

## LAYHER ALLROUND SCAFFOLDING® ESCAPE STAIRTOWERS



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Quality management  
certified according to  
DIN EN ISO 9001

Energy management  
certified according to  
DIN EN ISO 50001

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# THE FLEXIBLE STAIRTOWERS FROM LAYHER

SAFER – ECONOMICAL – ADJUSTABLE

Additional escape stairway structures for buildings are becoming more and more important. That includes the **reinforcement of existing buildings** for public use, due to altered regulations or to their being used for new purposes, model building regulations require, for greater numbers of people, a second escape route or modification to the existing one – for example for fire safety reasons. During **modernisation work on buildings** of any type too, a second escape route may be temporarily required if the main escape route is closed due to building work. The requirements relating to dimensions for building stairways are in general governed by DIN 18065 "Stairs in buildings". Only the flight width is not clearly defined here. Regulations such as German ASR A1.8 (technical rules for workplaces) are used as a general guideline.

Extensive modernisation measures for larger and better escape routes usually gobble up lots of time and money. In some cases, modernisation work by others is not even possible. The solution: escape stairtowers from Layher. Taking proven Allround Scaffolding as the basis, stairway structures can be flexibly adapted to a wide range of building situations, such as exit levels – for various rises and loads, and if required with child safety guardrails. Layher escape stairways also offer a long service life: this is assured by continuously monitored and high-quality production "Made in Germany", and by the high standard of surface coating on all Layher steel components by means of hot-dip galvanising.

## Important legal requirements for stairways open to the public

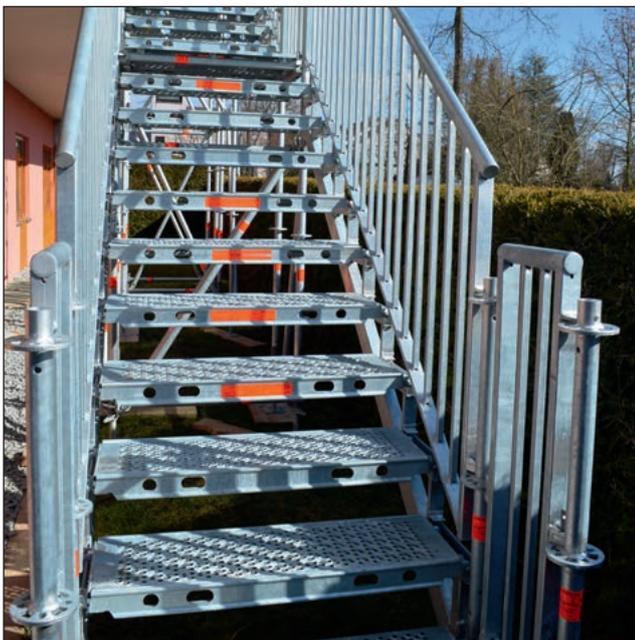
- ▶ Perpendicular load capacity as per DIN EN 1991-1-1/NA, depending on the type of use: 3.0–5.0 kN/m<sup>2</sup>.
- ▶ Riser min. 140 mm; max. 190 mm.
- ▶ Clear headroom min. 200 cm.
- ▶ Child safety guardrails min. 1.0 m high, above 12.0 m fall height min. 1.10 m high.
- ▶ Horizontal load capacity of guardrails depending on the type of use: 0.5–1.0 kN/m.
- ▶ Flight widths (clear widths) depending on the number of persons to be evacuated as per ASR A1.8, of min.
  - 0.90 m for up to 5 persons,
  - 1.00 m for up to 20 persons,
  - 1.20 m for up to 200 persons,
  - 1.80 m for up to 300 persons,
  - 2.40 m for up to 400 persons.

**Note:** These requirements may differ or can be increased to comply with other local regulations and laws. Generally speaking, the set task – in particular the sum of the live loads – must be checked specifically for the project.

## Your requirements – our solutions

If existing buildings fail to comply with legal requirements relating to escape routes, additional measures are needed for the latter. They can

be provided economically and quickly using escape stairtowers made using the Layher Allround Scaffolding construction kit.



**Adaptation of the flight width** to local conditions and requirements using system stairways from 1.09 to 2.57 metres wide.



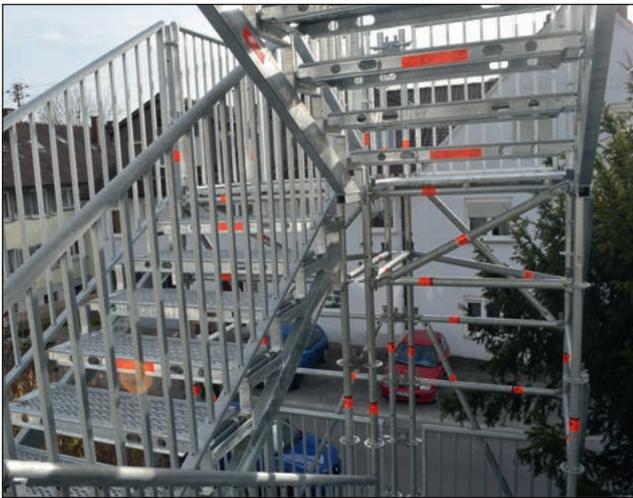
**Adaptation of the entry and exit levels** at the stairway bottom or top area using equalising stairways with different heights.



For a **reduction in the risk of injury** Allround standards without spigots can be used in the top stairway level – and optionally with tube caps. This ensures at the same time an attractive appearance.



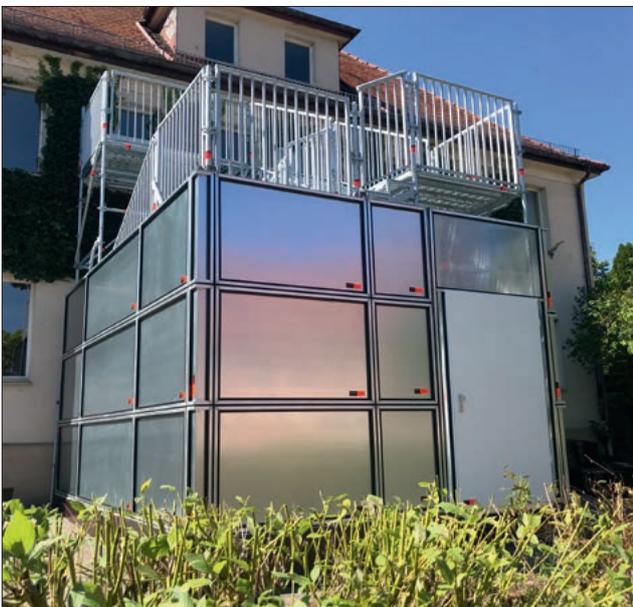
Even **great heights** of over 20 metres are **possible** without any problems – the load capacity can be further increased by bundling the standards.



The required **headroom can** where necessary **be increased** by the use of different diagonal braces in conjunction with the clampable rosette from the Allround Scaffolding construction kit.



To make escape stairways **accessible from different points of the building**, projecting building walkways can be built completely using standard parts from the Allround system.



To **prevent unauthorised access to the stairtower**, the lower exit area of the stairway can be enclosed using the Layher Protect System. An ideal addition to this is the Protect door element, which can only be opened from the inside.

#### THE BENEFITS FOR YOU AT A GLANCE

- ▶ Inexpensive alternative to one-off solutions using steel or wood.
- ▶ Rapid assembly of escape stairtowers from immediately available standard components.
- ▶ Flexible adaptation to different building conditions.
- ▶ Reusability of scaffolding parts for other applications.
- ▶ Sturdy and corrosion-resistant components thanks to hot-dip galvanisation – “Made in Germany”.

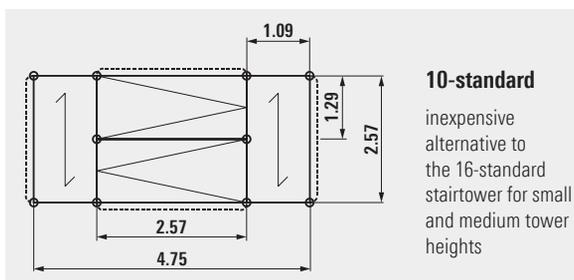
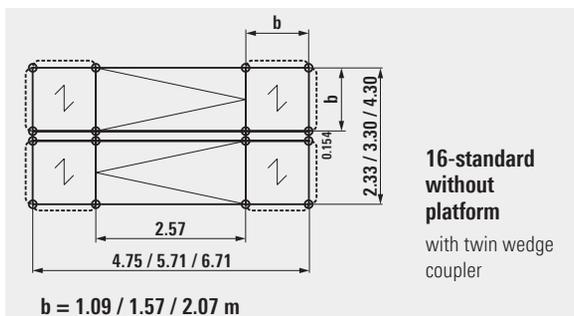
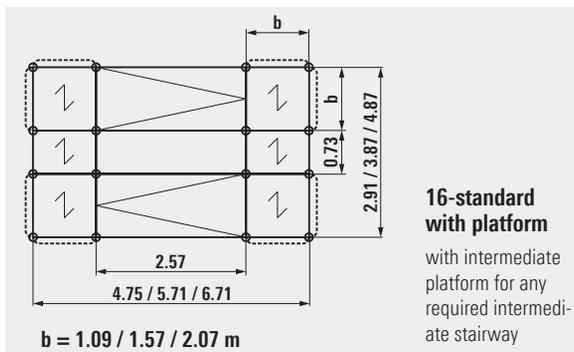
The 16-standard design of the Allround stairtower is suitable for uses with high live loads. In this case, the stairways are made up of individual stringers and – as steps – of series decks. That permits variable stairway flight widths of 1.09 to 2.57 metres. The 16-standard floor plan of the stairtower permits, in the intermediate bays too, adjustment of the exit heights using short equalising stairways.

Thanks to their modular design, the weights and the volumes of the individual parts are low, assuring rapid and hence economical assembly and dismantling as well as creating advantages for the logistics. The high proportion of standard Layher Allround Scaffolding material further contributes to high efficiency.

The **stairtower 500** is preferably used as a construction stairtower, for example as access to the site or as a road crossing not accessible to the general public, or **as an additional escape stairtower**. The **stairtower 750** is, thanks to its riser dimensions and load capacity values, the optimum solution for stairway structures open to the public and **as the first escape stairtower**.

The advantages of modular-designed Layher Allround Scaffolding over one-off solutions made of steel and wood are persuasive: rapid and economical assembly, exact adaptation to prevailing conditions, and later re-use of the scaffolding parts when the building requirements change – or for new applications.

### Ground plan design variants



### System handrail for stairs – easy with few components



Stairtowers, wheelchair ramps or bridges open to the public must, to conform to German state building regulations, be provided with continuous handrails. Layher now has an immediate solution for all structures with child safety guardrails.

With the system handrail, complex one-off designs and assembly work can be avoided. With just three parts – handrail holder, joint and handrail tube – the guardrail can be installed quickly and easily in line with regulations for every stair type. The lightweight aluminium handrail tubes of  $d = 42.3 \text{ mm}$  for a comfortable grip are easy to cut and drill holes into, and also quick to clean. They are simply riveted to the fitted handrail holders.

With rotating joints that permit any angle between  $90^\circ$  and  $180^\circ$  to be set and used, all transitions between the handrail tubes are smooth and pleasant to the touch.



### MORE INFORMATION

An overview of all access solutions from Layher can be found in the Temporary Accesses brochure:  
[downloads-en.layher.com](https://downloads-en.layher.com)

In successful use for many years





Layher is your dependable partner with more than 75 years of experience. "Made by Layher" always means "Made in Germany" too – and that goes for the entire product range. Superb quality – and all from one source.

Proximity to the customer is a central factor behind Layher's success – geographically speaking too. Wherever our customers need us, we will be there – with our advice, assistance and solutions.

-  **SpeedyScaf**
-  **Allround Scaffolding**
-  **System-free Accessories**
-  **Protective Systems**
-  **Shoring**
-  **Event Systems**
-  **Rolling Towers**
-  **Ladders**
-  **Software**



Headquarters in Eibensbach



Plant 2 in Gueglingen



Plant 3 in Clebronn

# Layher®



More Possibilities. The Scaffolding System.

**Wilhelm Layher GmbH & Co KG**  
Scaffolding Grandstands Ladders

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