

TAKING ROOF & ATTIC ACCESS TO THE NEXT LEVEL OF SAFETY

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INTRODUCTION

Across the country, the popularity of attics and accessible roof spaces is on the rise, as population density in major cities grows and space increasingly comes at a premium.¹ This coincides with a trend toward renovating instead of relocating. Domain reports that between 2015 and 2016, the percentage of Australians relocating fell from 5.2% to 4.5%.²

Meanwhile, the annual spend of Australians who are opting to renovate has cracked more than \$7 billion, according to The Australian Financial Review.³ The figure is expected to grow, with the value of alterations and additions across the country anticipated to rise by 6.8% in 2018-19.⁴

As more people decide to renovate rather than sell up when their preferences or needs change, attics and accessible roof spaces are becoming popular solutions for those searching for more space. Converting roofs and attics into a usable and

accessible space is an ideal way to unlock unused space for storage or living.⁵ While the growing popularity of these spaces being utilised is driving creativity and innovation within the design and construction industry, it can be problematic from a safety perspective if not properly managed.

The rising trend of Australians utilising attic space is coupled with the increasing insertion of air conditioning systems and other services into ceiling cavities, with three out of every four Australian households now fitted with a refrigerated air conditioner or an evaporative cooler.⁶

This creates a critical requirement for safe, reliable access methods to such ceiling cavities for occupants and service personnel. This whitepaper takes a closer look at roof and attic access, an often-overlooked component of designing within this space.

UNDERSTANDING THE RISKS OF INAPPROPRIATE ACCESS

Gaining safe and reliable access to an attic and roof space requires more than just a ladder or pull-down step system. Rather, access demands a whole system that includes fixings, footings, and the ceiling hatch. As with any construction component, failure to install an appropriate access system can create a number of issues, which are set out below.

Accessing the roof cavity can pose safety risks to the occupants and service personnel who perform routine installation, repairs or maintenance of services, such as air conditioning, within the roof cavity. Falling is a major risk, with an estimated 5,000 Australians each year being admitted to hospital due to an injury from falling off a ladder.

Most of these injuries are arm and leg fractures, as well as injuries to the head. The incidence of falls is climbing, with hospital admissions caused by ladder accidents between 2002 and 2012 increasing by nearly 47%.⁷

The US National Institute of Occupational Safety and Health reports that the top three causes of ladder-related injuries are: inappropriate ladder selection, failure of the ladder due to poor condition, and improper use of the ladder.⁸ This suggests that with the right equipment and proper use, the incidence of ladder-related injuries could be greatly reduced.

Non-compliance with the relevant building standards and regulations can result in serious risks and liabilities. In this context it is important to note that the Building Code of Australia (BCA) provides the minimum standards for construction in Australia, meaning that if a product does not at least comply, it is inadequate to perform its set task and may lead to further building issues or injury.⁹

If a system is not properly installed it can cause costly and dangerous damage to the ceiling structure and injury to the user. This can occur where poor connection to the ceiling causes the ladder to detach and rupture the ceiling surface.¹⁰





WHAT ARE THE SAFETY REQUIREMENTS?

There is currently no specific Australian Standard for pull-down roof and attic ladders. The closest referable standard is AS1657 – Platforms and landings, which applies to platforms, walkways, stairways and ladders that are intended to provide safe access to places used by operating, inspection, maintenance and servicing personnel.¹¹

However, if the trend of attics and accessible roof spaces continues as predicted, it is possible that a Standard may be introduced for pull-down (attic) access ladders.

“ The ability for a ladder to perform its purpose in a safe manner is dependent on its design. ”



DESIGN-BASED SOLUTIONS

The ability for a ladder to perform its purpose in a safe manner is dependent on its design. When selecting a pull-down roof and attic ladder, be sure to select a tread-style pull-down ladder specifically designed for attic or roof access.

This will be a much sturdier alternative to a fixed or portable ladder and can be fully retracted into the roof cavity to save space when not in use. It is helpful to evaluate the critical characteristics of each product using the following criteria.

- Select durable material that will not easily succumb to wear and tear. Roof and attic ladders can be made of aluminium or wood.

Aluminium ladders are lighter, making them easier to pull out, pack away or move. Wood ladders are more prone to the effects of moisture and temperature change, as well as potential natural defects.¹²

- Choose a product with a high weight capacity that is capable of supporting users and any additional loads they may carry up and down the ladder, such as heavy boxes and other objects.
- Look for a stable, sturdy connection with the ceiling opening and anti-slip feet at the point of contact with floor. This will increase stability and reduce the risk of injury.
- The usability of a ladder is key. A ladder should be easy to pull down for use and to stow when not in use. If the ladder is difficult to operate, it is likely users will avoid it or fail to operate them properly, causing a safety hazard.
- The ladder should be fit for the installation context. The ladder should be the correct length for the site, with tread space at a uniform distance from one another. Any variations in design will create unnecessary safety risks.





AM-BOSS ACCESS LADDERS

Since 1980, AM-BOSS has led the Australian market in purpose designed and engineered attic ladders and roof access stairs. The company's Founder Werner Hecht created the first prototypes in 1979, and soon developed what would become one of the most effective complete systems for roof and attic access on the market.

AM-BOSS has since led the industry in the design, manufacture, installation, and distribution of purpose-built pull-down access ladders, fixed access ladder systems and more. The company has also expanded to include the supply and installation of Fall Arrest Systems to complement its access systems and offer a complete system.

AM-BOSS provides versatile solutions for domestic and commercial applications, with its designs able to be customised to suit just about any situation. The key features which make the AM-BOSS products market leaders include an innovative access system with incorporated unique fixing clips that prevent the unit from falling out of the ceiling after it has been pushed into the frame, and specially designed metal architraves that allow for a simple, streamlined installation process.

Systems also include fully lubricated hardware components (such as hinges) and are counter-balanced to ensure that when the door is closed the springs holding it in place are not tense, reducing wear and tear on the product and aiding the reliability of the system. Access systems from AM-BOSS are fully compliant with the Building Code of Australia (BCA) and are certified in accordance with the NCC CodeMark scheme.

This ensures the utmost level of safety for occupants and service personnel accessing the roof or attic space. The reliability and high performance of AM-BOSS access systems have made the company a favoured choice in commercial buildings, homes, government facilities, hospitals, and factories alike.

Even as the company has expanded, it has remained proudly 100% Australian owned and operated. In addition to the extensive catalogue of access solutions, AM-BOSS can also manufacture bespoke ladders and systems that meet the specific requirements, for example, the size, pitch and angle, of each individual installation context.

To find out more on the AM-BOSS product range, visit www.ambossaccessladder.com.au.

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