References

Civil Engineering
Leading the way in concrete standards
MEVA has been instrumental in redefining the European DIN 18218 Standard for concrete pressure to take account of new concrete mixtures such as self-compacting and flowable concrete. A new procedure to determine how concrete pressure will develop during each pour is based on MEVA know-how and will be part of the new standard.

Replacing the knead-bag test:
Measuring device SolidCheck calculates concrete setting time
When has the concrete set? When can the formwork be stripped? These questions, up to now, had to be answered literally by rule of thumb using a knead-bag and pushing a thumb into the concrete. This uncertain technique is now redundant, replaced by a computer-aided ultrasonic measuring technology that ascertains the exact setting time as required for instance by the German standard DIN 18218. This allows the site to safely and fully utilise the formwork’s load capacity.

MEVA Formwork Systems is once again enhancing its portfolio of expertise and know-how by offering this technology to the contractor community. In addition calculation tools for fresh concrete pressure are available online. Go to www.meva-international.com to download them.

Benefit also from the mobile app.
More than just Formwork

Know-how for your building success
From the beginning, it has been MEVA’s philosophy to offer added value in the form of know-how and expertise – beyond supplying high-quality formwork. This far-reaching promise has been redeemed impressively for many years.

Leaders in the field
Committee and industry standards work has a high priority because it is essential to further expertise in concrete works. This is where quality and safety standards are defined and implemented. The German quality control association (GSV) nominated MEVA to chair the technology committee; MEVA is part of the influential, internationally active American Concrete Institute and its formwork committee and we’re a member of the ASCC (American Society of Concrete Contractors) to name only a few.

MEVA is acclaimed as an innovative leader in the formwork industry, underlined by several awards, distinctions and commendations for quality and service.
Cost Efficiency, Safety, Quality

Civil engineering construction: A welcome challenge
Being special makes them special. Their size or span, their height or volume: Large industrial facilities, bridges, tunnels, reservoirs, waterworks or power plants are a challenge to the formwork engineer. Without their inventiveness and the endeavour to make possible what seemed impossible, many a structure would not have been poured or differently so. As in other cases too, it is the search for the technically feasible, economically viable and practically sensible solution that makes the difference.

Based on MEVA’s comprehensive product range for civil engineering construction, the best solution for your project will be found. We are at your side to develop clever answers and support you in all formwork challenges.
Contractor Benefit through Expertise

Know-how and services
- Engineering services
- Formwork design and application
- Support in structural planning
- Special and customised designs
- Calculation of fresh concrete pressure and pour rates
- Support in optimising work flow and pour cycles

On-site support
- Assembly service and support
- Supervision and training of forming teams
- Support in supervising work flow
- Project engineers on site
- Support during critical concrete pours

Project management

Customised designs

On-site support
Leading the Way

High performance formwork
MEVA’s product and technology portfolio has a dominant position in civil engineering construction. The world’s largest panelised wall formwork system Mammut 350 with the highest concrete load capacity of 100 kN/m² stands for high-end construction performance. The STB 450 is the only support frame whose extensions come on top and require no dismantling. It allows pours up to and beyond 12 m and being only 4.50 m deep at the base fits on a truck, no special haulage needed. The 100 % wood-free, all-plastic facing handles hundreds of tough pours and high demands on concrete finish. Or take the shoring tower Space with which hundreds of very high columns have been formed at exceptional speed. Or the working scaffold KLK 230, trusted for its robustness, safety and comfortable work on the 2.30 m wide platform. And the shoring system MEP guarantees maximum worker safety thanks to its easy assembly and optimum flexibility at different heights and varying loads.

1 Mammut 350: heavy-duty wall formwork
2 Shoring tower Space
3 Shoring System MEP
4 Special formwork carriages
5 Special forms
6 Climbing Scaffold KLK 230
7 Support Frame STB: single-sided forming over 12 m
The patented all-plastic facing sheet is made of polypropylene (1 and 3), reinforced by an aluminium foil (2). The facing is resistant to UV rays, shrinking, swelling, rotting, building chemicals or fungal decay. It remains stable in any climate or temperature.

**The All-Plastic Facing for Unlimited Cycles**

**The all-plastic facing puts an end to plywood waste in formwork**
The introduction of the world’s first 100% wood-free facing started a new age in formwork. Replacing worn-out plywood sheets is now a thing of the past. No more waste. Get your job done without interruptions. No more unnecessary freight costs, no down-times and no hassles in work flow. No more chemical coatings that make disposal dangerous and expensive. Less waste means fewer CO2 emissions. Besides offering better quality, the all-plastic innovation saves time and money.

**Your advantages**
- No swelling and shrinking
- Nailable like plywood
- No re-facing – no hidden costs
- Easy and quick to clean
- Repairable using the same material
- Better concrete finish
A superior concrete finish, architectural standards for high demands, constant results from the first pour to the last, stability in very high, fast pours: The all-plastic facing alkus has achieved a prominent position in engineering construction. Easy cleaning with a high pressure washer or rotation cleaner contributes to a high-quality pour result even in tough on-site conditions.
Moorburg Power Plant, Hamburg, Germany

Complete formwork solution with planning and logistics plus work flow support.

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| Germany’s largest coal power plant project Moorburg in Hamburg. | - Wall formwork Mammut 350  
- Shoring tower MEP | Wayss & Freytag Ingenieurbau AG |
Hydropower Plant Linthal 2015, Switzerland

Crammed alpine site conditions, logistics, exceptional concrete pressure, work flow.

Project
Switzerland’s largest hydropower plant with underground pumped-storage power plant including inlet and outlet gallery in the Alps.

MEVA Systems
- Wall formwork Mammut 350
- Support frame STB 450
- Climbing scaffold KJK 230
- Working scaffold KAB 190

Consortium
- Marti AG
- Kraftwerk Linth-Limmern AG
- Axpo AG

Formwork engineering
MEVA Schalungs-Systeme, Seon
**Lauenburg Watergate, Germany**

**Project**
Construction of a new reinforced concrete watergate to replace the old facilities in Lauenburg on the Elbe-Luebeck canal. Work during normal watergate operation.

**MEVA Systems**
- Wall formwork Mammut
- All-plastic facing alkus
- Support frame STB 450

**Consortium**
- Hochtief Construction AG
- Moelders Baugesellschaft mbH
- Bauer Spezialtiefbau GmbH

**Formwork engineering**
MEVA Schalungs-Systeme, Haiterbach

Flowable concrete, 10 m high single-sided pours with very high concrete pressure.
Deurganckdok, Antwerp, Belgium

Project
Construction of a new 1,360 m quay wall, 29.70 m high for the Deurganckdok (tidal dock) in Antwerp’s container harbour, with no ties and no joints, applying a unique pilgrim step method.
- Foundation base 24 m wide, 6 m high
- 23.70 m high, 1,360 m long quay wall
- 17.15 m hohe ankerlose Wand

MEVA Solution
- Wall formwork Mammut with its load capacity of 97 kN/m² and all-plastic facing alkus
- Special construction: mobile gantry crane

Consortium
- Cordeel & Aertssen
- MBG
- CFG
- van Laere
- Dredging International

Formwork engineering
MEVA Schalungs-Systeme, Haiterbach, Germany

Gantry crane reduced labour costs by 75 % from 0.8 h/m² to 0.2 h/m².
Dam and Tunnel, St. Petersburg, Russia

Project
25.4 km flood dam in the Gulf of Finland outside St. Petersburg. Construction of 2 locks and a 1.2 km tunnel to the locks. 52,500 sq.m with reinforced concrete. Walls up to 1.30 m high and 7.55 m thick.

MEVA System
Wall formwork Mammut

Formwork engineering
ZAO MosMeva, St. Petersburg

Formwork planning and logistics, high concrete pressure, work flow.
**Project**
Complete renovation of the dam for the drinking water reservoir Klingenberg near Dresden. Special climbing solution allowing up to 4 jobs to be done simultaneously.

**MEVA Systems**
- Special formwork frames
- Climbing scaffold KLK 230
- All-plastic facing alkus
- Support frame STB 450

**Contractor**
Ed. Zueblin AG

**Formwork engineering**
MEVA Schalungs-Systeme, Haiterbach
Bjorvika/Sorenga, Oslo, Norway

Project
The largest traffic infrastructure project in Norway’s history. In a tunnel under Oslo’s city center and harbour, the new European road E18 will connect the western and eastern part of the Oslo bay and thus alleviate the traffic congestion on Oslo’s roads.

MEVA Systems
- Special formwork design with support frame
  - STB 450 extended to 7.50 m
- Wall formwork Mammut 350
- Wall formwork StarTec

Formwork engineering
Teknikk AS, Vøyenenga

Complete formwork tunnel engineering, single-sided solutions in cramped conditions.
Project
Construction of a road and railway tunnel under the Mittellandkanal canal as a rectangular reinforced concrete frame, 15 m wide and 39 m long.

MEVA Systems
- Wall formwork Mammut
- Wall formwork StarTec
- Girder formwork MevaFlex
- Shoring tower MEP

Contractors
Arge H. F. Wiebe GmbH & Co KG, Achim, and Heinrich Hecker GmbH & Co KG, Bremen
TGV Rail Link, Mulhouse, France

Complex project with tunnel, bridges and 25 ton load transfer per running meter.

Project
Inner-city rail link with aboveground tunnel and bridges over the Rhine-Rhone canal. Mobile formwork units saved 15 working days.

Client
French Railway SNCF, Paris

Contractor
Maia Sonnier S.A., Lyons, France

MEVA Systems
- Wall formwork Mammut 350
- Hand formwork EcoAs
- Climbing platform KAB 190
- Support frame STB 450
- Shoring tower MEP
- MEP heavy duty props
- H20 beams

Formwork engineering
MEVA Systèmes de Coffrage, Alsace
**Project**  
Construction of the new Henndorf tunnel including ventilation shaft, near Salzburg.

**MEVA Solution**  
Special formwork design with support frame STB 450 and shoring tower MEP

**Contractors**  
- Wayss & Freytag Ingenieurbau AG  
- Held und Francke Baugesellschaft mbH

**Formwork engineering**  
MEVA Schalungs-Systeme, Pfaffstaetten
**Project**
Construction of a parallel bridge over the Dultenaugraben valley along the motorway A 98 in south-western Germany

**MEVA Systems**
- Climbing platform KLK 230
- Wall formwork Mammut
- Mammut frames with special facing

**Contractor**
Porr Deutschland GmbH

**Formwork engineering**
MEVA Schalungs-Systeme, Munich
M6 Motorway Bridge, Budapest, Hungary

Cost-effective forming solution, quick, safe climbing, superior concrete finish.

Project
New construction of a bridge for the M6 motorway around Budapest.

MEVA Systems
- Climbing platform KLK 230
- Circular column formwork Circo

Contractor
P.A.M. Invest Kft.

Formwork engineering
MEVA Zsalurendszerek, Budapest
Project
Infrastructure project on Saadiyat island, 500 m offshore from Abu Dhabi, with water treatment plants, pumping stations, biological treatment facilities etc.

MEVA Systems
- 3,500 m² wall formwork Mammut 350 for walls up to 9 m high and 80 cm thick
- 6.60 m high columns poured using the column formwork CaroFalt

Contractors
- Kharafi National LLC
- Civiltech General Contracting Co. LLC
- Fourth Dimension General Contracting

Formwork engineering
MEVA KHK, Dubai
Mammut 350, KLK
Infrastructure

National Enrichment Facility, Eunice, New Mexico, USA

Planning and logistics for 16,000 m² of formwork and 700 KLK climbing scaffolds.

Project
Uranium enrichment facility in Eunice, New Mexico

MEVA Systems
- 12,000 m² wall formwork Imperial (US version of Mammut 350)
- 4,000 m² wall formwork MevaLite (US twin to the AluFix system)
- More than 700 climbing scaffolds KLK 230 with slide carriage

Project management
Washington Group

Contractor
Rust Contractors

Formwork engineering
MEVA Formwork Systems, Springfield, OH
Tunnel for Connecting Canal, Senftenberg, Germany

Project
Tunnel for a canal that connects Lake Senftenberg to Lake Geierswalder in the Lausitz region, eastern Germany.

MEVA Systems
- Wall formwork 350 with all-plastic facing alkus
- Push-pull props SRL
- Slab forming carriage table with MEP
- H20 beams
- Mobile table forms

Contractor
Ed. Zueblin AG, Dresden
Bradford College, Great Britain

Project
Building site on the campus of Bradford College

MEVA Systems
- Wall formwork Mammut 350 with all-plastic facing alkus
- Climbing platform KLK 230

Contractor
GRKC LLP, Bradford

Formwork engineering
MEVA Formwork Systems, Tamworth
MEVA in Haiterbach in the Black Forest, Germany. It is the home of the MEVA group of companies with its 40 locations in around 30 countries and 10 logistics centers all over the world. The headquarters are also home to research and development, engineering, production, rental logistics, detailing and sales. Cost-effective, lean logistics, transparent work flow, cost-saving rental concepts, technical support for better concrete results: Client benefit is in focus, everywhere. All the time. All over the world.
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