

## Safe use of portable ladders

A portable ladder is primarily used for gaining access to areas above or below the ground, or other levels that are not provided with permanent access. The potential for injury in a fall is significant – you should only consider using a portable ladder if other alternatives, such as scaffolding or elevating work platforms, are not reasonably practicable.

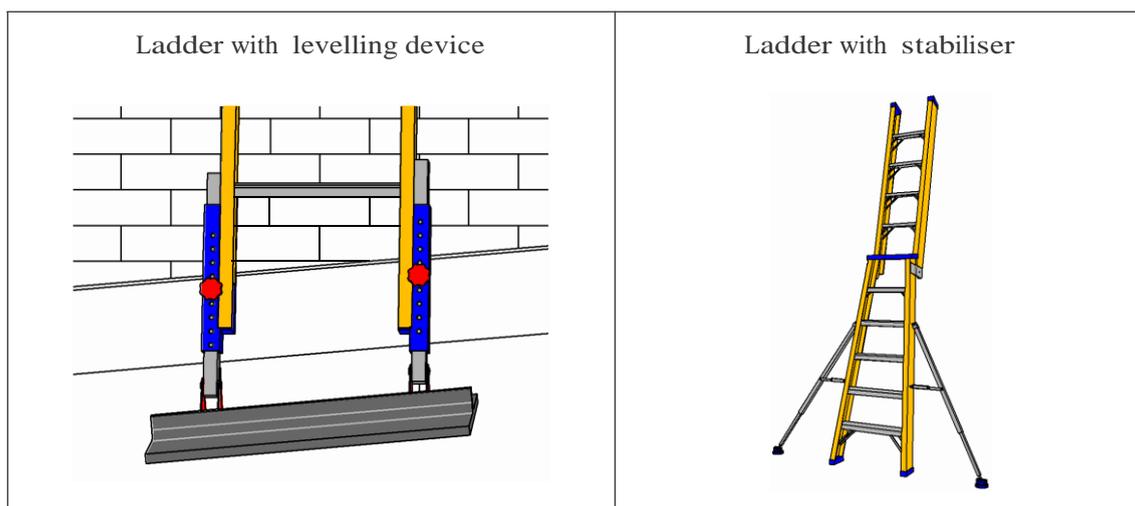
There are limits to the safe use of ladders and they should not be used for working at heights of 6 metres or more. Work done with ladders should be restricted to light duty work that's performed for short periods of time. For heights above six metres, ladders should only be used for access purposes.

In your workplaces use regularly inspected and maintained industrial ladders that are designed to comply with Australian Standards. They must have a clearly displayed load rating of at least 120kg. Do not use domestic ladders.

### Ladder placement

Portable ladders must be supported at the base and positioned on a stable surface. Straight and extension ladders should be secured at both the top and bottom to prevent movement. Avoid using ladders in wet or windy conditions, unless control measures account for these conditions.

For soft, uneven or sloping surfaces, use a support under the ladder feet for levelling and stability – eg planks or a proprietary ladder-levelling device. Be aware of the ground-to-first-rung distance to prevent tripping.



Metal ladders must be fitted with rubber feet, or a similar non-slip material. Do not erect a ladder on a slippery surface as stability depends on friction at the base.

Ladders used near powerlines should be non-conducting types, such as timber (without wire reinforcement or with the wire reinforcement recessed and insulated) or reinforced plastic (includes fibreglass), but not metal. Refer to the *Code of practice for work near overhead power lines* (catalogue no. WC01394). Keep metal or wire-reinforced ladders at least three metres clear of powerlines (or any electrical conductors). Beware of overhead powerlines when putting a ladder into position. Note: check with your workplace regulator for specific clearance distances.

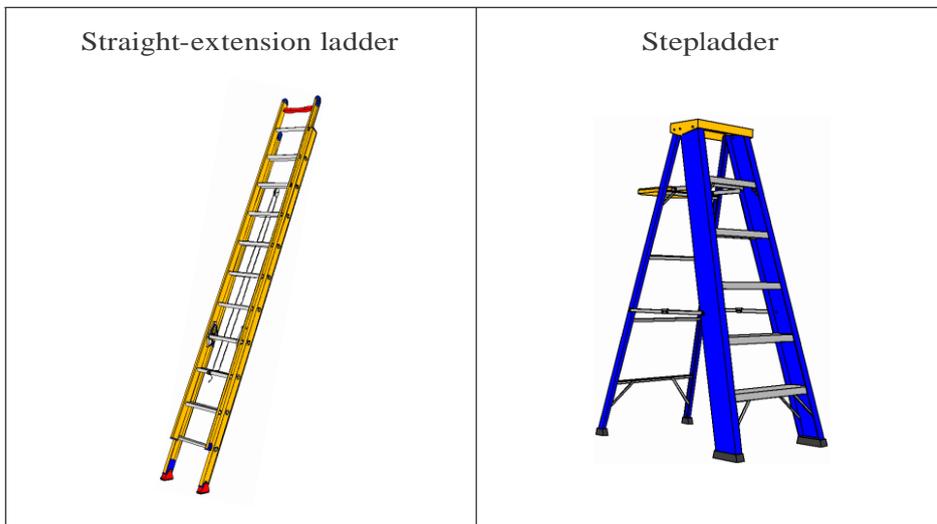
Place ladders away from areas where there are hazards such as sharp objects, machinery or chemicals. Other means of access, other than portable ladders, may be required above these hazardous areas.

Place ladders away from edges such as balconies and other raised surfaces.

When used near traffic areas, ensure that measures are taken to separate the public or other workers from the work activity – ie barriers, rerouting of pedestrian ways. Place ladders away from doors that could hit the ladder when opened, or lock or barricade the doors to avoid inadvertent opening.

## Ladder use

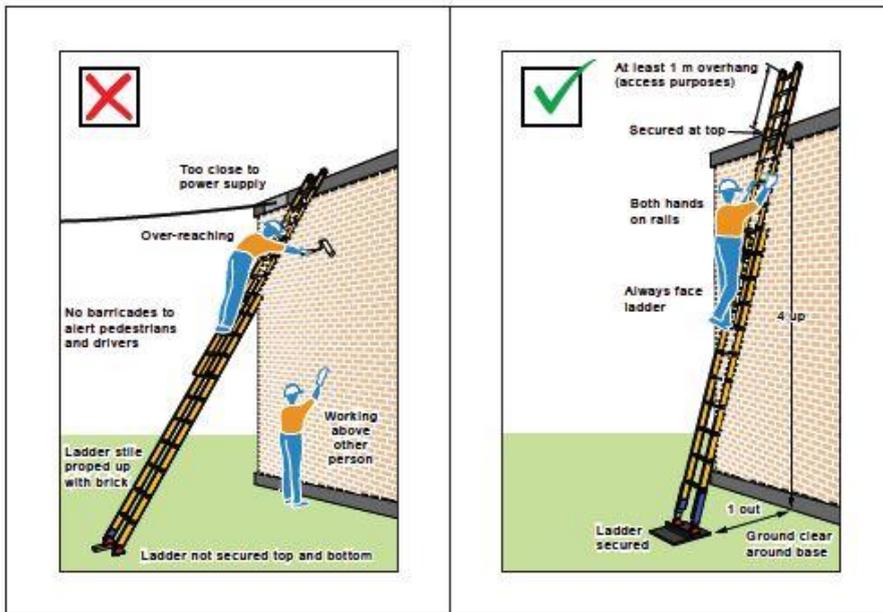
Incidents involving portable ladders frequently occur because the limits on their use and design are exceeded.



The base of a leaning (straight or extension) ladder should extend out one metre for every four metres of height – ie a height to base ratio of 4:1. This minimises the chance of the ladder falling backwards or the base sliding. It is the best slope for using a ladder.

Secure it or tie it off from the stiles (not the rungs) – if it can't be secured, it should be 'footed' by someone holding the stiles or suitable stabilisers to prevent movement.

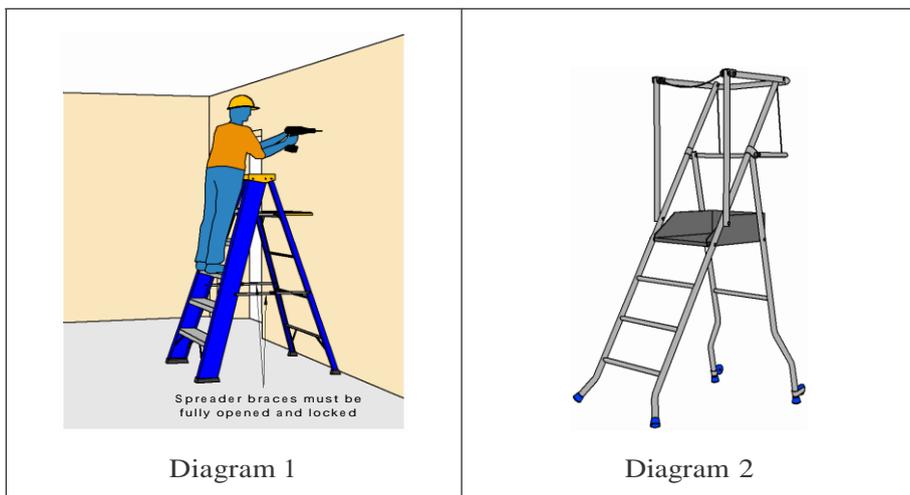
Ensure that the structure the ladder is leaning against is stable and will not break or move away when a person is on the ladder.



While on the ladder:

- Don't climb or place your feet higher than the third rung from the top. This allows you to grasp the ladder at waist height while working.
- Work within easy arm's reach of the ladder. Don't lean over the side of the ladder.
- Maintain three points of contact at all times.
  - Have two feet and one hand, or one foot and two hands, on the ladder when climbing it.
  - Have two feet and one other point of contact with the ladder while working from it, such as one hand or the upper torso leaning against the ladder.
- Wear fully-enclosed, slip-resistant footwear.
- Get off before moving the ladder. Don't walk while standing on it.
- Face the ladder when climbing or working on it.
- Do not work directly over other people. Barricade the area below if required.
- Use only lightweight hand tools on a ladder and ensure that:
  - Use is light-duty work for short durations.
  - They can be used in their normal operating position.
  - Guarding and other safety features on the tools are operational.
  - They can be carried in a tool belt or tool bag, and are not supported from the ladder. Don't attach tools to a ladder unless the ladder is designed for that purpose.
  - Your centre of gravity remains within the stiles.

- For straight and extension ladders:
  - When working from ladders, they should be long enough to provide at least one metre of solid support beyond the height of the task. Where this is not possible, consider using alternative methods, such as a mobile scaffold or elevating work platform.
  - When using ladders for access, they should extend at least one metre above the level being accessed, unless the structure provides adequate handholds.
- For extension ladders, such as the rope-and-pulley type, ensure:
  - They are placed into position, unextended. Extend a few rungs at a time using the rope.
  - Latching hooks are engaged after each extension.
  - Good manual handling practices are applied. Two people may be required to raise and lower, depending on the type of ladder, the location and weather conditions.
  - To apply adequate weight at the base when lowering to prevent it becoming uncontrollable.
- For stepladders:
  - Position with the treads facing the work activity with spreader braces fully opened and locked. See diagram 1 below.
- For stepladders with working platforms:
  - Some stepladders have a working platform on which to stand and these should only be used when the height of the work is compatible with the height of the platform. These platform ladders should have guardrails around the working platform, which should be inspected for damage prior to use, as they can be susceptible to damage in transport and storage. See diagram 2 below.
- For multi-purpose ladders:
  - These are portable ladders that have one or more pairs of articulation joints enabling the ladder to be configured for use relating to a variety of activities. Manufacturers instruction are required to be followed when they are configured.
  - When these are being used as portable ladders they should be used in accordance with the advice above that corresponds to the configuration in which they are being used – ie either as straight or stepladders.





## Maintenance

Ladders must be regularly inspected and maintained by a competent person as per manufacturer's specifications, and their designs must comply with Australian Standards.

Follow manufacturers recommendations for maintenance and inspections.

A competent person must inspect ladders before each use. Don't paint wooden ladders. Use a transparent preservative to ensure that defects can be easily detected. If defects are detected on any type of ladder, repair it as per the manufacturers instructions before further use or, if this is not possible, destroy it to prevent further use.

Repair or destroy ladders that have:

- Warped, splintered, cracked or bruised timber stiles and faults that are masked by paint.
- Twisted, bent, kinked, crushed or cracked metal stiles, or damaged feet.
- Missing, worn, damaged or loose rungs, steps, treads or top plates.
- Missing, broken or loose tie rods or damaged step ladder stays.
- Missing, broken or worn ropes, braces or brackets.

## Checklist

Ensure that the ladder is:

- An industrial ladder complying with the relevant part of AS/NZS 1892 series – ie labelled as rated for 120kg or more.
- Appropriate for the task – used for light-duty and short duration work only.
- In good condition and not damaged.
- Positioned on firm, level ground or that appropriate supports are provided – eg ladder leveller, plank, stabilisers.
- The correct height to avoid reaching or stretching.
- Not too close or too far from the support structure.
- Secured (and has all locking devices secured).
- Not supported by the rungs.
- Used with three points of contact maintained.
- Slip resistant at the base and on the rungs.
- Non-conducting, if used near powerlines or a minimum of three metres from powerlines, if metallic.
- Only used if the area below is clear of people.
- Not used on scaffolding, unless specifically designed for scaffold use.
- Not used on elevating work platforms to get extra height.
- Not used in wet or windy conditions, unless using work practices that are developed for such conditions.
- Not used near traffic areas, unless the working area is isolated.

