

Layher Solutions for the Mining Industry



**Increased Safety and Profitability
for Your Projects.**

Layher® 

More Possibilities. The Scaffolding System.

Made by Layher.

Supply and Service worldwide.

Layher has been a source of innovation, top quality and profitability for more than 60 years now. Layher scaffolding is flexible to use, quick to assemble and offers lasting value thanks to the long service life of all components.

Layher scaffolding systems are suitable for an unbeatable variety of uses – primarily on construction sites but also in industry and at events.

The wide range of Layher products, their design as modular systems and their cross-system compatibility enable you to cope with every application you can think of. This consistent focus on the demands of practical use ensures our products have a flexible and economical basis.

For more than six decades now the company has had its sole production and design facility in Eibensbach. Made by Layher means Made in Germany.

Layher quality sets standards. Certified to DIN ISO 9001:2008, streamlined and automated production ensures consistent high quality. Dependable suppliers, selected materials and strict quality controls at every phase of production are a matter of course for us, as are the marking and documenting of Layher parts to enable them to be traced.

Because we maintain high stocks and operate a flexible production system, we can offer unique delivery capability. With a very well equipped service and delivery network

of 31 service centres in Germany, fully-owned subsidiaries in 31 countries and more than 50 additional trading partners worldwide, we ensure that you can obtain our products any time and anywhere.

You too can benefit from our decades of experience and from the inventive spirit and skills of our employees. Layher scaffolding guarantees your success. Choosing Layher means choosing partnership, efficiency and profitability. We will keep on proving that in scaffolding construction there are still many “more possibilities”. Welcome to the world of successful construction companies.

Aerial view of the factory in Germany

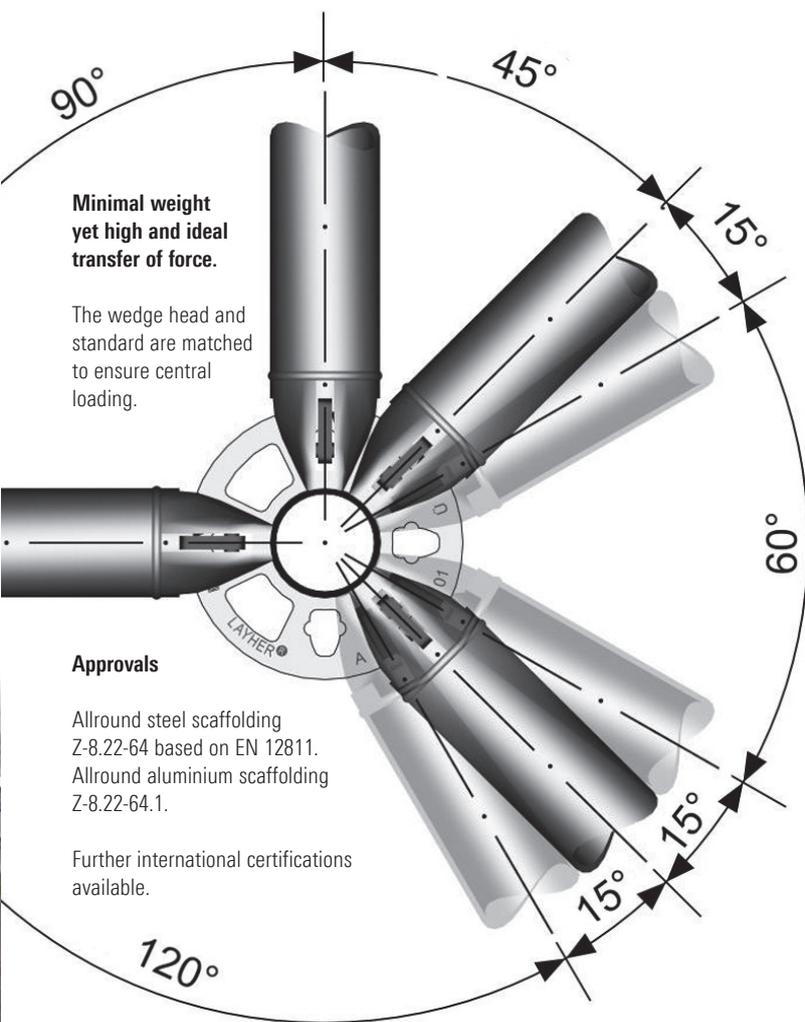


Ingenious. Strong. Limitless.

Layher Allround Scaffolding® – the “Original”.

Strong and inexpensive (hot-dip galvanised) steel Allround Scaffolding can be used for elaborate and ambitious scaffolding.

The advantage of the aluminium Allround Scaffolding, which is identical in design, is its low weight and its suitability for applications where appearance is relevant or where steel is not permitted.



Allround scaffolding uses a simple, unique and bolt-free connection technology.

Sliding the wedge head over the rosette and inserting the wedge into the opening immediately **secures the component**. There is still **sufficient play** to secure the other end of the ledger.

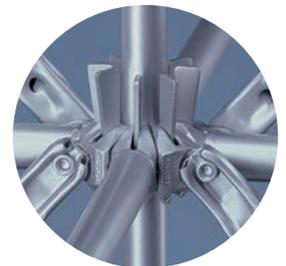


A hammer blow to the wedge transforms the loose connection into a superbly strong structurally rigid one. The face of the wedge head is now precisely positioned against the standard.



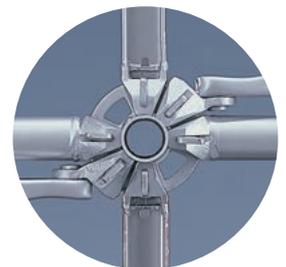
The result of superior design:

Up to 8 connections can be made in the structurally ideal Allround connector on one level and at various angles. Connections are provided in standard dimensions of 50 cm on all Allround standards. The flat rosette prevents clogging with dirt of whatever type.



Ingenious connection technology:

The four small punched-out openings in the rosette **automatically centre the ledger at right angles** – the four large openings allow the angle of alignment to be selected.



- Your benefits**
- ▶ Save time during assembly and dismantling thanks to bolt-free connection technology.
 - ▶ Safer and simple one-man assembly.
 - ▶ No loose parts.
 - ▶ Less material required.

- ▶ Low maintenance and always ready for use.
- ▶ Low weight of individual parts.
- ▶ Tried and proven range of parts.
- ▶ Economic and versatile design.



The Allround Scaffolding System in the Mining Industry. Increased Safety and Versatility.

The high safety demands and ever shorter periods of time available for building mining plants and for extending and maintaining these plants mean that the Allround Scaffolding System from Layher is transformed into an invaluable aid to the success of your projects. Its certified quality, its versatility and its variety of parts enable us to provide our customers with safer and profitable solutions for working at heights and for temporary access applications that your projects require.

The design of the equipment has been optimized to reduce transportation costs, thus helping to improve the profitability of your projects. The Allround Scaffolding System, combined with the capacity of our technical department, assures effective solutions to the project, optimizing material and human resources, helping to improve the productivity and performance of the assembly, and delivering significant savings in labour costs.

The company always keeps significant stocks of available materials, enabling us to supply the scaffolding required for your work at just the right time.

We're there for you. Wherever and whenever you need us.

The Layher system's advantages

Positive wedge lock system

▶ Loads are derived directly into the standard.

Hot-dip galvanization

▶ Practically maintenance-free.

Quality

▶ Selected materials and precision manufacture, steady quality controls.

Experience

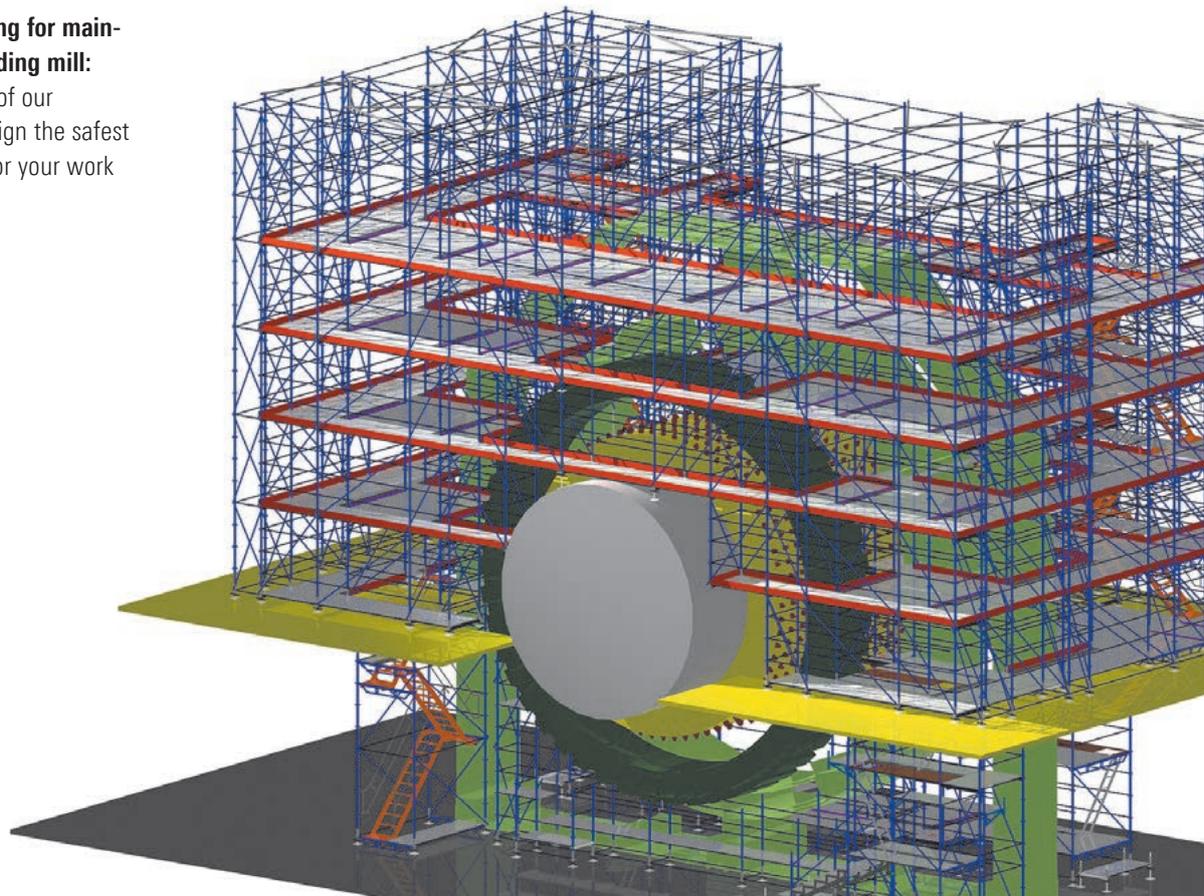
▶ The "Original" modular scaffolding system; designed for utmost bearing capacity with least material utilisation.

Your benefit



Design of Allround Scaffolding for maintenance work on a SAG grinding mill:

The expertise and experience of our engineers will help you to design the safest and most profitable solution for your work with Layher scaffolding.



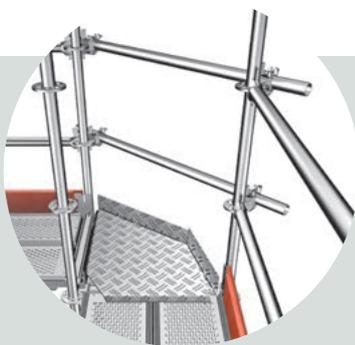


Allround Scaffolding from Layher: Assembly and Construction of Mining Plants – Reliable, Precise and Effective.

We are experts in solutions for the assembly of **crushers** and other large mining equipment. The construction of projecting scaffolding for this type of structure bears the Layher seal, since the high load-bearing capacity of our parts combined with the quality of manufacture allow for designs and solutions, with fast and reliable structural strength verification, which only Layher can provide.

Deck for Assembly of Circular Tanks:

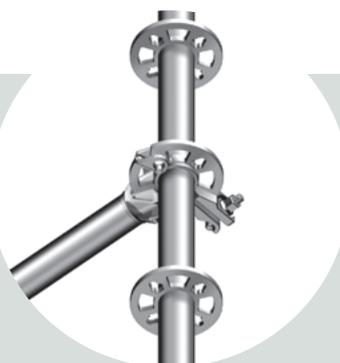
For circular scaffolding solutions, the corners are formed with angular decks, giving continuity to the deck and avoiding gaps in the structure that pose a serious risk of falling for the workers.



The scaffolding solutions necessary for the assembly of **SAG grinding mills**, we work in tandem with our customers' engineering departments to optimize the equipment and to support them with the temporary structures necessary for all this work. With our experience, we are familiar with the geometry of this equipment, allowing us to support our customers.

Clampable Rosette:

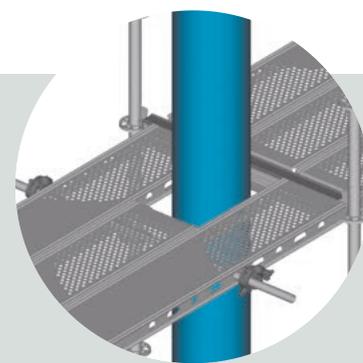
The clampable rosette – connected at any point on the standard – adapts up to 6 ledgers or diagonal braces.



For the **reinforcement of slopes**, our equipment is adapted to the design and assembly of the work platforms necessary to complete this task, providing solutions suitable for working with shotcrete equipment and assuring the stability and resistance necessary for this difficult work.

Allround Solutions:

Layher decks enable openings to be easily provided at the working level. This facilitates assembly and affords maximum adaptability of the scaffolding to the work requirements.



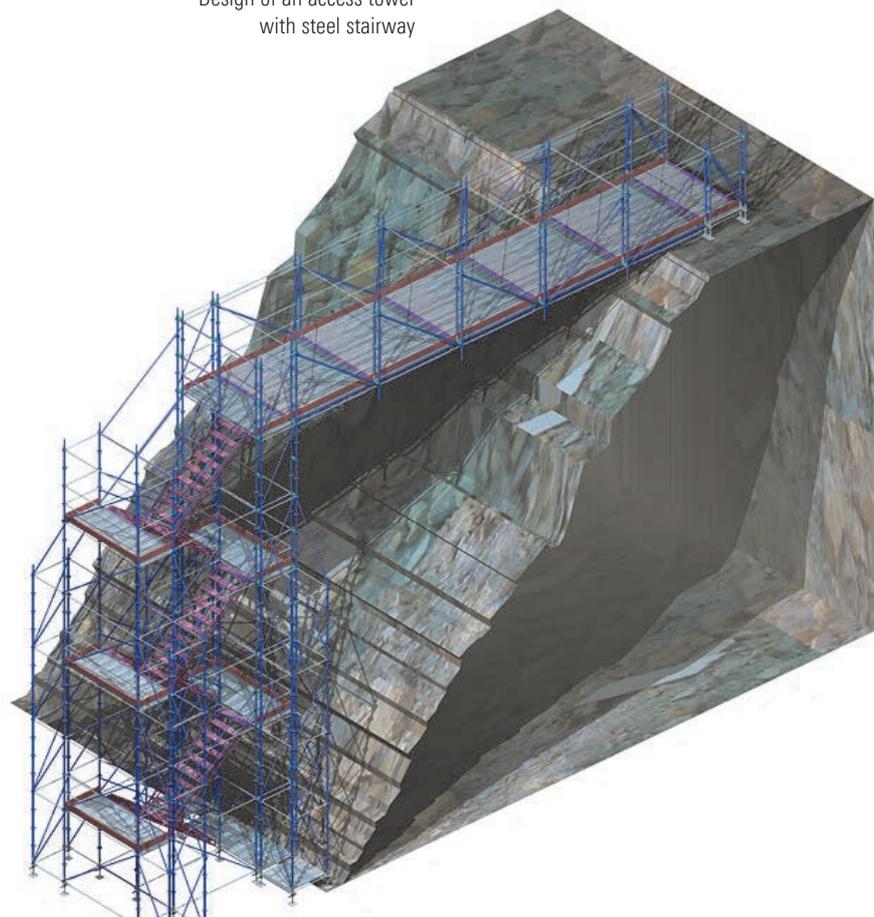


For **reinforcing underground mining tunnels**, it is necessary to have stable and resilient work surfaces which are quick to assemble and dismantle. For this we have designs for Allround rolling towers and fixed towers with a minimum number of parts.

For the **assembly of circular tanks**, we provide rapid designs and have elements that are unique to the market, such as the divided foot ledger, which allows a significant number of parts to be dispensed with. They take up small angles, maintain the scaffolding's load capacity and reduce the assembly times.

We have **solutions for temporary access applications** which are suited to specific requirements and stages of the project. Aluminium, steel and access stairways with stringer beams. With these elements it is possible to provide access to massive excavations, slopes, temporary installations and structures under construction.

Design of an access tower with steel stairway





Allround Scaffolding from Layher: Maintenance of Mining Plants – Safer, Versatile and Profitable

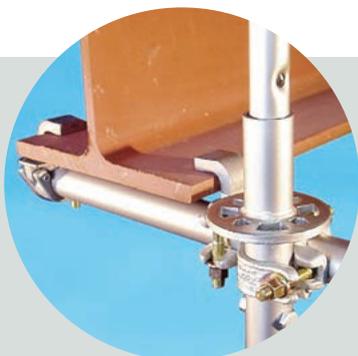
In mining maintenance, it is possible to reduce the uncertainties associated with scaffolding by considering this item as an important element in planning.

For non-scheduled maintenance, these uncertainties are reduced by maintaining at site sufficient quantities of Allround Scaffolding so that they can be more easily utilised.

The full range of accessories of the Layher Allround system improves all aspects of safety, versatility, speed and profitability,

Clamp Couplers:

A clamp formed by two couplers and a tube are fixed to an I-beam to attach the hanging standard.



and can be used in the most varied maintenance applications.

For the **maintenance of belt conveyors**, it is necessary to have sufficiently versatile scaffolding, such as the Layher Allround system, able to adapt to the variations in height in its longitudinal extent without losing its normal qualities of safety and resilience. **Grinding mills** are vital in the production chain, therefore interventions must be quick and effective. The Layher

Cantilever Erection:

Safer support for suspended and projecting scaffolding.



Allround system is ideal for this type of maintenance, since it can be assembled quickly and safely, with the protection of fitters and users always in mind.

Mining ports are the distribution points for the product. These installations require periodic maintenance with safer and resilient solutions. The Layher Allround system, thanks to its specially designed elements, enables this work to be carried out under the quay or jetty structure.

Layher Tensioning Belt:

To erect an Allround scaffold around or to build a catwalk over pipes, the scaffold can be fixed onto the pipe with the Layher tensioning belt.





The Layher system's advantages **Your benefit**

Flexible adaptation ▶ Time saved during erection and dismantling, ergonomic handling.

Versatile use ▶ Highly suitable for demanding work, compatible with other Layher systems and products.

Full and extensive range of accessories ▶ Special parts and accessories for solutions on quays, bridges, tunnels, etc. Complies with the requirements of every environment.

Full approval for aluminium/steel ▶ The Allround systems are certified (type-approved) by the most exacting European standards.





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Layher Protective Systems: Technologies for Protecting and Covering – Cassette Roof, Keder Roof XL and Protect System

The adaptable and modular **Layher Cassette Roof** provides enormously strong interim weather protection – suitable for any scaffolding system – with spans of up to about 40 m and corresponding load-bearing capacities. Only few different system components keep the investment costs within limits.

The Cassette Roof System:

The beams are connected and stiffened on the ground, the roof cassettes placed on them, and the finished unit is lifted by crane onto the substructure.



The **Layher Keder Roof XL** is the economical and lightweight way to achieve weather protection, with an attractive appearance and fitted in next to no time without a crane: a persuasively inexpensive complete solution for the roofing of widths up to 40 m; whether it's for a mono-pitch, double-pitch, asymmetrical or polygonal barrel roofs.

The Keder Sheets:

A technically optimised aluminium keder rail, on ridge, truss, eaves and side, holds the keder sheets in position.

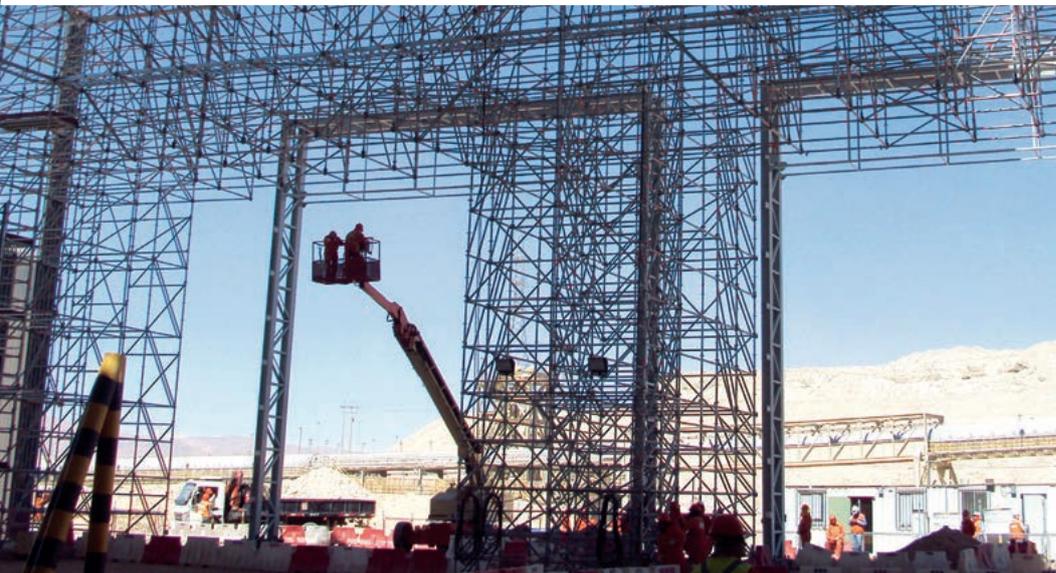
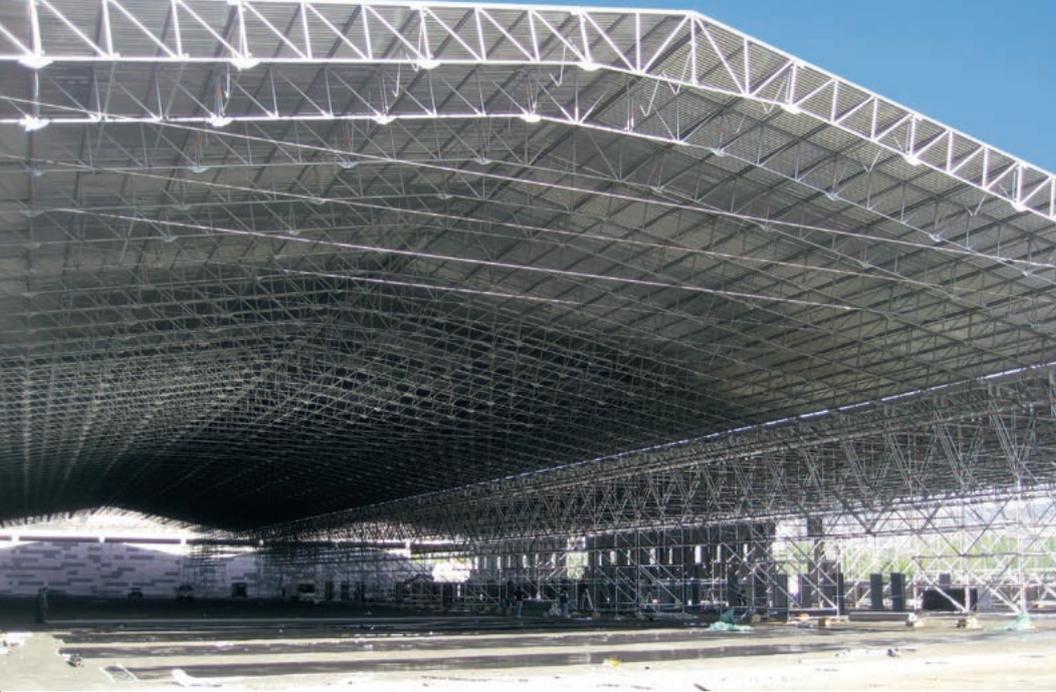


The **Layher Lightweight Cassette Roof (LWCR)** is a very light roof with a roof covering of aluminium/PVC roof cassettes that can be erected on non-system lattice beams. With a few extra parts, sturdy yet lightweight roofing can be provided for a wide range of applications. Assembly by crane or by hand is possible.

The Lightweight Cassette Roof:

Special U-profiles are attached to the top chord of the lattice beam and are used to receive the roof cassettes.





The Layher system's advantages **Your benefit**

- Minimum of individual parts** ▶ Simple and site-oriented assembly, with significant weight-saving.
- Stability** ▶ Safer thanks to enormous load-bearing capacity, designed for frequent use.
- Large spans** ▶ Up to 40 metres.
- Patented wedge connection** ▶ No time-consuming bolting work, rapid cassette assembly.
- Design possibilities** ▶ Monopitch, double-pitch or asymmetrical roof.
- Aesthetics** ▶ Attractive appearance, superior quality.
- Independence** ▶ Can be fitted regardless of system, existing scaffolding can be used as a sub-structure.

The Layher Protect System

Whenever complete protection is required, e.g. asbestos clearance, sandblasting work or weather protection, Layher Protect is the perfect solution. With ingenious detail solutions, for use with SpeedyScaf and Allround equipment, this unique system offers protection and safety both inside and outside.

The Protect Cassette:

Consist of a lightweight aluminium section frame with fillers made of sheet steel or plastic web plate. All cassette types can be used inside a façade surface.



We're there for you. Wherever and whenever you need us.

Layher in Germany

Branches and delivery warehouses nationwide.

Layher International

Subsidiaries:

Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Chile, Colombia, France, Greece, Hungary, India, Italy, Kazakhstan, Lithuania, Morocco, Netherlands, New Zealand, Norway, Peru, Poland, Russia, Serbia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, USA.

Representatives:

Croatia, Czech Republic, Denmark, Estonia, Finland, Hong Kong, Japan, Jordan, Kuwait, Latvija, Lebanon, Libya, Oman, Philippines, Romania, Saudi-Arabia, Slovakia, Slovenia, United Arab Emirates and many other countries.



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