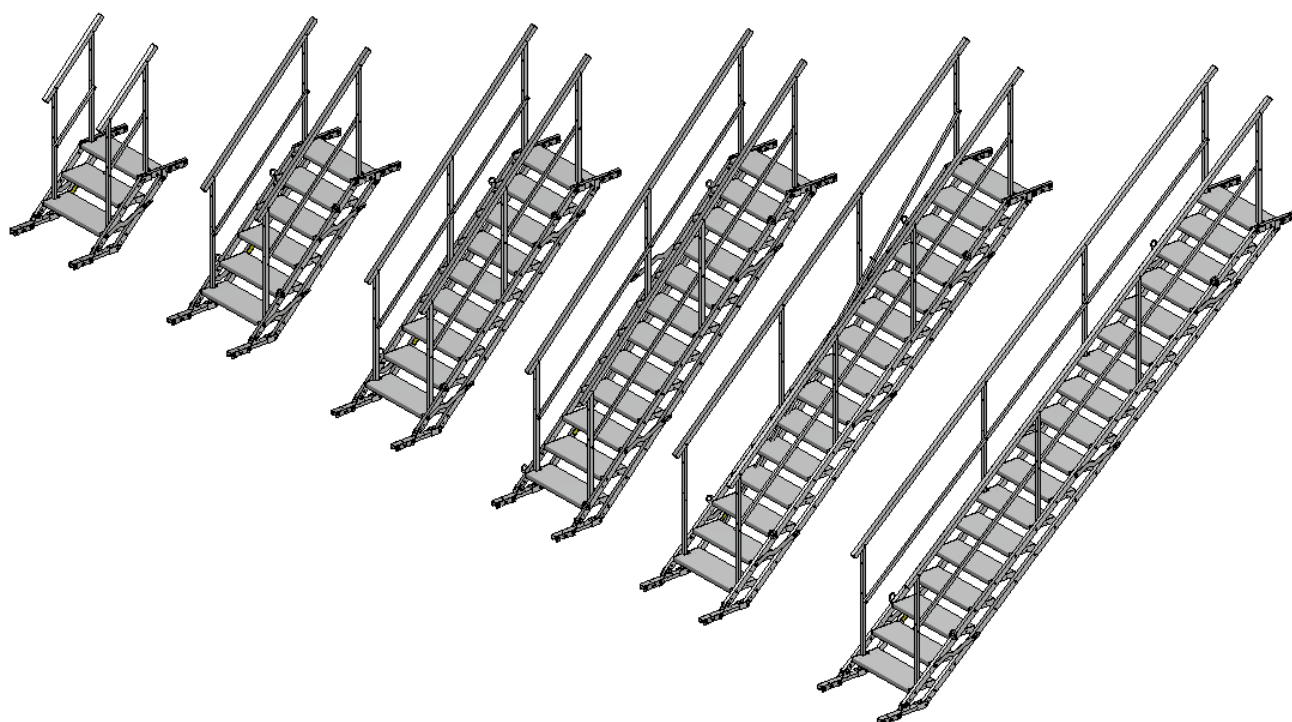


Operation and maintenance manual

TAS aluminium temporary access stairs



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List of revisions

#	FULL NAME	DEPARTMENT	REVISION DATE	SCOPE OF CHANGES	COMMENTS
1	Piotr Abram	BR	25/01/2024	General update of the document	
2	Karolina Kucharczyk	BR	25/06/2026	Changes to Section 12 – Storage	
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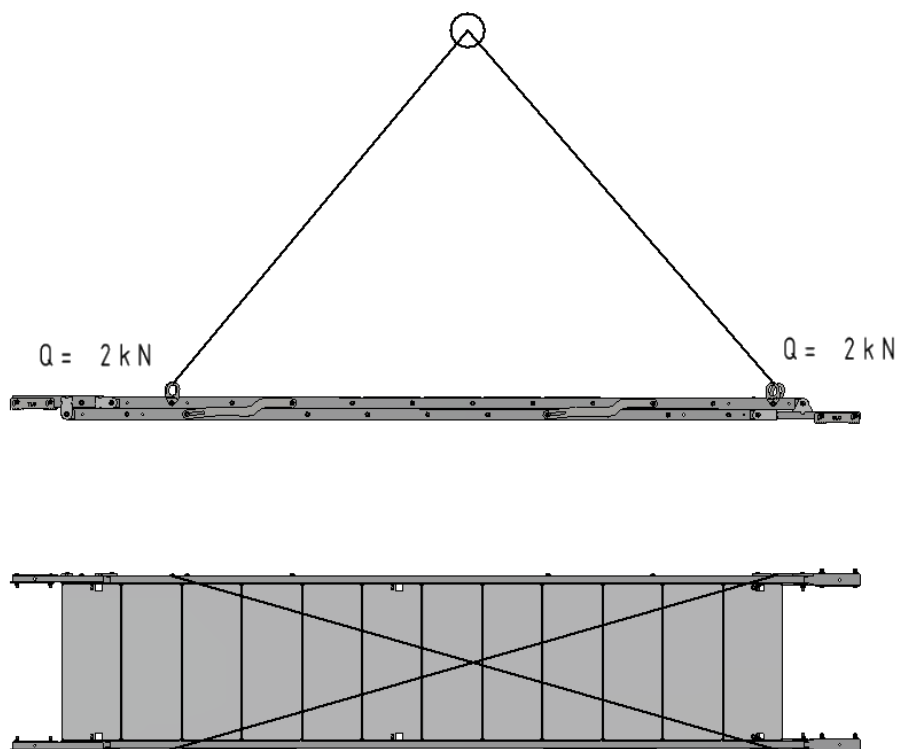
1. Introduction

The operation and maintenance manual relates to the installation and use access stairs for deep trenches for the movement of people. The stairs are installed in the excavation, after the ground and the upper supporting edge have been prepared. The bottom ground should be level to provide adequate support for the entire set, as only this position allows the set to be used correctly and safely. The essential element is the flight of stairs with the steps installed. The number of steps depends on the length of the stair segment. The steps are perforated to protect the user from slipping and the accumulation of dirt. There is a locking device between the top and bottom cheek beams of the stair run to prevent the stairs from folding uncontrolled. The individual steps have special sockets for the installation of railing posts, which can be installed on both sides of the staircase.

The steps are available with 3, 6, 9, 12, 15 and 18 steps and a width of 708 mm. It is possible to join the individual sets, using special connectors, and supports are required when joining long ones. Stairs with 3, 6, 9, 12 steps can be used as a footbridge over a trench.

Number of steps	3	6	9	12	15	18
Weight (kg)	25.9	42.4	59.2	73.6	91.7	106.1
Length L folded (m)	1.36	2.17	2.98	3.79	4.6	5.41

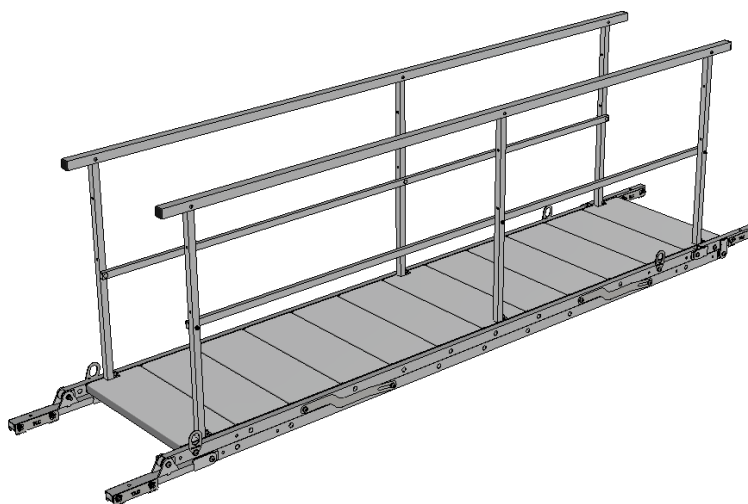
Tab 1. Weight and length of the stairs.



Rys 1. Drawing of the staircase



Rys 2. Stairs in unfolded state



Rys 3. Stairs folded to form a footbridge

2. Technical specifications

- permissible distributed load for stairs - 1.0 kN/m²
- admissible concentrated load for stairs - 1.5 kN on an area of 200 × 200 mm
- permitted side load on the railing - 0.3 kN/m
- allowable wind load - 0.2 kN/m²
- permissible number of persons on the staircase according to table 2.
- usable width of stairs - 710 mm
- material – 6060 aluminium
5754 aluminium
Grade S235 steel

Number of steps	Permissible number of persons on the staircase
3	1
6	1
9	2
12	2
15	2
18	3

Tab 2. Permissible number of persons per staircase

3. Proper use

The excavation stairs in question were intended for use in works requiring safe communication between levels of earth excavations as well as in building structures for temporary movement between levels.

4. Unintended use

The use of the product contrary to the recommendations - and therefore any deviation from the recommendations given in this manual - is considered as misuse.

5. Standards and materials

The guidelines of the following standards were taken into account during design:

- PN EN 12811-1:2007, class 1
- PN EN 13374:2005

Structural materials such as rectangular sections, channels, angles, flat bars, pipes and rods and sheet metal with the right parameters to ensure safe operation and durability were used in the construction of the stairs.

6. Terms and definitions



Caution!

Sign indicating important information



Note!

Sign to attract attention



Danger!

Sign indicating the occurrence of a hazard or safety-critical information

7. Use



Use the stairs for their intended purpose without allowing situations such as:

- Excessive strain on steps and platform gratings by multiple people stopping and staying for longer periods of time, leaving heavy objects, hanging loads, etc.
- Load the stair structure with a force acting in the direction from the ground as well as at an angle other than 90° downwards in relation to the steps, the only load permitted being the weight of people moving on the landings.
- Loosening of bolt connections.
- Individual components missing.
- Using the staircase in a range exceeding 50°.

Intended use also includes following all the instructions in this manual and carrying out regular inspections of the staircase.

8. Safety principles



General safety rules for the use of stairs:

- Use the stairs in accordance with general health and safety rules.
- Do not use stairs with unlevelled steps. The lower ground should then be adjusted so that the lower foot rests against it in an exact horizontal position.
- The staircase may only be assembled and used by persons who have read these instructions.
- Do not assemble the staircase in sets with other similar third-party structures.
- When installing at great heights, a safety harness should be used to prevent accidents.
- Before using the staircase, all components should be checked to ensure that they have been installed correctly.
- Do not hang on to staircase components or place any live electrical cables on the landings. Such cables may pose a risk due to the risk of damage to the insulation.

- Do not lean against the railings with your whole body weight.
- Do not tilt, shifting the centre of gravity of your own body off the railing.
- Do not slide down the railings.
- Replace damaged components only with new ones in accordance with the parts list.
- During repairs, take extra care to warn others of the work being carried out and inform everyone that the stairs are out of use.
- Do not put your hands or other parts of your body between the components of the structure (danger of crushing).
- Do not leave any objects on the surface of the landings and steps that could cause users to slip or that could fall from a height by getting through the trusses.
- If an accident has occurred or the staircase has been overloaded, it must be taken out of service until it has been thoroughly checked by qualified personnel.

9. Manufacturer's recommendations



To ensure the longest possible life and reliability of the staircase, it is recommended to:

- For the storage and transport of components, wooden or rubber spacers are required.
- During lifting with a crane or forklift, use conveyor belts and wooden spacers instead of metal hooks or chains.
- Keep the stairs reasonably clean. Do not use oily petroleum-based cleaning or maintenance products.

10. Security



The role of fall protection is fulfilled by guardrails, which form a line from the ground on which the stairs are placed to the exit of the trench. Their installation must be continuously checked and adjusted throughout their lifetime. For safety reasons, it is required to use the staircase with two railings.



The nuts used to assemble the steps have a polyamide insert to prevent self-unscrewing. The same type of nut is required for replacement.



In order to prevent self-assembly, both interlocks should be tightened with M12 nuts to the maximum torque in order to induce adequate clamping between the bracket and the interlock.

11. Inspections and maintenance

The staircase supplied is a structure that does not require servicing by qualified personnel. Nevertheless, in order to ensure the longest possible life of the staircase, periodic inspection and maintenance work should be performed at least once a year:

- Check the technical condition of individual components.
- Check that screw connections are tightened correctly.
- If the protective coating is scratched, protect the component from corrosion.

12. Storage

The stairs are protected against corrosion, however, the longest life can be achieved by storing them when not in use in a closed and dry room.

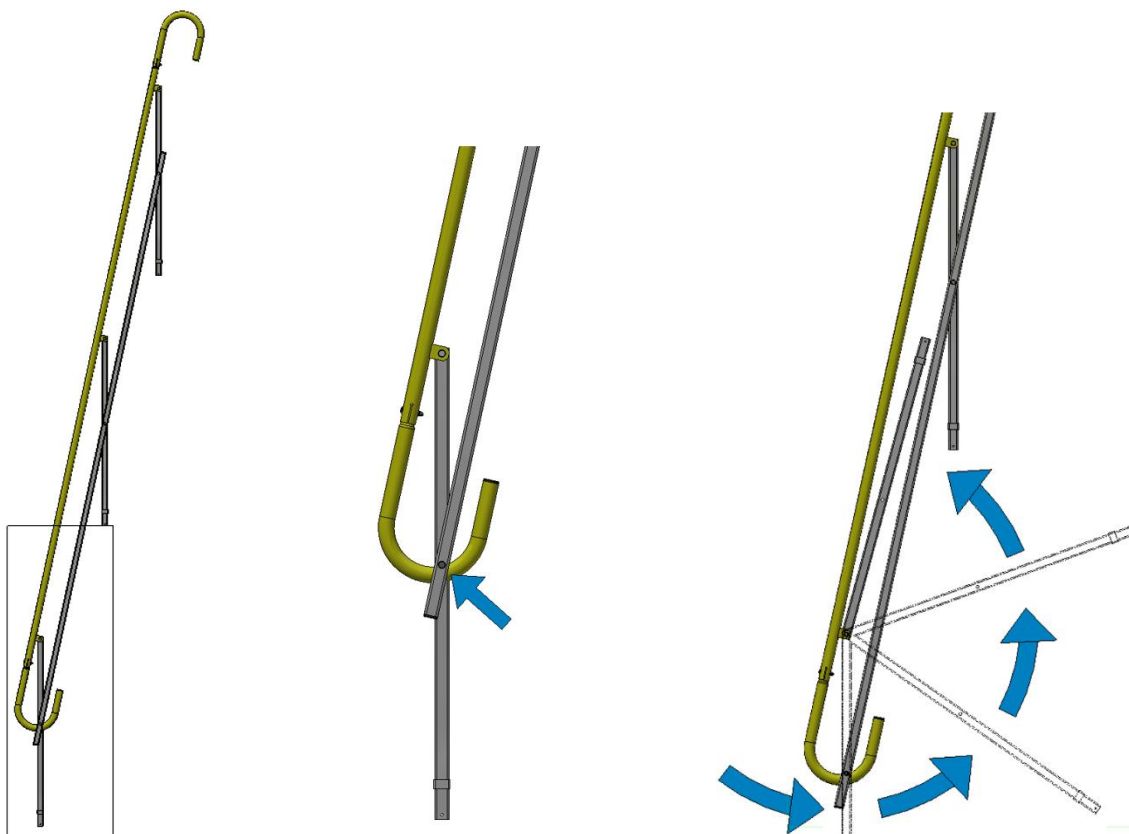
If more than one set needs to be stored, it is possible to stack them directly on top of each other, with each set folded, which significantly reduces the amount of storage space required.

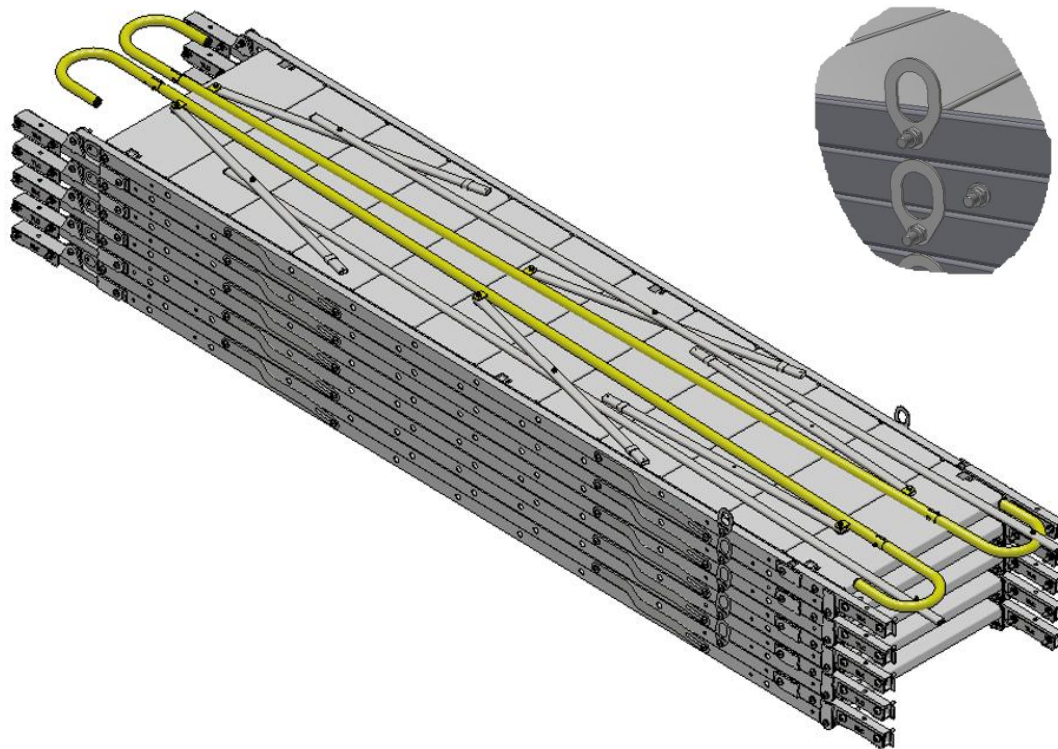
Before storing the assembly, the following steps must be carried out:

1. Unscrew the first guardrail post from the handrail.
2. Reposition the post to the opposite side and reattach it to the handrail as shown in the figure.
3. Fold the post into its storage/transport position.
4. Place the complete guardrail on top of the folded staircase.
5. Ensure that all fastening elements are properly reinstalled or secured to prevent loss.



With this solution, it is important to remember to use the transport handles to block the kit from moving sideways. To do this, the handles must be properly aligned and locked with a bolt.





Rys 4. Storage of stairs

13. Disposal

Store, manage or dispose of packaging and used equipment in accordance with the current recommendations and requirements set out in the Waste Act of 27.04.2001 (J.L. 2001 No. 62 item 628) as amended.

14. Appendices

List of appendices to the Technical and Operational Documentation:

Appendix no. 1 - Installation manual