



Our unique, heavy-duty, rollaway bank ladders are ideal for gaining access up and down uneven or slippery banks and slopes.

Easily fixed into position with metal pins through a metal reinforcing plate, individual ladders can be connected to form longer lengths.

Manufactured to order, we offer two standard ladders - each weighing less than 20kg - as well as custom made sizes, tailored to your needs.

3m long x 400mm wide with 7 rungs: **£285 EACH** + VAT

2m long x 600mm wide with 5 rungs: **£285 EACH** + VAT

"We are really impressed with the quality of manufacture. The custom size we asked for was no problem for Walker Rubber. Our bank ladder was despatched quickly and we have since ordered 3 more."

CUSTOMER **TESTIMONIAL**

FIND OUT **MORE**

CALL US ON **01603 487371**

EMAIL US AT **SALES@WALKER-RUBBER.CO.UK**

WWW.WALKER-RUBBER.CO.UK

Bank Ladders - Safety Advice

Bank ladders are designed to increase the grip on an angled surface allowing individuals to work more safely. It is important to understand that they do not completely eliminate the risks inherent in working on sloped surfaces.

The angled 'cleats' are designed to give a greater degree of grip but are best characterised as reduced slip rather than 'non' slip. They do not provide 100% grip. The amount of grip will vary depending on a number of factors including but not limited to the following:

- the weight of the person using the ladder
- the load the person is carrying
- the environmental conditions at the time of use
- The relative position of the person on the ladder
- The agility of the person
- The care and speed with which a person moves from step to step

Where there is a significant hazard, should the individual fall from the bank ladder, then additional safety measures must be provided. These may include for instance safety lines or safety netting.

Testing of our product

In order to provide guidance as to suggested maximum loads we arranged for testing to be carried out at Smithers Rapra.

Because of the unusual nature of the product there are no standard defined tests to measure the strength of the bank ladders. Working with Smithers Rapra we devised some ad-hoc tests to attempt to replicate the use in service.

The results of these tests are shown below:-

Test 1: Loading of a single step

Steps were loaded using a circular platen to simulate the ball of the foot and a rectangular platen to replicate a foot turned side onto the step.

It was found that the pressures required to deform the step so that it squashed flat to the belt and no longer acted as an angled step were as follows:

	Load (N)	Load (Kg)	Displacement (mm)
Circular platen	1210	125	35
Rectangular platen	2698	275	36

The loads were increased beyond this point under load 2 and reached a maximum of $\approx 3500\text{N}$ without failure. The step also returned to its original shape once the load was removed with no evidence of distortion of the fixing strips or tearing of the belt.

Test 2: Loading of the belting material and joint

A connecting section of the belting material was also tested under tension until failure. The failure strength was as follows:

	Load (N)	Load (Kg)	Displacement (mm)
Tensile test on join	3920	399.60	36

Conclusions

1. The maximum loads sustained by the cleat without failure ($\approx 3500\text{N}$) and the belting at failure (3920N) should not be treated as maximum limits in service but instead should be applied with a safety factor so the maximum loads allowable are a fraction of these loads. This level of safety factor should be applied depending on the potential hazards that should happen if failure occurs. It should also consider any associated additional safety measures that may be in place.
2. If a load exceeding 125Kg (foot perpendicular to the tread) or 275kg (foot parallel to tread) is applied to a step it will compress to the point where it ceases to act as a step. The total weight of worker + equipment should be considered to ensure that they are significantly below these weights to ensure that the bank ladder works as designed.

We would be happy to provide an electronic copy of the testing report free of charge should you require greater information than provided in this document.

Considerations for use

In addition the following points are also critical to consider when using the ladders.

1. The attachments to hold the top of the ladder (furthermore known as the fixings). These fixings must be adequate to hold the weight of the ladder and the weights of any individuals standing on the ladders (total weight).

The angle of the bank will affect the proportion of the total weight that will act upon the fixings. The steeper the bank is, the greater the proportion of these loads on the fixings.

Always ensure that ladders are carefully inspected before and after use. The materials used in manufacture are designed for long life but will deteriorate depending on the age, use and environmental conditions.

2. The ladder should not be used if there is any evidence of the following:

- Fixings becoming loose.
- Rubber cracking
- Tears or rips in the belting material

Should these occur, please contact us as we offer a service to repair the affected area or manufacture a new ladder. To ensure a long life, ladders should be cleaned after use and stored in a dry place, out of direct sunlight, which does not experience extremes of temperature ($>30^{\circ}\text{C}$ or $<0^{\circ}\text{C}$).

3. Because of the varying conditions that the ladders will be used in it is not possible to provide specific requirements for use that will cover all eventualities. Where there is a significant hazard, should the individual fall from the bank ladder, then additional safety measures must be provided. These may include for instance safety lines or safety netting.

4. Any risks from the use of a bank ladder should be fully assessed before use.