

# FormworkPress

Professional Formwork News

III/2023



**Cost-efficient and flexible**

Simply smart slab formwork – from page 6

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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 III/23. Circulation: 2200 copies. Publisher: MEVA Schalungs-Systeme GmbH, Industriestr. 5, D-72221 Haibach. 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.

"The ideal product is one that combines all positive features."

**Dear Reader,**

Let's be honest: observing the prescribed safety standards is a matter of routine, an absolute "must" as far as formwork and other site equipment are concerned. Sustainability, on the other hand, tends to be a "may", i.e. an optional extra. Yet, the key to project success is and remains cost-effective, on-time delivery. In the selection of resources, product qualities such as straightforward handling, material grade and longevity, vouching for reliable long-term use, are therefore paramount. All backed up, of course, by smart-detail solutions that accelerate progress on site.

The ideal product is one that combines all positive features. MEVA's slab formwork and shoring tower systems, featured in this edition of FormworkPress, are best examples. Regardless of the challenges confronting your project, whether they involve in-situ concrete or semi-precaster slabs – MEVA has the answer to your challenge.

One key success factor lies in the flexibility of our systems, which cater for wide-ranging applications and are readily combinable. This speeds up work processes, simplifies logistics and inventory management, and frees up space on site. The resulting efficiency pays both short- and long-

term dividends. Far from being precluded, integral safeguards, resource-efficient sustainability, non-strenuous ergonomics and low weight are, as it were, built in as standard features.

The MevaDec slab formwork system is a prime illustration of this level of product quality. Catering for three slab-forming methods, it is a delight for users – particularly when the drop head function is employed. For further details, please read the project reports in this issue.

Other MEVA products and services offer a similar boost to customer satisfaction – the MonoFix monolithic formwork system, for example, which was used on a large housing contract in the Philippines. As the project manager points out in the interview, MEVA formwork "helped us enormously".

Let me wish you a pleasant read.




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

## News

# Information about MEVA



## Digital summer edition

The coronavirus pandemic has changed consumer behaviour in many areas and increased the pace of development. The acceptance of digital media is increasing and their usage is expanding rapidly. MEVA is also pressing ahead with digitalisation in marketing and is following the trend towards multimediality: The next edition of our FormworkPress magazine in the summer of 2023 will thus – on a trial basis – only be available online as an interactive PDF version. A print edition, alongside a digital version, will then be published again in the autumn of 2023.

Our readers will be able to access the digital FormworkPress edition on their mobile devices or PCs at any time from any place. Due to the shorter lead time, MEVA will be able to react faster to cover topical issues. It will also save valuable resources if there is no need to print and transport the magazine.

In this way, MEVA would like to find out what our readers want in order to find optimum solutions that suit everyone in future. The editions will include more relevant content, topical issues and easy access to additional multimedia offerings such as videos and websites. Stay tuned!

## Fantastic experience in Canada

For the construction of a fertiliser storage facility in Ontario, the Canadian company Cornerstone Ltd. used the systems MEVA32 (shoring tower) and Imperial (wall formwork), which have been very successful on the North American market, combined with the MEP shoring tower system.

The lightweight MEVA32 aluminium frames have a load-bearing capacity of 142 kN (32 kip) and can be quickly assembled with a minimum of effort and just a few parts. During this project, elements of MEVA32 and MEP were combined and used as formwork tables that were easily relocated by crane to the next place of use after every pouring cycle. 6.7 m high walls were poured using the high-performance Imperial wall formwork. Here, efficiency was also the trump card, as several panels were joined to form large forming areas and relocated by crane, thus significantly reducing the time and effort required.

Site manager Chris Lambert: “The systems were easy to assembly, everything fitted together well and the resulting walls had a good surface quality. A fantastic experience. We are looking forward to the next project with MEVA.”





## EcoFix arouses interest

A few months ago at the bauma trade fair in Munich, MEVA presented a particularly efficient and flexible formwork system tailored to the requirements of markets in Asia, Africa, Latin America and Central America: EcoFix is a crane-independent hand-set formwork from MEVA with an excellent price-performance ratio that can be used for wall and column applications.

The EcoFix system's corner solution is as simple as it is effective: Quickly installed internal corner clamps (ICC) replace inside corners and thus reduce the cost of the overall system.

Due to its product features, the both lightweight and robust EcoFix meets the requirements of construction companies, especially regard to cost-efficient residential housing construction. The interest shown by construction companies is correspondingly strong. For example, the first projects have already commenced in Pakistan, India and Jamaica. And the first EcoFix project will also be starting soon in Bolivia.

## Time saved with very little material

There is often an acute shortage of space on construction sites in the middle of large cities. Optimum logistics and low material requirements are thus prerequisites for the successful realisation of projects. During construction of the Handelskai 214A residential complex in Vienna, the capital of Austria, the MevaDec slab formwork made a key contribution to fulfilling these requirements.

Seven houses, each with two parking levels, a ground floor and six to ten upper storeys, were built by GERSTL BAU on a narrow, 450 m long plot of land in the bustling district of Leopoldstadt. For the total slab area of more than 26,000 m<sup>2</sup> plus two parking levels, each with 7,000 m<sup>2</sup>, GERSTL purchased 1,800 m<sup>2</sup> of MevaDec slab formwork with alkus all-plastic facings that ensure top-class concrete quality even after more than one thousand applications and come with a 7-year warranty. It soon became clear that this was the correct choice, especially as the price of wooden facings had increased immensely in the meantime. Thanks to the predefined prop spacing, it was only necessary to install and store the number of props actually required. And through early stripping using the drop-head-beam-panel method, it was also possible to save a lot of time with a minimum of effort.

## Cover story

# Simply smart slab formwork

Flexible, cost-efficient systems and shoring towers from MEVA

**Slab construction requirements vary widely: in-situ concrete or prefabricated parts, small cellar ceilings up to surfaces covering thousands of square metres, slab thicknesses, slab heights, challenging floor plans, compensations, architectural concrete requirements. All these factors mean that construction companies require flexible formwork and support systems.**

A high level of efficiency, simple handling, integrated security features, low material and parts usage, durability and combinability are the convincing features of ideal solutions. These characteristics

are decisive for a high degree of cost-effectiveness, rapid construction progress and sustainability – and all are guaranteed when using MEVA formwork and shoring tower systems:

- MevaDec and MevaFlex slab formwork
- MonoDec slab formwork
- MEP and MEVA HN shoring systems
- MT 60 shoring tower system
- VarioMax support system

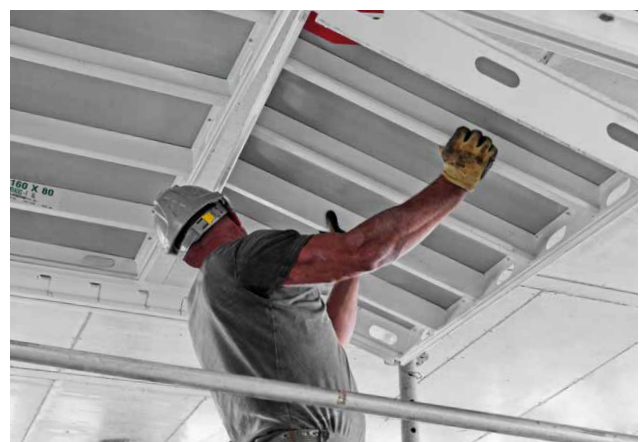
## MevaDec slab formwork

The lightweight, ergonomic MevaDec is a solution that covers almost every requirement, even for slab thicknesses above 30 cm. It is designed to allow different forming methods to be employed using just one system and identical components:

- Drop-head-beam-panel method
- Primary- and-secondary-beam method
- Panel method

Users simply select the most suitable method for each application. As these methods can also be combined, the number of compensation areas is reduced. MevaDec does not need to adhere to a fixed grid pattern and can be flexibly adapted to suit every building layout, slab thickness, conventionally formed areas and irregular slab edges. The predefined spacing between the props ensures a high degree of safety and enables less material to be stored on the construction site.

The aluminium profiles with a cured powder-coated finish can be cleaned quickly using few resources due to reduced concrete adhesion. The formwork panels with grip openings and ergonomic profiles are easy to handle and can also be safely and effortlessly inserted from below. The standard panel 160/80 cm weighs only 16 kg/m<sup>2</sup>. The new large-size panel 160/160 (with a forming area of 2.56 m<sup>2</sup>) enables the construction work to proceed even faster. The alkus all-plastic facing with a 7-year warranty can be repaired and ensures a







consistently high concrete quality. More than 1,000 applications using one facing are not uncommon. MevaDec is the fastest drop-head modular slab formwork system on the market\*. The time saved for a forming area of 1,000 m<sup>2</sup> is about 50 hours. When using the drop-head-beam-panel method, the primary beams and panels can be lowered by 19 cm using a hammer and then stripped and used for the next cycle while the slab that has just been formed is supported by the props and continues to harden. The outcome? Rapid construction progress, only a small amount of material stored on-site, simple logistics.

Early stripping is also possible using the primary-and-secondary-beam method. The user selects the facing from either the shuttering panel 3S, the alkus all-plastic facing or other alternatives. The panel method requires only panels and props with prop heads. It is suitable for small building layouts and filler areas in conjunction with simple logistics.

Safe work at heights is ensured by the MEVA MAB working platform or the MevaDec supports for guard-railing posts that can be attached to the panel or the beam and enable guardrailing posts with MEVA safety meshes to be installed.

\* (see pages 47–54 of the Handbuch Arbeitsorganisation Bau Schalarbeiten / Systemschalung Decken 2021 (manual on work organisation for construction projects – forming work / standard slab formwork (German only)) published by the Institut für Zeitwirtschaft und Betriebsberatung Bau (izb)

## MevaFlex slab formwork

The conventional formwork offers a high degree of flexibility for large surfaces and slabs with complex layouts. MevaFlex can also be used to support prefabricated slabs. The system is made up of shoring towers or props with forked prop heads, crossbeams and stringers (wood H20 or aluminium) and the freely selectable facing – either shuttering panel 3S, alkus all-plastic facing or other alternatives. The positioning of the beams and props is not predefined and can be specified during the planning phase to suit the slab thicknesses. This allows for a high degree of flexibility when planning the application. MEP and EuMax props, among others, are suitable for use as supports.

- Simple assembly and use
- Adaptation to various building layouts and slab thicknesses
- Free selection of the facing
- Stringers and crossbeams independent of the grid pattern
- Cost-effective and pays for itself after just a few applications.

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### MEP shoring tower system

Modular shoring towers ensure construction site safety. The selection of the best solution is governed by the slab heights and the specific supporting tasks. The MEVA MT 60 and MEP shoring towers provide optimum support. The use of only a few basic parts and frame types along with the lack of unnecessary assembly parts enables simple handling and lean logistics.

The strength of the modular MEP shoring tower system lies in its ability to be flexibly adapted to suit every building geometry. With only a few basic parts (props, extensions, frames), it guarantees a high level of stability, simple well-organised storage and rapid material requirements' planning. MEP is suitable for supporting slab formwork systems, slab tables, concrete beams or prefabricated components at heights up to 21 metres.

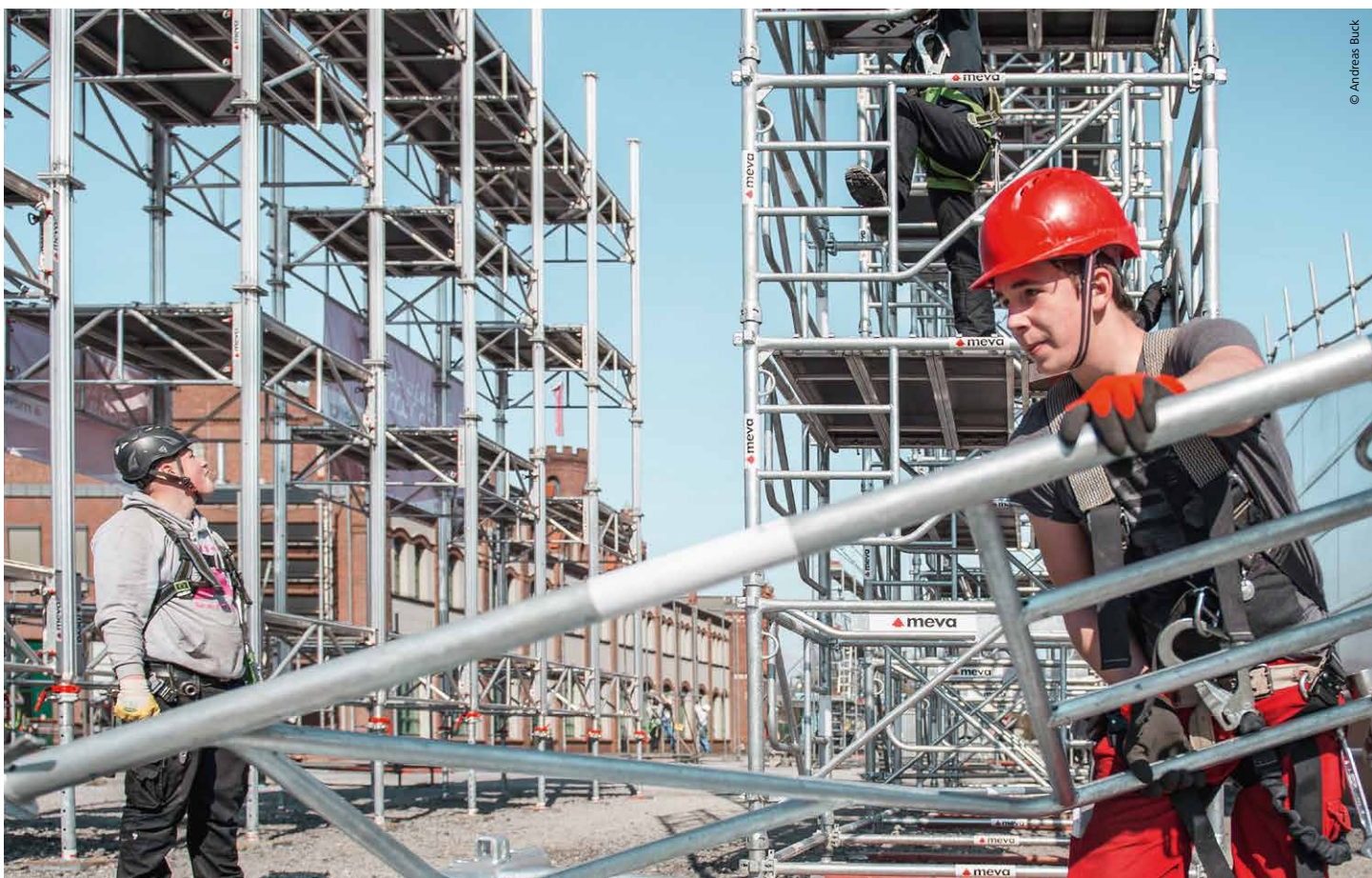
The MEP props are used as individual props or together with reinforcing frames as shoring towers. Ladders and scaffold platforms permit easy access to the slab formwork so that the formwork can be installed or stripped from below, even at greater heights. Integrated solutions such as the MEP frame connector or the automatic restraint mechanism on all platforms increase safety levels. MEP is compatible with all MEVA slab formwork systems and the MT 60 shoring tower. The frames 170 and 220 are designed to suit the system dimensions of the MevaDec slab formwork.

### MT 60 shoring tower system

Few individual parts, simple assembly: With only three frame types (100, 75, 50 cm) and the base and head spindles that can be height-adjusted up to 62 cm, any tower height up to 18.66 m can be achieved using the MT 60 shoring tower. Due to its high load capacity of 60 kN per leg, the MT 60 is suitable for slab thicknesses up to 71 cm.

The system can be assembled – whether lying down or upright – without tools, bolts or pins. The heaviest individual part weighs no more than 15 kg. The complete tower unit can be relocated by crane or on rollers. All parts are hot-dip galvanised.

The system has built-in safety features such as the module connections secured with a simple rotational movement, safety access ladders in every segment, scaffold platforms automatically secured in the frame, and all-round fall protection on the working platform. MT 60 and MEP are compatible with each other and with MevaDec, and it is also possible to use the efficient drop-head-beam-panel and primary- and-secondary-beam methods with MevaDec.







## MonoDec – light and robust

The MonoDec slab formwork with aluminium facing is a very cost-effective solution for numerous projects. It is flexible for any building geometry and easy assembled by hand – with no crane required. MonoDec delivers a high-quality finish for beams and slabs. The standard panel width is 50cm and the panels only weigh 19.56 kg/m<sup>2</sup>. The recommended spacing with MEVA EuMax Props is 200 cm x 165 cm. Panels and beam lengths are available for every shoring system, e.g. MEVA32.

- Drop head for early stripping – material savings of up to 40 %
- Permissible slab thickness from 20 to 44 cm
- Durable and superior for consistent concrete finish
- 100 % recyclable and environment-friendly, easy to clean
- Impervious to moisture, no corrosion, no fungal decay

## MEVA32 – fast, flexible, strong

This shoring system is a complete solution for slabs and garage beam applications. The aluminium frame is lightweight and has a total load capacity of 142 kN (32 kips). It can save time and reduce the amount of equipment required on the job site. MEVA32 can be used as a traditional shoring tower with cross braces or can be assembled horizontally on the ground with MEP gates, and then flown into position by crane. It is strong, flexible and designed to save labour, time, and space on the jobsite.

- Heights of 4', 5', 6', 8' (121.9 cm, 152.4 cm, 182.9 cm, 243.8 cm)
- Lightweight: 182.9 x 182.9 cm frame weighs 22.2 kg

- Easy conversion to garage beam system or flying table
- Frame folds: easy movement without disassembly
- Towers can be rolled using standard MEP trucks

## MEVA HN slab formwork

Available in Latin American markets and Australia, MEVA HN is easy to adapt to changing layouts. The secondary beams can be placed and slide freely within the primary beams and adjusted to accommodate complicated shapes – for more flexibility around columns and demanding geometries.

MEVA HN features drop heads for early stripping of beams and facing while props remain to support the concreted slab. That allows for fast cycle processes and material savings of up to 40 %. MEVA HN is designed for seamless integration with MEP and MEVA32.

## VarioMax

Available in Latin America, VarioMax is the flexible, lightweight support system for semi-precast floor slabs and – in conjunction with the H20 beam clamp – for in-situ concrete slab construction using the “Flex” method. Assembled from only a few parts and components, it vastly reduces the work and time requirement, cutting the number of props and components needed by up to 50% and labour costs by up to 40%.

For more information on all slab formwork and support systems, visit [www.meva.net](http://www.meva.net) and click on “Products”.





## New living space in Stockport

Carpenter Build Ltd. profits from the advantages of MEVA formwork systems

**An exciting new development in Stockport, England, comprises two residential buildings with 202 apartments for the private rental sector. The Springmount Mill apartments are named after a mill that once stood on the site. The construction company is using MEVA formwork technology for the first time.**

The Brinksway (106 flats) and Springmount (96) blocks are located in a pedestrian and cyclist-friendly environment. The property benefits from an elevated position providing attractive views across the Mersey River and the adjacent school playing fields to the Pennines in the distance.

The north-south fall across the site is around 10m and the master plan takes account of this level change by incorporating multi-storey car parking underneath the accommodation. The building design and brick façade reflect the character of the original factory building on the same spot. The two newly constructed buildings have eight and six storeys respectively, and up to three levels of parking below, with over 200 spaces.

L7 Architects are responsible for the design across this stylish site with Carpenter Build Ltd. managing the site and construction. As Carpenter Build decided that reinforced concrete framework was the best overall solution for this and other projects, they invested in MEVA formwork, falsework, access products and services.

### **Rapid progress on site with MevaDec**

Around 2,500 m<sup>2</sup> of slab area will be concreted for each floor. Carpenter Build learned about the MevaDec system at a product demonstration and decided to use the system for the first time because of its speed, safety, quality and light weight. When it came to concreting the floor slabs, MevaDec impressed not only with its low weight, but also because it is not constrained by any fixed grid and can be flexibly adapted to any layout and slab thickness. The Carpenter Build workers used 160/80 cm panels, weighing only 16 kg/m<sup>2</sup>, while catering for virtually all requirements. The smooth surface of the alkus all-plastic facing allowed flawless surfaces to be cast. Effortless handling of the easy-to-clean MevaDec panels is further simplified by the ergonomic grip profile.



The system provides for panel installation from above and below while simultaneously accommodating three slab-forming methods: the panel method, the primary-and-secondary beam method, and the drop-head-beam-panel method. The latter is based on only three components: panels, primary beams and props with drop heads. Regardless of which formwork method is most suitable for the construction project, the same components are always used. The methods can also be easily combined. MevaDec can be flexibly adapted to any building layout and slab thickness. Minimised filler areas allow for quick and easy construction. Other time-saving features that have benefitted the contractor include the closed aluminium profile with a high-grade powder-coated finish and the alkus facings, which reduce concrete adhesion and facilitate cleaning.

The drop-head beam element method has paid off in Stockport. Drop heads mounted on props allow for early stripping. With just a few hammer blows, the beams and panels can be lowered by 19 cm and then stripped and used for the next pouring cycle. It is thus possible to complete a slab in three days. Carpenter Build has saved a lot of time and achieved faster construction progress with significantly lower material, storage space and transport requirements. Predefined distances for the construction props ensure safety and optimised material supply on the construction site. This saves up to 40% on props and gives the crew more freedom of movement under the formwork. The falsework and edge protection can be easily erected from below, which increases the working height safety. Once built, the integral wind uplift protection ensures minimal work is required to complete the deck.

#### Balconies secured with MEP

MEP shoring with H20 beams provides safe support during construction of the balcony areas on the Springmount Hill project. Here too, less is more. The small number of basic parts – props, extensions and frames – facilitates storage and logistics. MEP is a versatile system for supporting slab formwork (such as MevaDec), slab tables, beams and precast units for heights up to 21 m high with little labour required. Similar to the MevaDec drop head, a quick-lowering system takes the load off the prop with a single hammer blow.

#### AluStar masters every challenge

Fast working procedures are being achieved on this project by using only one formwork system for the erection of walls, cores and columns. Carpenter Build has relied on MEVA's AluStar formwork. Lightweight and easy to handle, this universal alu-

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Carl Drury, Civils & RC Frame Manager, Carpenter Build Ltd

minium hand-set formwork range is ideal for crane-free use, saving time and money. The convenient ergonomic grip makes AluStar panels easy to hold, transport, position and precision-assemble at the required location. Thanks to its universal applicability and straightforward handling, AluStar is an established and popular choice for residential and commercial developments, making light work of heavy tasks. On the walls, 3.30 m high panels are used to pour entire floor heights in one cycle. On the columns, 2.70 m high panels are used. MEVA designed column formwork for this with AluStar elements on all four sides.

In each building, three cores of different sizes had to be cast for lifts and staircases – one big and two smaller ones. In view of the small size, it was easier to use MEVA's telescopic shaft platforms with trailing platforms, thus eliminating the use of scaffold in the core and reducing the number of formwork crane lifts. This solution enabled the deployment of scaffolding in the core area to be avoided and the number of formwork crane lifts to be reduced. As the beams are telescopically adjustable, they can also be used on future Carpenter Build projects.

Shear walls were cast at the front of the parking levels for structural purposes. Glass panels will later be installed between the walls as a feature. Originally, conventional scaffolding was to be used for access for the external formwork. However, the folding working platform KAB from MEVA was deemed to provide significant advantages, as it is more effective than traditional scaffolding in terms of material and labour costs. The brackets

can support formwork and access loads and have proven themselves in the tight access area between the buildings front elevation and the site perimeter. KAB is also being used for similar works throughout the project.

#### **Exposed concrete surfaces**

As the wall surfaces of the parking levels are visible, the alkus all-plastic panels – fitted as standard in the MEVA formwork, i.e. also in MevaDec and AluStar – ensured uniformly high surface quality finish and fulfilled the highest architectural concrete requirements. The robust facing with its smooth surface and a 7-year warranty guarantees top-class concrete quality even after more than 1,000 uses over their long life cycle. The alkus face is flush with the panel frame, minimising the tram-lines seen in typical panel formwork.

#### **Robust and easy to clean**

Using the alkus all-plastic facing, the construction company has fulfilled the stringent requirements on the quality of the concrete with aplomb. The flatness tolerances of the walls have been easily complied with thanks to AluStar's closed, robust and torsionally rigid steel frame profile for fresh-concrete pressure loads of 60 kN/m<sup>2</sup>. During the numerous assembly and stripping cycles, the reduced concrete adhesion and the ease with which the alkus facing and the aluminium frames can be cleaned have paid off.

#### **Effective and efficient process ensured**

Elliot Booth, Commercial & Technical Director, Carpenter Build Ltd: "We approached our form-





work options with great care, ensuring that we not only had a great product to work with but a strong client support system. MEVA ticked those boxes for us. The MevaDec and AluStar lightweight panels are easy to handle and adaptable to a range of situations and environments as well as being very user friendly. It was important to us to choose a supplier that offered a holistic approach and provided services that would support us on site whilst using MEVA formwork. This was provided to us through technical drawing information, on-site support and training, which was key to the successful installation of the product. As well as working well with third parties, the structural engineer, Term Engineering and L7 Architects, MEVA have ensured an effective and efficient process throughout the job.”

Carl Drury, Civils & RC Frame Manager, Carpenter Build Ltd: “From start to finish the MEVA designers have made their objectives clear: ensuring safe working and creating easy-to-understand drawings out of complex design situations. This has complemented our working style well and guaranteed the best results on site. At every level of our site staffing structure the team have been pleased with the erecting and dismantling of the formwork, making light of complicated manoeuvres and adjustments as and when required. In particular, the AluStar panels have proven to be a real asset, lightweight and easy to position. The KAB system has given us a simple method for installing access around the external walls without the need to wait for scaffolding.”

**i**

## Project data

- **Project**
  - Springmount Mill Apartments, Stockport (UK)
- **Contractors**
  - Carpenter Build Ltd, Liverpool  
[www.carpenterbuild.co.uk](http://www.carpenterbuild.co.uk)
- **Engineering**
  - Term Engineering, Liverpool  
[www.term-engineering.com](http://www.term-engineering.com)
- **Owner**
  - Carpenter Investments, Liverpool
- **Architect**
  - L7 Architects, Liverpool  
[www.l7architects.co.uk](http://www.l7architects.co.uk)
- **MEVA systems**
  - MevaDec slab formwork
  - MEP shoring tower
  - AluStar wall formwork
  - KLK 230 climbing system
  - KAB working platform
- **Engineering and support**
  - MEVA Formwork Systems Ltd., Tamworth





## Time savings on 155,000 m<sup>2</sup>

Hospital construction accelerated with the help of MevaDec, MEP and MT 60

**In Tournai, Belgium, a modern hospital complex is being built: the extension of the Centre Hospitalier de Wallonie picarde (CHwapi). With MevaDec, MEP and MT 60 systems, 155,000 m<sup>2</sup> of slab area, distributed over ten storeys, are being concreted quickly.**

The project is under time pressure. Another challenge is the complex logistics on and next to the construction site on the busy Boulevard Lalaing, close to the center of the 70,000 inhabitants city. The responsible consortium of four construction companies (Galère, CIT Blaton, Dherte and Tradeco) relies on the MevaDec formwork system combined with the MEP and MT 60 shoring systems to construct the post-tensioned concrete slabs quickly and in the quality required. The work on site was also supported by Revit planning from MEVA Benelux.

With the efficient drop-head-beam-panel method, MevaDec beams and panels can be stripped ahead of time with just a few hammer blows. While the previously concreted slab, still secured by the props, finishes drying out, these components are already used in the next section. Significantly less material has to be delivered, stored and used on the construction site. Other efficient product advantages are the effort-saving, easy handling of the lightweight MevaDec panels and their fast cleaning due to low concrete adhesion.

The Site Unique ("one single site") expansion project was launched to meet the medical challenges in the Tournai-Mouscron arrondissement in the long term and to concentrate medical services in one location, linked by short routes. The new ten-storey building will offer 708 beds for inpatient treatment, plus 140 beds in the day clinic and 1,000 underground parking spaces.



### Cost certainty with RentalPlus

A total of 13,200 m<sup>2</sup> of MevaDec was rented for a period of 24 months. They agreed on the All-in Rental Plus package, which offers the customer maximum cost certainty from the very outset: Besides rental and logistics, all ancillary services, such as cleaning and repairs, are covered by this package. There are no additional costs that were not calculated in or debates about deviations from the delivered condition.

The first floor (22,000 m<sup>2</sup> area) was completed in early summer 2022, and since then the structure has rapidly gained height. The MEVA formwork center Benelux in Landen, Belgium, also supplied the MEP and MT 60 modular shoring systems. They can be optimally combined with each other and with MevaDec, providing safety and flexibility when working at height. Both shoring systems consist of only a few basic components and frame types. This allows easy handling, error-free assembly, transparent stock-keeping and lean logistics.

### MT 60: Integrated safety

For casting high slabs up to 10 m, MT 60 was used in Tournai. This shoring system can be assembled upright or lying on the ground without tools, bolts or pins and can be moved as a complete tower unit by crane or on castors. Integrated solutions such as safety access ladders in each tower segment, fall protection on all sides of working platform, access hatch and self-locking connections even during assembly ensure worker safety.

### MEP: Flexible for any geometry

For supporting beams and for slabs, also the MEP modular shoring tower showed its strength. Slab formwork, slab tables and beams up to 21 m high can be safely supported with MEP. The versatile system adapts flexibly to the building geometry and allows large free spaces. The frames are perfectly coordinated with MevaDec. MEP supports flexible shuttering and stripping from below. The SAS quick-lowering system takes load off the prop with only a few hammer blows. The complete shoring unit is simply moved by a lift truck. It couldn't be easier.

### Improved quality due to Mammut XT

In order to reliably achieve the required high concrete surface quality in the visible area of the new building, the contractor opted for Mammut XT heavy-duty wall formwork, suitable for 100 kN/m<sup>2</sup> fresh concrete pressure. With these panels, all expectations could be met to the customer's satisfaction.



**i**

## Project data

- **Project**
  - Hospital extension CHwapi, Tournai/Belgium
- **Contractor**
  - Société Momentanée Galère, CIT Blaton, Dherte, Tradeco
- **MEVA system**
  - MevaDec slab formwork
  - MEP shoring tower
  - MT 60 shoring tower
  - Mammut XT wall formwork
- **Engineering and support**
  - MEVA BeNeLux NV, Landen/Belgium





## MonoFix convinces right away

Construction of 1,000 housing units in the Philippines in only two years

**MEVA's new MonoFix formwork system proved its worth in its first application in the Philippines. The Maresca Home project involved the construction of 1,000 semi-detached houses at two sites. Rotaflex Construction & Development Corp. carried out the work.**

The government of the Philippines has big plans for the construction of a total of 7 million new housing units by 2030. The National Housing Authority (NHA), the government agency for public housing, is mandating the construction of the buildings. The houses will provide affordable living space for socially disadvantaged people in safe, secure and

well-planned communities. Here, fast and cost-oriented construction is required, with a high density of housing units and a design that is repeated many times. These are ideal conditions for the efficient

use of the monolithic handset formwork system MonoFix, as it is suitable for the cost-effective implementation of large-scale housing projects due to its simple, fast and flexible assembly to any building layout. An investment in this formwork pays for itself in a short time.

The Island Garden City of Samal, a city of 100,000 inhabitants in the south of the archipelago, consists of nine small islands. On one of them, which can be reached by a 30-minute ferry ride, a total of 500 duplexes were to be built on 17 hectares of land in just 720 days. The buildings have two duplex floors, light and friendly on a compact area. The ground and upper floors of each residential unit with kitchen-dining room, living area, sanitary room and two bedrooms have 40 m<sup>2</sup> of living space each. The new district offers a good infrastructure with a sports centre, shopping, leisure facilities and 24-hour security.

### **Supported by Revit 3-D planning**

Construction was monolithic with the MonoFix formwork system. The work was significantly supported by Revit 3-D planning from MEVA Philippines. Initially, standard formwork was used, but due to time pressure, Rotaflex Construction & Development Corp. switched to monolithic concreting at







short notice. The contractor purchased six complete sets of the formwork, which consists of aluminium panels and can be easily adapted to all residential projects. Walls, slabs, balconies, columns, beams as well as staircases connected to the side walls are rapidly concreted in one cycle. Windows, doors and decorative elements are integrated.

The panels of the crane-independent system weigh only 22 kg/m<sup>2</sup>. They are simply assembled with a wedge-and-pin system to connect the panels. The robust formwork enables fast concreting operations with a maximum fresh-concrete pressure of 60 kN/m<sup>2</sup>. The components are impervious to moisture, robust against fungal decay, easily cleaned with high-pressure water and, after a long lifespan, fully recyclable.

The panels, 120, 245 and 300 cm high, have five widths from 30 to 60 cm and can be applied horizontally as well as vertically. The hand-set system is completed with inner and outer corners, wall end panels, slab connector, end beam, middle beam, rocker, beam slab connector and prop head.



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### Project data

- **Project**
  - Maresca Home, Samal/Philippines
- **Contractor**
  - Rotaflex Construction & Development Corp., Quezon/PHL
- **MEVA system**
  - MonoFix wall formwork
- **Engineering and support**
  - MEVA Philippines Inc., Quezon/PHL

## Interview with project manager

# “MonoFix has helped us a lot”

Ric Pierre Torno, Rotaflex Construction & Development Corp.



**Ric Pierre Torno, an engineer with Rotaflex Construction & Development Corp, is Maresca Home project manager in the Island Garden City of Samal. He shares his construction team's experience with MonoFix and the MEVA service.**

### **Why did you choose MonoFix for your project?**

We found that this monolithic system could be used continuously, simplifying our work and, above all, reducing the construction time. Initially, we had worked conventionally and lost a lot of time. But with MonoFix, we construct the formwork for the entire building structure with walls, stairs and slabs and then pour the concrete completely. In this way, we were able to shorten the time for the shell of a building by at least two to three weeks.

### **How long did it take with conventional construction method?**

It took us a long period of time – almost two months.

### **What were the challenges on this construction site?**

The biggest problem was the location on an island. That made it difficult to procure materials. That's another reason why MonoFix helped us a lot, because it uses very little material and minimises the effort. We can use the formwork quickly and many times. Conventional material, on the other hand, would have to be considered in large quantities.

### **How long did it take for your employees to get used to the system?**

At the start, we had about six weeks for them to get familiarised with MonoFix. Apart from minor details, it is easier to handle than conventional systems. This also means less training effort. With a little practice, we were able to finish a first floor in two weeks, including concreting.

### **Did MonoFix improve your productivity and efficiency?**

Yes, MonoFix has really helped us a lot in making our work faster. With trained workers, we were able to complete 30 to 40 duplexes in just two months.





**Has the formwork fulfilled your expectations?**

The only difficulty at first was coping with the individual parts and not losing anything. But with the help of drawings and staff training, our staff became familiar with the system.

**How would you rate this system overall?**

I have never seen a system or product that is absolutely perfect. However, MonoFix is the best system I have used. Above all, it is easy to handle.

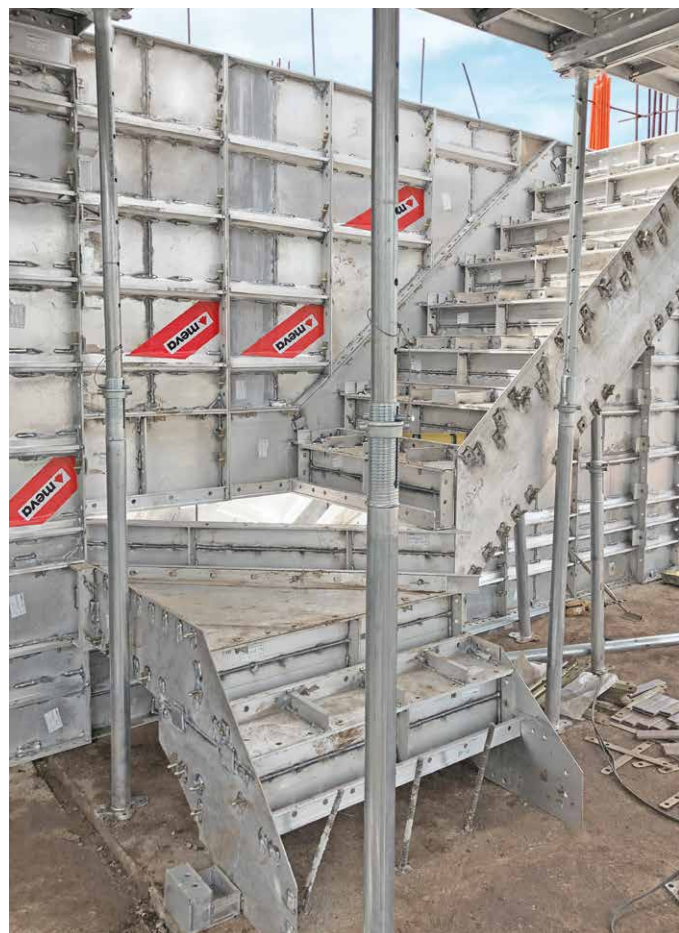
**What do you think about the MEVA services for training and delivery?**

The MEVA team has been the only one in my 22 years of professional experience that has done follow-up, follow-through on the training, and the visiting. Others who have been my partners only show up when collecting payment or there is a problem. Even when I didn't request anything, I received important and useful information and detailed reports. This is the first time I have experienced it this way.

**Would you recommend MonoFix to others?**

Yes, of course! MonoFix is really good and can help contractors significantly reduce their construction time.

Thank you for the interview, Mr. Torno.



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on the spot wherever you need us.

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