

PERI at bauma: Innovative solutions for civil engineering

The formwork and scaffolding manufacturer is presenting innovations for civil engineering

From 24 to 30 October 2022, the PERI exhibition hall at the northern open-air site (booth FN 719) in Munich will have the motto “Shaping the Future”. In addition to impressive exhibits, live demonstrations, personal discussions and information events, the formwork and scaffolding manufacturer will have many more surprises in store for visitors. Among other things, PERI will be showing innovations from the climbing formwork sector as well as further developments for civil engineering.

Whether high-rise buildings, tunnels, bridges or piers: At bauma 2022, PERI is showing unusual exhibits for civil engineering which sustainably increase safety and efficiency on the construction site. In discussions with experts, visitors can also see for themselves the sophisticated PERI engineering services that ensure even the most demanding civil engineering projects can be carried out. The portfolio is rounded off by digital tools that can be tried out in Munich.

Revolutionary climbing sequence with innovative climbing system

Thanks to innovations in the field of climbing technology, visitors to the PERI exhibition hall can reach the top safely and efficiently. PERI is presenting a special highlight with RCS MAX, the further development of the proven RCS Rail Climbing System.

The new components, the RCS MAX Hydraulic Unit as well as the RCS MAX Drive Rails can be easily combined with existing RCS material to optimise the performance of the system. The focus of this year's trade show stand is on the new C and CL drive rails, the cylinder of which is now firmly connected to the system and climbs along with it. This makes cumbersome conversions a thing of the past, saving valuable time and costs on the construction site. The vertical loads can be transferred via a climbing shoe into the already cured concreting section, thus enabling faster concreting cycles. Furthermore, due to reduced cylinder cycles, RCS MAX now needs fewer steps to reach the next position.

And PERI is also setting new standards in terms of safety with the innovative climbing system, because the decentralised hydraulics allow synchronous

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climbing of all platforms. This eliminates fall edges and reduces potential sources of danger for site personnel. Clever features such as the dead man's switch, an automatic stop in case of overload and collision as well as an emergency stop switch on each platform round off the well thought-out safety concept. Complete monitoring of the climbing process is also possible by light signals on the RCS MAX Hydraulic Unit and by the display.

Complex geometries meet standardised climbing system

With the SCS Climbing System, PERI will show visitors to the exhibition hall another highlight in the area of climbing technology. The standardised bracket system for single and double-sided applications is also based on the modular principle and thus enables optimal adaptation to project-specific requirements and geometries. In particular, the ability to combine with components of the VARIOKIT Engineering Construction Kit and the PERI UP Scaffolding Kit as well as the small number of components, make the climbing system an economical and flexible solution for engineering structures.

Whether in building construction, dam, pier head or tunnel construction – with the pre-assembled platforms, SCS is quickly ready for use in a wide range of applications. The particularly high load-bearing capacity ensures rapid construction progress with few climbing sections. Two console bracket discs form a crane-movable unit together with PERI wall formwork. The VARIO GT 24 Girder Wall Formwork or the two TRIO and MAXIMO Panel Formwork systems are used for this.

SCS also scores with the simple assembly of the console brackets, which can also be supplemented with a finishing platform if required. The wide, horizontal working areas of the platforms can be aligned horizontally even when working on an angle, enabling safe working with straight, sloping and also curved walls.

Visitors to the exhibition hall can also look forward to a super-class exhibit, as the SCS Climbing System will be demonstrated, among other things, on a replica of the pillars of one of Germany's currently most exciting infrastructure construction projects – the 485 m long Filstal Bridge in Mühlhausen im Thäle. This is part of the high-speed railway line between Wendlingen and Ulm and, at a height of 85 m, is one of the highest railway bridges in Germany, connecting the Bossler Tunnel in the north with the Steinbühl Tunnel in the south. The railway tracks run on two separate bridge sections and are supported by bridge piers that widen into a Y-shape at the head. In the complicated widening areas at the pier head, work

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platforms based on the SCS Climbing System, among others, allowed a safe load transfer.

Extended possible applications thanks to optimised components

The further developed components of the VGK offer new application possibilities in structural and transport engineering. In addition to their use as cantilevered parapet brackets, these now enable even more flexible use of the console bracket solution. Especially with pier heads or complex geometries, VGK can be used as lightweight work platforms for walls that slope forwards and backwards. The platforms are available in three different widths to meet a wide range of requirements. The VARIOKIT standard components available for rent make the system particularly economical.

Furthermore, VGK can now also be used as a work platform in building construction. For a safe construction process, the comparatively light components can be pre-assembled on the ground and suspended from the structure as a complete platform unit. In addition, reinforcement scaffolds can be attached to the closed work platform. In this way, the work is carried out from a secured position, which eliminates the need for a facade scaffold.

The VGK Console Bracket solutions are all type-tested. With the VGK Design Tool, PERI is also taking a further step towards digital construction – and is supporting users in the independent planning and structural design of their solution.

Economical tunnel formwork carriage in a modular design

PERI will also be showing the VTC Tunnel Formwork Carriage to visitors in the exhibition hall, with an exhibit that has been modelled on a real project. The tunnel formwork carriage is based on components of the VARIOKIT Engineering Construction Kit, and thus offers users a high degree of flexibility. In combination with sophisticated PERI engineering, PERI will impressively demonstrate here how solutions can be found that are exactly matched to the construction site and can be individually configured.

Digital visualisation possibility for civil engineering

In the spirit of the Construction Site 4.0, PERI is now also offering various 3D visualisation options for civil engineering solutions by means of augmented and virtual reality with the Extended Experience App. In this way, the models can be optimally integrated into the planning and construction process. The level of

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detail reflects the design planning precisely; plans can be walked through virtually and even projected into the physical environment.

Faster bridging using the incremental launching method

For those interested in bridge construction, PERI is exhibiting an attractive formwork solution at bauma with the continuously further developed VARIOKIT VIL Incremental Launching Facility. The system is used for the cost-effective production of external, internal and slab formwork for bridges using the incremental launching method.

The optimised shuttering and striking mechanism of the slab formwork via Roller Dropheads releases the formwork more quickly for time-critical work in the construction sequence and thus ensures accelerated workflows. Thanks to the cross-swivel head, the slab props of the mobile VIL Slab Formwork solution can also be folded up easily – and do not have to be moved by hand. During the moving process, Roller Dropheads automatically bring the formwork back into concreting position.

The incremental launching system offers another feature when used as external formwork: here, the distance between the cured concrete and the formwork is produced directly by means of a clever mechanism and thus, in the case of steep web walls, does not have to be moved in a horizontal direction as part of an additional work step. Another advantage: the clamping points of the trough formwork can be used for anchoring, thus reducing the number of lost components.

Mega construction kit for a lean solution from a single source

At bauma, PERI will also be showing how even complex working platforms, shoring and access points can be economically erected with the PERI mega construction kit. The mega construction kit is made up of system components from the PERI UP Scaffolding Kit as well as the VARIOKIT Engineering Construction Kit. Both construction kits are based on the metric assembly and coupling grid of 12.5 cm, 25 cm and 50 cm, and can thus cope with almost any building geometry or required load transfer.

Despite their small number of core components, both kits offer a wide range of assembly and design variants when combined, at a low investment cost. In addition, interface friction is avoided through delivery from a single source both during planning and on the construction site. The fully rentable components make

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the mega construction kit a particularly economical customised solution for building, bridge or tunnel construction as well as transport or plant engineering.

At the trade show, PERI will demonstrate how VARIOKIT can be used as a load-bearing base for various PERI UP scaffolding solutions in tight spaces. Visitors will also be able to try out all coupling and interface components for themselves on site.



Image 1

The RCS MAX Hydraulic Unit as well as the RCS MAX Drive Rails can be easily combined with existing RCS material to optimise the performance of the system.

(Photo: PERI SE)



Image 2

Complete monitoring of the climbing process is possible by light signals on the RCS MAX Hydraulic Unit and by the display.

(Photo: PERI SE)

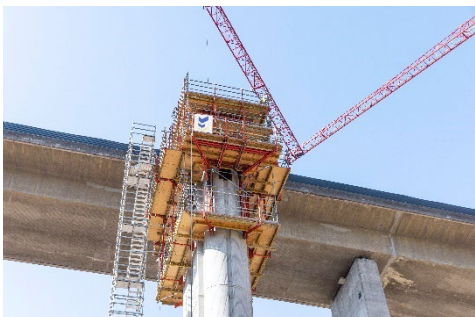


Image 3

Whether in building construction, dam, pier head or tunnel construction – with the pre-assembled platforms, the SCS Climbing System is quickly ready for use in a wide range of applications. The particularly high load-bearing capacity ensures rapid construction progress with few climbing sections.

(Photo: PERI SE)

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Image 4

The SCS Climbing System enables optimal adaptation to project-specific requirements and geometries. In particular, the ability to combine with components of the VARIOKIT Engineering Construction Kit and the PERI UP Scaffolding Kit makes the climbing system an economical and flexible solution for engineering structures.

(Photo: PERI SE)

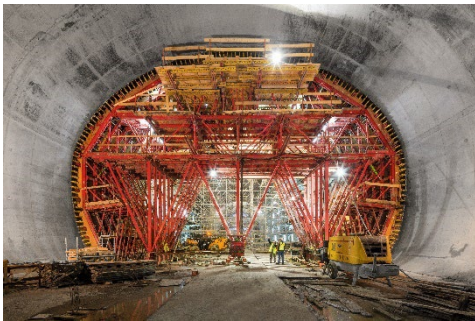


Image 5

The economical VTC tunnel formwork carriage is based on components of the VARIOKIT Engineering Construction Kit, and thus offers users a high degree of flexibility. Together with sophisticated PERI engineering, project-specific and individually configurable solutions can be found.

(Photo: PERI SE)

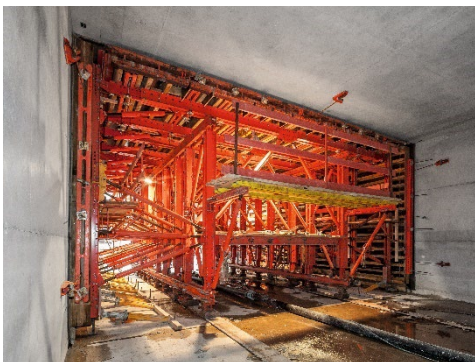


Image 6

The VTC Tunnel Formwork Carriage enables tailor-made solutions with optimised use of material for open and mining-method tunnel construction. With VARIOKIT system components available for rent, changing cross-sections in the project can be easily and cost-effectively constructed with only short modification times required.

(Photo: PERI SE)

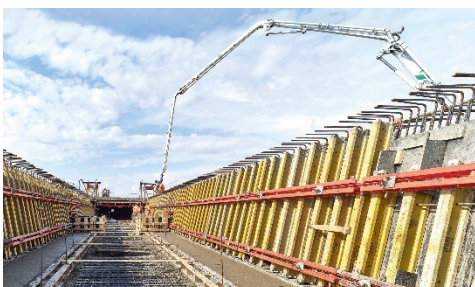


Image 7

With the continuously further developed VARIOKIT VIL Incremental Launching Facility, PERI offers a formwork solution for the cost-effective construction of external, internal and slab formwork for bridges using the incremental launching method.

(Photo: PERI SE)

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Image 8

The optimised shuttering and striking mechanism speeds up the working processes and thus allows the formwork to be released more quickly for the time-critical stages of the construction sequence.
(Photo: PERI SE)

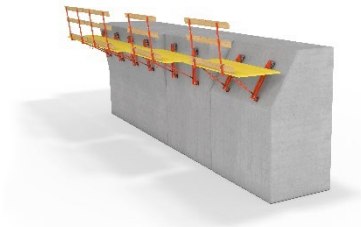


Image 9

The lightweight VGK Work Platforms allow use on walls sloping both forwards and backwards, making them ideally suited for projects with complex geometries. The platforms are available in three different widths to meet a wide range of requirements.
(Photo: PERI SE)

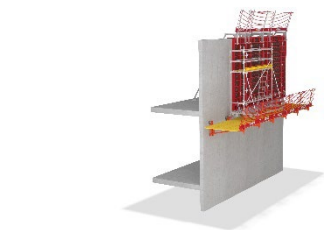


Image 10

As a work platform in building construction, VGK enables a safe construction process. The comparatively light components are pre-assembled on the ground and suspended from the structure as a complete platform unit. In addition, reinforcement scaffolds can be attached to the closed work platform. In this way, the work is carried out from a secured position, which eliminates the need for a facade scaffold.
(Photo: PERI SE)

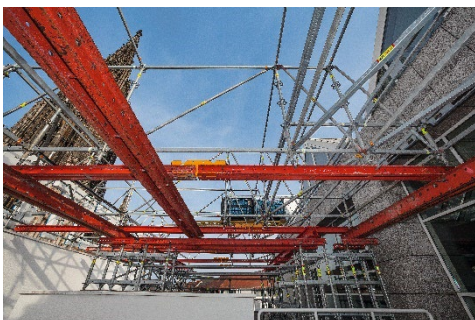


Image 11

On unstable substrates or in confined spaces, VARIOKIT can be used as a load-bearing base for various applications of the PERI UP Scaffolding Kit.
(Photo: PERI SE)

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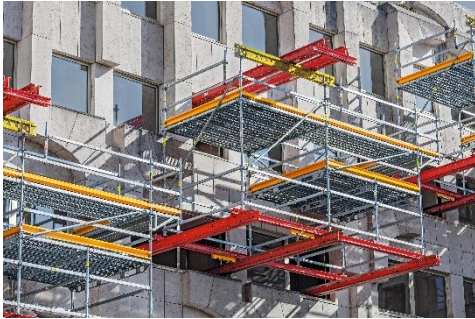


Image 12

Work platforms can be integrated into existing structures by combining VARIOKIT and the PERI UP Scaffolding Kit.

(Photo: PERI SE)

About PERI:

With sales of € 1,614 million in 2021, PERI is one of the leading manufacturers and suppliers of formwork and scaffolding systems in the world. The family-owned company, with its headquarters in Weissenhorn (Germany), a workforce of around 9,100 employees, more than 60 subsidiaries and well over 160 warehouse locations, provides its customers with innovative system equipment and comprehensive services relating to all aspects of formwork and scaffolding technology.

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