

0454P B&D GROUP IN OVERHEAD DOORS

Branded worksection

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Worksection abstract

This branded worksection *Template* is applicable to B&D Group sectional overhead doors, and rolling curtain and rolling shutter doors for residential, commercial and industrial applications. Manual and motorised operation are covered. It also includes rigid overhead doors and fire shutters.

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 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:

- *0455 Door hardware* for manufacturers' non-standard hardware.

Material not provided by B&D Group

This branded worksection *Template* includes generic material which may not be provided by the Product Partner including:

- Rigid overhead doors.
- Fire shutters.

Documenting this and related work

You may document this and related work as follows:

- If documenting manufacturer's standard and non-standard hardware in *0455 Door hardware*, list the hardware requirements for each overhead door in a door and hardware schedule.
- Bushfire protection: See NATSPEC TECHnote DES 018 for information on bushfire protection. Conform to AS 3959 and the NCC for construction in bushfire prone areas.

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

Specifying ESD

The following may be specified by including additional text:

- Improved corrosion resistance for low maintenance and to extend door service life, e.g. steel frames with galvanic protection under paint coating, Class I anodic coatings.
- Heavy duty weatherstripping including vinyl or wool pile weatherstrips along jambs, neoprene bulb wiper strips at the front of curtains, and neoprene baffles at the top of coils to improve air penetration resistance.

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

B&D Group is a leading manufacturer and supplier of doors and secure access systems serving the architectural, residential and commercial markets in Australia and New Zealand. With over 60 years of experience and as part of the ASX listed DuluxGroup, the B&D brand is synonymous with quality, security and reliability, and sets the industry standard. With manufacturing facilities across Australia, New Zealand and China, we are home to the largest range of garage door and secure access systems.

1.1 RESPONSIBILITIES

General

Requirement: Provide B&D overhead doors, as documented.

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

1.2 COMPANY CONTACTS

B&D Group technical contacts

Website: www.bnd.com.au/contact-us

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

Garage doors and other large access doors: To AS/NZS 4505.

Design wind pressure: To AS/NZS 1170.2.

Fire shutters: To AS 1905.2.

1.5 INTERPRETATION

Definitions

General: For the purposes of this worksection the definitions in AS/NZS 4505 and AS 1905.2, and the following apply:

See AS/NZS 4505 for the following definitions:

- Sectional overhead door.
- Rigid overhead door.
- Rolling curtain door.
- Rolling shutter door.

See AS 1905.2 for the definition of fire-resistant roller shutters.

- Wicket: Door side-hung on the vertical guide and interlocking with the closed curtain.

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

1.6 MANUFACTURER'S DOCUMENTS

Technical manuals

Website: www.bnd.com.au/architects-specifiers-landing

1.7 SUBMISSIONS

Certification

Fire shutters: Submit evidence of compliance of installation to AS 1905.2.

Operation and maintenance manual

General: Submit the manufacturer's published instructions for operation, care and maintenance.

Products and materials

Type tests: Submit results, as follows:

- Fire-resistance: Verification from an accredited test laboratory of fire-resistance level.
- Acoustic performance: Verification from an accredited test laboratory of weighted sound reduction index (R_w).
- Wind-borne debris impact: Verification from an accredited testing laboratory of wind-borne debris impact rating.

A wind-borne debris impact rating is an optional rating which may be applicable to design in cyclonic areas. Where wind-borne debris impact ratings are marked on a door, AS/NZS 4505 calls for verification by type testing to AS/NZS 4505 Appendix B.

All wind rated B&D door products have been independently tested by James Cook University – Cyclone Testing Station and all relevant certificates, forms and certification drawings are available from the B&D Group website.

Samples

General: Submit 2 samples of each of the following where applicable:

- Sections proposed for frames, louvres and slats.
- Joints made, using proposed techniques.
- Finishes to prepared surfaces.
- Colour samples from prefinished production material (e.g. anodised or organic coated extrusions and sheet) showing the limits of the range of variation, if any, for each component documented.
- Door manufacturer's standard hardware items.

Shop drawings

General: Submit shop drawings showing details of each assembly, component and connection, and information relevant to fabrication, surface treatment and installation.

Motorised overhead doors: Submit shop drawings showing location of motor, wiring, power requirements, location and type of safety devices, location of manual operation switch, and other electronic components.

Subcontractors

General: Submit names and contact details for proposed B&D Group approved suppliers and installers.

For an approved subcontractor list, contact B&D Group.

Conditions of tendering may require tenderers to state which approved firm they intend to use, in which case the firm proposed by the successful tenderer will be the approved subcontractor.

Delete if installer/supplier details are not required.

1.8 INSPECTION

Notice

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

- Framing or structure to receive tracks and motor.
- Tracks and guides installed before doors or shutters are hung.

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.

Door assembly

Requirement: Provide complete with B&D door assembly standard operating system, hardware, and accessories.

Marking and labelling

General: To AS/NZS 4505 Section 8.

2.2 B&D SECTIONAL OVERHEAD DOORS

B&D Group provides a variety of door panel types in residential, commercial, and industrial grades. The doors are custom-made to fit the openings. Residential types are available in widths up to 7.4 m and commercial types for heights up to 5.0 m. The required overhead clearance varies. Contact B&D Group for further information, the range of colours and options to suit the application. The **B&D sectional overhead doors schedule** provides options for specifying particular types, and non-standard hardware and accessories, if required.

B&D steel sectional overhead door range

B&D Panelift Door: Roll-formed, 0.6 mm thick, colour coated steel sectional overhead door.

Suitable for both residential and light commercial applications. Available for opening sizes 3.4 m high x 6.6 m wide.

B&D Storm-Shield Panelift Door: Roll-formed, 0.6 mm thick colour coated steel sectional overhead door, suitable for cyclone regions.

Designed for use in cyclonic affected regions and tested to comply with NCC requirements. panels, tracks and hardware are reinforced to withstand wind pressures, conforming to AS/NZS 4505.

Forms and certification drawings are available on the B&D Group website.

B&D Toughpanel Door: Roll-formed, 0.6 mm thick colour coated steel sectional overhead door.

Suitable for heavy duty industrial and commercial applications, counterbalanced with torsion springs and fitted with heavy duty hardware. Available for opening sizes up to 4.5 m high x 5.5 m wide.

B&D aluminium sectional overhead door range

B&D P7 Industrial: Aluminium framed sectional overhead door may be fitted with the following inserts:

A commercial grade aluminium sectional door suitable for various applications. Available in aluminium or powder coated finish. Options are available from B&D Group for high cycle applications.

- Airpanel: Aluminium mesh inserts.

Suitable for undercover carpark entry doors. The aluminium grill inserts provide 80% airflow.

- Alumpanel with Air: 1 mm thick corrugated and perforated aluminium inserts.

Suitable for various applications requiring privacy and ventilation. Perforations are 3.25 mm diameter at 6.1 mm staggered pitch. The perforated aluminium inserts provide 25% airflow.

- Slatted: 10 mm x 50 mm hollow aluminium slat sections.

The aluminium slat spacing provides up to 40% airflow.

- Acrylic: 4.5 mm acrylic inserts.

The acrylic inserts are available in a number of colours and frame colour options.

- Steel Flat Panel: 0.6 mm colour steel inserts.

The inserts are available in a number of colours in smooth or woodgrain finish and frame colour options.

- Mini Corrugated steel: Mini orb colour steel inserts.

The inserts are available in a number of colours and frame colour options.

- Aluminium Checker plate: Checker plate inserts.

The inserts are available in a number of powder coat colours and frames.

- Omnipanel: More than one insert type.

This model allows the combination of different insert types to suit design requirements.

Panels

Requirement: Materials and finishes, as documented.

Bottom panel: Adapted to follow the contour of sloping floors or threshold and fitted with a compressible PVC or neoprene seal strip.

Fixed and hinged taper options are available.

Side tracks

Material: Roll formed galvanized steel.

Reinforcing: If required to carry door loads without distortion, reinforce horizontal track sections with a galvanized rolled steel channel.

Counterbalancing

General: Counterbalance the door by an adjustable torsion spring system connected to the door by cables of galvanized steel multi-strand wire rope, or by an equivalent system.

Operation method

General: Method of opening and closing the door:

- Manual: From inside and outside, by lockable handle attached to the door panel.
- Motorised: Motor connected to the door through a shock absorbing connecting arm.

Delete if not applicable. Contact B&D Group for motorised options.

2.3 RIGID OVERHEAD DOORS

Also referred to as tilting overhead doors.

Panels

Requirement: Materials and finishes, as documented.

Rigid door frame: Braced frame capable of resisting the structural design actions without distortion when the door is in both vertical and horizontal positions.

Operation method

General: Method of opening and closing the door:

- Manual: From inside and outside, by lockable handle attached to the door panel.
- Motorised: Motor connected to the door through a shock absorbing connecting arm.

2.4 B&D ROLLING CURTAIN DOORS

B&D Group provides a variety of door types in residential, commercial, and industrial grades. The doors are custom-made to fit the openings. Contact B&D Group for further information. The **B&D rolling curtain door schedule** provides options for documenting particular types, and non-standard hardware and accessory items, if required.

B&D Roll-A-Door rolling curtain door range

Curtain edges fitted with Nylofelt running strips for smooth quiet operation.

B&D Series 1: Continuous 0.4 mm steel curtain roller door with a square corrugation profile.

Suitable for self-storage warehouse applications as well as residential and light commercial applications, in openings up to 3 m high and 3.15 m wide.

B&D Series 2: Continuous 0.5 mm steel curtain roller door, with a deep corrugation profile.

Suitable for industrial and commercial applications in openings up to 5.1 m high and 5.5 m wide.

Curtain

Rolling curtain: Continuous roll formed profiled steel.

Bottom rail

Requirement: Provide a stiffening member as follows:

- Interlocking with the bottom edge or lowest part of the curtain.
- Extending between the inner faces of the vertical guides.
- Formed or adapted as required to follow the contour of a sloping floor or threshold.
- Adapted to house a locking device, if required.

Wind locks

General: Provide wind lock end clips and guides to retain the curtain in wide openings or under extreme wind conditions.

Drum

Springs: Helical torsion springs fitted to drum wheels and arranged to counterbalance the curtain weight without exceeding the safe working stress of the spring material.

Wickets

General: Provide doors with metal frame and facings to match the curtain, and manufacturer's standard lockset and furniture.

Operation method

General: Method of opening and closing the door:

Delete unused operation methods.

- Manual:
 - . Chain: By pulling on a chain passing over a sprocket on the drum, with reduction gears where necessary.
- Motorised: If a wicket is fitted to the shutter, provide a limit switch device to prevent motor operation until wicket and the frame are hinged clear of the curtain.

2.5 B&D ROLLING SHUTTER DOORS

B&D Group provides a variety of door types in residential, commercial, and industrial grades. The doors are custom-made to fit the openings. Contact B&D Group for further information and options. The **B&D rolling shutter door schedule** provides options for specifying particular types, and non-standard hardware and accessory items, if required.

B&D industrial rolling shutter door range

B&D Envir-A-Shutter: Interlocking 19 mm x 77 mm double skin aluminium, polyurethane insulated slat curtain rolling shutter fitted with moulded nylon clips running in aluminium guides.

Insulated aluminium shutter suitable for applications that require thermal or sound insulation.

B&D 8/50 Roll-A-Shutter: Interlocking 0.8 mm x 50 mm roll formed galvanized steel slat curtain fitted with moulded nylon clips running in roll formed steel guides.

Small light shutter suitable for applications such as counters, kiosks and bars. Available for openings up to 5 m high x 5 m wide.

B&D 4/100 Roll-A-Shutter: Interlocking 0.4 mm x 100 mm roll formed high tensile galvanized steel slat curtain fitted with moulded nylon clips running in roll formed steel guides.

Suitable for applications such as warehouses and sheds. Available for openings up to 5.5 m high x 5.5 m wide.

B&D 6/100 Roll-A-Shutter: Interlocking 0.6 mm x 100 mm roll formed galvanized steel slat curtain fitted with moulded nylon clips running in roll formed steel guides.

Suitable for applications such as warehouses, factories, sheds, emergency service buildings and carpark entry. Available for openings up to 6.0 m high x 7.0 m wide.

B&D 8/100 Roll-A-Shutter: Interlocking 0.8 mm x 100 mm roll formed galvanized steel slat curtain fitted with moulded nylon clips running in roll formed steel guides.

Medium duty industrial shutter suitable for applications such as warehouses, factories, sheds, emergency service buildings and carpark entry. Available for openings up to 6.0 m high x 7.0 m wide.

B&D 10/100 Roll-A-Shutter: Interlocking 1.0 mm x 100 mm roll formed galvanized steel slat curtain fitted with moulded nylon clips running in roll formed steel guides.

Heavy duty industrial shutter suitable for applications such as perimeter security, aircraft hangers, warehouses, factories, sheds, emergency service buildings and carpark entry. Available for openings up to 10 m high x 12 m wide.

B&D 12/100 Roll-A-Shutter: Interlocking 1.2 mm x 100 mm roll formed galvanized steel slat curtain fitted with moulded nylon clips running in roll formed steel guides.

Heavy duty industrial shutter suitable for applications such as perimeter security, aircraft hangers, warehouses, factories, emergency service buildings, storm recovery buildings and carpark entry. Available for openings up to 10 m high x 12 m wide and can be manufactured to larger sizes upon request.

B&D Series 40 Industrial Aluminium Shutter: Interlocking 1.6 mm x 40 mm extruded aluminium slat curtain fitted with moulded nylon clips running in extruded aluminium guides.

Slimline, flat slat curtain, designed from aluminium extrusion to provide a high level of security, suitable for applications such as retail shopfronts, secure parking structures, arcades, sporting complexes, clubs, bars and counter tops. Available for openings up to 4 m high x 6.4 m wide.

B&D Series 65 Industrial Aluminium Shutter: Interlocking 1.6 mm x 65 mm extruded aluminium slat curtain fitted with moulded nylon clips running in extruded aluminium guides.

Slimline, flat slat curtain, designed from aluminium extrusion to provide a high level of security, suitable for applications such as retail shopfronts, secure parking structures, arcades, sporting complexes, clubs, bars and counter tops. Available for openings up to 4 m high x 6.4 m wide.

B&D Series 90 Industrial Aluminium Shutter: Interlocking 1.4 mm x 90 mm extruded aluminium slat curtain fitted with moulded nylon clips running in extruded aluminium guides.

Slimline, flat slat curtain, designed from aluminium extrusion to provide a high level of security, suitable for applications such as retail shopfronts, secure parking structures, arcades, sporting complexes, clubs, bars and counter tops. Available for openings up to 4.5 m high x 8 m wide.

B&D Clear-A-View Polycarbonate Shutter: Interlocking 100 mm polycarbonate with 30 mm rigid extruded aluminium slat curtain fitted with moulded nylon clips running in extruded aluminium guides.

Designed with retailers in mind, allowing for continual showcasing and product advertisement when the door is closed. Available for openings up to 4 m high x 6.4 m wide.

B&D Crystal-View Polycarbonate Shutter: Interlocking 100 mm polycarbonate extrusion fitted with moulded nylon clips running in extruded aluminium guides.

Designed to provide retailers with a door that replicates glass in the shopfront. Ideal for applications such as shopping centre retail spaces, street-facing shop fronts, arcades, sporting complexes, clubs and bars. Available for openings up to 4 m high x 6.4 m wide.

B&D 12 mm Roll-A-Grille Shutter: Constructed from 12 mm aluminium extrusion tubing connected with 100 mm links and fitted with moulded nylon clips running in extruded aluminium guides.

Aluminium curtain designed from aluminium extrusion to provide a high level of security. Suitable for applications such as retail shopfronts, secure parking structures, arcades, sporting complexes, clubs, bars and counter tops. Available for openings up to 4 m high x 5 m wide.

B&D 19 mm Roll-A-Grille Shutter: Constructed from 19 mm aluminium extrusion tubing at 75 mm centres interconnected with 35 mm x 3 mm links spaced at 500 mm centres and fitted with moulded nylon clips running in extruded aluminium guides.

Designed from aluminium extrusion to provide a high level of security while maintaining the feel of openness between the internal and external spaces. Suitable for applications such as retail shopfronts, secure parking structures, arcades, sporting complexes, clubs, bars and counter tops.. Available for openings up to 1 m high x 8 m wide.

Curtain

Rolling shutter: Individual horizontal interlocking slats with interlocking hinges.

Rolling grille: Articulated curtain formed of horizontal members spaced apart and connected by vertical links.

Fire shutter: Roll formed galvanized interlocking steel slats, each slat fitted with steel end caps.

Bottom rail

Requirement: Provide a stiffening member as follows:

- Interlocking with the bottom edge or lowest part of the curtain.
- Extending between the inner faces of the vertical guides.
- Formed or adapted as required to follow the contour of a sloping floor or threshold.
- Adapted to house a locking device, if required.

Wind locks

General: Provide wind lock end clips and guides to retain the curtain in wide openings or under extreme wind conditions.

Drum

Maximum drum deflection: 1/360th of the span.

Springs: Helical torsion springs housed in the drum and arranged to counterbalance the curtain weight without exceeding the safe working stress of the spring material.

Springless: Direct drive.

Door has been designed without springs and is driven by a geared motor fitted with a safety brake device. Suitable for high cycle applications such as car park entry doors. Contact B&D Group for more information on these options.

Wickets

General: Provide doors with metal frame and facings to match the curtain, and manufacturer's standard lockset and furniture.

Operation method

General: Method of opening and closing the door:

Delete unused operation methods.

- Manual:
 - . Chain: Chain operated shutter fitted with a spur gear attached to one end of the drum and meshing with reduction gears.
- Motorised: Direct drive or chain drive. If a wicket is fitted to the shutter, provide a limit switch device to prevent motor operation until wicket and the frame are hinged clear of the curtain.

Contact B&D Group for the selection of available automation options.

2.6 OPERATION

Manual operation

General: Install so that the force required to operate the door manually does not exceed 220 N.

Motorised operation

General: Provide a motorised door operating system incorporating the following:

Contact B&D Group for a wide range of automatic access products and options. All openers are independently tested to conform to AS/NZS 60335.1 and AS/NZS 60335.2.95.

If products are selected in **SELECTIONS**, delete text here.

- An electric motor with limit switches, and of adequate capacity to operate the specified door smoothly and without strain.
- Overload cutout.
- Automatic safety system to stop and reverse door if obstructed while closing, or stop door if obstructed while opening.
- Photocell or IR beam safety device.

Generally delete for single dwelling projects. If products are selected in **SELECTIONS**, delete text here.

- Manufacturer's standard light fixture, automatically switched on when opener is activated, and switched off by timer.

Generally retain for single dwelling applications, and delete for multi-unit residential, commercial and other applications where other area lighting is provided.

- Manual release handle to disengage door from drive mechanism in the event of a power failure.
- Operation by battery-powered radio remote controller, supplied as part of the system.
- Additional operation by push-button or key switch, located 1500 mm above floor level.

3 EXECUTION

3.1 INSTALLATION

General

Requirement: Install overhead door assembly in conformance with B&D Group's recommendations and as documented.

A full range of installation instructions are available for download from the B&D Group website, including recommendations for fixing into various substrates.

Preparation

Substrate: Before start of installation, check the alignment of substrates or framing and adjust if required.

Frames, guides and tracks

Requirement: Install frames, guides and tracks as follows:

- Plumb, level, straight, true, and within tolerances and clearances recommended by the manufacturer.
- Fixed or anchored to the building structure using mechanical fixings suitable for the substrate and the imposed loads.
- Isolated from any building loads, including loads caused by structural deflection or shortening.

3.2 COMPLETION

Operation

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

Safety: Make sure all safety features are operating.

Remote control devices: Make sure devices are programmed and operating.

Protection

Temporary coating: On or before the date for practical completion of the works, or before joining up to other surfaces, remove all traces of temporary coatings used for protection.

Warranties

General: Submit B&D Group's published product warranties.

See B&D Group for further information on warranties available.

Use only where warranties extending beyond the defects liability period are available for the particular 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. If specifying warranties, include the following:

- Warranty.
- Minimum period.
- Form of warranty.
- Powder coating.
- Hardware.

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

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 PERFORMANCE

Overhead door schedule

Property	A	B	C
Classification to AS/NZS 4505			

Property	A	B	C
Ultimate wind pressure rating			
Wind-borne debris impact rating			
Weighted sound reduction index (R_w)			

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.

Classification to AS/NZS 4505: Select from Domestic, General purpose – low cycle, General purpose – medium cycle and General purpose – high cycle. A Domestic door is suitable for garage doors for NCC Class 1 and 10 buildings. General purpose doors are suitable for Classes 1 to 10 buildings and with the sub-classifications depending on opening frequency. See AS/NZS 4505 Section 5 on duty cycles and typical applications.

Ultimate wind pressure rating:

- Domestic: See AS/NZS 4505 Table 5.2.
- General purpose: To AS/NZS 1170.2. See AS/NZS 4505 clause 5.2.2.3.

Wind-borne debris impact rating: Required or Not required.

For weighted sound reduction index (R_w) rating, see AS/NZS ISO 717.1. Refer to NATSPEC TECHnote DES 032 for information on airborne sound insulation.

4.2 PRODUCT

B&D sectional overhead door schedule

Property	SO1	SO2	SO3
Product			
Panels: Finish			
Panels: Colour			
Panels: Insulation			
Panels: Windows			
Panels: End stiles			
Lifting cables			
Operation method			
Motorised operation: Motor type			
Motorised operation: Motor force (N)			
Motorised operation: Drive type			
Motorised operation: Speed of curtain travel (mm/sec)			

Property	SO1	SO2	SO3
Motorised operation: Number of remote controllers required			
Motorised operation: Memory register			
Safety features			
Security option			
Light: Type			
Light: Operation			
Hardware: Item			
Hardware: Material			
Hardware: Finish			

SO1, SO2, SO3: These designate each instance or type or location of the item scheduled.

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

Product: B&D residential range: Select from the following:

- Panelift Icon: Nullarbor, Turino, Statesman, Grange, Federation, Seville or Madrid.
- Panelift: Nullarbor, Statesman, Grange or Seville.
- Storm-Shield.
- Windpanel.
- Smoothpanel.
- Panelmasta: Contemporary, Classic or Caprice.

Product: B&D commercial and industrial range: Select from the following:

- P7 Industrial: Alumpanel, Alumpanel with Air, Aluminium Checker plate, Acrylic, Airpanel or Aluminium Slatted.
- Toughpanel.

Panels:

- Finish: e.g. Colorbond®, Timber Coat, Knotwood, Luxe Design powder coat or other powder coats from the standard Dulux range.
- Colour: Consult B&D Group for options.
- Insulation: Insul-Shield.Windows: See B&D Group for options.
- End stiles: Double. This option is available for doors under 5000 mm wide.

Lifting cables: Stainless steel or Galvanized steel.

Operation method: e.g. Manual (Pull rope or Handle), or Motorised.

Motorised operation: e.g. B&D Control-A-Door. See B&D Group for options.

- Motor type: Select a.c. or d.c. motor, voltage requirements and other characteristics, or delete if there is no particular preference. d.c. motors are generally considered to be quieter. e.g. 240 V a.c., or 24 V d.c.
- Motor force: e.g. 800 N.
- Drive type: Select belt, chain or screw drive, or delete if there is no particular preference. Consider structure-borne sound generated by motor and drive, particularly in multi-unit residential buildings.

- Memory register: This limits the maximum number of remote controllers that can be programmed on the door operating mechanism. This is particularly important in multi-unit residential or commercial garages where a large number of remotes will be required.

Safety features: e.g. Closing door reversed by infra-red sensor or photocell.

Security option: Select Autolock option for sectional doors.

Light:

- Type: e.g. LED or Courtesy light.
- Operation: e.g. Turned on by opening door, turned off by adjustable timer.

Hardware: e.g. Handles, bolts, locks. The hardware is an integral part of the installation. Consult B&D Group. The description may be cross referred to non-standard items documented in detail in *0455 Door hardware*. Locking options available include the following:

- Keyed: Inside, outside or both.
- Manual: Shoot bolts.
- Motorised: Push-button (standard) or Key switch (internally or externally).

Rigid overhead door schedule

These schedules refer to the selections of the door by its properties, but does not locate it within the project. For this you should prepare a separate document, e.g. a Door schedule to locate them by reference to a designation code.

Property	TO1	TO2	TO3
Product			
Tilting mechanism			
Jambs: Metal			
Jambs: Size (mm)			
Jambs: Fixing			
Rigid door frame: Material			
Rigid door frame: Windows			
Rigid door cladding: Material			
Rigid door cladding: Finish			
Rigid door cladding: Thickness			
Vertical guides: Material			
Vertical guides: Size (mm)			
Vertical guides: Finish			
Vertical guides: Fixing method			
Mullions: Type			
Mullions: Method of removal			

Property	TO1	TO2	TO3
Operation method			
Motorised operation: Motor type			
Motorised operation: Motor force			
Motorised operation: Drive type			
Motorised operation: Speed of curtain travel (mm/sec)			
Motorised operation: Number of remote controllers required			
Motorised operation: Memory register			
Safety features			
Light: Type			
Light: Operation			
Hardware: Item			
Hardware: Material			
Hardware: Finish			

TO1, TO2, TO3: These designate each instance or type or location of the item scheduled.

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

Product: Nominate the brand name and model or delete. Amend the schedule as appropriate.

Tilting mechanism: Select from one of the following:

- Pivot and spring: Door pivots around jamb-mounted lever arms. The lower part of the door projects beyond the opening during the operation and remains projecting when open.
- Pivot, spring and tracks: Door pivots around jamb-mounted lever arms. Rollers fixed to door head run in horizontal head tracks. The lower part of the door projects beyond the opening during operation but retracts almost completely when in the open position.

Jambs: The manufacturer may supply proprietary steel jambs for spring controlled mechanisms. Slamming of heavy doors can loosen fixings in masonry joints, possible fixing options for overcoming this include the following:

- Grout block cores solid at jambs.
- Reinforce mortar joints.
- Galvanized bolts built-in or masonry anchors.

Rigid door frame material: e.g. Metallic-coated steel, Aluminium or Lugged and braced timber sections. If specifying timber, document the species, grade.

Rigid door cladding material and finish: Consult the manufacturers for the range available, e.g.:

- Steel sheets: Colorbond® or powder coat finish.
- Timber (boarding or plywood): Presealed, oiled or raw.

- Clear acrylic.
- Roll formed steel: Galvanized or prepainted.
- Aluminium: Anodised or powder coated.
- Other cladding options: e.g. Steel bars, perforated sheets or mesh in steel or aluminium, profiled or flat steel sheets with Colorbond® or powder coat finish.

Operation method: e.g. Manual, or Motorised.

Motorised operation:

- Motor type: Select a.c. or d.c. motor, voltage requirements and other characteristics, or delete if there is no particular preference. d.c. motors are generally considered to be quieter. e.g. 240 V a.c., or 24 V d.c.
- Motor force: e.g. 800 N.
- Drive type: Select Belt, Chain or Screw drive, or delete if there is no particular preference. Consider structure-borne sound generated by motor and drive, particularly in multi-unit residential buildings.
- Programmed remote controllers: Nominate number required.
- Memory register: This limits the maximum number of remote controllers that can be programmed on the door operating mechanism. This is particularly important in multi-unit residential or commercial garages where a large number of remotes will be required.

Safety features: e.g. Closing door reversed by infra-red sensor or photocell.

Light:

- Type: e.g. LED or Courtesy light.
- Operation: e.g. Turned on by opening door, turned off by adjustable timer.

Hardware: e.g. Handles, bolts, locks. The hardware is an integral part of the installation. Consult the manufacturers. The description may be cross referred to items specified in detail in *0455 Door hardware*. List non-standard hardware here. Locking options available include the following:

- Keyed: Inside, outside or both.
- Manual: Shoot bolts.
- Motorised: Push-button (standard) or Key switch (internally or externally).

B&D rolling curtain door schedule

These schedules refer to the selections of the door by its properties, but does not locate it within the project. For this you should prepare a separate document, e.g. a Door schedule to locate them by reference to a designation code.

Property	RO1	RO2	RO3
Product			
Curtain: Finish			
Bottom rail: Form			
Bottom rail: Material			
Bottom rail: Finish			
Mullions			
Operation method			
Motorised operation: Motor type			
Motorised operation: Number of remote controllers required			

Property	RO1	RO2	RO3
Motorised operation: Memory register			
Safety features			
Light: Type			
Light: Operation			
Hardware: Item			
Hardware: Material			
Hardware: Finish			
Accessories			
Personnel access			

RO1, RO2, RO3: 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.

Product: B&D residential rolling doors: Select from the following:

- Roll-A-Door: Squareline Deluxe, Traditional Wideline, Squareline Wideline or Traditional Low Profile.
- Firmadoor: Series 1 or Maxi.
- Rollmasta.
- High Wind Doors: Roll-A-Door Series 1 or Roll-A-Door Series 2.

Product: B&D industrial and commercial rolling doors: Select from the following:

- Roll-A-Door: Series 2, Series 3, Mini Warehouse Model or Mini Warehouse Model E.
- Firmadoor Series 2.
- High Wind Doors: Select from Roll-A-Door Series 1 or Roll-A-Door Series 2.

Curtain finish: Select from Prepainted or Colorbond® finished steel. Consult B&D Group for colour options.

Bottom rail:

- Form: e.g. Box section, Tee section, Paired angles. Specify special requirements, e.g. housing shoot bolts or locksets.
- Material: Usually extruded aluminium or rolled metallic-coated steel.
- Finish: Usually the same as the curtain.

Mullions: See B&D Group for options.

Operation method: e.g. Manual, Chain geared or Power driven.

Motorised operation:

- Motor type: e.g. 240 V a.c., or 24 V d.c.
- Programmed remote controllers: Nominate number required.
- Memory register: This limits the maximum number of remote controllers that can be programmed on the door operating mechanism. This is particularly important in multi-unit residential or commercial garages where a large number of remotes will be required.

Safety features: e.g. Closing door reversed by infra-red sensor or photocell.

Light:

- Type: e.g. LED or Courtesy light.

- Operation: e.g. Turned on by opening door, turned off by adjustable timer.

Hardware: e.g. Handles, bolts, locks. The hardware is an integral part of the installation. See B&D Group for further information. The description may be cross referred to non-standard items documented in detail in *0455 Door hardware*. Standard locking options available include the following:

- Keyed: Inside, outside or both.
- Lock: Fitted in bottom rail or mid-rail.
- Manual: Shoot bolts.
- Motorised: Push-button (standard) or Key switch (internally or externally).

Accessories: Manufacturer's standard or optional items, e.g. nylon running strips (for continuous curtain), sponge rubber or multi-fin weather strips on bottom curtain rail, draught excluding strips in vertical guides, resilient strips on bottom curtain rail.

Personnel access: Wicket gates, Escape gates or Access gates. For rolling shutters, not available on all types. Consult B&D Group. Show location on drawings. Avoid placing gate on the same side as the chain and electrical operating gear, where it may cause obstruction. Avoid using gates on windlocked shutters. Nominate left hand or right hand opening as viewed from the inside.

B&D rolling shutter door schedule

These schedules refer to the selections of the door by its properties, but does not locate it within the project. For this you should prepare a separate document, e.g. a Door schedule to locate them by reference to a designation code.

Property	RO1	RO2	RO3
Product			
Curtain: Finish			
Perforations			
Bottom rail: Form			
Bottom rail: Material			
Bottom rail: Finish			
Mullions			
Operation method			
Motorised operation: Motor type			
Motorised operation: Number of remote controllers required			
Motorised operation: Memory register			
Safety features			
Light: Type			
Light: Operation			
Hardware: Item			
Hardware: Material			

Property	RO1	RO2	RO3
Hardware: Finish			
Accessories			
Personnel access			

RO1, RO2, RO3: These designate each instance or type or location of the item scheduled.

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

Product: B&D industrial and commercial shutters: Select from the following:

- Envir-A-Shutter.
- Roll-A-Shutter: 8/50GS, 8/50D, 4/100, Advantage (6/8/10/12), 6/100, 8/100, 10/100, 12/100, Series 40, Series 65, Series 90, Clear-A-View, Crystal-View.
- Roll-A-Grille: 12 mm or 19 mm.

Curtain finish: Consult B&D Group for colour options. e.g.:

- Rolling shutters: Roll formed galvanized steel (Colorbond® or powder coat finish), Extruded aluminium (anodised or powder coated), Insulated aluminium slats, Clear polycarbonate panels with aluminium members (Clear anodised or powder coat finish).
- Roller grilles: Aluminium (anodised or powder coated). Some heavy duty roller grilles consist of galvanized steel tubes sleeved with aluminium tubes.

Slat: For galvanised steel slats, select from the following:

- Thickness: 0.4, 0.6, 0.8, 1.0 or 1.2 mm.
- Height: Select from 50 mm or 100 mm.

Perforations: Select from Slotted or Perforated. See B&D options for the documented product, or As shown on the drawings.

Bottom rail:

- Form: e.g. Box section, Tee section, Paired angles. Specify special requirements, e.g. housing shoot bolts or locksets.
- Material: Usually extruded aluminium or rolled metallic-coated steel.
- Finish: Usually the same as the curtain.

Mullions: See B&D Group for options.

Operation method: e.g. Manual - Chain, Motorised - Direct drive or Chain drive.

Motorised operation:

- Motor type: e.g. 240 V a.c. or 24 V d.c.
- Programmed remote controllers: Nominate number required.
- Memory register: This limits the maximum number of remote controllers that can be programmed on the door operating mechanism. This is particularly important in multi-unit residential or commercial garages where a large number of remotes will be required.

Safety features: e.g. Closing door reversed by infra-red sensor or photocell.

Light:

- Type: e.g. LED or Courtesy light.
- Operation: e.g. Turned on by opening door, turned off by adjustable timer.

Hardware: e.g. Handles, bolts, locks. The hardware is an integral part of the certified installation. See B&D Group for further information. The description may be cross referred to non-standard items documented in detail in *0455 Door hardware*.

Standard locking options available include the following:

- Keyed: Inside, outside or both.

- Lock: Fitted in bottom rail or mid-rail.
- Manual: Shoot bolts.
- Motorised: Push-button (standard) or Key switch (internally or externally).

Accessories: Manufacturer's standard or optional items, e.g. nylon running strips (for continuous curtain), sponge rubber or multi-fin weather strips on bottom curtain rail, draught excluding strips in vertical guides, resilient strips on bottom curtain rail.

Personnel access: Wicket gates, Escape gates or Access gates. For rolling shutters, not available on all types. Consult B&D Group. Show location on drawings. Avoid placing gate on the same side as the chain and electrical operating gear, where it may cause obstruction. Avoid using gates on windlocked shutters. Nominate left hand or right hand opening as viewed from the inside.

Fire shutter schedule

Property	FS1	FS2	FS3
Fire-resistance level (FRL)			
Product			
Slat thickness (BMT)			
Finish: Curtain slats			
Finish: Slat end pieces			
Finish: Vertical guides			
Finish: Bottom rail			
Finish: Barrel mechanism			
Finish: Hauling chains			
Normal operating mechanism			
Hardware: Item			
Hardware: Material			
Hardware: Finish			
Sensing device			

AS 1905.2 sets out design and testing requirements for fire-resisting rolling shutters (also referred to as fire shutters).

Add other requirements if necessary to comply. The use of fire shutters in place of required fire doors may not be permitted in some instance. Not being insulated they can be a heat radiation hazard.

Specification by proprietary item (manufacturer's standard door suite), will automatically cover most of the prescriptive items in this schedule.

FS1, FS2, FSO3: These designate each instance or type or location of the item scheduled.

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

Fire-resistance level (FRL): State required level in minutes, e.g. 120/120/10.

Product: Nominate the brand name and model or delete. Amend the schedule as appropriate.

Slat thickness (BMT): e.g. 1.0 mm.

Finish: e.g.:

- Unfinished.
- Powder coating: There may be door size restrictions. Consult the manufacturer.
- Primed and painted.

Normal operating mechanism: Automatic operation in the event of fire is mandatory. Specify here the type of operation for normal service, e.g.:

- Hold open: Remains open except when automatic closing is activated.
- Hand operation.
- Manual: By hand chain or crank handle.
- Motorised.

Hardware: e.g. Handles, bolts, locks. The hardware is an integral part of the certified installation. Consult the manufacturers. The description may be cross referred to items specified in detail in *0455 Door hardware*. List non-standard hardware here.

Sensing device: The operating system may be directly wired to a fire alarm system or smoke detectors, for activation to close, in addition to the fusible link.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS/NZS 1170		Structural design actions
AS/NZS 1170.2	2011	Wind actions
AS 1905		Components for the protection of openings in fire-resistant walls
AS 1905.2	2005	Fire-resistant roller shutters
AS/NZS 4505	2012	Garage doors and other large access doors

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 3959	2018	Construction of buildings in bushfire prone areas
NATSPEC DES 018	2008	Bushfire protection
NATSPEC DES 032	2014	Airborne sound insulation
NATSPEC GEN 006	2007	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
NATSPEC TR 01	2019	Specifying ESD