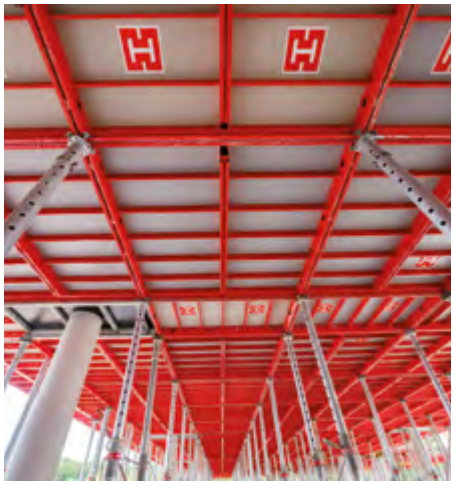
OUR PRODUCT RANGE

At Work For You







HÜNNEBECK
BY BRANDSAFWAY

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At Work For You

HÜNNEBECK
BY BRAND SAFWAY

Formwork in top form

Project: Construction of a 17-storey office and administration building for Debeka. The highlight is the cantilevered reception hall (25 m high).

Location: Koblenz

Customer: Adolf Lupp GmbH + Co KG

Hünnebeck systems: TOPMAX, TOPEC, ST 60, load-bearing frame props, MANTO, RASTO, PROTECO, EPS safety net

Sector: Commercial construction

We help you get the job done

Formwork, scaffolding and safety technology – that's where our expertise lies. At Hünnebeck, we develop excellent products and solutions for your construction projects. And thus ensure efficiency and safety on the construction site.

Hünnebeck can offer you a complete spectrum of building and construction products and services. You can purchase or rent systems and special formwork for

- Residential buildings and high-rise constructions.
- Industrial and commercial buildings.
- Infrastructure projects such as bridges, tunnels, airports, dams, and power plants.

Our service already starts with the tender. In this phase, we support you with cost and schedule calculations, for example. We then add technical planning, logistics and site support through our formwork foremen. We can even take over complete projects. And, finally, we hold regular seminars and courses compiled to meet the individual needs of our customers.

Something we emphasise in particular: our solutions are always practical in that they make construction work quicker and less costly by boosting productivity and fine-tuning workflows. We're always close to you and your specific needs and we work closely and constructively with all those involved in a project.

Safety is of the utmost importance for us. Professional health & safety coordinators are there to advise you and our proven safety management system includes reviews, audits, and web-based trainings.

Hünnebeck is one of the leading international manufacturers of formwork, scaffolding and safety technology. We have been developing customised solutions for the construction industry since 1929. We belong to the BrandSafway group, a leading supplier of specialised services for the global energy, industrial and infrastructure markets whose more than 38,000 employees generate annual sales of USD 5 billion. As a customer, you benefit from the expertise of BrandSafway with its over 340 branches worldwide.

“... our solutions are always practical in that they make construction work quicker and less costly ...”

People. Doers. And experts.

We assist you in achieving your goals with our highly functional products. This is the way we operate: as people, doers, and experts.

People
At Hünnebeck, construction is something we all take personally. Here at the site we are all members of a team, working hand in hand and having to fully rely on each other. Each of our team members accepts full responsibility: for costing or structural analysis, for making sure that all the materials arrive on time, for on-site safety. We maintain a continuous dialogue with our customers and are always there to listen to your needs and requirements.

Doers
Construction is getting things done. For a building to rise, all the trades must closely coordinate and intermesh. Hold-ups may mean a failure to comply with deadlines and such failures are costly. We plan all the phases of a project in advance and as precisely as possible. We deal with any unexpected challenges by developing creative solutions. Our comprehensive range of products is a match for all conceivable complexities. Drawing on their vast experience, our site employees will always find the industry's best-possible solution for you.

Experts
Construction requires expertise. The constraints of time and costs are growing tighter, and the demands on a building are getting more sophisticated. Construction technologies are of growing complexity and building regulations are becoming tougher. Our experts devote considerable time and care to meticulous planning: from situation appraisal to devising a formwork strategy. Building on this, we supply you with efficient, state-of-the-art products and solutions. Even now our innovators are working on products for tomorrow's construction world.

"We apply all our efforts, resources and skills to turn your visions into reality."

Our safety promise

Safety comes first, always
At BrandSafway, and at Hünnebeck, being a part of it, environmental health and safety (EHS) is our foremost value. It's a basic right that we owe to our employees, customers and everyone we interact with. We strive to set a standard in our industry by continuously improving our safety performance.

Our leadership team believes ALL accidents can be prevented and every one of our employees is responsible for EHS – not only for themselves, but also for co-workers, customers and contractors on every one of our jobsites.

Our safety values
We are committed to developing a culture where environment, health and safety are core values, adopted and practiced throughout all levels of the organisation. Our commitment to EHS starts with our executive leadership team and cascades throughout our organisation to include our entire network of companies, branches, locations and jobsites. With these core values as the focus of our industry-leading safety culture and our award-winning safety record, we are more than a company with a great safety program; we are a safe company.

When it comes to occupational safety, our customers benefit significantly from the international BrandSafway network. Thanks to our presence in more than 30 countries worldwide, we know the requirements in the markets and incorporate the most diverse standards into our product development.

In this way, we strengthen the understanding of safety wherever we are active and help to minimise risks on the construction site.

Zero accidents on the construction site
We are continuously expanding and optimising our product range according to this principle.

We are convinced that safety and profitability go hand in hand. The easier a system is to operate, the safer it is and the more efficient the processes are on the construction site. Systems that are ergonomic to handle, intuitive to use, safety features integrated into the system – all these contribute to you being able to work safely.

Systems for increased safety
For example, we provide safe options for working at great heights. In this regard, our innovative SAFESCREEN® system not only provides a safe working environment over several floors including fall protection – it also protects the teams from wind and weather.

Reliable protection at the edge of the building is provided by Hünnebeck EPS, a side protection system that can be installed without tools and flexibly extended. It offers options from standard side protection to complete enclosure. This way you are protected from falls at all times.

In terms of ergonomics, the ST 60 support tower, convinces with particularly light components that relieve the body when lifting and carrying.

“Environmental health and safety is our foremost value.”

Efficient formwork solution, optimal materials deployment, spectacular views!

Project: Apartment buildings "The Wave" – 3 ten-storey buildings and extensive leisure complex

Location: Międzyzdroje, Poland

Building contractor: Greenhouse Development

Hünnebeck systems: RASTO, MANTO, RONDA, TOPEC, TOPFLEX, PROTECTO

Sector: Commercial construction

Global competence

We believe that our shared knowledge is our greatest asset. It offers in-built advantages to customers around the world in terms of safety, productivity and innovation – all of which can make a critical difference to the success of your project.

To complement the support you receive from local experts, we have developed specialised project application teams offering engineering support for unique and complex projects. We call these Global Engineering Centres, or GECs for short.

Based in Canada, Germany and Italy, the GECs are innovation-led teams focused on offering an industry-leading solution in our specialised fields. The teams' advanced design tools, innovative thinking and customer-focused attitude are deployed on major projects all over the world.

Expert Global services

Our Global teams bring a wealth of knowledge and experience working in difficult terrain, in live transport environments and under tight time and operational constraints. You as a customer will benefit from Hünnebeck's worldwide experience in finding practical and intelligent solutions, applied locally to your project.

- Dedicated sales support for technical projects
- Basic understanding of Global codes, local skills & language barriers
- Skilled site supervisors available offering support for assembly & use, anywhere in the world
- Successful partnerships with manufacturers for time-effective bespoke solutions

“Unique combination of expertise & resources.”

Project management

Project management is a key ingredient of our service program. With all our experience and expertise, we at Hünnebeck make sure that your costs are kept under control, especially when planning on-site materials, transfer times, and pouring cycles. An important element in this respect is our “4-phase strategy”.

Phase #1
We analyse the situation.

Definition and analysis of all the relevant data, assumptions and circumstances of the customer. This includes specification of services, scheduling, hours of work daily/weekly, setting times needed for the slabs and walls, as well as site safety, quality of the concrete faces, protective scaffolding, shoring, etc.

Phase #2
We develop the technical drawings and calculate the costs.

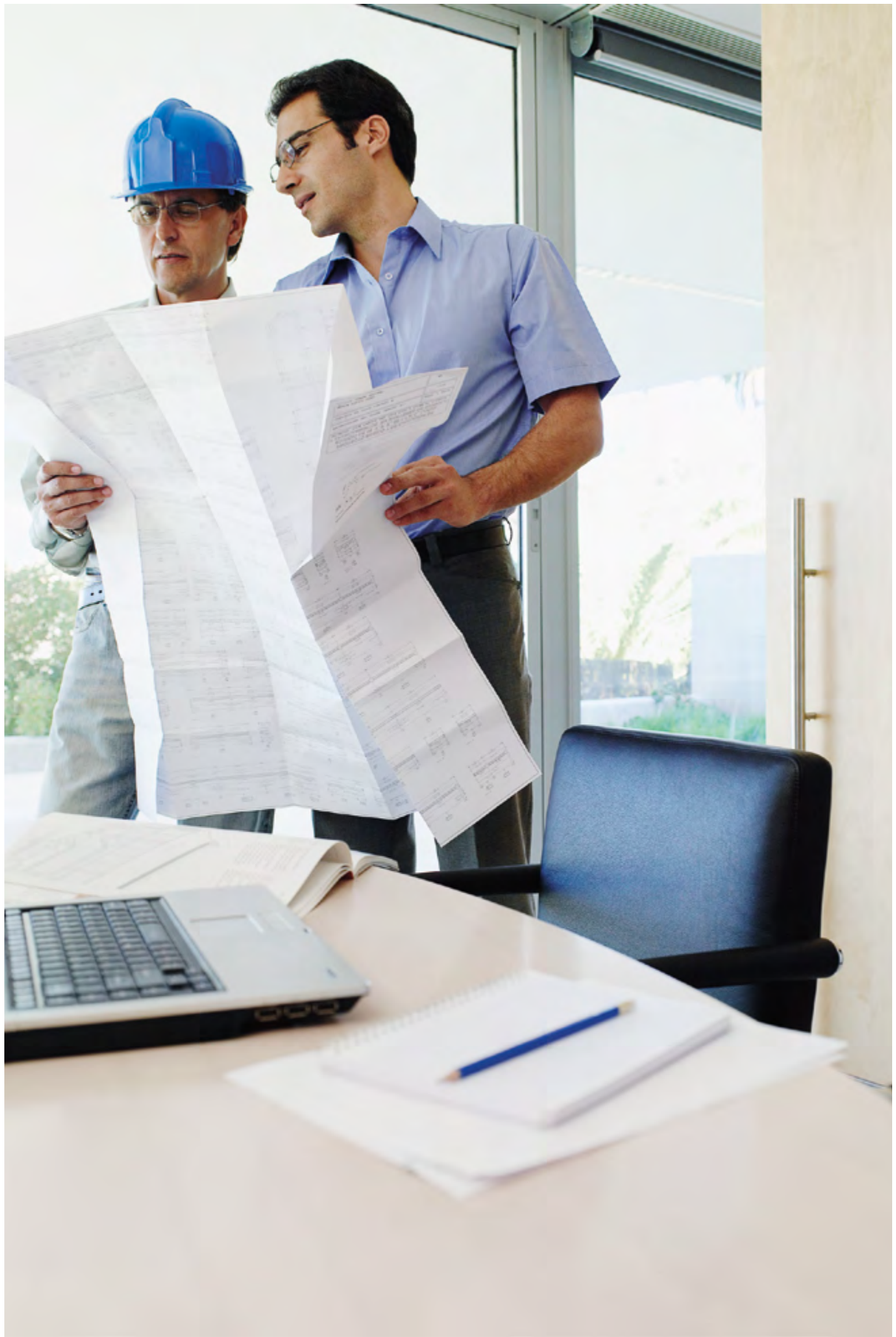
All the details concerning the system and the execution are defined in order to determine the costs. The following are then worked out on this basis: system choice, construction work progress and pouring sequences, on-site quantities, on-site workers (teams and numbers), rough timetable, materials used and worker deployment sketches, costing of specified services including a technical description of each item.

Phase #3
We plan and implement the realisation.

Depending on what the customer decides, the deployment of the materials and equipment is then scheduled. This phase includes planning the technical details, formwork layout with bills of materials, static load computations, detailed formwork allocation, scheduling, and availability.

Phase #4
We assist with project finalisation.

Delivery of all the equipment according to plans, materials deployment to match site conditions, weekly forward planning, comparison of actual and scheduled milestones, detecting any delays and their reasons, recommendations for corrective measures, attending site meetings (as required), coordination input to take some of the work off the site supervisor.



Technical design

Construction is first and foremost a matter of trust: from the first contact through to the handover, the jobsite members must be confident they can rely on each other. Reliability and compliance with schedules are on a par with top-calibre work and cost compliance. With Hünnebeck, you have a strong partner at your side.

Our engineers apply their ingenuity and specialist expertise, along with the latest software technologies to design solutions that both solve/pre-empt problems and save money for you.

Design on your behalf
We can design the most complex projects on your behalf quickly and thoroughly. Starting with the ground plan and facade dimensions, we produce the required structural drawings, determine the precise quantities of materials and supply all the required quantity lists.

We help in finding the right safety and access solution. Transparency, flexibility, cost-effectiveness and safety are a matter of course for us and an integral part of our corporate philosophy.

Whatever it takes!
We assist you throughout complex construction projects including the engineering of one-off structures. Our mission at all times is to protect you from any unnecessary risks and help you arrive at the best-possible results in every respect.

“With us you’re in the best of hands!”

On-site assistance

Our professionals are there where you need them. They can join you in planning, reviewing and organising – either physically on your construction site, or from one of our branches or central locations. They are highly familiar with our systems and your sites. And they can also draw on the expertise accumulated by a global player.

On-site instructions

An important condition for work to progress smoothly on the construction site is thorough and expert familiarisation with the materials and equipment. Only with such familiarity can they be used to the best advantage. Instructions and site supervision by one of our foremen reduces the time necessary for such familiarisation. He makes sure that the site crew is quickly able to handle the systems entrusted to its members. Readily understandable instructions for erection and use accompanied by other technical documentation also make handling easier.

On-site assistance

When it comes to assisting with work in progress you can draw on our Hünnebeck expertise. From our numerous teams of technicians, planning engineers and costing accountants we can have crews at your site throughout the construction period. The ultimate objective: close adherence to defined schedules, improved productivity and hence lower costs. Included among our services are regular site visits, attendance at site meetings, materials scheduling to match site conditions, weekly advance planning, comparing planned/actual progress, analysing and remedying any delays, and providing forming coordinators. Additionally, we offer state-of-the-art solutions for site safety and access.

“Personal and professional.”

Logistics, cleaning and repair

Functioning logistics are indispensable for smooth construction site operations. Hünnebeck organises the professional transport of material to the construction site as well as the return transport. We also offer professional cleaning and repair of the formwork.

Our central warehouses have the ordered system on hand ready to be loaded and dispatched. Our contracted forwarding agents ensure dependable shipments and on-time deliveries worldwide.

Just in time

Keeping pace with the progress of the construction works, our logistics specialists make sure that needed materials are there on site in the specific quality and quantity and at just the right time. They are backed by a network of fully stocked warehouses which you can count on when sudden needs arise.

Personal and quick

In organising our deliveries we at Hünnebeck, of course, take into account your requirements and the situation at the site. Where space is cramped, we can send you a trailer-mounted crane along with the materials. We keep haulage costs as low as possible, one advantage in this respect being our closely meshed network of depots that ensures short distances to you and your sites.

Professional cleaning and repair service

Regular cleaning and maintenance makes sure the formwork can last longer and function cost efficiently. Repair and cleaning are chores we will gladly take over for the parts you have rented or for the material you own.

Saving your own resources

To conserve your own resources, our cleaning and repair service is the perfect solution. You save working space and rental time, you prevent interruptions and disruptions to your workflow, and you can deploy your own workforce more efficiently elsewhere.

From a single source

Our cleaners and repairers use the latest equipment for perfect, eco-friendly cleaning. Where necessary, parts are repaired, re-welded, or replaced by original ones.
We will also replace wooden or plastic form sheets; we will clean props, scaffolding, and small items.

“Smooth workflows for maximum efficiency.”

Challenging bridge project with perfect support from H 20 fair-faced concrete formwork

Project: New construction of the 1.3 km long and 16 m high Neckar valley bridge near Heilbronn with pier heads in fair-faced concrete quality

Location: Heilbronn

Customer: BauArge consisting of HOCHTIEF Infrastructure and JOHANN BUNTE KG

Hünnebeck systems: MANTO, ES 24, H20, GASS, alignment struts

Sector: Infrastructure construction

Our solutions for high-rise construction

High-rise construction is booming in many metropolises. In most cases, these buildings are constructed in densely built-up areas that place high demands on construction site operations. There is little storage space available, logistics are complicated and space for additional crane capacity is limited.

Hünnebeck is a full-service provider for high-rise construction. Our product and service range includes an extensive range of formwork, shoring, self-climbing formwork and self-climbing safety systems. All our products and services are designed to support safe, efficient and time-saving processes on the construction site.

With Hünnebeck at your side, you have comprehensive high-rise expertise at your disposal. It starts with teams of specialists from different areas of expertise, which we put together for you on a site-specific basis, and includes a versatile range of crane-set and crane-independent formwork, support and safety systems. Last but not least, this includes our special formwork construction, which develops extremely efficient, individual formwork solutions for complex geometries.

Our services start even before the bidding phase with a project and site analysis. On this basis, our project engineers develop a customised formwork and safety concept for your project. They provide the technical planning for construction work and pouring cycles as well as a reliable cost calculation. Our site supervision is then responsible for formwork layout plans and scheduling as well as return services. Comprehensive instruction and on-site consultation go without saying.

Our high-performance products for high-rise construction

CS 240 L	Climbing formwork	Page 166
SCF	Climbing formwork	Page 170
SAFESCREEN®	Safety	Page 160
PLATINUM	Wall formwork	Page 34
MANTO®	Wall formwork	Page 38
RASTO®	Wall formwork	Page 46
H 20	Wall formwork	Page 66
TOPMAX®	Slab formwork	Page 84
TOPEC®	Slab formwork	Page 88
ST 60	Shoring	Page 130
GASS®	Shoring	Page 134

Our solutions for infrastructure construction

The demand for new construction and renovation of infrastructure works is enormous. We accompany your projects with solutions that save time and money and meet the highest safety requirements.

In recent years, we have continuously expanded our range of innovative solutions for infrastructure construction. With us at your side, you are ideally positioned to meet these challenges!

Our team of infrastructure specialists is available for you throughout Europe and supports you from the bidding phase onwards with customised solutions for your infrastructure project. With our highly variable and flexible girder, formwork and climbing systems, bridges and tunnels can be concreted efficiently.

Thanks to the large load capacity, the modular INFRA-KIT H system makes it possible to easily realise even wide-span passageways and high load-bearing structures. INFRA-KIT L and M are used, for example, for the erection of trusses and transfer light and medium loads from a wide range of formwork or building geometries.

QuikDeck, the suspended factory, was developed especially for renovation work on bridges, railway stations or airport buildings, for example. The powerful, innovative access system enables safe and efficient work at great heights.

Beyond the design and technical planning of your infrastructure project, we also take on tasks such as pre-assembly, site supervision and logistics services.

Our high-performance products for infrastructure construction

INFRA-KIT	Infrastructure construction	Page 104
QuikDeck®	Infrastructure construction	Page 112
Load-bearing frame prop	Infrastructure construction	Page 116
MANTO®	Wall formwork	Page 38
H 20	Wall formwork	Page 66
SCF	Climbing formwork	Page 170
CS 240	Climbing formwork	Page 166
ID 15*new*	Shoring	Page 126

Digital construction

Building 4.0 – the construction industry can benefit from digitisation in every respect: It accelerates processes, making them more transparent and efficient.

They also simplify communication between the partners involved and support planning and design decisions with the help of virtualisation. At Hünnebeck, we also rely on digitisation as a means for greater efficiency and cost-effectiveness.

One example is Building Information Modelling (BIM). Here we offer:

- Efficient 3D product planning in HCAD
- Accompanying project management for the highest possible calculation and planning security
- Trimble Tekla Structure® 3D library including product catalogue
- Autodesk Revit® 3D library including product catalogue

Another example is our customer portal: www.myhuennebeck.com. There, our customers can get an up-to-date overview of all relevant data of the project they are realising together with us at any time.

Financial data (e.g. invoices) and material data (material on site and rental file cards) are stored in the portal. Projects that have already been completed can be viewed in the individual project archive. Technical documents and engineering drawings are also available for download here.

“Our BIM applications already enable more efficient processes.”

HÜNNEBECK

BY BRAND SAFWAY

WALL FORMWORK

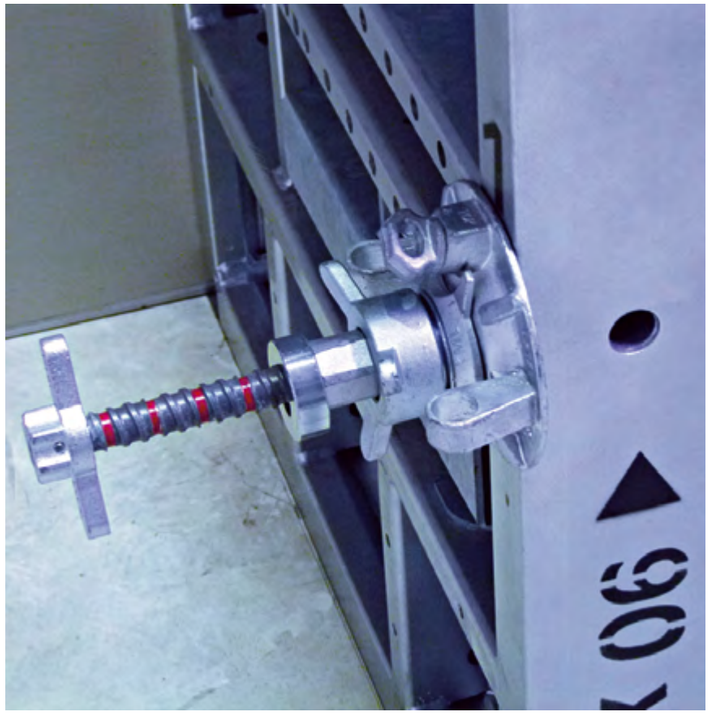
PLATINUM 100
MANTO®
MANTO® G3
RASTO®
RASTO® G2
Column formwork
RONDA®
ES 24 element formwork
H 20 & GF 24 large-area formwork
Facade formwork
Support frames
Aligning struts

PLATINUM 100

PLATINUM 100 is our innovative 100 kN/m² panel formwork for walls.

Technical data

Product description	Crane-set large area wall formwork
Panel widths	45 I 60 I 75 I 90 I 120 I 240 cm
Panel heights	60 I 90 I 120 I 300 I 360 cm
Multi-purpose panels	105 x 90 I 105 x 120 I 105 x 300 I 105 x 360 cm
Profile thickness	14 cm steel frame profile (closed)
Form lining	ECOPLY full plastic composite sheet
Lining thickness (coating)	ECOPLY 15 mm I (300 µm thick PP surface)
Average weight	65 to 90 kg/m² (including connection parts)
Max. concrete pressure	100 kN/m² (DIN 18202, line 7)
Relevant standards	Complies with DIN 18216 I EN 1993
Standard connection	PLATINUM aligning wedge clamp
Corrosion protection	Fully galvanised
Inner corners	MP inside corner I Inside corner 90° (2.5° play for easing)
Outer corners	MP panel with basic panel (90°)
Special features	• Versatile platform and access system with integrated backrailings, side rails, self-closing passages and ladders • Only one type of tie required for wall thicknesses from 15.00 – 42.50 cm • RFID chips for individual panel identification • Hinged inside and outside corner • Simple turning of the panels thanks to a crane sling, which is easy to handle.



The PLATINUM 100 tie may only be operated by one person. That saves time and labour costs. For wall thicknesses from 15 to 42.5 cm, you only need one type of tie. This can quickly be pre-adjusted in a 2.5 cm grid.
The visual check before the concreting phase is facilitated.

PLATINUM 100

PLATINUM 100 requires up to 30% less ties up to a height of 3.60 m and delivers high occupational safety as well as high quality concrete surfaces.

Product benefits

Safe

Connection elements are secured inside panel during transportation

High concrete pressure up to 100 kN/m² for safe and fast concrete placement

Safe pouring with system platform

Economical

Up to 3.60 m high panels to match increased wall heights

One tie row less is required for pouring heights of up to 3.60 m compared to traditional systems; 30% less ties

High-quality concrete finish reduces amount of rework

Quick

One-man tie operation saves time and money

100 kN/m² concrete pressure throughout the system for new SCC and liquid concrete types

For best quality

Neatly aligned tying and joint grid possible, no matter if the panels are used in upright or horizontal positions

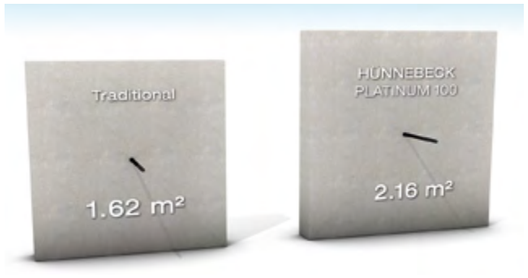
High-quality concrete finish

Easy handling

Aligning wedge clamps are secured in the panel and deliver tight and flush joints

RFID chips on all sides for easy, fast and individual panel identification, also in stacks

Easy handling, as aligning clamps are secured in the panel and deliver tight and flush joints



One tie row less is required for pouring heights of up to 3.60 m than with traditional systems; 30% less ties

RFID chips on all sides for easy, fast and individual panel identification, also in stacks

Neatly aligned tying and joint grid possible, no matter if the panels are used in upright or horizontal positions

100 kN/m² concrete pressure throughout the system for new SCC and liquid concrete types

Application & use

- Even geometries, large wall surfaces
- High walls
- Architectural finish achieved with high-quality plywood

PLATINUM 100 integrates with

- aligning struts
- CS 240
- SCF
- Support frames

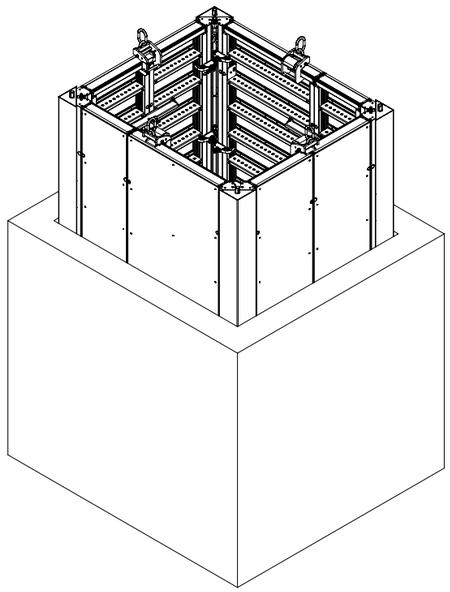
If you would like to find out more, take a look at our video.

MANTO®

MANTO is a crane-set formwork system (80 kN/m²) for large-area forming of walls.

Technical data

Product description	Crane-set large area wall formwork
Panel widths	30 I 45 I 60 I 75 I 90 I 105 I 120 I 240 cm
Panel heights	120 I 270 I 330 cm
Multi-purpose panels	75 x 60 I 75 x 120 I 75 x 270 I 75 x 330 cm
Profile thickness	14 cm steel frame profile (closed)
Form lining	Plywood (min. 280 g/m² coating) I ECOPLY full plastic composite sheet
Form lining thickness	Plywood = 18 mm I ECOPLY full plastic composite sheet = 19 mm
Average weight	55 to 75 kg/m² (including connection parts)
Max. concrete pressure	80 kN/m² (line 6, some line 7)
Corrosion protection	Fully galvanised steel frame and connection elements
Relevant standards	Complies with DIN 18216 I EN 1993
Standard connection	Aligning clamp (aligned and flush connection)
Special connection	Adjustable aligning clamp I Corner clamp
Inner corners	35/35 cm (with 2.5° play for easing)
Hinged corners	60° to max. 175° angle
Outer corners	Basic panel with outer corner clamps
Forming/stripping times	t = 0.20 – 0.40 h/m² *
Special features	• Large panels 240 I 360 I 480 x 270 cm • MANTO shaft corner for easier forming of shafts • High quality form lining on all panels • Extensive accessory parts program



By using the mechanism of the shaft corner, the formwork can be fully released from the concrete in an instant, and it can then be lifted out by a crane in one go. It is operated from above by means of a readily accessible set-screw. No special tools are required.

* Time calculation (average) by Hünnebeck

MANTO®

A very versatile and heavy-duty system that is equal to very tough challenges. 40 m² can be moved in a single crane pick.

Product benefits

Versatile

- Broad range of panel sizes up to a height of 3.30 m
- Two stacked large panels form one unit with an astonishing 26 m² surface area
- Also suitable for forming of single-sided walls
- All panels can be used horizontally and vertically and can be combined in any way

Strong & durable

- High flexural strength due to 14 cm steel profile, concrete pressure 80 kN/m²
- Fully galvanised steel frame and connection elements

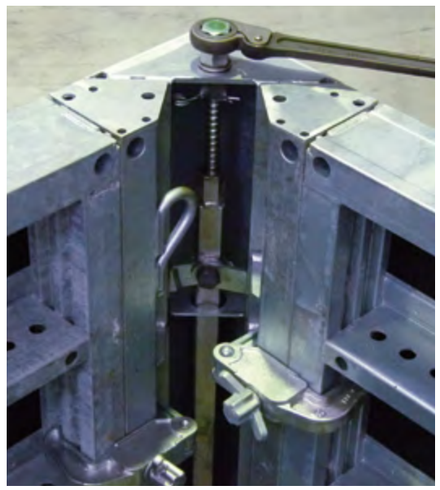
Economical

- Strong connection thanks to aligning clamp: 40 m² can be moved in a single crane pick
- Easy and quick forming and stripping of shafts due to the MANTO shaft corner

Easy handling

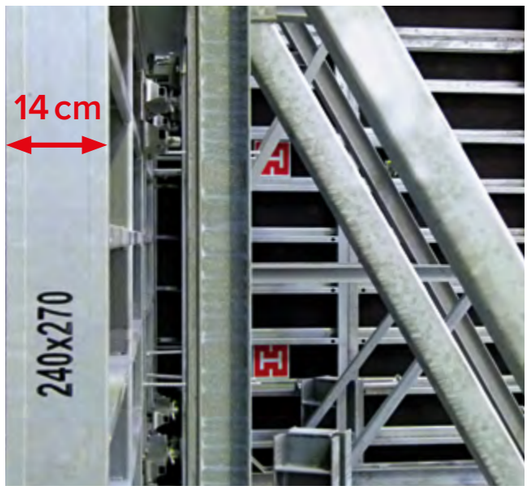
- Multi-purpose panels for easy forming of columns
- MANTO shaft corner for a system-compatible shaft formwork

A special solution: Facade walers are used to ensured back anchoring of the horizontal loads and to enable the exact alignment of the MANTO formwork in a desired inclined position.



Easy and quick forming and stripping of shafts due to the MANTO shaft corner

By using facade soldiers, the 16.73 m high walls of a terminal were shuttered in two pouring cycles instead of three.



High flexural strength due to 14 cm steel profile, concrete pressure 80 kN/m²

Application & use

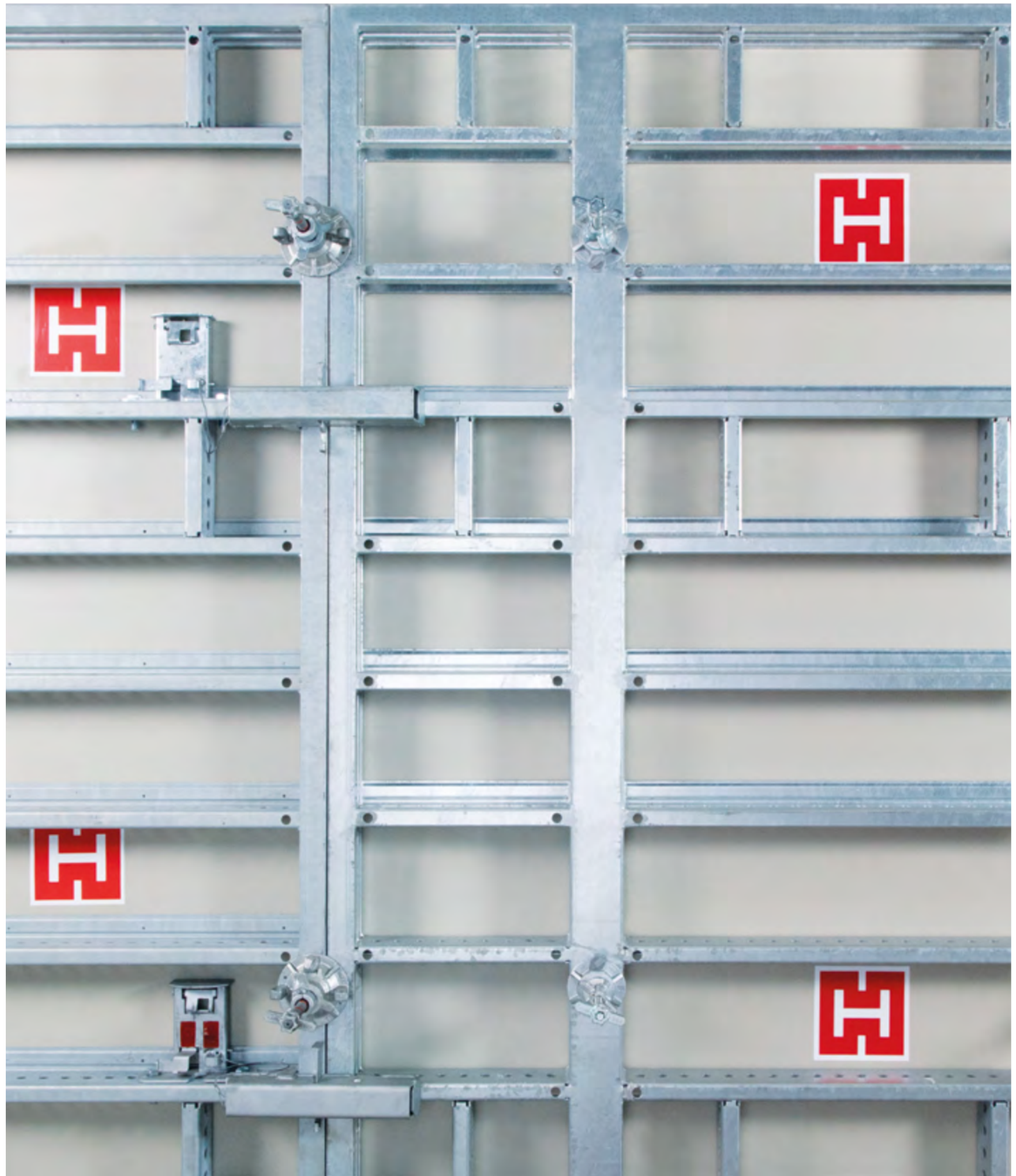
- Options from small to large panels
- Single-sided wall applications
- Column forms

MANTO® integrates with

- PLATINUM platform system
- Aligning struts
- RONDA®
- Support frames

MANTO® G3

The new, particularly economical generation of MANTO. Your special benefit: the anchoring system is freely selectable, one-sided anchoring is also possible.



Technical data

Product description	Crane-set large area wall formwork
Panel widths	30 I 45 I 60 I 75 I 90 I 105 I 120 I 240 cm
Panel heights	120 I 270 I 330 cm
Multi-purpose panels	75 x 120 I 75 x 270 I 75 x 330 cm
Profile height	14 cm steel frame profile (closed)
Form lining	ECOPLY full plastic composite sheet (19 mm thick)
Average weight	47 to 75 kg/m² (including connection elements)
Max. concrete pressure	80 kN/m² (line 6, some line 7)
Corrosion protection	Fully galvanised steel frame and connection elements
Relevant standards	Complies with EN 1993 I DIN 18202 I DIN 18218 I DIN 18216
Standard connection	Aligning clamp (aligned and flush connection) I Aligning wedge clamp
Special connection	Adjustable aligning clamp I Corner clamp I Universal connector
Inner corners	35/35 cm
Hinged corners	60° to max. 175° angle
Outer corners	Basic panel with outer corner clamps
Forming/stripping times	t = 0.20 – 0.40 h/m² *
Special features	• Aligning wedge clamp for secure, tight and aligned connection • One-sided anchoring possible • Plastic formwork lining

The universal load class 2 formwork platform (150 kg/m²) can be mounted to the RASTO® as well as to the MANTO® formwork system. Only the respective adapters are system-specific.

* Time calculation (average) by Hünnebeck

MANTO® G3

The well thought-out range of panels with panel sizes up to 3.30 m high ensures high system utilisation.

Product benefits

Versatile

Minor adaptation to different anchor systems thanks to plastic inserts

All panels can be used horizontally and vertically

Quick

Aligning wedge clamp for fast and secure panel connections

One-piece bulkhead clamp with presetting option for panel spacing

40 m^2 large formwork unit can be moved in a single crane pick

Economical

Time and cost savings during shuttering and striking due to the possibility of one-sided anchoring

Well thought-out range of panels with panel sizes up to 3.30 m high for high system utilisation

Realisation of outer corners with standard panels

For best quality

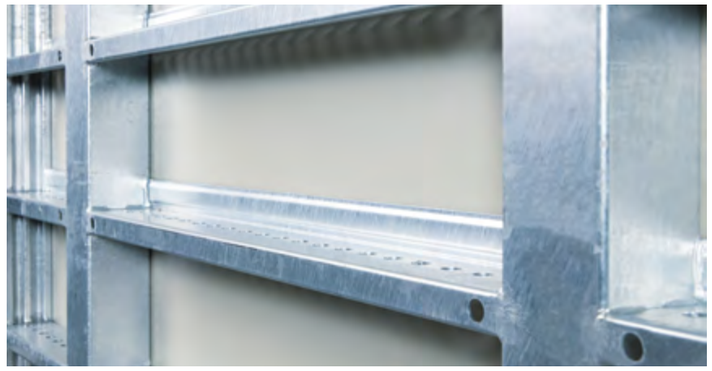
Internal anchor points for an orderly anchor pattern (G3 M)

High-quality concrete appearance thanks to ECOPLY plastic formwork lining

Strong & durable

ECOPLY plastic formwork lining with tie hole reinforcement can be used up to three times longer than wooden formwork lining

Robust galvanised steel frame (14 cm high) reduces the need for repairs and increases the service life of the panel elements



Robust and durable thanks to fully galvanised steel frame with plastic formwork lining

Time and cost savings thanks to one-sided anchoring system

Simple and quick panel connection thanks to the aligning wedge clamp

Optimum results thanks to internal tie points and plastic formwork lining

Application & use

- For large wall areas
- Single-sided wall applications
- As column formwork

MANTO® G3 integrates with

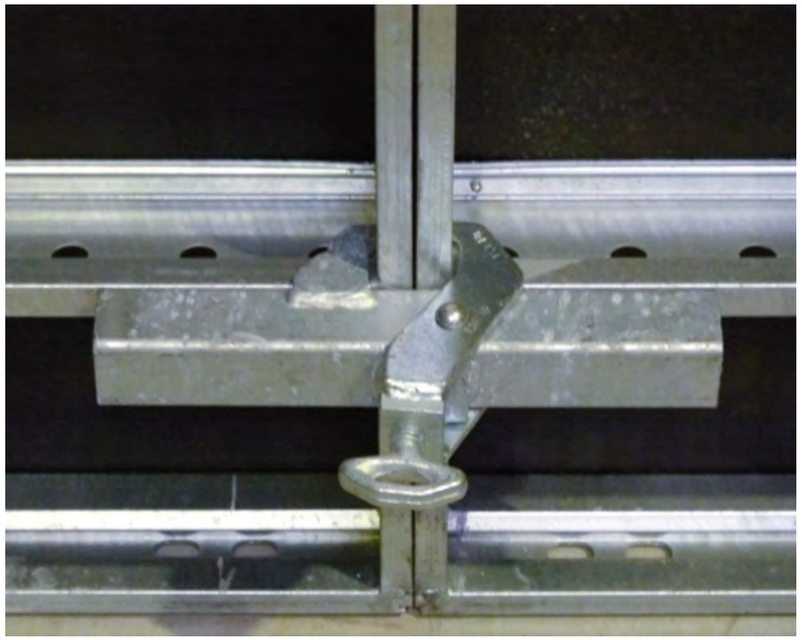
- MANTO
- PLATINUM platform system
- Aligning struts
- RONDA
- Support frames

RASTO®

RASTO is a versatile 60 kN/m² wall formwork, which offers an ideal solution for small and mid-size projects, especially in residential construction.

Technical data

Product description	Versatile panel formwork system
Panel widths	30 I 45 I 50 I 60 I 75 I 90 I 240 cm
Panel heights	120 I 150 I 270 I 300 cm
Multi-purpose panels	70 x 150 I 70 x 270 I 70 x 300 cm
Profile thickness	12 cm steel frame profile
Form lining	Plywood (min. 280 g/m² coating) I ECOPLY full plastic composite sheet
Lining thickness (coating)	Plywood = 14 mm I ECOPLY full plastic composite sheet = 15 mm
Average weight	40 to 65 kg/m² (including connection parts)
Max. concrete pressure	60 kN/m² (line 6)
Corrosion protection	Fully galvanised steel frame and connection elements
Relevant standards	Complies with DIN 18216 I EN 1993
Standard connection	RASTO aligning clamp (aligned and flush connection)
Special connection	RASTO adjustable clamp I Outer corner clamp
Inner corners	30/30 cm (with 2° play for easing)
Hinged corners	From 60° to max. 150° angle
Outer corners	Basic panel with outer corner clamps
Forming/stripping times	t = 0.4 – 0.6 h/m² *
Special features	• XXL panel 240 x 270 cm • RASTO shaft corner adapter I Panel clamp • High quality form lining on all panels • Extensive accessory parts program



With the RASTO aligning clamp, the joints of the RASTO panels are connected light, tension proof and flush without offset in a single working step.

* Time calculation (average) by Hünnebeck

RASTO®

RASTO is a frame panel formwork that can – up to a panel width of 90 cm – be used by hand without a crane or as large-area units with a crane.

Product benefits

Versatile

Highly versatile wall formwork system with the same connection elements for every project size

RASTO multi-purpose panels for easy forming of columns and corners

Strong & durable

Longer service life due to the robust, galvanised steel frame profile with 12 cm thickness

Easy handling

The easy-to-use outer corner clamp makes an outer corner out of two standard panels

The adjustable aligning clamp permits adjustments up to 15 cm and flush, force-fit connections

Economical

Craneless forming possible due to low weight of basic RASTO panels

RASTO aligning clamps provide a strong, tight and flush panel connection in just one working step

RASTO XXL panel for large-area forming

RASTO: the ideal formwork for smaller and medium-size projects, particularly in the housing sector.

Highly versatile wall formwork system with the same connection elements for every project size

Craneless forming possible due to low weight of basic RASTO panels

Longer service life due to the robust, galvanised steel frame profile with 12 cm thickness

RASTO as foundation formwork

Application & use

- Ideal for smaller and medium-size projects
- Craneless operation of smaller panels possible

RASTO® integrates with

- TOPMAX®
- Aligning struts
- Support frames

RASTO® G2

The new generation of RASTO for greater efficiency: RASTO G2's new one-sided anchoring technology ensures fast results.

Technical data

Product description	Versatile panel formwork system
Panel widths	30 I 45 I 60 I 75 I 90 I 240 cm
Panel heights	120 I 150 I 270 cm
Multi-purpose panels	70 x 120 I 70 x 270
Profile thickness	12 cm steel frame profile
Form lining	ECOPLY full plastic composite sheet I Max. concrete pressure 60 kN/m²
Form lining thickness	ECOPLY full plastic composite sheet = 15 mm
Average weight	40 to 65 kg/m² (including connection elements)
Corrosion protection	Fully galvanised steel frame and connection elements
Relevant standards	Complies with EN 1993 I DIN 18202 I 18216 I 18218
Standard connection	RASTO® aligning clamp (aligned and flush connection)
Special connection	RASTO® adjustable clamp I Corner clamp I RASTO® clamping lever
Inner corners	30/30 cm
Hinged corners	From 60° to max. 150° angle
Outer corners	Basic panel with outer corner clamps
Forming/stripping times	t = 0.4 – 0.6 h/m²
Special features	• XXL panel 240 x 270 cm • RASTO® shaft corner adapter I Panel clamp • High quality form lining on all panels

Wide range of accessories

Safe transport of single panels and corners with higher load capacity

The strut quick connector enables the quick connection of alignment struts

The lattice box enables the storage of fasteners, anchor nuts, etc. It can be attached to the carriage and moved by crane. The easy handling saves considerable crane time – a clear improvement for storage and logistics

Bulkhead clamp for tight and pressure-resistant stop-ends with only one part

RASTO® G2

RASTO G2 makes anchoring flexible and easy. Single-sided anchoring is possible, as is the use of traditional DW 15, DW 20 or She-Bolt anchors.

Product benefits

Quick

- One-sided anchoring saves time when shuttering and striking
- Realisation of outer corners with standard panels
- Steel frame construction requires only a small number of connection elements

Easy handling

- RASTO clamping lever for simple panel connections without tools
- One-piece bulkhead clamp with presetting option for panel spacing
- Continuous perforated grid for a wide range of applications
- Connection elements can be "parked" on the formwork

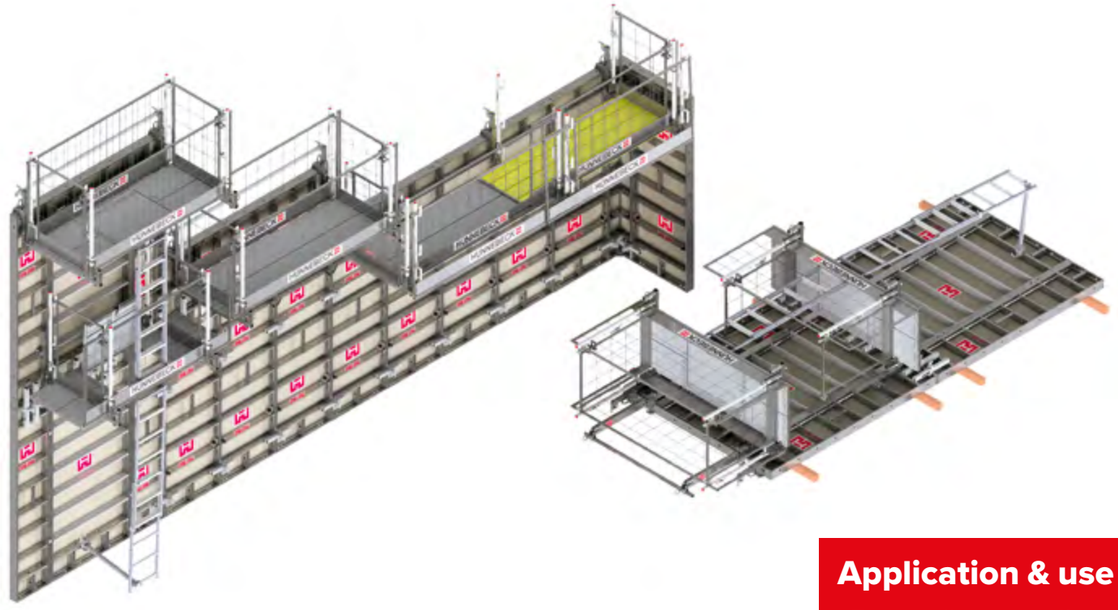
Economical

- Well thought-out range of panels for high system utilisation
- ECOPLY plastic formwork lining ensures consistent concrete results and easy cleaning
- Flexible use of different anchor systems

Strong & durable

- ECOPLY plastic formwork lining with tie hole reinforcement can be used up to three times longer than wooden formwork lining
- Robust galvanised steel frame reduces the need for repairs and increases the service life of the panel elements

Simple and efficient mounting of the RASTO® clamping levers: no tools are required.



The universal load class 2 formwork platform (150 kg/m²) can be mounted to the RASTO® as well as to the MANTO® formwork system. Only the respective adapters are system-specific

The RASTO® anchor for single-sided anchoring

Flexible anchor selection possible. In this case, RASTO® anchor for single-sided and DW 15 anchor for double-sided anchoring

Application & use

- For smaller to medium-sized objects
- Crane-independent use possible

RASTO® G2 integrates with

- TOPMAX®
- Aligning struts
- Support frames

Column formwork

The ready-to-use column formwork system is the quick and easy way to form rectangular and square columns.

Technical data

Product description	Ready-to-use formwork for columns
Panel heights	120 I 270 I 320 cm
Panel widths	60 I 120 cm
Column types	Squared and rectangular-shaped cross-sections possible
Adjustment range PW 60	From 15 x 15 cm to 60 x 60 cm In 5 cm increments
Adjustment range PW 120	From 50 x 50 cm to 120 x 120 cm In 5 cm increments
Adjustment setting	Perforated strip & double bolt Closing via operating clamp
Column heights	Adaptations from 2.70 m up to 6.60 m
Permissible concrete pressure	PW 60 cm = up to 120 kN/m^2 PW 120 = up to 80 kN/m^2
Form lining	Plastic-coated plywood (connected from the back)
Relevant standards	Complies with EN 1993
Stacking connection	Via 2 stacking bolts per frame (M16 x 100)

Column formwork assembled with the concrete pouring platform in one unit for safe concrete placement. The attachment set for safety ladders can be mounted on one side of the concreting platform, which allows a ladder to be hooked in and secured.

Column formwork

Easy and safe forming of columns with either rectangular or square shaped cross-sections up to a maximum pouring height of 6.60 m.

Product benefits

Economical

Plastic-coated plywood allows for multiple use

Moving complete units with a single crane pick. All accessories are firmly secured to the element

Quick

Delivery on site in ready-to-use assemblies for a smooth and efficient forming operation

High strength – fresh concrete pressures of up to 120 kN/m^2 for faster pouring cycles

Easy handling

Operating clamp aids assembly and dismantling of the column forms

Cross-sections of the columns are adjustable in steady increments of 5 cm

Simple and straightforward stripping of the form in a counter-clockwise fashion

Versatile

Standard elements and stacking angles permit a height adjustment from 2.40 – 6.60 m

For best quality

Superb concrete finish and more re-uses thanks to the plastic-coated plywood

Cross-sections of the columns are adjustable in steady increments of 5 cm

Moving complete units with a single crane pick.
All accessories are firmly secured to the element

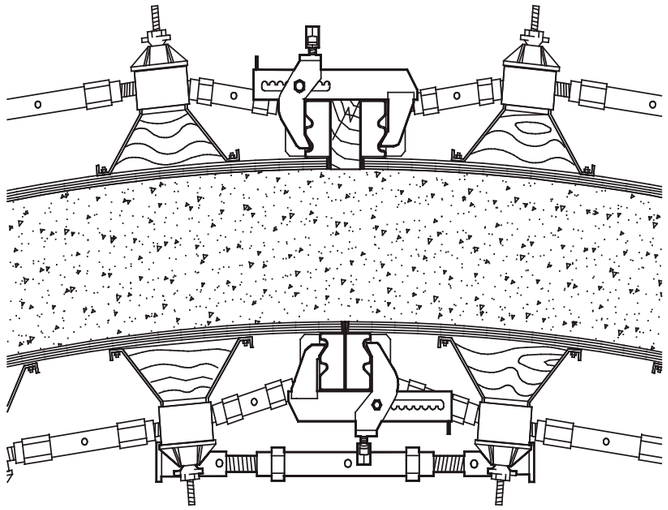
Superb concrete finish and more re-uses thanks to the plastic-coated plywood

RONDA®

RONDA is your radius-adjustable circular formwork which consists of ready-to-use shuttering elements.

Technical data

Product description	Radius-adjustable circular formwork
Element heights	150 I 200 I 300 cm
Element widths	128 I 250 cm (outer elements) 123 I 240 cm (inner elements)
Element thickness	20.8 cm (straight state)
Form lining	Plywood 14 mm
Max. concrete pressure	Up to 60 kN/m²
Radius range	5.50 – 35.0 m (inside)
Relevant standards	Complies with DIN 18216 I EN 1993
Element connection	Via element connector Infills up to 15 cm possible
Height extension	Via MANTO aligning panel clamp
Corrosion protection	Hot-dip galvanisation of all steel profiles and parts
Forming/stripping times	t = 0.3 – 0.6 h/m²
Component max. weight	Outer element 300 x 250 = 367.00 kg
Special features	• Compatible with MANTO panel wall formwork • Additional protection of the thread inside turnbuckles • 30 m² transferable via crane with no additional bracing • Extensive accessory parts program



The element connector is easy to use and allows timber adjustments of up to 15 cm

* Time calculation (average) by Hünnebeck

RONDA®

The no. 1 choice for forming curved walls. By using the integrated spindle system, the rugged, ready-to-use elements can be precisely adjusted to any desired radius upward of 2.75 m.

Product benefits

Quick

Short forming times due to ready-to-use elements available in two different widths and three heights

30 m^2 transferable via crane with no additional bracing

Economical

Low transport volumes and great stackability as a result of the minimum element thickness of only 21 cm

Easy handling

Millimetre-precise radius adjustment using turnbuckles and fine-tune alignment thanks to lever edge on profiles

Height extensions can be made using the aligning panel clamp from MANTO

The element connector is easy to use and allows timber adjustments of up to 15 cm

Easy turnbuckle operation using an open-ended spanner or tie rod (< Ø18 mm)

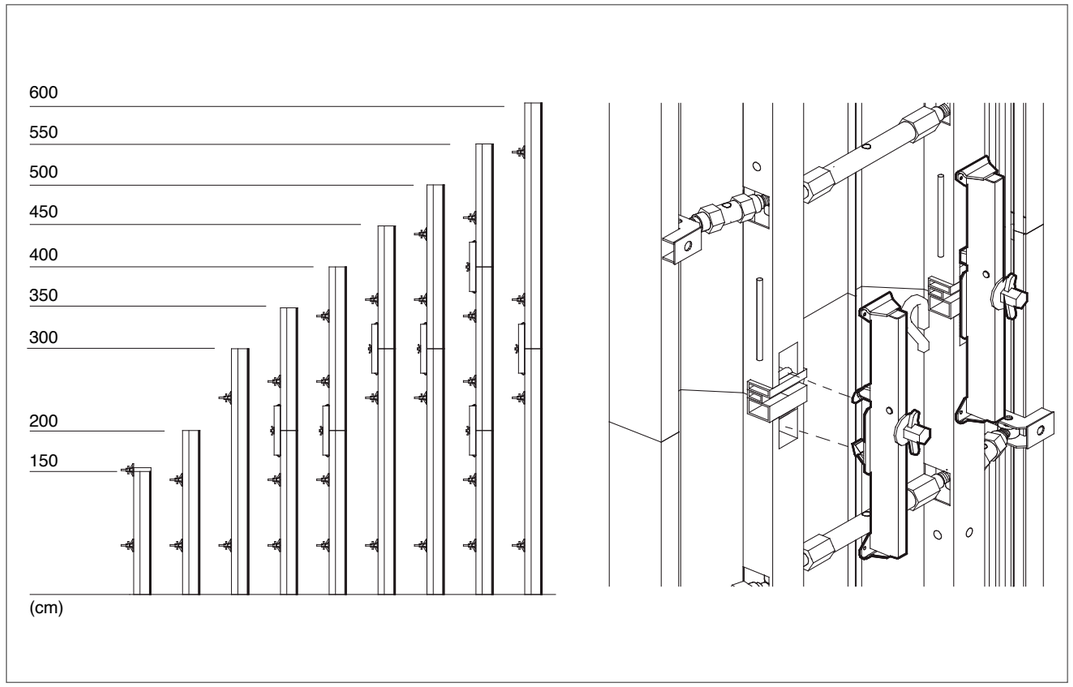
Versatile

Height extensions can be made using the aligning panel clamp from MANTO

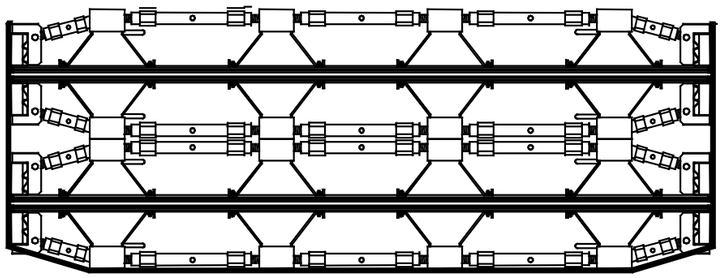
Inner and outer elements available in various heights

Strong & durable

Additional edge protection of the form lining thanks to the outer MANTO edge profiles



Height extensions can be made using the aligning panel clamp from MANTO



Low transport volumes and great stackability as a result of the minimum element thickness of only 21 cm

Millimetre-precise radius adjustment using turnbuckles and fine-tune alignment thanks to lever edge on profiles

Application & use

- Sewage plants
- Spiral ramps
- Skyscrapers

RONDA® integrates with

- MANTO®
- Support frames

ES 24 element formwork

ES 24 is the highly adaptable yet robust timber beam formwork for walls, composed of pre-assembled R 24 elements.

Technical data

Product description	ES 24 element formwork for walls
Element heights	327 I 267 I 90 cm
Element widths	250 I 200 I 125 I 75 cm
Version	ES 24 frame (without plywood) ES 24 panel (with plywood)
Element thickness	36 cm (waler + R 24 girder + plywood)
Main formwork beam	R 24 girder
Max. concrete pressure	60 kN/m² (DIN 18202, lines 6 and 7)
Element connection	Using waler connector and four joining wedges Waler connector 100 with four wedges allows up to 20 cm adjustment
Form lining thickness	21 mm
Relevant standards	Complies with DIN 18216 I EN 1993
Average weight	Approx. 50 kg/m² (ES 24 frame 250/327) Approx. 60 kg/m² (ES 24 panel 250/327)
Special features	Wooden girders have good structural attributes and a low weight

Maximum concrete pressure up to 60 kN/m² (according to DIN 18218)

ES 24 element formwork

Experience versatility: These pre-assembled elements are available in four widths and three heights and can be almost endlessly and steplessly combined in order to attain any desired wall dimensions.

Product benefits

Versatile

Optimal adaptability to ground plan possible thanks to the object-related arrangement of the girders and tie rows

Desired element heights can be easily attained according to the architectural concrete requirements

Free choice of plywood

Safe

Walkway bracket with a width of 90 cm provides safe working area

Economical

Low amount of ties

Maximum concrete pressure up to 60 kN/m^2

Quick

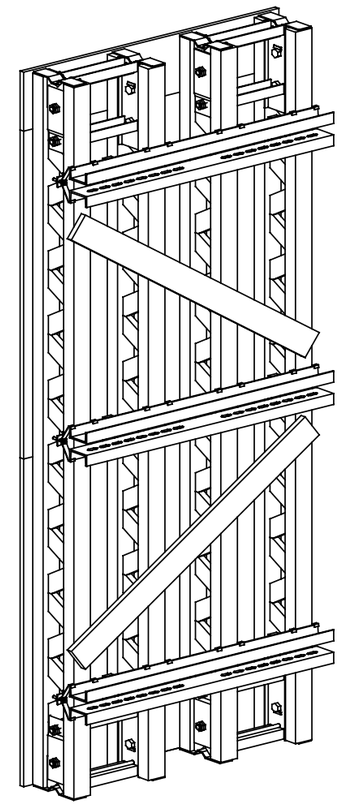
Easy assembly and disassembly of formwork units enable trouble-free retrofitting in case of frequent changes to the ground plan

Fast and easy connection of stacked elements using the MANTO aligning panel clamp

Fast and easy connection of stacked elements using the MANTO aligning panel clamp

Desired element heights can be easily attained according to the architectural concrete requirements

Easy assembly and disassembly of formwork units enable trouble-free retrofitting in case of frequent changes to the ground plan



Optimal adaptability to ground plan possible thanks to the object-related arrangement of the girders and tie rows

Application & use

- Wall formwork
- Column formwork
- Circular formwork
- Bridge piers
- Abutments

H 20 & GF 24 large-area formwork

The H 20 and GF 24 large-area formwork is a versatile timber beam formwork for walls and columns, tailor-made for big challenges.

Technical data

Product description	Wooden H 20/GF 24 large-area formwork
Version	H 20 large-area formwork
Main formwork beam	H 20 web beam (timber)
Element heights	190 I 245 I 265 I 290 I 330 I 360 I 390 I 450 I 490 I 590 cm
Element widths	1.00 – 3.00 m in increments of 25 cm
Element thickness	32 cm (waler + H 20 beam + plywood)
Average weight	Approx. 42 kg/m² (without plywood)
Permissible concrete pressure	40, 50 or 60 kN/m²
Version	GF 24 large-area formwork
Main formwork beam	R 24 lattice girder (timber)
Element heights	90 I 180 I 240 I 270 I 300 I 330 I 360 I 390 450 I 510 I 600 cm
Element widths	1.00 – 3.00 m in increments of 25 cm
Element thickness	36 cm (waler + R 24 girder + plywood)
R 24 beam statics	Perm. bending moment = 7.0 kNm Perm. shear force = 14.0 kN
Average weight	Approx. 48 kg/m² (without plywood)
Permissible concrete pressure	40, 50, 60 or 80 kN/m²
Form lining thickness	21 mm (with H 20 and GF 24)
Relevant standards	Complies with DIN 18216 I EN 1993

Standard walers from 1.0 – 3.0 m for element widths in 25 cm increments make object-related element dimensions simple for planning and forming operations

H 20 & GF 24 large-area formwork

Do you have challenging projects? Our timber beam large-area formwork is the best option for customised formwork solutions, where the user can freely determine the element dimensions, main beams, location of tying points and the type of form sheets.

Product benefits

Safe

Safe and fast element connection using the waler connectors and 4 joining wedges

Easy handling

Standard walers from 1.0 – 3.0 m for element widths in 25 cm increments make object-related element dimensions simple for planning and forming operations

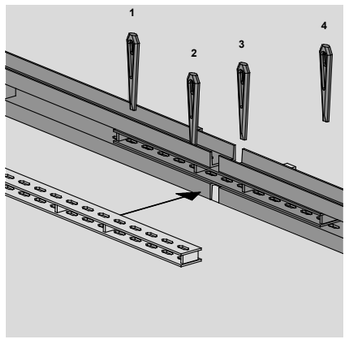
Beams and girders have good static values and a low weight

Versatile

Desired element heights can be easily achieved according to concrete surface requirements

Free choice of plywood provides flexibility in terms of the required quality of concrete surface

Desired element heights can be easily achieved according to concrete surface requirements



Fast and safe element connection using the waler connectors and 4 joining wedges

Free choice of plywood provides flexibility in terms of the required quality of concrete surface

Concrete pressure of up to 80 kN/m² possible

Application & use

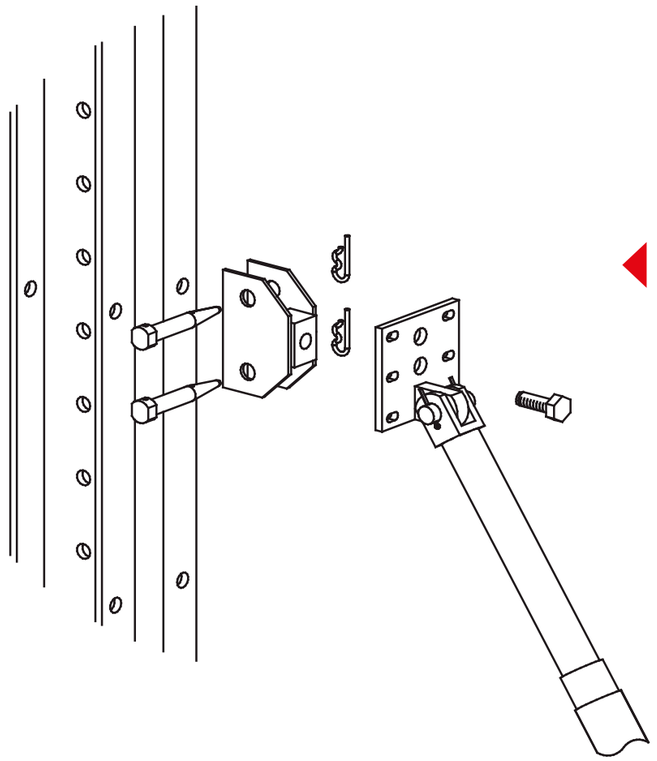
- Wall formwork
- Column formwork
- Circular formwork
- Customised formwork for bridge piers and abutments

Facade formwork

For the easy construction of facades that are made up of both prefabricated elements and in-situ concrete columns – without edge tables.

Technical data

Product description	Facade formwork for facade construction
Soldier lengths	50 I 75 I 100 I 125 cm I Facade soldier = 600 cm
Steel waler lengths	96 I 121 I 146 I 171 I 196 I 221 I 246 I 271 I 296 cm
Steel waler horizontal	Steel waler 246 facade
Support types	Horizontal support I Weight = 27.80 kg Facade adapter I Weight = 6.40 kg Vertical support I Weight = 7.30 kg
Connection elements	Facade soldier to steel waler 246 via facade adapter Vertical support to waler via pins and spring cotters Horizontal support to facade soldier via pins and spring cotters
Permissible concrete pressure	Columns in-situ concrete: 40 I 50 I 60 I 80 kN/m^2
Wall thicknesses	Suitable for prefab elements with 10 – 30 cm wall thickness
Form lining thickness	Plywood 21 mm
Relevant standards	DIN 18202 (line 6, 7)
Erection & dismantling	Erection: 1.0 h/unit * I Dismantling: 0.3 h/unit *
Special features	Facade soldiers, walers and bracings form a strong unit



Wall struts and bracing can easily be connected: The connection part has to be bolted to the facade soldier and fixed with the included pins and spring cotters. The wall strut is attached to the connection part using the included bolt.

* Time calculation (average) by Hünnebeck

Facade formwork

By constructing the building facade ahead of and independently from the slabs, the slabs can be constructed faster and safer with the help of the Hünnebeck facade formwork.

Product benefits

Economical

The facade formwork enables mixed structures to be formed in economical procedures

Low quantities of equipment kept on site thanks to leading construction cycles

Units are transferable by crane in a quick and safe manner

Strong & durable

Long service life thanks to hot-dip galvanisation of all steel soldiers and parts

Safe

Safe and easy-to-use connectors for quick operations

Quick

No time-consuming forming with edge tables in connection with slab construction

Low number of parts keep operations simple (soldiers, supports, walers, and fasteners)

Easy handling

The small number of simple work steps are quickly learnt

Retractable supports allow easy transfer via crane

Low quantities of equipment kept on site thanks to leading construction cycles

The facade formwork enables mixed structures to be formed in economical procedures.

The small number of simple work steps are quickly learnt

Application & use

- Facades that are made of prefabricated elements and in-situ concrete columns

Support frames

Hünnebeck support frames for single-faced walls up to a height of 8.60 m with ease and precision.

Technical data

Product description	Support frames for single-faced formwork
Support frame type	Support frame 325 I Weight = 171.00 kg
Tying bar	Tying bar 12/60 I Weight = 18.20 kg
Additional components	Distance keepers and anchoring parts
Max. pouring height	3.25 m
Support frame type	Support frame 500 I Weight = 305.00 kg
Tying bar	SF-tying bar 24/75 I Weight = 60.00 kg
Additional components	SF-lower part 200 and base frame 200/2
Max. pouring height	8.60 m
Max. concrete pressure	Up to 60 kN/m^2
Special features	Double vertical U-profiles permit connection to any form system

Support frames can also be used in a special application to stabilise MODEX scaffolding against horizontal forces

Support frames

The vertical double-U profiles make the Hünnebeck support frames compatible with virtually any formwork system.

Product benefits

Strong & durable

High strength: support frames can withstand a maximum concrete pressure of up to 60 kN/m²

Applicable up to a maximum pouring height of 8.60 m

Versatile

Full compatibility with Hünnebeck frame wall formwork as well as with circular wall formwork and timber beam wall formwork

Distances between support frames can be adapted according to plan

Easy handling

Base jacks enable the single-sided structure to be adjusted correctly and with high precision

SF shifting hooks make easy crane transfers of formwork units possible

SF extension bar allows to employ the support frame 500 behind a 5.40 m tall MANTO formwork

Easy-to-connect SF shifting hooks facilitate handling of units

High strength: support frames can withstand a maximum concrete pressure of up to 60 kN/m²

Full compatibility with Hünnebeck frame wall formwork as well as with circular wall formwork and timber beam wall formwork

Distances between support frames can be adapted according to plan

Base jacks enable the single-sided structure to be adjusted correctly and with high precision

Application & use

- Single-faced walls

Support frames integrate with

- PLATINUM
- MANTO®
- RASTO®
- GF 20 + 24
- RONDA®

Aligning struts

Hünnebeck aligning struts are designed for bracing and aligning of formwork or precast concrete elements.

Technical data

Product description	Struts for fixing and aligning
Strut type	P330 I Steel I Weight = 13.7 kg
Extension range/ Loading	2.05 m – 3.30 m I Load capacity = 13.0 kN – 9.50 kN
Strut type	K440 I Steel I Weight = 23.4 kg
Extension range/ Loading	3.25 m – 4.40 m I Load capacity = 20.00 kN – 11.00 kN
Strut type	K600 I Steel I Weight = 35.8 kg
Extension range/ Loading	4.80 m – 6.00 m I Load capacity = 20.00 kN – 14.00 kN
Strut type	K760 I Steel I Weight = 51.3 kg
Extension range/ Loading	5.30 m – 7.60 m I Load capacity = 20.00 kN – 15.00 kN
Strut type	SUPER 10 I Aluminium I Weight = 84,03 kg
Extension range/ Loading	7.05 m – 10.25 m I Load capacity = 25.00 kN – 22.30 kN
Connections	Quick-action fastener I Weight = 2.76 kg Head attachment K I Weight = 1.30 kg
Corrosion protection	All steel components of the strut are galvanised
Special features	• Fast length adjustment via telescoping and locking pin • Covered threads stay clean and easy-to-use

The Super 10 is an aluminium strut, which is ideal for larger tasks. An additional advantage: since the threaded part of the Hünnebeck aligning struts are protected with a cover, they always stay clean and can be easily used and remain ready for use, even after multiple applications.

Aligning struts

Aligning struts are easy to transport and can be quickly and easily anchored, using the quick-locking mechanism.

Product benefits

Easy handling

All aligning struts have a telescopic design and an extremely low weight

Base plates can be easily fixed and secure the struts in position

Quick-action fasteners allow for an easy installation safely from the ground and secure the struts at the top end

Simplified and convenient dismantling due to the separation of strut from the quick-action fastener

Quick

Time saving during installation due to quick-action fastener

Safe

Safe and easy attachment of the strut from the ground

Economical

Great load-capacity to self-weight ratio comprising five strut types with extension lengths from 2.05 m – 10.25 m

Versatile

Even with cast-in-place columns, aligning struts can serve as an ideal bracing solution for formwork panels up to significant heights

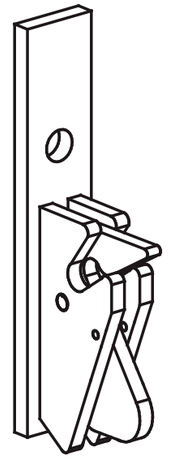
Option for faster length adjustment due to rough setting and fine tuning

Strong & durable

All steel components of the strut are galvanised

Great load-capacity to self-weight ratio comprising five strut types with extension lengths from 2.05 m – 10.25 m

Simplified and convenient dismantling due to the separation of strut from the quick-action fastener



Quick-action fasteners allow for an easy installation safely from the ground and secure the struts at the top end

Option for faster length adjustment due to rough setting and fine tuning

Application & use

- Precast concrete elements
- Column formwork
- Wall formwork

Aligning struts integrate with

- PLATINUM
- MANTO®
- RASTO®

HÜNNEBECK

BY BRAND SAFWAY

SLAB FORMWORK

TOPMAX®

TOPEC®

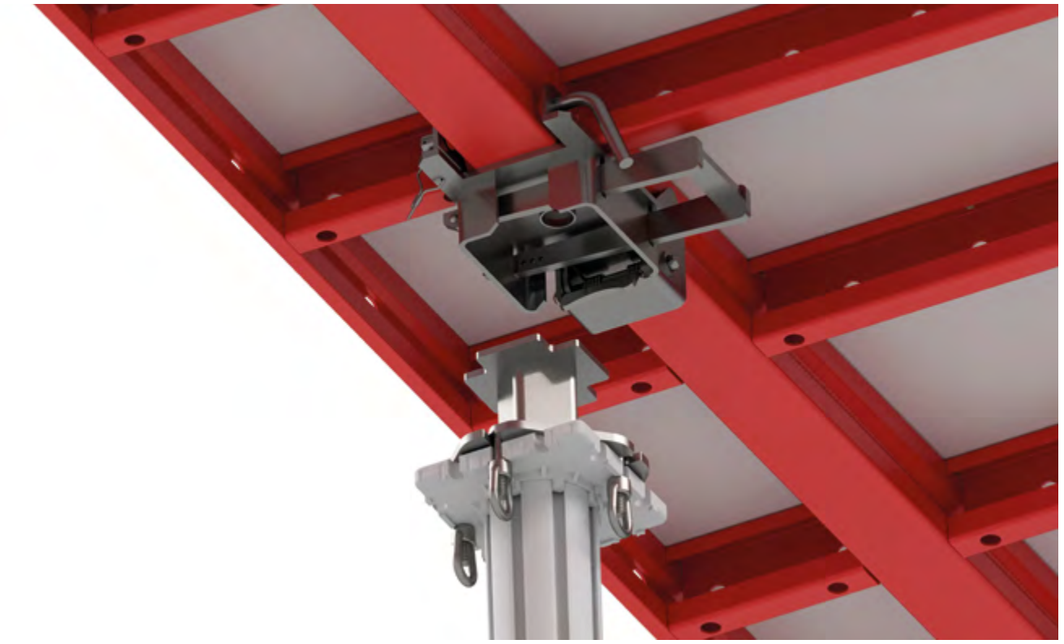
TOPFLEX®

TOPMAX®

The TOPMAX floor table is the quick formwork solution for large slab surfaces with regular ground plans and repetitive geometries.

Technical data

Product description	Steel-frame floor table with plastic form lining
Element widths	180 I 240 cm
Element lengths	540 cm
Forming areas	9.72 m^2 (180 x 540 cm) I 12.96 m^2 (240 x 540 cm)
Table height	12 cm steel frame profile
Form lining type	15 mm ECOPLY® full plastic composite sheet
Weight	422 kg (180 x 540 cm) I 495 kg (240 x 540 cm)
Corrosion protection	Hot-dip galvanisation and powder-coating
Standard shoring	EUROPLUS*new*® props 20 kN I 30 kN I GASS®
Special shoring	MODEX® shoring I GASS®
Bearings	TOPMAX® folding head I Connection bearing
Adjustments	Support girder with RASTO® panel I Timber holder & fillers
Forming/stripping times	t = 0.15 – 0.30 h/m^2 *
Special features	· Table jack lift for fast horizontal transportation · Integrated safety with PROTECTO® and EXTRAGUARD® edge guard systems · Very robust for a long service life



The TOPMAX-GASS multi-adapter allows to attach TOPMAX panels in combination with the TOPMAX folding head to the GASS support (single props or towers). The adapter is fixed to the GASS support with four ring bolt clamps from GASS leg to GASS leg.

* Time calculation (average) by Hünnebeck

TOPMAX®

Easy to use, efficient and very safe: TOPMAX is a steel-frame floor table. With just four props, the tables can support slabs with a thickness of 50 cm without additional static calculation.

Product benefits

Quick

Large forming units up to 26 m^2 transferable in just a single crane pick

Economical

Low transportation volumes and stockyard costs due to low table thickness of just 12 cm

Low cleaning and repairs due to the powder-coating and all-round edge guard of the form lining

Easy handling

Specially developed folding heads with self-securing pins make it effortless to connect props

The TOPMAX table lifting system is a useful alternative whenever a crane is not available

The ability of the folding head to swing up with the prop makes it easier to overcome barriers when necessary

Versatile

For special adjustments and infill areas, TOPMAX floor tables can be easily combined with RASTO panels

The TOPMAX multi-adapter allows to attach TOPMAX panels in combination with the TOPMAX folding head to the GASS support (single props or towers). The adapter is fixed to the GASS support with four ring bolt clamps from GASS leg to GASS leg.

Strong & durable

Very stable steel frame which is hot-dip galvanised and powder-coated

ECOPLY full plastic composite sheet

Safe

High safety measures due to compatibility with PROTECTO edge guard system

High safety measures due to compatibility with PROTECTO edge guard system

Large forming units up to 26 m^2 transferable in just a single crane pick

Easy forming of infill and adjustment areas with timber holder or standard RASTO panels

Low transportation volumes and stockyard costs due to low table thickness of just 12 cm

Application & use

- Large slab surfaces with regular ground plans

TOPMAX® integrates with

- RASTO®
- TOPEC®
- EUROPLUS®*new*
- PROTECTO®
- GASS®

If you would like to find out more, take a look at our video.

TOPEC®

TOPEC is an aluminium modular formwork slab system without beams.

Technical data

Product description	Modular slab formwork
Panel widths	45 I 60 I 75 I 90 I 180 cm
Panel lengths	90 I 180 cm
Adjustment panel	55 – 90 x 90 cm I 55 – 90 x 180 cm
Profile thickness	14 cm aluminium frame profile
Form lining types	ECOPLY® full plastic composite sheet I Plywood (340 g/m²)
Form lining thickness	11 mm ECOPLY full plastic composite sheet I 10 mm plywood
Weight per panel	Panel 180 x 90 cm = 22.20 kg Panel 180 x 180 cm = 47.10 kg
Relevant standards	Complies with DIN 18202
Max. slab thickness	75 cm (with 60 cm wide panels)
Corrosion protection	Powder-coating
Standard shoring	EURO PLUS*new* props 20 kN I 30 kN
Special shoring	MODEX scaffolding
Bearings	TOPEC bearing I Edge support N I Drophead
Forming/stripping times	t = 0.2 – 0.4 h/m²
Special features	· Adjustment panels (fully telescopic) · ECOPLY® full plastic composite sheet · Alternatively with TOPEC drophead for early striking · EUROPLUS*new* with quick-lowering mechanism · TOPEC lift hydraulically positions the panels exact and flush

Safe forming and stripping up to a height of 3.5 m from the ground in three easy working steps.
Just hook on – push up – prop it.

* Time calculation (average) by Hünnebeck

TOPEC®

TOPEC® modular slab formwork from Hünnebeck makes the shuttering and stripping of slabs much faster and demonstrably more economical than conventional slab formwork systems.

Product benefits

Easy handling

Robust yet lightweight aluminium design provides ergonomic and fatigue-free handling

Columns and other obstacles are easy to work around with TOPEC's adjustment solutions

Safe

Can easily be used with PROTECTO edge guard

Safe forming and stripping up to a height of 3.50 m from the ground in three easy working steps

Economical

Giant panel 180 x 180 cm covers a forming area of 3.24 m^2

Versatile

Versatile due to various adjustment parts and alternatives

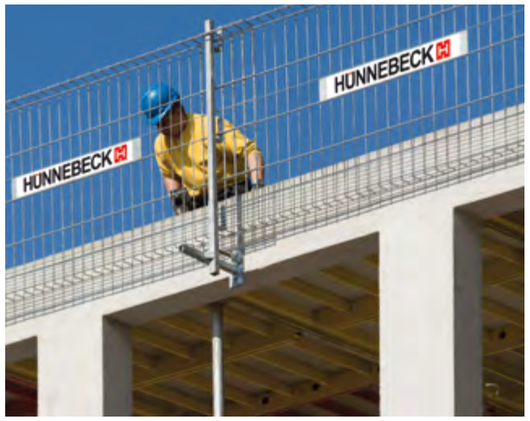
TOPEC can be used in combination with TOPMAX floor tables and serves as an ideal and speedy fill-in solution for adjustment areas

Adjustment panels can continuously extend in widths from 55 to 90 cm with no extra props required

Columns and other obstacles are easy to work around with TOPEC's adjustment solutions

This giant panel measuring 180 x 180 cm has a forming area of 3.24 m^2.

TOPEC's lightweight aluminium design ensures ergonomic and fatigue-free operations



Can easily be used with PROTECTO edge guard

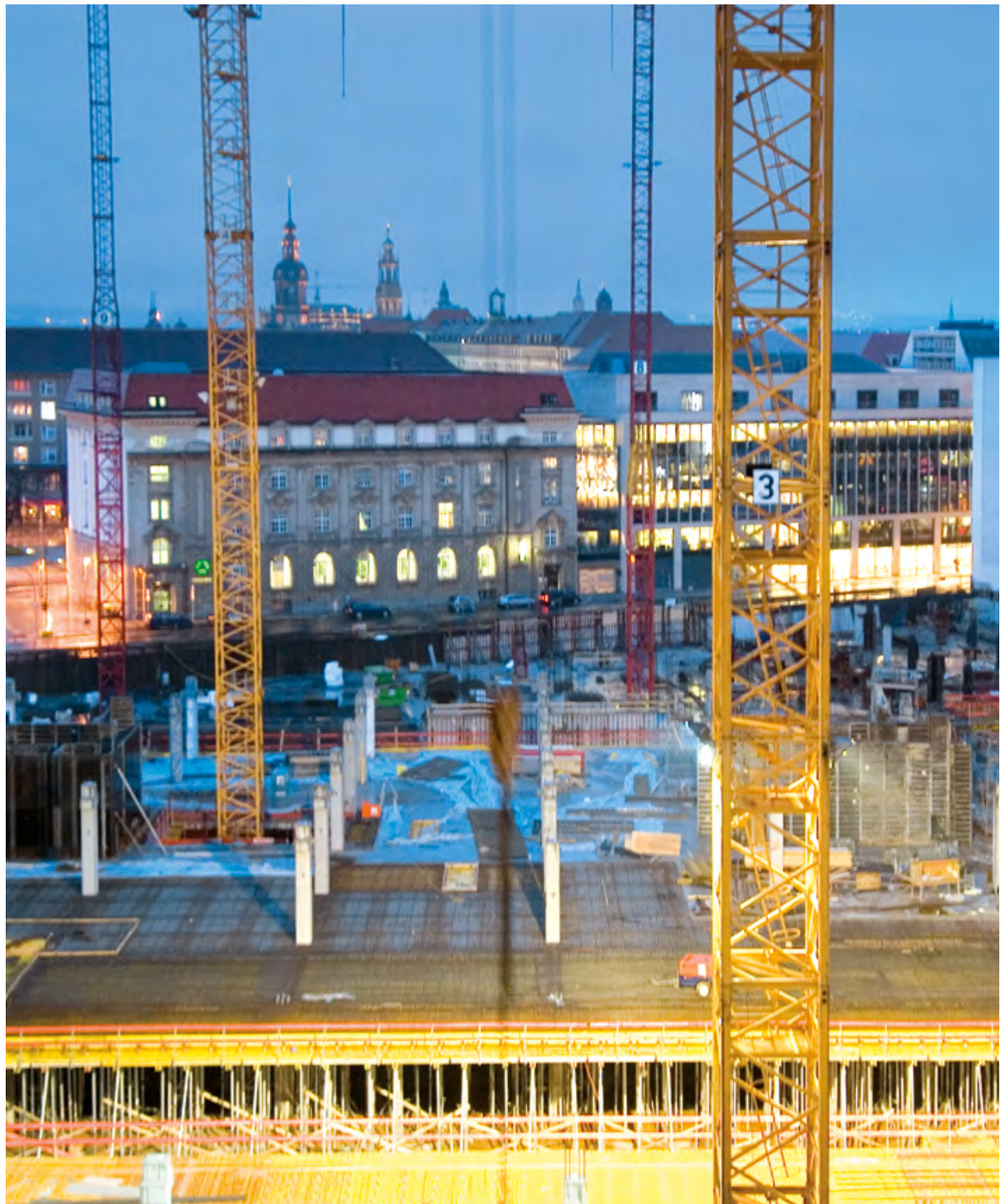
TOPEC® integrates with

- TOPMAX®
- MODEX® shoring
- EUROPLUS® *new*
- PROTECTO®

If you would like to find out more, take a look at our video.

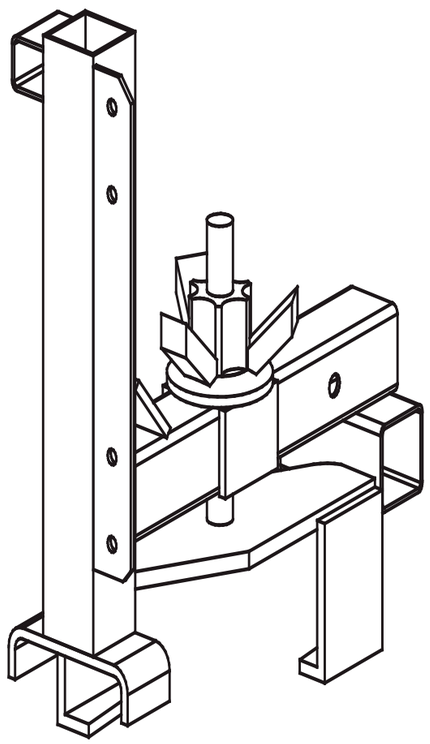
TOPFLEX®

TOPFLEX is a highly versatile timber beam system, suitable for any ground plan, any slab size and thickness.



Technical data

Product description	Timber beam slab formwork
Beam type	H 20 timber beam
Primary beam length	190 I 245 I 290 I 330 I 360 I 390 I 450 I 490 I 590 I 1190 cm
Cross beam length	(see primary beam lengths)
Beam width	8 cm
Beam thickness	20 cm
Form lining	21 mm shuttering panel 3-S I 150 x 50 I 200 x 50 cm
Beam weight	5.0 kg / m
Standard props	EUROPLUS*new* 20 kN I EUROPLUS*new* 30 kN
Other props/shoring	ID 15*new* I INFRA-KIT I MODEX I GASS
Joist connection system	Joist clamp I Joist beam 500
Special features	· Quick and facilitated lowering with lowering pin on EUROPLUS*new* props · Integrated safety with the PROTECTO timber beam connector



Integrated safety measures with the PROTECTO timber beam connector. This is a connecting part and holding device for the PROTECTO railing post on standard timber beams with heights of 20 or 24 cm.

TOPFLEX®

In combination with tubular props, tripod stands, fork heads and shuttering panels, TOPFLEX provides versatile, yet cost-effective slab formwork for any geometry.

Product benefits

Versatile

Highly versatile system can accommodate any floor plan and/or building geometry

TOPFLEX application for great heights with ID 15*new* as means of shoring

Optimal prop arrangement for the given loads as a result of variable distances between props

Easy handling

Handy and dimensionally stable three-ply panels consist of three wooden veneers and a melamine coating on both sides

Stripping is made easier by lowering the forming plane by about 6 cm using the adjustment nut of the steel props

Practical due to its low weight

EUROPLUS*new* props with quick-lowering mechanism and in various lengths

Safe

Safety on site: side protection is easily provided thanks to compatibility with PROTECTO edge protection system

Quick

Clever and useful accessories save labour and achieve outstanding results faster

Economical

Long service life due to its high-grade bonding and its rounded beam ends

Stripping is made easier by lowering the forming plane by about 6 cm using the adjustment nut of the steel props

Optimal prop arrangement for the given loads as a result of variable distances between props

Application & use

- Concrete slabs regardless of ground plan, slab size and thickness

TOPFLEX® integrates with

- EUROPLUS®*new*
- ID 15*new*
- MODEX® shoring
- INFRA-KIT
- PROTECTO®

HÜNNEBECK
BY BRAND SAFWAY

FORMWORK ACCESSORIES

TOPMAX Mover
Euro Trolley

TOPMAX Mover

The extra-slim TOPMAX Mover carriage for safe and fast horizontal movement of formwork systems.

Technical data

TOPMAX Mover	
Dimensions	1.00 m x 1.80 m
Weight	1,630 kg
Lifting capacity	Max 1 t
Application above ground	1.90 m – 7.50 m
Drive system power	4 kW
Lift system power	2 kW
Operation time	8 to 10 hours
Battery capacity	24 V / 350 Ah
Charging time	8 to 10 hours

Product benefits

TOPMAX Mover
Particularly narrow dimensions and high manoeuvrability facilitate navigation in confined spaces and between supports
High lifting capacity of 1 t
Travel heights between 1.90 m and 7.50 m
Battery operation with charging via 220 V to 240 V socket
Safe moving thanks to integrated crane attachment points

Safe moving thanks to integrated crane attachment points

Euro Trolley

You can move Hünnebeck transport aids with the help of the Euro Trolley. In addition, you can firmly connect the transport aids to the Euro Trolley and then move the unit with the crane.

Product benefits

Versatile

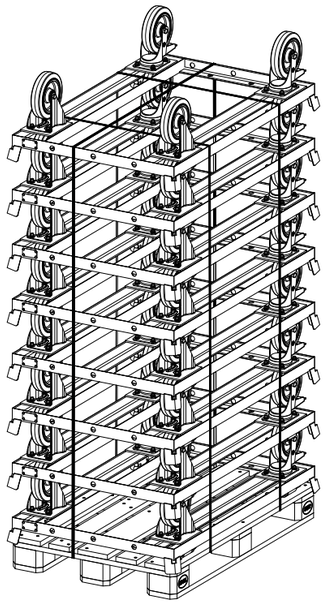
- Suitable for the Euro lattice box – for storing and transporting small materials
- Europlus*new* props, Du-Al beams and H20 K beams can be stored and transported with the Euro stacking frame
- Can also be used as a frame for the universal protective grids
- Can be moved manually or by crane

Economical

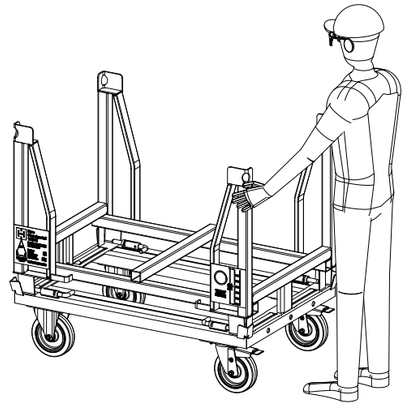
- The load capacity is up to 1,300 kg depending on the application
- Up to nine trolleys can be stacked on top of each other to save space

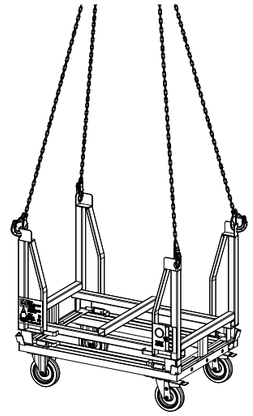
Safe

- The Euro Trolley has two lockable swivel castors



Up to nine trolleys can be stacked on top of each other to save space





Can be moved manually or by crane

HÜNNEBECK

BY BRAND⟩SAFWAY

INFRASTRUCTURE

INFRA-KIT

INFRA-KIT parapet traveller

QuikDeck®

Load-bearing frame prop

INFRA-KIT

INFRA-KIT is a modular system for infrastructure projects. It offers maximum flexibility with a minimal number of required system parts.

Technical data

INFRA-KIT L beam	For light applications
Fields of application	Tunnel construction; bridge and civil construction
Lengths of walers	100 I 125 I 150 I 200 I 250 I 300 I 350 I 400 I 450 I 500 I 550 cm
Waler connectors	Connectors to walers or spindles with or without additional spindle connection
Bolts	Load dependent Ø 16 and Ø 20
Spindle lengths	Spindles for light and heavy loads available; from 50 cm to 480 cm in different extension lengths
Corrosion protection	Fully galvanised
Accessories	Connection options to side protection systems, scaffold tubes and wheels

INFRA-KIT M beam	For moderately heavy applications
Fields of application	Tunnel construction; bridge and civil construction
Lengths of walers	150 I 200 I 250 I 300 I 350 I 400 I 450 I 500 I 550 I 600 cm
Waler connectors	Connectors to walers or spindles with or without additional spindle connection
Bolts	Load dependent Ø 20 and Ø 25
Spindle lengths	Spindles for light and heavy loads available; from 50 cm to 480 cm in different extension lengths
Corrosion protection	Fully galvanised
Accessories	Connection options to side protection systems, scaffold tubes and wheels

INFRA-KIT H beam	Heavy-duty shoring
Fields of application	Tunnel construction; bridge and civil construction
Main beam lengths	62 I 175 I 300 I 450 I 600 cm
Lengths of load-bearing frame props	50 I 75 I 100 I 150 I 200 cm
Load	Up to 210 kN load capacity per support
Beam connections	Beam joint with connecting bolts (18% flexural strength) Beam joint with screws (37% bending strength) Beam joint with beam joint plate and screws (83%) Butt plate joint with screws
Vertical supports	Load-bearing frame prop I INFRA-KIT beam I MkII soldiers I MODEX HD Tower
Support connections	Prop jack-2 I Pin-jointed base plate
Spindle range	0 cm – 30 cm I resp. 0 cm – 60 cm (with two prop jacks)
Angular compensation	0° to 10°
Application above ground	1.0 – 16.0 m (higher with separate structural analysis)
Corrosion protection	Fully galvanised
Accessories	Among others: Centring bar and clip I abutment clamping device I beam clamp I walkway bracket and post I wall strut

INFRA-KIT

Product benefits

Economical

Economic infrastructure construction with few system components and low planning effort

Load-optimised system components can transfer light, medium and heavy loads

Pre-assembly possible – greater efficiency especially in confined spaces

Safe

High level of working safety by using standard walkway brackets and PROTECTO or MODEX side protection

Quick

Fast and straightforward assembly due to plug connecting components and secured centering bar

Versatile

Suitable for every application: All three load classes have beams in different lengths

L and M system parts can be combined with the H system

Numerous connections for adapters and compensating connectors enable articulated or rigid connections and increase the variety of shapes to be produced

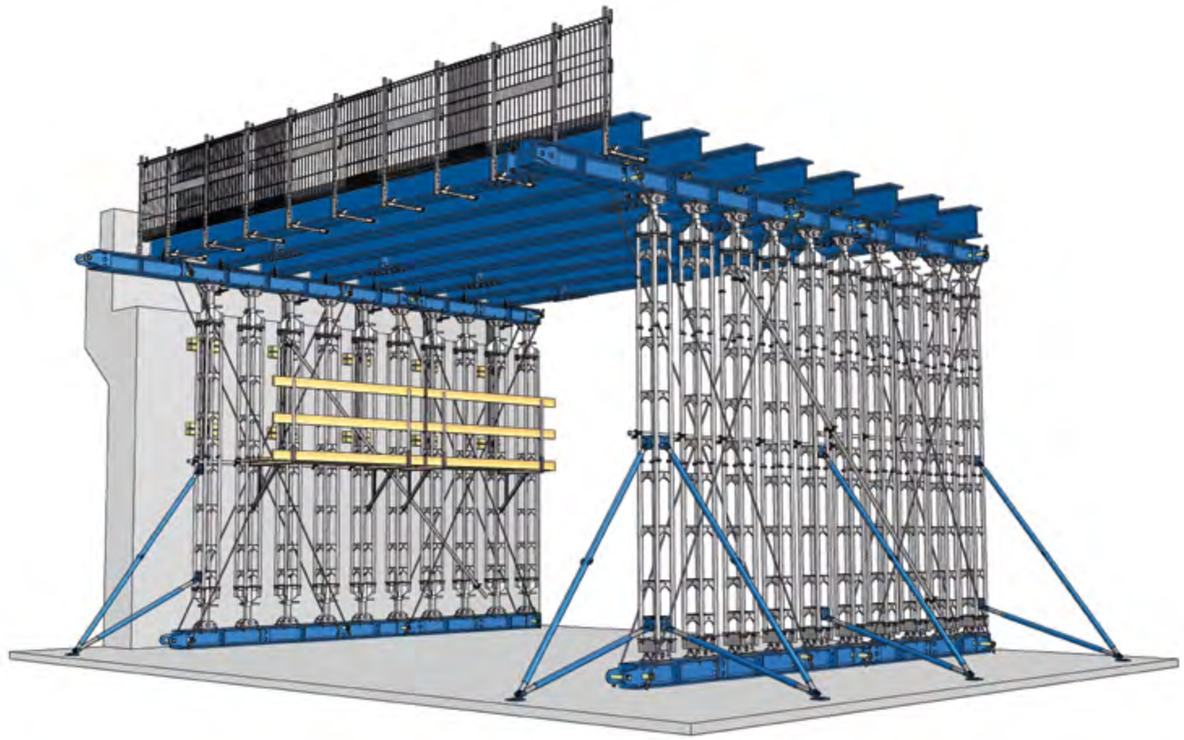
Easy insertion of tie rods for diagonal bracing

Strong & durable

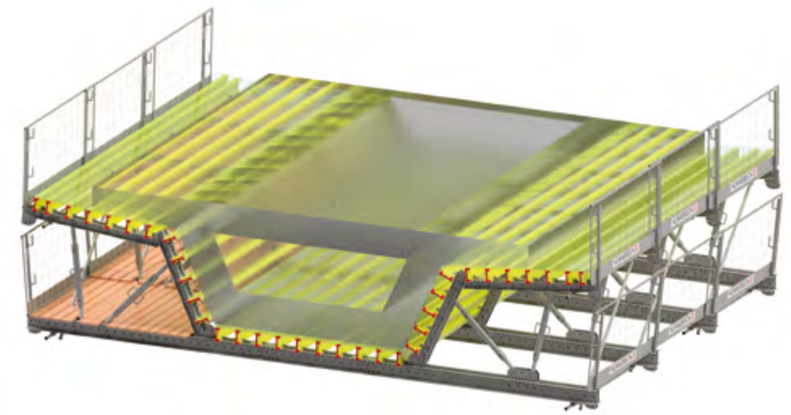
All materials consist of hot-dip galvanised steel

High load-capacity due to the load-optimised system parts

INFRA-KIT is available in three versions: INFRA-KIT L & M are ideal for light and moderately heavy applications; INFRA-KIT H is suitable for carrying the heaviest loads.



INFRA-KIT H: Thanks to the large load capacity, even wide-span passages and high supporting structures can be easily implemented.



INFRA-KIT L and M are used, for example, for the erection of trusses and transfer light and medium loads from a wide range of formwork or building geometries.

Application & use

- Tunnel construction
- Bridge and civil construction
- Renovation
- Heavy-duty towers
- Temporary passages
- Solid slabs

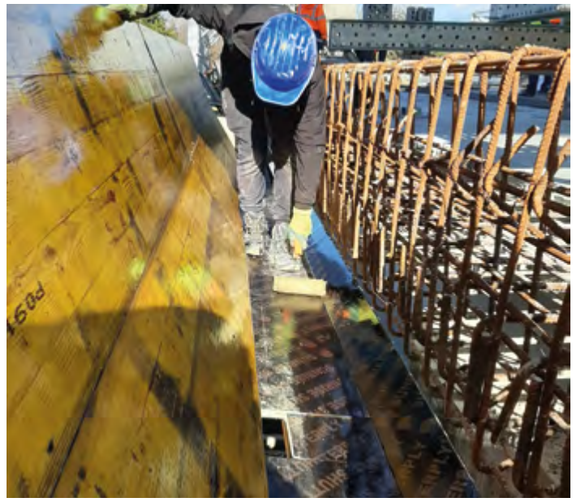
INFRA-KIT® integrates with

- PROTECTO side protection
- MODEX side protection
- Load-bearing frame prop

If you would like to find out more, take a look at our video.

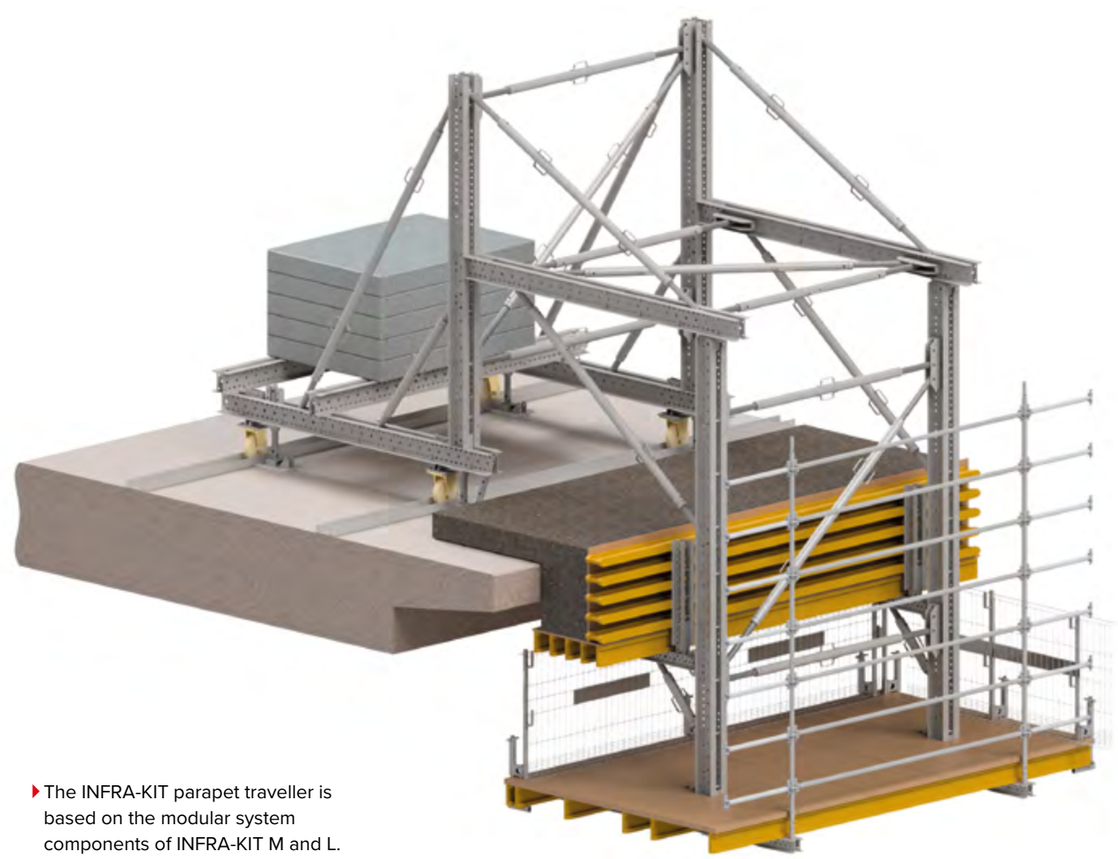
INFRA-KIT Parapet traveller

Variable-use parapet traveller for the efficient production or renovation of parapets. Can be used for any bridge length, any bridge radius and also for special geometries.



Technical data

Product description	Parapet traveller for bridge construction
Rail profiles	U-profiles; width adjustable according to application
Spindle struts	Any size possible from 50 – 480 cm
Lengths of scaffold tubes	50 I 100 I 150 I 200 I 250 I 300 I 350 I 400 I 450 I 550 I 600 cm
Couplers	Rigid, swivel and half couplers
Lengths of walers	**INFRA-KIT M** 150 I 200 I 250 I 300 I 350 I 400 I 450 I 550 I 600 cm **INFRA-KIT L** 100 I 125 I 150 I 200 I 250 I 300 I 350 I 400 I 450 I 550 cm
Weights	**INFRA-KIT M** 73.84 – 298.3 kg = Ø 185.9 kg/running metre **INFRA-KIT L** 25.45 – 142.12 kg = Ø 78.68 kg/running metre
Load transfer	Loads are transferred via the IK jack (180 kN). Heavy-duty fixed and swivel castors 30 kN/60 kN
Beam connections	Numerous different adapters available. All adapters can be bolted together
Corrosion protection	Fully galvanised
Accessories	Wheel connection, heavy-duty fixed castors, heavy-duty swivel castors, jack, PROTECTO/MODEX side protection system



The INFRA-KIT parapet traveller is based on the modular system components of INFRA-KIT M and L.

INFRA-KIT Parapet traveller

Standardised system components reduce the planning effort and enable quick assembly on site. Can also be used for bridges with strong transverse and longitudinal inclinations.

Product benefits

Economical

Quick assembly and disassembly: Pre-assembly possible. Bolting of the adapters substantially reduces time-consuming screwing

Anchoring to the structure not required

Operation in a few seconds allows rapid work progress

High load capacity for optimum system utilisation

Versatile

Flexible arrangement of beams and spindles thanks to numerous adjustment options. Traveller can therefore be adapted to any parapet

Continuously perforated U-beams for installing the fasteners at any point.

Formwork can be used at any desired angle

Can also be used as a demolition traveller

Strong & durable

The traveller is moved on stable fixed and swivel castors on U-steel profiles

Robust and durable system components thanks to hot-dip galvanisation

Safe

High level of occupational safety by using PROTECTO or MODEX side protection

Anchoring to the structure not required

Operation in a few seconds allows rapid work progress

Continuously perforated U-beams for installing the fasteners at any point. This allows the formwork to be used at any desired angle

Application & use

- Parapet travellers in bridge construction

INFRA-KIT PARAPET TRAVELLER integrates with

- INFRA-KIT M and L
- PROTECTO

QuikDeck®

QuikDeck is a high-performance suspended platform that can be erected quickly and assembled in almost any shape and size.

Technical data

Product description	Suspended work platform
Beam lengths	42 I 83 I 123 I 125 I 128 I 168 I 177 I 208 I 250 cm
Beam connections	Knots
Planks	122 x 244 x 1.9 cm
Length of suspension chains	180 I 360 I 550 I 730 I 1230 cm
Corrosion protection	Load-bearing components are hot-dip galvanised
Load capacity	Up to 300 kg/m² (load class 4)

QuikDeck provides safe and spacious work platforms for new constructions, refurbishment and repair work

Trent River Bridge (UK): QuikDeck provides large safety margins thanks to high load capacity of the suspension chains

The QuikDeck suspended platform enables work without interruption, e.g. during bridge renovations. There is usually no need for traffic closures – on or under bridges

QuikDeck®

Product benefits

Efficient
Fast delivery to the place of use thanks to a capacity of 460 m² per low-loader truck
Work in parallel is possible with up to seven work platforms on top of each other that are accessible for machines
Material savings thanks to the gradual shift of the work platforms depending on the progress of work
High assembly speed due to small number of components
Load capacity up to 300 kg/m² (load class 4) depending on configuration

Safe
Clear and trip-free working environment thanks to clean, smooth surfaces
Protection from falling equipment, debris or tools due to robust construction
Large safety margins thanks to high load capacity of the suspension chains

Easy handling
Easy and fast assembly without special tools or knowledge
Important components are equipped with handles
Dismountable components fit through narrow openings

Versatile
Suitable for new construction, renovation and repair
Constructions in almost any size and shape possible thanks to modular design
Installation in the air or on the ground

QuikDeck makes it possible to work without interruption, e.g. during bridge renovations. There is usually no need for traffic closures – on or under bridges.

The QuikDeck platforms suspended from the Romanian railway bridge of Caracău Viaduct provide a consistent, safe working level and replace classic spatial scaffolding. This lowers the costs of bridge maintenance and speeds up the work

Madison Square Garden (New York City)
During renovation work in Madison Square Garden, Penn Station, which is located underneath and serves as a major transportation hub in New York, had to remain open. QuikDeck was the perfect solution for worker access

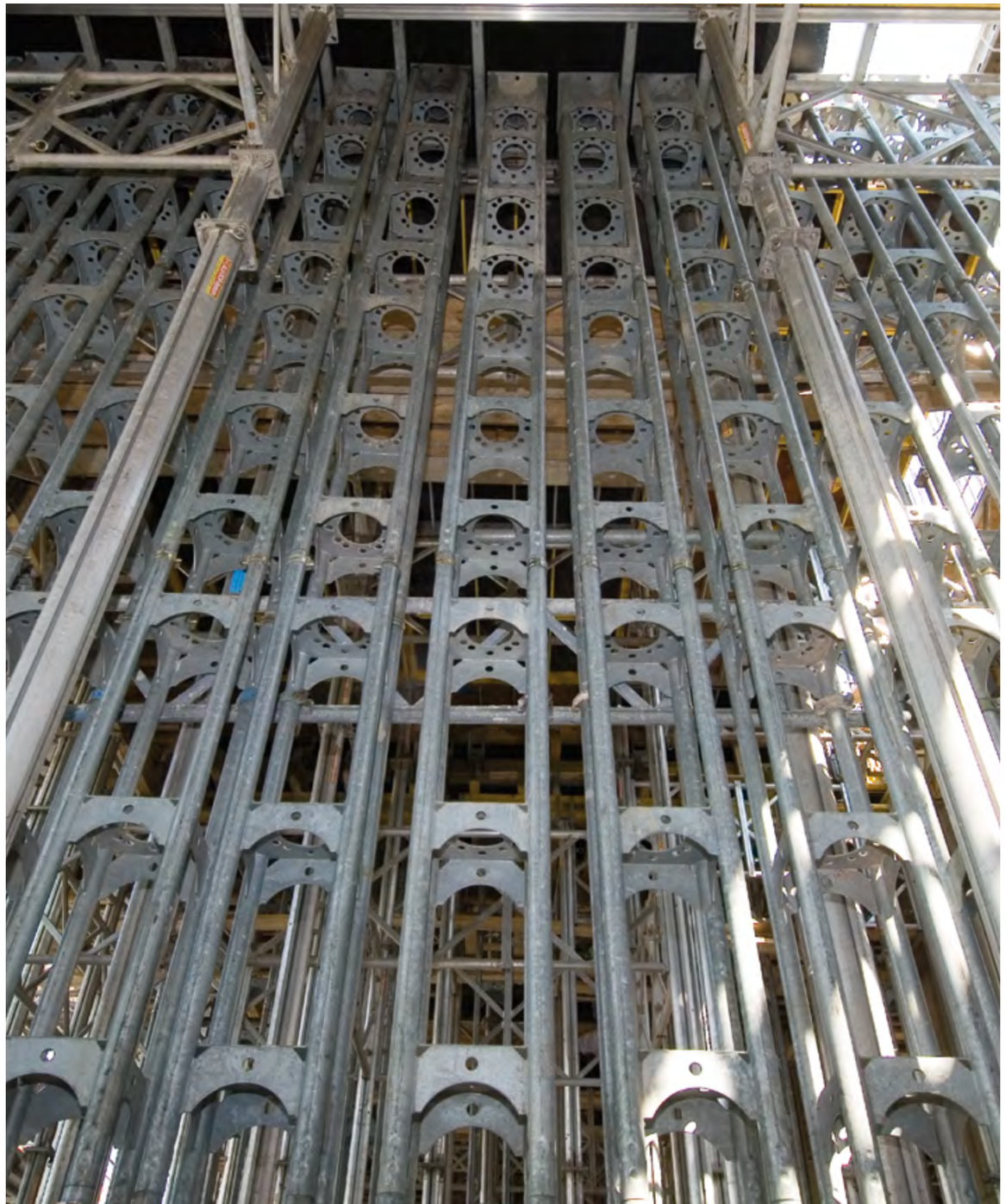
Application & use

- Restoration and renovation works on bridges, in railway station or airport buildings, in power stations or on large roofing structures

If you would like to find out more, take a look at our video.

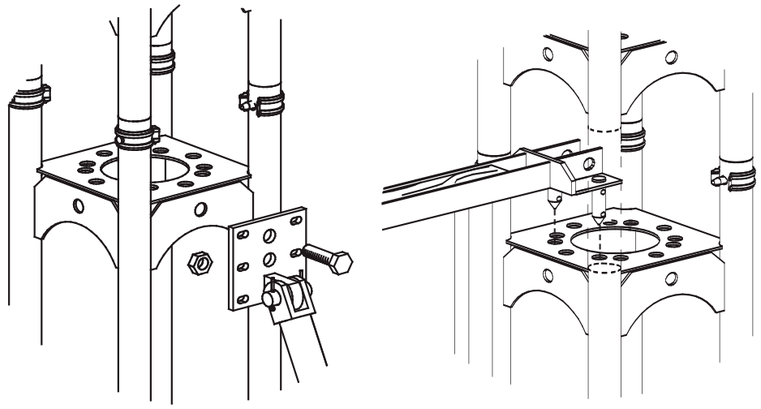
Load-bearing frame prop

The Hünnebeck load-bearing frame prop is well suited for all applications where particularly high loads have to be supported safely and economically.



Technical data

Product description	Load-bearing frame prop for high loads
Material	Steel
Basic dimensions	25.00 x 25.00 cm (4 posts)
Frame section lengths	100 I 150 I 200 cm
Head section lengths	50 I 75 cm
Spindle range	From 0 cm to 60 cm (using two prop jacks)
Angular compensation	0° to 7° or 10° (depending on surface)
Typical application heights	1.90 to 10.0 m
Type approval	Heights up to 14 m (with wind) I 16 m (without wind)
Connections	Using L-bolts and connecting spigots
Component max. weight	Load spindle-2 = 50.0 kg
Relevant standards	Complies with DIN EN 12812
Max. load capacity:	210 kN at approx. 4.0 m I 185 kN at approx. 7.20 m
Corrosion protection	Hot-dip galvanisation
Suitable as	Single prop I Load tower I Braced series
Accessories	M-walkway bracket and railing post I Wall strut



The stiffening bulkhead plates of the frame prop offer many solutions for the connection of scaffold tubes for bracing, working platforms and struts.

Load-bearing frame prop

All components of the load-bearing frame prop are robust and galvanised for a long service life. The load-bearing frame prop has a system dimension of 25 cm x 25 cm and can be loaded with up to 210 kN. A type approval for heights up to 16 m (without wind) is available.

Product benefits

Strong & durable

Very high load capacity up to 210 kN even with small base dimensions of only 25 x 25 cm

Versatile

Versatile configuration of the prop jack, selectively at the top and/or at the base of the load-bearing frame prop

Continuously variable adjustment of the articulated prop jack as a result of the 30 cm high spindle range

Various connection possibilities for wall struts, bracing, and walkway brackets

Frame sections in different heights for versatile application

Vertical and horizontal application possible

Safe

Safe use due to officially approved calculation for prop heights up to 14 m (with wind) and up to 16 m (without wind)

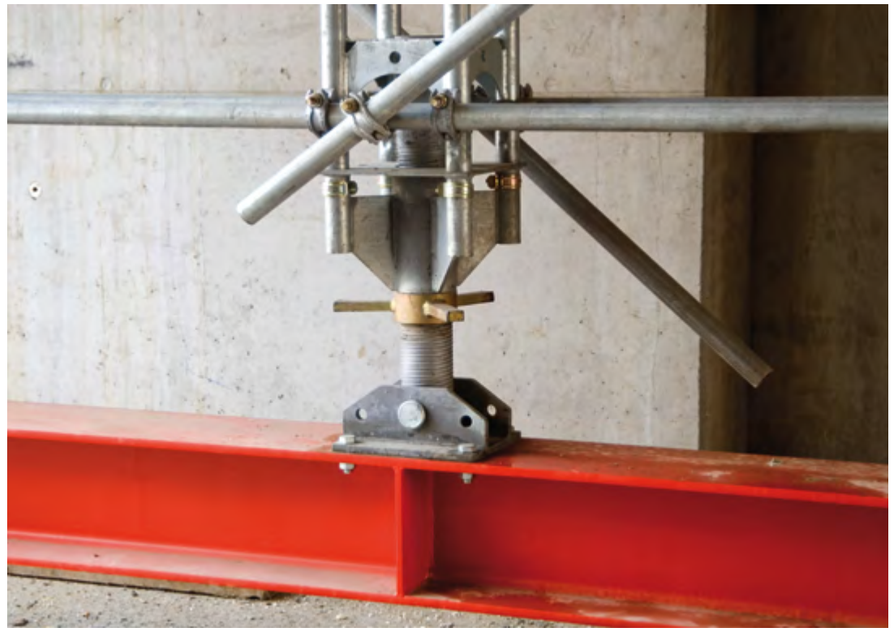
Easy handling

Simple L-bolt and spigot connections enable simple on-site assembly

Easy assembly due to the low weight of basic components and simple bolt connections

Very high load capacity up to 210 kN even with small base dimensions of only 25 x 25 cm

Continuously variable adjustment of the articulated prop jack as a result of the 30 cm high spindle range



Load-bearing frame props used as shoring solution for an unobstructed site underpass

Application & use

- Heavy slabs
- Superstructures
- Site underpasses

LOAD-BEARING FRAME PROP integrates with

- INFRA-KIT

HÜNNEBECK

BY BRAND SAFWAY

SHORING

EUROPLUS® *new*

ID 15*new*

ST 60

GASS®

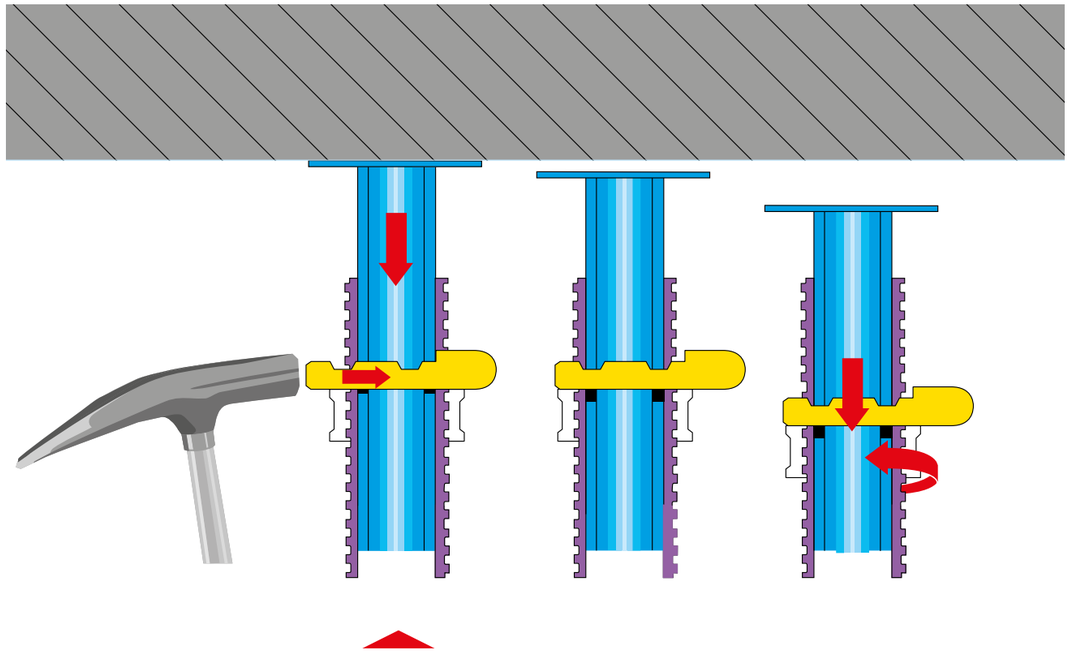
MODEX®

EUROPLUS®*new* props

EUROPLUS*new* is the innovative tubular steel prop with an integrated quick-lowering mechanism.

Technical data

Product description	Tubular steel props for shoring
Prop type & lengths	EUROPLUS*new* 20 – 250 I 300 I 350 I 400 I 550 cm
Load capacity	Up to 20 kN as single prop
Threaded locking nut	Coloured black to indicate 20 kN load capacity I Galvanised and powder-coated
Adjustment range	From 1.47 m (20 – 250) up to 5.50 m (20 – 550)
Prop type & lengths	EUROPLUS*new* 30 – 150 I 250 I 300 I 350 I 400 cm
Load capacity	Up to 30 kN as single prop
Relevant standards	EN 1065
Threaded locking nut	Coloured red to indicate 30 kN load capacity I Galvanised and powder-coated
Adjustment range	From 1.04 m (30 – 150) up to 4.00 m (30 – 400)
Average weight	10.7 to 36.0 kg
Corrosion protection	Fully galvanised on inside and outside of tubes
Zinc coating	70 µm for prolonged service life
Pegging holes	Lasered numbering for faster setting
Setting & adjusting	Quick setting via pegging holes I Fine tuning
Stripping	For quick lowering by 3 mm



Quick-lowering mechanism for simple and fast striking (even under occurring loads)

EUROPLUS®*new* props

The product's highlight: its quick-lowering mechanism. It allows you to lower the prop by 3 mm just by the stroke of a hammer. The props are available in ten different versions, divided into different extension lengths and loads of either 20 kN or 30 kN.

Product benefits

Safe

Safe on-site handling thanks to 10 cm anticrush-guard as well as dropout failsafe

Clear differentiation of load capacities due to color-coded threaded locking nuts minimises mistakes on-site

Pegging holes have lasered numbers for easier and faster setting

Safe transportation of props in EUROPLUS*new* props stacking frame

Quick

Lowering is twice as fast in comparison to conventional props due to the integrated quick-lowering mechanism

Versatile

EUROPLUS*new* props can be used in virtually all slab formwork systems

EUROPLUS*new* props come in different sizes and capacities

Strong & durable

High service life as a result of the seamless hot-dip galvanisation on the inside and outside of the tubes

Faster setting of extension length thanks to lasered numbering at pegging holes

Safe transportation of props in stacking frame

High service life as a result of the seamless hot-dip galvanisation on the inside and outside of the tubes

Application & use

- Shoring of slabs up to a height of 5.50 m

EUROPLUS®*new* props integrate with

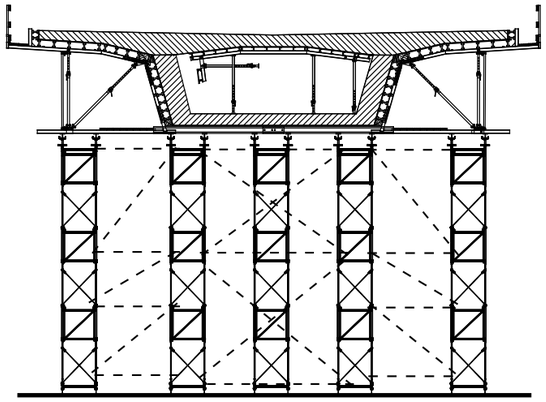
- TOPMAX®
- TOPEC®
- TOPFLEX®
- H 20 timber beams
- R 24 timber beams

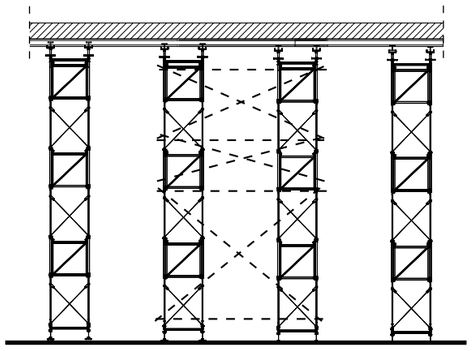
ID 15*new*

ID 15*new* frame supports are one of the most frequently used shoring systems with a load capacity of up to 180 kN per tower.

Technical data

Product description	ID 15*new* frame supports
Basic dimensions	100 x 100 cm
Frame heights	100 I 133 cm
Typical application heights	1.42 – 20.1 m
Type approval (min. to max.)	4.75 – 12.76 m (heights > 12.76 m with structural analysis)
Average weight	Approx. 42.0 kg/vertical metre
Relevant standards	Complies with DIN EN 12812
Max. load capacity:	180 kN per tower (45 kN per leg)
Connections	Integrated quick-action connectors I Couplings
Corrosion protection	Full hot-dip galvanisation
integrate with	H 20 timber beams I R 24 timber beams I Steel profiles I DuAl beams
Erection/dismantling times	Approx. 0.17 h/vertical meter (each) * I 0.34 h/vertical meter (total) *
Special features	• Horizontal and vertical erection and dismantling possible • Fast transfer of shoring towers with a crane • New diagonal rungs I Planks I H 20 console





Bridge and slab construction are typical applications for ID 15*new*. Previous operational planning and preparations improve the quick and safe assembly of the ID 15*new* frame support.

* Time calculation (average) by Hünnebeck

ID 15*new*

ID 15*new* frame supports are just right everywhere where high weight must be supported even with varying loads per leg, and even in confined spaces.

Product benefits

Strong & durable

- High load capacity of 180 kN per tower even with small base dimensions (1.00 m x 1.00 m)
- Long service life due to complete exterior and interior hot-dip galvanisation

Safe

- Safer working areas at even greater heights thanks to the new rungs, planks, and H 20 console
- Diagonal rungs ensure a sound footing during vertical assembly and dismantling

Easy handling

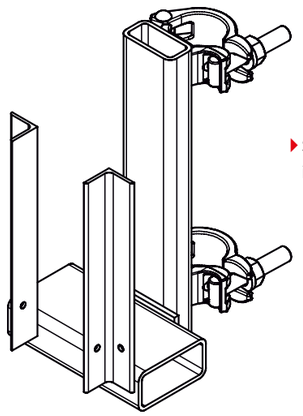
- ID 15 planks are secured with integrated latches against uplift and accelerate vertical erection and dismantling
- Easy connections of parts via quick-action fasteners
- Horizontal and vertical erection and dismantling possible

Quick

- Time-saving handling due to the one-man assembly utilising integrated quick-action connector

Economical

- Required shoring heights are attainable using just six different lightweight components
- Trusted and efficient shoring application for high loads in confined spaces
- Basic shoring towers consist of just six basic components



Special H 20 console allows the installation of safe working decks

High load capacity of 180 kN per tower even with small base dimensions (1.00 m x 1.00 m)

ID15*new* is fully compatible with the TOPFLEX slab formwork system

Application & use

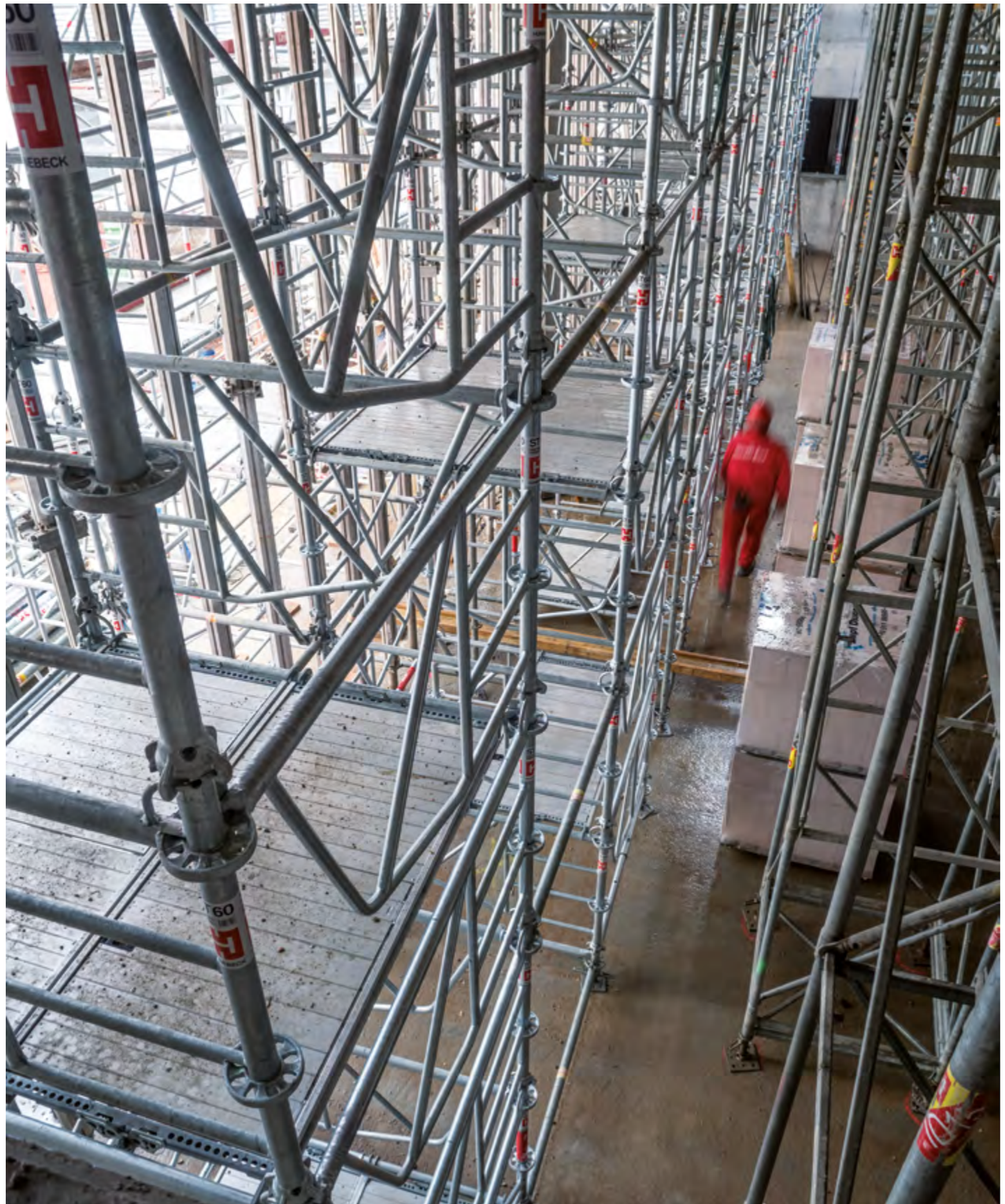
- Shoring system for high loads

ID 15*new* integrates with

- PROTECTO®
- TOPFLEX®

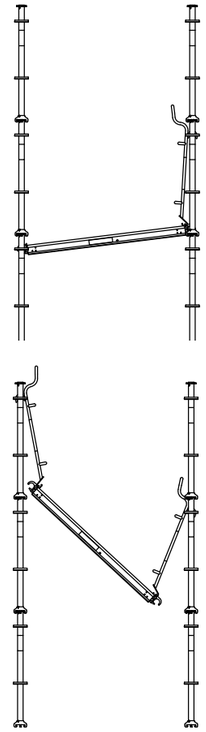
ST 60

ST 60 is an innovative shoring system remarkable for its easy handling and exceptional safety.



Technical data

Product description	ST 60 shoring tower
Basic dimensions	Three tower widths with just two frames: 113 x 113 cm I 150 x 150 cm I 113 x 150 cm
Typical application heights	3.00 to 15.00 m
Scaffold boards	Load Class 4 (drop test approved acc. to EN 12811)
Relevant standards	Complies with EN 12811, EN 12812
Max. load	240 kN per tower (60 kN per leg)
Connection elements	Secure with wedge mechanism
Corrosion protection	Hot-dip galvanisation
Special features	• Up to 62 cm jack height • Tight and pressure-resistant frame connections with bayonet lock • Frames secured in position for safe transportation • Just one stacking rack for all frame sizes • Boards designed to prevent slipping when stacked



Patented solution to transfer boards easily and ergonomically to the next level

ST 60

Product benefits

Safe

Safe assembly at all times with surrounding side guards

Ergonomic, fatigue-free work due to low weight of the elements (< 15kg)

High load-capacity of 240 kN per shoring tower

Economical

Only a few basic components are required – for a high utilisation rate and increased efficiency

The load-bearing MODEX nodes at 50 cm intervals on the ST 60 frame enable force-locked connections in eight directions

Versatile

Three versatile system dimensions and the variable installation height at one-meter intervals make it easily possible to adjust any ST 60 shoring tower optimally to the individual construction site

Easy handling

Patented solution to deck climbing to next level easily and ergonomically

ST 60 focuses on just six basic parts to allow a high utilisation rate. The low weight of the parts (max. 15 kg each) and ergonomic board transfer ensure quick, safe and effortless work. The modular design enables the construction of shoring towers that can withstand high loads, in three system dimensions.

Safe assembly at all times with surrounding side guards

High load-bearing capacity of 240 kN per tower

Good system utilisation and cost effectiveness thanks to low parts count

Application & use

- Shoring tower
- High-performance room scaffold

ST 60 integrates with

- MODEX® scaffolding
- H 20 girders
- R 24 girders
- Aluminium and steel profiles

If you would like to find out more, take a look at our video.

GASS®

GASS is a lightweight, high capacity shoring system that is easy to use, fast to erect and involves only a small number of components.

Technical data

Product description	Aluminium shoring system
Outer leg lengths	140 I 249 I 358 I 467 cm
Inner leg lengths	78 I 168 cm
Extension leg lengths	50 I 140 I 249 I 358 I 467 cm
Ledger frame lengths	120 I 180 I 240 I 300 cm
Ledger frame depth	100 cm
Ledger frame connection	Integrated hammer wedge
Decking types	Access platform decks or scaffold boards (fixed to ledger frames)
Decking platform lengths	180 I 240 I 300 cm (also with trap door)
Max. load capacity:	Up to 140 kN per leg
Typical application heights	2.79 m to 19.6 m
Relevant standards	EN 12812

Strong team:
The combination of TOPMAX steel frame floor table and GASS shoring towers saves time and money. For the construction of Oslo's new National Museum of Art, Architecture and Design the systems were used for shaping the up to 50 cm thick slabs mounted at heights of up to 7.65 m.

GASS®

Product benefits

Economical

Heavy-duty capacity of up to 140 kN reduces the amount of equipment required

Quick and easy assembly with just three main components

Combination with TOPMAX slab tables for quick and efficient forming of big slab areas

Easy handling

Lightweight, yet strong aluminium components

Versatile

Unique locking ledger frames located at any position along the outer leg

Applicable with the DU-AL aluminium beams as well as MKLL soldiers

Ideally suited to high-rise construction projects

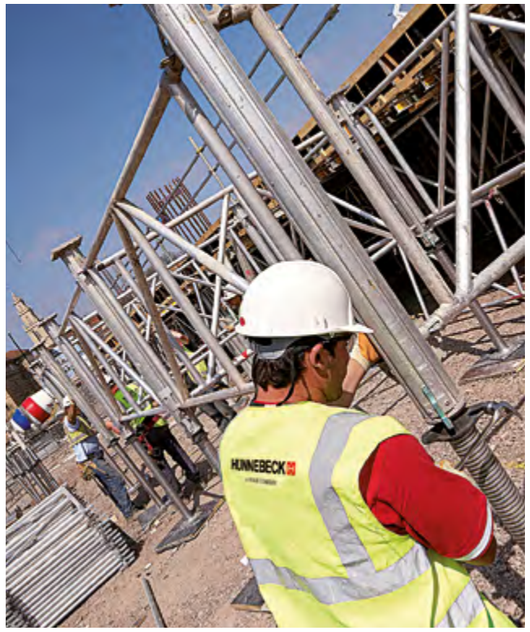
Safe

Platform decks can be fixed onto ledger frames

Integral safe guardrail with working platform

GASS has been developed through extensive experience gained from working on some of the largest and most demanding construction projects worldwide. With just three main components, assembly is quick and simple.

Heavy-duty capacity of up to 140 kN reduces the amount of equipment required



Lightweight, yet strong aluminium components

Quick and easy assembly with just three main components

Bridge deck and parapet shoring

Application & use

- Single prop
- Shoring tower
- Falsework
- Floor table

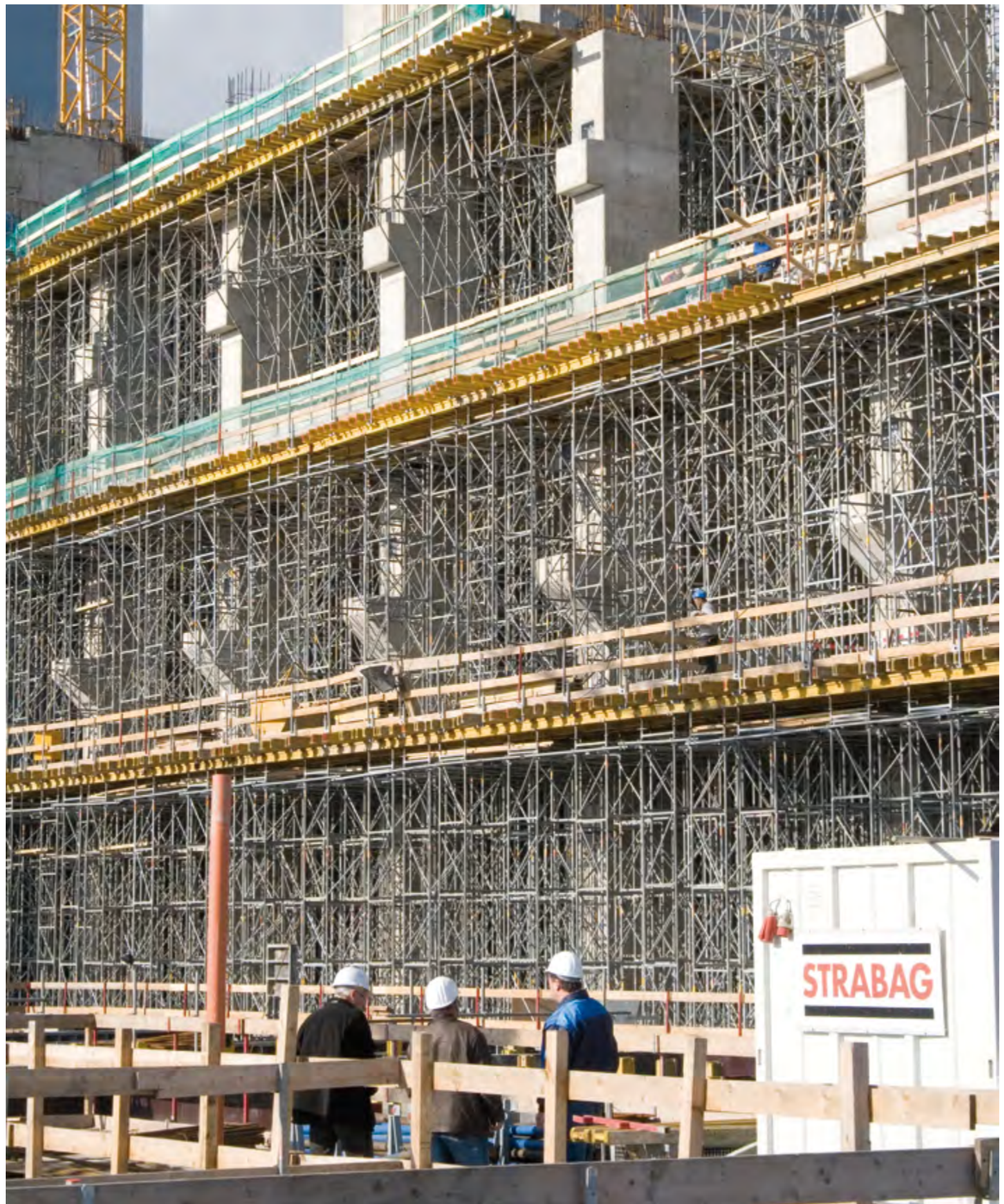
GASS® integrates with

- TOPMAX®
- DU-AL aluminium beams
- MKII soldiers

If you would like to find out more, take a look at our video.

MODEX®

MODEX is a versatile modular scaffolding system with high load-bearing capacity. Ideal for complex construction projects.



Technical data

Product description	MODEX shoring applications
Vertical post lengths	100 I 150 I 200 I 300 I 400 cm
Connecting cups	50 cm grid I Eight possible connections in every direction
Ledger lengths	25 I 74 I 82 I 90 I 101 I 113 I 125 I 150 I 168 I 180 I 200 I 250 I 300 I 400 cm
Connection type	Via undetachable wedge
Plank types	Hollow box plank I Steel plank I Alu frame deck
Base jack type	Base jack 45/3.80 I 70/3.80 I ID-base jack 38/52
Component max. weight	Vertical leg 400 = 20.2 kg
Load capacity	Leg loads up to approx. 50 kN possible
Relevant standards	Complies with EN 12810 I EN 12811 I EN 12812
Corrosion protection	Complete hot-dip galvanisation of all system parts
Erection/dismantling times	8 – 10 h/t *
Special features	· Connecting node cups every 50 cm enable force-locked joints · Versatile placement of work platforms · Six additional connections possible with the Variocup

Ideal flexibility as a result of 8 possible connections in horizontal, vertical, and diagonal directions

* Time calculation (average) by Hünnebeck

MODEX®

Product benefits

Versatile

Ideal flexibility as a result of 8 possible connections per node in horizontal, vertical, and diagonal directions

Customisable for various shoring applications and compatible with most slab formwork systems

Vertical posts in different lengths

Extensive accessory parts program

Strong & durable

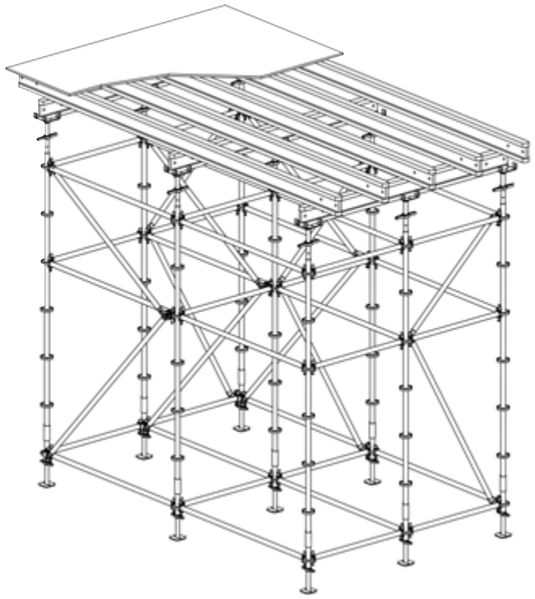
High leg loads of up to 50 kN and incredible stability thanks to force-locked connections

MODEX heavy duty shores carry loads of up to 215 kN

Fully galvanised

Safe

Safe one-man assembly at any height due to the upturned edge on the connection cups



MODEX accommodates a multitude of uses, including shoring for timber beam formwork

Whether it is used as a shoring scaffold, reinforcement scaffold, access tower or for facade retention: There is hardly anything that could not be solved by using the MODEX modular scaffolding system. It can also accommodate greater shoring heights, sloping ceilings and shoring for timber beam formwork.

Easy handling due to intuitive construction-kit system with just 4 basic elements

MODEX can also accommodate greater shoring heights

Application & use

- Facade scaffold
- Suspended scaffold
- Stair towers
- Mobile scaffold
- Temporary bridges
- Heavy-duty shoring

MODEX® integrates with

- TOPEC®
- TOPFLEX®
- Aluminium beams
- Timber beams

HÜNNEBECK

BY BRAND⟩SAFWAY

SAFETY

PROTECTO®

HÜNNEBECK EPS

FALKO

Folding scaffold

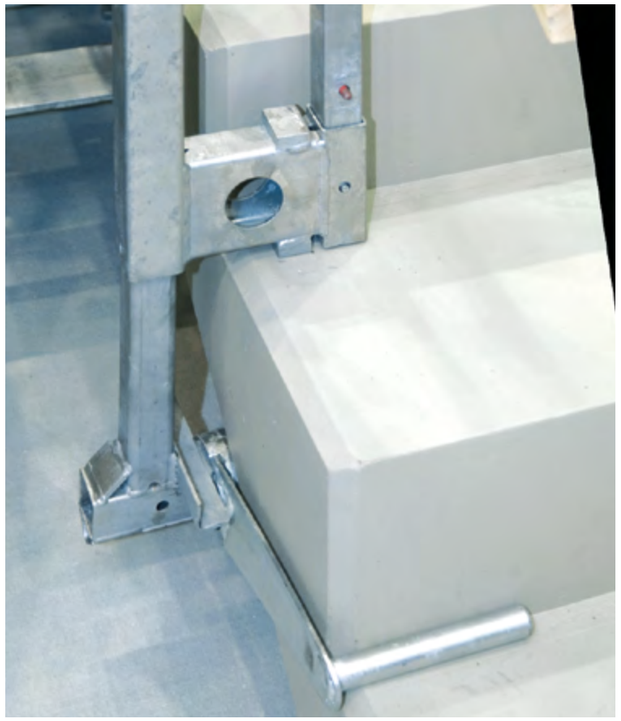
SAFESCREEN®

PROTECTO®

PROTECTO is a modular, state-of-the-art temporary edge protection system.

Technical data

Product description	Temporary edge protection system
Guardrail post	PROTECTO railing post 120 cm high (square tube)
Post attachment via	Screw base joint I Staircase bracket I Beam section clamp I Timber beam connector Post holder vari I Front attachment I Multiple clamp I Screw-on holder I Sheet pile clamp
Guardrail types	PROTECTO protective grating I Plank railings
Toe board retainer	PROTECTO toe board retainer
Corrosion protection	Hot-dip galvanisation
Average weight	6.00 – 8.00 kg/running metre
Relevant standards	Complies with EN 13374 – Class A
Max. post spacing	2.00 m using planks I 2.40 m using protective grating
Erection/dismantling times	Approx. 0.02 – 0.03 h/linear meter*
Special features	• Fast, versatile and easy assembly • Integrated safety pin secures the post firmly to base • Height adjustment with post extensions 26 and 42



The PROTECTO fixing device for clamp in combination with the PROTECTO multiple clamp, the PROTECTO railing post and a plank railing allows the installation of a railing to stairways.

* Time calculation (average) by Hünnebeck

PROTECTO®

The edge protection system without compromises – equal to all requirements and easy to handle. With everything necessary to create a safe working environment on the construction site.

Product benefits

Versatile

Versatile modular system composed of just a few robust basic components

Railing post fits any PROTECTO holder, bracket or clamp

Easy handling

Lightweight basic parts and easy handling ensure simple and safe on-site installation

Screw base joint can easily be fixed to the base slab

Safe

Completely fulfils the technical and safety requirements of the EN 13374 – Class A

The PROTECTO fixing device for clamp allows the installation of a clamped side protection on stairways

New protective gratings in various lengths enable safe and easy overlaps

Economical

Very economical as a result of the low erection and dismantling times

Strong & durable

Highly durable and robust system parts due to the complete galvanisation of all steel components

PROTECTO is compatible with all Hünnebeck slab formwork systems, such as TOPMAX as shown here

Screw base joint can easily be fixed to the base slab

Versatile modular system composed of just a few robust basic components

Very economical as a result of the low erection and dismantling times

Application & use

- Slab formwork
- Climbing formwork
- Staircases
- Bracket scaffolds
- Concrete slabs and walls

PROTECTO® integrates with

- TOPMAX®
- TOPEC®
- TOPFLEX®
- INFRA-KIT
- H 20 timber beams
- R 24 timber beams
- Steel beams

If you would like to find out more, take a look at our video.

HÜNNEBECK EPS

This easy-to-install containment edge protection system allows the post to be braced between the floor and ceiling without drilling.

Technical data

Product description	HÜNNEBECK EPS containment edge protection system
Guardrail post	HÜNNEBECK EPS posts cover a height of 2.0 – 3.4 m. In addition, a particularly long post is available for heights between 2.9 m and 4.3 m
Post attachment via	Screw base joint, Staircase bracket, Steel beam screw base joint, Beam connection, Ceiling clamp, Wall clamp, Beam clamp
Guardrail types	EPS panel
Corrosion protection	Strip galvanised steel materials with additional powder coating
Relevant standards	Complies with BS EN13374:2013 + A1.2018 class A&B
Max. post spacing	2.7 m
Installation period	8.1 m/min*
Special features	· Safe, quick and easy assembly · Tool-free assembly · Various height adjustment options including complete enclosure

*According to own measurements

The HÜNNEBECK EPS post: flexible and durable

The HÜNNEBECK EPS post covers a height of 3.4 m. In addition, an extra long post up to 4.3 m is available.

Easy to assemble because the prop is braced between the floor and the ceiling. No drilling into the concrete required.

All heights can be covered by means of the EPS coupling.

Pressure mechanism withstands at least 2 million load cycles.

Visible safety indicator shows proper assembly.

Side protection possible in single, double and full height of the storey.

HÜNNEBECK EPS

HÜNNEBECK EPS is a EN 13374-compliant containment edge protection system. It is used floor by floor in building construction and protects against risks of falls at the edge of the building.

Product benefits

Safe

- Creates a safe workzone
- Various height adjustment options including complete enclosure
- Meets all relevant standards: BS EN13374:2013 + A1.2018 class A&B

Easy handling

- Simple assembly in three steps
- Tool-free assembly
- No drilling or other fixings required

Economical

- Assembly time 8.1 m/min*, thus significantly faster than traditional systems with screw fastening
- Large post spacing of 2.7 m reduces assembly time
- No renovation work or repairs to the ceiling
- Long service life thanks to strip galvanised steel materials with additional powder coating

*According to own measurements

Maximum side protection for all dimensions

HÜNNEBECK EPS safety net

- **Fulfils** the B1 class for nets
- **Tested** for catching persons and materials by Lloyds British Testing Institute
- 70 x 70 mm² basic net with 20 x 20 mm² parts net overlay

Application & use

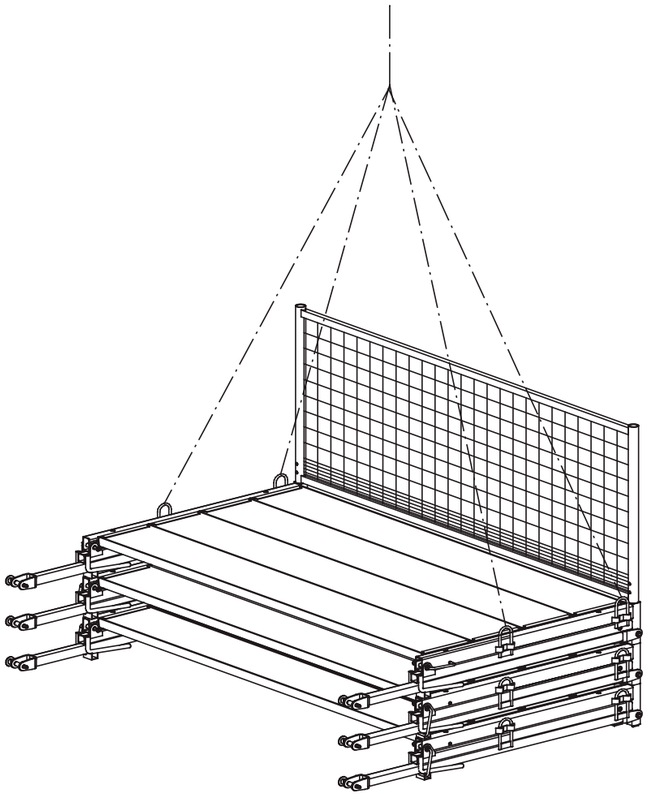
- Building construction
- Staircases
- Storage areas
- Trench systems

FALKO

With just three basic elements, the FALKO bracket scaffold can adapt to any ground plan, providing safe working areas.

Technical data

Product description	FALKO working and protective scaffold
Material	Steel
Main platform types	Bracket platform 250 I Corner platform
Platform dimensions	Bracket platform 250: length = 2.50 m I width = 1.50 m Corner platform: length = 0.65 m & 0.65 m I width = 1.50 m
Adjustment section	Adjustment section 250 I Adjustment section 125
Dimensions	Adjustment section 250: length = 2.85 m I width = 1.28 m Adjustment section 125: length = 1.60 m I width = 1.28 m
Railing types	Railing 250 I Corner railing I Railing adjustment 250 Railing adjustment 125 I Cross railing
Railing heights	1.00 m I 2.00 m (when stacked for roofer's safety scaffold)
Load capacity	Up to 3.0 kN/m^2
Corrosion protection	Fully galvanised steel components I Aluminium-zinc coating
Relevant standards	Scaffold class 4 I EN 12811



A folded bracket platform is only 23.5 cm high. The bracket platforms can be stacked, a stack can contain a maximum of five FALKO bracket platforms. The bundles are strapped with galvanised steel tapes.

FALKO

FALKO is the name of our folding bracket scaffold, which is supplied to the construction site in its folded state. Set up the guardrail, secure the diagonals, and then lift the complete unit with a crane to the desired position – ready.

Product benefits

Safe

Additional safety due to the structured surface of planks providing necessary slip-resistance even when wet

Corner platform with corner railing for safe working areas even around corners

Economical

Space-saving storage with a storage height of only 23.50 cm per bracket platform

FALKO bracket platforms can be pre-assembled and arrive on site ready-to-use

Versatile

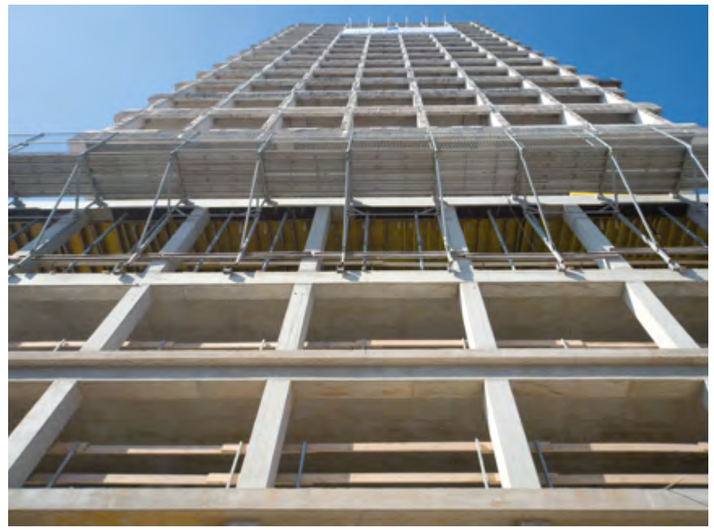
FALKO adapts to any building shape and ground plan

Respective railings for all platform types and adjustment sections

With the support triangle, the bracket scaffold can be employed on buildings with a skeleton construction or on facades with large wall openings

Additional safety due to the structured surface of planks providing necessary slip-resistance even when wet

Applications up to 100 m above the ground possible with just a 1 m high side protection



Corner platform with corner railing for safe working areas even around corners

Application & use

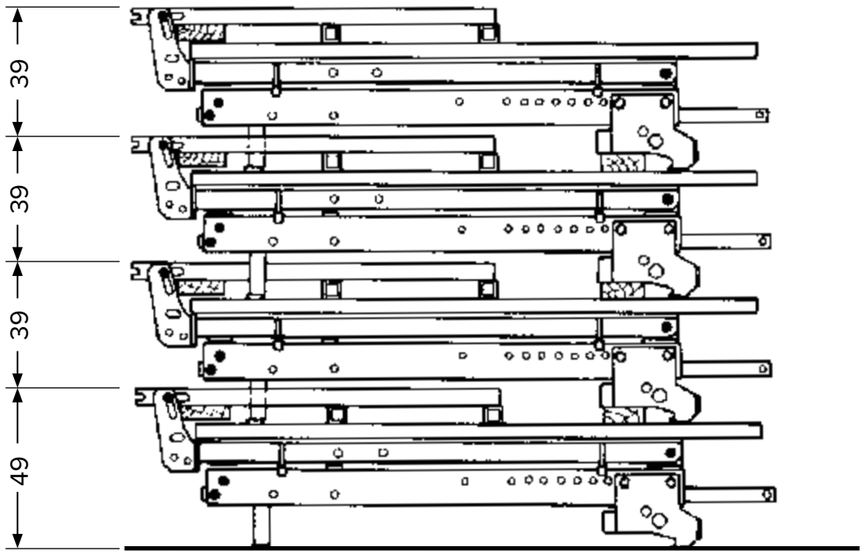
- Working scaffold
- Safety scaffold
- Roofer’s safety scaffold

FOLDING SCAFFOLD

The Hünnebeck folding scaffold system is both a protective and working scaffold, supplied on site in complete and ready-to-use units.

Technical data

Product description	Folding scaffold
Material	Steel (brackets)
Unit types	Folding scaffold 300 I 450 I Corner folding scaffold R and L
Platform dimensions	Folding scaffold 300: length = 3.00 m I width = 1.80 m Folding scaffold 450: length = 4.50 m I width = 1.80 m Corner folding scaffold R and L: length = 2.50 m I width = 1.80 m
Trailing platforms	KG lower platform 300 I KG lower platform 450
Platform connections	KG lower platform connected via KG suspension bar and two bolts
Other connections	Easy setting with bolts and spring pins
Side protection	Guardrails are pre-assembled
Railing heights	1.00 m
Load capacity	Main platform = up to 2.0 kN/m^2 Lower platform = up to 1.5 kN/m^2
Corrosion protection	Fully galvanised steel components
Relevant standards	EN 12811 I Scaffold classes 3 – 6 possible



The folding scaffold comes in collapsible sections for practical storage & handling. The stacking height is only 39 cm when folded, the lowest element requires an additional 10 cm. This saves money – 70 running metres of folding scaffold can be transported on a truck trailer.

FOLDING SCAFFOLD

**Complete scaffold unit with boards and guardrails.
Unfolded and secured on site and immediately ready for use.**

Product benefits

Economical

Storage and transport-friendly units thanks to a stacking height of only 39 cm when folded

Ready-to-use units arrive on site pre-assembled and are quick and easy to set up

Withstands up to 2.00 kN/m² in combination with a 5.40 m high formwork and up to 6.00 kN/m² without formwork

Easy handling

Easy-to-adapt lower platforms provide additional working level below main platforms for reworks

Integrated lowerable crane stirrups make it easy to transfer scaffold units and disappear once the platforms are in use

Versatile

Extensive range of accessories for all-round solutions

Strong & durable

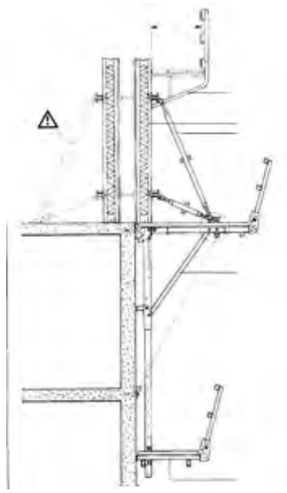
Made to last, all steel elements are galvanised and wooden elements are treated

Safe

EN 12811 | Scaffold class 3

Extra room for manoeuvring with the angled guardrail

Withstands up to 2.00 kN/m² in combination with a 5.40 m high formwork and up to 6.00 kN/m² without formwork



Application of KG lower platforms creates a supplementary working level for reworking

By using the KG bearer bars and KG suspension bars, large wall openings are easily overcome

Application & use

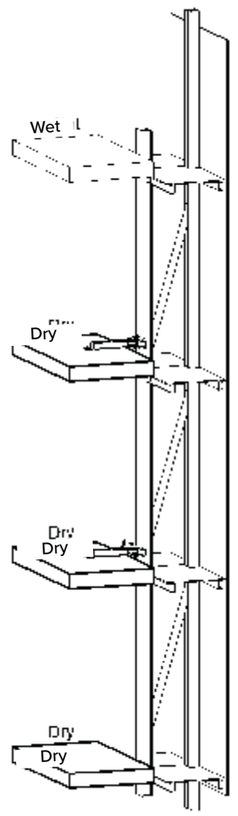
- Working scaffold
- Safety scaffold

SAFESCREEN®

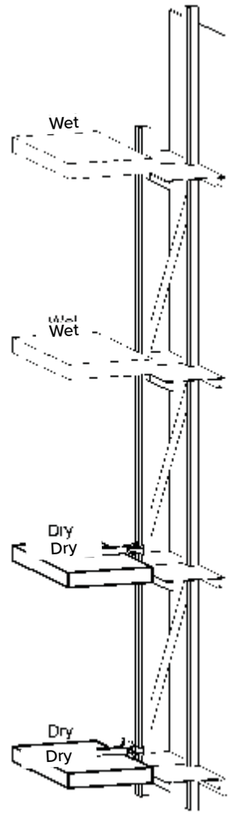
SAFESCREEN is a perimeter climbing protective system used for full work floor enclosure as well as edge and weather protection.

Technical data

Product description	Perimeter Climbing Protective System
Dimensions	4.60 m x 12 m typical
Weight	1.50 – 3.70 tonnes
Handling	110 V hydraulics I Crane
Transportation	No requirement for special wide load
Panels	Solid steel sheeting I Perforated sheeting I GRP translucent sheeting
Application	From second floor
Suitability	Variable building shapes
Relevant standards	BS 5975 I EN 12811 I EN 1993
Special features	• Adjustable cladding panels • Folding / extending platform • Self climbing • Simple to assemble and install • Can be assembled on site or delivered pre-assembled. Suitable for standard transport • Used on reinforced, post tension and precast slabs • Size of the loading area: approx. 2.10 m x 2.70 m by default. Other sizes with a maximum width of approx. 2.70 m and length of 5.00 m are also available



• 4 Platforms (3D+1W)



• 4 Platforms (2D+2W)

Most commonly the sections are designed for approx. 3.00 m floor to floor; however, they can also be designed for floors from 2.80 m to 4.30 m providing full protection and access platforms to completed “Dry” and new under construction “Wet” levels.

SAFESCREEN®

SAFESCREEN is an innovative rail climbing edge protection system ideal for projects over ten stories high. Protecting operatives from falls, weather conditions and also providing a useful working platform which extends beyond the slab edge.

Product benefits

Safe

- Improved on-site and public safety due to full enclosure of the working environment
- Multiple floor protection with optional vertical extension
- Providing a protective screen for workforce at high levels

Versatile

- With various shield options made of translucent, solid or perforated formworks, grids or panels
- Complex architecture easily accommodated
- Choice of cladding, colours and brand display for marketing and advertising purposes

Economical

- Nearly all parts can also be rented
- Pre-assembly options for confined site conditions available
- The space required for storage and assembly on the construction site is comparatively small
- Low dead weight accelerates the assembly process

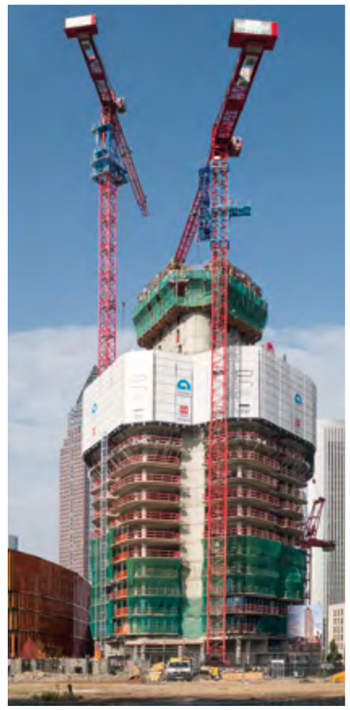
Easy handling

- Lightweight system for easy installation, lifting with crane or hydraulics

Providing a protective screen for workforce at high levels

Multiple floor protection with optional vertical extension

Complex architecture easily accommodated



The Grand Tower, Germany's highest residential building (as of July 2018)

Improved on-site and public safety due to full enclosure of the working environment

Application & use

- High-rise construction

HÜNNEBECK

BY BRAND⟩SAFWAY

CLIMBING FORMWORK

CS 240

SCF

CS 240 CLIMBING SCAFFOLD

CS 240 is a crane-dependent climbing system that can be used both as a load-bearing scaffold or as a working and safety scaffold.

Technical data

Product description	CS 240 L Climbing scaffold
Platform widths	Working platform 2.40 m I Trailing platform 2.02 m I Pouring platform 0.82 m
Maximum formwork height	5.40 m
Clearance from concrete	Up to 83 cm
Relevant standards	Load-bearing scaffolds accord. to EN 12811 Working and safety scaffolds accord. to EN 12811 part 1
Influence width per CS brackets	With 4 m formwork height, up to 4.75 m (depending on wind load)
Handling	Crane
Formwork	MANTO I H 20 wall formwork I PLATINUM 100
Application above ground	Up to 100 m and higher (accord. to static calculation)

Product description	CS 240 H Climbing scaffold
Platform widths	Working platform 2.60 m I Trailing platform 2.02 m I Pouring platform 1.30 m
Maximum formwork height	5.40 m
Clearance from concrete	Up to 95 cm
Relevant standards	Load-bearing scaffolds accord. to EN 12811 Working and safety scaffolds accord. to EN 12811 part 1
Influence width per CS brackets	With 4 m formwork height, up to 4.75 m (depending on wind load)
Handling	Crane
Application above ground	Up to 100 m and higher (accord. to static calculation)
Max. formwork height for use as dam bracket	3.90 m (accord. to static calculation)
Inclined walls	Up to ± 30° (accord. to static calculation)

Applicable for great heights of more than 100 m

CS 240 CLIMBING SCAFFOLD

Product benefits

Versatile

High adaptability and load-carrying capacity of the climbing scaffold

Usable either with frame panel or timber beam wall formwork

Applicable for great heights of more than 100 m

CS 240 H is usable on inclined walls up to 30°.

Economical

Climbing scaffold units can be pre-assembled according to project requirements and arrive on site ready to use

Quick

Quick and effective final assembly of the accessory parts on site

Easy handling

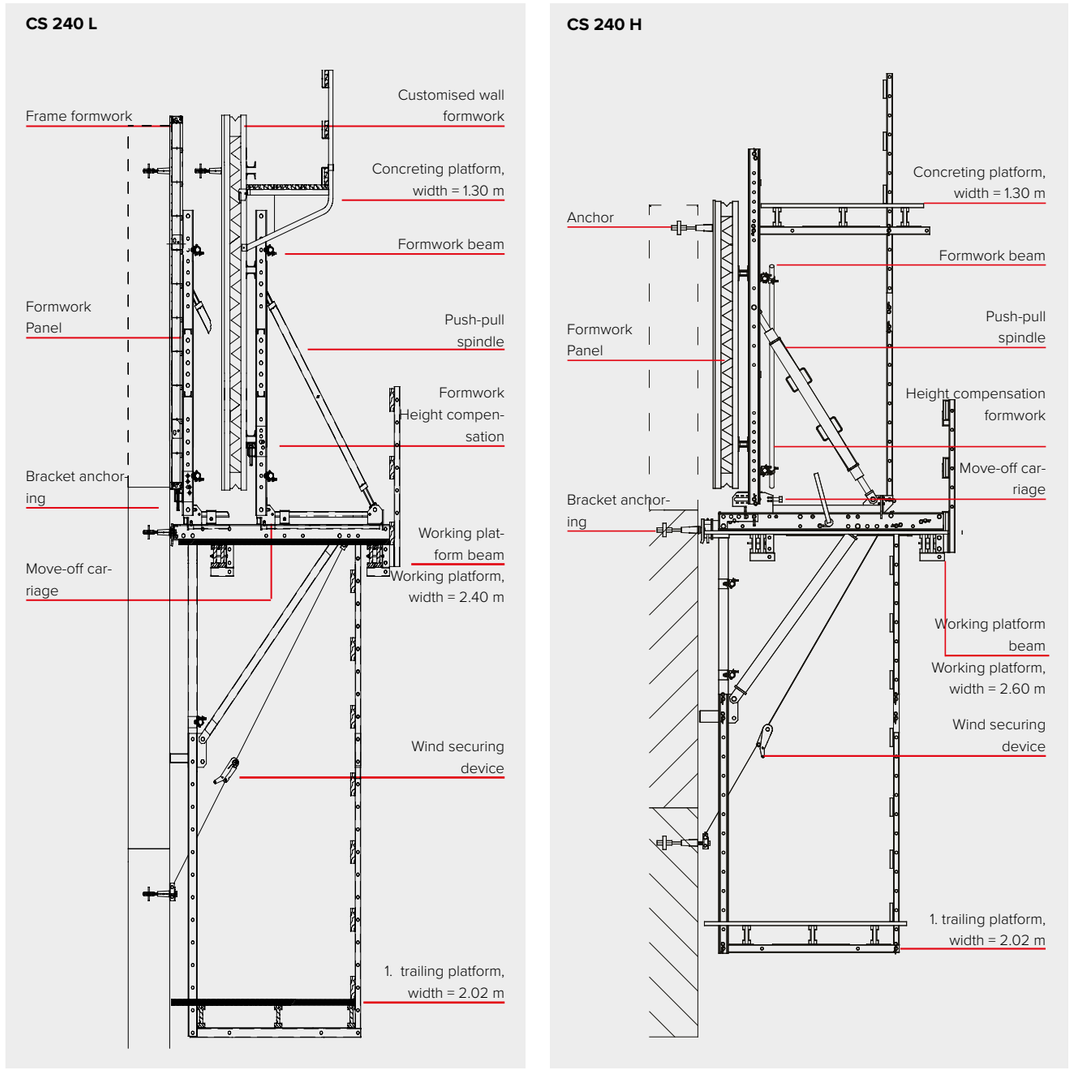
Formwork can be rolled back from concrete by means of move-off unit

Safe

Guardrail posts ensure that all platforms are safe

Formwork can be rolled back from concrete by means of move-off unit

For versatile application: The CS 240 climbing scaffold with retractable formwork, available in two different versions: either as CS 240 L for use with wall formwork with through ties in concreting position or as CS 240 H for use on inclined walls up to 30°.



Overview of the main system components of the CS 240 L and CS 240 H climbing scaffolds with one trailing platform

Application & use

- Wall formwork
- Inclined walls

CS 240 integrates with

- MANTO®
- PLATINUM 100
- H 20 wall formwork

SELF-CLIMBING FORMWORK

With the aid of an inbuilt hydraulic device, SCF climbs step-by-step without the need for a crane, matching the pace of construction.

Technical data

Product description	Self-climbing formwork system
Vertical load capacity	150 kN per bracket (for climbing and static)
Platform widths	Working platform 3.20 m I Trailing platform 2.30 m I Pouring platform 1.50 m
Climbing direction	Inclined climb tracks in all directions technically possible (forward, backwards, sideways and curved)
Hydraulic	Simultaneous operation of up to 8 brackets per hydraulic pump, completely secured and movable hydraulic pump
Wall offset	Passing of wall offsets up to 50 mm without extra measures, up to 150 mm with extra measures
Bracket spacing	With 4 m formwork height, up to 4.75 m (depending on wind load)
Wind speed	Tested up to 208 km/h

The ratio of bracket number to shuttered surface can be adapted precisely to the building’s geometry. The result is shorter shuttering times, less work, more efficiency.

SELF-CLIMBING FORMWORK

Product benefits

Economical

Only one embedded climbing anchor per bracket per lift – less consumables and labour than traditional SCF systems

Very high vertical load capacity up to 150 kN per bracket, wider platforms and higher loading weight

Additional work decks above the formwork for continuous rebar operation and easier handling of double length vertical rebar

Versatile

Compatible with all beam and frame formwork

Upwards and higher: forming operations at heights of over 300 m are no challenge for SCF

Safe

Housing at all working levels provides additional protection against falling debris and weather conditions for both workers and materials

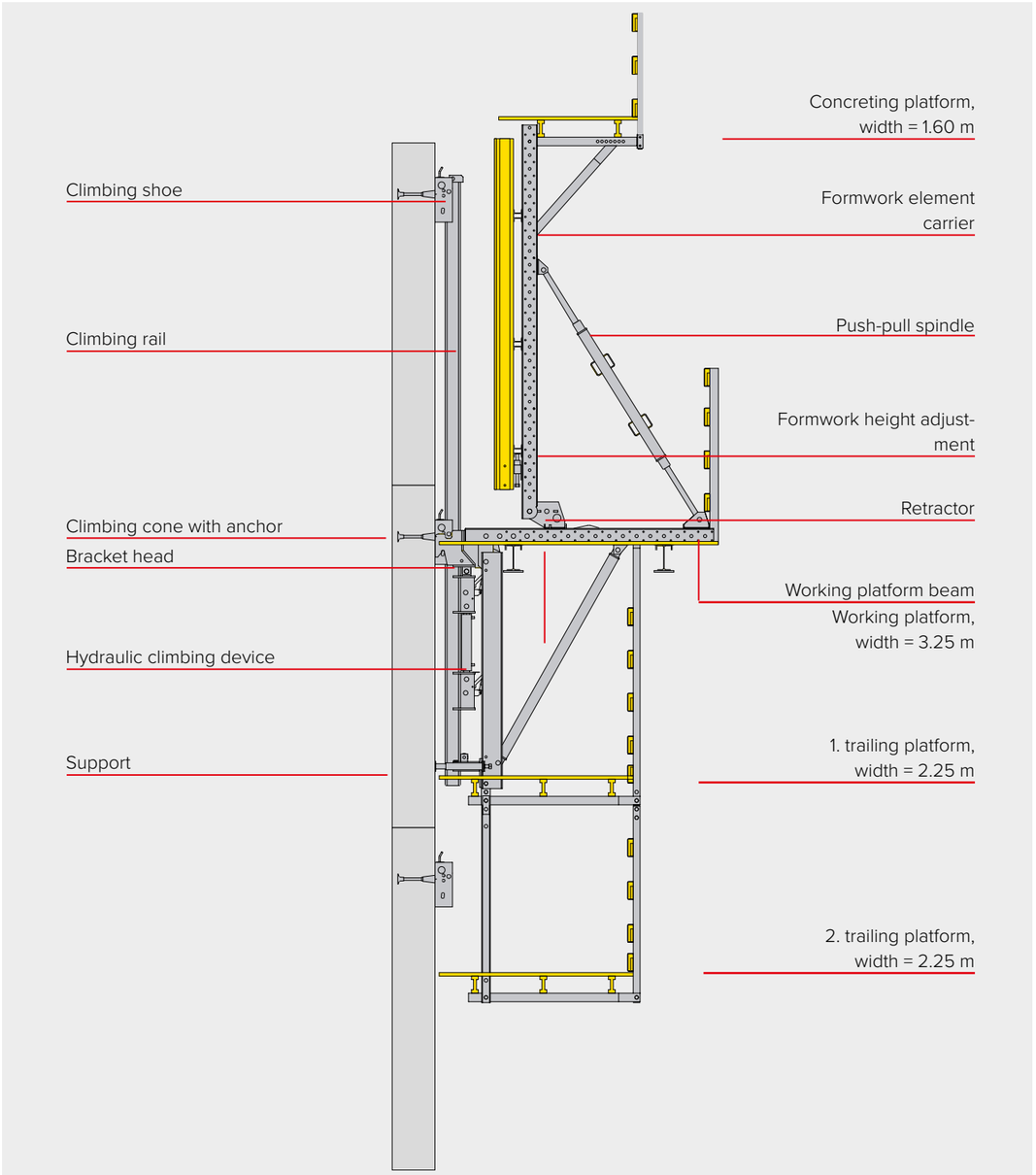
Fulfils all safety requirements according to EN, British and American Standard

Quick

Large hydraulic stroke for faster climbing and less control effort during climbing

Upwards and higher: forming operations at heights of over 300 m are no challenge for SCF

SCF self-climbing formwork can take up and discharge all forces up to a maximum vertical load of 150 kN per bracket. With a maximum influence width of 8.50 m per bracket, formed surfaces up to 5.50 m high or 17 m wide are now possible.



Overview of the main system components of the Self-Climbing Formwork (SCF)

SCF integrates with

- MANTO®
- PLATINUM 100
- H 20 wall formwork

HÜNNEBECK

BY BRAND⟩SAFWAY

SCAFFOLDING

BOSTA® 70

BOSTA® 100

BOSTA® Alu staircase G2

MODEX®

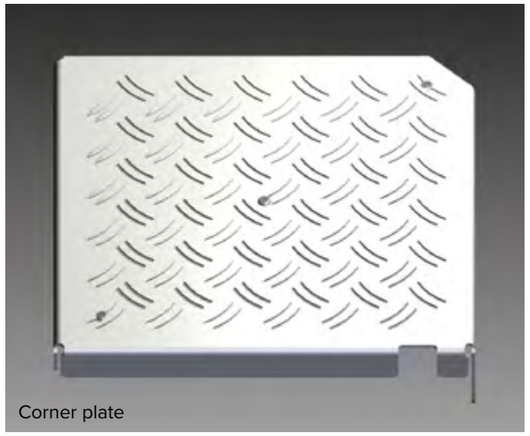
MODEX® FLEX staircase

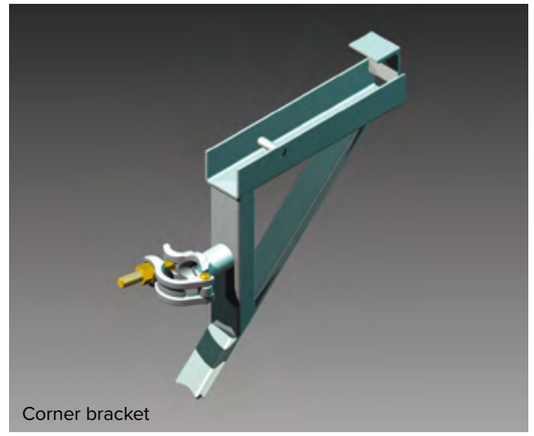
BOSTA® 70

BOSTA 70 is a steel frame scaffold system in load class 3, which is well suited for roofs or walls, painting or facade cladding projects, on interiors or exteriors.

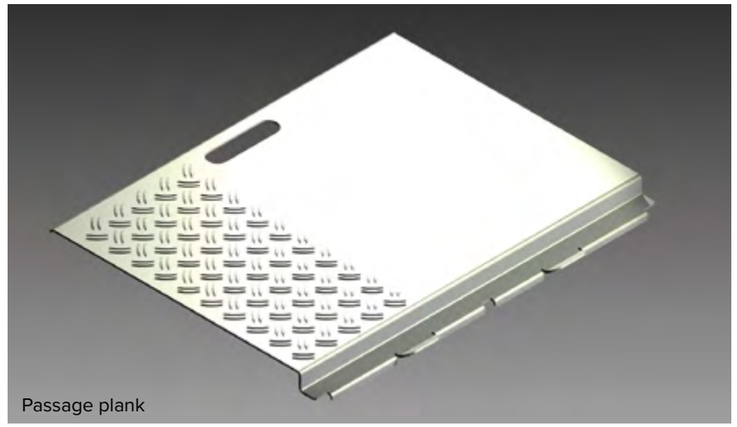
Technical data

Product description	Steel frame scaffolding
Frame heights	66 I 100 I 150 I 200 cm
Frame widths	74 cm
Bay lengths	74 I 125 I 150 I 200 I 250 I 300 I 400 cm
Load class	LC 3 according to approval, up to LC 6 possible
Corrosion protection	Hot-dip galvanisation
Plank types	Hollow box plank I Steel plank I Alu frame deck Alu ladder passage deck (with or without ladder)
Vertical frame weight	200/70 = 19.3 kg
Relevant standards	Complies with EN 12810 I EN 12811, Pt. 1 I Approval from DIBt (German approval and assessment body for regulatory questions related to construction products and construction techniques.)
Erection/dismantling times	t = 0.06 – 0.10 h/m² * I 0.04 – 0.07 h/m² *


Corner plate


Corner bracket


Niche bracket


Passage plank

Get to know our BOSTA accessories for even more safety.

* Time calculation (average) by Hünnebeck

BOSTA® 70

BOSTA is quick to set up and dismantle, very robust and safe in every respect. Practical measurements make BOSTA 70 a highly versatile scaffold system.

Product benefits

Versatile

Simple calculation and great combination possibilities due to the practical measurements and smooth system dimensions

Highly versatile due to few basic components and an extensive accessories program

BOSTA 70 vertical frames also available in lightweight aluminium version

Safe

Safe and inevitably plumb-vertical erection already after assembly of the first bay

Aluminium passage plank equipped with an integrated ladder for safe ascent

Railing post MGR for safe erection of scaffolds at the top level

Strong & durable

Robust and durable system parts as a result of the complete hot-dip galvanisation

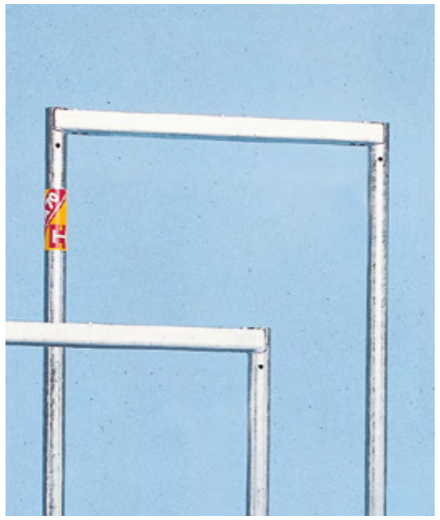
Easy handling

Easy connections with no need for tools due to gravity pins

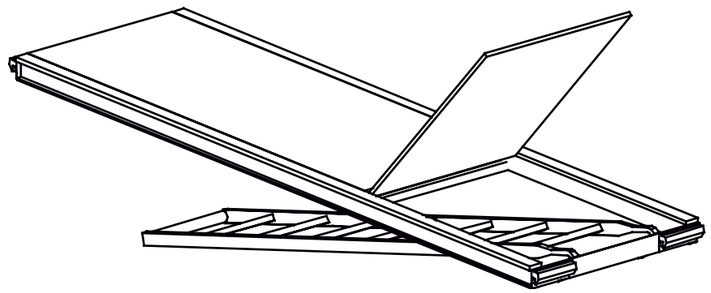
Fast and easy one-man assembly without tools due to manual connection technology

BOSTA 70 is compatible with MODEX. Here it is used in combination to form a star-shaped corset that was used to deflect loads.

Safe and inevitably plumb-vertical erection already after assembly of the first bay



Robust and durable system parts as a result of the complete hot-dip galvanisation



Aluminium passage plank, equipped with an integrated ladder for safe ascent

Application & use

- Working scaffold
- Safety scaffold
- Mobile scaffold
- Facade scaffold
- Reinforcement scaffold
- Staircase

BOSTA® 70 integrates with

- MODEX® scaffolding

BOSTA® 100

The BOSTA 100 steel frame scaffold system is the trusted solution when it comes to great heights and high loads up to load class 6.

Technical data

Product description	Steel frame scaffolding
Frame heights	100 I 150 I 200 cm
Frame widths	101 cm
Bay lengths	125 I 150 I 200 I 250 I 300 cm
Load class	LC 6 (evenly distributed load of 6.0 kN/m²)
Corrosion protection	Hot-dip galvanisation
Plank types	Hollow box plank I Steel plank I Horizontal frame
Vertical frame weight	200/100 = 27.4 kg
Relevant standards	Complies with EN 12810 I EN 12811, Pt. 1 I Approval from DIBt (German approval and assessment body for regulatory questions related to construction products and construction techniques.)
Erection/dismantling times	t = 0.10 – 0.15 h/m² * I 0.07 – 0.10 h/m² *
Special features	• Easy, fast and safe one-man assembly possible • High load capacity up to load class 6

Optimal use as a working scaffold for heavy loads (max. area load up to 600 kg/m²). BOSTA 100 also offers more space to move and store materials thanks to the greater system width.

Life loads per DIN EN12811, part 1

March 2004 edition

Load class LC	Nominal area load p kN/m²	Single load 1) P1 kN	Single load 1) P2 kN	Partial load pc partial area kN/m²	Partial load pc partial area Ac
1	0.75 2)	1.50	1.00	-	-
2	1.50	1.50	1.00	-	-
3	2.00	1.50	1.00	-	-
4	3.00	1.50	3.00	5.00	0.4 x A_B
5	4.50	1.50	3.00	7.50	0.4 x A_B
6	6.00	1.50	3.00	10.00	0.4 x A_B

1) P_1 Load area 0.50 m x 0.50 m. min. 1.5 kN per plank
P_2 Load area 0.20 m x 0.20 m

2) for planks p = 1.50 kN/m²
$\frac{A}{B}$ = plank area per DIN 4420 – 5.4.4.3

* Time calculation (average) by Hünnebeck

BOSTA® 100

This 100 cm wide frame scaffold system provides plenty of room to manoeuvre, copes with high loads and masters extreme heights.

Product benefits

Quick

Quick and easy one-man assembly without tools due to manual connection technology of the frames, guardrails, diagonals and toe boards

Safe

BOSTA 100 allows safe working and temporary storage at height even in limited space

Railing post MGR for safe erection of scaffolds

Passage frame for safe and unhindered scaffolding works in pedestrian areas

Easy handling

More space to move and store materials thanks to the greater system width

Easy connections with no need for tools due to gravity pins

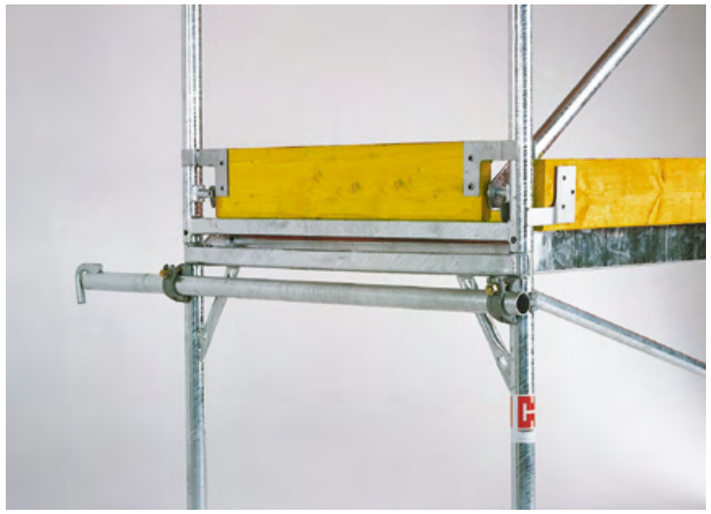
Versatile

High up – also the standard design is applicable for heights up to 24 m

Optimal use as a working scaffold for heavy loads (max. area load up to 600 kg/m^2)

Strong & durable

Robust and durable system parts as a result of the complete hot-dip galvanisation



Robust and durable system parts as a result of the complete hot-dip galvanisation

High up – also the standard design is applicable for heights up to 24 m

BOSTA 100 is the ideal scaffold whenever additional space is required to move around and temporarily store materials

Application & use

- Working scaffold
- Safety scaffold
- Mobile scaffold
- Facade scaffold
- Reinforcement scaffold
- Staircase

BOSTA® 100 integrates with

- MODEX® scaffolding

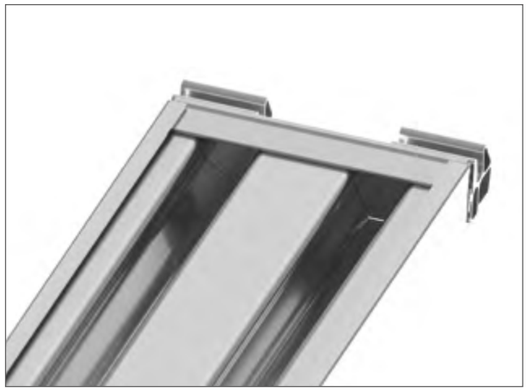
BOSTA® Alu staircase G2

The new generation of BOSTA® Alu staircases fulfils all relevant safety requirements for temporary height access in construction.

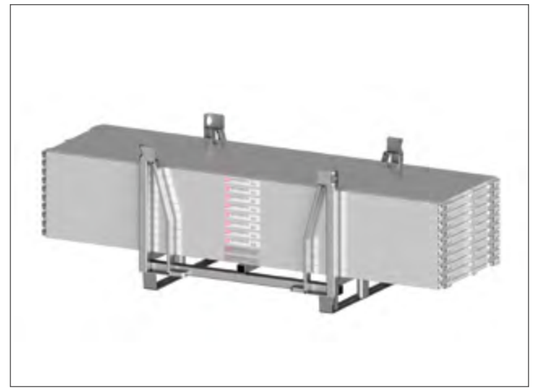
Product benefits

BOSTA® Alu-staircase G2
High load capacity
Efficiency thanks to fewer components for assembly
Easy to repair (screwed steps, platform coverings and support profiles) and therefore economical
Safe: access with requirements of DIN EN 12811 and BGR 113

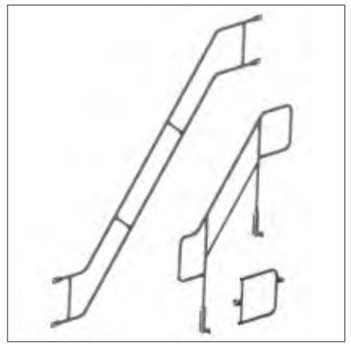
BOSTA® 70 is our proven load class 3 scaffolding system. Quick to set up and dismantle, absolutely stable and safe all round. We have now introduced the new generation of aluminium staircases.



Aluminium lining G2



Steps are screwed and can therefore be repaired in a time-saving manner



Protected with safety thanks to high-quality side protection

The BOSTA® Alu staircase is available in three riser heights

MODEX®

The MODEX modular scaffolding system is defined by its ideal functionality, adaptability, and cost-efficiency.

Technical data

Product description	Modular scaffolding system
Vertical post lengths	100 I 150 I 200 I 300 I 400 cm
Connecting cups	50 cm grid I Eight possible connections in every direction
Soldier lengths	25 I 74 I 82 I 90 I 101 I 113 I 125 I 150 I 168 I 180 I 200 I 250 I 300 I 400 cm
Connection type	Via undetachable wedge
Plank types	Hollow box plank I Steel plank I Alu plank
Base jack type	Base jack 45/3.80 I 70/3.80 I ID-base jack 38/52
Component max. weight	Vertical leg 400 = 20.2 kg
Relevant standards	Complies with EN 12810 I EN 12811, Pt. 1 I Approval from DIBt (German approval and assessment body for regulatory questions related to construction products and construction techniques.)
Corrosion protection	Complete hot-dip galvanisation of all system parts
Erection/dismantling times	8 – 10 h/t *

The MODEX power junction principle makes the system special. The so-called MODEX plates are arranged in a grid of 50 cm on the vertical legs. They allow eight connections in horizontal and diagonal directions. Thus, force-locked connections are able to withstand ultimate loads.

* Time calculation (average) by Hünnebeck

MODEX®

Get to know the true quality of MODEX: It performs excellently as a facade scaffold, but comes into its own on complex, angled frontages.

Product benefits

Quick

Easy handling due to intuitive construction-kit system with just 4 basic elements

Economical

High load capacity and incredible stability thanks to force-locked connections

Versatile

Six additional connections possible with the Variocup (such as for circular scaffolding)

High flexibility as a result of up to 8 possible connections in horizontal and vertical directions

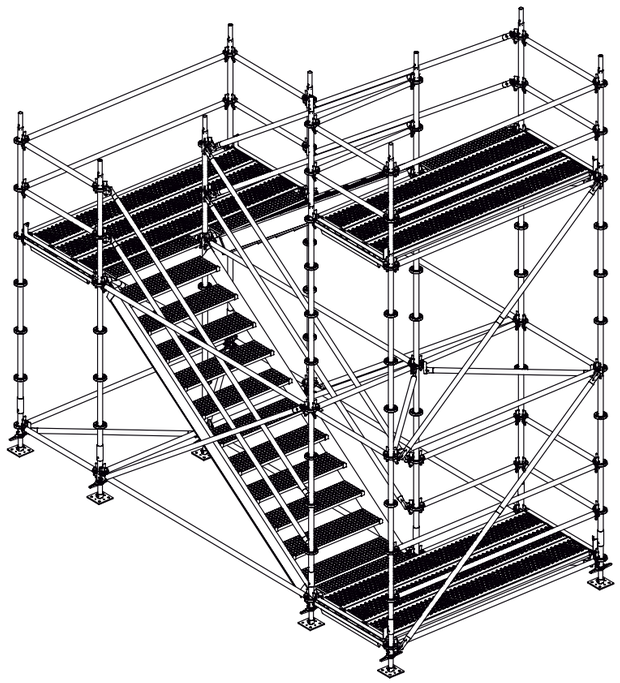
Countless areas of application due to extensive accessory parts program

Strong & durable

All parts are hot-dip galvanised from the inside and the outside

Safe

Safe one-man assembly at any height due to the upturned edge on the connection cups



MODEX serves a multitude of uses, such as stair towers for example

Safe one-man assembly at any height due to the upturned edge on the connection cups

Countless areas of application due to extensive accessory parts program

MODEX force-locked connections in eight different directions

Application & use

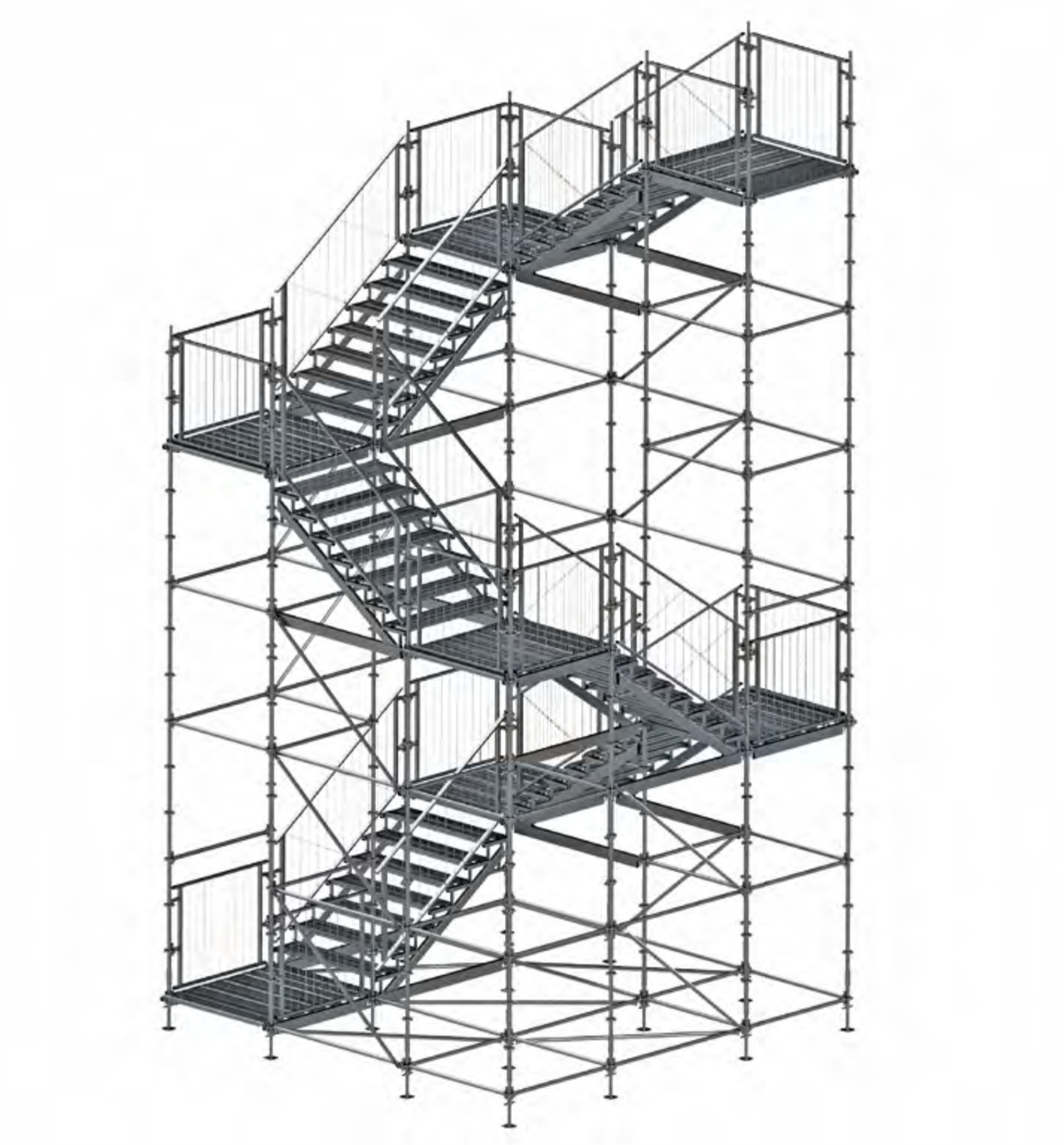
- Shoring
- Birdcage scaffold
- Reinforcement scaffold
- Facade scaffold
- Suspended scaffold
- Stair towers
- Mobile scaffold
- Temporary bridges
- Heavy-duty shoring

MODEX® integrates with

- BOSTA® 70
- BOSTA® 100

MODEX® FLEX staircase

The new MODEX® FLEX staircase provides safe temporary height access in construction, in public buildings and at events – wherever high demands are made on load-bearing capacity or passage width.

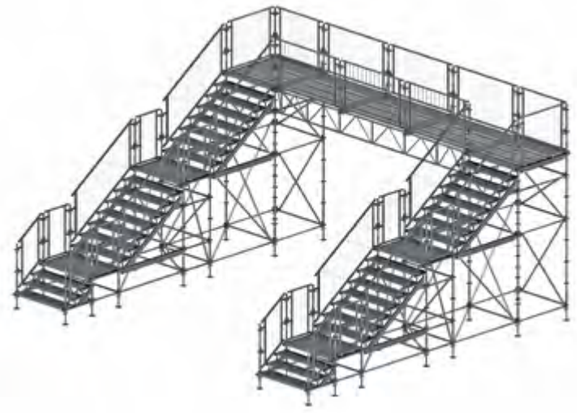


Technical data

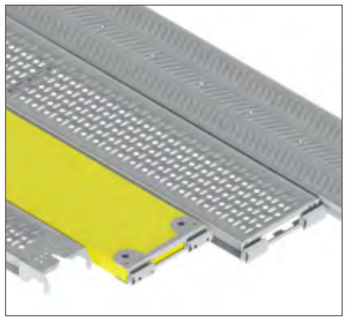
MODEX® FLEX staircase	
Load capacity	Up to 7.5 kN/m² for events
Stringer heights	Three (1.5 m, 1.0 m, 0.5 m)
Staircase	Double flight possible (two flights with three stringers)
Handrail	For all stringers. Integrated V-diagonal, integrated lifting retainer

Product benefits

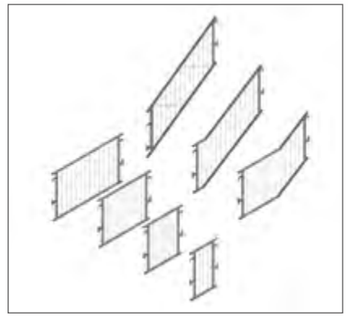
MODEX® FLEX staircase
Steps made of scaffold planks allow variable widths of the staircase
High load-bearing capacity of 7.5 kN/m² (for events)
Safe assembly concept
Meets all requirements of DIN EN 18065
Compatible with all Hünnebeck system coverings (BOSTA, MODEX®)



The new MODEX® FLEX staircase sets new standards in terms of safety and flexibility.



Compatible with all Hünnebeck system coverings



The suitable side protection for every application

Stair stringers in 1.5 m, 1.0 m and 0.5 m

Notes

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4000 DE 2019-03-15

Editor: Hünnebeck GmbH, Rehhecke 80, 40885 Ratingen. March 2021