

PRODUCT ASSESSMENT

Client: McGrath Locks
ATTENTION: Graeme McGrath
PO Box 173
WILSTON, QLD 4051

Introduction:

You indicate that you have developed an electronic lock which includes a keyless access function (Figure 1). You have requested that we assess the lock for compliance with AS 1428.1–2009 Design for access and mobility Part 1: General requirements for access – New building work Clause 13.5 Door Controls.

The key requirements of this clause which relate to the handle in question are listed below:

13.5.2 Design and performance

Door handles and related hardware and accessories shall comply with the following:

- (a) The door handle and related hardware shall be of the type that allows the door to be unlocked and opened with one hand. The handle shall be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch.*

NOTES:

- 1 Figure 35(A) shows an example of a suitable hinged door handle. Figure 35(B) shows an example of a suitable door handle for sliding doors.*
 - 2 Door handles of 'D' lever type provide an adequate grip for people with hand impairments.*
- (b) The clearance between the handle and the back plate or door face at the centre grip section of the handle shall be not less than 35 mm and not more than 45 mm.*
- (c) 'D' type handles shall be provided on sliding doors.*
- (d) Where snibs are installed, they shall have a lever handle of a minimum length of 45 mm from the centre of the spindle.*

Figures 35(A) and 35(B) have been attached to this report at Figure 2.

Assessment:

Clause 13.5.2 (a) of AS 1428.1–2009 requires that the door be unlocked and opened with one hand, and that the hand of a person who cannot grip will not slip from the handle during operation of the latch. As the door contains an electronic latch which is opened with a key card, and the handle is designed with a thick top face and a protruding cap at the end, in my opinion this requirement has been met.

Clause 13.5.2 (b) requires the clearance between the back face of the handle and the door to be within 35 – 45 mm at the centre grip section of the handle. A clearance of 43.3 – 43.9 mm was measured using calibrated Vernier calipers, which is within the required clearance, Figure 3. It is important to note that, as part of the installation, this distance should be verified to ensure that compliance with this requirement is maintained.

Clause 13.5.2 (c) requires that 'D' type handles be provided on sliding doors. As this handle is not a 'D' type, it is not suitable for use on sliding doors.

Clause 13.5.2 (d) requires that installed snibs have a minimum lever handle length of 45 mm from the centre of the spindle. As this handle does not have a snib, this requirement is not applicable.

It is also important to note that various other requirements exist within Clause 13.5 of AS 1428.1–2009, for example on the location and height of the handle, that are related to the installation of the handle and cannot be addressed in this assessment.

Figure 35(A) of AS 1428.1–2009 contains an illustrative diagram of the handle indicating a minimum cap length of 20 mm. However, this is not specifically referenced in any of the clauses as a performance requirement and as such has not been assessed and does not represent a compliance requirement.

Conclusion:

The handle as it is constructed meets the relevant performance requirements of AS 1428.1–2009 Clause 13.5. It is important to note that additional requirements related to the installation of the handle exist within AS 1428.1–2009, and must also be complied with.

Prepared by:



Liam Roche BEng (Mech) Hons. GradIEAust
Mechanical & Testing Engineer

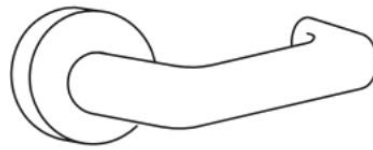
Reviewed by:



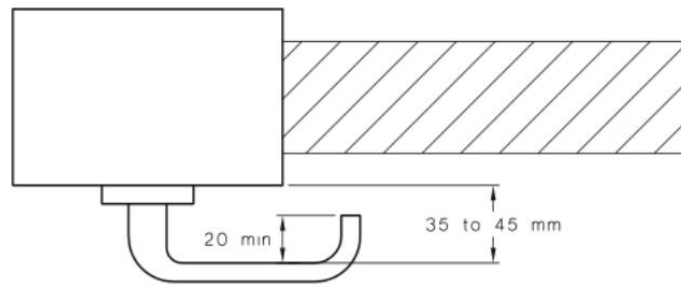
Dr Adrian Grosvenor BSc/BEng (Mat) Hons. MIEAust
Principal Engineer



Figure 1. Supplied handle.



(a) Isometric view



(b) Plan view

FIGURE 35(A) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR HINGED DOORS

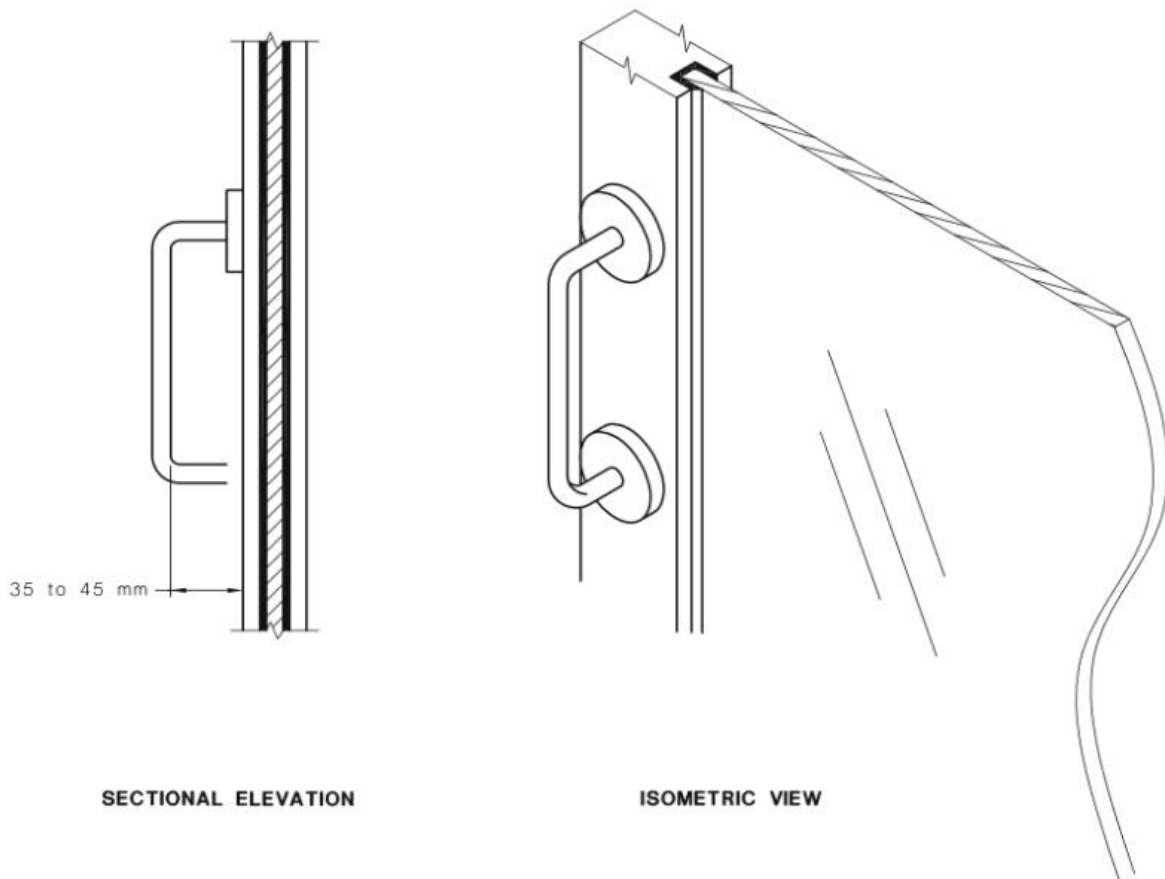


FIGURE 35(B) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR SLIDING DOORS

Figure 2. Figures 35(A) and 35(B) of AS 1428.1–2009

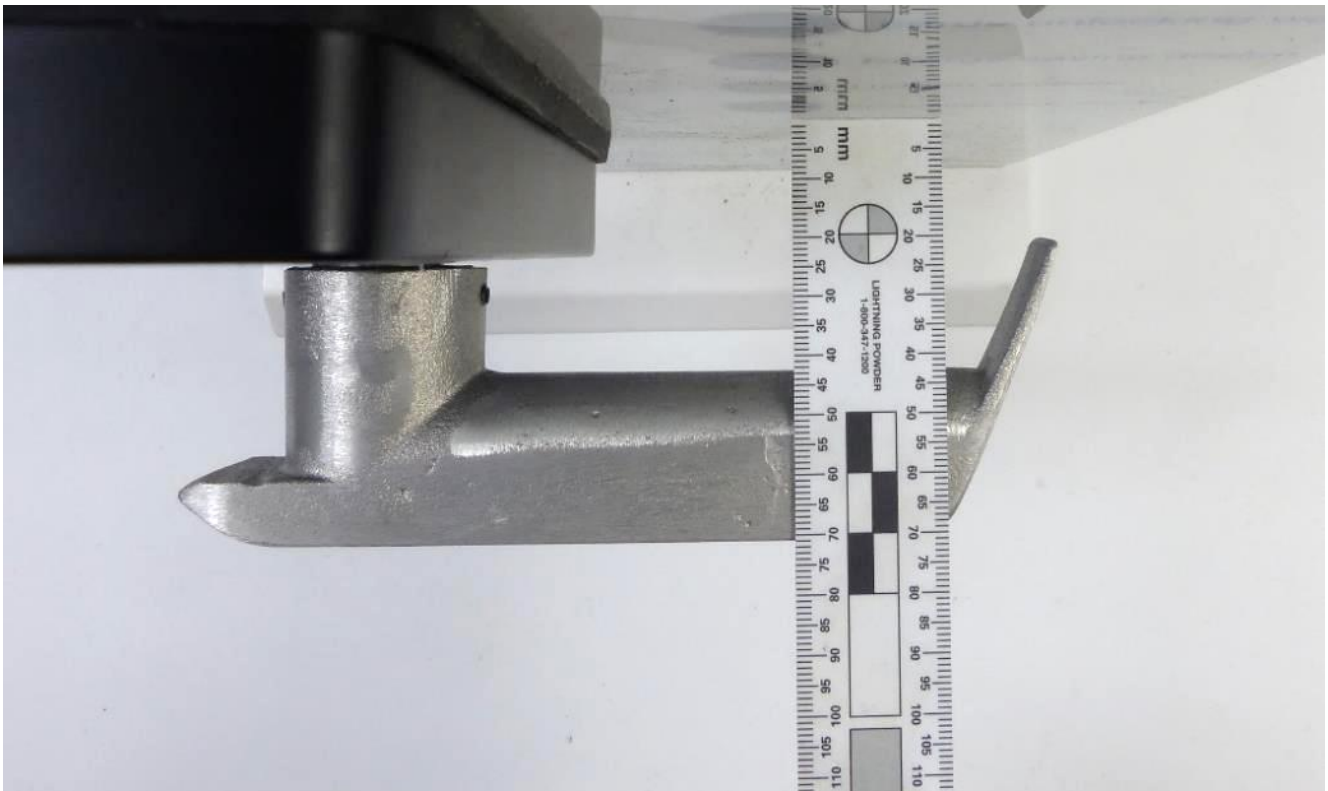
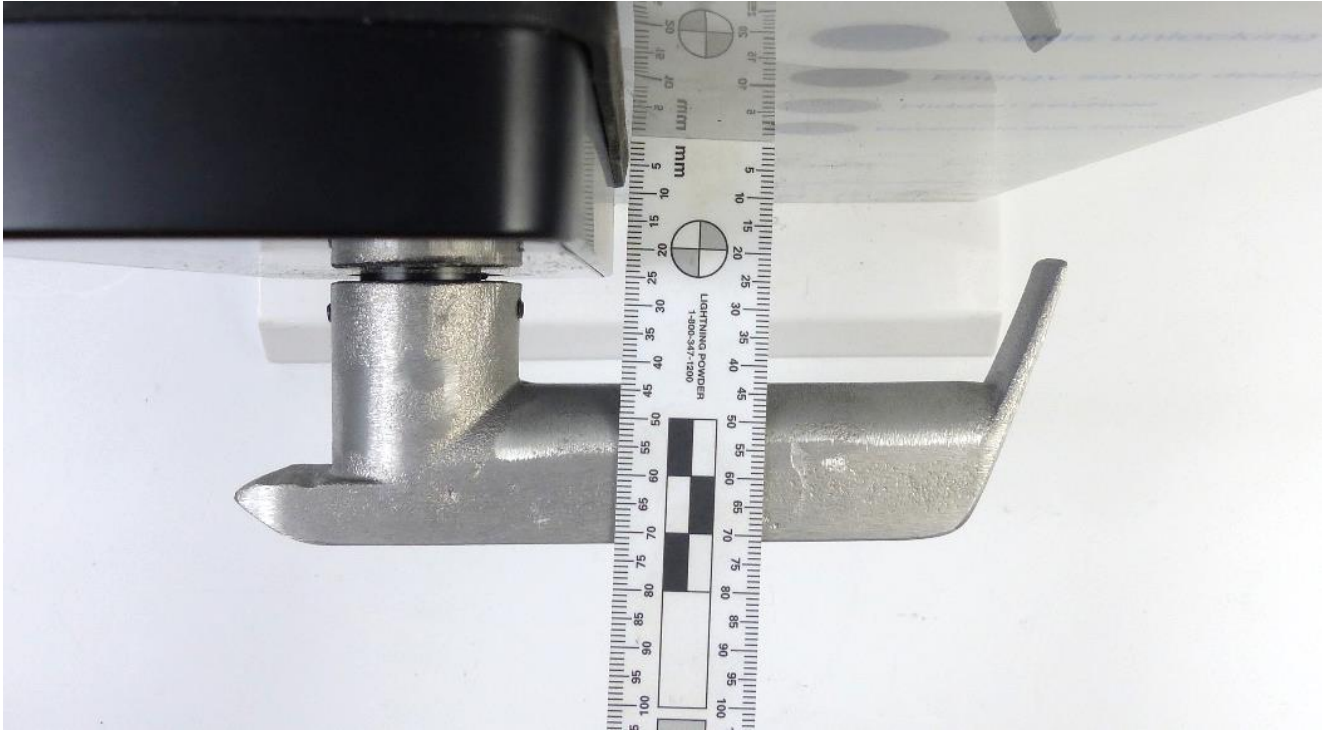


Figure 3. Measurement of handle back face to mount face.