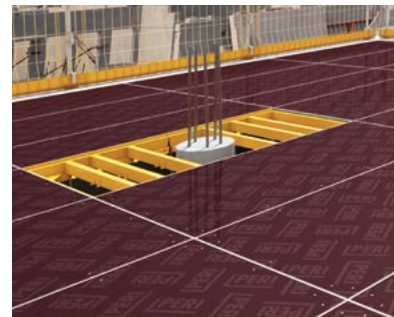
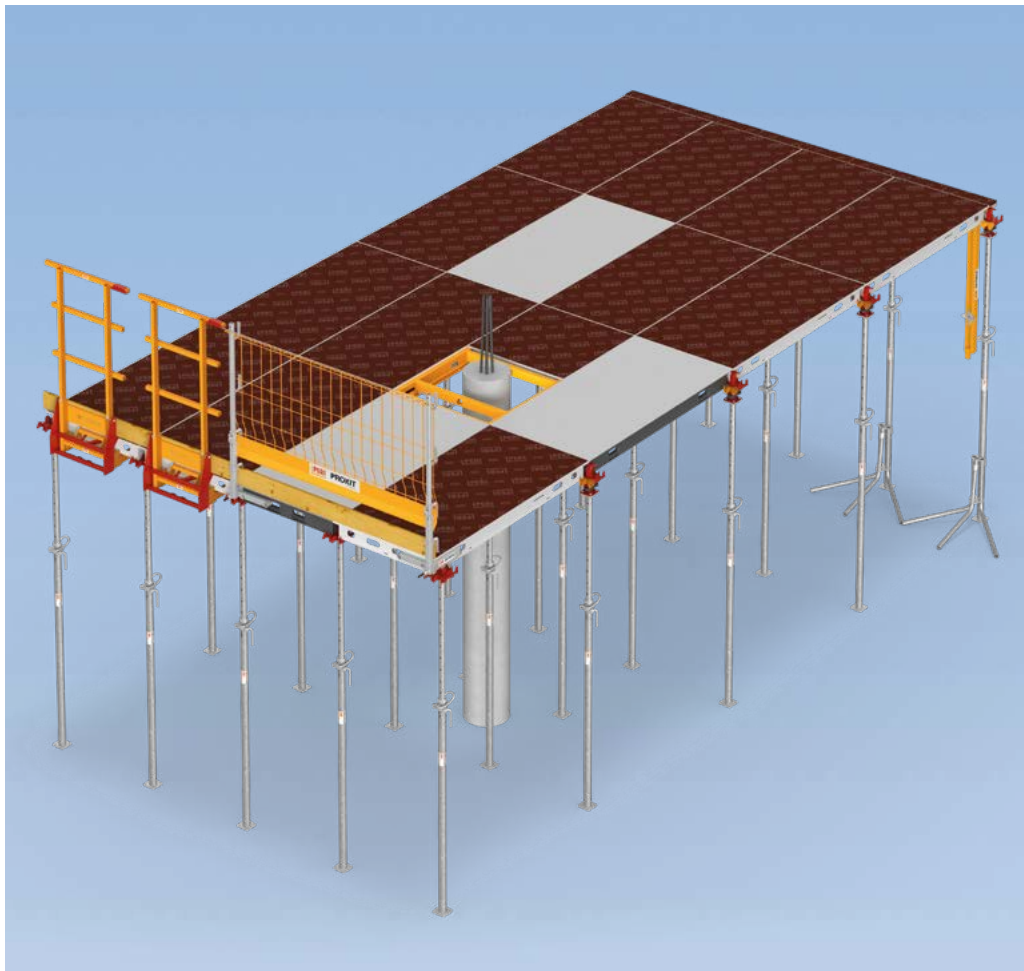


SKYMAX – Large Panel Slab Formwork

Future-proof forming: quick – simple – safe

Product Brochure – Issue 10/2022



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Publisher PERI SE Formwork Scaffolding Engineering Rudolf-Diesel-Strasse 19 89264 Weissenhorn Germany info@peri.com www.peri.com		Important notes All current regulations and guidelines applicable in countries where our products are used must be observed. The photos shown in this brochure feature construction sites in progress. For this reason, safety and anchor details in particular cannot always be considered conclusive or final. These are subject to the risk assessment carried out by the contractor. In addition, the computer graphics used are to be regarded as system representations. To facilitate understanding, these and the detailed illustrations shown have been partially reduced to certain as-

pects. The safety equipments that are not shown in these detailed descriptions must nevertheless be available. The systems or items shown might not be available in every country.

Safety instructions and load specifications are to be strictly observed at all times. Separate structural calculations are required for any deviations from the standard design data.

The information contained herein is subject to technical changes in the interests of progress. Errors and typographical mistakes reserved.

SKYMAX – Large Panel Slab Formwork

Future-proof forming: quick – simple – safe

The ability to install the SKYMAX Slab Formwork from the next level down allows for a particularly high level of safety at your construction site. From a technical and economic point of view, the slab formwork is also a highly flexible system on account of the aluminium and polymer components used and is extremely straightforward to assemble and disassemble.

The multifunctional, aluminium and polymer-based SKYMAX Slab Formwork system offers a wide range of adaptable combination options. You will be able to combine panels, support heads and other system components in many different ways or join them together to form slab tables. This will significantly reduce your labour and material costs.

Our large-scale panels, the minimal variation between components and the straightforward installation process will also improve the cost-efficiency of your construction site.

What's more, SKYMAX is extremely safe. The components are pivoted upwards from a safe position on the level below. Using the support head or patented lowering head, the panels can be supported at any given position. With SKYMAX, the striking process also follows self-explanatory logic and is carried out from the erection area.

System-integrated safety

given the panels and guardrails can be swung upwards from a safe position

Planning and work tasks made simple

thanks to the small number of different components and self-explanatory functional principle

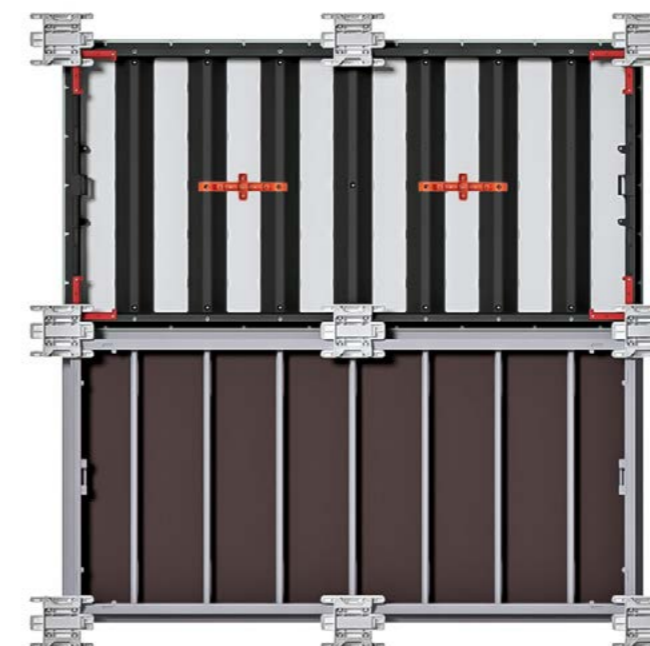
Commercial and technical flexibility

thanks to the wide range of possible combinations of aluminium and polymer system components



Our aluminium SKYMAX panels will provide you with the highest degree of systematic flexibility. The panels come in dimensions of 2.00 m x 1.00 m or 2.00 m x 0.67 m, are extremely easy to handle and only weigh 32 kg or 26 kg. These features will reduce the amount of time and level of effort required for the installation process and lessen the burden placed on your personnel. You also have the option of assembling the aluminium panels to form large slab tables with minimal effort. You can also choose from panels measuring 1.00 m x 1.00 m and 1.00 m x 0.67 m for forming infill areas with ease.

The SKYMAX panels made of polymer are lighter than the aluminium panels in the dimensions 2.00 m x 1.00 m or 2.00 m x 0.67 m – and weigh only 30 kg or less than 25 kg. In addition, these panels have reinforcements on the frame and on the formwork panel. They are convincing because of their price-performance ratio and save personnel and financial resources in equal measure. By combining them with aluminium components, you can also optimise their performance.



The aluminium and polymer panels can be combined in a way that meets your specific requirements.

In comparison: With aluminium SKYMAX panels you can form slab thicknesses of 35 cm or 40 cm without centre support and up to 55 cm with centre support. Polymer SKYMAX panels can be used to form slab thicknesses of 30 cm or 35 cm.

System-integrated safety

Panels and guardrails can be swung upwards from a safe position

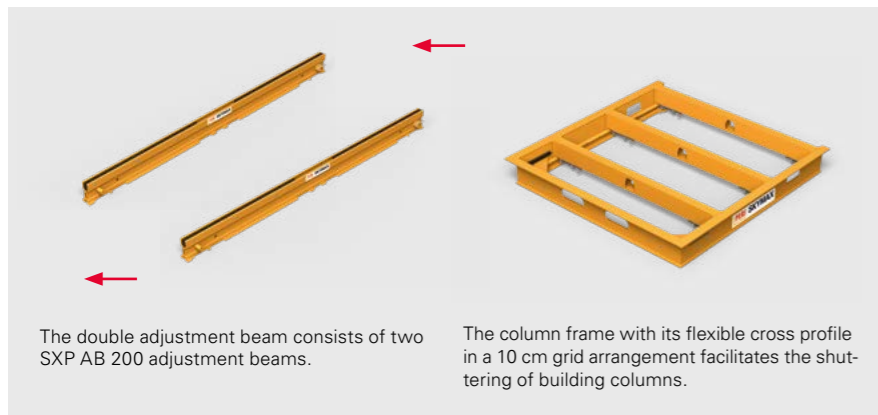
With only a few well-thought-out and system-integrated components, SKYMAX impresses with its high level of safety and will meet the very latest safety standards on your construction site.

Even a brief moment of carelessness can lead to dangerous situations on the construction site. It is for this reason that PERI comes up with suitable measures as early as the product development stage that will prevent potentially dangerous situations from occurring at a later stage.

By opting for SKYMAX Panel Slab Formwork, not only will you be meeting the latest safety requirements for forming slabs, you will also be well-equipped for the future.

Filler elements

such as column frames or (double) adjustment beams make the process of closing mating surfaces safe and simple. The transverse profiles of the column frame can be positioned in a small grid, thus removing the need for time and material-intensive construction site solutions. To create openings at a later date, you can simply take individual panels of a unit out of the bracing, for example from directly behind the concrete joint. Also, double adjustment beams allow for the safe assembly of large infill areas.



The double adjustment beam consists of two SXP AB 200 adjustment beams.

The column frame with its flexible cross profile in a 10 cm grid arrangement facilitates the shuttering of building columns.



The panels

are slipped into the head from a safe position on the erection surface below and pushed upwards using a shuttering aid. As soon as the panel is in position, the rear handle engages on the hooked side and the front prop is set up. With a maximum weight of 32 kg, only two workers are needed to install the panels. This cuts down on the amount of work and level of effort required considerably.



The guardrail in advance

ensures that it is safe to work at the slab edge. It can be pre-assembled in a safe mounting position and pivoted upwards. The first step is to attach the guardrail frame to the traverse. Next, the entire guardrail unit is pivoted upwards using the shuttering aid until it engages automatically. This process is repeated until the entire edge of the structure is safeguarded.



The teeth

take the form of integrated barbed hooks in the support heads and lowering heads, for which there is a counterpart in the corner plates of the panels. Once the panel is hooked into the head, it acts as a lift lock and cannot fall out between the moment it is attached and the moment it is pivoted upwards.

The lowering head

facilitates flexible use in all directions – even for changing the direction of the panels. It can also be used with a centre support across adjacent panels. The potential for operating errors is therefore virtually eliminated.



Planning and work tasks made simple

Small number of different components and self-explanatory functional principle

Working with the SKYMAX system is remarkably simple due to the low number of system components. The system of combining the panels and heads is self-explanatory. You can learn the assembly process quickly and without any extensive training required.

You will only need a single head for the entire shuttering and striking process as the head can be deployed flexibly in all directions, even in the edge areas and if there is a change in the direction of panels. You can choose between three variants to meet your specific requirements: the support head, made of either steel or polymer, or the lowering head which is made of steel.

Thanks to the low number of components and panel dimensions in a metric

grid of 2 m by 1 m, the effort required for planning and training is extremely low. What's more, the process of assembling the lightweight and ergonomic SKYMAX system components is self-explanatory: even inexperienced and untrained personnel can quickly learn how to handle the system. Considering the fact that only two workers are required for the shuttering and striking process, using the SKYMAX system also leads to a reduction in the personnel required.



Combining the panel and head

You can support the panels with both the support head and the lowering head at any point. The well-thought-out geometry of the heads and panels means that they can be deployed in an adaptable, simple and time-saving manner.

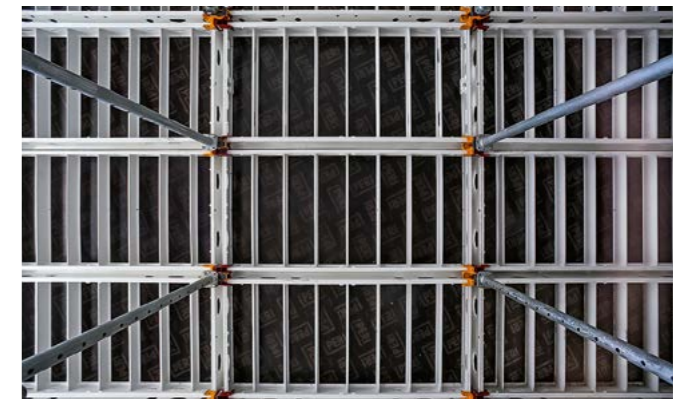
The teeth on the support heads and lowering heads make it exceptionally easy to insert the panels. The panels are fed, via the patented guide openings retaining teeth, onto the head where they are automatically secured in place and cannot be lifted out. This significantly increases the level of safety on the construction site.



On account of the teeth on the prop heads and lowering heads, once the panels have been installed, they are automatically secured in place and cannot be lifted out.

Minimal training required

The straightforward logic of the system and the low number of components used mean that users can learn how to work with the SKYMAX system in a particularly swift and intuitive manner. As such, even inexperienced personnel can quickly learn how to handle the system. This leads to a significant reduction in the number of application errors on the construction site.



The installation process for the SKYMAX system is self-explanatory. This keeps the amount of training required by personnel to a minimum.

Ergonomic work processes

The lightweight and large-scale panels ensure energy-conserving and ergonomic working. None of our formwork elements weigh more than 32 kg. As such, each person in a two-person team would be required to handle a maximum of 16 kg per panel. Moreover, the handle strips in the lateral and longitudinal profiles make the panels easier and more ergonomic to handle.



On account of the low weight and the ergonomic handling features, no more than two persons are required for the SKYMAX installation process.

Commercial and technical flexibility

Wide range of possible combinations of aluminium and polymer system components

From a technical and economic point of view, the SKYMAX Large Panel Slab Formwork is a highly flexible system on account of the aluminium and polymer components used. The wide range of possible combinations in the modular system not only ensures that the assembly process is self-explanatory, but also provides the highest level of system-integrated safety.

The panel slab formwork option provides you with entirely new ways of adapting your forming concept to your specific requirements or assembling the components for use as a slab table solution.

Impressively, SKYMAX offers a wide range of combination options for its system components. Numerous components are available both in polymer and aluminium versions. Not only will you benefit from the respective advantages of these materials, but also from the fact that you can combine components within each material type and also with the other material type.

SKYMAX modular system – Components

Aluminium



Polymer



High technical and economical flexibility

- Flexible integrated options for the aluminium and polymer components
- System solutions for infill areas, changing the direction of panels and partial early striking
- Customisable solution as panel slab formwork or table solution

Future-proof assembly

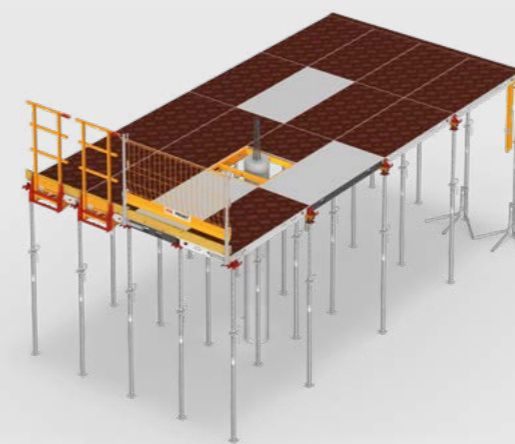
- Compliance with the latest safety standards on the construction site
- Comprehensive safety at every work step of the shuttering and striking procedures of the components

SKYMAX modular system – Application options

SKYMAX Large Panel Slab Formwork

SKYMAX Panel Slab Formwork can be used with panels made of aluminium or with polymer panels. In addition to a polymer support head, you can also use a support head made of steel. You will be able to combine panels, support heads and other system components in many different ways to suit your needs, which will enable you to achieve the greatest possible flexibility at your construction site. Even outside and inside corners can be safely formed from the level below using SKYMAX system components.

The aluminium and polymer panels are available in the dimensions 2.00 m x 1.00 m and 2.00 m x 0.67 m. You can also choose from aluminium panels measuring 1.00 m x 1.00 m and 1.00 m x 0.67 m for forming infill areas with ease.



Video More info in the video:

SKYMAX slab table solution

The SKYMAX slab table solution consists of components of the panel slab formwork and other system components from the PERI portfolio. This minimises the number of different components required on the construction site, simplifies the handling of the system and enables users to learn the system more effectively. In addition to saving valuable time, you will also reduce your training, logistics and storage costs.

The SKYMAX panels can be assembled at the construction site to produce 2.00 m x 4.00 m slab tables or assembled using safety equipment to produce 4.00 m x 6.00 m slab tables. This allows for cost-effective forming processes across the entire slab area. Even corner tables can be formed using the slab table solution by making use of the column frame.

Additional panels can be mounted directly onto the table solution in order to expand it. This makes the modular principle even more adaptable.



Commercial and technical flexibility

Wide range of possible combinations of aluminium and polymer system components

Speed up processes on your construction site with the SKYMAX system. The large yet lightweight panels facilitate swift, resource-friendly forming processes.

The shuttering and striking process is expedited by the innovative starter beam. The lowering head reduces the shuttering time thanks to the partial early striking option.



The sophisticated SKYMAX modular system components increase productivity and safety on your construction site.

Early striking thanks to lowering head

Using a lowering head keeps the shuttering time to a minimum and paves the way for swift and partial early striking. This will also allow you to reduce your material quantities available on site, thus cutting your costs. The lowering head can be used in all directions and also for changing the direction of the panels.



With the aid of the lowering head, you will be able to strike the panels after only a short period of time and then use them together with the heads for the next section.

Starter beam

The starter beam enables you to start the process quickly and easily, thus speeding up the straightforward shuttering and striking procedure. The starter beam is available in the lengths 66.5 cm, 100 cm and 300 cm. In addition to the reduced workload at the outset, using the starter beam also means that fewer tripods are required for the forming process. It is no longer necessary to go through the time-consuming process of measuring the exact position of the individual props.



The starter beam speeds up the shuttering and striking procedure to the extent that it is no longer necessary to go through the time-consuming process of measuring the props.



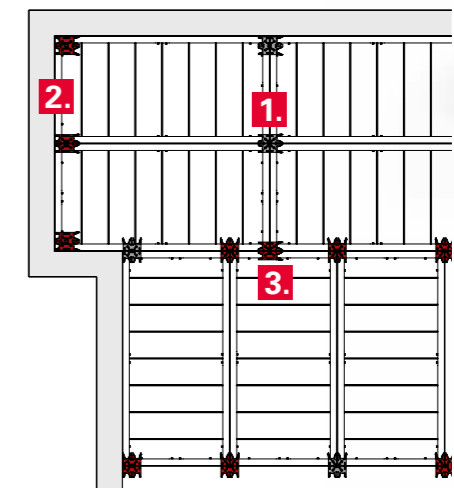
Even high slabs exceeding 3.80 m can be formed from the level below with PERI system components. The compatibility of the aluminium and polymer components enables you to optimally adapt them to your construction site requirements.

Support head variants

A robust steel version and a more cost-effective polymer version of the support head are available. It can be mounted on the props using a simple quick fastener.

1. It fits in the slab area at the intersections of four panels.
2. It can be mounted in front of a rising wall in the panel corner or reaching over two panels.
3. If there is a change of direction, you can mount it in any position you choose.

The support head can also be used with a centre support across two adjacent panels.



Polymer support head



Steel support head

Additional components

Supplementary components that ensure even greater efficiency and safety

As part of its broad SKYMAX portfolio, PERI provides supplementary components that will make your construction site operations even more efficient.

With the shuttering aid, you can quickly and safely form slabs that are at least 3.80 m high without any difficulty. It is possible to achieve even greater room heights if a PERI UP Flex Mobile Working Platform is used as an auxiliary aid.

What's more, PERI can supply you with a tensioning unit with up to 15 kN of tension anchor force. In comparison with conventional bracing systems, you will save time, cut installation costs and therefore improve the efficiency of your construction site.

The transport pallet is available in three versions (2.00 x 2.00 m, 2.00 m x 1.00 m and 2.00 m x 0.67 m), offering you twice the added value. By stacking the panels in the pallets, it is possible to move a forklift or pallet lifting trolley underneath the panels and transport them easily and safely. It is also possible to move them by crane. Furthermore, the dimensions of the smallest version of the pallet even fit through conventional door openings, thereby saving you valuable space on the construction site.



With the shuttering aid you can safely form room heights of at least 3.80 m.



Providing up to 15 kN of tensioning force, the tensioning unit gives you the opportunity to save time and assembly costs.

PERI transport pallets are also suitable for confined spaces – that's because the smallest version is able to fit through conventional door openings.

It is even possible to form greater room heights easily and safely with the aid of the PERI UP Flex Mobile Working Platform.

Thinking digitally with RFID for SKYMAX

Fast and digital access to product information

RFID technology helps you make the flow of materials at your construction site more transparent while also optimising logistical processes. The key to this is an RFID tag, a smartphone or UHF reader and the PERI MATERIAL SCAN app.

Fast product identification takes your logistics processes to the next level: By installing dual-frequency RFID transponders (RFID = RADIO Frequency Identification) in each SKYMAX system as standard, PERI has ensured that SKYMAX is optimally equipped for the future. This technology enables you to detect and clearly identify the SKYMAX panels from significant distances and en masse using a scanner.

In line with the motto "All the information in your pocket", you can use a smartphone or UHF reader to retrieve specific component information, instructions for assembly and use, and product videos digitally using the PERI MATERIAL SCAN app.

The aluminium panels are fitted with an RFID tag as standard so that they can be uniquely identified and assigned using a reader. For polymer panels, RFID is available as an option ex works or as a retrofit kit.

Thanks to the retrofit kit for polymer panels, you can retrofit the RFID tag into the polymer panels yourself. To do this, simply remove the formlining and insert the RFID tag into the panel opening provided.

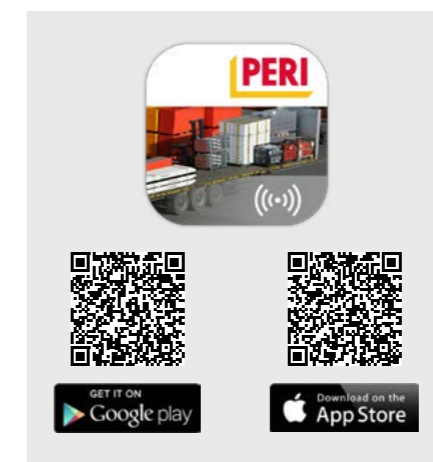


Video

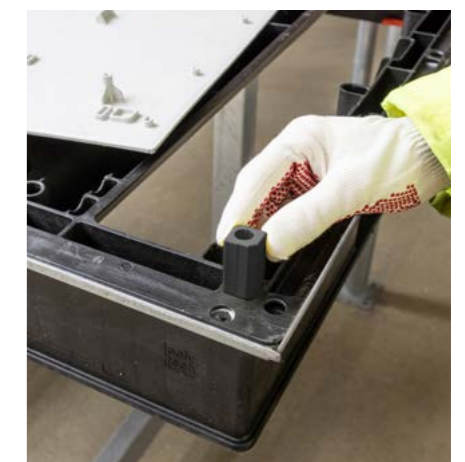
More info on RFID for SKYMAX in the video:



All you need for the scanning process is your smartphone and the PERI MATERIAL SCAN app. Hold your smartphone near the RFID tag. It is also possible to detect the panels with a UHF reader.



In the PERI MATERIAL SCAN app, you get direct access to specific product information such as the Instructions for Assembly and Use as well as product videos.



Aluminium panels are fitted with RFID tags as standard. For polymer panels, the retrofit kit provides you with an easy way to retrofit the tags into the panels yourself.

SKYMAX in use

Jurament, Martin Meier headquarters, Eichstätt, Germany

The Eichstätt-based Martin Meier Group, an experienced construction project and building materials contractor, opted to build its new company headquarters single-handedly.

The building, which goes by the name of "Jurament", was designed by Daniel Weiss, owner of the Weiss architectural office in Eichstätt. It comprises four upper floors plus an underground car park

with a floor space of around 10,000 square metres.

The special features of the building geometry placed high demands on the formwork used. These included the large room heights, for example 4.25 m on the ground floor, as well as the 30-cm-thick floor slabs. In addition to the MAXIMO Wall Formwork and the PERI PEP Ergo Slab Props from its own inventory, the

Meier construction company used SKYMAX Large Panel Slab Formwork for the first time and has come to appreciate the merits of this trend-setting system.

SKYMAX was particularly safe to use because all panels could be hooked in from the level below and swung upwards. The self-explanatory system and straightforward handling methods also

facilitated rapid assembly and minimised the likelihood of errors and accidents during construction site operations. Despite their size, the individual aluminium formwork elements weighed no more than 32 kg each, meaning that the work could be carried out both swiftly and ergonomically. Additional system components such as column frames and adjustment beams made it safe and easy to close mating surfaces.

It was possible to case slabs in sections on account of SKYMAX's special design. The specialised lowering heads mounted on the props could be struck with a hammer to release the panels. This meant that individual slab sections could be struck very early and these formwork elements could be used for the next section immediately. This reduced the number of formwork elements kept on the construction site and cut costs.

Around 1,000 t of steel and 12,000 m³ of concrete were used for the building, which is more than 18 m high. To ensure that the work operations were quick and safe, PERI took on the task of instructing and training Meier's employees on how to use the SKYMAX system on the construction site.



Pasteurs Tårn, Copenhagen, Denmark

For the construction of the 37-storey Pasteurs Tårn in Carlsberg City, a district in the heart of Copenhagen, PERI supplied a wide range of formwork solutions. One particular highlight of the project was that the SKYMAX Large Panel Slab Formwork was used in real-life conditions for the first time.

Pasteurs Tårn, Denmark's tallest residential building, was built on an area covering 76,000 m². Before work on the formwork could begin in 2019, 85,000 m³ of earth had to be excavated.

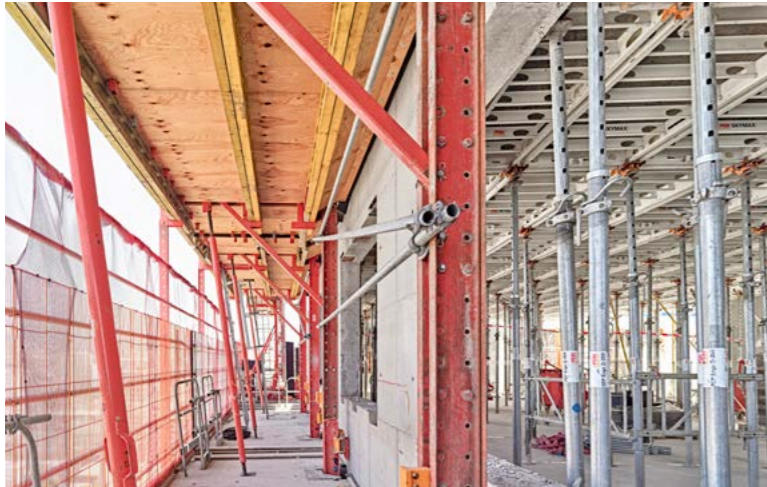
The SKYMAX Large Panel Slab Formwork played a decisive role in meeting the tight specifications of the formwork cycles. It impressed for two reasons: On the one hand, with the SKYMAX system, shuttering and striking could be carried out quickly. This was mainly due to the lightweight large panels and the small number of different parts. Secondly, the SKYMAX Large Panels were installed exclusively from the level below. Therefore, no compromises were necessary in terms of safety.

The special SKYMAX lowering head is compatible with all PERI props. In Copenhagen, it was used in combination with the tried-and-tested MULTIPROP Aluminium Slab Props. This enabled partial early striking and helped to maintain the tight 6-day cycle.

All in all, the SKYMAX Slab Formwork made a significant contribution to the success of the project. The customer Per Aarsleff A/S was completely satisfied with the progress of the project and the new innovative method of forming slabs from the level below.



Tour Mirabeau, Marseilles, France



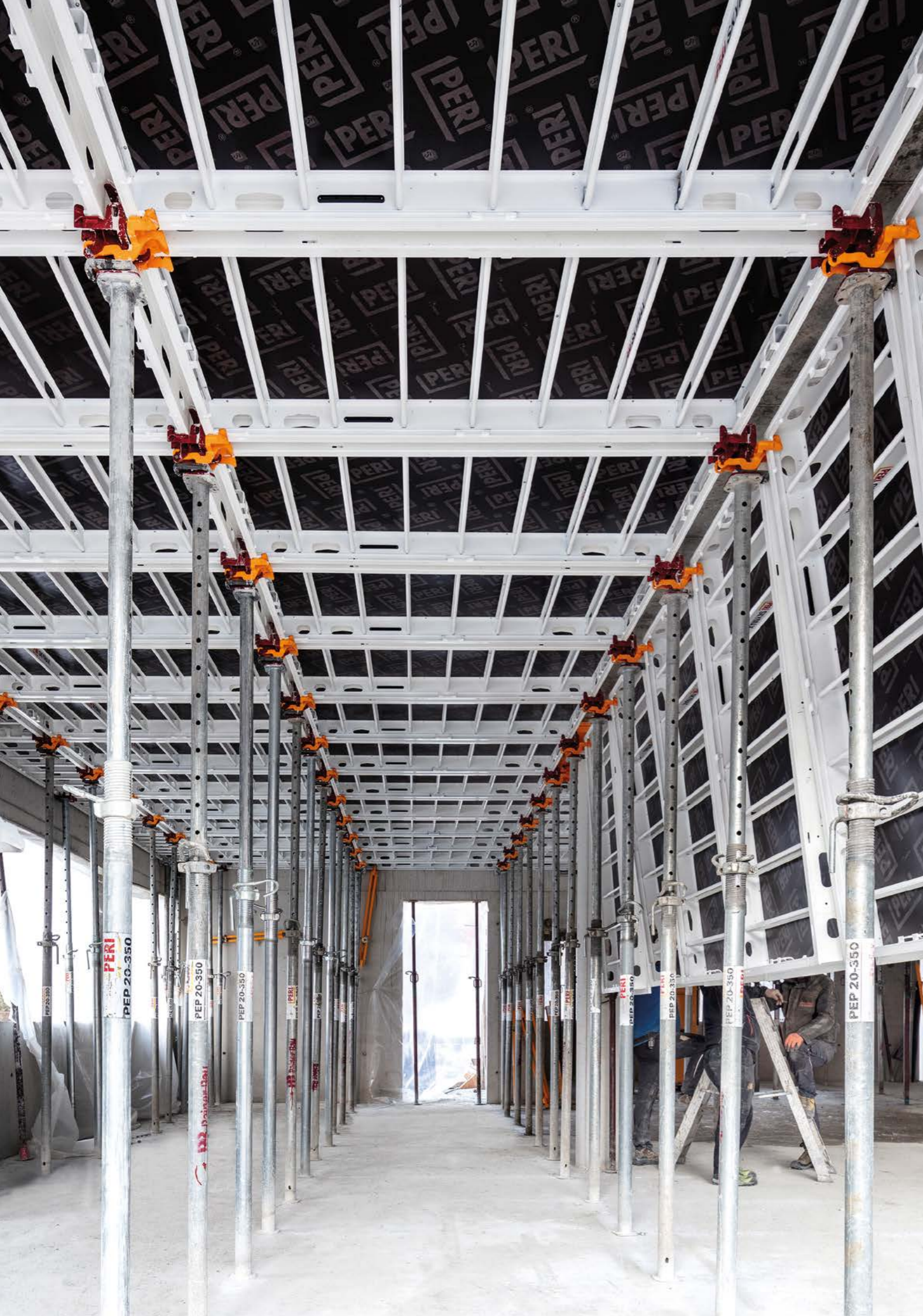
On the coast of Marseilles, PERI assisted with the construction of the new Tour Mirabeau by supplying a variety of systems: The 85-metre-high tower has 21 floors of state-of-the-art, energy-efficient office space with views of the sea and the neighbouring city.

Due to the immediate proximity to the Mediterranean Sea, space was limited on the construction site, which at the same time led to high demands on safety. In this respect, the SKYMAX Large Panel Slab Formwork, which is already integrated into the system and ensures a high level of safety, was particularly well received. 1,000 m² of slab formwork was used to form the slabs.

The low dead weight of the SKYMAX panels of just 32 kg sped up the shuttering process considerably and made the work processes less strenuous. The lowering head also facilitated prompt striking of the formwork, resulting in lower on-site material requirements. This, in turn, was beneficial in view of the cramped conditions on the construction site.



New hotel complex, Prad, Italy



In Prad am Stilfser Joch, in the heart of the national park area near the Reschen Pass, a new hotel with a total area of 2,500 m² was built using SKYMAX Large Panel Slab Formwork. Following completion, the building has 86 rooms for guests, swimming pools and an underground garage available.

Rainer Klotz, proprietor of Rainerbau GmbH, did not hesitate for long when choosing to work with the slab formwork system. What impressed him most about SKYMAX was how economical, fast and easy it was to use. After a short period of instruction, the construction site team no longer needed any help and was able to complete the work quickly, which resulted in considerable time savings. For example, around 1,000 m² of surface area were shuttered and cast in only five working days.



▶ Video

Project video:

**The optimal System
for every Project and
every Requirement**



Wall Formwork



Column Formwork



Slab Formwork



Climbing Systems



Bridge Formwork



Tunnel Formwork



Shoring Systems



Construction Scaffold



Facade Scaffold



Industrial Scaffold



Access



Protection Scaffold



Safety Systems



**System-Independent
Accessories**



Services



PERI SE
Formwork Scaffolding Engineering
 Rudolf-Diesel-Strasse 19
 89264 Weissenhorn
 Germany
 Tel. +49 (0)7309.950-0
 Fax +49 (0)7309.951-0
 info@peri.com
 www.peri.com

