

Formwork**Press**

Professional Formwork News

X/2022



Climbing down safely

Cautious high-rise demolition – page 12

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Imprint

Site photos show situations which do not always depict the final assembly of formwork with regard to safety regulations. Imprint: Edition X/2022. Circulation: 6100 copies. Publisher: MEVA Schalungs-Systeme GmbH, Industriestr. 5, D-72221 Halterbach. Layout: MEVA. Print: C. Maurer Druck + Verlag, D-73312 Geislingen/Steige. Reprint and re-use of any editorial content only by copyright permission. We accept no liability for the content of external internet sites, nor for a violation of privacy or any other law arising from these.

“Tell us what concerns you at our bauma 2022 booth.”

Dear Reader

It is three-and-a-half years ago since we last met at the bauma trade show. But now, at last, the Munich event will give us the chance to experience exhibition atmosphere and meet with people from all over the world. That is what I am really looking forward to. At bauma 2022, we would like to hear about what concerns you and what your specific wishes are for formwork systems and services. In this way, we can continue to respond quickly in future by offering optimum solutions tailored to your requirements.

The latest MEVA novelties showcased in our 470 m² presentation area – booth 236 in the B3 formwork hall – are the result of your previous feedback. These discussions serve to sharpen our perception of market developments, trends and requirements. After all, no one knows better than you what is needed to master the challenges posed by your projects.

Once again, prioritising safety at work, maximum flexibility, sustainability and cost-effectiveness were high on the agenda for our new developments and refinements. Ideas spawn products that will help you maintain your long-term competitiveness. Take the new, fully equipped, foldable MEVA Integrated Safety (MIS) system, for example. It is used in con-

junction with wall formwork to maximise job safety at all stages of assembly. As it can remain attached to the panels, complete units comprising formwork and working platforms can be quickly deployed whenever needed, thus considerably shortening assembly times. Like all other products we bring to market, the MIS system was put through its paces by contractors beforehand in comprehensive real-life tests. This procedure tells us where further improvements are needed and enables us to act promptly. You can gain a first impression of MIS on page 17 of this issue.

Among the other novelties on show in Munich and introduced in this issue of FormworkPress is the flexible VarioMax support system for semi-precast slabs. Its application scope can be extended, with little additional effort, to cover in-situ concrete slab construction using the traditional Flex method. We spoke to the first VarioMax user, who was brimming with enthusiasm (pages 18/19).

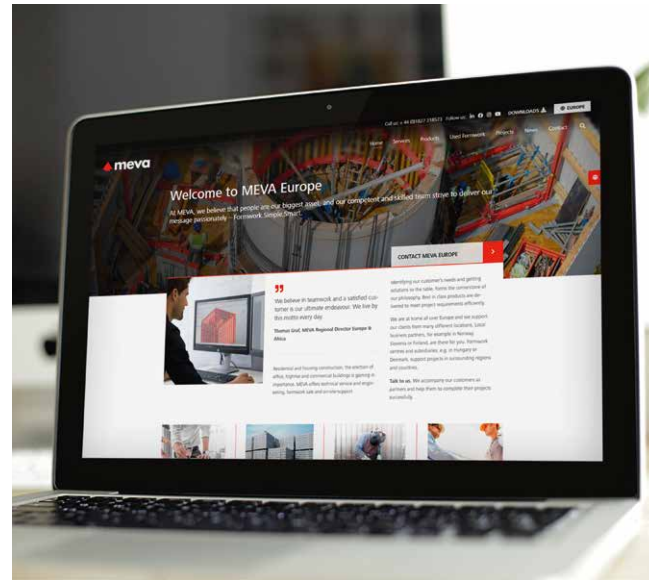
I will be keen to hear your reactions when we meet in Munich, but, for the meantime, let me wish you a pleasant read.




Florian F. Dinger,
Owner and Managing Director
of MEVA Schalungs-Systeme GmbH

News

Information about MEVA



Green electricity from sunlight

Generating renewable energy is a major factor in the Black Forest region in the south-west of Germany. MEVA is increasingly relying on photovoltaic (PV) systems as a clean way to produce electricity, as solar power can be produced directly where the electricity is required and consumed, as is the case at our headquarters in Haiterbach: The modernisation work in Factory I (new production) and Factory II (Formwork Centre), including major investments in the building infrastructure and plant technology, were completed with the installation of a high-performance 950 kWp photovoltaic system.

During the renovation of the roofs, 1,839 PV modules were installed on a surface area of 3,678 m². The sunlight collected is converted into electrical energy and fed into a 300 kWh storage battery. MEVA thus produces about 70% of its electricity needs at its headquarters in Haiterbach on site in an environmental friendly manner. "Our processes, the quality of our formwork and the comfort of the working environment for our employees have reached a new level – in conjunction with greater sustainability and significantly reduced energy consumption," says production manager Harald Konrad, summing up the outcome of the modernisation work.

New MEVA website online

Customer-orientated and informative – these are the main characteristics of the new MEVA website www.meva.net, which has been online for several weeks now. The old website had reached its limits from a technical point of view due to the addition of several regions and languages. The online presence now comprises seven subcontinental regions with the global MEVA site and a further 22 regional pages. Hence, it now covers all subsidiaries and regions and is available in seven languages.

The relaunched website now features a modern design and is full of information. Users receives an even better overview of the MEVA products and services, as the information has been pooled and can be called up in a structured manner. Relevant content can be found without having to spend a lot of time searching for it. Furthermore, the internet presence is uncluttered and responsive, i.e. geared towards optimum use on mobile devices.

The viewability of the product and service portfolio available in each region and detail of the contact person responsible make our internet presence easier to navigate. Have fun discovering our redesigned, update and extended website!



Putting an end to delays

July 2022 saw the conclusion of a project by master's degree students at the Biberach University of Applied Sciences in southern Germany. The project was supported by MEVA as a practice partner, its digitalisation partner BIM² and the startup Building Information Innovator. Students from the two master's degree courses Project Management in Construction and Engineering Management worked on the project over the course of one semester and presented the results upon completion. With the pilot project "In-situ concrete formwork in the life cycle – processing future formwork", they addressed the standard problem that causes delays on modern construction sites: a lack of structure and a poor overview of the overall processes. The project focussed on the formwork and its digital integration through use of the BIM method. The objective was to rethink the formworking sequence as a process and propose a solution that enables construction sites to be streamlined in future.

As partners, BIM² and MEVA are supporting the construction specialists of tomorrow who are considering the topics of BIM and 3D formwork planning today. In this way, support is given to projects that promote the digitalisation of the formwork and construction industry.

Eye-catcher

When planning new construction projects, architects often use architectural concrete as a creative element. The implementation of the more stringent requirements by the construction companies requires experience and finesse. This was the case during construction of the new technical faculty of the Baden-Wuerttemberg Cooperative State University (DHBW) in Stuttgart, Germany. The light that streams in through a glass dome draws attention to the attractive atrium in a spectacular way. A veritable eye-catcher is the unique spiral staircase that meanders up from storey to storey with lateral offsets. It connects the six storeys with each other and was produced using architectural concrete of the highest quality. Thus, not only was the geometry challenging, there were also exceptional requirements on the concrete finish, which had to be exceedingly smooth with a uniform colour and very discreet construction joints.

MEVA's office for special design was responsible for the formwork planning. Produced using white concrete, the exquisite staircase appears to have been formed in one piece. In order to produce a uniform hue for this light colour in particular, the component geometry was planned so that it could be poured easily and quickly.



Borj Attijari shapes the skyline

MAC climbing system enables safe construction of an office tower in Casablanca

The Borj Attijari, the future headquarters of Attijariwafa Bank, will gloriously enhance the skyline of the fast-growing Casablanca Financial City. The experienced construction company responsible is building the 25-storey office tower and relies on the globally proven climbing system MAC and robust Mammut wall formwork.

The project in Morocco's largest city is outstanding in the truest sense of the word: the entire complex with 99,000 m² of space consists of several interconnected buildings that offer attractive space for accommodation, offices and service providers. The ensemble with striking architectural bodies – the Borj, the Oasis and the Loop – will be positioned around a park and act like a green promenade in the middle of the metropolis on the Atlantic coast.

Gaining time with MAC

Always in view is the high-rise building, the core of which is being erected with the automatic climbing system MAC (MEVA Automatic Climbing). The climbing process is crane-independent, hydraulic and as a complete unit, with wall formwork and all-round enclosure. This compresses the construction

process, reduces the time required and is significantly safer than systems with individually climbing platforms. The fully enclosed unit protects workers from the elements and provides comfortable working conditions. This has just as positive an effect on work efficiency and construction progress as the ability to work independently on walls and slabs. The upper surface can easily integrate concrete placing booms, provides ample storage space and minimises the risk of accidents.

Maximum precision is offered by the 3-way adjustment for the suspended formwork, which can be moved and adjusted manually in three directions and quickly and easily adapted to the geometry of the structure. This is also paying off in the Borj Attijari project. The team of SOGEA MAROC (a subsidiary of Vinci Construction) is moving entire wall panels over a large area in a single operation, and shuttering and striking are fast. The robust Mammut wall formwork with large panels complements MAC perfectly.

Performance proven many times over

The automatic climbing system has proven itself many times over and was a decisive factor in the



The fully enclosed unit protects workers from the elements and provides comfortable working conditions.

successful construction of some of the tallest buildings in countries such as India, Australia or the Philippines. The 205-metre-high Roche Tower II in Basel, where the highest Swiss safety requirements applied, was even completed ahead of schedule. Now the technology is being applied on the African continent for the first time. Non-return valves on each of the 20-tonne cylinders secure the hydraulics, which overcomes heights of up to 4.5 m per climbing operation in about 60 minutes. Only a few SOGEA workers are required for this process.

Just one day needs to be scheduled for stripping, climbing and setting up the formwork. Depending on the duration of the boxout work, four days per cycle have already been achieved on numerous occasions. Large parts of the climbing system can be pre-assembled on request so that preparation on the construction site proceeds quickly. The bearing pockets can be dismantled from the trailing platforms and reused in the following climbing operation. So no lost installation parts remain in the concrete, which reduces material costs.

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Project data

- **Project**
 - Borj Attijari Office Tower, Casablanca, Morocco
- **Contractor**
 - SOGEA MAROC (a subsidiary of Vinci Construction), Rabat, Morocco
- **MEVA systems**
 - MAC (MEVA Automated Climbing)
 - Wall formwork Mammut
- **Engineering and support**
 - MEVA Schalungs-Systeme GmbH, Haiterbach (Germany)



Huge time savings

Luxury 178 metres high: High-rise building Allure in Colombia

On the Colombian Caribbean coast on a peninsula in the city of Cartagena, a 45-storey building is being built as a new architectural reference on the skyline. The challenging structural work was completed on schedule in summer 2022.

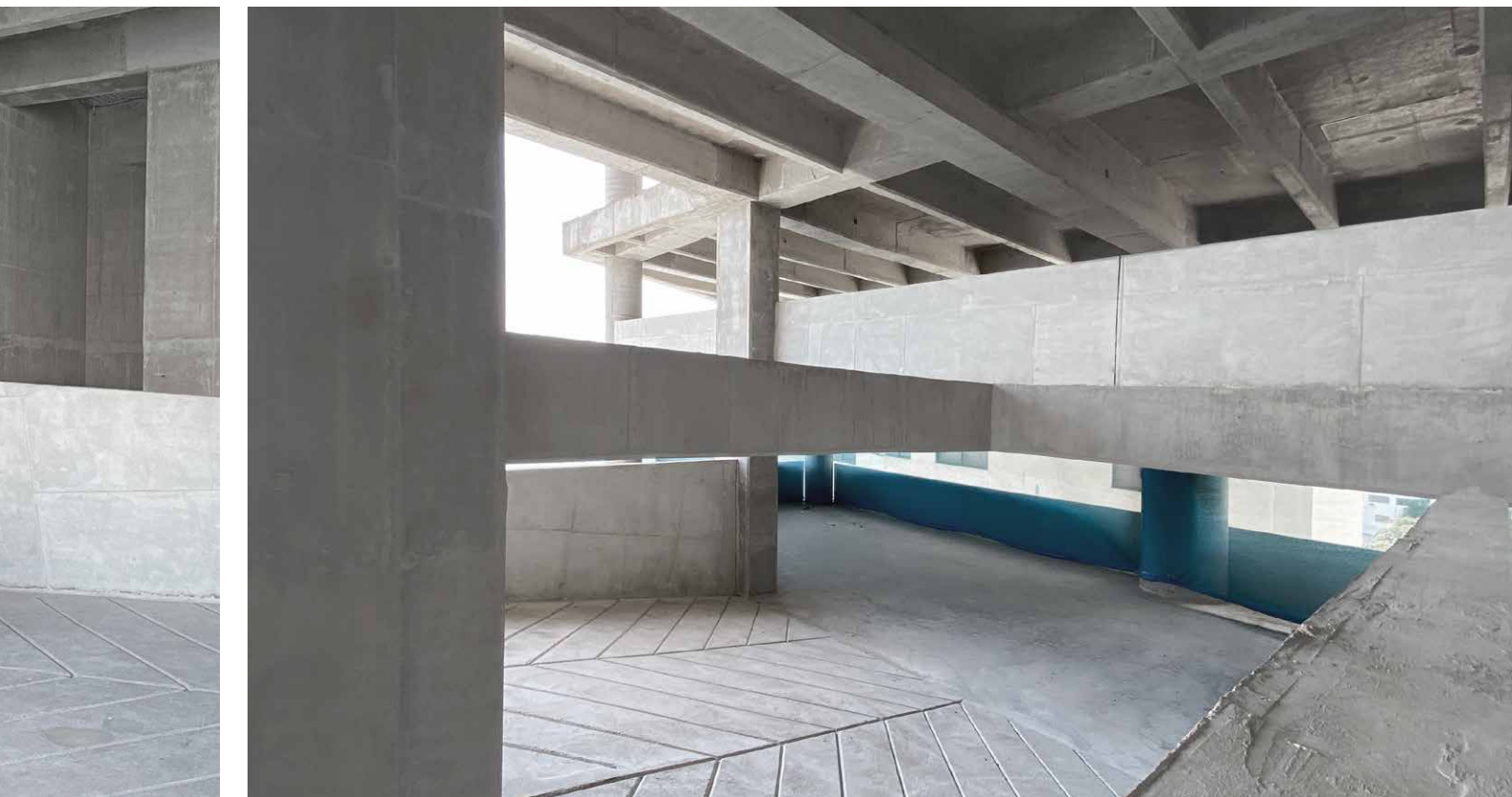
Allure, the name of the 178 m high residential tower, says it all: graceful and alluring is what has been built here. Anyone who is fortunate enough to live in the exclusive 234-596 m² luxury flats, up to 4 m high, can let their eyes wander over the pulsating city, the harbour, the blue sea and green mountain ranges. A renowned South American architect designed a slim, avant-garde high-rise with unusual stylistic devices. Changing geometry, curved and individually cantilevered terraces, cone-shaped and sloping columns, fair-faced concrete: the construction work demanded a lot of know-how and a high degree of flexibility from planners and workers.

Identical floors – boring

None of the 45 floors with an approximate area of 550 m² is identical and each flat has an exclusive, non-repeating floor plan. The Allure is a residential paradise with a feudal entrance area, numerous

parking levels, floors for events, recreation and fitness, and a swimming pool on the 11th floor. For the construction of the two lift and staircase shafts as well as the linear or sloping columns that run through the complex building like the bones of a skeleton, the experienced construction company Construalmanza S.A. used 650 m² of the light-weight, crane-independent AluFix formwork. One of the shafts has changing dimensions, is typically 6.3x6.36 m, and is split in two (fork-shaped). The second also has changing dimensions, is typically 6x6 m and split in four (cross-shaped). The wall thickness changes as well as the internal dimensions of the shafts. They were erected with the help of the KLK climbing scaffold with set-on shoes for fixing the formwork. The shaft platforms were installed by MEVA on site and could be used quickly.

The construction company from Cartagena has deployed many of its own previously used AluFix systems in many successfully implemented projects. The lightness and ergonomics of this effort-saving system simplifies the work, especially in areas that are difficult to access. Up to the 9th floor, the Allure's highest parking deck, the access ramp leading around a shaft is equipped with several



beams. In order to be able to concrete these, the corresponding connections had already to be taken into account during the construction of the shafts. "AluFix saved us a lot of time and manpower. With the large panels like the 300/75, we were able to concrete larger areas with the same amount of work compared to other typical formwork," explains site manager Fredy Mora from Construalmanza S.A.

Time saving with KLK

Together with the KLK climbing scaffolds, walkway brackets and inner shaft platforms, AluFix formed a reliable combination for constructing the stair and lift shafts. They were connected to form a craneable unit that served as a safe formwork scaffold – another factor for great time savings and high working safety on 2.30 m wide, barrier-free platforms. Fredy Mora: "Using the KLK shaft platform reduced our assembly time by 80% and in safety terms we minimised the risk by practically 100%. The workers step onto a safe and reliable platform. The system brings great benefits compared to what is otherwise used on construction sites."



Project data

- **Project**
 - Allure High-rise building, Cartagena, Colombia
- **Contractors**
 - Contrualmanza S.A., Bogota
- **Owner**
 - KMA Construcciones, Cartagena
- **MEVA systems**
 - AluFix hand-set formwork
 - KLK climbing scaffold
- **Engineering and support**
 - MEVA Schalungs-Systeme GmbH, Haiterbach, Germany



Safely to the highest heights

Park Central Towers grow into the Makati sky with MAC and MGS

The magnificent skyline of Ayala Avenue in Makati is enriched by two magnificent buildings. MDBI Construction, which has already been involved in the construction of several skyscrapers in the Philippine financial metropolis is once again relying on MEVA technology for the construction of the Park Central Towers. The south tower rises 276 m into the sky and is thus only slightly shorter than the country's tallest building.

The formwork design was closely coordinated by international MEVA teams in Singapore, the Philippines and Germany. The south tower has 69 floors, the smaller north tower 56, each most of them 3.15 m high. In addition to the MAC system (MEVA Automatic Climbing) and the rail-guided protection system MGS-H, the slab formwork MevaDec and wall formwork Mammut are being used. MDBI, a joint venture of Bouygues Batiment Internatio-

nal and Makati Development Corp., knows these systems from many jobs and appreciates their efficiency, flexibility and safety. The project mainly uses material from MDBI's own stock, and as many parts as possible are to be reused for environmental and economic reasons.

Automatic climbing at great heights

The MAC allows both towers in Makati to grow rapidly, providing workers with a comfortable environment and protection from the elements. The system climbs, hydraulically and crane-independently, together with the wall formwork as a complete, fully enclosed unit. This optimises the construction process and is safer than systems with individually climbing platforms. The fact that work can be carried out on the wall and slab simultaneously also proves to be a major advantage in terms of efficiency and time savings. The suspended Mammut wall formwork can be moved by hand

in three directions and precisely adjusted to the geometry of the structure. The elements can be retracted manually, ensuring that the formwork can be stripped quickly and easily. The upper platform provides plenty of working space, storage area and allows the integration of concrete placing booms. Small teams operate the automatic climbing system and from the trailing platforms, the bearing pockets that have just been used can be dismantled and used for new climbing stages. This reduces the material costs, as no lost build-in parts are left over in the concrete.

MG5-H: Seamless protection

Structural fixtures on the buildings required layout revisions, but that was no problem for the flexible rail-guided screen system MGS-H with freely selectable sizes of the units. They adapt to the shape of the building, enclose complete floors and fall edges without gaps, and maximise worker safety. The MGS-H remains permanently connected to the structure and can be attached to the slab and the wall. The screening is completely closed in with perforated or unperforated cladding sheets or with various fabrics. The system is firmly anchored to the building and windproof – not only in the working phase, but also in the lifting phase.

Quickly formed slabs with MevaDec

The over 1,000 m² slabs of the taller south tower of the Park Central Towers are being built with the lightweight, ergonomic MevaDec. The components are easy to clean due to their low concrete adhesion, so little time and resources are needed for this work. Another advantage is that MevaDec predefines the prop grid according to the system, so only the props that are really needed have to be provided and mounted.

MevaDec offers three slab-forming methods in one system. MBDI used the fast drop-head-beam-panel method for this project, where construction of each floor is subject to tight time constraints. It consists of only three components – panels, primary beams, and props with drop-heads. The panels can be freely inserted and slid into place, also passing over the drop heads, to ensure maximum flexibility and make MevaDec readily adaptable to any building geometry. Thanks to the drop head, the primary beams and panels are lowered by 19 cm with just a few hammer blows. This makes early stripping possible, thus allowing optimised material stock on the construction site as well as rapid construction progress. Thus, slabs can be completed in only three-day cycles.



A worker from MBDI Construction unlocking after the MGS-H moved to the next level and provides full protection.

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Project data

- **Project**
 - Park Central Towers, Makati, Philippines
- **Contractor**
 - MBDI Construction Corp., Manila, Philippines
- **MEVA systems**
 - MAC automatic climbing system
 - MGS-H screen system
 - Mammut wall formwork
 - MevaDec slab formwork
- **Engineering and support**
 - MEVA Singapore; MEVA Philippines; MEVA Germany



An over 50-year-old high-rise building in the centre of Cologne has to make way for a new development. In a triumphant European premiere, specialist contractor Linkamp GmbH is using MEVA's MGS-H rail-guided screen system to perform the necessary fully enclosed deconstruction works.

When buildings grow skywards, smooth progress (time is money!) and, above all, job safety at work are of paramount importance. The same applies the other way around, of course, during top-down

Continuous, all-round protection at any height

The rail-guided screen system provides a full-perimeter protective housing at the slab edges on upper building levels. Lifted into place hydraulically or by crane, it reliably guards against falling objects and weather impacts. MGS-H meets tough international standards for high-rise construction and is used worldwide – frequently in conjunction with MEVA's MAC und MGC-H climbing systems – to erect sky-

... continued on page 14

Climbing in reverse gear

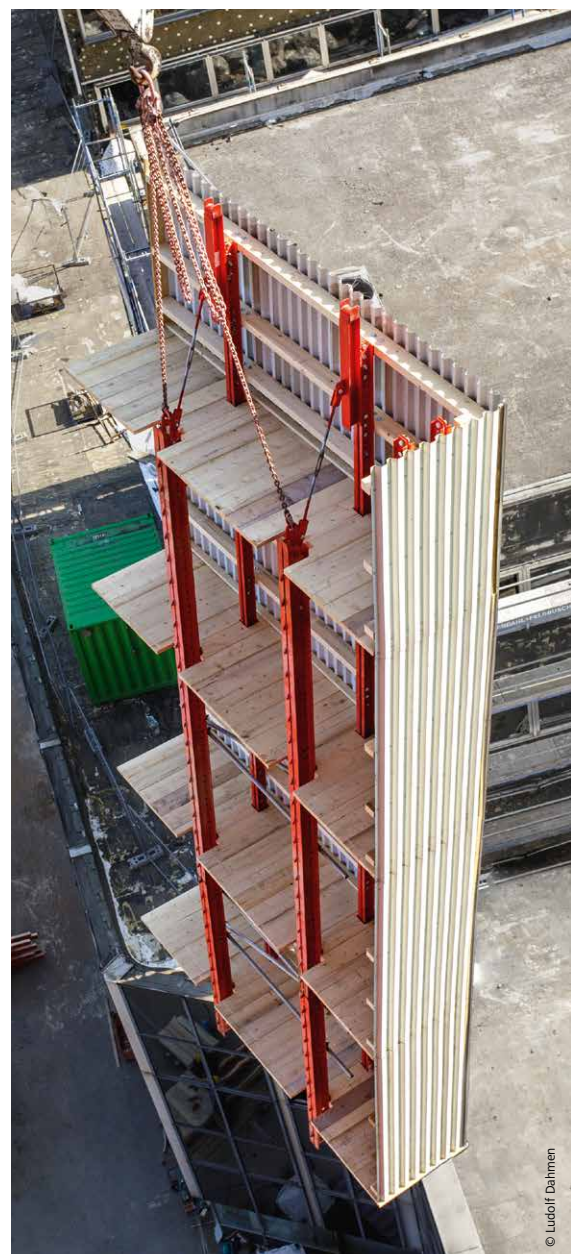
European premiere: safe high-rise deconstruction using MGS-H rail-guided screen system

deconstruction. An increasing number of high-rises, after serving their purpose for decades, now need to be removed to free up space for modern and usually even bigger buildings.

The project

16 storeys and 54 m tall with a plain, rectangular footprint: the office high-rise of the Rhineland Landscape Association (LVR), inaugurated in 1966, was hardly an architectural jewel and in any case no longer met contemporary requirements. This prompted the decision to clear the site swiftly for redevelopment with a new office block housing some 1,200 workplaces. The sensitive city-centre site automatically ruled out any possibility of straightforward demolition by longfront and chain excavators or even controlled blasting. Any disturbance to the neighbourhood – by vibration, dust, falling debris or noise – had to be prevented. The adjoining area is densely developed, with heavily trafficked roads, while the busy Messe-Deutz railway station lies in the immediate vicinity.

Moreover, the facades were found to be heavily contaminated with harmful asbestos insulation. This required painstaking removal and disposal together with precautions to prevent its escape into the surrounding environment. This thus ruled out unshielded deconstruction as an option: only a fully enclosed solution with isolated zones was permissible. In tackling the deconstruction contract, Linkamp GmbH's demolition and remediation experts had to exercise the utmost caution and adopt a flexible, easily manageable solution. Hence the selection of MEVA's MGS-H rail-guided screen system.



... from page 13

scrapers. The system also excels when used for top-down applications, i.e. when climbing downwards, as demonstrated on this contract – the first of its kind in Europe.

The system is adaptable to virtually any building geometry, including round, acute- and obtuse-angled shapes, with or without working platforms. The heights and widths of the MGS-H climbing units, which comprise platforms, guard railings and windshields with perforated or unperforated trapezoidal metal sheeting, are freely selectable. Each unit is connected to the building, also during the lifting and lowering operations, by two flexibly positionable vertical guiding rails. Use, attachment and lowering are possible at wind speeds of up to 20 m/s (72 km/h). This reduces the risk of costly downtimes, especially at great heights.

Site operations

The work cycles are tightly scheduled. The project in the Rhine city of Cologne was the first time the Linkamp team led by Project Managers Thorsten Blasse and Bernhard Gillig had ever encountered the MGS-H system. During the first few days of its use, MEVA master formworker Adam Szántó provided on-the-spot technical assistance. The procedures were planned by Stefan Kappler from MEVA's Central Engineering department. "Metic-

ulous preparation and support by MEVA helped us to quickly familiarise ourselves with the MGS-H system," reports Linkamp Project Manager Thorsten Blasse.

In spring 2022, 18 climbing units were assembled horizontally at two points on the ground. Each unit is between 4.60 and 5.10 m wide and comprises four platforms, guard railings and unperforated trapezoidal metal sheeting. Eight units were additionally equipped with side railings to guarantee safe circulation around the perimeter and maximum safety for the works carried out at the building corners. The units were lifted by crane from the assembly points and threaded from the top into the prepared suspension shoes with a folding mechanism. After the guiding rails had been fitted in place and secured by safety locks, the next climbing unit was collected. In this way, the four top storeys of the over 30 m long and approx. 15 m wide building were soon completely enclosed.

The joints separating the working platforms of the units are only narrow. Yet all the gaps, however small, including those at the junctions with the building wall and in the trapezoidal metal sheeting, were carefully sealed using stable, hard rubber lips. The gaps between the 5 cm thick planking and the guiding rails are covered by brush strips. Platform 1 at the top serves to protect the second level

and to attach/detach the crane hooks.

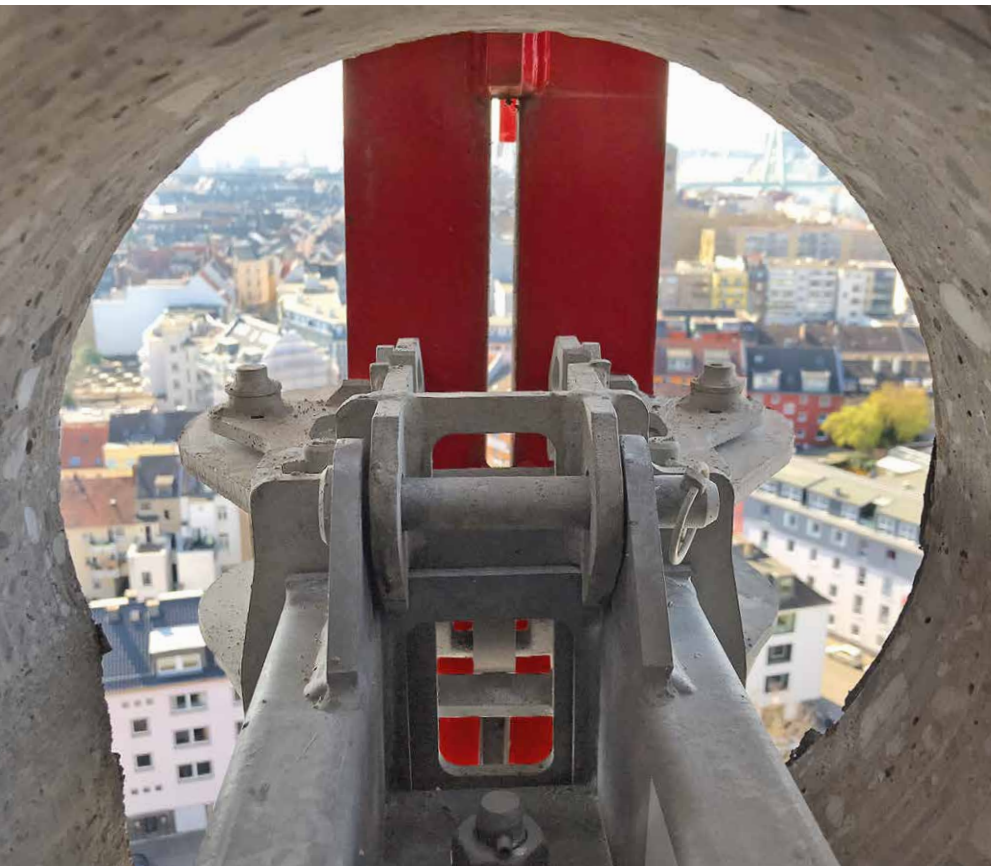
Platforms 2 and 3 are used for the remediation works to the asbestos-contaminated facades, which are subject to enhanced safe-working criteria.

After deconstruction of the top storey, the MGS unit was attached to the crane, lifted some 10 cm out of the fixing hooks and moved away from the wall. The top suspension shoe could then be released and refitted three storeys further down. The MGS unit, which was still connected to the building by the guiding rails, was lowered and re-anchored.

Drilling and casting

In contrast to new-build projects, where the climbing cones needed to fix the suspension shoes are simply cast in, deconstruction contracts require somewhat more elaborate measures:

Screen system secured by guiding rail and suspension shoe. Right-hand page, top: One of 18 MGS-H-units fitted in place by crane. Below: All joints sealed with rubber lips and brushes.

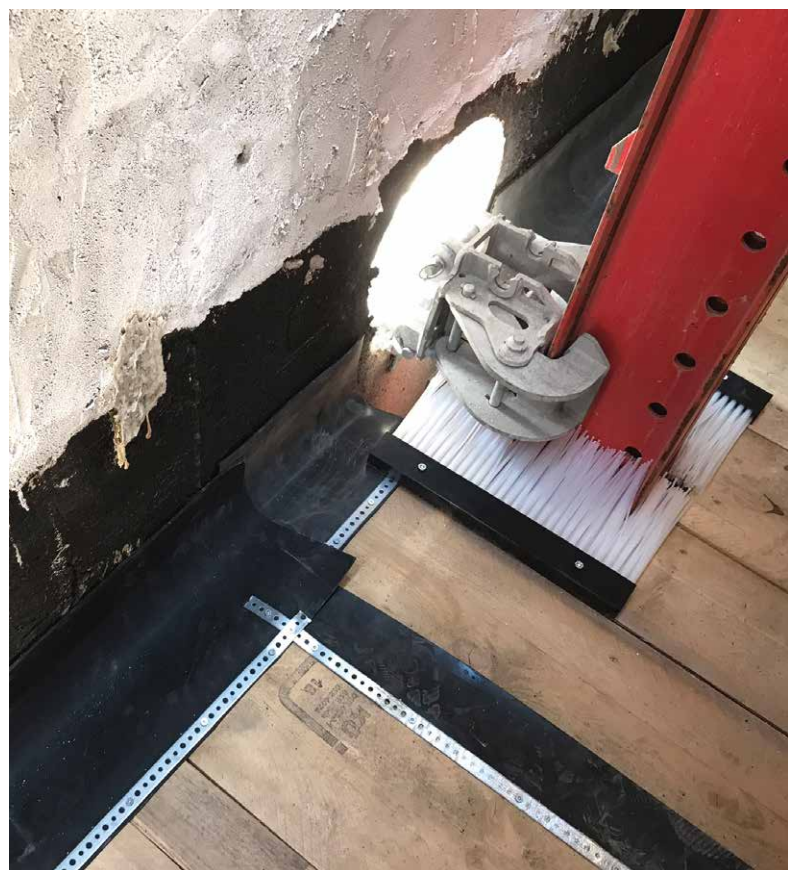
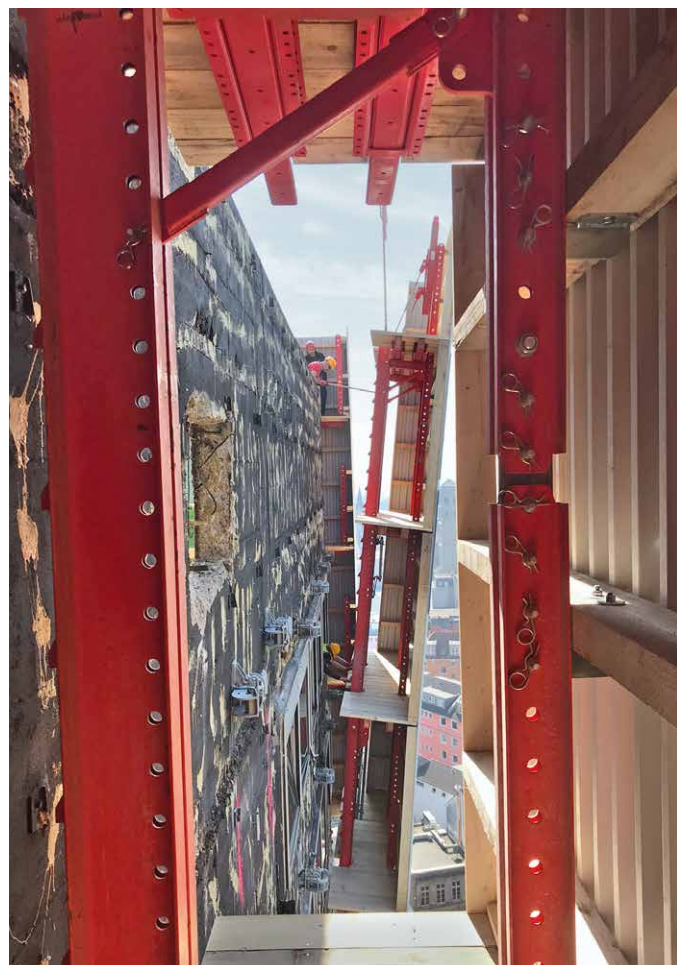


350 mm holes are drilled in the external wall in order to move the suspension shoes, which are connected to a support rail, to the outside. The length-adjustable support rail bears fully on the slab, to which it is structurally connected so as to safely accommodate the loads from the screen system. The climbing cones (M24) and DW 15 tie rods are cast into a 100 mm hole through the slab with expanding grout and secured from below by a cross-stiffener (to guard against punching failure) with an articulated flange nut.

A similar procedure was adopted at the stairwell locations: due to the slab openings near the wall, the climbing cones for two of the 18 MGS-H units could only be secured via the external wall. Here too, a 100 mm hole was drilled, an M30 climbing cone and DW 20 tie rod cast in, and secured by a cross-stiffener with an articulated flange nut.

A real time-saver for the Linkamp team

Despite the unfamiliar procedure, the experienced Linkamp team already started to pick up speed after deconstruction of the top storey. Since then, the work has proceeded more quickly and smoothly with each storey. Linkamp Project Manager Thorsten Blasse now knows that selecting the MEVA system was the right decision: "Our team feels safe and comfortable working at elevated heights. This, together with the MGS-H system's straightforward handling, helps us save lots of time with each demolished storey. For lowering the full-perimeter enclosure, we had actually allowed several days per storey. We would never have believed that, by only the third time round, we would manage it in less than a day. I am very confident that we will be able to meet our schedule."



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Project data

- **Project**
 - LVR high-rise deconstruction, Cologne, Germany
- **Contractor**
 - Linkamp GmbH, Anröchte, Germany
- **MEVA systems**
 - MGS-H rail-guided screen system
- **Engineering and support**
 - MEVA Schalungs-Systeme GmbH, Haiterbach, Germany

MEVA at bauma 2022

Experience new developments close up

Clever MEVA solutions for increased safety, cost-effectiveness and flexibility

After three-and-a-half years the construction industry is finally meeting up again: bauma 2022 will attract an international audience to Munich from the 24th to the 30th of October. MEVA will also be there and will be presenting clever products and solutions on 470 m² of exhibition space in formwork hall B3, stand 236.

The focus on the MEVA stand will be on new products and further developments that provide for improved safety, economic efficiency and flexibility on construction sites. The new, comprehensive, foldable system **MIS – MEVA Integrated Safety** includes every detail required for effective work safety in conjunction with MEVA wall formwork systems (see also page 17).

VarioMax is a flexible, lightweight support system for use with filigree slabs. With little effort, it can also be used for in-situ concrete construction employing the classic support method using H20 formwork girders. VarioMax is made up of only three components and can be adapted to suit any building layout without a fixed grid pattern. As the prop positions are predefined, users require up to 50% fewer props (see also pages 18 and 19).

AluFix is suitable for the construction of foundations, for garden and landscape construction, for construction work on existing buildings, and, in addition, is now even suitable for the slab formwork. For this purpose, users require only the lowerable AluFix prop heads. The crane-independent “all-round talent” is lighter than comparable plastic formwork, but more durable and requires significant fewer attachment parts.

The hand-set formwork EcoFix is optimally tailored to meet the requirements in the export markets.

The **MevaDec 160/160** large-size panel enables particularly rapid construction progress when using the successful slab formwork. Users need up to 40% fewer props when using the panel method.

The **XT taper tie 23** for single-sided tying of Mammut XT and StarTec XT wall formwork can be adjusted intuitively in 0.5 cm increments by means of an adjustment screw to precisely suit the wall thickness.

The new **EuMax Pro** prop is compatible with all MEVA slab formwork systems. With the cranked G hook and numbered holes in the inner tube, the prop can be adjusted very easily. The strengths of the classic EuMax props, such as durability through hot-dip galvanisation and a load capacity of either 20 or 30 kN for all props in the respective series, have, of course, been retained in the EuMax Pro.

A high level of cost efficiency and simple handling characterise the new products from MEVA for the up-and-coming markets in Latin America, Asia, the Middle East and the Caribbean. The lightweight slab formwork **MonoDec** convinces through its safe use and is optimally tailored to meet the requirements in these export markets. The system made of aluminium can be used for every building geometry with only three basic elements – panels, beams and props. **EcoFix** is a crane-independent hand-set formwork with an excellent price-performance ratio and can be used for wall and column applications.

On the ground floor of the MEVA exhibition stand, the visitors can inform themselves about the current status of the digitalised construction site. **MEVA partner BIM²** will be on the spot to discuss the potential offered by formwork planning using building information modelling.





MEVA at bauma 2022

MIS – the foldable, all-in-one solution

Safety system for wall formwork systems and rapid construction progress

Safety on a construction site is not open to negotiation. The MIS safety system MEVA will be presenting at bauma offers a new dimension of work safety.

MIS stands for MEVA Integrated Safety and for a foldable all-in-one solution designed for a high degree of user protection on construction sites. Stairs, rear and side protection, front railings, platform extensions and non-slip flooring are integrated into the system. Tie rod and assembly lock holders enable these parts to be quickly accessed and provide for comfortable work routines. MIS provides all-round protection irrespective of the current construction status and without having to make economic compromises. Users are thus able to work efficiently without any worries.

The MIS with platform widths of 125 and 250 cm remains permanently attached to the formwork panel. Units made up of working platforms and formwork can be simply relocated, transported, stacked, and stored in a space-saving manner. Made of hot-dip galvanised stainless steel and with checkered aluminium sheeting, MIS is designed to last and promises long-term investment security.

Well-thought-out down to the finest detail

Safe and comfortable working conditions, multi-storeyed and a minimum of assembly work – that is what makes MIS stand out. The access solution for concreting work with only two platform widths – 250 and 125 cm – has been optimally adapted to suit the application in conjunction with the flexible, high-performance Mammut XT wall formwork. The units consisting of MIS and formwork panels can be safely assembled when lying on the ground and then raised and relocated as complete units using a crane. Lifting arms enable the units to be erected without subjecting them to oblique pulling.

MIS remains attached to the formwork for as long as required. The one-off installation of the platforms reduces the working time required for each new application. Construction site logistics, transport and storage are simplified, as the unit consisting of the formwork panel and MIS is not even 30 cm high when folded. Numerous well-thought-out details and accessories reduce the risk of accidents occurring on construction sites and increase efficiency levels.

MEVA at bauma 2022

"Getting rid of superfluous props"

Interview with first VarioMax user: 160 m² assembled in 70 minutes

Building contractor Michael Weißinger became the first VarioMax user when his company deployed MEVA's new system on a project back in February 2022. The flexible support system for semi-precast slabs has since proved its credentials on numerous other contracts.

Michael, what feedback can you give us from your first use of VarioMax?

We built a single-family house in Bad Liebenzell with a really convoluted floorplan and varying room lengths. What immediately became clear was the speed, flexibility and ease with which the VarioMax system, with its grid-free telescopic function, can be adapted to any geometry. That allowed us to work very efficiently.

On your maiden project, how long did you need to erect the slab support for one storey?

Three of us managed to complete the total area of 160 m² in just about 70 minutes – that was for everything, including unloading from the truck and levelling. An unbeatable time.

How does it compare with the standard method?

We have now used VarioMax on several sites and it takes only half as long as it does for H20 beam assemblies. In other words, we are now twice as fast. Another significant factor is that, instead of having to install a "forest" of props, we can make do with only a few. That saves both time and effort.

Could you explain that in more detail?

One feature of the VarioMax system is the predetermined number and position of props. Only four props are needed, for example, for a total stringer length of over 8 m. So, for a stringer spacing of 1.60 m, only very little inventory has to be brought to the site, assembled, subsequently removed and cleaned. We sometimes require only half as many props and components as we did before. A large amount of the inventory we used to need for a single project is now freed up for deployment elsewhere. Which is a major benefit given that the slab supports have to remain in place for around two weeks. I should also mention the greater amount of room to manoeuvre below the slab, which is



useful, for example, for the subsequent works performed by electricians, window contractors, plumbers etc.

Weren't there any initial delays before your operatives had familiarised themselves with the system?

No. VarioMax consists solely of props, double beams and slide-in beams. The connection pins on the beams simply fit into the props at the top. That is intuitive. You can't do anything wrong. My team really enjoys working with this system because it means they only have to assemble what is really needed. You could also put it this way: with VarioMax, you are finally rid of those unnecessary props you put in just to be on the safe side. And sawing timber beams is something else that can be consigned to history.

To be honest, when we assembled the system for the very first time and saw how few props were needed, we wondered whether that was really everything, whether it was really stable enough.



Michael und Melanie Weißinger: VarioMax cuts working times and saves effort.

And how do you rate the stability of the system?

It is better than with conventional timber beams. It is unbelievable how little inventory was needed, for example, to support slab thicknesses of 26 cm.

Do you think that VarioMax will also pay long-term dividends for your company?

I am sure it will. We are always careful and gentle with our inventory, and VarioMax is no exception. The aluminium beams are quick to clean: all you need is a bit of water to spray them down and that's it. Concrete adhesion is very low – even after the system has been standing for two to three weeks, there are no problems.

Karl Weißinger Baugeschäft

Based in Bad Teinach-Zavelstein in south-west Germany and with a team comprising Managing Director Michael Weißinger, his wife Melanie and five employees, Karl Weißinger Baugeschäft specialises, among other things, in high-spec residential contracts meeting stringent architectural requirements. "The lightweight, easy-to-handle VarioMax system is also a blessing on refurbishment projects," says the boss. Karl Weißinger Baugeschäft has been a satisfied MEVA customer for over 30 years and has routinely used StarTec wall formwork since 1991 as well as the durable alkus all-plastic facing since its introduction in 2000.



You can rely on us wherever you are.

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on the spot wherever you need us.

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