

0455 Door hardware

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00 Design Principles

0.01 Main considerations

It is a requirement to undertake the [00 PLANNING AND DESIGN/0001R - DESIGN REFERENCE](#) and [GLOSSARY OF TERMS](#) information into all aspects of design, detailing and delivery when developing the content here within. Clear demonstration of adherence to these requirements is part of the services and will be called upon at key points in the project and during at the discretion of the Department of Education (DoE).

GUIDE NOTE: Refer to [04 ENCLOSURE/0451 WINDOWS AND GLAZED DOORS](#), [04 ENCLOSURE/0453 DOORS AND ACCESS PANELS](#) and [000 PLANNING AND DESIGN/0001C DESIGN CHECKLIST - SECURITY](#)

Specification

01 General

As per current NATSPEC except as follows:

1.1 Aim

The aim of this specification section is to have uniformity of quality for the products being supplied in accordance with the Educational Facilities Standards and Guidelines.

GUIDE NOTE: Delete the relevant NATSPEC Building Template clauses and include the following:

1.2 Cross references

All products utilised must conform to current building code requirements; Building Codes of Australia (BCA) and all relevant Australian Standards.

1.3 Interpretations

General: For the purposes of this work section the abbreviations and definitions given below apply.

Table 01: Abbreviations and definitions

Code	Term	Definition / Notes
KD	Keyed to differ	Each lock has a unique key which will operate that lock only.
KA	Keyed alike	All locks in the group will pass the same key, but that key will not operate any locks outside the group.
MK	Master keyed	The master key will operate all the locks in the MK group, in addition to their KD or KA keys.
Finishes		
SSS	Satin Stainless Steel	No. 4 finish to be used
SCP	Satin Chrome Plate	Fine Linished, then first quality copper, nickel and chrome plating
SA	Satin Anodised	25 microns thickness min.
SAL	Satin Aluminium Lacquer	
SCDP	Satin Chrome Display Pack	
SNP	Satin Nickel Plate	

1.4 Submissions

Materials and components:

Key control system: Submit details of the proprietary key control security system proposed by the lock manufacturer for locks required to accept a group key (master etc or existing).

Key schedule: Submit the Keying Schedule and factory registration details for approval prior to supply of the key system.

Locksets test report: Submit test reports to AS 4145.2 as specified.

1.5 Uniformity

GUIDE NOTE: Product uniformity facilitates more cost effective and convenient long-term maintenance.

Uniformity:

- DoE prefer that locks, lock furniture and new key systems have a common brand of manufacture.

02 Product

As per current NATSPEC except as follows:

2.1 Materials

Metal finishes: Electroplated coatings

Chromium plating on metals: To AS 1192. Service condition number 3 unless otherwise specified. Surface finish as scheduled.

Chromium plating on plastic: To AS 1406. Service condition number 3 unless otherwise specified. Surface finish as scheduled.

Cadmium plating on threaded components: To AS 1192. Service condition number 3 unless otherwise specified.

Stainless Steel: To AS 1449 -Type 304. Hardware shall have exposed edges finished to remove sharp edges and burrs.

All hardware to be satin chrome plated or stainless steel with satin finish unless otherwise specified. All Hardware is to conform to AS 4145.2 Table 3.7 Corrosion resistance category C6.

GUIDE NOTE: Door hardware items as nominated hereunder. Finish SCP unless stated otherwise.

2.2 General requirements

Door hardware, supply and fitting

All door hardware must be supplied by suppliers listed on the buy.nsw Supplier Hub or to an equivalent quality and agreed with the Department in writing.

Refer to Figure A1.1 'Climate zones for thermal designs' in the BCA for location and Zone codes. It is to be noted that different climatic Zones have specific requirements for Doors and Door Hardware.

All Stainless-Steel products must be of 304 Grade minimum.

Product manufacturers are liable for any product supplied that is not of the quality specified or has the incorrect technical information to comply with this worksection.

Non-compliant products must be replaced within the set time period at the manufacturer's cost. Failure to comply with the above may result in removal from the suppliers list for any future work.

Building contractors are liable for any incorrectly fitted product.

Replacement of the item is to be performed at the building contractor's cost within the set time period allowed for the breach. Failure to comply may result in removal from the contractors list for any future work.

Hardware sets packaging

Package hardware items in individual sets in readiness for installation on each door as scheduled. Each set shall be complete with all necessary fixing instructions, templates and fixing screws. Individually label the contents of each set to indicate door and location information.

Place each individual hardware set in separate heavy-duty clear polythene bags and seal against ingress of dust and water. Attach tags to the outside of each bag identifying door and location information ready for installation.

Permanent product marking requirements

Compliance reference mark is to be approximately 3mm depending on available space. This mark is to be of a permanent nature and visible on faceplate, hinges and Cylinders.

Hardware Selection

Requirement: Comply with the Hardware Selection Schedule. [Door Hardware Selection](#), [Door Hardware Appendix](#)

Compliance legislation

All door furniture must comply with the current BCA (Building Code of Australia) Section D2.

All Door handles are to be levers and comply with the current AS 1428.1, Design for access and mobility- section 13.5 Door Controls.

2.3 Hinges

GUIDE NOTE: Interfold (Quick fix) hinges must not to be selected for school application.

All hinges and pins to be of 304 grade stainless steel. All hinges are to have compliance markings.

Number of hinges

Two Hinges per Leaf:

- Doors under 25 mm thick not exceeding 1500 mm high or 720 mm wide (eg. solid cupboard doors)
- Toilet/Shower cubicle doors
- Internal doors and screen doors over 25 mm thick not exceeding any of the following:
 - Height 2100 mm, width 720 mm, weight 35 kg

Three Hinges per Leaf:

- Doors over 25 mm thick exceeding any of the following:
 - Height 2040 mm, width 720 mm, weight 35 kg.
- Aluminium framed doors.
- Doors less than 25 mm thick exceeding 1500 mm high or 720 mm wide.

Wide throw hinges: Wide throw butt hinges to clear reveals must be avoided where possible due to associated maintenance problems.

Table 02: Cupboard hinges

Flush fitting doors suitable for blockboard core or 15 mm minimum thickness solid timber edge strip doors.

Height (mm)	Width (mm)	Thickness (mm)	Hinges	Size (mm)
760	450	20	1 pair	70
2100	450	20	1 1/2 pair	70
1500	600	20	1 pair	70
2100	600	20	1 1/2 pair	70
1500	900	35	1 pair	85
2100	900	35	1 1/2 pair	85

Table 03: Particle board door hardware

Overlay Doors	Description
Suitable for particle board doors without solid timber edge strips	All metal concealed hinge, screw fixed 3-way adjustment without self-closing mechanism, minimum 1700 opening.

Notes:

- Fixing screws also stainless steel
- 100 x 100 fixed pin hinges with 6mm backing plate for hinge fixing are to be used on doors that are required to open 180 deg with a maximum reveal (opening side) of 25mm.
- Install hinges with undercut stainless screws

Table 04: Types of hinges

Type	Location
Brass butts with Bronze / SS bushes	High traffic areas
Heavy duty butts with sintered lube bushes	Door leaves over 1000 mm wide, fire doors and doors fitted with door closers
Stainless steel butts	Steel frame / timber or fire door
Brass butts foundation access door	Low Traffic Areas
Aluminium Butts	Aluminium Frame / Aluminium Door Clear anodised to match frame. Install hinges with undercut stainless-steel screws.
Stainless Steel Spring Hinges	Timber door / Terrazzo Partitions
Pivot Hinge	Gate hinge – steel with grease nipple (Capacity assumes 2 hinges per leaf – add 25% capacity for 3 hinges)

2.4 Keying

Cylinders

All cylinders are preferred by DoE to be of a non-restricted key type and must comply with to security level Sc8 in AS4145.2, Table 3.3, in the following parts:

- Resistance to picking
- Impressioning
- Bumping

-
- Drilling

Where DoE requests a restricted master key system it must be a factory built and fully transferable system. The manufacturer, at no cost to the school, is responsible for all electronic records. The transfer of systems is to take no longer than 7 working days from receiving an official letter from the school wishing to make a transfer.

Identification

All cylinders are to be marked with the manufacturers branding and SS 455 on the face of the cylinder.

Stamping

All keys and key groups must be Code Stamped as scheduled. Code stamp keys and lock cylinders are to be stored in a secure location.

Labelling

Provide plastic key tags correctly labelled with door number and area description. Attach with split rings a separate tag for each lock and hand over to the Principal's Authorised Person / Principal's Representative at completion of the work. Ensure that the school name is included on the separate key tags for the additional two sets of keys specified in **Keying - Number of Keys** section below.

Records

Provide two copies of the Master Key Schedule and factory registration details indicating both new and existing Master Key codes, lock catalogue codes, door numbers and key quantities supplied. Factory Master Key Schedule to include lock manufacturers' keying reference details for future maintenance of the Master Key system.

The two copies of the Master Key Schedule and factory registration details to be handed to the Client's Representative i.e. One for the School Principal. One for Security Service Unit

Master keying

Master key locks and padlocks distributed to appropriate groups as scheduled. Where an existing master key system is in working operation and has similar existing master key coding, key the new work to the existing appropriate coding to avoid multiple coding with similar functions. All Master Keying and coding details are to be recorded by the manufacturer in an electronic format.

Keying Schedule: Prepare the Factory Master Key Schedule and submit to the Principal's Authorised Person / Principal's Representative for approval prior to supply of the keying system.

Delivery - master keys

Arrange for the manufacturer or supplier to deliver direct to the Principal's Authorised Person / Principal's Representative. The Authorised person will acknowledge receipt directly to the hardware supplier.

All other keys: Deliver to the Authorised person on practical completion.

Key codes

Code KA "E": Keyed alike group PW "E", Lockwood cylinders.

Number of keys

Provide keys as set out in Table 05.

Table 05: Key number schedule

Key	Code	Number
Master Keys (existing)	MK	Nil
Master Keys (new)	MK	4 keys per code
Key to differ	KD	2 keys per code
Key to differ (not MK)	KD	4 keys per code
Key alike	KA	6 keys (total) 1 or 2 locks
Key alike	KA	10 keys (total) 3 to 10 locks
Key alike	KA	20 keys (total) 11 to 40 locks

GUIDE NOTE: Existing key alike supplies are included when determining above key quantities for existing systems.

Key quantities supplied by the Contractor to be checked against Master Key Schedule key quantities.

All keys, including Master Keys, to be handed over to the Clients representative.

The Principal must retain Two Master Keys, plus two keys per code for designated non-mastered locks for the Schools Security Service Unit.

Key control

Construction keyed cylinders are to be used during construction period, with the master key system to be installed after works are complete.

The Principal's Authorised Person / Principal's Representative may provide written approval for use of specific keys, under the master key system after installation of the master keyed system.

Where such approval is received, establish a key control register for recording and coding of keys issued, person accountable, date issued and returned.

Return all keys to the Principal's Authorised Person / Principal's Representative when directed.

No keys of the master key system are to be duplicated or replaced without the appropriate written authority from the Principal's Authorised Person / Principal's Representative.

Re-key cylinders for any keys not returned and completely re-key all cylinders for any master key not returned. Ensure that the complete master key system still operates as originally designed and provide specified number of replacement keys, all with code stampings.

Key code schedule

Locks must be master keyed in MK code groups as specified. (Locks must NOT be Grand Master Keyed).

GUIDE NOTE: Keying system details are dependent upon school types. Refer to EFSG stakeholder for keying schedules.

2.5 Locks and latches

GUIDE NOTE: Delete Mechanical locksets in NATSPEC building template and include the following.

Mechanical locksets (mandatory)

Standard: To selected parts of AS 4145.2 to meet the following:

Table 06: Mechanical locksets

Section	Clause	Requirement
3.4	Durability designation (Table 3.2)	D8
3.5	Cylinder Security (Table 3.3)	Sc8
3.6	Physical Security (Table 3.4)	S7
3.7	Keying Security (Table 3.6)	K5 -Key Control level 1

Marking: Permanent product marking confirming compliance with the Department of Finance and Services requirements must be undertaken by the manufacturer. The permanent mark must be located on the lockset and to be easily identified when the lockset is installed. Marking of packaging or catalogues without marking the product is not acceptable.

Compliance testing (mandatory)

Full scope testing of mechanical locksets must be undertaken at least every five years. Test results are to be made available on request with a maximum lead time of 60 days from request date, from either the current Governing Body or the building contractor performing the works. Failure to conform with the request in the specified time period will result in removal of the product from this Specification.

The first full scope testing of the proprietary mechanical locksets nominated in the EFSG Specification Guide must be undertaken and completed by the 30th June 2011 or the manufacturer must provide proof that these tests have been performed within the timeframe nominated in the relevant Australian Standard.

Re-testing must be undertaken five years from the previous test.

The manufacturers/suppliers of the proprietary mechanical locksets are to arrange and pay all costs relating to the testing. Failure to conform will result in the removal of the product from this Specification. The Governing Body has the right to remove all the manufacturer's products if continued non-compliance occurs.

Full scope test to AS 4145.2 confirming compliance to the specified durability, cylinder security, physical security levels and compliance with the permanent product marking requirements must be provided.

An independent lock expert must perform the testing of the mechanical locksets, as approved by the Governing Body.

Locksets test report: Provide the latest test reports (see below) prepared by a facilitator in a controlled NATA calibrated testing facility in accordance with AS 4145.2.

- Hand one copy of the latest test reports to the Department's Authorised person.

Note: Onsite compliance auditing will be undertaken intermittently.

For fire doors, submit evidence of compliance with the Standard to AS 1905 Part 1 and BCA Spec C3.4.

GUIDE NOTE: Delete locks and latches schedule section in NATSPEC Building Template and include the following

2.6 Door hardware items

Flush bolts

General: Where door leaves exceed 2100mm in height and bolts are fitted, the top bolt should have an extended shoot bolt to allow a maximum operable height of 1800mm from the floor. Provide top angle plates for open out doors and floor sockets or plates for bottom bolts.

General: Flush bolts generally should only be used for aluminium doors and should only be fitted to the door edge and not face fitted. The top bolt should be extended as for barrel bolts, when required. Flush bolts should not be used for timber doors, skeleton bolts are preferred.

Handles

Requirement: Where pull handles are fitted to external doors, the outside pull handle should be specified as being "with concealed fixing externally".

Table 07: Handles schedule

Handle	Requirement
Latch Handle (Timber Doors)	Minimum: 100 x 13 mm pull on 200 x 45 x 2mm thick end plate (rounded or 10mm radius corners) with cylinder hole at top. Finish: Satin chrome plated on brass or satin finish stainless steel.
Pull Handle (Roller grille)	Minimum: 125mm x 12mm satin chrome plated on brass or satin finish stainless steel pull with 4 fixing holes (2 pairs each end) for screw fixing.

GUIDE NOTES:

Check with each company proprietor to confirm that they can provide the above lockset test report. If the test report cannot be supplied do not include the applicable proprietary items in the project specification.

Refer to **Table 08: Door hardware** schedule and list of hardware items for each set. Refer application guide for door hardware sets for specific location with door types.

Documentation should only include items applicable to the door hardware sets for each project. Doors over 50mm maximum thickness requires extended cylinders and/or spindles and furniture screws.

Table 08: Door hardware schedule

Type	Notes
Primary Mortice Lock	Add rebate code to lock number for rebated forend. Set to egress unless specific requirement connecting door dual cylinders are required. For connecting space door, substitute two-cylinder model.
Mortice Cylinder Anti-Lockout Vestibule Lockset (Disabled Toilet and Self-Help Toilet)	For connecting space door, substitute two-cylinder model
Dual Cylinder Mortice Escape Lockset (Switch rooms)	Bottom cylinder key alike PW "E" and top cylinder keyed to local authorities' requirements. Requirement: Lock to plant room doors to have key alike PW "E".
Rim Cylinder Nightlatch	Ducts / Fire doors (Electrical / Mechanical Services)
Padbolt with Padlock/shackle protection	Security Cupboards, Gates and Roller Shutters.
Padbolt – Heavy Duty (Compound Gates)	Requirement: Provide additional floor sockets or wall angle strikes to allow gates to be also locked in the open position

Type	Notes
Padbolt with Padlock protection (Security Stores, Gates and Roller Shutters)	For steel roller shutters – weld padbolt to internal side of bottom rail and bolt retainer to track. For installation to aluminium roller shutters, weld padbolt to internal side of track - to enable the bolt shoot to immobilise door curtain.
Padlock	Boron Shackle
	Omit padlock plates where gate latch incorporates padlock locking
Lock Bolt Shield	Lock bolt protector for open out doors.
2-point Horizontal Locking Bar (Security “D”)	Requirement: Doors opening out, add "Opening Out" to Model Number.
Cylinder Rim Nightlatch	For single leaf doors opening out, add RBS to lock number. For two leaves opening out, add RBP to lock number
Kick Plate	Satin Stainless Steel 200 mm high x door width x 1.2 mm countersunk screw fixed at 150 mm maximum centres. Height of kick plate may be altered to suit glazed door bottom rail.
Push Plate	Satin Stainless Steel 250 x 200 x 2 mm thick (nominal). Form hole in plate for lock or turn-snib to align push/pull plates, if required. Width of push plate may be altered to suit door stile width.

Door stops and door holders

General: Door stop and holders to be provided for all external entry/exit opening out doors to allow doors to be held open and to limit door travel where damage can be caused to doors, walls, frames or door hardware.

Provide steel bollards with protective hood for installation of all door stops and holders as shown on drawing.

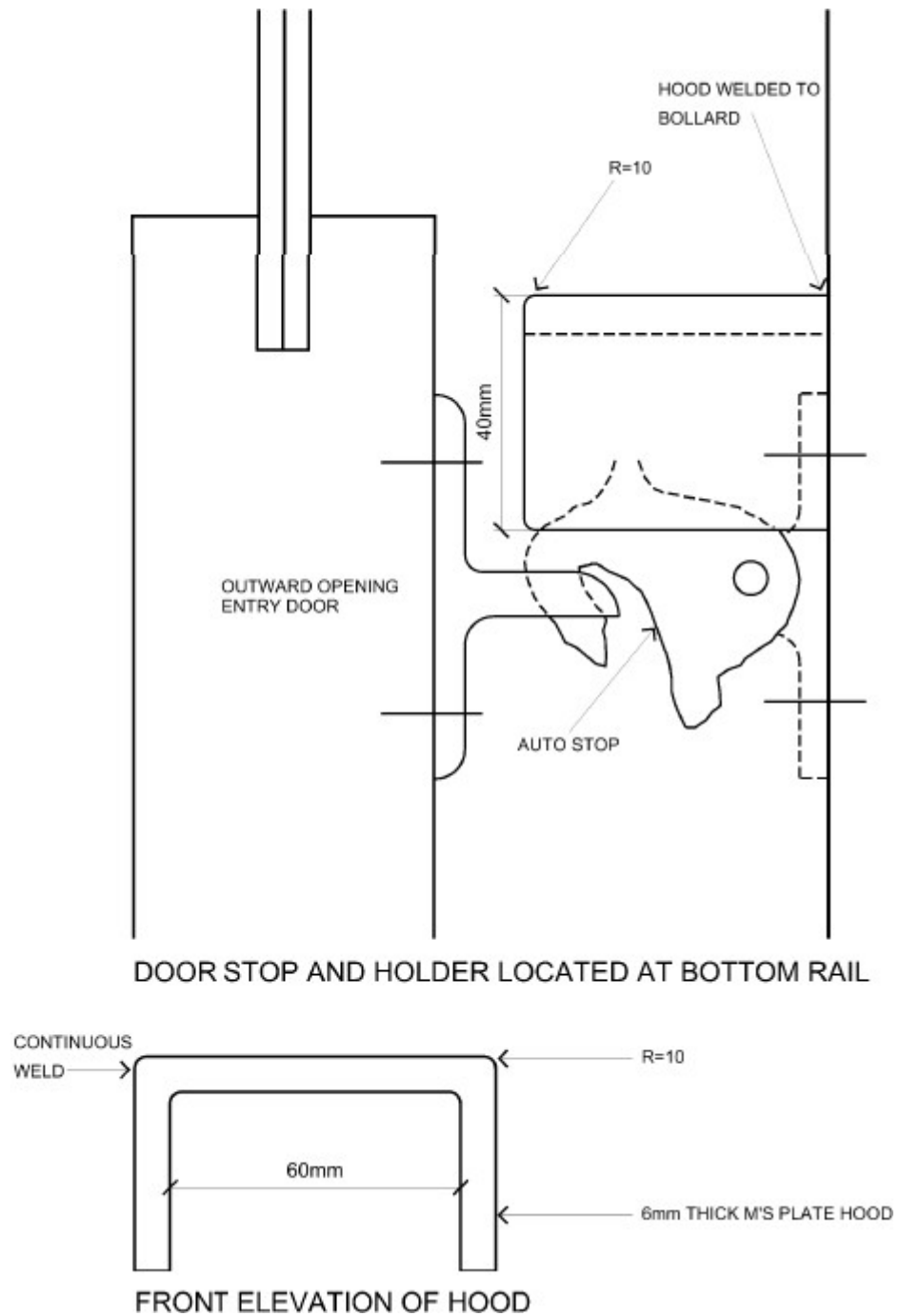
GUIDE NOTE: Include the appropriate drawing number.

Refer drawing:

Figure 01: Hood for Bollard with Auto-Stop

NOTES

- 1 Applicable to all external opening out doors, except for
 - 2 Plant Room doors.
- Complete unit to be hot dipped galvanised after fabrication



Installation: Where doors can open approx. 180d locate bollard as close as practical to the face of the wall.

Table 09: Door stop/holder schedule

Type	Notes
Door Stop and Holder	Bollard/Rail Fixing: Refer to drawing in Figure 1 above.
	Requirement: For external opening outdoors
Floor Stop with Hook	Requirement: For opening in doors. Locate to avoid trip hazard.
Floor Stop – Type A	Requirement: For floor finishes other than carpet.
Floor Stop – Type B	Requirement: For carpet floor finishes.
Wall Stop	Requirement: Wall fixed.
Overhead Door Stay	Requirement: Maximum 90d opening out external services doors.
Cabin Hook	For Cam action open outdoors (180d).

Panic exit devices

Requirement: Approved panic exit devices should be specified for egress doors to all multi-purpose spaces, communal areas, etc. Also refer to floor ferrule requirements.

Panic exit devices to incorporate key operated lock cylinders to lock push bar depressed (cylinder dogging) for unlocked entry.

To avoid external manipulation of these devices, door frames should have rebate forming stops, pairs of timber doors should have rebated meeting edges and pairs of aluminium doors should have a cover meeting stile to second closing door leaf.

Door suites to be “Superline” or “Shopfront” profile. Incorporate an integral cover strip stile for self-latch locks or panic bolts.

Panic exit devices should not be specified in conjunction with centre hung pivoted doors as they do not allow rebate forming stops to be fitted to door frames.

Doors should open 180d (nominal) with a door stop and holders fitted to bollards to provide positive hold open anchorage. Door frames should be positioned flush with the external wall surface. If this cannot be achieved position the bollards to allow maximum door swing. Refer to [04 ENCLOSURE/0455 DOOR HARDWARE](#).

Door closers should only be fitted to the first opening leaf of a pair of doors and door stops A.B.S. fitted to each leaf. Pull handles also, should only be fitted to the first opening leaf of a pair of doors, except when a dogged exit device is fitted to the inactive leaf (on non-fire rated doors) in which case both leaves will have pull handles fitted

Table 10: Panic exit devices schedule

Type	Notes
Panic Exit Device (Timber Door - Single Leaf)	Requirement: Where key entry is not required omit night latch cylinder. Cylinder dogging (CD) to be Keyed Alike (MK) to entry key.
Panic Exit Device (Aluminium door - with mid rail - two leaves)	Requirement: Where key entry is not required omit night latch cylinder. Cylinder dogging (CD) to be Keyed Alike (MK) to entry key. Refer DSTA aluminium door details drawing 2/19. Where two leaf door set is over 2100 mm high, add top rod extension to panic exit device, (nominate door height for device.)

2.7 Door controllers

General

Door controllers specified unless noted: Use cam action door closers, automatic door operators, Closers are to have the following:

- Adjustable spring strength not to be used with a spring strength over EN3
- Delayed action feature for door including entries and all areas designed for access by people with disabilities.
- Automated Controllers to be used where required entries are designed for access by people with disabilities in accordance with Access the Premise Standard.

Construction: Surface mounted design with slimline body for minimum wall clearance installation.

Standards: To EN1154 pending AS4145 part 5 upon release.

- Door control to be successfully type-tested and in full compliance to EN1154. Test reports and/or certificates to be made available upon request.

Marking: The product (each door closer) must be marked to identify conformance to EN1154.

Closer adjustment: Separate inbuilt control valves to adjust door closing speed, latching speed, backcheck cushion, closer strength and delayed action (closing time).

Adjust door closer latching speed and closer speed allowing doors to close without slamming. Depending on door closer application, adjust spring strength, backcheck and delayed action closing time, to assist access for people with disabilities.

Closer installation and adjustment details:

- The manufacturer must provide clearly labelled precise closer installation instructions with corresponding graphics.
- The manufacturer must provide clearly labelled precise closer adjustment instructions with corresponding graphics.
 - Size: A4
 - Hand one copy to the Principal's Authorised Person / Principal's Representative

Or

- Closer adjustment instructions to be shown on the inside of the cover box or body of the closer.

Door closers should not be installed externally where applicable. For open outdoors, drop plates are required for aluminium glazed door installations. Relevant fire certificates are required

Fire rated door closers

General: Use closers tested and certified for use as components of fire door assemblies to AS/NZS 1905.1 – Part 1: Fire resistant doorsets.

Table 11: Door closer schedule

Type	Description
Door Closers	Pull side door fitted - maximum door opening 180d for flush wall doorset.
Door Closers	Push side invert frame fitted – maximum door opening 180d.
Door Closer: (pneumatic)	Flyscreen doors
Door sequence selector	Aluminium or stainless steel.

Bolts

General: Where door leaves exceed 2100mm in height and bolts are fitted, the top bolt should have an extended shoot bolt to allow a maximum operable height of 1800mm from the floor. Provide top angle plates for open out doors and floor sockets or plates for bottom bolts.

Table 12: Barrel bolt schedule

Type	Description
Barrel Bolt-Cupboards	Extruded brass body and 6mm diameter brass shoot bolt with ferrule or keeper plate
Barrel Bolt –Stable Door	Extruded Brass Body and 10mm diameter shoot bolt with not-slip clutching bolt travel. 150 mm minimum barrel bolt length

Sockets

Table 13: Sockets schedule

Type	Description
	Brass or Aluminium Alloy 6061, 40 mm long x 3 mm wall thickness with internal diameter to closely match the bolt shank diameter. Drill floor and grout in flush with the finished floor finish.
Carpeted Floor Alternative (Not to be used for external doors)	Brass or Aluminium Alloy 6061, 20 mm long x 3 mm wall thickness with solid closed base, flanged top and internal diameter to closely match the bolt shank diameter. Drill and countersink base to receive 30 mm x 5 mm diameter long thread stainless steel screw and drill and fix to floor through carpet with lead plug.
Timber Floor Alternative (Non-carpeted floors only)	Brass or stainless steel 40 mm x 25 mm x 1.2 mm thick flat plate with two fixings to suit countersink wood screws and centre drill hole to closely match bolt shank diameter. Fix to timber floor with two 25 mm x 3 mm wood screws, finish and material to match flat plate.

03 Execution

As per current NATSPEC except as follows:

3.1 Installation

Handing

Determine on site, prior to supply, the correct handing of hardware.

Hinges

Steel frame fixing: Recess flush and screw fix to a 150 mm x 45 mm x 6 mm mild steel reinforcing plate, welded to the back of the frame at each hinge point. Drill and tap the plate to receive stainless steel machine thread screws to suit hinges.

Aluminium frame fixing: Slot aluminium broad butt hinges into sections and fix with eight machine thread screws per hinge. Alternatively face fix SS broad butt hinges to aluminium frame with stainless steel machine screw fixing to backing plates secured at each hinge fixing point

Table 14: Mounting height schedule

Furniture item	Height from finished floor (mm)
Locksets and Latch sets: Centreline of door furniture spindle, or of keyway if no furniture	1000
Panic Exit Device: Crossbar	1000
Pull Handle (Aluminium Doors)	Mount centrally above lock
Deadlock: Centre of cylinder where pull handle/push plate is also fitted	1100

Note: All installations to comply with AS 1428.1 and the Building Code of Australia.

Table 15: Door Hardware requirements to room types

Room(s)	Door Hardware description
A	Primary Mortice Lock, Cylinder both sides

Room(s)	Door Hardware description
B, C, D, E, F, G(IR)	Primary Mortice Lock, Cylinder
	External Plain Plate with Cylinder Hole
	Internal Plain Plate with Cylinder Hole
A, B, C, D, E, F, G(IR)	External Plain Plate Lever Handle with Cylinder Hole
A	Internal Plain Plate Lever handle with cylinder hole
C, D, E, G(IR)	Internal Plain Plate Lever handle
B, F	Internal Plain plate lever handle & turnsnib to lock & unlock external handle.
B(IR), C, G, L	Cam Action Door Closer/ Automated Door Closer
L	Panic Exit Device
A, B, D, E(IR), F	Door Stop
C, E(IR)	Door Stop with Holder
E	2 Point Horizontal Locking Bar
G	Push and Pull Plates
M	Pull Handle
H	Indicator Set
J	Padlock with Padlock Protection (Padlock plates and shackle protector used as required)
K	Nightlatch
K	Overhead Door Stay
C(IR)	Lock Bolt Shield (as required)
M	Mortise Roller Bolt
N	Dual Entry Lock

(IR) = If required

Table 16: Door Hardware Type locations

Type	Location/Space
A	Connecting door between General Learning Spaces and Workshops/ Laboratories, Library and Senior Study, Entrances
B	Animal Space, Plant Space, Agriculture Covered Area, Botany/Zoology, Clerical, Printing, Workroom, Executive, Clinic, First Aid, Community Clinic, Corridors, Kitchenette, Library Office/Workroom (PS), Careers Adviser, System Administrator, Principal, Deputy Principal, Home Base/Practical Activities Area, Home Base Store, Interview, Interview/Office, Interview/Meeting, Kiln Room (PS), Kiln Space (HS), Kitchens and Laboratories, Learning Spaces Generally, Laundry, Lecture Theatre, Library, Practice, Preparation, Kitchen - Preparation, Tea Room, Visitor's Office, Workshops, Staff Room, Sick Bay, Staff Room Annexe, Staff Study, Staff Lounge, Science Laboratory, Preparation - Science, Stage to Backstage, Staff Toilets and Air Lock Entry, Seminar, Senior Study, Special Programs Room
C	Chemical Store
D	Pantry – Semi-Commercial, Pantry – Domestic, Wood & Metal Materials Store, Project Store, P.E. Store, Large Equipment Store, Outdoor Equipment Store, Chair Store, Performance Store (PS), Movement Studio Store, Stage Control Cupboard, Sound Cupboard, Shed Workshop, Bulk Store (HS), Cleaning Supplies Store, Cleaning Distributed Store, Dust Extraction, General Store, Shared Withdrawals
E	GLS Store, Apparatus Store, Visual Arts Store, Pottery Store, Dark Room, Performance Store (HS), Fitness Store, Kitchen - Store, Multimedia Store, Lecture Theatre Store, Computer Store, Communications Room, KLA Resource Store, Special Programs Store, Sports Store, Sport Equipment Store, Control Room, Security Store (PS), Administration Store (HS), Preparation/Printing, Duplicating (own space), Bulk Store (General Assistant, PS), Archive Store, Multimedia Studio, Library Admin (HS), Computer Learning Space, Canteen
F	Under Stage Storage, Switchroom, Mechanical Plant Room, Lift Motor Room, L.P.G. Storage, Canteen Office/Store (stable door with barrel bolt), Evaporating Cooling Unit (ECU)
G	Student Shower/Change/Toilets (Air Lock Entry), Vending Machines, Access Toilet, Access Shower/Toilet, Staff Shower, Laundry to Change, Stage, Stage/Platform Access, Access Lift Lobby, E.I. Homebase to Shower/WC Access Shower/WC/Change/ Laundry
H	Staff Toilets, Student Toilets, Clinic Toilets, (fully enclosed cubicle), Staff/Student Toilet/Shower (Cubicles)
J	Garden Store, Swimming Pool Fence for Outdoor Learning/Play Enclosure, Boundary Fence Gate, Zone Fence Gate, Compound/Security Gates, Games Court (HS)
K	Electrical Distribution Board, Service Duct
L	Exits for Communal Hall, Gymnasium, Movement Studio, Stair Exit, Library Exit, Corridor Exit

Type	Location/Space
M	Fire Hose Reel
N	Switchroom, rooms where power industry access is required

3.2 Completion

Product warranties

Refer to separate schedules for manufacturer's items.

To be read in conjunction with plans and room technical data.

Corridor double door leaf meeting edges non-rebated.

- Omit lock if egress is required from the locked side (where required).
- Omit lockset for internal spaces not required to be locked and substitute mortice latchset.
- Omit deadlock for internal air lock doors.
- Non-combustible construction, smoke seals, RHS galv. sill for bottom seal where required.
- Door leaves to have aluminium meeting edges with/without overlapping cover strip. (Where req.)
- Canteen servery door frame to be positioned flush with the external wall surface to allow doors to open back against walls. Where adjoining door leaves overlap when open 100 x 150mm stainless steel heavy duty wide throw butt hinges are required for one leaf. For overlapping door leaves omit one door stop and holder. Skeleton bolts, door stop, hinge bolts, pull handle with roses (active leaf internal side)

04 Selections

As per current NATSPEC.