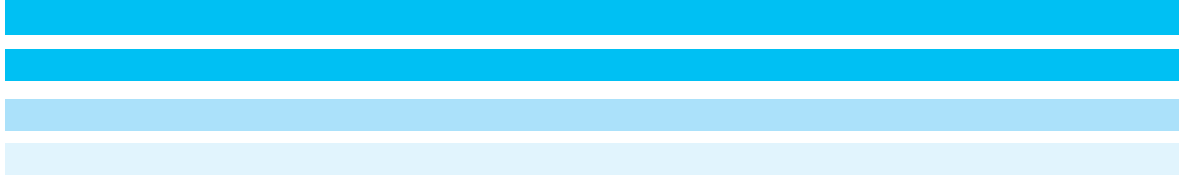


Fixing



**An Industry Guide to the Correct
Fixing of Windows & Doors**

version 2.0



Foreword

The Australian Window Association is pleased to produce 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 information from Australian Standard AS1720.1-1997 Timber structures, Ramset Specifiers Resource Book Ed 3 and Hybrid Wood and Steel Details - Builder's Guide, published by the US Department of Housing and Urban Development - Office of Development and Research

Australian Window Association

The AWA is a co-operative of window manufacturers and their suppliers.

The Australian Window Association (AWA) aims are:

- To promote and advance the awareness of windows 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

This Industry Guide to the Fixing of Windows and Doors sets out to provide the basic fastening number and sizes for fixing windows and doors into residential buildings. By providing this resource as a guide it is hoped that windows and doors supplied to residential buildings remain structurally sound.

Acknowledgement

The AWA gratefully acknowledges those member companies whose contributions of materials and continued support to the AWA Technical Committee 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 2700mm. For all sizes greater than 2700mm an engineered solution is required. Refer to the system supplier.

While the AWA has made every effort to ensure that the material within this guide is accurate, the Australian 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 the AWA

Background	3
Acknowledgements	4
Responsibilities	6
Fixing Frames Correctly	9
Fixing Size Guide	
Timber Frame Buildings	11
Brick & Blockwork Buildings	55
Lightweight Steel Frame Buildings	76
Further Information	87

The Building Code of Australia

The National Construction Code (NCC) is an initiative of the Council of Australian Governments (COAG) developed to incorporate all on-site construction requirements into a single code. The NCC comprises the Building Code of Australia (BCA), Volume One and Two; and the Plumbing Code of Australia (PCA), as Volume Three.

The BCA is a uniform set of technical provisions 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 3.0 section 3.6.0 of Volume Two of the BCA, performance requirements (P2.1 & P2.2.2) are satisfied if windows are designed and constructed in accordance with AS2047. For glazed assemblies not covered by AS2047 compliance to AS1288 is required.

AS2047 - Windows in buildings: Selection and Installation

AS1288 - 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 such.

Approved PPE (performance 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.

Extract from AS2047 Appendix D

1. For housing and other residential buildings the purchaser (building designer or builder) should nominate the window rating (N or C) when ordering the window assemblies.
2. For other buildings the purchaser should nominate the design wind pressures for the windows assemblies when ordering the windows.
3. The manufacturer of window assemblies should verify the window ratings or design wind pressures

Methods of identifying windows that comply to AS2047

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.

	<p>This manufacturer certifies that this product was designed to conform with AS2047. The design performance has been verified by a NATA accredited test laboratory. This manufacturer is a member of the AWA Accreditation Program</p>		<p>DESIGN PERFORMANCE</p> <p>700 <hr style="width: 80%; margin: 0 auto;"/> Structural Pa</p> <p>Water Resistance 150</p>
<p>ACCREDITED MEMBER No. AWA XXX</p>			

Example of labelling used by AWA Members

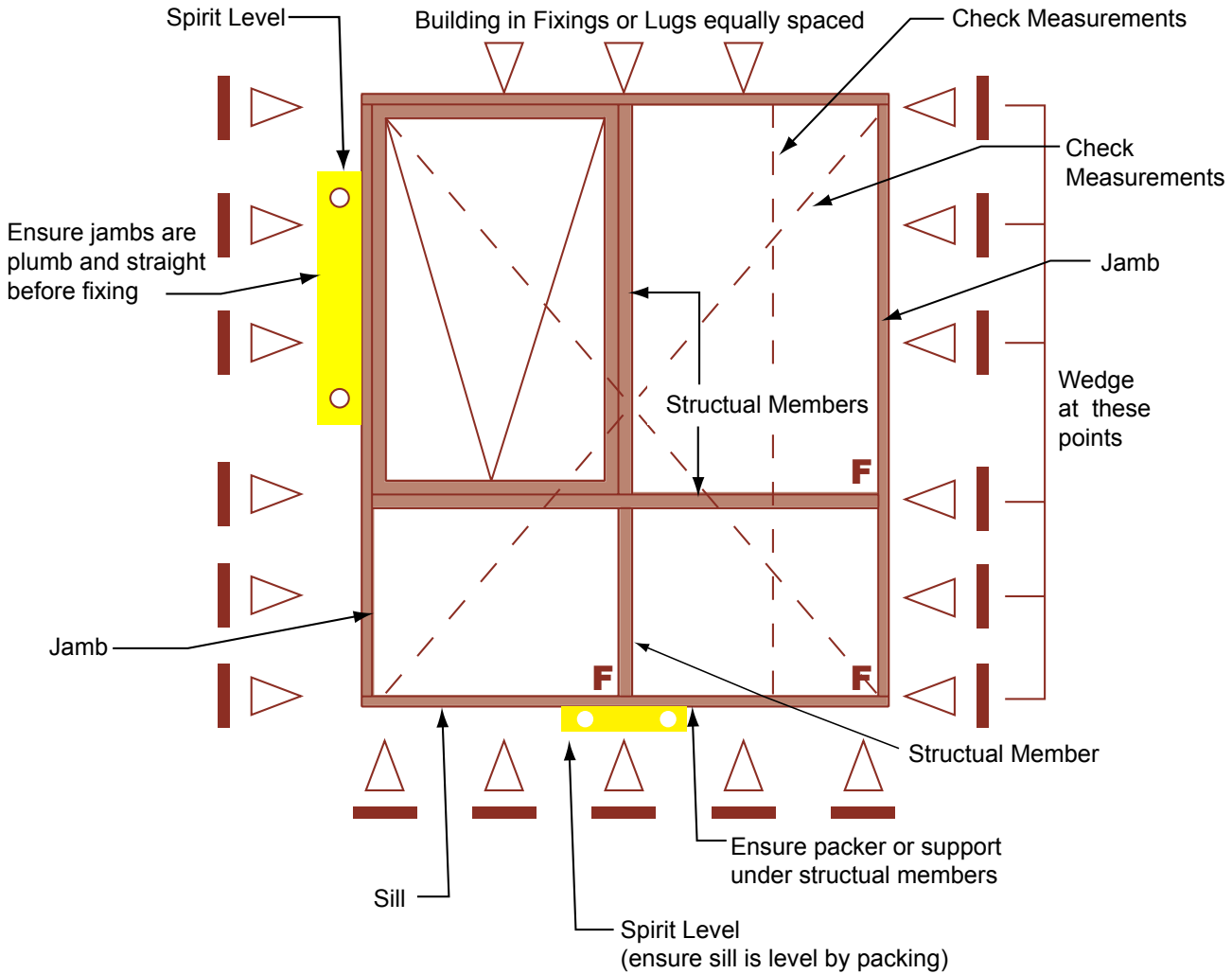
Certificate

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



Example of Compliance Certificate used by AWA Members

Fixing Frames Correctly



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

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 AS4055)
- ULS Wind Pressure
- 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 your system supplier if you are unsure.

Example

ULS Wind Pressure: 700 Pa, Nail Diameter: 1.8 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	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

For a window with the size of **2100mm (h) x 1500mm (w)** to be fixed into a home built in a **N1 Wind Classification** zone (with a **ULS Wind Pressure of 700Pa**) and using a **1.8mm** nail: **10 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 2.5mm nail, penetration should be at least 25mm
 - Using a 6 Gauge screw, determine the diameter, in this case 2.8mm, penetration should be at least 28mm

Fixing Size Guide

Timber Frames Buildings

Assumptions

1. *The following tables for nails and screws show the minimum number of fasteners required to hold a window into a timber frame, but may be equally applicable to fastening into other materials.*
2. *These tables have been derived from AS1720.1-1997 Timber structures, Section 4.2 Design of nailed joints: Type 1, Species group JD4.*
3. *1.8 and 2.1mm nails are not included in AS1720.1. However extrapolated values have been used to calculate the tables.*
4. *ULS wind pressures are as per AS2047-1999 Windows in Buildings and AS4055-2006 Wind loads for housing.*
5. *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.*
6. *It is assumed that the load is distributed equally to all fasteners.*
7. *Manufacturers generally recommend that windows be fastened through the jambs. Wide windows may need to be fastened through the sill.*
8. *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*

Nail Capacity - N1 Timber Frames

ULS Wind Pressure: 700 Pa, Nail Diameter: 1.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 700 Pa, Nail Diameter: 2.1 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 700 Pa, Nail Diameter: 2.5 mm

Window Width

Window Height

	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	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	12
2400	4	4	4	6	6	8	8	10	10	12	12
2700	4	4	6	6	8	8	10	10	12	12	14

ULS Wind Pressure: 700 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 700 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

	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	6	6	6
1800	4	4	4	4	4	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	8	8
2400	4	4	4	4	6	6	6	6	8	8	8
2700	4	4	4	4	6	6	6	8	8	8	10

ULS Wind Pressure: 700 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	4	6	6	6	6	6	6	8

Nail Capacity - N2 Timber Frames

ULS Wind Pressure: 1000 Pa, Nail Diameter: 1.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	16	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	34
2700	8	10	14	16	20	24	26	30	32	36	38

ULS Wind Pressure: 1000 Pa, Nail Diameter: 2.1 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	8	8	10	10	12	14	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	28

ULS Wind Pressure: 1000 Pa, Nail Diameter: 2.5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 1000 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	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	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	14	16

ULS Wind Pressure: 1000 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 1000 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

	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	6
1500	4	4	4	4	4	4	4	4	6	6	6
1800	4	4	4	4	4	6	6	6	6	6	8
2100	4	4	4	4	6	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

Nail Capacity - N2 Timber Frames

ULS Wind Pressure: 1000 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

	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	6	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	8	8

ULS Wind Pressure: 1000 Pa, Nail Diameter: 5 mm

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	4	6	6	6	6	6	6	6

ULS Wind Pressure: 1500 Pa, Nail Diameter: 1.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	38
2100	8	12	16	20	24	26	30	34	38	42	46
2400	10	14	18	22	26	30	34	38	44	48	52
2700	10	16	20	24	30	34	38	44	48	54	58

ULS Wind Pressure: 1500 Pa, Nail Diameter: 2.1 mm

Window Width

Window Height

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

ULS Wind Pressure: 1500 Pa, Nail Diameter: 2.5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Nail Capacity - N3 Timber Frames

ULS Wind Pressure: 1500 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 1500 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

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

ULS Wind Pressure: 1500 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

	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	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

Nail Capacity - N3 Timber Frames

ULS Wind Pressure: 1500 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

	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	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	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

ULS Wind Pressure: 1500 Pa, Nail Diameter: 5 mm

Window Width

Window Height

	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	6	6
1800	4	4	4	4	4	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	8
2400	4	4	4	6	6	6	6	6	8	8	8
2700	4	4	4	6	6	6	6	8	8	8	10

Nail Capacity - N4 Timber Frames

ULS Wind Pressure: 2300 Pa, Nail Diameter: 2.5 mm

Window Width

Window Height

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

ULS Wind Pressure: 2300 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	28	30	32	36

ULS Wind Pressure: 2300 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	16	16	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	12	16	18	20	22	24	28	30

ULS Wind Pressure: 2300 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

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

ULS Wind Pressure: 2300 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

	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	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	14	16

ULS Wind Pressure: 2300 Pa, Nail Diameter: 5 mm

Window Width

Window Height

	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	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

Nail Capacity - N5 Timber Frames

ULS Wind Pressure: 3300 Pa, Nail Diameter: 2.5 mm

Window Width

Window Height

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

ULS Wind Pressure: 3300 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 3300 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

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

ULS Wind Pressure: 3300 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 3300 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	20	22

ULS Wind Pressure: 3300 Pa, Nail Diameter: 5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Nail Capacity - N6 Timber Frames

ULS Wind Pressure: 4500 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
600	4	4	6	8	8	10	12	12	14	14	16
900	4	6	8	10	12	14	16	18	20	22	24
1200	6	8	12	14	16	18	22	24	26	28	32
1500	8	10	14	16	20	22	26	30	32	36	38
1800	8	12	16	20	24	28	32	34	38	42	46
2100	10	14	18	22	28	32	36	40	44	50	54
2400	12	16	22	26	32	36	42	46	52	56	62
2700	12	18	24	30	34	40	46	52	58	64	68

ULS Wind Pressure: 4500 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4500 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

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

ULS Wind Pressure: 4500 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

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

ULS Wind Pressure: 4500 Pa, Nail Diameter: 5 mm

Window Width

Window Height

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

ULS Wind Pressure: 4500 Pa, Nail Diameter: 5.6 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Nail Capacity - C1 Timber Frames

ULS Wind Pressure: 2000 Pa, Nail Diameter: 2.1 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	28	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	28	32	36	40	44	48	54

ULS Wind Pressure: 2000 Pa, Nail Diameter: 2.5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	30	34
2700	8	10	14	16	20	22	26	28	32	34	38

ULS Wind Pressure: 2000 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	14	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	18	22	24	26	28
2700	6	8	12	14	16	18	22	24	26	28	32

ULS Wind Pressure: 2000 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

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

ULS Wind Pressure: 2000 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 2000 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

	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	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	6	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

Nail Capacity - C1 Timber Frames

ULS Wind Pressure: 2000 Pa, Nail Diameter: 5 mm

Window Width

Window Height

	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	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	8	10
2400	4	4	4	6	6	6	8	8	10	10	10
2700	4	4	4	6	6	8	8	10	10	12	12

Nail Capacity - C2 Timber Frames

ULS Wind Pressure: 3000 Pa, Nail Diameter: 2.5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 3000 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	34	38	42	46

ULS Wind Pressure: 3000 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Nail Capacity - C2 Timber Frames

ULS Wind Pressure: 3000 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 3000 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 3000 Pa, Nail Diameter: 5 mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 4400 Pa, Nail Diameter: 2.8 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4400 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

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

ULS Wind Pressure: 4400 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Nail Capacity - C3 Timber Frames

ULS Wind Pressure: 4400 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4400 Pa, Nail Diameter: 5 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4400 Pa, Nail Diameter: 5.6 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Nail Capacity - C4 Timber Frames

ULS Wind Pressure: 6000 Pa, Nail Diameter: 3.15 mm

Window Width

Window Height

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

ULS Wind Pressure: 6000 Pa, Nail Diameter: 3.75 mm

Window Width

Window Height

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

ULS Wind Pressure: 6000 Pa, Nail Diameter: 4.5 mm

Window Width

Window Height

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

Nail Capacity - C4 Timber Frames

ULS Wind Pressure: 6000 Pa, Nail Diameter: 5 mm

Window Width

Window Height

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

ULS Wind Pressure: 6000 Pa, Nail Diameter: 5.6 mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 700 Pa, Screw Size: 4 Gauge

Window Width

Window Height

	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	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	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

ULS Wind Pressure: 700 Pa, Screw Size: 6 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	4	6	6	6	6	6	6	8

ULS Wind Pressure: 700 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 700 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	4	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 700 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	6	6	6	6	6	6	6	6
2700	4	4	6	6	6	6	6	6	6	6	6

ULS Wind Pressure: 700 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	6	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 1000 Pa, Screw Size: 4 Gauge

Window Width

Window Height

	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	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	12	12
2400	4	4	6	6	8	8	10	10	12	12	14
2700	4	4	6	6	8	10	10	12	12	14	16

ULS Wind Pressure: 1000 Pa, Screw Size: 6 Gauge

Window Width

Window Height

	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	6
1500	4	4	4	4	4	4	4	4	6	6	6
1800	4	4	4	4	4	6	6	6	6	6	8
2100	4	4	4	4	6	6	6	6	8	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

ULS Wind Pressure: 1000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	4	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	8	8

ULS Wind Pressure: 1000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	4	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 1000 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 1000 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	4	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 1500 Pa, Screw Size: 4 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 1500 Pa, Screw Size: 6 Gauge

Window Width

Window Height

	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	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

ULS Wind Pressure: 1500 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	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	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	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

ULS Wind Pressure: 1500 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	8	8
2700	4	4	4	6	6	6	6	6	8	8	8

ULS Wind Pressure: 1500 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	6	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 1500 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	6	4	4	4	4	4
2100	4	4	4	4	6	6	4	4	4	4	4
2400	4	4	4	6	6	6	4	4	4	4	6
2700	4	4	4	6	6	6	4	4	6	6	6

ULS Wind Pressure: 2300 Pa, Screw Size: 6 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	18	18	20	22

ULS Wind Pressure: 2300 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	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	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	14	16

ULS Wind Pressure: 2300 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	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

Screw Capacity - N4 Timber Frames

ULS Wind Pressure: 2300 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	6
1500	4	4	4	4	4	4	4	4	6	6	6
1800	4	4	4	4	4	6	6	6	6	6	8
2100	4	4	4	4	6	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

ULS Wind Pressure: 2300 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	8	8
2700	4	4	4	6	6	6	6	6	8	8	8

ULS Wind Pressure: 2300 Pa, Screw Size: 18 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	6

ULS Wind Pressure: 3300 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	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	

ULS Wind Pressure: 3300 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	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	20	22

ULS Wind Pressure: 3300 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
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

ULS Wind Pressure: 3300 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	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	8	10
2100	4	4	4	6	6	6	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	12	14

ULS Wind Pressure: 3300 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	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

ULS Wind Pressure: 3300 Pa, Screw Size: 18 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	4	6	6	6	6	6	8	8
2700	4	4	4	6	6	6	6	6	8	8	8

ULS Wind Pressure: 4500 Pa, Screw Size: 8 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 4500 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4500 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	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

ULS Wind Pressure: 4500 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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

ULS Wind Pressure: 4500 Pa, Screw Size: 18 Gauge

Window Width

Window Height

	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	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	6	8	8	8
2400	4	4	4	6	6	6	6	8	8	10	10
2700	4	4	6	6	6	6	8	8	10	10	12

ULS Wind Pressure: 2000 Pa, Screw Size: 6 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 2000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	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	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	6	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

ULS Wind Pressure: 2000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	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	6	8	8	8
2400	4	4	4	6	6	6	6	8	8	10	10
2700	4	4	4	6	6	6	8	8	10	10	10

Screw Capacity - C1 Timber Frames

ULS Wind Pressure: 2000 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	6	6
1800	4	4	4	4	4	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	8
2400	4	4	4	4	6	6	6	6	6	8	8
2700	4	4	4	6	6	6	6	6	8	8	8

ULS Wind Pressure: 2000 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	6	6	6	6	6	6	6	6
2700	4	4	4	6	6	6	6	6	6	6	8

ULS Wind Pressure: 3000 Pa, Screw Size: 6 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 3000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 3000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	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

Screw Capacity - C2 Timber Frames

ULS Wind Pressure: 3000 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	6	6	6
1500	4	4	4	4	4	4	6	6	6	8	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

ULS Wind Pressure: 3000 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	6
1500	4	4	4	4	4	4	4	6	6	6	6
1800	4	4	4	4	4	6	6	6	6	6	8
2100	4	4	4	4	6	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

ULS Wind Pressure: 3000 Pa, Screw Size: 18 Gauge

Window Width

Window Height

	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	6	6	6	6	6	6
2100	4	4	4	4	6	6	6	6	6	6	6
2400	4	4	4	6	6	6	6	6	6	6	6
2700	4	4	6	6	6	6	6	6	6	8	8

ULS Wind Pressure: 4400 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4400 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4400 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	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	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

ULS Wind Pressure: 4400 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	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	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	12	12
2400	4	4	6	6	8	8	10	10	12	12	14
2700	4	4	6	6	8	10	10	12	12	14	16

ULS Wind Pressure: 4400 Pa, Screw Size: 18 Gauge

Window Width

Window Height

	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	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	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

ULS Wind Pressure: 6000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 6000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 6000 Pa, Screw Size: 12 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Screw Capacity - C4 Timber Frames

ULS Wind Pressure: 6000 Pa, Screw Size: 14 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 6000 Pa, Screw Size: 18 Gauge

Window Width

Window Height

	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	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

Fixing Size Guide

Brick & Blockwork Buildings

Assumptions

1. *The following tables show the minimum number of fasteners required to hold a window into a brick or blockwork opening.*
2. *These tables have been derived from information published in the Ramset Specifiers Resource Book Ed 3 - RamPlug Brick and Block Anchoring. Similar products are available from other manufacturers and users should ensure that the working load limit performance of the anchors used is not less than that of the equivalent RamPlug anchor.*
3. *The anchor manufacturer's installation instructions should be followed at all times.*
4. *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.*
5. *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.*
6. *ULS wind pressures are as per AS2047-1999 Windows in Buildings and AS4055-2006 Wind loads for housing.*
7. *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.*
8. *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.*

ULS Wind Pressure: 700 Pa, Anchor Size: 5mm

Window Width

Window Height

	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	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: 700 Pa, Anchor Size: 6mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 700 Pa, Anchor Size: 7mm

Window Width

Window Height

	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	6
3000	4	4	4	4	4	4	4	4	4	6	6

ULS Wind Pressure: 700 Pa, Anchor Size: 8mm

Window Width

Window Height

	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: 1000 Pa, Anchor Size: 5mm

Window Width

Window Height

	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	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: 1000 Pa, Anchor Size: 6mm

Window Width

Window Height

	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	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	6	8	8
2700	4	4	4	4	6	6	6	8	8	8	10
3000	4	4	4	4	6	6	6	8	8	10	10

ULS Wind Pressure: 1000 Pa, Anchor Size: 7mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 1000 Pa, Anchor Size: 8mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 1000 Pa, Anchor Size: 10mm

Window Width

Window Height

	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: 1500 Pa, Anchor Size: 5mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 1500 Pa, Anchor Size: 6mm

Window Width

Window Height

	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	6
1200	4	4	4	4	4	4	4	6	6	6	6
1500	4	4	4	4	4	4	6	6	6	8	8
1800	4	4	4	4	6	6	6	8	8	8	10
2100	4	4	4	4	6	6	8	8	8	10	10
2400	4	4	4	6	6	8	8	10	10	10	12
2700	4	4	6	6	8	8	10	10	12	12	14
3000	4	4	6	6	8	8	10	12	12	14	14

ULS Wind Pressure: 1500 Pa, Anchor Size: 7mm

Window Width

Window Height

	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	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: 1500 Pa, Anchor Size: 8mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 1500 Pa, Anchor Size: 10mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 1500 Pa, Anchor Size: 12mm

Window Width

Window Height

	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: 2300 Pa, Anchor Size: 5mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 2300 Pa, Anchor Size: 6mm

Window Width

Window Height

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

ULS Wind Pressure: 2300 Pa, Anchor Size: 7mm

Window Width

Window Height

	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	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: 2300 Pa, Anchor Size: 8mm

Window Width

Window Height

	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	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: 2300 Pa, Anchor Size: 10mm

Window Width

Window Height

	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	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	8	10

ULS Wind Pressure: 2300 Pa, Anchor Size: 12mm

Window Width

Window Height

	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	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: 3300 Pa, Anchor Size: 5mm

Window Width

Window Height

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

ULS Wind Pressure: 3300 Pa, Anchor Size: 6mm

Window Width

Window Height

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

ULS Wind Pressure: 3300 Pa, Anchor Size: 7mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	12	12	14	14	16
2400	4	6	6	8	10	12	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: 3300 Pa, Anchor Size: 8mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 3300 Pa, Anchor Size: 10mm

Window Width

Window Height

	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	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: 3300 Pa, Anchor Size: 12mm

Window Width

Window Height

	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	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: 4500 Pa, Anchor Size: 5mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 6mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 7mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 4500 Pa, Anchor Size: 8mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 10mm

Window Width

Window Height

	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	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: 12mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 2000 Pa, Anchor Size: 5mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 6mm

Window Width

Window Height

	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	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: 7mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 2000 Pa, Anchor Size: 8mm

Window Width

Window Height

	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	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: 10mm

Window Width

Window Height

	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	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: 12mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 3000 Pa, Anchor Size: 5mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 6mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 7mm

Window Width

Window Height

	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	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

ULS Wind Pressure: 3000 Pa, Anchor Size: 8mm

Window Width

Window Height

	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	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: 10mm

Window Width

Window Height

	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	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: 12mm

Window Width

Window Height

	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	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: 4400 Pa, Anchor Size: 5mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	60	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: 4400 Pa, Anchor Size: 6mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 4400 Pa, Anchor Size: 7mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 4400 Pa, Anchor Size: 8mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 4400 Pa, Anchor Size: 10mm

Window Width

Window Height

	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	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	14	16
3000	4	6	6	8	10	10	12	14	14	16	18

ULS Wind Pressure: 4400 Pa, Anchor Size: 12mm

Window Width

Window Height

	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	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	12
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: 6000 Pa, Anchor Size: 5mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 6mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 7mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

ULS Wind Pressure: 6000 Pa, Anchor Size: 8mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 10mm

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 12mm

Window Width

Window Height

	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	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

Fixing Size Guide Lightweight Steel Frame Buildings

Assumptions

- 1. The following tables show the minimum number of fasteners required to hold a window into a lightweight steel frame.*
- 2. These tables have been derived from the Hybrid Wood and Steel Details - Builders Guide, published by the U.S. Department of Housing and Urban Development - Office of Policy Development and Research.*
- 3. ULS wind pressures are as per AS2047-1999 Windows in Buildings and AS4055-2006 Wind loads for housing.*
- 4. 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.*
- 5. 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.*
- 6. 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.*

ULS Wind Pressure: 700 Pa, Anchor Size: 8 Gauge

Window Width

Window Height

	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	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	6	8	8
2700	4	4	4	4	6	6	6	8	8	8	10
3000	4	4	4	4	6	6	6	8	8	10	10

ULS Wind Pressure: 700 Pa, Anchor Size: 10 Gauge

Window Width

Window Height

	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	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

Screw Capacity - N2 Lightweight Steel

ULS Wind Pressure: 1000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	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	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: 1000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	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

Screw Capacity - N3 Lightweight Steel

ULS Wind Pressure: 1500 Pa, Screw Size: 8mm

Window Width

Window Height

	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	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	12	12	14	14
2400	4	4	6	8	8	10	12	12	14	14	16
2700	4	6	6	8	10	12	12	14	16	16	18
3000	4	6	8	8	10	12	14	16	16	18	20

ULS Wind Pressure: 1500 Pa, Screw Size: 10mm

Window Width

Window Height

	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	6	6
1500	4	4	4	4	4	4	4	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	8	10
2400	4	4	4	4	6	6	8	8	8	10	10
2700	4	4	4	6	6	8	8	10	10	10	12
3000	4	4	4	6	8	8	8	10	10	12	14

Screw Capacity - N4 Lightweight Steel

ULS Wind Pressure: 2300 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	22	26	28
3000	6	8	10	14	16	18	20	22	26	28	30

ULS Wind Pressure: 2300 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	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

ULS Wind Pressure: 3300 Pa, Screw Size: 8 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 3300 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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	22	26	28

Screw Capacity - N6 Lightweight Steel

ULS Wind Pressure: 4500 Pa, Screw Size: 8 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 4500 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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

Screw Capacity - C1 Lightweight Steel

ULS Wind Pressure: 2000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
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: 2000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	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	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	12	12
2400	4	4	6	6	8	8	10	10	12	12	14
2700	4	4	6	6	8	10	10	12	12	14	16
3000	4	4	6	8	8	10	12	12	14	16	16

Screw Capacity - C2 Lightweight Steel

ULS Wind Pressure: 3000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 3000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

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

Screw Capacity - C3 Lightweight Steel

ULS Wind Pressure: 4400 Pa, Screw Size: 8 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 4400 Pa, Screw Size: 10 Gauge

Window Width

Window Height

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

Screw Capacity - C4 Lightweight Steel

ULS Wind Pressure: 6000 Pa, Screw Size: 8 Gauge

Window Width

Window Height

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

ULS Wind Pressure: 6000 Pa, Screw Size: 10 Gauge

Window Width

Window Height

	600	900	1200	1500	1800	2100	2400	2700	3000	3300	3600
600	4	4	4	4	6	6	8	8	8	10	10
900	4	4	6	8	8	10	10	12	14	14	16
1200	4	6	8	8	10	12	14	16	16	18	20
1500	4	8	8	10	14	14	16	18	20	22	26
1800	6	8	10	14	16	18	20	22	26	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	14	16	20	26	28	32	36	40	44	50



Further Information

Australian Building Codes Board

www.abcb.gov.au

Australian Institute of Building Surveyors

www.aibs.com.au

Australian Window Association (AWA)

www.awa.org.au

BUILdata - Building Products Information Service

www.buildata.com.au

Building Services Authority - Queensland

www.bsa.qld.gov.au

Building Commission - Victoria

www.buildingcommission.com.au

Building Commission - Western Australia

www.buildingcommission.wa.gov.au

Department of Planning & Local Government - South Australia

www.planning.sa.gov.au

Housing Industry Association (HIA)

www.buildingonline.com.au

Master Builders Association

www.masterbuilders.com.au

National Association of Steel Housing

www.nash.asn.au

Northern Territory Government

www.nt.gov.au

Office of Fair Trading & Home Building Services

www.fairtrading.nsw.gov.au

Workplace Standards -Tasmania

www.wst.tas.gov.au

Australian Window Association

a: 71 Ridge Street Gordon NSW 2072

p: 02 9498 2768 f: 02 9498 3816

e: info@awa.org.au

www.awa.org.au



Document No. AWA2012/FIXV2

2012 © Copyright Australian Window Association