

# FormworkPress

Professional Formwork News

IV/2024



**Attractive housing**

Fast and easy to build with MonoFix – on pages 6-11

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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 IV/2024. Publisher: MEVA Schalungs-Systeme GmbH, Industriestr. 5, D-72221 Haiterbach. Layout: MEVA. 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.

“Sometimes the biggest challenge is to construct attractive living space for many people in the shortest possible time and particularly economically.”

**Dear Readers,**

Is it not repeatedly impressive what construction companies achieve? They create new and modern structures, connect people and are able to master many challenges.

These challenges are not always projects involving particularly unusual or technically demanding buildings. Sometimes, the challenge lies in creating attractive living space for a large number of people in a short period of time and in a particularly economical manner. This is where our monolithic hand-set formwork system MonoFix comes into play, a system developed for price-sensitive markets for economical residential housing construction and presented three years ago. Construction companies had been waiting for this system, as two projects described in this issue reveal: one in the Philippines and one on the other side of the globe in the Caribbean. In contrast to the snug single-family houses that have already been completed there using MonoFix, the projects also include buildings that tower above their neighbours in both the figurative and the literal sense of the word, and are being built using our automatic MAC climbing system. With heights of over 200 metres and 50 storeys and more, skyscrapers are reaching for the sky in many large cities, for example in Australia, India and the Philippines. The climbing system for rapid and safe erection of high-rise tower cores is also used in Europe. This is particularly evident in the British city of Manchester, where a single property developer has been changing the skyline for years. Why this company is consistently building with MAC is explained in this issue on pages 14-15.

We can, however, reveal this much already: time is money.

During numerous projects completed with MAC across the world, one thing has become clear: After using MAC for the first time, construction companies count on this system again and again during subsequent projects and rely on the partnership-based service provided by MEVA's formwork experts.

By the way, fruitful business partnerships sometimes come about in unexpected ways. Not long ago, the managing director of a construction company in Lisbon recalled past working visits to Germany. While there, he had come to appreciate the efficiency and costeffectiveness of MEVA formwork. He did some research on the Internet, picked up the phone and called our Berlin office. Thus, the first business with a customer in Portugal came about. Until then, “Europe's balcony” was a blank spot on our sales map. Read all about this on pages 12-13.

I wish you a pleasant read.




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

## News

# Information about MEVA



## FormworkPress is going digital

In the previous issue of our customer magazine FormworkPress, we invited you to take part in a survey. This was completed a few weeks ago and a large number of readers took part in it. Among other things, we wanted to know whether, in addition to our online edition, our magazine should continue to be printed and sent by post.

The vote was unequivocal: A large majority of our readers mainly read the digital issue of FormworkPress. The acceptance of digital media is continuing to increase and their usage is expanding. Moreover, we consider the result of the survey to be a vote in favour of conserving valuable resources by not printing the magazine and having it transported to its recipients.

In future, we will also give greater consideration to the results of the vote on content wishes. FormworkPress, which is available worldwide in six languages and in three different versions, will focus more strongly in future on being a magazine from professionals for professionals.

## Expansion of MEVA's Plant 3

First came continuous rain and then snow and severe frost – the white winter in the Northern Black Forest impaired the work on MEVA's new Plant 3 at its headquarters in Haiterbach, Germany. So we had to make up for a delay of several weeks in constructing the new factory building. However, the overall schedule went strictly to plan and further delays were avoided. In a few weeks time, the new Plant 3, which is being built onto Plant 4 on a single site, will be fully operational.

The new 90 x 25 m factory building comprises a modern office wing, skylights in the crown of the roof, and walls in architectural concrete quality. The modernization and investment in Plant 3 will help MEVA further improve the company's competitiveness in the long term. By the middle of this year, the special formwork construction area, preassembly, fixture construction, cleaning of large parts and training area for apprentices will be located in the same building. This will result in simpler processes and efficient logistics as well as excellent working conditions for our employees.



## Expertise in bridge construction

The world of bridge construction is fascinating. No two tasks are the same, and the safety and quality requirements are challenging. The products and solutions supplied by MEVA, which are used in projects all over the world, are as varied and flexible as the tasks involved in bridge construction are wide-ranging.

Information on this topic has been compiled in an eight-page brochure that can be downloaded from our website. It includes examples of successfully completed construction projects and a brief overview of the factors that characterise MEVA's service portfolio: innovative technologies and first-class engineering expertise in bespoke solutions and fulfilment of the highest quality standards. This ranges from formwork planning and intensive on-site support to the successful completion of projects and our all-round carefree formwork service.

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**Download now**

12,8 MB



## 15 years of MEVA India

A milestone was celebrated recently in Navi Mumbai – the 15th anniversary of MEVA India: This success story has been ongoing since the beginning of 2009. During the anniversary celebrations, which were also attended by MEVA's owner and managing director Florian F. Dingler and international regional director Tarc Fröhlich, eleven members of staff who have done dedicated work for MEVA for many years were honoured.

Exceedingly cost-effective and efficient wall and slab formwork as well as climbing systems developed specifically for this market have proven their worth during numerous successful projects.

Services such as competent formwork planning by a qualified and experienced design team are also in strong demand. The MEVA engineers offer solutions not only for customers in India but also for subsidiaries and partners worldwide. Furthermore, our range of services includes team training for construction site workers in order to improve their skills.

# Cost-effective hand-set solution

Saving time and labour with MonoFix aluminium facing

With three monolithic formwork systems, MEVA supports the economical and fast construction of residential and commercial buildings. MonoFix, MonoDec and MonoWall bring great efficiency to construction sites, as they are easy to use and can be adapted to any requirement thanks to their smart flexibility. Today, we are presenting the MonoFix wall formwork, which has been a hit in numerous projects, for example in the Caribbean (see page 8) and the Philippines (see page 10).

The monolithic hand-set system MonoFix is the perfect solution for all residential construction projects thanks to its outstanding features:

- Easy and quick assembly
- Cost-effective implementation on site
- Flexibility to adapt to any building layout

The wall panels are made of aluminium for a superior finish. The standard vertical panel size is 245 cm high and special panels can range from a minimum of 10 cm to a maximum height of 300 cm. They are available in widths ranging from 30 cm to 60 cm to match the building geometry.

→ **MonoFix can be used to form all concrete structures:**

- Walls
- Floors
- Slabs
- Balconies
- Window hoods and parapets
- Curved and decorative features
- Columns
- Beams
- Stairs

A wedge and pin arrangement guarantees a tight and perfectly aligned panel connection. Panels with perforated profiles can be manufactured to suit different column sizes.

## **Columns, beams and stairs**

Many residential projects mainly require walls and slabs, for which MonoFix is ideally suited. But even when projects require columns and beams rather than walls, the system can easily produce all the sizes and connections needed, including complicated offsets and drop-panels. MonoFix can be adapted to the beams or slabs to suit the project requirements.





Windows and doors are simply cut out while balconies, columns and beams can be formed as required – all with just one formwork system.

MonoFix comes with integrated stair forms, connected to the side wall panels and supported by MEVA props. They guarantee the correct geometry of the finished stairs and can be poured together with the walls and slabs above or in a second stage pour. Customized production of the stair forms allows MonoFix to meet all architectural requirements. With the help of useful components such as beams, prop heads, panels and connectors, all kinds of formwork can be created. Windows and doors are simply cut out, stairs and balconies can be formed as required and corners can also be concreted in a rounded shape. Reusable ties and tie sleeves are used to create connections quickly and easily. Stripping the formwork is just as easy.



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## Simply smart

- **Simple adaptation to building layout**
  - Standard panel heights 120, 245 and 300 cm; custom-designed to cast walls and slabs monolithically
- **All of a floor's work completed in one cycle**
  - Horizontal / vertical structure joints
  - Integrated stairs and stair flights
  - Openings for doors and windows
- **Light handling and assembly by hand**
  - Weight of panels: 22 kg/m<sup>2</sup>
- **Fast and efficient concrete pours**
  - Load capacity: 60 kN/m<sup>2</sup>
- **Durable and lightweight system**
  - Frames made from aluminum profiles (100% recyclable)
  - Components impervious to moisture; no fungal decay and long lifespan
- **Easy to clean with high-pressure water**
  - Aluminium extrusion: T6061 – T6 with nominal thickness of 4 mm
- **Quick and simple assembly**
  - Simple wedge and pin system to connect panels



# Attractive housing for the Caribbean

Constructed to plan thanks to MonoFix

Around 40 million people live in the Caribbean, which stretches from the Gulf of Mexico in the west to the north of Latin America. Affordable living space is in high demand on the green coasts of the islands and archipelagos in the Caribbean Sea. Numerous residential construction projects are currently being built here, often on behalf of government ministries in the various states. Renowned construction companies rely on economical and fast serial production of buildings with the MonoFix monolithic formwork system, as with the project mentioned here.

This residential park will provide attractive housing for numerous people, both in economic and infrastructural terms. The carefully planned community has a sports center, shopping facilities, leisure facilities and children's playgrounds. The residential units consist of well-equipped, single-storey, single-family homes, bright and friendly in a compact design. There is a choice of three different floor plans with 73 m<sup>2</sup>, 90 m<sup>2</sup> or 120 m<sup>2</sup> of living space.

The houses include a living room, kitchen, one to three bedrooms and one or two bathrooms.

### Ideally suited for MonoFix

The experienced construction company invested in 970 m<sup>2</sup> of MonoFix formwork elements and relies on the strengths of the monolithic system when numerous, identically cut houses are to be built in large numbers – economically, efficiently and without complications. The formwork proved its worth right from the start and, thanks to its easy handling, the formwork, which consists entirely of aluminum elements, enabled rapid construction progress.

Each building unit was concreted in a single cycle. The project had one special feature, but this was no problem for MonoFix: the building roofs each have two different pitches, so the walls on the outer sides and in the middle of the building are of different heights, which gives the finished concreted houses an even higher quality appearance.



The formwork proved its worth right from the start.

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### Project data

- **Project**
  - Residential housing in the Caribbean
- **MEVA system**
  - MonoFix monolithic formwork system
- **Engineering and support**
  - MEVA Sistemas de Encofrado S.A.S., Bogotá, Colombia



## A new era of construction excellence

Menzi Heights growing three times faster with MonoFix

**With an increasing number of country-wide housing projects embracing this system, MEVA's MonoFix and its benefits have become undeniable, revolutionizing the construction landscape in the Philippines. MonoFix, an adaptable and versatile monolithic formwork system, stands out for its ability to align with the unique requirements of each project.**

One notable example of the successful implementation of the MonoFix system is the Menzi Heights. Developed by Argusland, a renowned land developer with a track record of successful projects, this 8-hectare, 4-phase project has been a showcase for the efficiency and benefits of MonoFix.

### **300 units within a year**

The completed first phase of Menzi Heights was designed as economical housing, with each unit measuring 42 m<sup>2</sup>. The ongoing phase 2, aimed at social housing, features units of 32 m<sup>2</sup>. With the assistance of MEVA's MonoFix system, the project aims to construct 300 units within a year, a feat that would be challenging with conventional construction methods.

During the initial installation of the MonoFix system, there was a learning curve for new users. However, the MEVA team of site supervisors provided ample training for the workers, guiding them on the "Do's" and "Don'ts" of using the system. The MEVA team remained on-site to supervise and assist in the installation, use, and disassembly of the system until the workers became proficient in its utilization.

### **Three times faster**

The streamlined process enabled by MonoFix allowed for a cycle completion period that is three times faster than conventional methods. Since the start of the project in February 2023, 45 units have been completed at an average of 7.5 units per month. With uniform units produced, the process became repetitive, minimizing human errors and labor requirements. This, in turn, decreased project costs, both in terms of labor and material expenditures.

The monolithic nature of the formwork system ensured that the finished units maintained consistent dimensions, unlike conventional methods where walls tend to become thicker after plastering. This



contributed to the overall efficiency of the project and resulted in a seamless, standardized outcome.

The success of MonoFix at Menzi Heights is a testament to the transformative power of this innovative formwork system. As the trend towards housing projects continues to rise in the Philippines, MonoFix stands poised to lead the way, re-shaping the construction industry with its reliability, efficiency and adaptability. With MEVA Philippines championing its benefits, more and more developers are expected to embrace MonoFix, ushering in a new era of construction excellence in the country.



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### Project data

- **Project**
  - Menzi Heights, Manolo Fortich, Bukidnon, Philippines
- **Principal and contractor**
  - Argusland Inc., Cagayan de Oro, Philippines
- **MEVA systems**
  - MonoFix monolithic formwork system
- **Engineering and support**
  - MEVA Philippines Inc.

The Menzi Heights project offers ideal conditions for the efficient use of MonoFix. An investment in this monolithic handset formwork system pays for itself in a short time.



Given the sum of its advantages, the use of MevaDec quickly pays off. Below from left to right: the managing directors of the construction company Neourbano, Bruno Coutinho and Artur Santos, with Thomas Keck and Paulo Jorge (MEVA). MevaDec predefines the column spacing so that only the props that are actually required are installed.



# Over the roofs of Lisbon

How MEVA came to Portugal and Neourbano forms its slabs

**While residential construction is stagnating in large parts of Europe, Portugal is currently enjoying a veritable boom – not least due to the stimulus triggered by foreign investors. In the capital, Lisbon, the construction company Neourbano Construção is currently building numerous multi-family residential buildings and profiting in the process from the advantages of the flexible and ergonomic MevaDec slab formwork.**

Until recently, Portugal, “Europe’s balcony” at the westernmost edge of the continent, was a blank spot on MEVA’s map. “Three years ago I received a phone call from Lisbon,” recalls Paulo Jorge, MEVA’s Portuguese-born regional manager in eastern Germany. At the other end of the line was Artur Santos, managing director of the construction company Neourbano Construções. Having previously worked on construction sites in Germany, he was familiar with and had a high opinion of MEVA’s formwork. He had found Paulo Jorge’s contact details on the website.

A non-binding phone call quickly developed into a deeper relationship: Paulo Jorge and Thomas Keck, the head of sales in Germany, invited a small Neourbano delegation to Haiterbach in order to get to know each other personally. The local restaurants were all closed at this time due to the Covid lockdown and some improvisation was required. The guests were entertained without further ado in MEVA’s Technikum showroom with platters of cold cuts and cheese. “An unforgettable and unconventional meeting,” Thomas Keck reports.

## MevaDec for high expectations

The decision makers from Neourbano got to know the advantages of MevaDec and bought 2,400 m<sup>2</sup> of the slab formwork system as well as a corresponding quantity of EuMax props. Artur Santos appreciates the flexibility and efficiency of the slab formwork. He uses it Lisbon and the surrounding area, mainly for residential development projects in the upper price segment. For example, the Monview project is currently underway on the hills of the capital city, with eight- to ten-storey houses, stringent architectural concrete requirements and a tight schedule. “The system is quick and easy-to-handle and can be flexibly adapted to suit every building layout and slab thickness. We do a lot of work with concrete columns with different diameters. Thanks to the optimum panel size increments, we only have to deal with small filler areas in each case,” says Artur Santos.

## Investment pays off quickly

The formwork market in Portugal is highly competitive and mainly dominated by low-cost systems offering low levels of quality and flexibility. Despite this, Neourbano has decided to use MevaDec “as a matter of conviction and due to the sum of its advantages, which, in the final analysis, provide a high degree of economic efficiency,” Artur Santos explains. That starts with the fact that the formwork predefines the prop spacing. This ensures safety, optimised material storage and efficiency on the construction site. Last but not least, Neourbano appreciates the possibility of employing three slab formwork methods – the drop-head-beam-panel, the primary- and-secondary-beam and the panel methods.



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## Project data

- **Project**
  - Monview residential building, Lisbon, Portugal
- **Contractor**
  - Neourbano Construções, Lda, Milharado, Portugal
- **MEVA systems**
  - MevaDec slab formwork
  - EuMax props
- **Engineering and support**
  - MEVA Schalungs-Systeme GmbH, Berlin office, Germany

# Conquering heights and challenges

Construction companies worldwide rely on MAC – just like Renaker in Manchester

In the ever-evolving landscape of construction, where safety, speed, and sustainability take centre stage, MEVA has carved a niche with its cutting-edge solutions. At the forefront of this innovation is the MEVA Automatic Climbing system (MAC), a crane-independent, hydraulic climbing formwork solution that has set new standards in the construction industry. MAC has built a proven track record worldwide and was a decisive factor for the successful construction of some of the tallest buildings in countries such as Australia or the Philippines. The 205-metre high Roche Tower II in Basel, to which the stringent Swiss safety requirements applied, was even completed ahead of schedule. In India's flourishing metropolitan areas, too, there are more and more MAC projects.

## In the skies above "Manc-hattan"

An increasing number of skyscrapers are dominating the skyline in the English city of Manchester. Since 2006, the region's leading property developer, Renaker Build Ltd, has been reshaping districts that have seen better days into up-and-coming neighbourhoods. The focus lies on the renovation of brownfield sites in the heart of Manchester, where a new landscape with high-rise towers is coming into being and affectionately referred to as "Manc-hattan". Since 2016 Renaker has been working with MEVA on large projects in Manchester. Both the management and the construction site teams have come to appreciate MAC due to its efficiency, flexibility and safety.

Many projects testify to this comprehensive cooperation, for example Deansgate Square (four towers of up to 201 m with up to 67 storeys and more than 1,500 apartments), Elizabeth Tower, Trinity Riverview, Greengate Plot, Three60 and more.

MEVA formwork and climbing systems play a major role in the implementation of new projects such as New Jackson and Trinity Islands, where MAC is being used. This system, which climbs hydraulically with the formwork during erection of the concrete walls, proved advantageous for Renaker, as it enables rapid construction processes with little effort and provides for safe and comfortable working conditions. As a reaction to the increasing demand for high-rise buildings and the construction of their cores, Renaker purchased a large stock of MAC climbing systems and Mammut 350 wall formwork. The lightweight, crane-independent AluStar system is used to construct the columns. The flexibility of all these systems means they can be easily adapted to suit varying geometries and changing requirements. Hence, they pay dividends in the long term when used for different construction projects. For buildings with 30 storeys or more, Renaker prefers the globally tried-and-tested, automatic MAC climbing system to every conventional jumpform or slipform system.

MAC lifts the core wall formwork and all platforms hydraulically in a single operation and enables quick and efficient working practices without the

MAC climbs compactly as a complete unit. The closed-off working area offers comfortable, safe conditions.

Inside-formwork boxes were assembled next to the core and then lifted into place.



help of a crane, even at great heights. The hydraulic unit is operated by only a single person. The complete unit can be raised by 4.5 m in only 60 minutes using a minimum of personnel.

### Cycle times of only four days

During some projects, the Renaker construction site team achieved very short cycle times of only four days for stripping, climbing, rebar and box-out installation, and reinstallation of the formwork. Sometimes, the cycle times were so efficient that the core construction team had to interrupt its work to allow the construction of the previous storeys to catch up. Instead of anchors, the MAC system employs reusable bearing pockets for support. These pockets are removed from the trailing platform and reused during the next climbing stage. This reduces the material costs, as no lost built-in parts are left over in the concrete. If there is little space available, parts belonging to the climbing system can be pre-assembled outside the construction site.

Integrated platforms and ladders guarantee a high degree of work safety. The main working platform is free of obstructions and offers a large surface area for materials such as rebars. The all-round enclosure with cladding sheets, for example, makes it possible to work in all weathers, while offering privacy and ample advertising space.

### Large-scale concrete placing

The smart design of the MAC climbing system enables the formwork to be simply adapted to suit varying building geometries. Large units made up of several formwork panels that are connected to each other can be relocated in one operation. This saves a lot of time when installing and stripping the formwork. The robust, large-format Mammut 350 panels (350/250 = 8.75 m<sup>2</sup>) with a full-surface, fresh-concrete pressure capacity of 100 kN/m<sup>2</sup> optimally supplement the climbing system. A good example of this duo's efficiency is the Deansgate Square project: Two MAC systems were used in tandem in order to erect one storey with two cores located next to each other every five days. Each of the systems was then modified and used for two further cores. The group of four high-rise buildings in the centre of Manchester was completed punctually within the desired time frame thanks to the speedy core construction method and rapid relocation MAC made possible.



New Renaker construction project in Jackson Street.

### Experts from Singapore and UK involved

To ensure correct on-site installation, a highly specialised team of MAC experts from the MEVA subsidiaries in the UK and Singapore was involved in the planning. The exchange of information at an early stage and close cooperation with the principal ensured that planning and construction were performed smoothly. The precise coordination between all the parties involved in the project enjoyed a high priority. MAC and Mammut 350 were adapted from cycle to cycle in order to compensate for floor plans that deviated in detail or special forms such as different door openings.

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### Project data

- **Project**
  - New construction of high-rise residential buildings in Manchester, UK
- **Contractor**
  - Renaker Build Ltd, Manchester, UK
- **MEVA systems**
  - MAC climbing system
  - Mammut 350 wall formwork
  - AluStar wall formwork
- **Engineering and support**
  - MEVA Formwork Systems Pte Ltd, Singapore
  - MEVA Formwork Systems Ltd, Tamworth, UK

# You can rely on us wherever you are.

With 40 offices on 5 continents, we are  
on the spot wherever you need us.

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