

0458P TORMAX AUTOMATIC DOORS**Branded worksection**

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Worksection abstract

This branded worksection *Template* is applicable to automatic swing, sliding and folding pedestrian doors with TORMAX drivers and motion/presence sensor control devices provided as complete systems, and TORMAX automatic revolving doors.

Guidance text

All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This *Guidance* text may be hidden or deleted from the document using the NATSPEC Toolbar or the hidden text *Hide* and *Delete* functions of your word processing system. For additional information visit FAQs at www.natspec.com.au.

Optional style text

Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into *Normal* style text where it is applicable to a project.

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:

- *0451 Windows and glazed doors.*
- *0453 Doors and access panels.*
- *0455 Door hardware* for drives which are fixed to existing doors.

Documenting this and related work

You may document this and related work as follows:

- Coordinate aluminium finishes with *0451 Windows and glazed doors.*
- Note dimensions, locations and elevation on drawings and a door schedule to you documentation policy.
- Coordinate with electrical worksections.

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

1 GENERAL

TORMAX is one of the world's leading manufacturers of automatic doors. In 1951, the founders of the company, head-quartered in Bulach Switzerland, installed Europe's first electro-hydraulic swing door in Davos, Switzerland. The drive is still in use today, 60 years later. "Peak performance for life-long contented customers".

TORMAX Australia has Australia's largest range of sliding, swing, folding and revolving doors and have been successfully installing TORMAX drive systems throughout Australia for over 30 years.

1.1 RESPONSIBILITIES**General**

Requirement: Provide TORMAX automatic doors including door panels and sidelights, operator, motion/presence sensor control device and hardware, as documented.

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

1.2 COMPANY CONTACTS**TORMAX technical contacts**

Website: www.tormax.com.au

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

Automatic doors: To AS 5007.

AS 5007 clause 3.1.2 requires the specifier to consult with the doorset manufacturer to select the correct equipment for anticipated usage. Other design issues include the avoidance of congestion, entrapment, minimisation of slips and trips and access for maintenance.

1.5 MANUFACTURER'S DOCUMENTS

Technical manuals

General: www.tormax.com.au/en

Downloads: www.tormax.com.au

1.6 SUBMISSIONS

Products and materials

Requirement: Submit TORMAX product data, including description of materials, components, fabrication, finishes and installation.

Operation and maintenance manuals

Automatic door operators: Submit the installer's proposal for continuing maintenance after completion on an annual renewal basis.

Spare parts: Submit spare parts list.

Samples

Requirement: Submit samples of the door system as follows:

- Colour samples of prefinished production material (e.g. anodised or organic coated extrusions and sheet) showing the limits of the range of variation of the selected colour.
- Joints made by proposed techniques.
- Section proposed to be used for frames and sashes.
- Label each sample, giving the series code reference and date of manufacture.

Shop drawings

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

- Full size sections of members.
- Hardware, fittings and accessories including fixing details.
- Junctions and trim to adjoining surfaces.
- Layout (sectional plan and elevation) of the window assembly.
- Lubrication requirements.
- Methods of assembly.
- Methods of installation, including fixing, caulking and flashing.

See BCA 3.12.3 and BCA J3.4 for the sealing of windows and doors.

- Provision for vertical and horizontal expansion.
- Method of glazing, including the following:
 - . Rebate depth.
 - . Edge restraint.
 - . Clearances and tolerances.
 - . Glazing gaskets and sealant beads.

Subcontractors

Requirement: Submit names and details of proposed TORMAX approved manufacturer and installer.

Contact TORMAX for details of approved installers. Revolving doors are installed by TORMAX only.

Tests

Requirement: Submit report on site acceptance test and inspection.

Test and associated report is required by AS 5007.

Warranties

General: Submit TORMAX's published product warranties.

TORMAX provide 2 years warranty on parts and 1 year on labour.

1.7 INSPECTION

Notice

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

- Openings prepared to receive door system (where door systems are to be installed in prepared openings).
- Fabricated door system assemblies at the factory ready for delivery to the site.
- Fabricated door system assemblies delivered to the site, before installation.
- Commencement of door system installation.
- Completion of door system 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 PRODUCTS, **GENERAL, Substitutions** in *0171 General requirements*.

The *0171 General requirements* clause 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

Requirement: To the manufacturer's recommendations.

Product identification

General: To AS 5007 Section 6.

2.2 TORMAX SWING DOOR SYSTEMS

General

Requirement: TORMAX automatic swing door drives which are suitable for the door type, size and weight as required to suit the site operating conditions, including wind pressure.

Hold open delay time is adjustable. Schedule required hold open delay time.

TORMAX 1201

Articulated arm drive system: Electromechanical swing door operator with DC motor, extensible with modules, spring activated closing or opening.

Application: Suitable for interior and exterior doors up to 250kg, dependent on leaf size and environmental conditions. Can be combined for double leaf doors, airlocks, escape and emergency exit doors, networked doors.

The BCA D2.19 sets out requirements for doorways serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building.

Doors fitted with a TORMAX 1201 drive can be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.

Doors fitted with a TORMAX 1201 with battery back-up can open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.

iMotion 1301

Articulated arm drive system: Electromechanical swing door operator with AC permanent magnet, synchronous motor and additional spring for currentless resetting.

Application: Suitable for interior and exterior doors up to 650kg (including the S model), dependent on leaf size and environmental conditions. Can be combined for double leaf doors, airlocks, escape and emergency exit doors, networked doors. The BCA D2.19 sets out requirements for doorways serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building.

Doors fitted with a TORMAX iMotion 1301 drive can be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.

Doors fitted with a TORMAX iMotion 1301 with battery back-up can open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.

iMotion 1302.KI

Top hung pivot drive system: Electromechanical swing door operator with AC permanent magnet synchronous motor and additional spring for currentless resetting.

Application: Suitable for interior doors up to 125kg dependent on leaf size. Can be combined for double leaf doors, airlocks, escape and emergency exit doors, networked doors.

iMotion 1401

In floor drive system: Electromechanical swing door operator with AC permanent magnet synchronous motor and additional spring for currentless resetting.

Application: Suitable for interior and exterior doors up to and over 450kg in custom installations. dependent on leaf size and environmental conditions. Can be combined for double leaf doors, airlocks, escape and emergency exit doors, networked doors. The BCA D2.19 sets out requirements for doorways serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building.

Doors fitted with a TORMAX iMotion 1401 drive can be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.

Doors fitted with a TORMAX iMotion 1401 with battery back-up can open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.

2.3 TORMAX SLIDING DOOR DRIVES

General

Requirement: TORMAX automatic sliding door operators which are suitable for the door type, size and weight as required to suit the site operating conditions, including wind pressure.

iMotion 2202

Drive system: Electromechanical sliding door operator with AC synchronous motor.

Application: External and internal single leaf or double leaf doors in linear, telescopic, and frameless configurations. Standard with battery backup and 8 programmable inputs.

Weight for door leaves:

- Single: 130 kg.
- Bi-parting: 120 kg.
- Telescopic: 80 kg.

iMotion 2302

Drive system: Electromechanical sliding door operator with direct drive through AC permanent magnet synchronous motor.

Application: External and internal single leaf or double leaf doors in linear, telescopic, and frameless configurations. Standard with battery backup and 8 programmable inputs.

Weight for door leaves:

- Single: 200 kg.
- Bi-parting: 180 kg.
- Telescopic: 100 kg.

iMotion 2401

Drive system: Electromechanical sliding door operator with direct drive through AC permanent magnet synchronous motor.

Application: External and internal single leaf or double leaf doors in linear, telescopic, and frameless configurations. Standard with battery backup and 8 programmable inputs.

Weight for door leaves:

- Single: 400 kg. In custom installations far greater weights can be achieved.

- Bi-parting: 300 kg. In custom installations far greater weights can be achieved.
- Telescopic: 120 kg. In custom installations far greater weights can be achieved.

2.4 TORMAX FOLDING DOORS

General

Requirement: TORMAX automatic folding door operators which are suitable for the door type, size and weight as required to suit the site operating conditions, including wind pressure.

FOLDDOOR System TOP

Description: Aluminium folding door system with electromechanical drive unit, built into a self-supporting aluminium header profile.

Application: Internal uses where sliding and swing doors are not suitable due to lack of space. Suitable for opening widths from 800 mm to 1400 mm.

2.5 TORMAX REVOLVING DOOR SYSTEMS

General

Requirement: TORMAX automatic revolving door operators which are suitable for the door type, size and weight as required to suit the site operating conditions, including wind pressure.

REVOLVEDOOR Universal Drive 5201

Description: Revolving door drive system with heavy duty AC asynchronous motor with frequency inverter and microprocessor controller.

Application: Internal and external revolving doors with 2, 3 or 4 wings e.g shopping centres, restaurants, hotels, office buildings, hospitals. Under BCA D2.19, revolving doors are not permitted for doorways serving as a required exit, or forming part of a required exit or a doorway in a patient care area of a Class 9a health-care building.

2.6 ALUMINIUM DOORS AND FRAMES

General

Requirement: Construct door panels from extruded aluminium profiles, as documented.

Standards

Flashings: To AS/NZS 2904.

Aluminium extrusions: To AS/NZS 1866.

2.7 ALUMINIUM FRAME FINISHES

Powder coatings

Standard: To AS 3715.

Anodised

Standard: To AS 1231.

Thickness: ≥ 15 microns to 20 microns.

25 micron thick anodising, recommended for severe conditions, can be made available by some suppliers on request.

2.8 GLASS

Glazing

Glass type and thickness: To AS 1288, where no glass type or thickness is given.

For glass type and thickness refer to AS 1288 Table 4.1 and to AS/NZS 4667.

Glass thickness may be governed by human safety and other requirements – see AS 1288 Sections 5. The commonly available thicknesses of various glasses are shown on the wind pressure figures of AS 1288 Section 4.

Nominate a thickness if:

- The glass is to be thicker than required by AS 1288 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 wind loading, the design wind pressure needs to be known in order to interpret the figures and tables of glass sizes and thicknesses in AS 1288.

Design wind pressure: To AS/NZS 1170.2 or AS 4055 as appropriate.

Materials and installation: To AS 1288.

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

Terminology for work on glass: To AS/NZS 4668.

Safety glasses

Standard: To AS/NZS 2208.

AS/NZS 2208 includes toughened, laminated, wired and organic-coated glass, and safety glazing plastics. The required grade (A or B) is specified in AS 1288 Section 5 for each application.

See AS/NZS 2208 Section 2 for dimensional specifications and AS/NZS 2208 Table 2.3 for overall bow and warpage.

Roller wave distortion (not in the standard) is a consequence of heat treating glass and may be more noticeable in some applications. Consult the manufacturer for more information on tolerances.

Certification: Required.

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

Type: Grade A to AS 1288.

3 EXECUTION

3.1 PREPARATION

General

Requirement: Before installation, check for the following:

- Openings to receive frames are plumb, level and square.
- Required support has been provided at operator header.
- Floor is level and smooth.

3.2 INSTALLATION

General

Requirement: Install doors to the TORMAX's recommendations using TORMAX approved installers.

Glazing

General: 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 which does not harm the glass. Remove marking on completion.

Toughened glass: Do not cut, work, or permanently mark after toughening. Use installation methods which 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, with minimum feather.

Specify particular installation methods and detailed performance testing requirements for water and airtightness.

Preglazing

Glazed doors: Supply inclusive of glazing, shop preglazed.

Door frames

General: Install door 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.

Weatherproofing

Requirement: Install flashings and sealants so that water is prevented from penetrating the building between the door frame and the building structure under the prevailing service conditions, including normal structural movement of the building.

Fixing

Fasteners and fastener spacing: To TORMAX's recommendations.

Fasteners: Conceal fasteners.

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

Joists

General: Make accurately fitted tight joints so that neither fasteners nor fixing including screws, adhesives and pressure indentations are 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.

Repair of finish

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

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 TESTING

0171 General requirements covers progressive, site and completion tests in **Definitions** and calls for an inspection and testing plan under **SUBMISSIONS, Tests**.

Completion tests

Site acceptance test and inspection: To AS 5007 Section 5.

3.4 COMPLETION

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 inside and out.

Keys

Contractor's keys: Immediately before practical completion, replace or reset cylinders to which the contractor has had key access during construction and exclude the contractor's keys.

Site acceptance

Standard: To AS 5007 Appendix E.

Warranties

Requirement: Cover materials and workmanship in the terms of the warranty in the form of interlocking warranties from the manufacturer and installer.

Form: Against failure of materials and execution under normal environment and use conditions.

Extent of interlocking warranty: [complete/delete]

3.5 MAINTENANCE

General

Standard: To AS 5007 Appendix E.

General: Maintain and adjust the automatic door system throughout the defects liability period.

4 SELECTIONS

Schedules are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 TORMAX AUTOMATIC DOORS

TORMAX automatic swing doorset schedule

Property	A	B	C
Pedestrian traffic			
Door configuration			
Drive type			
Drive location			
Motion sensor control device			
Proprietary door suite			
Aluminium frame finish			
Powder coating: Service condition category			
Powder coating: Coating performance			
Powder coating: Coating type			
Powder coating: Polyester coating grade			
Powder coating: Product			
Powder coating: Gloss level			
Colour			
Fire resistance level (FRL)			
Design wind pressure (Pa)			
Lock type			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

Pedestrian traffic: e.g Light, Medium or Heavy.

Door configuration: Select from Single leaf or Double leaf.

Drive type: Consult with TORMAX and select from the following swing automatic operators:

- TORMAX 1201.
- iMotion 1301.
- iMotion 1302.KI.
- iMotion 1401.

Drive location: e.g. Overhead-concealed or Surface-applied.

Motion sensor control device: TORMAX offer a range of combined safety and activation sensors, and safety sensors. Consult with TORMAX on the appropriate solution for the project.

Proprietary suite: Nominate proprietary window and glazed door suite if applicable.

Aluminium frame finish: e.g. Powder coat or Anodised.

Powder coating

Service condition category: AS 3715 clause 1.4 describes service condition categories for powder coated aluminium architectural applications based on the severity of the environment. Select from the following atmospheric environments:

- Category 3 – Exterior mild to moderate.
- Category 4 – Tropical.
- Category 5 – Exterior severe.

Categories 1 and 2, applicable to interior environments, are not included in this standard. See also NATSPEC TECHnote DES 010 on atmospheric corrosivity categories for ferrous products.

Coating performance: The American Architectural Manufacturers Association's (AAMA) standards represent the various warranty performances available and should be selected appropriate to the class of the project and the application. Select from:

- To AAMA 2604. Applicable to all classes of the NCC.
- To AAMA 2605. Applicable to all classes of the NCC.

Coating type: Thermoset polyester powder coating or Thermoset fluoropolymer powder coating.

Polyester coating grade: General or Commercial. Delete if using fluoropolymer powder coating.

Product: Contact the manufacturer's data sheets for a complete product description.

Gloss level: e.g. Texture, Matt, Satin or Gloss. Not all gloss levels are available across the colour ranges

Colour: Consult the manufacturer's colour charts.

Fire resistance level (FRL): State the required level to AS 1530.4, delete or state 'not applicable'. TORMAX 1102 and TORMAX 1201 have been tested to AS 1530.4 and positively assessed.

Design wind pressure: Nominate the design wind pressure for the project to AS/NZS 1170.2 as required by the supplier.

TORMAX automatic sliding doorset schedule

Property	A	B	C
Pedestrian traffic			
Door configuration			
Drive type			
Drive location			
Motion sensor control device			
Proprietary door suite			
Aluminium frame finish			
Powder coating: Service condition category			
Powder coating: Coating performance			
Powder coating: Coating type			
Powder coating: Polyester coating grade			
Powder coating: Product			
Powder coating: Gloss level			
Colour			
Design wind pressure (Pa)			
Lock type			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

Pedestrian traffic: e.g. Light, Medium or Heavy.

Door configuration: Select from Single slide, Bi-part slide or Telescopic slide.

Drive type: Consult with TORMAX and select from the following sliding automatic operators:

- iMotion 2202.
- iMotion 2302.
- iMotion 2401.

Drive location: e.g. Overhead-concealed or Surface-applied.

Motion sensor control device: TORMAX offer a range of combined safety and activation sensors, and safety sensors. Consult with TORMAX on the appropriate solution for the project.

Proprietary suite: Nominate proprietary window and glazed door suite if applicable.

Generic description: e.g. Single or double leaf, Linear, telescopic, and frameless configuration.

Aluminium frame finish: e.g. Powder coat or anodised.

Powder coating

Service condition category: AS 3715 clause 1.4 describes service condition categories for powder coated aluminium architectural applications based on the severity of the environment. Select from the following atmospheric environments:

- Category 3 – Exterior mild to moderate.
- Category 4 – Tropical.
- Category 5 – Exterior severe.

Categories 1 and 2, applicable to interior environments, are not included in this standard. See also NATSPEC TECHnote DES 010 on atmospheric corrosivity categories for ferrous products.

Coating performance: The American Architectural Manufacturers Association's (AAMA) standards represent the various warranty performances available and should be selected appropriate to the class of the project and the application. Select from:

- To AAMA 2604. Applicable to all classes of the NCC.
- To AAMA 2605. Applicable to all classes of the NCC.

Coating type: Thermoset polyester powder coating or Thermoset fluoropolymer powder coating.

Polyester coating grade: General or Commercial. Delete if using fluoropolymer powder coating.

Product: Contact the manufacturer's data sheets for a complete product description.

Gloss level: e.g. Texture, Matt, Satin or Gloss. Not all gloss levels are available across the colour ranges

Colour: Consult the manufacturer's colour charts.

Design wind pressure: Nominate the design wind pressure for the project to AS/NZS 1170.2 as required by the supplier.

TORMAX automatic folding doorset schedule

Property	A	B	C
Pedestrian traffic			
Door configuration			
Drive type			
Drive location			
Motion sensor control device			
Proprietary door suite			
Aluminium frame finish			
Powder coating: Service condition category			
Powder coating: Coating performance			
Powder coating: Coating type			
Powder coating: Polyester coating grade			
Powder coating: Product			
Powder coating: Gloss level			
Colour			
Design wind pressure (Pa)			
Lock type			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

Pedestrian traffic: e.g Light, Medium or Heavy.

Door configuration: Select from Single fold or Bi-part fold.

Drive type: FOLDDOOR System TOP.

Drive location: e.g. Overhead-concealed .

Motion sensor control device: TORMAX offer a range of combined safety and activation sensors, and safety sensors. Consult with TORMAX on the appropriate solution for the project.

Proprietary suite: Nominate proprietary window and glazed door suite if applicable.

Generic description: e.g. Single or double leaf, Linear, telescopic, and frameless configuration.

Aluminium frame finish: e.g. Powder coat or anodised.

Powder coating

Service condition category: AS 3715 clause 1.4 describes service condition categories for powder coated aluminium architectural applications based on the severity of the environment. Select from the following atmospheric environments:

- Category 3 – Exterior mild to moderate.
- Category 4 – Tropical.
- Category 5 – Exterior severe.

Categories 1 and 2, applicable to interior environments, are not included in this standard. See also NATSPEC TECHnote DES 010 on atmospheric corrosivity categories for ferrous products.

Coating performance: The American Architectural Manufacturers Association's (AAMA) standards represent the various warranty performances available and should be selected appropriate to the class of the project and the application. Select from:

- To AAMA 2604. Applicable to all classes of the NCC.
- To AAMA 2605. Applicable to all classes of the NCC.

Coating type: Thermoset polyester powder coating or Thermoset fluoropolymer powder coating.

Polyester coating grade: General or Commercial. Delete if using fluoropolymer powder coating.

Product: Contact the manufacturer's data sheets for a complete product description.

Gloss level: e.g. Texture, Matt, Satin or Gloss. Not all gloss levels are available across the colour ranges

Colour: Consult the manufacturer's colour charts.

Design wind pressure: Nominate the design wind pressure for the project to AS/NZS 1170.2 as required by the supplier.

TORMAX automatic revolving doorset schedule

Property	A	B	C
Pedestrian traffic			
Door configuration			
Drive type			
Drive location			
Motion sensor control device			
Proprietary door suite			
Aluminium frame finish			
Powder coating: Service condition category			
Powder coating: Coating performance			
Powder coating: Coating type			
Powder coating: Polyester coating grade			
Powder coating: Product			
Powder coating: Gloss			

Property	A	B	C
level			
Colour			
Design wind pressure (Pa)			
Lock type			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

Pedestrian traffic: e.g Light, Medium or Heavy.

Door configuration: Select from Four-wing, Three-wing and Two-wing.

Drive type: REVOLVEDOOR Universal Drive 5201.

Drive location: e.g. Pit or Canopy.

Motion sensor control device: TORMAX offer a range of combined safety and activation sensors, and safety sensors. Consult with TORMAX on the appropriate solution for the project.

Proprietary suite: Nominate proprietary window and glazed door suite if applicable.

Aluminium frame finish: e.g. Powder coat or anodised.

Powder coating

Service condition category: AS 3715 clause 1.4 describes service condition categories for powder coated aluminium architectural applications based on the severity of the environment. Select from the following atmospheric environments:

- Category 3 – Exterior mild to moderate.
- Category 4 – Tropical.
- Category 5 – Exterior severe.

Categories 1 and 2, applicable to interior environments, are not included in this standard. See also NATSPEC TECHnote DES 010 on atmospheric corrosivity categories for ferrous products.

Coating performance: The American Architectural Manufacturers Association's (AAMA) standards represent the various warranty performances available and should be selected appropriate to the class of the project and the application. Select from:

- To AAMA 2604. Applicable to all classes of the NCC.
- To AAMA 2605. Applicable to all classes of the NCC.

Coating type: Thermoset polyester powder coating or Thermoset fluoropolymer powder coating.

Polyester coating grade: General or Commercial. Delete if using fluoropolymer powder coating.

Product: Contact the manufacturer's data sheets for a complete product description.

Gloss level: e.g. Texture, Matt, Satin or Gloss. Not all gloss levels are available across the colour ranges.

Colour: Consult the manufacturer's colour charts.

Design wind pressure: Nominate the design wind pressure for the project to AS/NZS 1170.2 or as required by the supplier.

4.2 GLAZING

Glazed door performance schedule

Property	A	B	C
Total system U-Value (W/m ² .K)			
Total system solar heat gain coefficient SHGC			
Weighted sound reduction index (R _w)			
Visible transmittance (T _{vis})			
Reflectance (%)			
WERS Energy rating %: Heating			

Property	A	B	C
WERS Energy rating %: Cooling			
Water penetration resistance (Pa)			
Fire-resistance level (FRL)			
Bushfire protection (BAL)			
Ultimate limit state (ULS) wind pressure (Pa)			
Serviceability limit state (SLS) wind pressure (Pa)			

A, B, C: These designate each instance or type or location of the item scheduled. Edit to align with the project's codes or tags.
Edit codes in the **Schedule** to match those on drawings.

Total system U-Value ($W/m^2.K$): Insert the thermal transmittance value used for determining BCA compliance. These should be obtained from tests to NFRC 100. Select the product to fulfil design and compliance requirements. See NATSPEC TECHnote DES 015 on BCA 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. Select the product to fulfil design and compliance requirements.

Weighted sound reduction index: State the required rating to AS/NZS ISO 717.1. It is advisable to obtain the advice of an acoustic consultant on the selection of an R_w rating for sound transmission reduction. Refer to NATSPEC TECHnote DES 032 for information on airborne sound insulation.

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 BCA Glazing calculator www.abcb.gov.au.

WERS Energy rating: Star rating system operated by the Australian Window Association.

Water penetration resistance: e.g. 150 Pa.

Fire-resistance level (FRL): State the required level to AS 1530.4, delete or state Not applicable. See NATSPEC TECHnote DES 020 on fire behaviour of building materials and assemblies.

Bush fire protection: Fit screens and seals to AS 3959.

Ultimate and serviceability design wind pressure: Nominate the design wind pressures for the project to AS/NZS 1170.2 (for residential and commercial building). AS 2047 Appendix A includes an informative guide to design wind pressure.

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS 1231	2000	Aluminium and aluminium alloys - Anodic oxidation coatings
AS 1288	2006	Glass in buildings - Selection and installation
AS/NZS 1866	1997	Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes
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/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 5007	2007	Powered doors for pedestrian access and egress

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

AS ISO 717		Acoustics - Rating of sound insulation in buildings and of building elements
AS/NZS ISO 717.1	2004	Airborne sound insulation
AS/NZS 1170		Structural design actions
AS/NZS 1170.2	2011	Wind actions
AS 1530		Methods for fire tests on building materials, components and structures
AS 1530.4	2014	Fire-resistance tests for elements of construction
AS 2047	2014	Windows and external glazed doors in buildings
AS 3959	2009	Construction of buildings in bushfire prone areas
AS 4055	2012	Wind loads for housing
BCA 3.12.3	2016	Acceptable construction - Energy efficiency - Building sealing
BCA D2.19	2016	Access and egress - Construction of exits - Doorways and doors
BCA J3.4	2016	Energy efficiency - Building sealing - Windows and doors

NATSPEC DES 010	2015	Atmospheric corrosivity categories for ferrous products
NATSPEC DES 015	2007	BCA - NCC Volume One Energy efficiency provisions
NATSPEC DES 020	2011	Fire behaviour of building materials and assemblies
NATSPEC DES 032	2014	Airborne sound insulation
NATSPEC GEN 006	2007	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
AAMA 2604	2017	Voluntary specification, performance requirements and test procedures for high performance organic coatings on aluminium extrusions and panels
AAMA 2605	2017	Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminum extrusions and panels