20	22	26	28	32	34	38
	1500	8	12	16	20	24	28	32	36	40	44	48
	1800	10	14	20	24	28	34	38	42	48	52	56
	2100	12	18	22	28	34	38	44	50	56	60	66
	2400	14	20	26	32	38	44	50	56	62	68	76
	2700	14	22	28	36	42	50	56	64	70	78	84
	3000	16	24	32	40	48	56	62	70	78	86	94

ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	8	8	10	10	12	14	14	16
	900	4	6	8	10	12	14	16	18	20	22	24
	1200	6	8	10	14	16	18	20	24	26	28	30
	1500	8	10	14	16	20	22	26	28	32	34	38
	1800	8	12	16	20	24	26	30	34	38	42	46
	2100	10	14	18	22	26	32	36	40	44	48	52
	2400	10	16	20	26	30	36	40	46	50	56	60
	2700	12	18	24	28	34	40	46	50	56	62	68
	3000	14	20	26	32	38	44	50	56	62	68	74

C1C / 2700 PA ULS



ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	20	22	24
	900	6	10	12	16	18	22	24	28	30	34	36
	1200	8	12	16	20	24	28	32	36	40	44	48
	1500	10	16	20	26	30	36	40	46	50	56	60
	1800	12	18	24	30	36	42	48	54	60	66	72
	2100	14	22	28	36	42	50	56	64	70	78	84
	2400	16	24	32	40	48	56	64	72	80	88	96
	2700	18	28	36	46	54	64	72	82	90	98	108
	3000	20	30	40	50	60	70	80	90	100	110	120

ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	8	8	10	12	12	14	16	16
	900	4	6	8	10	12	14	16	18	20	22	24
	1200	6	8	12	14	16	20	22	24	26	30	32
	1500	8	10	14	18	20	24	26	30	34	36	40
	1800	8	12	16	20	24	28	32	36	40	44	48
	2100	10	14	20	24	28	32	38	42	46	52	56
	2400	12	16	22	26	32	38	42	48	52	58	64
	2700	12	18	24	30	36	42	48	54	60	66	72
	3000	14	20	26	34	40	46	52	60	66	72	78

ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	12	12
	900	4	6	6	8	10	10	12	14	14	16	18
	1200	4	6	8	10	12	14	16	18	20	22	24
	1500	6	8	10	12	14	18	20	22	24	26	28
	1800	6	10	12	14	18	20	24	26	28	32	34
	2100	8	10	14	18	20	24	26	30	34	36	40
	2400	8	12	16	20	24	26	30	34	38	42	46
	2700	10	14	18	22	26	30	34	38	42	46	50
	3000	10	14	20	24	28	34	38	42	48	52	56

C1C / 2700 PA ULS



ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	6	8	8	8	10
	900	4	4	6	6	8	8	10	10	12	12	14
	1200	4	6	6	8	10	10	12	14	14	16	18
	1500	4	6	8	10	12	14	14	16	18	20	22
	1800	6	8	10	12	14	16	18	20	22	24	26
	2100	6	8	10	14	16	18	20	22	26	28	30
	2400	6	10	12	14	18	20	24	26	28	32	34
	2700	8	10	14	16	20	22	26	30	32	36	38
	3000	8	12	14	18	22	26	28	32	36	40	42

ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	8	8
	900	4	4	4	6	6	6	8	8	10	10	10
	1200	4	4	6	6	8	8	10	10	12	14	14
	1500	4	6	6	8	10	10	12	14	14	16	18
	1800	4	6	8	10	10	12	14	16	18	20	20
	2100	4	6	8	10	12	14	16	18	20	22	24
	2400	6	8	10	12	14	16	18	20	24	26	28
	2700	6	8	10	14	16	18	20	24	26	28	30
	3000	6	10	12	14	18	20	24	26	28	32	34

C2C / 4000 PA ULS



ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	10	12	16	18	22	24	28	30	34	36
	900	10	14	18	22	28	32	36	40	44	50	54
	1200	12	18	24	30	36	42	48	54	60	66	72
	1500	16	22	30	38	44	52	60	66	74	82	88
	1800	18	28	36	44	54	62	72	80	88	98	106
	2100	22	32	42	52	62	72	82	94	104	114	124
	2400	24	36	48	60	72	82	94	106	118	130	142
	2700	28	40	54	66	80	94	106	120	132	146	160
	3000	30	44	60	74	88	104	118	132	148	162	176

ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	20	22	24
	900	6	10	12	16	18	22	24	26	30	32	36
	1200	8	12	16	20	24	28	32	36	40	44	48
	1500	10	16	20	26	30	34	40	44	50	54	58
	1800	12	18	24	30	36	42	48	52	58	64	70
	2100	14	22	28	34	42	48	54	62	68	76	82
	2400	16	24	32	40	48	54	62	70	78	86	94
	2700	18	26	36	44	52	62	70	78	88	96	104
	3000	20	30	40	50	58	68	78	88	98	106	116

ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	10	12	14	14	16	18
	900	6	8	10	12	14	16	18	20	22	24	26
	1200	6	10	12	14	18	20	22	26	28	32	34
	1500	8	12	14	18	22	24	28	32	36	38	42
	1800	10	14	18	22	26	30	34	38	42	46	50
	2100	10	16	20	24	30	34	40	44	48	54	58
	2400	12	18	22	28	34	40	44	50	56	62	66
	2700	14	20	26	32	38	44	50	56	62	68	74
	3000	14	22	28	36	42	48	56	62	70	76	84

C2C / 4000 PA ULS



ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	8	10	10	12	12	14
	900	4	6	8	8	10	12	14	14	16	18	20
	1200	6	8	10	12	14	16	18	20	22	24	26
	1500	6	8	12	14	16	20	22	24	26	30	32
	1800	8	10	14	16	20	22	26	28	32	34	38
	2100	8	12	16	20	22	26	30	34	38	40	44
	2400	10	14	18	22	26	30	34	38	42	46	50
	2700	10	14	20	24	28	34	38	42	48	52	56
	3000	12	16	22	26	32	38	42	48	52	58	62

ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	6	8	8	10	10	10
	900	4	4	6	8	8	10	10	12	14	14	16
	1200	4	6	8	10	10	12	14	16	18	20	20
	1500	6	8	10	12	14	16	18	20	22	24	26
	1800	6	8	10	14	16	18	20	24	26	28	30
	2100	6	10	12	16	18	22	24	26	30	32	36
	2400	8	10	14	18	20	24	28	30	34	38	40
	2700	8	12	16	20	24	26	30	34	38	42	46
	3000	10	14	18	22	26	30	34	38	42	46	50

C3C / 5900 PA ULS



ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	10	14	18	22	26	32	36	40	44	48	52
	900	14	20	26	34	40	46	52	60	66	72	78
	1200	18	26	36	44	52	62	70	78	88	96	104
	1500	22	34	44	54	66	76	88	98	108	120	130
	1800	26	40	52	66	78	92	104	118	130	144	156
	2100	32	46	62	76	92	106	122	136	152	168	182
	2400	36	52	70	88	104	122	140	156	174	190	208
	2700	40	60	78	98	118	136	156	176	196	214	234
	3000	44	66	88	108	130	152	174	196	216	238	260

ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	10	12	16	18	20	24	26	30	32	36
	900	10	14	18	22	26	30	36	40	44	48	52
	1200	12	18	24	30	36	40	46	52	58	64	70
	1500	16	22	30	36	44	50	58	64	72	80	86
	1800	18	26	36	44	52	60	70	78	86	94	104
	2100	20	30	40	50	60	70	80	90	100	110	120
	2400	24	36	46	58	70	80	92	104	114	126	138
	2700	26	40	52	64	78	90	104	116	128	142	154
	3000	30	44	58	72	86	100	114	128	142	158	172

ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	16	18	20	22	24	26
	900	8	10	14	16	20	22	26	28	32	34	38
	1200	10	14	18	22	26	30	34	38	42	46	50
	1500	12	16	22	26	32	36	42	46	52	56	62
	1800	14	20	26	32	38	44	50	56	62	68	74
	2100	16	22	30	36	44	50	58	64	72	78	86
	2400	18	26	34	42	50	58	66	74	82	90	98
	2700	20	28	38	46	56	64	74	82	92	100	110
	3000	22	32	42	52	62	72	82	92	102	112	122

C3C / 5900 PA ULS



ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	14	16	18	20
	900	6	8	10	12	14	16	20	22	24	26	28
	1200	8	10	14	16	20	22	26	28	32	34	38
	1500	8	12	16	20	24	28	32	36	38	42	46
	1800	10	14	20	24	28	32	38	42	46	52	56
	2100	12	16	22	28	32	38	44	48	54	60	64
	2400	14	20	26	32	38	44	50	56	62	68	74
	2700	14	22	28	36	42	48	56	62	70	76	82
	3000	16	24	32	38	46	54	62	70	76	84	92

ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	8	8	10	10	12	14	14	16
	900	4	6	8	10	12	14	16	18	20	20	22
	1200	6	8	10	14	16	18	20	22	26	28	30
	1500	8	10	14	16	20	22	26	28	32	34	38
	1800	8	12	16	20	22	26	30	34	38	40	44
	2100	10	14	18	22	26	30	34	40	44	48	52
	2400	10	16	20	26	30	34	40	44	50	54	60
	2700	12	18	22	28	34	40	44	50	56	60	66
	3000	14	20	26	32	38	44	50	56	62	68	74

C4C / 8000 PA ULS



ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	12	18	24	30	36	42	48	54	60	66	72
	900	18	28	36	44	54	62	72	80	88	98	106
	1200	24	36	48	60	72	82	94	106	118	130	142
	1500	30	44	60	74	88	104	118	132	148	162	176
	1800	36	54	72	88	106	124	142	160	176	194	212
	2100	42	62	82	104	124	144	164	186	206	226	246
	2400	48	72	94	118	142	164	188	212	236	258	282
	2700	54	80	106	132	160	186	212	238	264	290	318
	3000	60	88	118	148	176	206	236	264	294	322	352

ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	12	16	20	24	28	32	36	40	44	48
	900	12	18	24	30	36	42	48	52	58	64	70
	1200	16	24	32	40	48	54	62	70	78	86	94
	1500	20	30	40	50	58	68	78	88	98	106	116
	1800	24	36	48	58	70	82	94	104	116	128	140
	2100	28	42	54	68	82	96	108	122	136	150	162
	2400	32	48	62	78	94	108	124	140	154	170	186
	2700	36	52	70	88	104	122	140	156	174	192	208
	3000	40	58	78	98	116	136	154	174	194	212	232

ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	10	12	14	18	20	22	26	28	32	34
	900	10	14	18	22	26	30	34	38	42	46	50
	1200	12	18	22	28	34	40	44	50	56	62	66
	1500	14	22	28	36	42	48	56	62	70	76	84
	1800	18	26	34	42	50	58	66	74	84	92	100
	2100	20	30	40	48	58	68	78	88	96	106	116
	2400	22	34	44	56	66	78	88	100	110	122	132
	2700	26	38	50	62	74	88	100	112	124	136	148
	3000	28	42	56	70	84	96	110	124	138	152	166

C4C / 8000 PA ULS



ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	16	18	20	22	24	26
	900	8	10	14	16	20	22	26	28	32	34	38
	1200	10	14	18	22	26	30	34	38	42	46	50
	1500	12	16	22	26	32	38	42	48	52	58	62
	1800	14	20	26	32	38	44	50	56	62	68	76
	2100	16	22	30	38	44	52	58	66	74	80	88
	2400	18	26	34	42	50	58	66	76	84	92	100
	2700	20	28	38	48	56	66	76	84	94	102	112
	3000	22	32	42	52	62	74	84	94	104	114	124

ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	10	12	14	16	18	20	20
	900	6	8	10	14	16	18	20	24	26	28	30
	1200	8	10	14	18	20	24	28	30	34	38	40
	1500	10	14	18	22	26	30	34	38	42	46	50
	1800	10	16	20	26	30	36	40	46	50	56	60
	2100	12	18	24	30	36	42	46	52	58	64	70
	2400	14	20	28	34	40	46	54	60	66	74	80
	2700	16	24	30	38	46	52	60	68	74	82	90
	3000	18	26	34	42	50	58	66	74	84	92	100

FIXING SIZE GUIDE

MASONRY BUILDINGS

The following tables show the minimum number of fasteners required to hold a window into a brick or blockwork opening.

The anchor manufacturer's installation instructions should be followed at all times.

Anchoring into pre-manufactured masonry units such as concrete blocks, wire cut extruded clay brick and pressed solid bricks requires a different approach to anchoring into solid in-situ concrete or precast concrete units. The anchor must firmly clamp a fixture to the face of the substrate without splitting it or causing other damage. The capacity of the anchors is frequently limited by the strength of the substrate, and the strength of the various units available on the market varies from manufacturer to manufacturer and from region to region within any one manufacturer. Also being discrete units rather than a continuous slab means the anchor will always be in close proximity to an edge of that individual unit whilst also possibly being centrally placed within the overall structure.

Ideally all anchors into these pre-manufactured masonry units should be in the centre of the block or brick and in the case of hollow units such as wire cut

bricks and concrete blocks the anchors should be placed in the solid section of the unit, but it is not always practical to position fixtures to ensure this.

ULS wind pressures are as per AS 2047-2014 Windows and External Glazed Doors in Buildings and AS 4055-2012 Wind Loads for Housing.

Windows should be packed between the reveals and frame (except at lintels). Failure to do so will greatly reduce the strength of the fasteners used.

For wide windows that may need to be fastened at even spacing all round, the transfer of wind lateral loads into heads and sills of wall frames may need to be designed. Consult the manufacturer. Applies to both timber and light gauge steel frames.

It is assumed that the load is distributed equally to all fasteners. Manufacturers generally recommend that windows be fastened through the jambs. Wide windows may need to be fastened through the sill.

For more information, refer to the AGWA Guide for Installation.



N1 / 600 PA ULS

ULS WIND PRESSURE: 600 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	6
	1500	4	4	4	4	4	4	4	6	6	6	6
	1800	4	4	4	4	4	4	6	6	6	6	8
	2100	4	4	4	4	4	6	6	6	8	8	8
	2400	4	4	4	4	6	6	6	8	8	8	10
	2700	4	4	4	6	6	6	8	8	10	10	10
	3000	4	4	4	6	6	8	8	10	10	10	12

ULS WIND PRESSURE: 600 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	6
	2700	4	4	4	4	4	4	4	4	6	6	6
	3000	4	4	4	4	4	4	4	6	6	6	6

ULS WIND PRESSURE: 600 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	4
	2700	4	4	4	4	4	4	4	4	4	4	4
	3000	4	4	4	4	4	4	4	4	4	4	4

N1 / 600 PA ULS

ULS WIND PRESSURE: 600 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	4
	2700	4	4	4	4	4	4	4	4	4	4	4
	3000	4	4	4	4	4	4	4	4	4	4	4

ULS WIND PRESSURE: 600 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	4
	2700	4	4	4	4	4	4	4	4	4	4	4
	3000	4	4	4	4	4	4	4	4	4	4	4

ULS WIND PRESSURE: 600 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	4
	2700	4	4	4	4	4	4	4	4	4	4	4
	3000	4	4	4	4	4	4	4	4	4	4	4

N2 / N1C / 900 PA ULS

ULS WIND PRESSURE: 900 PA, **ANCHOR SIZE: 5 MM**

WINDOW HEIGHT	WINDOW WIDTH											
	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	
600	4	4	4	4	4	4	4	4	4	4	4	
900	4	4	4	4	4	4	4	4	6	6	6	
1200	4	4	4	4	4	4	6	6	6	6	8	
1500	4	4	4	4	6	6	6	8	8	8	10	
1800	4	4	4	6	6	6	8	8	10	10	10	
2100	4	4	4	6	6	8	8	10	10	12	12	
2400	4	4	6	6	8	8	10	10	12	12	14	
2700	4	4	6	8	8	10	10	12	14	14	16	
3000	4	6	6	8	10	10	12	14	14	16	18	

ULS WIND PRESSURE: 900 PA, **ANCHOR SIZE: 6 MM**

WINDOW HEIGHT	WINDOW WIDTH											
	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	
600	4	4	4	4	4	4	4	4	4	4	4	
900	4	4	4	4	4	4	4	4	4	4	4	
1200	4	4	4	4	4	4	4	4	4	4	4	
1500	4	4	4	4	4	4	4	4	4	4	6	
1800	4	4	4	4	4	4	4	4	6	6	6	
2100	4	4	4	4	4	4	4	6	6	6	6	
2400	4	4	4	4	4	4	6	6	6	6	8	
2700	4	4	4	4	4	6	6	6	8	8	8	
3000	4	4	4	4	6	6	6	8	8	8	10	

ULS WIND PRESSURE: 900 PA, **ANCHOR SIZE: 7 MM**

WINDOW HEIGHT	WINDOW WIDTH											
	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	
600	4	4	4	4	4	4	4	4	4	4	4	
900	4	4	4	4	4	4	4	4	4	4	4	
1200	4	4	4	4	4	4	4	4	4	4	4	
1500	4	4	4	4	4	4	4	4	4	4	4	
1800	4	4	4	4	4	4	4	4	4	4	4	
2100	4	4	4	4	4	4	4	4	4	4	6	
2400	4	4	4	4	4	4	4	4	4	6	6	
2700	4	4	4	4	4	4	4	4	6	6	6	
3000	4	4	4	4	4	4	4	6	6	6	6	

N2 / N1C / 900 PA ULS

ULS WIND PRESSURE: 900 PA, **ANCHOR SIZE: 8 MM**

WINDOW HEIGHT	WINDOW WIDTH											
	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	
600	4	4	4	4	4	4	4	4	4	4	4	
900	4	4	4	4	4	4	4	4	4	4	4	
1200	4	4	4	4	4	4	4	4	4	4	4	
1500	4	4	4	4	4	4	4	4	4	4	4	
1800	4	4	4	4	4	4	4	4	4	4	4	
2100	4	4	4	4	4	4	4	4	4	4	4	
2400	4	4	4	4	4	4	4	4	4	4	4	
2700	4	4	4	4	4	4	4	4	4	6	6	
3000	4	4	4	4	4	4	4	4	6	6	6	

ULS WIND PRESSURE: 900 PA, **ANCHOR SIZE: 10 MM**

WINDOW HEIGHT	WINDOW WIDTH											
	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	
600	4	4	4	4	4	4	4	4	4	4	4	
900	4	4	4	4	4	4	4	4	4	4	4	
1200	4	4	4	4	4	4	4	4	4	4	4	
1500	4	4	4	4	4	4	4	4	4	4	4	
1800	4	4	4	4	4	4	4	4	4	4	4	
2100	4	4	4	4	4	4	4	4	4	4	4	
2400	4	4	4	4	4	4	4	4	4	4	4	
2700	4	4	4	4	4	4	4	4	4	4	4	
3000	4	4	4	4	4	4	4	4	4	4	4	

ULS WIND PRESSURE: 900 PA, **ANCHOR SIZE: 12 MM**

WINDOW HEIGHT	WINDOW WIDTH											
	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	
600	4	4	4	4	4	4	4	4	4	4	4	
900	4	4	4	4	4	4	4	4	4	4	4	
1200	4	4	4	4	4	4	4	4	4	4	4	
1500	4	4	4	4	4	4	4	4	4	4	4	
1800	4	4	4	4	4	4	4	4	4	4	4	
2100	4	4	4	4	4	4	4	4	4	4	4	
2400	4	4	4	4	4	4	4	4	4	4	4	
2700	4	4	4	4	4	4	4	4	4	4	4	
3000	4	4	4	4	4	4	4	4	4	4	4	

N2C / 1300 PA ULS

ULS WIND PRESSURE: 1300 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	6	6
	900	4	4	4	4	4	6	6	6	6	8	8
	1200	4	4	4	4	6	6	8	8	8	10	10
	1500	4	4	4	6	6	8	8	10	10	12	12
	1800	4	4	6	6	8	10	10	12	12	14	16
	2100	4	6	6	8	10	10	12	14	14	16	18
	2400	4	6	8	8	10	12	14	16	16	18	20
	2700	4	6	8	10	12	14	16	16	18	20	22
	3000	4	6	8	10	12	14	16	18	20	22	24

ULS WIND PRESSURE: 1300 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	6	6
	1500	4	4	4	4	4	4	4	6	6	6	6
	1800	4	4	4	4	4	6	6	6	6	8	8
	2100	4	4	4	4	6	6	6	8	8	8	10
	2400	4	4	4	4	6	6	8	8	8	10	10
	2700	4	4	4	6	6	8	8	8	10	10	12
	3000	4	4	4	6	6	8	8	10	10	12	12

ULS WIND PRESSURE: 1300 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	6
	1800	4	4	4	4	4	4	4	4	6	6	6
	2100	4	4	4	4	4	4	4	6	6	6	6
	2400	4	4	4	4	4	4	6	6	6	8	8
	2700	4	4	4	4	4	6	6	6	8	8	8
	3000	4	4	4	4	6	6	6	8	8	8	10

N2C / 1300 PA ULS

ULS WIND PRESSURE: 1300 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	6
	2100	4	4	4	4	4	4	4	4	6	6	6
	2400	4	4	4	4	4	4	4	6	6	6	6
	2700	4	4	4	4	4	4	6	6	6	6	8
	3000	4	4	4	4	4	6	6	6	6	8	8

ULS WIND PRESSURE: 1300 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	4
	2700	4	4	4	4	4	4	4	4	4	6	6
	3000	4	4	4	4	4	4	4	4	6	6	6

ULS WIND PRESSURE: 1300 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	4
	2700	4	4	4	4	4	4	4	4	4	4	4
	3000	4	4	4	4	4	4	4	4	4	4	6

N3 / 1400 PA ULS

ULS WIND PRESSURE: 1400 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	6	8	8	10	10	12
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	12	12	14	14	16
	2100	4	6	6	8	10	12	12	14	16	18	18
	2400	4	6	8	10	12	12	14	16	18	20	22
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	26

ULS WIND PRESSURE: 1400 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	6	6	6
	1500	4	4	4	4	4	4	6	6	6	6	8
	1800	4	4	4	4	4	6	6	6	8	8	8
	2100	4	4	4	4	6	6	6	8	8	10	10
	2400	4	4	4	6	6	6	8	8	10	10	12
	2700	4	4	4	6	6	8	8	10	10	12	12
	3000	4	4	6	6	8	8	10	10	12	12	14

ULS WIND PRESSURE: 1400 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	6	6
	1800	4	4	4	4	4	4	4	6	6	6	6
	2100	4	4	4	4	4	4	6	6	6	6	8
	2400	4	4	4	4	4	6	6	6	8	8	8
	2700	4	4	4	4	6	6	6	8	8	8	10
	3000	4	4	4	4	6	6	8	8	8	10	10

N3 / 1400 PA ULS

ULS WIND PRESSURE: 1400 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	6	6
	2100	4	4	4	4	4	4	4	6	6	6	6
	2400	4	4	4	4	4	4	6	6	6	6	8
	2700	4	4	4	4	4	6	6	6	6	8	8
	3000	4	4	4	4	4	6	6	6	8	8	8

ULS WIND PRESSURE: 1400 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	6
	2700	4	4	4	4	4	4	4	4	4	6	6
	3000	4	4	4	4	4	4	4	4	6	6	6

ULS WIND PRESSURE: 1400 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	4
	2400	4	4	4	4	4	4	4	4	4	4	4
	2700	4	4	4	4	4	4	4	4	4	4	6
	3000	4	4	4	4	4	4	4	4	4	6	6

N4 / N3C / 2000 PA ULS

ULS WIND PRESSURE: 2000 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	6	8	8
	900	4	4	4	6	6	8	8	10	10	10	12
	1200	4	4	6	6	8	10	10	12	12	14	16
	1500	4	6	6	8	10	12	12	14	16	18	18
	1800	4	6	8	10	12	14	16	18	18	20	22
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	12	16	18	20	22	24	28	30
	2700	6	10	12	14	18	20	22	26	28	30	34
	3000	6	10	12	16	18	22	24	28	30	34	36

ULS WIND PRESSURE: 2000 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	6	6	6	6
	1200	4	4	4	4	4	6	6	6	6	8	8
	1500	4	4	4	4	6	6	6	8	8	10	10
	1800	4	4	4	6	6	8	8	10	10	10	12
	2100	4	4	6	6	8	8	10	10	12	12	14
	2400	4	4	6	6	8	10	10	12	12	14	16
	2700	4	6	6	8	10	10	12	14	14	16	18
	3000	4	6	6	8	10	12	12	14	16	18	18

ULS WIND PRESSURE: 2000 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	6	6	6
	1500	4	4	4	4	4	4	6	6	6	6	8
	1800	4	4	4	4	4	6	6	6	8	8	8
	2100	4	4	4	4	6	6	8	8	8	10	10
	2400	4	4	4	6	6	8	8	8	10	10	12
	2700	4	4	4	6	6	8	8	10	10	12	12
	3000	4	4	6	6	8	8	10	10	12	12	14

N4 / N3C / 2000 PA ULS

ULS WIND PRESSURE: 2000 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	6	6
	1500	4	4	4	4	4	4	4	6	6	6	6
	1800	4	4	4	4	4	4	6	6	6	8	8
	2100	4	4	4	4	4	6	6	6	8	8	8
	2400	4	4	4	4	6	6	6	8	8	10	10
	2700	4	4	4	6	6	6	8	8	10	10	10
	3000	4	4	4	6	6	8	8	10	10	12	12

ULS WIND PRESSURE: 2000 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	6	6
	2100	4	4	4	4	4	4	4	4	6	6	6
	2400	4	4	4	4	4	4	6	6	6	6	8
	2700	4	4	4	4	4	4	6	6	6	8	8
	3000	4	4	4	4	4	6	6	6	8	8	8

ULS WIND PRESSURE: 2000 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	6	6
	2400	4	4	4	4	4	4	4	4	6	6	6
	2700	4	4	4	4	4	4	4	6	6	6	6
	3000	4	4	4	4	4	4	6	6	6	6	8

N5 / N4C / 3000 PA ULS

ULS WIND PRESSURE: 3000 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	10	12
	900	4	6	6	8	10	10	12	14	14	16	18
	1200	4	6	8	10	12	14	16	18	18	20	22
	1500	6	8	10	12	14	16	18	22	24	26	28
	1800	6	10	12	14	18	20	22	26	28	30	34
	2100	8	10	14	16	20	24	26	30	32	36	38
	2400	8	12	16	18	22	26	30	34	36	40	44
	2700	10	14	18	22	26	30	34	38	42	46	50
	3000	10	14	18	24	28	32	36	42	46	50	56

ULS WIND PRESSURE: 3000 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	6	6	6	6
	900	4	4	4	4	6	6	6	8	8	8	10
	1200	4	4	4	6	6	8	8	10	10	10	12
	1500	4	4	6	6	8	8	10	12	12	14	14
	1800	4	6	6	8	10	10	12	14	14	16	18
	2100	4	6	8	8	10	12	14	16	16	18	20
	2400	4	6	8	10	12	14	16	18	18	20	22
	2700	6	8	10	12	14	16	18	20	22	24	26
	3000	6	8	10	12	14	16	18	22	24	26	28

ULS WIND PRESSURE: 3000 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	6	6	6	6
	1200	4	4	4	4	4	6	6	6	8	8	8
	1500	4	4	4	6	6	6	8	8	10	10	10
	1800	4	4	4	6	6	8	8	10	10	12	12
	2100	4	4	6	6	8	10	10	12	12	14	14
	2400	4	4	6	8	8	10	12	12	14	16	16
	2700	4	6	6	8	10	12	12	14	16	18	18
	3000	4	6	8	10	10	12	14	16	18	18	20

N5 / N4C / 3000 PA ULS

ULS WIND PRESSURE: 3000 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	6	6	6
	1200	4	4	4	4	4	4	6	6	6	8	8
	1500	4	4	4	4	6	6	6	8	8	8	10
	1800	4	4	4	6	6	6	8	8	10	10	10
	2100	4	4	4	6	6	8	8	10	10	12	12
	2400	4	4	6	6	8	8	10	10	12	14	14
	2700	4	4	6	8	8	10	10	12	14	14	16
	3000	4	6	6	8	10	10	12	14	14	16	18

ULS WIND PRESSURE: 3000 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	6	6
	1500	4	4	4	4	4	4	4	6	6	6	6
	1800	4	4	4	4	4	4	6	6	6	8	8
	2100	4	4	4	4	4	6	6	6	8	8	8
	2400	4	4	4	4	6	6	8	8	8	10	10
	2700	4	4	4	6	6	6	8	8	10	10	12
	3000	4	4	4	6	6	8	8	10	10	12	12

ULS WIND PRESSURE: 3000 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	6	6	6
	1800	4	4	4	4	4	4	4	6	6	6	6
	2100	4	4	4	4	4	6	6	6	6	8	8
	2400	4	4	4	4	4	6	6	6	8	8	8
	2700	4	4	4	4	6	6	6	8	8	10	10
	3000	4	4	4	6	6	6	8	8	10	10	10

N5C / 4500 PA ULS

ULS WIND PRESSURE: 4500 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	10	12	14	14	16	18
	900	6	8	10	12	14	16	18	20	22	24	26
	1200	6	10	12	14	18	20	22	26	28	30	34
	1500	8	12	14	18	22	24	28	32	34	38	42
	1800	10	14	18	22	26	30	34	38	42	46	50
	2100	10	16	20	24	30	34	38	44	48	52	58
	2400	12	18	22	28	34	38	44	50	54	60	66
	2700	14	20	26	32	38	44	50	56	62	68	74
	3000	14	22	28	34	42	48	54	62	68	76	82

ULS WIND PRESSURE: 4500 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	6	8	8	8	10
	900	4	4	6	6	8	8	10	10	12	12	14
	1200	4	6	6	8	10	10	12	14	14	16	18
	1500	4	6	8	10	12	12	14	16	18	20	22
	1800	6	8	10	12	14	16	18	20	22	24	26
	2100	6	8	10	12	16	18	20	22	24	26	30
	2400	6	10	12	14	18	20	22	26	28	30	34
	2700	8	10	14	16	20	22	26	28	32	34	38
	3000	8	12	14	18	22	24	28	32	34	38	42

ULS WIND PRESSURE: 4500 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	6	6	6	6
	900	4	4	4	4	6	6	6	8	8	10	10
	1200	4	4	4	6	6	8	8	10	10	12	12
	1500	4	4	6	8	8	10	10	12	14	14	16
	1800	4	6	6	8	10	12	12	14	16	18	18
	2100	4	6	8	10	12	14	14	16	18	20	22
	2400	4	6	8	10	12	14	16	18	20	22	24
	2700	6	8	10	12	14	16	18	20	24	26	28
	3000	6	8	10	14	16	18	20	24	26	28	30

N5C / 4500 PA ULS

ULS WIND PRESSURE: 4500 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	6	8	8	10	10	10
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	10	12	14	14	16
	2100	4	6	6	8	10	12	12	14	16	16	18
	2400	4	6	8	10	10	12	14	16	18	20	20
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	26

ULS WIND PRESSURE: 4500 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	6	6	6
	1200	4	4	4	4	4	4	6	6	6	8	8
	1500	4	4	4	4	6	6	6	8	8	8	10
	1800	4	4	4	6	6	6	8	8	10	10	12
	2100	4	4	4	6	6	8	8	10	10	12	12
	2400	4	4	6	6	8	8	10	12	12	14	14
	2700	4	4	6	8	8	10	12	12	14	16	16
	3000	4	6	6	8	10	10	12	14	16	16	18

ULS WIND PRESSURE: 4500 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	6	6
	1200	4	4	4	4	4	4	4	6	6	6	6
	1500	4	4	4	4	4	6	6	6	8	8	8
	1800	4	4	4	4	6	6	6	8	8	10	10
	2100	4	4	4	6	6	8	8	8	10	10	12
	2400	4	4	4	6	6	8	8	10	10	12	12
	2700	4	4	6	6	8	8	10	10	12	14	14
	3000	4	4	6	8	8	10	10	12	14	14	16

N6 / 4000 PA ULS

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	16
	900	4	6	8	10	12	14	16	18	18	20	22
	1200	6	8	10	12	16	18	20	22	24	28	30
	1500	6	10	12	16	18	22	24	28	30	34	36
	1800	8	12	16	18	22	26	30	34	36	40	44
	2100	10	14	18	22	26	30	34	38	42	48	52
	2400	10	16	20	24	30	34	40	44	48	54	58
	2700	12	18	22	28	34	38	44	50	54	60	66
	3000	12	18	24	30	36	42	48	54	60	66	72

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	6	8	8
	900	4	4	4	6	6	8	8	10	10	10	12
	1200	4	4	6	6	8	10	10	12	12	14	16
	1500	4	6	6	8	10	12	12	14	16	18	18
	1800	4	6	8	10	12	14	16	18	18	20	22
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	12	16	18	20	22	24	28	30
	2700	6	10	12	14	18	20	22	26	28	30	34
	3000	6	10	12	16	18	22	24	28	30	34	36

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	8	8	8	10	10	12
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	12	12	14	16	16
	2100	4	6	8	8	10	12	14	14	16	18	20
	2400	4	6	8	10	12	14	14	16	18	20	22
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	28

N6 / 4000 PA ULS

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	6	6
	900	4	4	4	4	4	4	6	6	6	8	8
	1200	4	4	4	4	6	6	6	8	8	10	10
	1500	4	4	4	6	6	8	8	10	10	12	12
	1800	4	4	6	6	8	8	10	10	12	14	14
	2100	4	4	6	8	8	10	12	12	14	16	16
	2400	4	6	6	8	10	12	12	14	16	18	18
	2700	4	6	8	10	10	12	14	16	18	20	20
	3000	4	6	8	10	12	14	16	18	20	22	24

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	6	6
	1200	4	4	4	4	4	4	6	6	6	6	8
	1500	4	4	4	4	4	6	6	6	8	8	8
	1800	4	4	4	4	6	6	8	8	8	10	10
	2100	4	4	4	6	6	8	8	8	10	10	12
	2400	4	4	6	6	8	8	10	10	12	12	14
	2700	4	4	6	6	8	8	10	12	12	14	14
	3000	4	4	6	8	8	10	12	12	14	14	16

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	6	6	6
	1500	4	4	4	4	4	4	6	6	6	6	8
	1800	4	4	4	4	4	6	6	6	8	8	8
	2100	4	4	4	4	6	6	8	8	8	10	10
	2400	4	4	4	6	6	8	8	8	10	10	12
	2700	4	4	4	6	6	8	8	10	10	12	12
	3000	4	4	6	6	8	8	10	10	12	12	14

N6C / 6000 PA ULS

ULS WIND PRESSURE: 6000 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	18	20	22
	900	6	10	12	14	18	20	22	26	28	30	34
	1200	8	12	16	18	22	26	30	34	36	40	44
	1500	10	14	18	24	28	32	36	42	46	50	56
	1800	12	18	22	28	34	38	44	50	56	60	66
	2100	14	20	26	32	38	46	52	58	64	70	76
	2400	16	22	30	36	44	52	58	66	72	80	88
	2700	18	26	34	42	50	58	66	74	82	90	98
	3000	18	28	36	46	56	64	72	82	90	100	110

ULS WIND PRESSURE: 6000 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	10	12
	900	4	6	6	8	10	10	12	14	14	16	18
	1200	4	6	8	10	12	14	16	18	18	20	22
	1500	6	8	10	12	14	16	18	22	24	26	28
	1800	6	10	12	14	18	20	22	26	28	30	34
	2100	8	10	14	16	20	24	26	30	32	36	38
	2400	8	12	16	18	22	26	30	34	36	40	44
	2700	10	14	18	22	26	30	34	38	42	46	50
	3000	10	14	18	24	28	32	36	42	46	50	56

ULS WIND PRESSURE: 6000 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	8	8	8
	900	4	4	4	6	6	8	8	10	10	12	12
	1200	4	4	6	8	8	10	12	12	14	16	16
	1500	4	6	8	10	10	12	14	16	18	18	20
	1800	4	6	8	10	12	14	16	18	20	22	24
	2100	6	8	10	12	14	18	20	22	24	26	28
	2400	6	8	12	14	16	20	22	24	28	30	32
	2700	6	10	12	16	18	22	24	28	30	34	36
	3000	8	10	14	18	20	24	28	30	34	36	40

N6C / 6000 PA ULS

ULS WIND PRESSURE: 6000 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	8	8
	900	4	4	4	6	6	6	8	8	10	10	10
	1200	4	4	6	6	8	8	10	10	12	14	14
	1500	4	6	6	8	10	10	12	14	14	16	18
	1800	4	6	8	10	10	12	14	16	18	20	20
	2100	4	6	8	10	12	14	16	18	20	22	24
	2400	6	8	10	12	14	16	18	20	24	26	28
	2700	6	8	10	14	16	18	20	24	26	28	30
	3000	6	10	12	14	18	20	24	26	28	32	34

ULS WIND PRESSURE: 6000 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	6	6
	900	4	4	4	4	4	4	6	6	6	8	8
	1200	4	4	4	4	6	6	8	8	8	10	10
	1500	4	4	4	6	6	8	8	10	10	12	12
	1800	4	4	6	6	8	8	10	12	12	14	14
	2100	4	4	6	8	8	10	12	12	14	16	16
	2400	4	6	8	8	10	12	14	14	16	18	20
	2700	4	6	8	10	12	12	14	16	18	20	22
	3000	4	6	8	10	12	14	16	18	20	22	24

ULS WIND PRESSURE: 6000 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	6	6	6	6
	1200	4	4	4	4	4	6	6	6	8	8	8
	1500	4	4	4	6	6	6	8	8	10	10	10
	1800	4	4	4	6	6	8	8	10	10	12	12
	2100	4	4	6	6	8	10	10	12	12	14	14
	2400	4	4	6	8	8	10	12	12	14	16	16
	2700	4	6	6	8	10	12	12	14	16	18	18
	3000	4	6	8	10	10	12	14	16	18	18	20

C1 / 1800 PA ULS

ULS WIND PRESSURE: 1800 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	6	8
	900	4	4	4	6	6	6	8	8	10	10	10
	1200	4	4	6	6	8	8	10	10	12	12	14
	1500	4	6	6	8	10	10	12	14	14	16	18
	1800	4	6	8	10	10	12	14	16	18	18	20
	2100	4	6	8	10	12	14	16	18	20	22	24
	2400	6	8	10	12	14	16	18	20	22	24	26
	2700	6	8	10	14	16	18	20	22	26	28	30
	3000	6	10	12	14	18	20	22	26	28	30	34

ULS WIND PRESSURE: 1800 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	6	6	6
	1200	4	4	4	4	4	4	6	6	6	6	8
	1500	4	4	4	4	6	6	6	8	8	8	10
	1800	4	4	4	6	6	6	8	8	10	10	10
	2100	4	4	4	6	6	8	8	10	10	12	12
	2400	4	4	6	6	8	8	10	10	12	12	14
	2700	4	4	6	8	8	10	10	12	14	14	16
	3000	4	6	6	8	10	10	12	14	14	16	18

ULS WIND PRESSURE: 1800 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	6	6
	1500	4	4	4	4	4	4	4	6	6	6	6
	1800	4	4	4	4	4	6	6	6	6	8	8
	2100	4	4	4	4	6	6	6	8	8	8	10
	2400	4	4	4	4	6	6	8	8	8	10	10
	2700	4	4	4	6	6	8	8	8	10	10	12
	3000	4	4	4	6	6	8	8	10	10	12	12

C1 / 1800 PA ULS

ULS WIND PRESSURE: 1800 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	6	6	6
	1800	4	4	4	4	4	4	4	6	6	6	6
	2100	4	4	4	4	4	6	6	6	6	8	8
	2400	4	4	4	4	4	6	6	6	8	8	8
	2700	4	4	4	4	6	6	6	8	8	10	10
	3000	4	4	4	6	6	6	8	8	10	10	10

ULS WIND PRESSURE: 1800 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	6
	2100	4	4	4	4	4	4	4	4	4	6	6
	2400	4	4	4	4	4	4	4	6	6	6	6
	2700	4	4	4	4	4	4	6	6	6	6	8
	3000	4	4	4	4	4	4	6	6	6	8	8

ULS WIND PRESSURE: 1800 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	4	4
	1800	4	4	4	4	4	4	4	4	4	4	4
	2100	4	4	4	4	4	4	4	4	4	4	6
	2400	4	4	4	4	4	4	4	4	4	6	6
	2700	4	4	4	4	4	4	4	4	6	6	6
	3000	4	4	4	4	4	4	4	6	6	6	6

C2 / C1C / 2700 PA ULS

ULS WIND PRESSURE: 2700 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	6	8	8	10	10	10
	900	4	4	6	8	8	10	10	12	14	14	16
	1200	4	6	8	10	10	12	14	16	18	18	20
	1500	6	8	10	12	14	16	18	20	22	24	26
	1800	6	8	10	14	16	18	20	22	26	28	30
	2100	6	10	12	16	18	20	24	26	30	32	36
	2400	8	10	14	18	20	24	26	30	34	36	40
	2700	8	12	16	20	22	26	30	34	38	42	44
	3000	10	14	18	22	26	30	34	38	42	46	50

ULS WIND PRESSURE: 2700 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	6	8	8	10	10	10
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	10	12	14	14	16
	2100	4	6	6	8	10	10	12	14	16	16	18
	2400	4	6	8	10	10	12	14	16	18	18	20
	2700	4	6	8	10	12	14	16	18	20	22	22
	3000	6	8	10	12	14	16	18	20	22	24	26

ULS WIND PRESSURE: 2700 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	6	6	6
	1200	4	4	4	4	4	6	6	6	6	8	8
	1500	4	4	4	4	6	6	6	8	8	10	10
	1800	4	4	4	6	6	8	8	8	10	10	12
	2100	4	4	6	6	8	8	10	10	12	12	14
	2400	4	4	6	6	8	10	10	12	12	14	16
	2700	4	4	6	8	8	10	12	12	14	16	16
	3000	4	6	6	8	10	12	12	14	16	18	18

C2 / C1C / 2700 PA ULS

ULS WIND PRESSURE: 2700 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	6	6
	1200	4	4	4	4	4	4	4	6	6	6	6
	1500	4	4	4	4	4	6	6	6	8	8	8
	1800	4	4	4	4	6	6	6	8	8	10	10
	2100	4	4	4	6	6	8	8	8	10	10	12
	2400	4	4	4	6	6	8	8	10	10	12	12
	2700	4	4	6	6	8	8	10	12	12	14	14
	3000	4	4	6	8	8	10	10	12	14	14	16

ULS WIND PRESSURE: 2700 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	6
	1500	4	4	4	4	4	4	4	4	6	6	6
	1800	4	4	4	4	4	4	6	6	6	6	8
	2100	4	4	4	4	4	6	6	6	6	8	8
	2400	4	4	4	4	6	6	6	8	8	8	10
	2700	4	4	4	4	6	6	8	8	8	10	10
	3000	4	4	4	6	6	6	8	8	10	10	12

ULS WIND PRESSURE: 2700 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	4	4	4
	1500	4	4	4	4	4	4	4	4	4	6	6
	1800	4	4	4	4	4	4	4	4	6	6	6
	2100	4	4	4	4	4	4	6	6	6	6	8
	2400	4	4	4	4	4	6	6	6	6	8	8
	2700	4	4	4	4	4	6	6	6	8	8	8
	3000	4	4	4	4	6	6	6	8	8	10	10

C3 / C2C / 4000 PA ULS

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	16
	900	4	6	8	10	12	14	16	18	18	20	22
	1200	6	8	10	12	16	18	20	22	24	28	30
	1500	6	10	12	16	18	22	24	28	30	34	36
	1800	8	12	16	18	22	26	30	34	36	40	44
	2100	10	14	18	22	26	30	34	38	42	48	52
	2400	10	16	20	24	30	34	40	44	48	54	58
	2700	12	18	22	28	34	38	44	50	54	60	66
	3000	12	18	24	30	36	42	48	54	60	66	72

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	6	8	8
	900	4	4	4	6	6	8	8	10	10	10	12
	1200	4	4	6	6	8	10	10	12	12	14	16
	1500	4	6	6	8	10	12	12	14	16	18	18
	1800	4	6	8	10	12	14	16	18	18	20	22
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	12	16	18	20	22	24	28	30
	2700	6	10	12	14	18	20	22	26	28	30	34
	3000	6	10	12	16	18	22	24	28	30	34	36

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	8	8	8	10	10	12
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	12	12	14	16	16
	2100	4	6	8	8	10	12	14	14	16	18	20
	2400	4	6	8	10	12	14	14	16	18	20	22
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	28

C3 / C2C / 4000 PA ULS

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	6	6
	900	4	4	4	4	4	4	6	6	6	8	8
	1200	4	4	4	4	6	6	6	8	8	10	10
	1500	4	4	4	6	6	8	8	10	10	12	12
	1800	4	4	6	6	8	8	10	10	12	14	14
	2100	4	4	6	8	8	10	12	12	14	16	16
	2400	4	6	6	8	10	12	12	14	16	18	18
	2700	4	6	8	10	10	12	14	16	18	20	20
	3000	4	6	8	10	12	14	16	18	20	22	24

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	6	6
	1200	4	4	4	4	4	4	6	6	6	6	8
	1500	4	4	4	4	4	6	6	6	8	8	8
	1800	4	4	4	4	6	6	8	8	8	10	10
	2100	4	4	4	6	6	8	8	8	10	10	12
	2400	4	4	6	6	8	8	10	10	12	12	14
	2700	4	4	6	6	8	8	10	12	12	14	14
	3000	4	4	6	8	8	10	12	12	14	14	16

ULS WIND PRESSURE: 4000 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	6	6	6
	1500	4	4	4	4	4	4	6	6	6	6	8
	1800	4	4	4	4	4	6	6	6	8	8	8
	2100	4	4	4	4	6	6	8	8	8	10	10
	2400	4	4	4	6	6	8	8	8	10	10	12
	2700	4	4	4	6	6	8	8	10	10	12	12
	3000	4	4	6	6	8	8	10	10	12	12	14

C3C / 5900 PA ULS

ULS WIND PRESSURE: 5900 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	16	18	20	22
	900	6	8	12	14	16	20	22	24	28	30	32
	1200	8	12	16	18	22	26	30	32	36	40	44
	1500	10	14	18	24	28	32	36	40	46	50	54
	1800	12	16	22	28	32	38	44	48	54	60	64
	2100	14	20	26	32	38	44	50	56	62	70	76
	2400	16	22	30	36	44	50	58	64	72	78	86
	2700	16	24	32	40	48	56	64	72	80	88	96
	3000	18	28	36	46	54	62	72	80	90	98	108

ULS WIND PRESSURE: 5900 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	8	10	10	12
	900	4	4	6	8	8	10	12	12	14	16	16
	1200	4	6	8	10	12	14	16	16	18	20	22
	1500	6	8	10	12	14	16	18	20	24	26	28
	1800	6	8	12	14	16	20	22	24	28	30	32
	2100	8	10	14	16	20	22	26	28	32	36	38
	2400	8	12	16	18	22	26	30	32	36	40	44
	2700	8	12	16	20	24	28	32	36	40	44	48
	3000	10	14	18	24	28	32	36	40	46	50	54

ULS WIND PRESSURE: 5900 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	8	8	8
	900	4	4	4	6	6	8	8	10	10	12	12
	1200	4	4	6	8	8	10	12	12	14	16	16
	1500	4	6	8	10	10	12	14	16	18	18	20
	1800	4	6	8	10	12	14	16	18	20	22	24
	2100	6	8	10	12	14	16	20	22	24	26	28
	2400	6	8	12	14	16	20	22	24	26	30	32
	2700	6	10	12	16	18	22	24	28	30	32	36
	3000	8	10	14	18	20	24	26	30	34	36	40

C3C / 5900 PA ULS

ULS WIND PRESSURE: 5900 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	6	8
	900	4	4	4	6	6	6	8	8	10	10	10
	1200	4	4	6	6	8	8	10	10	12	12	14
	1500	4	6	6	8	10	10	12	14	14	16	18
	1800	4	6	8	10	10	12	14	16	18	18	20
	2100	4	6	8	10	12	14	16	18	20	22	24
	2400	6	8	10	12	14	16	18	20	22	24	28
	2700	6	8	10	14	16	18	20	24	26	28	30
	3000	6	10	12	14	18	20	22	26	28	30	34

ULS WIND PRESSURE: 5900 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	6	6
	900	4	4	4	4	4	4	6	6	6	8	8
	1200	4	4	4	4	6	6	6	8	8	10	10
	1500	4	4	4	6	6	8	8	10	10	12	12
	1800	4	4	6	6	8	8	10	12	12	14	14
	2100	4	4	6	8	8	10	12	12	14	16	16
	2400	4	6	6	8	10	12	12	14	16	18	18
	2700	4	6	8	10	12	12	14	16	18	20	22
	3000	4	6	8	10	12	14	16	18	20	22	24

ULS WIND PRESSURE: 5900 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	6	6	6	6
	1200	4	4	4	4	4	6	6	6	8	8	8
	1500	4	4	4	6	6	6	8	8	10	10	10
	1800	4	4	4	6	6	8	8	10	10	12	12
	2100	4	4	6	6	8	8	10	12	12	14	14
	2400	4	4	6	8	8	10	12	12	14	16	16
	2700	4	6	6	8	10	12	12	14	16	16	18
	3000	4	6	8	10	10	12	14	16	18	18	20

C4 / 5300 PA ULS

ULS WIND PRESSURE: 5300 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	16	16	18	20
	900	6	8	10	12	16	18	20	22	24	28	30
	1200	8	10	14	16	20	24	26	30	32	36	40
	1500	8	12	16	20	24	28	32	36	40	44	48
	1800	10	16	20	24	30	34	40	44	48	54	58
	2100	12	18	24	28	34	40	46	52	56	62	68
	2400	14	20	26	32	40	46	52	58	64	70	78
	2700	16	22	30	36	44	52	58	66	72	80	86
	3000	16	24	32	40	48	56	64	72	80	88	96

ULS WIND PRESSURE: 5300 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	8	8	8	10	10
	900	4	4	6	6	8	10	10	12	12	14	16
	1200	4	6	8	8	10	12	14	16	16	18	20
	1500	4	6	8	10	12	14	16	18	20	22	24
	1800	6	8	10	12	16	18	20	22	24	28	30
	2100	6	10	12	14	18	20	24	26	28	32	34
	2400	8	10	14	16	20	24	26	30	32	36	40
	2700	8	12	16	18	22	26	30	34	36	40	44
	3000	8	12	16	20	24	28	32	36	40	44	48

ULS WIND PRESSURE: 5300 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	6	8	8
	900	4	4	4	6	6	8	8	8	10	10	12
	1200	4	4	6	6	8	10	10	12	12	14	14
	1500	4	6	6	8	10	12	12	14	16	16	18
	1800	4	6	8	10	12	14	14	16	18	20	22
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	12	14	18	20	22	24	26	28
	2700	6	8	12	14	16	20	22	24	28	30	32
	3000	6	10	12	16	18	22	24	28	30	32	36

C4 / 5300 PA ULS

ULS WIND PRESSURE: 5300 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	6	6	6	6
	900	4	4	4	4	6	6	6	8	8	10	10
	1200	4	4	4	6	6	8	8	10	10	12	12
	1500	4	4	6	8	8	10	10	12	14	14	16
	1800	4	6	6	8	10	12	12	14	16	18	18
	2100	4	6	8	10	12	12	14	16	18	20	22
	2400	4	6	8	10	12	14	16	18	20	22	24
	2700	6	8	10	12	14	16	18	20	24	26	28
	3000	6	8	10	14	16	18	20	24	26	28	30

ULS WIND PRESSURE: 5300 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	6
	900	4	4	4	4	4	4	6	6	6	6	8
	1200	4	4	4	4	6	6	6	8	8	8	10
	1500	4	4	4	6	6	6	8	8	10	10	12
	1800	4	4	6	6	8	8	10	10	12	12	14
	2100	4	4	6	6	8	10	10	12	12	14	16
	2400	4	6	6	8	10	10	12	14	14	16	18
	2700	4	6	8	8	10	12	14	14	16	18	20
	3000	4	6	8	10	12	12	14	16	18	20	22

ULS WIND PRESSURE: 5300 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	6	6	6
	1200	4	4	4	4	4	6	6	6	6	8	8
	1500	4	4	4	4	6	6	6	8	8	8	10
	1800	4	4	4	6	6	8	8	8	10	10	12
	2100	4	4	6	6	8	8	10	10	12	12	14
	2400	4	4	6	6	8	10	10	12	12	14	14
	2700	4	4	6	8	8	10	12	12	14	16	16
	3000	4	6	6	8	10	12	12	14	16	16	18

C4C / 8000 PA ULS

ULS WIND PRESSURE: 8000 PA, **ANCHOR SIZE: 5 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	16	18	20	22	24	28	30
	900	8	12	16	18	22	26	30	34	36	40	44
	1200	10	16	20	24	30	34	40	44	48	54	58
	1500	12	18	24	30	36	42	48	54	60	66	72
	1800	16	22	30	36	44	52	58	66	72	80	88
	2100	18	26	34	42	52	60	68	76	84	94	102
	2400	20	30	40	48	58	68	78	88	96	106	116
	2700	22	34	44	54	66	76	88	98	108	120	130
	3000	24	36	48	60	72	84	96	108	120	132	144

ULS WIND PRESSURE: 8000 PA, **ANCHOR SIZE: 6 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	16
	900	4	6	8	10	12	14	16	18	18	20	22
	1200	6	8	10	12	16	18	20	22	24	28	30
	1500	6	10	12	16	18	22	24	28	30	34	36
	1800	8	12	16	18	22	26	30	34	36	40	44
	2100	10	14	18	22	26	30	34	38	42	48	52
	2400	10	16	20	24	30	34	40	44	48	54	58
	2700	12	18	22	28	34	38	44	50	54	60	66
	3000	12	18	24	30	36	42	48	54	60	66	72

ULS WIND PRESSURE: 8000 PA, **ANCHOR SIZE: 7 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	8	10	10	12
	900	4	4	6	8	8	10	12	12	14	16	16
	1200	4	6	8	10	12	14	14	16	18	20	22
	1500	6	8	10	12	14	16	18	20	22	24	28
	1800	6	8	12	14	16	20	22	24	28	30	32
	2100	8	10	14	16	20	22	26	28	32	34	38
	2400	8	12	14	18	22	26	28	32	36	40	42
	2700	8	12	16	20	24	28	32	36	40	44	48
	3000	10	14	18	22	28	32	36	40	44	48	54

C4C / 8000 PA ULS

ULS WIND PRESSURE: 8000 PA, **ANCHOR SIZE: 8 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	6	8	8	10	10
	900	4	4	6	6	8	8	10	10	12	14	14
	1200	4	6	6	8	10	12	12	14	16	18	18
	1500	4	6	8	10	12	14	16	18	20	22	24
	1800	6	8	10	12	14	16	18	20	24	26	28
	2100	6	8	12	14	16	20	22	24	26	30	32
	2400	6	10	12	16	18	22	24	28	30	34	36
	2700	8	10	14	18	20	24	28	30	34	38	40
	3000	8	12	16	20	24	26	30	34	38	42	46

ULS WIND PRESSURE: 8000 PA, **ANCHOR SIZE: 10 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	6	8
	900	4	4	4	4	6	6	8	8	8	10	10
	1200	4	4	6	6	8	8	10	10	12	12	14
	1500	4	4	6	8	8	10	12	12	14	14	16
	1800	4	6	8	8	10	12	14	14	16	18	20
	2100	4	6	8	10	12	14	16	16	18	20	22
	2400	6	8	10	12	14	16	18	20	22	24	26
	2700	6	8	10	12	14	16	20	22	24	26	28
	3000	6	8	12	14	16	18	22	24	26	28	32

ULS WIND PRESSURE: 8000 PA, **ANCHOR SIZE: 12 MM**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	8	8	8	10	10	12
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	12	12	14	16	16
	2100	4	6	8	8	10	12	14	14	16	18	20
	2400	4	6	8	10	12	14	14	16	18	20	22
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	28

FIXING SIZE GUIDE

LIGHTWEIGHT STEEL FRAMED BUILDINGS

The following tables show the minimum number of fasteners required to hold a window into a lightweight steel frame.

These tables have been derived using load determined from AS/NZS 4600-2018 for cold-form steel structures, Section 5.4 (Screwed connections). Please note steel studs considered for the purpose of this guide is **G550 grade** steel with a minimum Base Metal Thickness (BMT) of 0.55 mm.

ULS wind pressures are as per AS 2047-2014 Windows and External Glazed Doors in Buildings and AS 4055-2012 Wind Loads for Housing.

Windows should be packed between the reveals and frame (except at lintels). Failure to do so will greatly reduce the strength of the fasteners used.

For all connections, screws should extend through the steel a minimum of three exposed threads. Screws should penetrate individual components of a connection without causing permanent separation between the components.

It is assumed that the load is distributed equally to all fasteners. Manufacturers generally recommend that windows be fastened through the jambs. Wide windows may need to be fastened through the sill.

For wide windows that may need to be fastened at even spacing all round, the transfer of window lateral loads into heads and sills of wall frames may need to be designed. Consult the manufacturer. Applies to both timber and light gauge steel frames.

For more information, refer to the AGWA Guide for Installation.





ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	6
	900	4	4	4	4	4	4	6	6	6	6	8
	1200	4	4	4	4	6	6	6	8	8	8	10
	1500	4	4	4	6	6	8	8	10	10	10	12
	1800	4	4	6	6	8	8	10	10	12	12	14
	2100	4	4	6	8	8	10	10	12	14	14	16
	2400	4	6	6	8	10	10	12	14	16	16	18
	2700	4	6	8	10	10	12	14	16	18	18	20
	3000	4	6	8	10	12	14	16	18	18	20	22

ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	6	6	6
	1200	4	4	4	4	4	6	6	6	6	8	8
	1500	4	4	4	4	6	6	6	8	8	10	10
	1800	4	4	4	6	6	8	8	8	10	10	12
	2100	4	4	6	6	8	8	10	10	12	12	14
	2400	4	4	6	6	8	10	10	12	12	14	16
	2700	4	4	6	8	8	10	12	12	14	16	16
	3000	4	6	6	8	10	12	12	14	16	18	18

ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	6	6
	1200	4	4	4	4	4	4	6	6	6	6	8
	1500	4	4	4	4	4	6	6	6	8	8	8
	1800	4	4	4	4	6	6	8	8	8	10	10
	2100	4	4	4	6	6	8	8	10	10	10	12
	2400	4	4	6	6	8	8	10	10	12	12	14
	2700	4	4	6	6	8	10	10	12	12	14	14
	3000	4	4	6	8	8	10	12	12	14	16	16



ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	6
	1200	4	4	4	4	4	4	4	6	6	6	6
	1500	4	4	4	4	4	6	6	6	6	8	8
	1800	4	4	4	4	6	6	6	8	8	8	10
	2100	4	4	4	6	6	6	8	8	10	10	10
	2400	4	4	4	6	6	8	8	10	10	12	12
	2700	4	4	6	6	8	8	10	10	12	12	14
	3000	4	4	6	6	8	10	10	12	12	14	16

ULS WIND PRESSURE: 900 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	4	4	4	4
	1200	4	4	4	4	4	4	4	4	6	6	6
	1500	4	4	4	4	4	4	6	6	6	6	8
	1800	4	4	4	4	4	6	6	6	8	8	8
	2100	4	4	4	4	6	6	6	8	8	10	10
	2400	4	4	4	6	6	6	8	8	10	10	12
	2700	4	4	4	6	6	8	8	10	10	12	12
	3000	4	4	6	6	8	8	10	10	12	12	14

N2C / 1300 PA ULS



ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	6	8
	900	4	4	4	4	6	6	8	8	8	10	10
	1200	4	4	6	6	8	8	10	10	12	12	14
	1500	4	4	6	8	8	10	12	12	14	16	16
	1800	4	6	8	8	10	12	14	14	16	18	20
	2100	4	6	8	10	12	14	16	18	18	20	22
	2400	6	8	10	12	14	16	18	20	22	24	26
	2700	6	8	10	12	14	18	20	22	24	26	28
	3000	6	8	12	14	16	18	22	24	26	30	32

ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	6	6	6
	900	4	4	4	4	4	6	6	6	8	8	8
	1200	4	4	4	6	6	6	8	8	10	10	12
	1500	4	4	6	6	8	8	10	10	12	12	14
	1800	4	4	6	8	8	10	12	12	14	16	16
	2100	4	6	6	8	10	12	12	14	16	18	18
	2400	4	6	8	10	12	12	14	16	18	20	22
	2700	4	6	8	10	12	14	16	18	20	22	24
	3000	6	8	10	12	14	16	18	20	22	24	26

ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	6	6
	900	4	4	4	4	4	4	6	6	6	8	8
	1200	4	4	4	4	6	6	6	8	8	10	10
	1500	4	4	4	6	6	8	8	10	10	12	12
	1800	4	4	6	6	8	8	10	12	12	14	14
	2100	4	4	6	8	8	10	12	12	14	16	16
	2400	4	6	6	8	10	12	12	14	16	18	18
	2700	4	6	8	10	12	12	14	16	18	20	22
	3000	4	6	8	10	12	14	16	18	20	22	24

N2C / 1300 PA ULS



ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	6
	900	4	4	4	4	4	4	6	6	6	6	8
	1200	4	4	4	4	6	6	6	8	8	8	10
	1500	4	4	4	6	6	6	8	8	10	10	12
	1800	4	4	6	6	8	8	10	10	12	12	14
	2100	4	4	6	6	8	10	10	12	12	14	16
	2400	4	6	6	8	10	10	12	14	14	16	18
	2700	4	6	8	8	10	12	14	14	16	18	20
	3000	4	6	8	10	12	12	14	16	18	20	22

ULS WIND PRESSURE: 1300 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	4	4	4	4
	900	4	4	4	4	4	4	4	6	6	6	6
	1200	4	4	4	4	4	6	6	6	8	8	8
	1500	4	4	4	4	6	6	8	8	8	10	10
	1800	4	4	4	6	6	8	8	10	10	12	12
	2100	4	4	6	6	8	8	10	10	12	12	14
	2400	4	4	6	8	8	10	10	12	14	14	16
	2700	4	6	6	8	10	10	12	14	14	16	18
	3000	4	6	8	8	10	12	14	14	16	18	20

N3C / 2000 PA ULS



ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	8	8	8	10	10
	900	4	4	6	6	8	10	10	12	12	14	16
	1200	4	6	8	8	10	12	14	16	16	18	20
	1500	4	6	8	10	12	14	16	18	20	22	24
	1800	6	8	10	12	16	18	20	22	24	28	30
	2100	6	10	12	14	18	20	24	26	28	32	34
	2400	8	10	14	16	20	24	26	30	32	36	38
	2700	8	12	16	18	22	26	30	34	36	40	44
	3000	8	12	16	20	24	28	32	36	40	44	48

ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	8	8	8
	900	4	4	4	6	6	8	8	10	10	12	12
	1200	4	4	6	8	8	10	12	12	14	16	16
	1500	4	6	8	10	10	12	14	16	18	20	20
	1800	4	6	8	10	12	14	16	18	20	22	24
	2100	6	8	10	12	14	18	20	22	24	26	28
	2400	6	8	12	14	16	20	22	24	28	30	32
	2700	6	10	12	16	18	22	24	28	30	34	36
	3000	8	10	14	18	20	24	28	30	34	38	40

ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	6	8	8
	900	4	4	4	6	6	8	8	8	10	10	12
	1200	4	4	6	6	8	10	10	12	12	14	14
	1500	4	6	6	8	10	12	12	14	16	16	18
	1800	4	6	8	10	12	14	14	16	18	20	22
	2100	6	8	10	12	14	16	18	20	22	24	26
	2400	6	8	10	12	14	18	20	22	24	26	28
	2700	6	8	12	14	16	20	22	24	26	30	32
	3000	6	10	12	16	18	22	24	26	30	32	36

N3C / 2000 PA ULS



ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	6	6	6	6	8
	900	4	4	4	4	6	6	8	8	8	10	10
	1200	4	4	6	6	8	8	10	10	12	12	14
	1500	4	4	6	8	8	10	12	12	14	16	16
	1800	4	6	8	8	10	12	14	14	16	18	20
	2100	4	6	8	10	12	14	16	18	20	20	22
	2400	6	8	10	12	14	16	18	20	22	24	26
	2700	6	8	10	12	14	18	20	22	24	26	28
	3000	6	8	12	14	16	20	22	24	26	30	32

ULS WIND PRESSURE: 2000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	4	4	6	6	6	6
	900	4	4	4	4	6	6	6	8	8	8	10
	1200	4	4	4	6	6	8	8	10	10	12	12
	1500	4	4	6	6	8	10	10	12	12	14	16
	1800	4	6	6	8	10	10	12	14	16	16	18
	2100	4	6	8	10	10	12	14	16	18	20	20
	2400	4	6	8	10	12	14	16	18	20	22	24
	2700	6	8	10	12	14	16	18	20	22	24	26
	3000	6	8	10	12	16	18	20	22	24	28	30

N4C / 3000 PA ULS



ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	16
	900	4	6	8	10	12	14	16	18	18	20	22
	1200	6	8	10	12	16	18	20	22	24	28	30
	1500	6	10	12	16	18	22	24	28	30	34	36
	1800	8	12	16	18	22	26	30	34	36	40	44
	2100	10	14	18	22	26	30	34	38	42	46	50
	2400	10	16	20	24	30	34	38	44	48	54	58
	2700	12	18	22	28	34	38	44	50	54	60	66
	3000	12	18	24	30	36	42	48	54	60	66	72

ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	12	12
	900	4	6	6	8	10	12	12	14	16	18	18
	1200	4	6	8	10	12	14	16	18	20	22	24
	1500	6	8	10	14	16	18	20	24	26	28	30
	1800	6	10	12	16	18	22	24	28	30	34	36
	2100	8	12	14	18	22	26	28	32	36	38	42
	2400	8	12	16	20	24	28	32	36	40	44	48
	2700	10	14	18	24	28	32	36	40	46	50	54
	3000	10	16	20	26	30	36	40	46	50	56	60

ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	8	10	10	12
	900	4	4	6	8	8	10	12	12	14	16	16
	1200	4	6	8	10	12	14	14	16	18	20	22
	1500	6	8	10	12	14	16	18	20	22	24	26
	1800	6	8	12	14	16	20	22	24	26	30	32
	2100	8	10	14	16	20	22	26	28	32	34	38
	2400	8	12	14	18	22	26	28	32	36	38	42
	2700	8	12	16	20	24	28	32	36	40	44	48
	3000	10	14	18	22	26	32	36	40	44	48	52

N4C / 3000 PA ULS



ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	8	8	8	10	10
	900	4	4	6	6	8	10	10	12	12	14	14
	1200	4	6	8	8	10	12	14	14	16	18	20
	1500	4	6	8	10	12	14	16	18	20	22	24
	1800	6	8	10	12	14	18	20	22	24	26	28
	2100	6	10	12	14	18	20	22	26	28	30	34
	2400	8	10	14	16	20	22	26	28	32	36	38
	2700	8	12	14	18	22	26	28	32	36	40	42
	3000	8	12	16	20	24	28	32	36	40	44	48

ULS WIND PRESSURE: 3000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	6	8	8	8	10
	900	4	4	6	6	8	8	10	10	12	12	14
	1200	4	6	6	8	10	10	12	14	16	16	18
	1500	4	6	8	10	12	14	16	18	18	20	22
	1800	6	8	10	12	14	16	18	20	22	24	26
	2100	6	8	10	14	16	18	20	24	26	28	30
	2400	6	10	12	16	18	20	24	26	30	32	36
	2700	8	10	14	18	20	24	26	30	34	36	40
	3000	8	12	16	18	22	26	30	34	36	40	44

N5C / 4500 PA ULS



ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	18	20	22
	900	6	10	12	14	18	20	22	26	28	30	34
	1200	8	12	16	18	22	26	30	34	36	40	44
	1500	10	14	18	24	28	32	36	42	46	50	54
	1800	12	18	22	28	34	38	44	50	54	60	66
	2100	14	20	26	32	38	44	50	58	64	70	76
	2400	16	22	30	36	44	50	58	66	72	80	86
	2700	18	26	34	42	50	58	66	74	82	90	98
	3000	18	28	36	46	54	64	72	82	90	98	108

ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	12	12	14	16	18	18
	900	6	8	10	12	14	16	18	20	24	26	28
	1200	6	10	12	16	18	22	24	28	30	34	36
	1500	8	12	16	20	24	26	30	34	38	42	46
	1800	10	14	18	24	28	32	36	40	46	50	54
	2100	12	16	22	26	32	38	42	48	52	58	64
	2400	12	18	24	30	36	42	48	54	60	66	72
	2700	14	20	28	34	40	48	54	60	68	74	80
	3000	16	24	30	38	46	52	60	68	76	82	90

ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	8	8	10	12	12	14	16	16
	900	4	6	8	10	12	14	16	18	20	22	24
	1200	6	8	12	14	16	20	22	24	26	30	32
	1500	8	10	14	18	20	24	26	30	34	36	40
	1800	8	12	16	20	24	28	32	36	40	44	48
	2100	10	14	20	24	28	32	38	42	46	50	56
	2400	12	16	22	26	32	38	42	48	52	58	62
	2700	12	18	24	30	36	42	48	54	58	64	70
	3000	14	20	26	34	40	46	52	58	66	72	78

N5C / 4500 PA ULS



ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	14
	900	4	6	8	10	12	14	14	16	18	20	22
	1200	6	8	10	12	14	18	20	22	24	26	28
	1500	6	10	12	16	18	22	24	28	30	32	36
	1800	8	12	14	18	22	26	28	32	36	40	42
	2100	10	14	18	22	26	30	34	38	42	46	50
	2400	10	14	20	24	28	34	38	42	48	52	56
	2700	12	16	22	28	32	38	42	48	54	58	64
	3000	12	18	24	30	36	42	48	54	58	64	70

ULS WIND PRESSURE: 4500 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	8	10	10	12	12	14
	900	4	6	8	10	10	12	14	16	18	18	20
	1200	6	8	10	12	14	16	18	20	22	24	26
	1500	6	10	12	14	18	20	22	26	28	30	34
	1800	8	10	14	18	20	24	26	30	34	36	40
	2100	8	12	16	20	24	28	30	34	38	42	46
	2400	10	14	18	22	26	30	36	40	44	48	52
	2700	10	16	20	26	30	34	40	44	50	54	58
	3000	12	18	22	28	34	38	44	50	54	60	66

N6C / 6000 PA ULS



ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	16	18	20	22	24	28	30
	900	8	12	16	18	22	26	30	34	36	40	44
	1200	10	16	20	24	30	34	38	44	48	54	58
	1500	12	18	24	30	36	42	48	54	60	66	72
	1800	16	22	30	36	44	50	58	66	72	80	86
	2100	18	26	34	42	50	60	68	76	84	92	100
	2400	20	30	38	48	58	68	76	86	96	106	114
	2700	22	34	44	54	66	76	86	98	108	118	130
	3000	24	36	48	60	72	84	96	108	120	132	144

ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	20	22	24
	900	6	10	12	16	18	22	24	28	30	34	36
	1200	8	12	16	20	24	28	32	36	40	44	48
	1500	10	16	20	26	30	36	40	46	50	56	60
	1800	12	18	24	30	36	42	48	54	60	66	72
	2100	14	22	28	36	42	50	56	64	70	76	84
	2400	16	24	32	40	48	56	64	72	80	88	96
	2700	18	28	36	46	54	64	72	80	90	98	108
	3000	20	30	40	50	60	70	80	90	100	110	120

ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	14	16	18	20	22
	900	6	8	12	14	16	20	22	24	26	30	32
	1200	8	12	14	18	22	26	28	32	36	38	42
	1500	10	14	18	22	26	32	36	40	44	48	52
	1800	12	16	22	26	32	38	42	48	52	58	62
	2100	14	20	26	32	38	44	50	56	62	68	74
	2400	14	22	28	36	42	50	56	62	70	76	84
	2700	16	24	32	40	48	56	62	70	78	86	94
	3000	18	26	36	44	52	62	70	78	86	96	104

N6C / 6000 PA ULS



ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	14	16	18	20
	900	6	8	10	12	14	18	20	22	24	26	28
	1200	8	10	14	16	20	22	26	28	32	36	38
	1500	8	12	16	20	24	28	32	36	40	44	48
	1800	10	14	20	24	28	34	38	42	48	52	56
	2100	12	18	22	28	34	38	44	50	56	60	66
	2400	14	20	26	32	38	44	50	56	62	70	76
	2700	14	22	28	36	42	50	56	64	70	78	84
	3000	16	24	32	40	48	56	62	70	78	86	94

ULS WIND PRESSURE: 6000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	10	12	14	16	16	18
	900	6	8	10	12	14	16	18	20	22	24	26
	1200	6	10	12	16	18	20	24	26	30	32	36
	1500	8	12	16	18	22	26	30	34	36	40	44
	1800	10	14	18	22	26	30	36	40	44	48	52
	2100	10	16	20	26	30	36	40	46	50	56	60
	2400	12	18	24	30	36	40	46	52	58	64	70
	2700	14	20	26	34	40	46	52	58	66	72	78
	3000	16	22	30	36	44	50	58	66	72	80	86

C1C / 2700 PA ULS



ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	8	10	10	12	12	14
	900	4	6	8	10	10	12	14	16	18	18	20
	1200	6	8	10	12	14	16	18	20	22	24	26
	1500	6	10	12	14	18	20	22	26	28	30	34
	1800	8	10	14	18	20	24	26	30	34	36	40
	2100	8	12	16	20	24	28	30	34	38	42	46
	2400	10	14	18	22	26	30	36	40	44	48	52
	2700	10	16	20	26	30	34	40	44	50	54	58
	3000	12	18	22	28	34	38	44	50	54	60	66

ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	8	10	10	12
	900	4	4	6	8	8	10	12	12	14	16	16
	1200	4	6	8	10	12	14	16	16	18	20	22
	1500	6	8	10	12	14	16	18	20	24	26	28
	1800	6	8	12	14	16	20	22	24	28	30	32
	2100	8	10	14	16	20	22	26	28	32	36	38
	2400	8	12	16	18	22	26	30	32	36	40	44
	2700	8	12	16	20	24	28	32	36	40	44	48
	3000	10	14	18	24	28	32	36	40	46	50	54

ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	8	8	8	10	10
	900	4	4	6	6	8	10	10	12	12	14	14
	1200	4	6	8	8	10	12	14	14	16	18	20
	1500	4	6	8	10	12	14	16	18	20	22	24
	1800	6	8	10	12	14	18	20	22	24	26	28
	2100	6	10	12	14	18	20	22	26	28	30	34
	2400	8	10	14	16	20	22	26	28	32	34	38
	2700	8	12	14	18	22	26	28	32	36	40	42
	3000	8	12	16	20	24	28	32	36	40	44	48

C1C / 2700 PA ULS



ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	6	6	6	8	8	8	10
	900	4	4	6	6	8	8	10	10	12	12	14
	1200	4	6	6	8	10	10	12	14	14	16	18
	1500	4	6	8	10	12	14	14	16	18	20	22
	1800	6	8	10	12	14	16	18	20	22	24	26
	2100	6	8	10	14	16	18	20	22	26	28	30
	2400	6	10	12	14	18	20	24	26	28	32	34
	2700	8	10	14	16	20	22	26	30	32	36	38
	3000	8	12	14	18	22	26	28	32	36	40	42

ULS WIND PRESSURE: 2700 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	4	4	6	6	6	8	8	8
	900	4	4	4	6	6	8	8	10	10	12	12
	1200	4	4	6	8	8	10	12	12	14	16	16
	1500	4	6	8	10	10	12	14	16	18	18	20
	1800	4	6	8	10	12	14	16	18	20	22	24
	2100	6	8	10	12	14	16	18	22	24	26	28
	2400	6	8	12	14	16	18	22	24	26	30	32
	2700	6	10	12	16	18	22	24	26	30	32	36
	3000	8	10	14	18	20	24	26	30	34	36	40

C2C / 4000 PA ULS



ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	16	16	18	20
	900	6	8	10	12	16	18	20	22	24	28	30
	1200	8	10	14	16	20	24	26	30	32	36	38
	1500	8	12	16	20	24	28	32	36	40	44	48
	1800	10	16	20	24	30	34	38	44	48	54	58
	2100	12	18	24	28	34	40	46	50	56	62	68
	2400	14	20	26	32	38	46	52	58	64	70	76
	2700	16	22	30	36	44	50	58	66	72	80	86
	3000	16	24	32	40	48	56	64	72	80	88	96

ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	8	8	10	12	12	14	16	16
	900	4	6	8	10	12	14	16	18	20	22	24
	1200	6	8	12	14	16	20	22	24	28	30	32
	1500	8	10	14	18	20	24	28	30	34	38	40
	1800	8	12	16	20	24	28	32	36	40	44	48
	2100	10	14	20	24	28	34	38	42	48	52	56
	2400	12	16	22	28	32	38	44	48	54	58	64
	2700	12	18	24	30	36	42	48	54	60	66	72
	3000	14	20	28	34	40	48	54	60	66	74	80

ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	10	10	12	12	14	14
	900	4	6	8	10	12	14	14	16	18	20	22
	1200	6	8	10	12	14	18	20	22	24	26	28
	1500	6	10	12	16	18	22	24	26	30	32	36
	1800	8	12	14	18	22	26	28	32	36	38	42
	2100	10	14	18	22	26	30	34	38	42	46	50
	2400	10	14	20	24	28	34	38	42	46	52	56
	2700	12	16	22	26	32	38	42	48	52	58	62
	3000	12	18	24	30	36	42	46	52	58	64	70

C2C / 4000 PA ULS



ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	6	6	8	8	10	10	12	12	14
	900	4	6	8	8	10	12	14	14	16	18	20
	1200	6	8	10	12	14	16	18	20	22	24	26
	1500	6	8	12	14	16	20	22	24	26	30	32
	1800	8	10	14	16	20	22	26	28	32	36	38
	2100	8	12	16	20	22	26	30	34	38	40	44
	2400	10	14	18	22	26	30	34	38	42	46	50
	2700	10	14	20	24	28	34	38	42	48	52	56
	3000	12	16	22	26	32	38	42	48	52	58	62

ULS WIND PRESSURE: 4000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	4	4	6	6	8	8	10	10	12	12
	900	4	6	6	8	10	10	12	14	16	16	18
	1200	4	6	8	10	12	14	16	18	20	22	24
	1500	6	8	10	12	16	18	20	22	24	28	30
	1800	6	10	12	16	18	20	24	26	30	32	36
	2100	8	10	14	18	20	24	28	30	34	38	40
	2400	8	12	16	20	24	28	32	36	40	42	46
	2700	10	14	18	22	26	30	36	40	44	48	52
	3000	10	16	20	24	30	34	40	44	48	54	58

C3C / 5900 PA ULS



ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	18	20	22	24	26	28
	900	8	12	14	18	22	26	28	32	36	40	42
	1200	10	14	20	24	28	34	38	42	48	52	56
	1500	12	18	24	30	36	42	48	54	60	66	70
	1800	14	22	28	36	42	50	56	64	70	78	84
	2100	18	26	34	42	50	58	66	74	82	90	98
	2400	20	28	38	48	56	66	76	84	94	104	112
	2700	22	32	42	54	64	74	84	96	106	116	126
	3000	24	36	48	60	70	82	94	106	118	130	140

ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	20	22	24
	900	6	10	12	16	18	22	24	28	30	34	36
	1200	8	12	16	20	24	28	32	36	40	44	48
	1500	10	16	20	26	30	34	40	44	50	54	60
	1800	12	18	24	30	36	42	48	54	60	66	70
	2100	14	22	28	34	42	48	56	62	68	76	82
	2400	16	24	32	40	48	56	64	70	78	86	94
	2700	18	28	36	44	54	62	70	80	88	98	106
	3000	20	30	40	50	60	68	78	88	98	108	118

ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	12	14	16	18	20	22
	900	6	8	12	14	16	18	22	24	26	28	32
	1200	8	12	14	18	22	24	28	32	34	38	42
	1500	10	14	18	22	26	30	34	38	44	48	52
	1800	12	16	22	26	32	36	42	46	52	56	62
	2100	12	18	24	30	36	42	48	54	60	66	72
	2400	14	22	28	34	42	48	56	62	68	76	82
	2700	16	24	32	38	46	54	62	70	76	84	92
	3000	18	26	34	44	52	60	68	76	86	94	102

C3C / 5900 PA ULS



ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	8	10	12	14	14	16	18	20
	900	6	8	10	12	14	16	20	22	24	26	28
	1200	8	10	14	16	20	22	26	28	32	34	38
	1500	8	12	16	20	24	28	32	36	38	42	46
	1800	10	14	20	24	28	32	38	42	46	52	56
	2100	12	16	22	28	32	38	44	48	54	60	64
	2400	14	20	26	32	38	44	50	56	62	68	74
	2700	14	22	28	36	42	48	56	62	70	76	84
	3000	16	24	32	38	46	54	62	70	76	84	92

ULS WIND PRESSURE: 5900 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	6	8	10	10	12	14	16	16	18
	900	6	8	10	12	14	16	18	20	22	24	26
	1200	6	10	12	16	18	20	24	26	30	32	34
	1500	8	12	16	18	22	26	30	32	36	40	44
	1800	10	14	18	22	26	30	34	38	44	48	52
	2100	10	16	20	26	30	36	40	46	50	54	60
	2400	12	18	24	30	34	40	46	52	58	62	68
	2700	14	20	26	32	38	46	52	58	64	70	76
	3000	16	22	30	36	44	50	58	64	72	78	86

C4C / 8000 PA ULS



ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 4 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	8	10	14	16	20	24	26	30	32	36	38
	900	10	16	20	24	30	34	38	44	48	54	58
	1200	14	20	26	32	38	46	52	58	64	70	76
	1500	16	24	32	40	48	56	64	72	80	88	96
	1800	20	30	38	48	58	68	76	86	96	106	114
	2100	24	34	46	56	68	78	90	100	112	122	134
	2400	26	38	52	64	76	90	102	114	128	140	152
	2700	30	44	58	72	86	100	114	130	144	158	172
	3000	32	48	64	80	96	112	128	144	160	174	190

ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 6 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	12	14	16	20	22	24	28	30	32
	900	8	12	16	20	24	28	32	36	40	44	48
	1200	12	16	22	28	32	38	44	48	54	58	64
	1500	14	20	28	34	40	48	54	60	66	74	80
	1800	16	24	32	40	48	56	64	72	80	88	96
	2100	20	28	38	48	56	66	74	84	94	102	112
	2400	22	32	44	54	64	74	86	96	106	116	128
	2700	24	36	48	60	72	84	96	108	120	132	144
	3000	28	40	54	66	80	94	106	120	132	146	158

ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 8 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	18	20	22	24	26	28
	900	8	12	14	18	22	26	28	32	36	38	42
	1200	10	14	20	24	28	34	38	42	46	52	56
	1500	12	18	24	30	36	42	46	52	58	64	70
	1800	14	22	28	36	42	50	56	62	70	76	84
	2100	18	26	34	42	50	58	66	74	82	90	98
	2400	20	28	38	46	56	66	74	84	92	102	110
	2700	22	32	42	52	62	74	84	94	104	114	124
	3000	24	36	46	58	70	82	92	104	116	126	138

C4C / 8000 PA ULS



ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 10 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	6	8	10	12	14	16	18	20	22	24	26
	900	8	10	14	16	20	22	26	28	32	36	38
	1200	10	14	18	22	26	30	34	38	42	46	50
	1500	12	16	22	26	32	38	42	48	52	58	62
	1800	14	20	26	32	38	44	50	56	62	70	76
	2100	16	22	30	38	44	52	58	66	74	80	88
	2400	18	26	34	42	50	58	66	76	84	92	100
	2700	20	28	38	48	56	66	76	84	94	104	112
	3000	22	32	42	52	62	74	84	94	104	114	124

ULS WIND PRESSURE: 8000 PA, **SCREW SIZE: 12 GAUGE**

		WINDOW WIDTH										
		600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
WINDOW HEIGHT	600	4	6	8	10	12	14	16	18	20	22	24
	900	6	10	12	16	18	20	24	26	30	32	36
	1200	8	12	16	20	24	28	32	36	40	42	46
	1500	10	16	20	24	30	34	40	44	48	54	58
	1800	12	18	24	30	36	40	46	52	58	64	70
	2100	14	20	28	34	40	48	54	60	68	74	80
	2400	16	24	32	40	46	54	62	70	78	84	92
	2700	18	26	36	44	52	60	70	78	86	96	104
	3000	20	30	40	48	58	68	78	86	96	106	116

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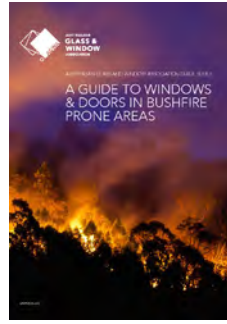
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a: Pymble Corporate Centre, Suite 1, Level 1, Building 1, 20 Bridge Street, Pymble NSW 2073

t: +61 2 9498 2768 e: admin@agwa.com.au w: www.agwa.com.au



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