

<b>0456P SAFETYLINE JALOUSIE LOUVRE WINDOWS</b>
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**Branded worksection**

This branded worksection *Template* has been developed by NATSPEC in conjunction with **Safetyline Jalousie** (the Product Partner) louvre windows and may be used whilst the Product Partner is licensed to distribute it. The copyright remains with NATSPEC. As with all NATSPEC worksections, it is the responsibility of the user to make sure it is completed appropriately for the project. The user should also review its applicability for local conditions and regulations. Check [www.natspec.com.au](http://www.natspec.com.au) for the latest updated version.

**Worksection abstract**

This branded worksection *Template* is applicable to Safetyline Jalousie louvre windows manufactured by SMR Designs Pty Ltd supplied as complete systems and including installation accessories such as fasteners, flashings, sealants, joint sealing and weather-stripping, necessary for the satisfactory functioning of the whole.

**How to use this worksection**

Customise this worksection *Template* for each project. See A guide to NATSPEC worksections ([www.natspec.com.au](http://www.natspec.com.au)) for information on *Template* structure, word styles, and completing a worksection.

**Related material located elsewhere in NATSPEC**

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:

- *0432 Curtain walls*, if the project contains windows and window-and-spandrel assemblies in addition to louvred windows.
- *0451 Windows and glazed doors*, if the project contains windows other than louvre windows.
- *0461 Glazing* for types of glass.
- *0462 Structural silicone glazing*, for adhesive fixed glazing.
- *0463 Glass blockwork*, if the project contains glass blockwork in addition to louvred windows.
- *0524 Partitions – glazed* for glazed internal partitions.
- *0671 Painting*.
- *0673 Powder coatings*.

**Material not provided in Product Partner**

This worksection *Template* includes generic material which may not be provided by Safetyline Jalousie, including:

- Bushfire screens.
- Ventilating louvre assemblies.
- Security window grilles.
- Frameless glass louvres.

**Documenting this and related work**

You may document this and related work as follows:

- Schedule louvre windows to your office documentation policy.
- In bushfire-prone areas, document bushfire protection requirements to AS 3959 (2018) and the NCC. If documenting bushfire shutters, see AS 3959 (2018) clause 3.7 and *0457 External screens*. See NATSPEC TECHnote DES 018 on bushfire protection.
- For protection of openable windows conforming to BCA (2022) D3D29 and BCA (2022) H5D3, document a device to restrict the window opening, a screen with secure fittings or a barrier to the window, as required.
- Coordinate ventilating louvre assemblies with the mechanical consultant and requirements of the mechanical system, if any.
- See NATSPEC TECHnote PRO 006 for glass types used in buildings.
- For information on the Window Energy Rating Scheme (WERS), see [www.agwa.com.au](http://www.agwa.com.au).
- For information on the Australian Glass and Window Association (AGWA) Accreditation Program, see Accreditation Schemes ([agwa.com.au](http://agwa.com.au)).

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Search [acumen.architecture.com.au](http://acumen.architecture.com.au), the Australian Institute of Architects' practice advisory subscription service, for notes on the following:

- Daylighting of buildings.
- Guarantees and warranties.

- Revisiting energy efficiency in commercial buildings.
- Site planning and design for bushfire.

### Specifying ESD

The following may be specified by retaining default text:

- Louvre assemblies for natural ventilation.
- Window seals to minimise air leakage when louvres are shut.

The following may be specified by using included options:

- Thermal performance to reduce heating/cooling load by specifying the required Total system U-Value, Total system SHGC, frame material (e.g. metal has higher conductivity than timber).
- Glass and frame selection with an acceptable visible transmittance for natural lighting.
- High performance glass, e.g. Low-E.

The following may be specified by including additional text:

- Re-use of salvaged louvres.
- Recycled material content, e.g. Aluminium frames.

Refer to NATSPEC TECHreport TR 01 on specifying ESD.

## 1 GENERAL

Safetyline Jalousie, a leading louvre window brand with over 50 years of history in Europe, arrived in the Australian market in 2009. It is a high-quality option for specifiers looking for a louvre window system with wide louvre spans (up to 1.4 m), impenetrable building security and weatherproof seals. Safetyline Jalousie is distributed by SMR Designs, who have been involved in the Australian home improvement and commercial building market for more than 30 years.

### 1.1 RESPONSIBILITIES

#### General

Requirement: Provide Safetyline Jalousie louvre windows, as documented.

*Documented* is defined in *0171 General requirements* as meaning contained in the contract documents.

### 1.2 COMPANY CONTACTS

#### Safetyline Jalousie technical contacts

Website: [www.safetylinejalousie.com.au/contact](http://www.safetylinejalousie.com.au/contact)

### 1.3 CROSS REFERENCES

#### General

Requirement: Conform to the following:

- *0171 General requirements*.

*0171 General requirements* contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. *0171 General requirements* references the *018 Common requirements* subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

### 1.4 STANDARDS

#### General

Selection and installation: To AS 2047 (2014).

AS 2047 (2014) does not cover fixed louvres.

**Building classification:** [complete/delete]

To use AS 2047 (2014), the building class needs to be nominated as follows:

- Housing: NCC Class 1 and 10.
- Residential: NCC Class 2, 3 and 4.
- Commercial: NCC Class 5, 6, 7, 8 and 9.

**Glazing**

Glass type and thickness: To AS 1288 (2021), if no glass type or thickness is nominated.

For glass type and thickness refer to AS 1288 (2021) Table 4.1 and to AS/NZS 4667 (2000).

Glass thickness may be governed by human safety and other requirements – see AS 1288 (2021) Section 5. Maximum spans for various thicknesses of glass types subject to wind loading are shown in the figures of AS 1288 (2021) Section 4.

Nominate a thickness if:

- The glass is to be thicker than required by AS 1288 (2021) or applicable regulations.
- There are unusual conditions requiring detailed calculations for which the designer should be responsible.

In other cases, the determination of thickness is usually within the competence of the glazing contractor.

Where thickness is determined by loading from wind actions, the design wind pressure needs to be known in order to interpret the figures and tables of glass sizes and thicknesses in AS 1288 (2021).

See AS/NZS 1170.2 (2021) or AS 4055 (2021) as appropriate for design wind pressure.

Materials and installation: To AS 1288 (2021).

Quality requirements for cut-to-size and processed glass: To AS/NZS 4667 (2000).

The standard specifies requirements for the following:

- Cut sizes of flat, clear ordinary annealed and tinted heat-absorbing glass with glossy, apparently plane and smooth surfaces, which are used for general and architectural glazing or similar.
- Cut sizes of flat, clear ordinary annealed and tinted heat-absorbing processing glass used for Grade A safety requirements (i.e. toughened or laminated).
- Cut sizes of ordinary annealed, patterned and wired glass used in decorative and general glazing applications.
- Cut sizes of wired glass used for Grade B safety and general glazing applications.
- Processed laminated and toughened glass.

**1.5 MANUFACTURER'S DOCUMENTS****Technical manuals**

Design, installation and operation manuals, CAD, BIM files and REVIT models:  
[www.safetylinejalousie.com.au/downloads/](http://www.safetylinejalousie.com.au/downloads/)

Contact Safetyline Jalousie for the latest product updates.

**1.6 INTERPRETATION****Abbreviations**

General: For the purposes of this worksection, the following abbreviations apply:

- AGWA: Australian Glass and Window Association (formerly Australian Window Association (AWA)).
- WERS: Window Energy Rating Scheme.

Edit the **Abbreviations** subclause to suit the project or delete if not required. List alphabetically.

**Definitions**

General: For the purposes of this worksection, the definitions given in AS/NZS 4668 (2000) and the following apply:

- Louvres - continuous: Louvres that run continuously past, and are supported by, concealed framing or brackets.
- Louvres - horizontal: Louvres that span horizontally between frame stiles, mullions or vertical supports.
- Louvres - vertical: Louvres that span vertically between frame heads and sills, or horizontal supports.
- Total system SHGC: Solar heat gain coefficient as defined by the NCC and tested in conformance with NFRC 200 (2023).
- Total system U-Value: Thermal transmittance as defined by the NCC and tested in conformance with NFRC 100 (2023).

Edit the **Definitions** subclause to suit the project or delete if not required. List alphabetically.

**1.7 SUBMISSIONS****Certification**

Conformance: Submit evidence that the louvre windows conform to AS 2047 (2014).

See AS 2047 (2014) clause 8.3.

Protection of openable windows: Submit a certificate of on-site fall prevention testing.

On-site testing may not be required if type tests of window assemblies are available.

### Operation and maintenance manuals

Requirement: Submit manual to **COMPLETION, Operation and maintenance manuals.**

### Products and materials

Type tests: Submit results, as follows:

- Acoustic performance.
- Protection of openable windows.

Edit as required.

Type tests are carried out off-site. However, submission of evidence of a successful type test may be called up here for requirements specified in SELECTIONS or PRODUCTS, when there are no SELECTIONS.

Evidence of delivery: Submit delivery docket as evidence of delivery of [complete/delete]

If evidence of delivery to site is required for particular products, consider including this *Optional* style text by changing to *Normal* style.

### Samples

General: Submit samples of louvre window system components as follows:

- Manufacturer's standard hardware and accessories, including louvre handles, anchor brackets and attachments, masonry anchors and weatherseals (pile or extruded).
- Colour samples of prefinished production materials, showing the limits of the range of variation in the documented colour.
- Frame member profiles and louvre materials.
- Frame member joining techniques.

Glazing: Submit samples of glazing materials, each at least 200 x 200 mm, showing the visual properties and range of variation, if any, for each of the following:

- Tinted or coloured glass.
- Patterned or obscured glass or glazing plastics.

Labelling: Label each sample with the series code reference and date of manufacture.

Edit as required.

### Shop drawings

General: Submit shop drawings to a scale that best describes the detail, showing the following:

- Frame member profiles.
- Hardware, fittings and accessories including fixing details.

If louvre windows are to be fitted with non-standard hardware supplied by others, make sure that the selected louvre window suites can accept the selected hardware. Document hardware in SELECTIONS.

- Junctions and trim to adjoining surfaces.
- Layout (sectional plan and elevation) of the window assembly.
- Methods of installation including fixing, joint sealing and flashing.
- Provision for vertical and horizontal expansion.

### Subcontractors

General: Submit names and contact details of proposed subcontractors endorsed by Safetyline Jalousie.

Evidence of experience: [complete/delete]

Safetyline Jalousie have a fabricator network for supply and installation. Refer to the Safetyline Jalousie website.

Delete if not required.

### Warranties

General: Submit warranties, as documented.

Describe the requirements of warranties in PRODUCTS or EXECUTION, as appropriate, and list the submissions required here.

## 1.8 INSPECTION

### Notice

Inspection: Give notice so that inspection may be made of the following:

- Openings prepared to receive louvre windows.
- Fabricated louvre window assemblies at the factory ready for delivery to the site.
- Fabricated louvre window assemblies delivered to the site, before installation.
- Commencement of louvre window installation.
- Completion of louvre window installation.

Amend to suit the project, adding critical stage inspections required.

Hold points, if required, should be inserted here.

## 2 PRODUCTS

### 2.1 GENERAL

#### Product substitution

Other products: Conform to **SUBSTITUTIONS** in *0171 General requirements*.

**SUBSTITUTIONS** in *0171 General requirements* sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

#### Storage and handling

Storage: Store in a clean, dry area unaffected by weather, to the manufacturer's recommendations. Protect from building materials and loose debris such as wet plaster, mortar, paint and welding splatter.

#### Acoustic performance

Louvre windows: Rating to AS/NZS ISO 717.1 (2004), as documented.

Document the required rating in the **Louvre window performance schedule**.

#### Protection of openable windows

Fall prevention: To BCA (2022) D3D29 and BCA (2022) H5D3.

Testing: To AS 5203 (2016).

Windows supplied as complete sets with security grilles and tested to AS 5041 (2003) are not required to be tested to AS 5203 (2016).

#### Marking

Louvre window assemblies: To AS 2047 (2014) Section 8.

Louvre window assemblies for housing must be labelled to AS 2047 (2014) clause 8.2. Timber louvre window assemblies for housing and louvre window assemblies other than for housing may conform to AS 2047 (2014) clause 8.2 or be provided with a certificate to AS 2047 (2014) clause 8.3.

#### Product identification

General: Marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

Edit the list to suit the project or delete if not required.

### 2.2 LOUVRE WINDOW ASSEMBLIES

#### General

Requirement: Louvre blades mounted in a frame or subframe, able to withstand the ultimate limit state wind pressures for that location without failure or permanent distortion of members, and without louvre blade flutter.

**Adjustable louvres**

Requirement: Louvre blades glazed into louvre bearers, and end caps linked into bars, attached to side jamb together in banks, with each bank operated by an individual operating handle.

Safetyline Jalousie louvres open completely to the outside, opening up to 80° with no interference to blinds and curtains with four different locking positions (three open and one closed) with the standard lever. Other operators that provide differing opening variants are available.

Select from the following Safetyline Jalousie louvre window products and nominate here:

- Glass louvre blades: Mounted in an aluminium blade holder (louvre bearer), fixed on three sides of the blade and hinged at the rear edge of each blade holder at 135 mm centres to the fixed window frame.
- Aluminium louvre blades: Curved 135 mm wide (one piece) blades hinged at the rear edge to the fixed window frame at 135 mm centres.

**Seals: [complete/delete]**

Nominate here type and extent of seals to be provided.

Safetyline Jalousie louvre blades are sealed on all four sides with EPDM gaskets.

**Power operated louvres**

Requirement: Louvres with automated operating mechanisms to suit louvre size, operated with or without remote control.

Louvre controls may be integrated with a building management system.

**2.3 VENTILATING LOUVRE ASSEMBLIES**

This clause refers to louvre assemblies used as part of the mechanical ventilation system. Coordinate with the mechanical consultant. Delete if documented as part of the mechanical services or if not required.

Ventilating louvre assemblies range from panels for insertion into window and door frames to major assemblies for air control and screening of plant, substations, and mechanical air intakes and exhausts.

**General**

Requirement: Louvre blades mounted in a frame or subframe, able to withstand the ultimate design wind pressures for that location, without failure or permanent distortion of members, and without blade flutter.

**Adjustable louvres**

Requirement: Louvre blades clipped into blade holders pivoted to stiles or coupling mullions, linked together in banks, each bank operated by an operating handle incorporating a latching device, or by a locking bar.

**Framed adjustable louvres**

Requirement: Louvre blades beaded into steel blade surround frames (sash), pivoted to pressed steel main frames, linked together in banks, each bank controlled by a proprietary sash operator.

These are proprietary systems for industrial, rural and some commercial applications. The blade frame allows for large louvre sizes.

**Screens**

Requirement: Metallic-coated steel wire, stainless steel or PVC mesh screens behind louvres to prevent the entry of vermin, birds, rodents, and wind-blown leaves and papers.

AS/NZS 3666.1 (2011) clause 2.2.1 requires the prevention of entry of vermin, birds, rodents, and wind-blown matter such as leaves and paper.

**2.4 SCREENS**

Screens are usually installed to the external face of frame. Make sure the louvre assembly is located so that when fully opened the louvre blades are clear of screens and security grilles, or document an appropriate restricted opening to prevent interference between the clips and the screen.

**Fixed screens**

General: Fixed screens fitted to the window frames with a clipping device that allows for removal for cleaning.

**Retractable screens**

General: Proprietary retractable screens, comprising aluminium frames and fibreglass mesh, fitted between the guide channels incorporated in the frames, and a retraction system including tension spring, bearings, positive self-locking device and elastomeric sealing strip at sill.

**Aluminium framed screens**

General: Aluminium extruded sections with mesh fixing channel, mitred, staked and screwed at corners.

Mesh: Bead the mesh into the frame channel with a continuous resilient gasket, so that the mesh is taut and free of distortion.

Safetyline Jalousie provides fixed screens attached to the inside of window frames, these screens may be removed for cleaning. Select from the following mesh types:

- Aluminium.
- Stainless steel.
- Fibreglass.

**Screens in bushfire-prone areas**

Mesh: Type 316 stainless steel mesh, 1 mm thick in 2 x 2 mm woven pattern, fixed taut into aluminium frame to AS 3959 (2018).

Safetyline Jalousie provides fixed insect screens attached to the inside of window frames, these screens may be removed for cleaning. Select from the following mesh types:

- Aluminium.
- Stainless steel.
- Fibreglass.

Refer to AS 3959 (2018) for details of construction requirements associated with the BAL of the site. See NATSPEC TECHnote DES 018 on bushfire protection.

**2.5 SECURITY**

This clause includes security provisions that may be used in combination with security screens.

**Security window grilles**

Requirement: Proprietary metal security grilles fixed to the building structure with tamper resistant fastenings.

Standard: To AS 5039 (2008).

AS 5039 (2008) acknowledges that the security window grilles described are not intruder proof. See the foreword to this standard. The dynamic impact, jemmy, pull, probe shear and knife shear tests scheduled for compliance in AS 5039 (2008) Table 1 are described in AS 5041 (2003).

**Security bars**

General: 8 mm diameter stainless steel rods inserted into the louvre blade holder.

Narrower louvre blades may use narrower window frames, which do not allow louvres to open sufficiently if security bars are installed. Make sure security bars are compatible with the louvre window assembly.

**Key lock**

Requirement: Louvre key lock that locks louvre windows in the closed position.

**2.6 GLAZING****Glazing**

Glass type: [complete/delete]

Refer to the Safetyline Jalousie website and select from the range of Clear, Tinted, Low-E and Satin glass.

Thickness: 6, 6.38 or 6.5 mm annealed, laminated, toughened or toughened and heat soak tested or 6.5 mm vacuum glazed.

**Safety glass**

Standard: To AS/NZS 2208 (1996).

AS/NZS 2208 (1996) includes toughened, laminated, wired and organic-coated glass, and safety glazing plastics. See AS 1288 (2021) Section 5 for the required grade (A or B) for each application.

Certification: Required.

- Certification provider: An organisation accredited by the Joint Accreditation System of Australia and New Zealand (JASANZ).

Marking: To AS 1288 (2021) clause 5.23.

## 2.7 GLAZING MATERIALS

If louvre window assemblies are selected as complete proprietary items, delete this clause.

### General

Requirement: Putty, glazing compounds, sealants, gaskets, glazing tapes, spacing strips, spacing tapes, spacers, setting blocks and compression wedges appropriate for the conditions of application and required performance.

### Jointing materials

Requirement: Provide jointing and pointing materials that are compatible with each other and the contact surfaces, and non-staining to finished surfaces to manufacturer's recommendations. Do not provide bituminous materials on absorbent surfaces.

### Elastomeric sealants

Sealing compounds (polyurethane, polysulfide, acrylic): To ASTM C920 (2018) or ISO 11600 (2002).

Sealing compounds (silicone): To ASTM C920 (2018) or ISO 11600 (2002).

Sealing compounds (butyl): To ASTM C1311 (2022).

## 2.8 ALUMINIUM FRAME FINISHES

Delete finish not required.

### Powder coatings

Standard: To AS 3715 (2002).

Product: [complete/delete]

Product: e.g. AkzoNobel Interpon or Dulux standard powder coatings.

Type: 7 year or 10 year warranty coatings from Interpon and Dulux.

AS 3715 (2002) sets minimum standards for various performance criteria. Consult with manufacturers if variations are proposed.

AkzoNobel Interpon and Dulux offer powder coatings with enhanced protection that carry 10 year, 15 year and 20 year warranties.

Edit as appropriate.

Colour: [complete/delete]

Nominate colour name and code from AkzoNobel Interpon or Dulux powder coatings colour charts

### Anodised

Standard: To AS 1231 (2000).

Thickness: 20 or 25 microns.

25 micron thick anodising, recommended for severe industrial and coastal conditions, can be made available by some suppliers upon request.

Colour: [complete/delete]

Select from the available range of colours by Australian Aluminium Finishing (AAF) or Universal Anodisers.

## 2.9 ANCILLARY COMPONENTS AND FITTINGS

### Fasteners

Requirement: [complete/delete]

Comply with the louvre window manufacturer's recommendations for fastener requirements and AS 2047 (2014) (for residential and commercial buildings) or AS 4055 (2021) (for Class 1 and 10a buildings) for design wind loads.

Allow for the following to suit the fixing substrate:

- For aluminium, use aluminium or 300 series stainless steel fasteners.
- For galvanized steel, use hot-dipped galvanized steel or 300 series stainless steel fasteners.
- For stainless steel, use 300 series stainless steel fasteners.

Size and type: To suit louvre window unit size and wind loading conditions.

### Extruded gaskets and seals

General: Provide seals, as documented.

Location or function: [complete/delete]

Materials: Non-cellular (solid) elastomeric seals as follows:



- Rubber products: Neoprene, ethylene propylene diene monomer (EPDM) or silicone rubber.

BS 4255-1 (1986) provides more specific product requirements for weather resistant rubber gaskets and seals.

- Flexible polyvinyl chloride (PVC): E type compounds, colourfastness grade B.

BS 2571 (1990) provides more specific requirements for PVC E type (extruded) products.

### Flashings

General: Corrosion-resistant, compatible with the other materials in the installation, and coated with a non-staining compound where necessary.

Standard: To AS/NZS 2904 (1995).

### Pile weatherstrips

Standard: To AAMA 701/702 (2023).

AAMA 701/702 (2023) is a guide to selecting pile weatherstrips and weatherseals used in windows and doors. It defines requirements to restrict air and water infiltration.

Location: [complete/delete]

Materials: Polypropylene or equivalent pile and backing, low friction silicone treated, ultraviolet stabilised, fixed to the frame to the manufacturer's recommendations.

## 3 EXECUTION

### 3.1 PRE-INSTALLATION

#### General

Timber reveals: Prime all surfaces of timber reveals that are to be painted before fixing to aluminium frames.

### 3.2 LOUVRE WINDOW ASSEMBLIES

#### General

Requirement: Install louvre windows frames, as follows:

- Plumb, level, straight and true within building tolerances.
- Fixed or anchored to the building structure in conformance with the wind action loading requirements.
- Isolated from any building loads, including loads caused by structural deflection or shortening.
- Allow for thermal movement.

Power operated louvre windows: Make sure power and control signal services are provided at the louvre controls.

#### Glazing

Requirement: Install the glass as follows:

- Permanently fix in place each piece of glass to withstand the normal loadings and ambient conditions at its location without distortion or damage to glass and glazing materials.
- No transfer of building movements to the glass.
- Watertight and airtight for external glass.

Temporary marking: Use a method that does not damage the glass. Remove marking on completion.

Toughened glass: Do not cut, drill, edge-work or permanently mark after toughening. Use installation methods that prevent the glass making direct contact with metals or other non-resilient materials.

Heat absorbing glass: In locations exposed to direct sunlight, provide wheel cut edges free from damage or blemishes, and with minimum feather.

#### Weatherproofing

Flashing and weatherings: Install flashings, weather bars, drips, storm moulds, joint sealant and pointing to prevent water penetrating the building between the window frame and the building structure under the prevailing service conditions, including normal structural movement of the building.

#### Fixing

General: Do not penetrate metal flashings with fixings.

Packing: Pack behind fixing points with durable full width packing.

Fasteners: Conceal fasteners. Use size and type to suit window unit size and wind loading conditions.

Fastener spacing (nominal): 600 mm and maximum 150 mm from reveal ends.

### Joins

General: Make accurately fitted tight joints so that fasteners or fixing devices such as pins, screws, adhesives and pressure indentations are not visible on exposed surfaces.

Sealants:

- If priming is recommended, prime surfaces in contact with jointing materials.
- If frames are powder coated, apply a neutral cure sealant.

### Operation

General: Make sure moving parts operate freely and smoothly, without binding or sticking, at correct tensions or operating forces and are lubricated.

### Protection

Removal: Remove temporary protection measures from the following:

- Contact mating surfaces before joining up.
- Exposed surfaces before completion of the works.

Temporary measures: [complete/delete]

State a particular method here, or delete to leave the choice of method to the contractor. For on-site care, see AS 2047 (2014) Appendix E (Informative).

### Trim

General: Provide mouldings, architraves, reveal linings, and other internal trim using materials and finishes matching the window frames. Install to make neat and clean junctions between frames and the adjoining building surfaces.

## 3.3 VENTILATING LOUVRE ASSEMBLIES

### General

Installation: Screw fix stiles and mullions to the building structure. Provide weatherstrips to heads and sills.

### Expansion joints

Requirement: Provide for expansion and contraction in continuous sections, at spacings not exceeding those recommended by the manufacturer, or 6 m, whichever is the lesser.

Continuous sections include continuous louvres and interlocking mullions.

### Framed adjustable louvres

Installation: Screw fix the main frame to the building structure with monel or stainless steel screws or masonry anchors of the type recommended by the louvre manufacturer.

## 3.4 SECURITY

### Security window grilles

Installation: To AS 5040 (2003).

## 3.5 COMPLETION

### Repair of finish

Polyester or fluoropolymer coatings: Contact supplier for approval to apply touch up products, otherwise replace damaged material.

### Cleaning

Method: Clean with soft clean cloths and clean water, finishing with a clean squeegee. Do not use abrasive or alkaline materials.

Extent: All frames and glass surfaces internally and externally.

### Operation and maintenance manuals

Requirement: Prepare a manual that includes Safetyline Jalousie instructions for operation, care and maintenance.

Refer to the Safetyline Jalousie website for care and maintenance details.

[www.safetylinejalousie.com.au](http://www.safetylinejalousie.com.au)

Compliance with this clause targets the Operations and Maintenance requirement within the Minimum Expectation level of the Verification and Handover credit in Green Star Buildings (2021).

## Warranties

Louvre windows: Provide the manufacturer's published product warranties.

Use only if warranties extending beyond the defects liability period are available for the documented system. Insert the required warranty period and terms, which should be negotiated beforehand. If the warranty is in the form of separate material and installation warranties, require the signatures of both manufacturer and installer.

The form(s) required should be provided as part of the contract documentation.

Warranty: Provide a warranty on [complete/delete]

Form of warranty: [complete/delete]

Minimum period: [complete/delete]

Powder coating: [complete/delete]

Hardware: [complete/delete]

If documenting warranties, change the following *Optional* style text to *Normal* style text.

Form of warranty: e.g. Against failure of materials and operation under normal environment and use conditions.

Minimum period: As offered by the manufacturer. Safetyline Jalousie provides a 6 year warranty for the materials and workmanship of its products. Full details can be found at the Safetyline Jalousie website.

Powder coating: e.g. As offered by the manufacturer for the selected finish.

Hardware: e.g. As offered by the manufacturer.

## 4 SELECTIONS

**Schedules** are a tool to specify properties required for products or systems. If the principal permits documentation of the product or system by proprietary name, some of the properties may be unnecessary and can be deleted. Document the product or system's location or application here and/or on the drawings with a matching project code. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

### 4.1 PERFORMANCE

#### Louvre window performance schedule

	A	B	C
Total system U-Value (W/m <sup>2</sup> .K)			
Total system SHGC			
Airborne sound insulation			
Visible transmittance (T <sub>vis</sub> )			
Reflectance (%)			
WERS Energy rating%: Heating			
WERS Energy rating%: Cooling			
AGWA Glass Compliance Certificate			
AGWA Window Compliance Certificate			
Water penetration resistance (Pa)			
Ultimate limit state (ULS) wind pressure (Pa)			
Serviceability limit state (SLS) wind pressure (Pa)			
Openable (free) area (m <sup>2</sup> )			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Total system U-Value (W/m<sup>2</sup>.K): Insert the thermal transmittance value used for determining NCC conformance and calculated to BCA (2022) Spec 37. These should be obtained from tests to NFRC 100 (2023). Select the product to fulfil design and compliance requirements. See NATSPEC TECHnote DES 015 on NCC energy efficiency.

Total system SHGC: Insert the solar heat gain coefficient value used for determining NCC compliance. These should be obtained from tests to NFRC 200 (2023). Select the product to fulfil design and compliance requirements.

Airborne sound insulation: State the required rating to AS/NZS ISO 717.1 (2004) for either the weighted sound reduction index (R<sub>w</sub>) or weighted sound reduction index with spectrum adaptation (R<sub>w</sub> + C<sub>tr</sub>). This rating is for a building system e.g. partition

wall, of which the building element is only one component. It may be better to provide the rating in the appropriate system schedule. It is advisable to obtain the advice of an acoustic consultant on the selection of an  $R_w$  or  $R_w + C_{tr}$  rating for airborne sound transmission reduction. Refer to NATSPEC TECHnote DES 032 for information.

Visible transmittance ( $T_{vis}$ ): The visible light passing directly through the glass. The higher the  $T_{vis}$ , the more daylight.

Reflectance (%): A maximum value is often a council requirement. Refer to the ABCB Glazing calculator available from [www.abcb.gov.au/resources](http://www.abcb.gov.au/resources). Delete if this requirement is more appropriately covered in the **Glass schedule**.

WERS Energy rating: Star rating system operated by AGWA.

AGWA Glass Compliance Certificate: Insert Required or Not required. The AGWA Glass Compliance Certificate will cover only products that conform to AS 1288 (2021).

AGWA Window Compliance Certificate: Insert Required or Not required. The AGWA Window Compliance Certificate will cover only products that conform to AS 1288 (2021) and AS 2047 (2014).

Water penetration resistance (Pa): e.g. 150 Pa.

Ultimate and serviceability limit state wind pressure (Pa): Nominate the design wind pressures for the project to AS/NZS 1170.2 (2021) (for residential and commercial buildings) or AS 4055 (2021) (for Class 1 and 10a buildings). AS 2047 (2014) Appendix A includes an informative guide to design wind pressure.

Openable (free) area ( $m^2$ ): State the openable area in  $m^2$  to achieve NCC requirements for natural ventilation.

## 4.2 LOUVRE WINDOW ASSEMBLIES

### Louvre window schedule

For a summary and comparison of Safetyline Jalousie window systems and guidance on selecting Safetyline Jalousie louvre window options, refer to the Safetyline Jalousie website.

	A	B	C
Product			
Frame: Material			
Frame: Finish			
Frame: Height and width (mm)			
Louvre blade: Material			
Louvre blade: Finish			
Louvre blade: Height and width (mm)			
Number of galleries (banks)			
Operation: Operator type			
Operation: Handle type			
Screen: Frame material			
Screen: Frame finish			
Screen: Mesh type			
Security window grilles			
Security bars			
Key lock			
Glazing			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Product: e.g. JX Louvre Window with 63 mm extruded aluminium frame.

Frame:

- Material: e.g. Aluminium.
- Finish: e.g. Powder coated, high performance powder coated, anodised.
- Height and width (mm): Nominate the dimensions.

Louvre blade:

- Material: e.g. Curved aluminium, glass. See *Guidance* on **Glazing** below.
- Finish: e.g. Powder coated, High performance powder coated, Anodised. See *Guidance* on glazing below.

- Height and width (mm): Refer to Safetyline Jalousie Standard Heights – Glass Louvres, Standard Heights – Aluminium Louvres tables. Alternative: Note sizes on drawings.

Number of galleries (banks): Indicate number here or show on drawings.

Operation:

- Operator type: e.g. Left Lever, Right Lever, Reversible Turn Handle, Turn Handle.
- Handle type: e.g. Lever, Winder. The number required per window is dependent on the louvre type and width. Refer to the manufacturer's recommendations for the number of lever handles required.

Screen: Document here or cross reference the **Screen schedule**. For bushfire-prone areas, refer to AS 3959 (2018) for details of construction requirements associated with the BAL of the site. AS 3959 (2018) calls for screens of aluminium, corrosion-resistant steel or bronze with a maximum aperture of 2 mm to buildings assessed as being in a BAL-12.5, BAL-19 or BAL-29 zone and corrosion-resistant steel or bronze in buildings assessed as being in a BAL-40 or BAL-FZ zone. Fibreglass mesh is excluded in all bushfire areas. Document bushfire shutters in *0457 External screens*. See NATSPEC TECHnote DES 018 on bushfire protection.

- Frame material: e.g. Aluminium, Timber or PVC-U.
- Frame finish: e.g. Powder coat, Anodised, Paint, Clear finish, No applied finish.
- Mesh type: e.g. Coated aluminium, Fibreglass, Corrosion-resistant steel or Bronze.

Security window grilles: Nominate material and finish. Document here or cross reference the **Security window grille schedule**. Delete if not required.

Security bars: e.g. 8 mm diameter stainless steel rods. Delete if not required.

Key lock: Nominate finish and location. Delete if not required.

Glazing: Document the glazing type and thickness in this schedule or cross reference the **Glass schedule**. Documenting glazing in this schedule is suitable for projects where the same glass is used for each window or glazed door type. It can be documented by description, e.g. 6.38 mm clear laminated glass, or by reference to a designated glass type in the **Glass schedule**. The latter approach may be more appropriate for projects with a large number of glazing types, or glazing that requires more detailed specification. Refer to the *Guidance* for the **Glass schedule** and NATSPEC TECHnote PRO 006 for guidance on glass types. Safetyline Jalousie can provide any Viridian glass, providing the thickness is either 6 mm or 6.38 mm.

### Power operated louvre window schedule

For a summary and comparison of Safetyline Jalousie window systems and guidance on selecting Safetyline Jalousie louvre window options, refer to the Safetyline Jalousie website.

	A	B	C
Product			
Frame: Material			
Frame: Finish			
Frame: Height and width (mm)			
Motor mounting			
Louvre blade: Material			
Louvre blade: Finish			
Louvre blade: Height and width (mm)			
Number of galleries (banks)			
Operation			
Motor mounting			
Screen: Frame material			
Screen: Frame finish			
Screen: Mesh type			
Security window grilles			
Security bars			
Glazing			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Product: e.g. JX Louvre Window with 63 mm extruded aluminium frame.

Frame:

- Material: e.g. Aluminium.
- Finish: e.g. Powder coated, high performance powder coated, anodised.
- Height and width (mm): Nominate the dimensions.

Louvre blade:

- Material: e.g. Curved aluminium, glass. See *Guidance* on glazing below.
- Finish: e.g. Powder coated, High performance powder coated, Anodised. See *Guidance* on glazing below.
- Height and width (mm): e.g. Blade height of 135 mm. Refer to Safetyline Jalousie Standard Heights – Glass Louvres, Standard Heights – Aluminium Louvres tables. Alternative: Note sizes on drawings.

Number of galleries (banks): Refer to Safetyline Jalousie Standard Heights – Glass Louvres, Standard Heights – Aluminium Louvres tables. Alternative: Indicate number on drawings.

Operation: e.g. Wall switches, remote controls, control by sensor, integration with building management systems (central building control panel).

Motor mounting: e.g. Externally mounted on the frame or Concealed within the frame.

Screen: Document here or cross reference the **Screen schedule**. For bushfire-prone areas, refer to AS 3959 (2018) for details of construction requirements associated with the BAL of the site. AS 3959 (2018) calls for screens of aluminium, corrosion-resistant steel or bronze with a maximum aperture of 2 mm to buildings assessed as being in a BAL-12.5, BAL-19 or BAL-29 zone and corrosion-resistant steel or bronze in buildings assessed as being in a BAL-40 or BAL-FZ zone. Fibreglass mesh is excluded in all bushfire areas. See NATSPEC TECHnote DES 018 on bushfire protection.

- Frame material: e.g. Aluminium, Timber or PVC-U.
- Frame finish: e.g. Powder coat, Anodised, Paint, Clear finish, No applied finish.
- Mesh type: e.g. Coated aluminium, Fibreglass, Corrosion-resistant steel or Bronze.

Security window grilles: Nominate material and finish. Document here or cross reference the **Security window grille schedule**. Delete if not required.

Security bars: e.g. 8 mm diameter stainless steel rods. Delete if not required.

Glazing: Document the glazing type and thickness in this schedule or cross reference the **Glass schedule**. Documenting glazing in this schedule is suitable for projects where the same glass is used for each window type. It can be documented by description, e.g. 6.38 mm clear laminated glass, or by reference to a designated glass type in the **Glass schedule**. The latter approach may be more appropriate for projects with a large number of glazing types, or glazing that requires more detailed specification. Refer to the *Guidance* for the **Glass schedule** and NATSPEC TECHnote PRO 006 for guidance on glass types. Safetyline Jalousie can provide any Viridian glass, providing the thickness is either 6 mm or 6.38 mm.

### 4.3 VENTILATING LOUVRE ASSEMBLIES

If the louvres are connected to the air conditioning or ventilation system, obtain the value required for the maximum pressure drop at 2.0 m/s face velocity from the consultant and include as a performance requirement.

#### Ventilating louvre assembly schedule

	A	B	C
Product			
Type			
Frame: Material			
Frame: Finish			
Frame: Height and width (mm)			
Louvre blade: Material			
Louvre blade: Profile			
Louvre blade: Finish			
Louvre blade: Height and width (mm)			
Operation			
Hardware			
Screen: Frame material			
Screen: Frame finish			
Screen: Mesh type			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Product: Delete if the selection is by generic performance.

Type: e.g. Horizontal, Continuous horizontal, Vertical.

Frame:

- Material: e.g. Aluminium, Timber.
- Finish: e.g. Powder coat, Anodised, Paint, Clear finish, No applied finish. Coordinate paint finishes using paint type designation from *0671 Painting*.
- Height and width (mm): Nominate the dimensions.

Louvre blade:

- Material: e.g. Aluminium, Timber.
- Profile: e.g. Z, throated, 1-stage, 2-stage.
- Finish: e.g. Powder coat, Anodised, Paint, Clear finish, No applied finish. Coordinate paint finishes using paint type designation from *0671 Painting*.
- Height and width (mm): Nominate the dimensions.

Operation: e.g. Fixed, Operable.

Hardware: Select proprietary or nominate hardware if not supplied as part of the louvre window assembly. Coordinate with your hardware schedule.

Screen: AS/NZS 3666.1 (2011) clause 2.2.1 requires the provision of screens behind air intake louvres. Document here or cross reference the **Screen schedule**.

- Frame material: e.g. Aluminium, Timber or PVC-U.
- Frame finish: e.g. Powder coat, Anodised, Paint, Clear finish, No applied finish.
- Mesh type: e.g. Coated aluminium, Fibreglass, Corrosion-resistant steel or Bronze.

#### 4.4 SCREENS

##### Screen schedule

	A	B	C
Product			
Type			
Frame material			
Frame finish			
Mesh type			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Product: Safetyline Jalousie louvre windows.

Type: e.g. Flyscreen, Fall prevention screen, Bushfire screen. See BCA (2022) D3D29 and BCA (2022) H5D3 for openable windows requiring fall prevention devices, screens or barriers.

Frame material: e.g. Aluminium.

Frame finish: e.g. Powder coat, Anodised.

Mesh type: e.g. Aluminium, Fibreglass, or Stainless steel. Document here or in the **Louvre window schedule, Power operated louvre window schedule** or **Ventilating louvre assembly schedule**. For bushfire-prone areas, refer to AS 3959 (2018) for details of construction requirements associated with the BAL of the site. AS 3959 (2018) calls for screens of aluminium, corrosion-resistant steel or bronze with a maximum aperture of 2 mm to buildings assessed as being in a BAL-12.5, BAL-19 or BAL-29 zone and corrosion-resistant steel or bronze in buildings assessed as being in a BAL-40 or BAL-FZ zone. Fibreglass mesh is excluded in all bushfire areas. Document bushfire shutters in *0457 External screens*. See NATSPEC TECHnote DES 018 on bushfire protection.

#### 4.5 SECURITY

##### Security window grille schedule

	A	B	C
Product			
Type to AS 5039 (2008)			

	A	B	C
Material			
Finish			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Product: Delete if the selection is by generic performance.

Type to AS 5039 (2008): AS 5039 (2008) clause 5.2 describes the three window screen security classification types as follows:

- Type I prevents an arm from passing through.
- Type II allows an arm to pass through but prevents bodily entry.
- Type III prevents insects passing through.

Material: e.g. Steel, Stainless steel or Aluminium.

Finish: See AS 5039 (2008) clause 6.2 for corrosion protection finishes.

## 4.6 GLAZING

### Glass schedule

	A	B	C
Glass type			
Glass thickness (mm)			
Body tint colour			
Interlayer colour			
Surface coating: Description			
Surface coating: Colour			
Reflective coating: Colour			
Reflective coating: % reflectance			
Surface pattern			
Surface processing: Method			
Surface processing: Pattern			
Surface processing: Colour			
Edge processing			
Number of edges processed			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

This schedule can be used for projects where a large number of different glass types are used or if the glazing requires more detailed specification than it is appropriate to include in the **Louvre window schedule**. If this schedule is used, coordinate with the **Louvre window schedule** so that each glass type is associated with the relevant louvre window.

Glass type: Refer to NATSPEC TECHnote PRO 006 for guidance on glass types.

Glass thickness (mm): It is generally not necessary to document thickness. Nominate a thickness if:

- The glass is to be thicker than required by AS 1288 (2021) or applicable regulations.
- There are unusual conditions requiring detailed calculations for which the designer should be responsible.

In other cases, the determination of thickness is usually within the competence of the glazing contractor.

Body tint colour: e.g. Grey, Bronze, Green, Blue. Consult the manufacturer for colours available. Do not use body tinted wired glass (cast or polished) in locations exposed to the sun; fracture may result.

Interlayer colour: For laminated glasses only. Consult the manufacturer for colours available.

Surface coating:

- Description: Describe by coating function, e.g. Solar control, Low emission, Self-cleaning or Decorative, or by coating type, e.g. Pyrolytic hard coating, Vacuum sputtered or Ceramic. Coatings are best described by the manufacturer's brand name. Self-cleaning surface coatings are coatings applied to glazing that dissolve dirt (photoactive) and shed water (hydrophilic) using natural UV light and rain.
- Colour: e.g. Grey, Bronze, Green, Blue. Consult the manufacturer for colours available.



## Reflective coating:

- Colour: e.g. Silver, Gold, Bronze. Consult the manufacturer for colours available. Reflective coatings may be available on either clear or body tinted float. Consult manufacturer.
- % reflectance: Consult the manufacturer for reflectances available. Delete if this requirement is more appropriately covered in the **Louvre window performance schedule**. The manufacturer's brand name is often the best way to identify tinted, reflective, and patterned glasses.

Surface pattern: For patterned glass only. Proprietary patterns are best described by the manufacturer's brand name. Patterns include diffuse reflection (picture glass).

## Surface processing:

- Method: e.g. Screen printing with ceramic paint fused to the surface, Sandblasting, Acid etching.
- Pattern: Proprietary patterns are best described by the manufacturer's brand name.
- Colour: Applicable to screen printed patterns only.

Edge processing: Maximum width varies with thickness. Wired glass is restricted to rough arrised edges. Consult with processor. Refer also to NATSPEC TECHnote PRO 006 for more information on this topic. Common edge types and typical applications for each edge type are:

- None (clean cut, no processing).
- Flat ground: Silicone structural glazing with exposed edges.
- Flat polished: Silicone structural glazing where edge condition is critical for aesthetic purposes.
- Ground pencil edge: Mirrors, decorative furniture glass.
- Polished pencil edge: Mirrors, decorative furniture glass.
- Ground mitre: Silicone structural glazing.
- Bevelled: Mirrors, decorative furniture glass.
- Seamed edges: Normal edge treatment for heat-treated glass.

Number of edges processed: e.g. 1 long, 2 long, All.

**REFERENCED DOCUMENTS****The following documents are incorporated into this worksection by reference:**

AS ISO 717		Acoustics - Rating of sound insulation in buildings and of building elements
AS/NZS ISO 717.1	2004	Airborne sound insulation
AS 1231	2000	Aluminium and aluminium alloys - Anodic oxidation coatings
AS 1288	2021	Glass in buildings - Selection and installation
AS 2047	2014	Windows and external glazed doors in buildings
AS/NZS 2208	1996	Safety glazing materials in buildings
AS/NZS 2904	1995	Damp-proof courses and flashings
AS 3715	2002	Metal finishing - Thermoset powder coating for architectural applications of aluminium and aluminium alloys
AS 3959	2018	Construction of buildings in bushfire-prone areas
AS/NZS 4667	2000	Quality requirements for cut-to-size and processed glass
AS/NZS 4668	2000	Glossary of terms used in the glass and glazing industry
AS 5039	2008	Security screen doors and security window grilles
AS 5040	2003	Installation of security screen doors and window grilles
AS 5203	2016	Protection of openable windows/ fall prevention – Test sequence and compliance method
BCA D3D29	2022	Access and egress - Construction of exits - Protection of openable windows
BCA H5D3	2022	Class 1 and 10 buildings - Safe movement and access - Barriers and handrails
AAMA 701/702	2023	Performance specification for pile weatherstrips (AAMA 701) and polymer weatherseals (AAMA 702)
ASTM C920	2018	Standard specification for elastomeric joint sealants
ASTM C1311	2022	Standard specification for solvent release sealants
NFRC 100	2023	Procedure for determining fenestration product U-factors
NFRC 200	2023	Procedure for determining fenestration product solar heat gain coefficient and visible transmittance at normal incidence
ISO 11600	2002	Building construction - Jointing products - Classification and requirements for sealants

**The following documents are mentioned only in the Guidance text:**

AS/NZS 1170		Structural design actions
AS/NZS 1170.2	2021	Wind actions
AS/NZS 3666		Air-handling and water systems of buildings - Microbial control
AS/NZS 3666.1	2011	Design, installation and commissioning
AS 4055	2021	Wind loads for housing
AS 5041	2003	Methods of test - Security screen doors and window grilles
BCA Spec 37	2022	Energy efficiency - Calculation of U-Value and solar admittance
GBCA Buildings	2021	Green Star Buildings
NATSPEC DES 015		NCC - BCA Volume One Energy efficiency provisions
NATSPEC DES 018		Bushfire protection
NATSPEC DES 032		Airborne sound insulation

NATSPEC GEN 006		Product specifying and substitution
NATSPEC GEN 024		Using NATSPEC selections schedules
NATSPEC PRO 006		Glass types used in buildings
NATSPEC TR 01		Specifying ESD
BS 2571	1990	Specification for general-purpose flexible PVC compounds for moulding and extrusion
BS 4255		Rubber used in preformed gaskets for weather exclusion from buildings
BS 4255-1	1986	Specification for non-cellular gaskets