



THE FORMWORK

NOE-Schaltechnik



NOE-Schaltechnik

Over sixty years of formwork experience

System formwork was almost unknown before the start of the 1950s. Instead, concrete was cast in forms that were individually made for each project out of squared timber and boards. As these forms could usually be used only once, this approach was very time consuming and costly.

Against this background, Georg Meyer-Keller developed a universal steel

formwork system with components that could be used many times and thus considerably simplified the construction process. The patent for this design was granted in 1952 and established Georg Meyer-Keller as one of the pioneers of modern formwork technology.

This universal formwork system was originally marketed through construction plant dealer Jakob Noe. It soon

became known on the market as "NOE Schalung". Georg Meyer-Keller quickly realised that advice on formwork use relating to specific projects and its engineering design are of crucial importance to customers. This realisation led to the founding of NOE-Schaltechnik Georg Meyer-Keller KG on 1. October 1957, which is now NOE-Schaltechnik Georg Meyer-Keller GmbH + Co. KG.

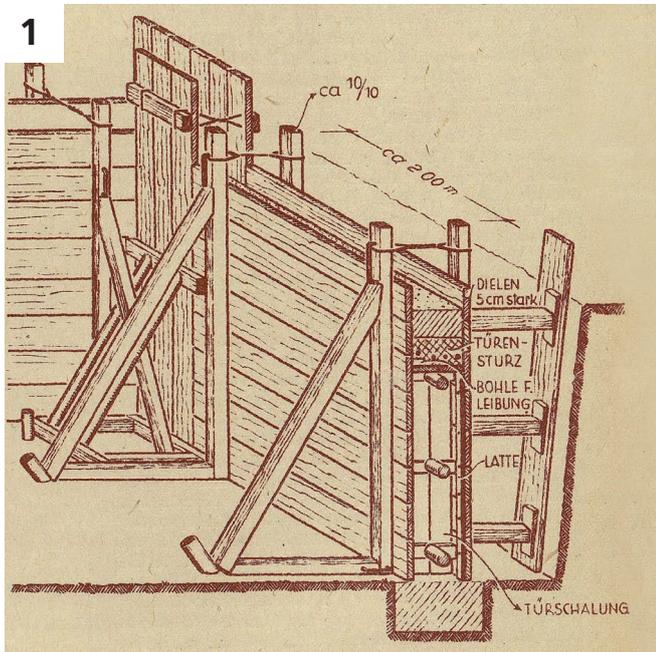


Figure 1:
Schematic diagram of an earlier typical
concrete form

Figure 2:
Installing concrete formwork in the fifties

Figure 3:
The Weststadt School in Göppingen was
one of the first sites where systemised
concrete formwork was used – universal
steel formwork

Figure 4:
An example of modern formwork tech-
nology: NOEtop frame formwork with
integral bracing. Here being used for
the construction of the Conservatoire de
Musique, Mulhouse, France

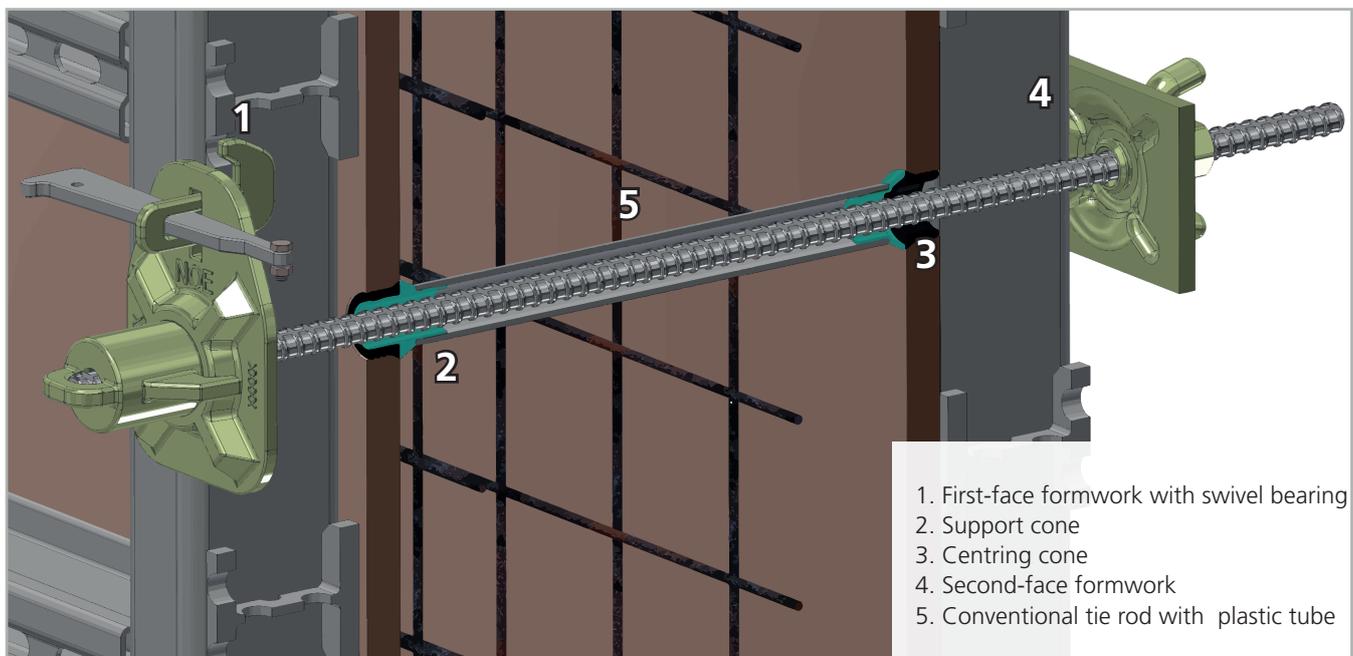
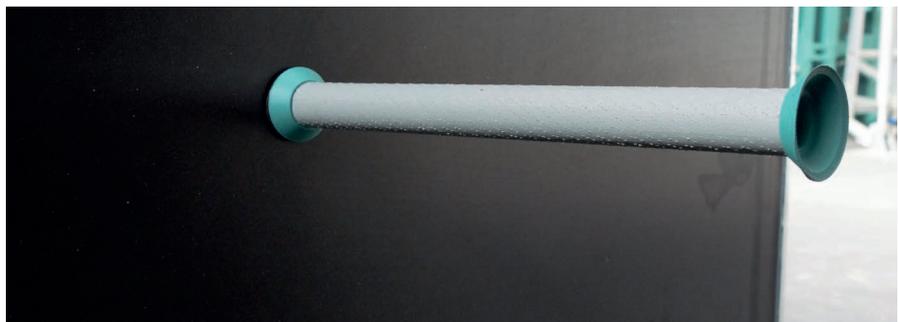


NOE® FixKonus

Formwork tying made easy

The NOE FixKonus is a revolutionary system offering new possibilities of use. It consists of a support cone and a centring cone. Between them sits a conventional plastic tube. The NOE FixKonus allows conventional tie rods to be used to implement 1-sided tie formwork arrangements. Alternatively, NOE FixKonus can be used for 2-sided tie formwork arrangements and makes erection of the second-side formwork easier because the tie plastic tube is already in its correct position.

- The plastic tube is attached independently to the panel
- 1-sided tie with conventional plastic tube
- No need for panel refits
- For use with 1-sided or conventional tie systems
- The arrangement can be changed from a 1-sided to a 2-sided tie formwork arrangement – without having to refit the formwork
- Conventional tie rods



Installing FixKonus



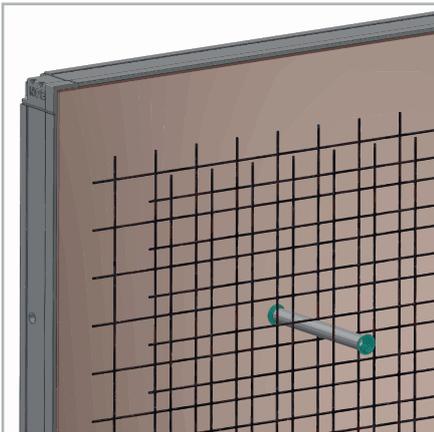
Install swivel bearing on first-face formwork



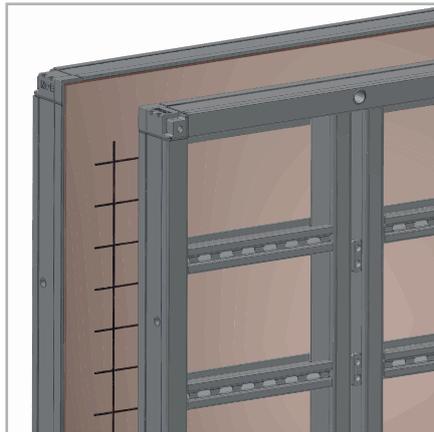
Cut plastic tube to length, push onto support cone and centring cone



Put first-face formwork into place



Push the plastic tube together with the support cone onto the tie rod recess tube of the first-face formwork, before or after fixing the reinforcement



Put second face formwork into place



Insert tie rod and install the swivel plate with wing nut



NOE[®]top

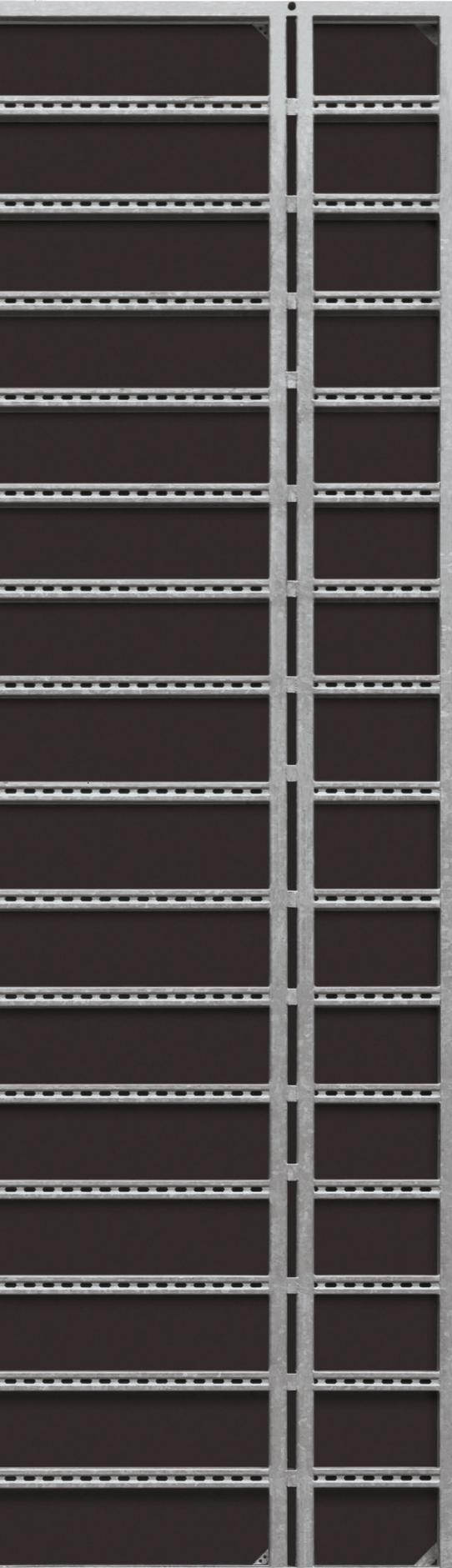
Versatile formwork system

The name says it all. NOEtop is an impressive, innovative and future-oriented frame formwork system. NOE has developed this system to fulfill a multifunctional role. Its very wide field of application extends far beyond that of ordinary frame formwork. With an allowable concrete pressure of up to 88 kN/m², NOEtop is suitable for use on all typical construction projects. The system has a broad range of additional elements to make your work easier. Best example: NOEtop S – for a particularly high safety standard on your site!

- Extends the range of application of frame formwork
- Increases flexibility of use and user-friendliness
- Synthesis of frame and beam formwork
- Considerably reduces the need for connection components and accessories. This results in significant savings in labour costs
- Symmetrical panels, integral bracing, multifunction transverse ribs and cast corners
- Allowable concrete pressure 88 kN/m²
- Large-format panels over 14 m² form face area
- Uniform frame profile thickness of 3.5 mm
- Tie bars can be positioned anywhere in the bracing
- Hot-dip galvanised frame
- One panel – three types of tie







XXL panels

Forms concrete cost effectively with 14.05 m² form face area (5300 x 2650 mm)

Simply strong

Permissible concrete pressure 88 kN/m²

Freely selectable tie rod layout

Symmetrical or freely selectable tie rod layout

Standardised

Transverse ribs with elongated holes and a continuous groove, which provides plenty of options for fastening and suspension arrangements for accessories

Large panels with integral bracing

Width/height: 5300, 3310, 2650 mm

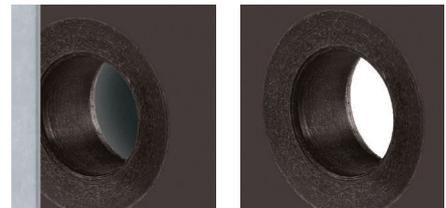
Versatile in use

Integral bracing allows NOEtop to be used as beam formwork (without external strongbacks etc.)

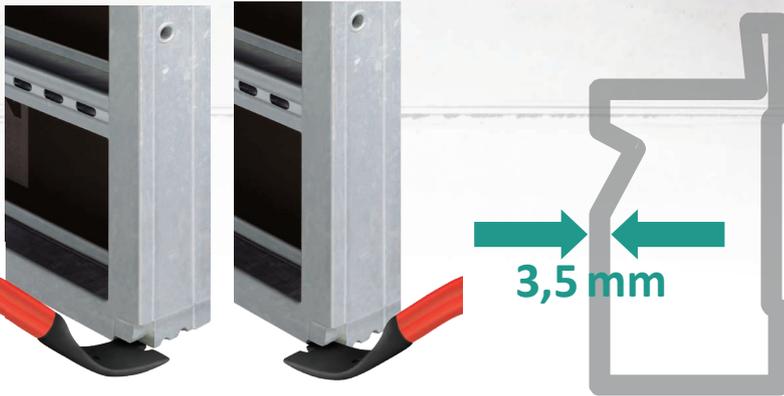
Regular joint pattern

Well-designed, consistent formwork panel height and width grid options (1/4, 1/2, 1/1, 5/4, 2/1). All panels can be combined end-on or side-on

Bushed tie rod holes



NOEtop



Robust

All formwork panels are fitted with corner castings. The frame profile material thickness is a consistent 3.5 mm

Ease of handling

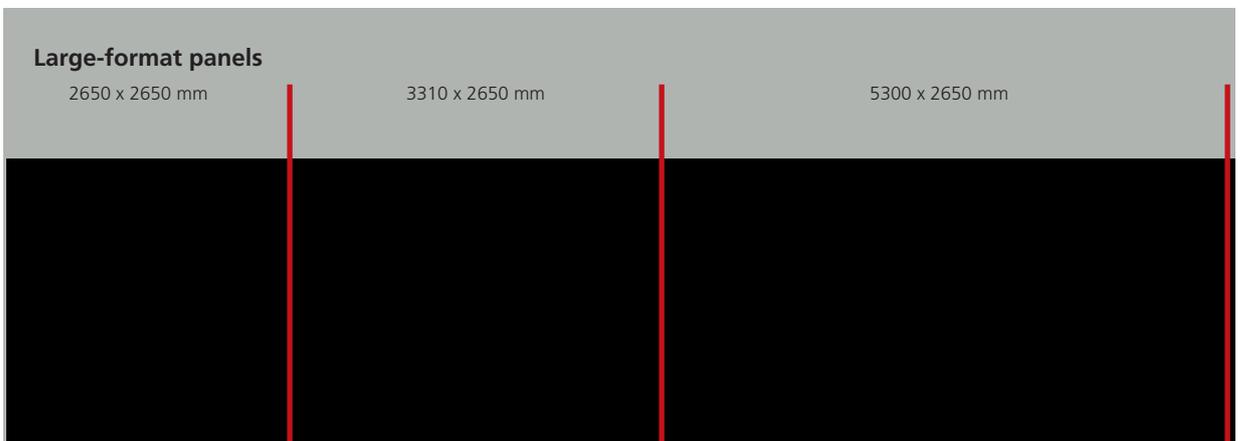
Corner castings with lever edge on all formwork panels

Durable

Frames and profiles are hot-dip galvanised inside and outside

No rivets

Formwork facing screwed from the rear face



NOEtop lock



NOE Toplock V – a lock for all situations

- For standard connections
- For compensation pieces 42 mm
- For corners
- For articulating corners
- For height extensions
- Permissible tensile load 15 kN



NOE Toplock H

- For compensation pieces 100 mm
- Conventional height extensions
- Permissible tensile load 20 kN

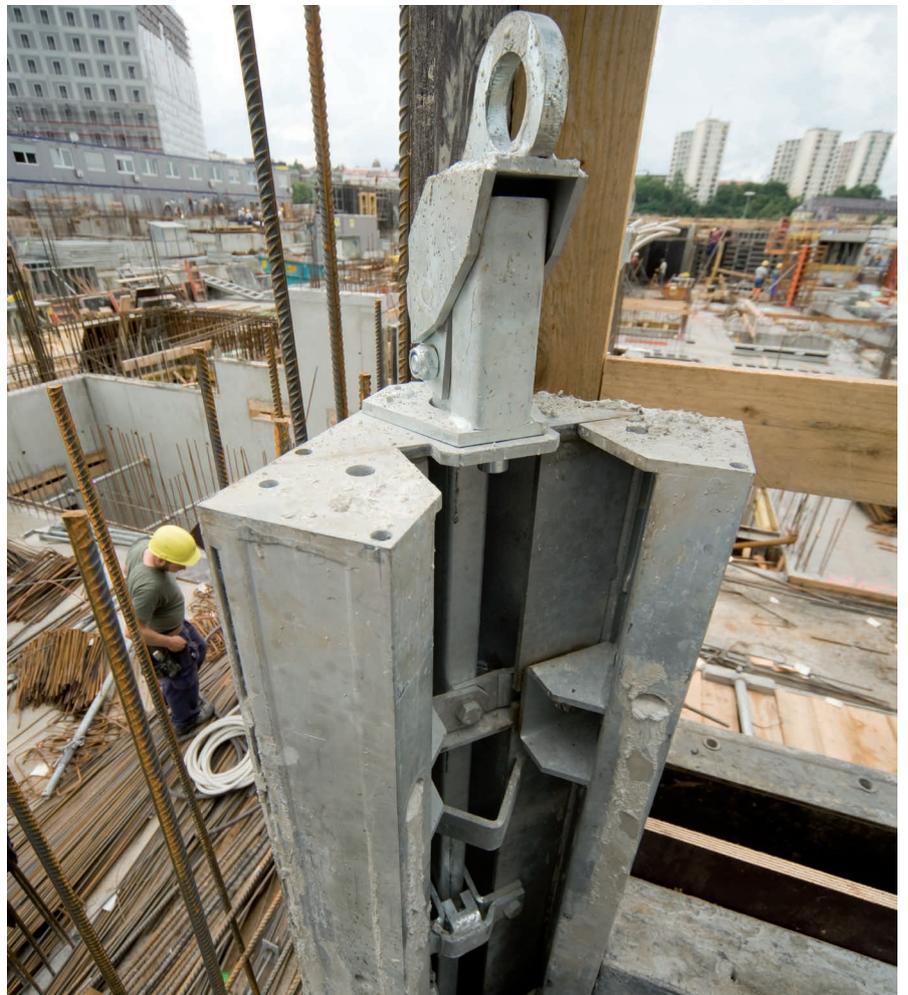
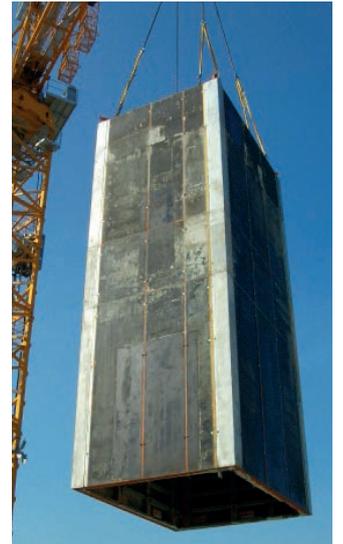


NOEtop stripping corner



The smart solution for shafts

- Efficient and economical lift shaft and stair-well core formwork
- 20 mm stripping play all round
- Moved as a complete unit
- Quick to erect and strip
- Lever operated from above or from outside

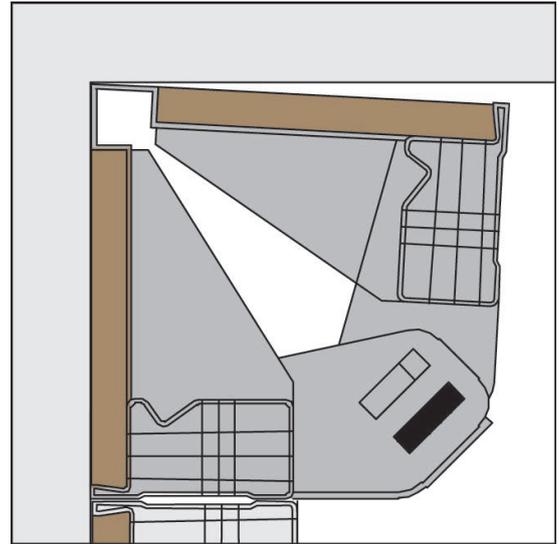


NOEtop corner solutions



90° internal corner – perfect around corners

- Easier stripping with 4° stripping play
- No hinges
- Simple stripping



Adjustable NOEtop internal and external corners

- Patented (Patent No. DE 102 62 255 B4)
- Easily operated and maintained adjustment mechanism
- Replaceable PU corner strips
- No rusted-stuck hinges
- No bleeding out of concrete
- No concrete-encrusted hinges





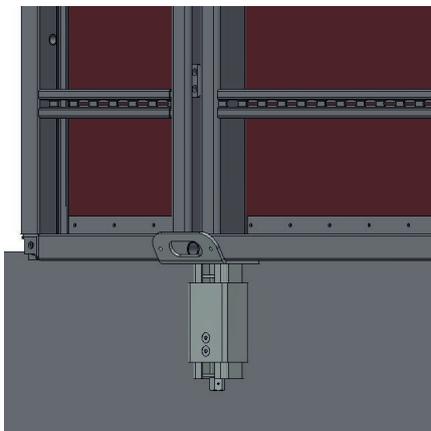
NOEtop stabilizer connector – innovative and time-saving

- Time-saving attachment to the formwork
- Can be installed from the ground
- Positive connection
- Connection to the cross-profile on side-on or end-on panels



NOEtop formwork support – easy to operate, even in tight situations

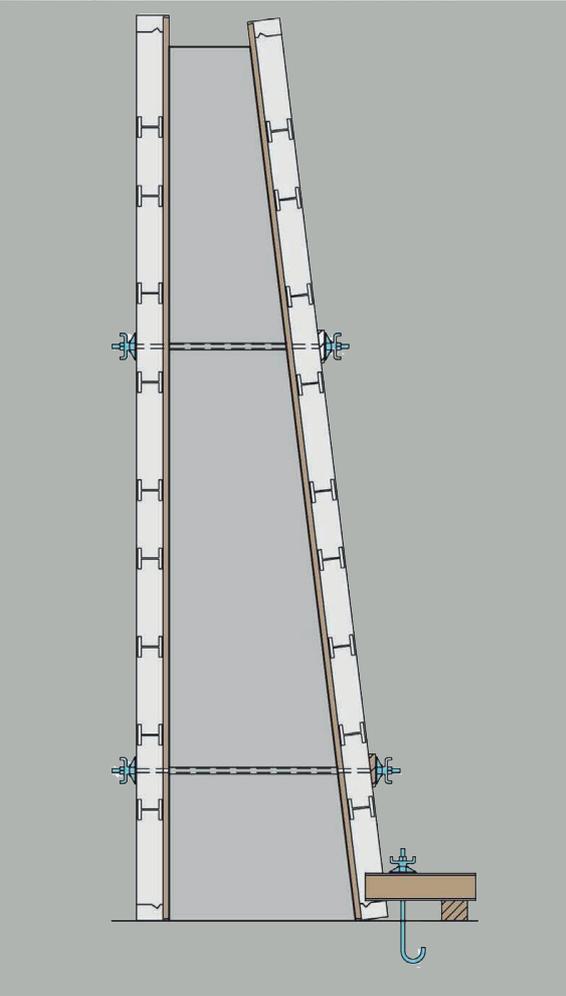
- For supporting formwork panels where space is short, e.g. working with a movable facade scaffold
- Easily adjusted in height from above and below
- Adjustment range ± 70 mm
- NOEtop formwork is held in place at the foot of the wall



Simple single-sided formwork

In conjunction with NOEtop support brackets, single-sided formwork can be used 3.31 m form height without additional bracing





Tapering walls – no problem

NOEtop large area panels can also be used for vertically tapering walls thanks to their integral bracing. Even formwork inclinations greater than 15° can be accommodated



Foundation formwork

- Large cost-savings compared with conventional methods
- Reduced excavation
- Free choice of panel layout
- No need for tie rod plastic tubes, the panels are tied above and below the form
- The bottom tie passes under the form
- Can also be used in very narrow working spaces



NOEtop Alu



Integrated

NOEtop Alu is integrated into the NOEtop formwork concept. Its dimensions match the NOEtop panel grid. Accessories and connectors are identical with those of NOEtop

Crane not required

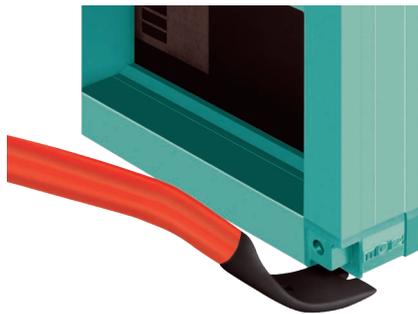
Crane-independent manual formwork e.g. for sites without cranes. Also ideal as formwork extensions on sites using NOEtop

Sturdy

Multi-cell frame profiles for high torsional stiffness

Panel range

Panel widths:
883, 750, 500, 250 mm
Aluminium external corner panel 883 mm
Aluminium internal corner 250 x 250 mm
Panel heights:
3310, 2650 and 1325 mm



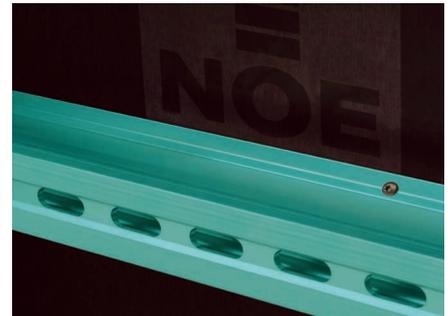
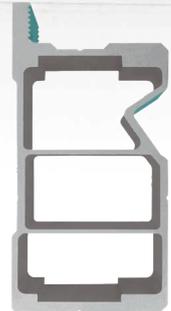
Durable

All panels have integrated corner castings



Strong

Permissible concrete pressure 60 kN/m²



Lightweight

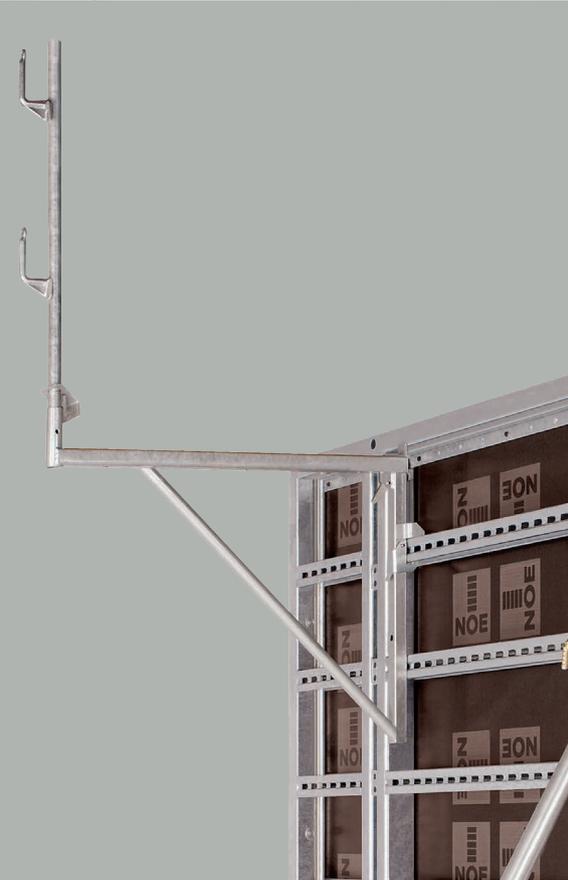
Panel weight only 27.4 kg/m²

Perfect concrete surfaces

NOEform facing screwed from the rear face



NOEtop safety



Safe workplace

Can be used with self-locking walkway brackets attached to side-on or end-on panels

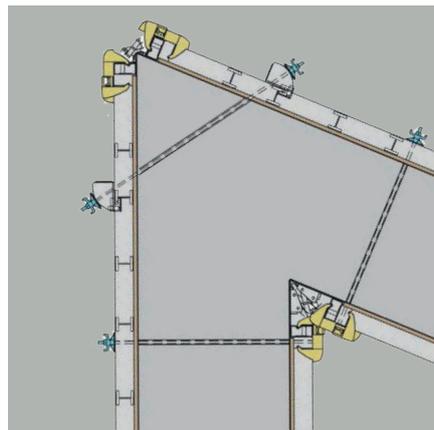


NOEtop Slanted tying plate

NOEtop offers impressive solutions, e.g. with large area panels for bridge abutments

The trick with the click

The skewed tying plates click into distance pieces on the bracing and allow the ties to run across the corner



NOE[®]top S

Integrated safety

NOEtop S is designed for use on sites with particularly high safety standards. Working platforms with all-round safety rails, ladder access and integrated stabilizers are attached directly to NOEtop large area panels and are supplied to site ready for immediate use. Fold out the working

platform and align the stabilizers – and NOEtop S is ready for use. It requires only to be folded up again before being moved to the next site. Dismantling is not required.



NOEtop S



- Working platforms, ladder access and stabilizers are fastened directly onto the NOEtop panels
- Ready for immediate use on site
- Folds down to only 370 mm depth
- Platform widths:
2650, 2400, 2000, 1325, 1200, 750,
600, 450 mm
- All-round protection against falling from height
- Assembled horizontally on the ground



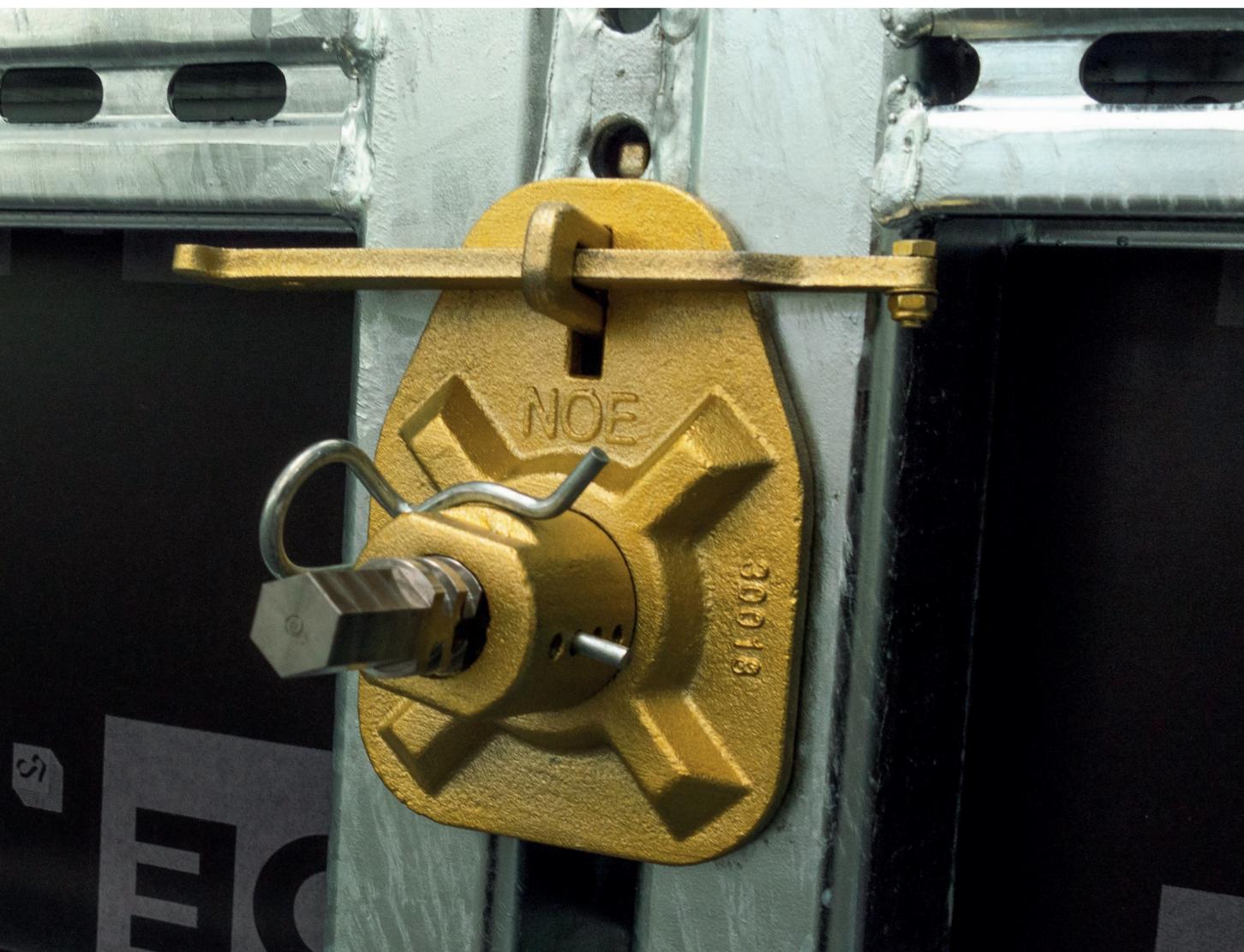
NOE[®]top EinsA

Erect formwork quickly

Integrated into the NOEtop formwork system: the NOEtop one-sided tie rod system. NOEtop EinsA used with the NOEtop formwork system saves time and money. Nothing is so good that it could not be improved. We have further

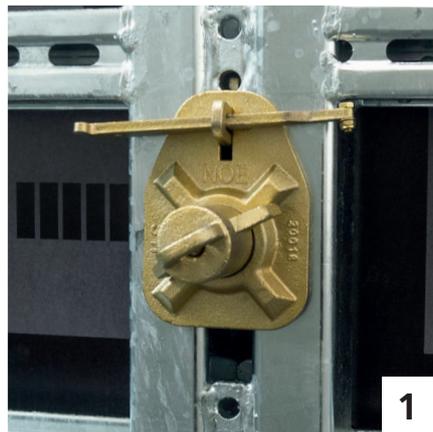
improved the NOEtop formwork system, regarded as one of the best formwork systems on the market, with the addition of NOEtop EinsA, the one-sided tie rod system.

- Can be operated from one side
- For wall thicknesses from 150 to 400 mm
- Adjustable in 10 mm increments
- Tapering tie rod
- Simply secured with a wedge
- Allowable concrete pressure 60 kN/m²





- NOEtop EinsA frame with integral bracing with widths of 400 to 1325 mm
- No need for a new system: NOEtop panels can be converted
- All NOEtop large area panels can also be used with the one-sided tie rod system
- Substantial time savings compared to conventional tie rod arrangements
- Tie rod sealed with a cost-effective rubber seal



1



2



3

1. NOEtop EinsA non-operator side with swivel bearing
2. Fitting the tapering tie rod and adjuster nut
3. NOEtop EinsA operator side with adjuster nut



NOE[®]top R

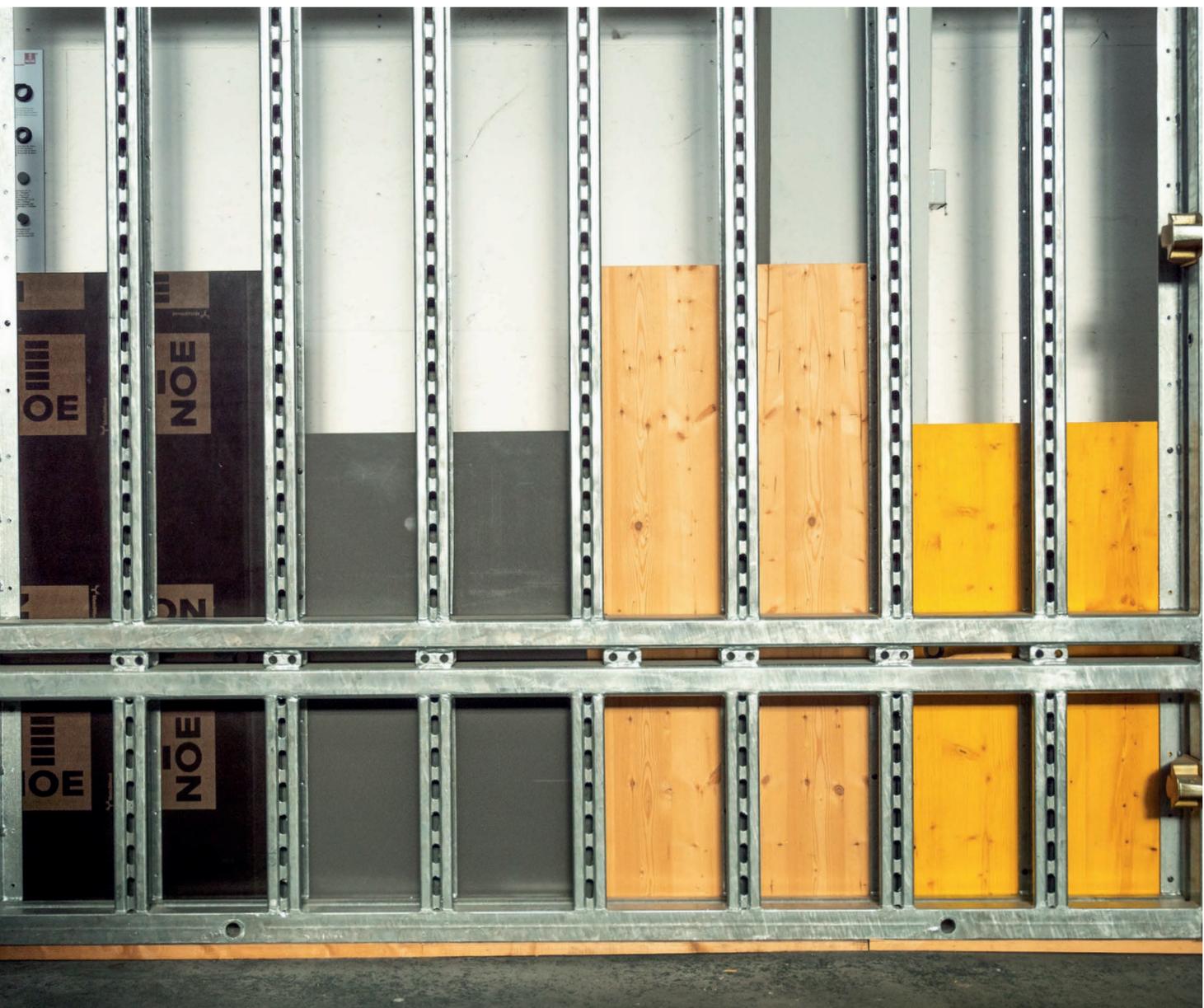
Choice of formwork facing

NOEtop R greatly increases the scope of use of the NOEtop formwork system. Top hat profiles with plastic strips to allow the formliner to be attached are fitted to the frame panels, which have integrated bracing members.

This allows any type of formwork facing to be attached – irrespective of the panel arrangement.

Your advantage:

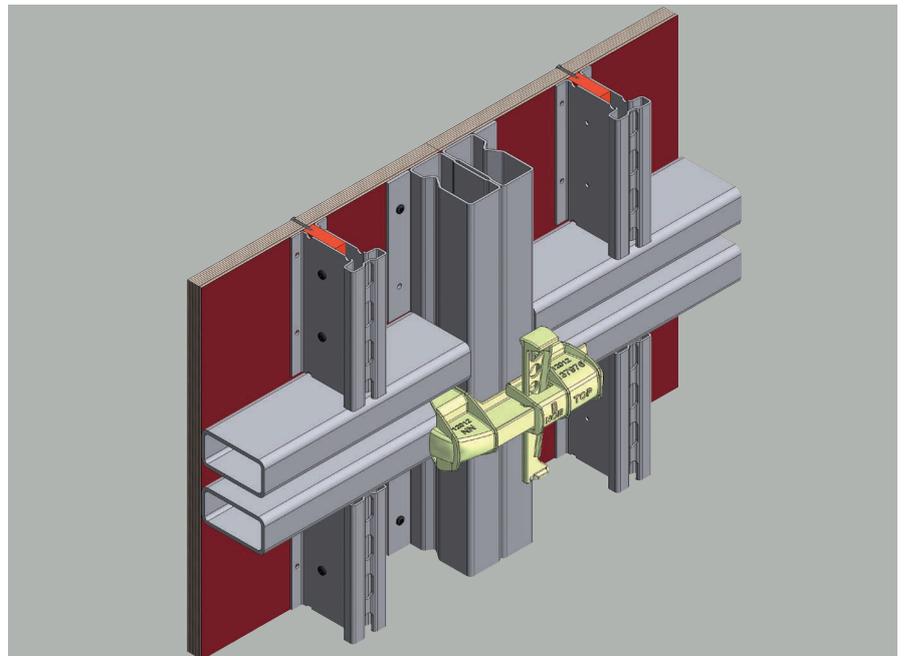
The same accessory components can be used for all NOEtop systems



NOEtop R



- Panel sizes
Heights: 3310, 1325 mm
Widths: 2500, 2000, 1000, 750, 200 mm
Internal corner (without facing): 473 x 473 mm
- Nailing cores inserted into top hat profiles
- Facings can be screwed on from the front or the back
- Free choice of facing, frame butt joints can be ignored
- NOEtop panels and NOEtop R panels can be combined

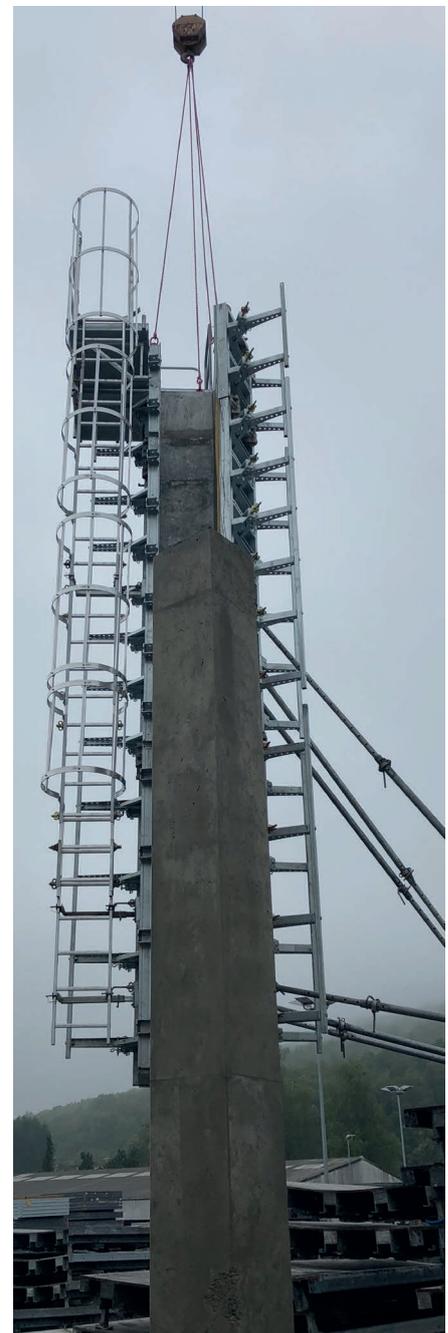


NOE[®]top FS

Foldable column formwork

The NOEtop FS allows columns with cross sections from 200 to 600 mm to be concreted without tie rods. The cross section dimensions are adjustable in 50 mm increments. Available in two versions: with steel facing or as a supporting frame for any type of 21 mm thick formwork facing.

Erecting and stripping the formwork is done in one piece, i.e. the formwork does not have to be assembled or disassembled. Repositioning can also be done in one piece. Safety is built-in with working platforms and ladder access including integrated safety cage.



NOEtop FS



- Concreting of tie rod-free columns
- Cross sections 200–600 mm in 50 mm increments
- Free choice of facing
- NOEtop steel edge and top hat profiles
- Foldable, i.e. the formwork can be closed around the reinforcement
- With attached platform and ladder access
- Stackable to save space
- Flexible with panel heights of 3500, 2750, 1250 and 600 mm
- Concrete pressure 120 KN/m²



NOE[®]top R 275

Adjustable circular formwork

An impressive circular formwork system for curved, vertical components with radii from 2750 mm.

Your advantage:

The initial, first-use radius is set at the factory so that the formwork can be delivered to your site ready for immediate use. Setting to other radii for later uses can be done quickly and easily on site.



NOE[®]alu L

Perfect manual formwork

NOEalu L is the innovative lightweight member of the NOE wall formwork family.

In developing this product, NOE's engineers concentrated on creating a system that could be moved around manually and yet be capable of withstanding the everyday stresses and strains of robust use on site.

If you have larger areas of formwork to construct, you can make very effective use of NOEalu XLS with its form face areas 5.50 m².

- Low self-weight
- Robust aluminium frame
- Integral cast corners and lever edges
- Allowable concrete pressure 60 kN/m²
- Well-designed arrangement options of heights and widths
- XLS panels with 5.50 m² form face area
- Adjustable internal and external corners with easily operated and maintained adjustment mechanisms, and replaceable PU strips





Lightweight

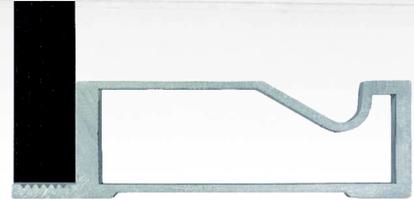
Panel weight only 20 kg/m²

Strong

Allowable concrete pressure 60 kN/m²

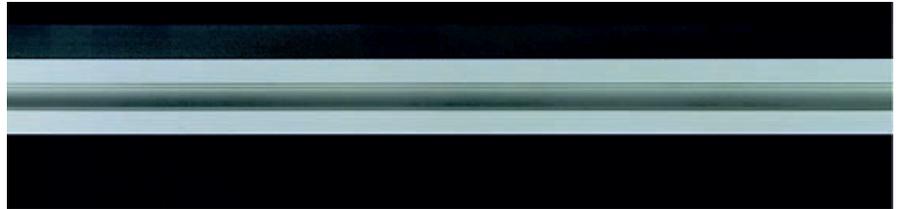
Standardised

Aluminium transverse ribs with continuous lips to accept hammerhead bolts and walkway brackets



High performance

15 mm NOEform liner and strong aluminium frame profile for optimum concreting results



NOE Alulock

Safe

A connection designed from the point of view of ergonomics – makes formwork easier

Quick

Concrete-tight, flowing panel connections with NOE Alulock



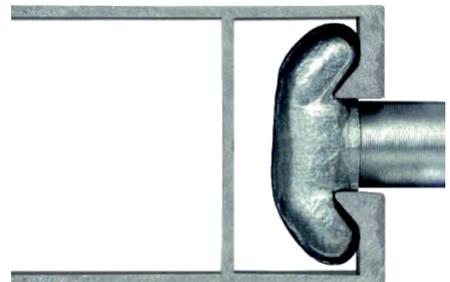
Hammer-head bolt

Attached anywhere

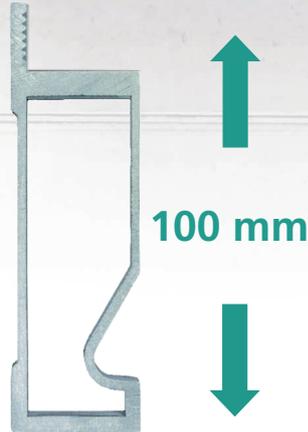
Accessories can be attached anywhere on the transverse ribs with hammerhead bolts

Professional

Uses hammerhead bolts with integrated Sprint nut



NOEalu L



Slender
A depth of only 100 mm
reduces transport costs

Robust

Robust aluminium frame with corner casting with lever edge for durability in use

Safe

New generation of walkway brackets can be attached anywhere on the transverse profile



NOEalu XLS / large area panels

2.00 x 2.75 m = 5.50 m² panel area
2.00 x 1.50 m = 3.00 m² panel area

Panel dimensions

Panel widths:
2000, 900, 750, 600, 550,
500, 450, 400, 300 mm

Internal corner:
300 x 300 mm

Panel heights:
3000, 2750, 1500, 900 mm

Foundation panel:
900 x 1250 mm



Patented

NOEalu L adjustable internal and external corners based on the patented NOEtop adjustable internal and external corners (Patent No. DE 102 62 255 B4) with easily operated and maintained adjustment mechanisms, and replaceable PU strips. This means: no rusted-stuck hinges, bleeding out of concrete or concrete-encrusted hinges.



Reduced tie costs for foundation formwork

Impressive

The ease of handling of NOEalu L foundation formwork impresses users when constructing all types of foundations

Large cost savings

Through reduced excavation and no need for additional panel supports

Strong

Allowable tension force in the perforated steel straps 16 kN

Align precisely

By nailing the perforated steel strap on to the blinding concrete

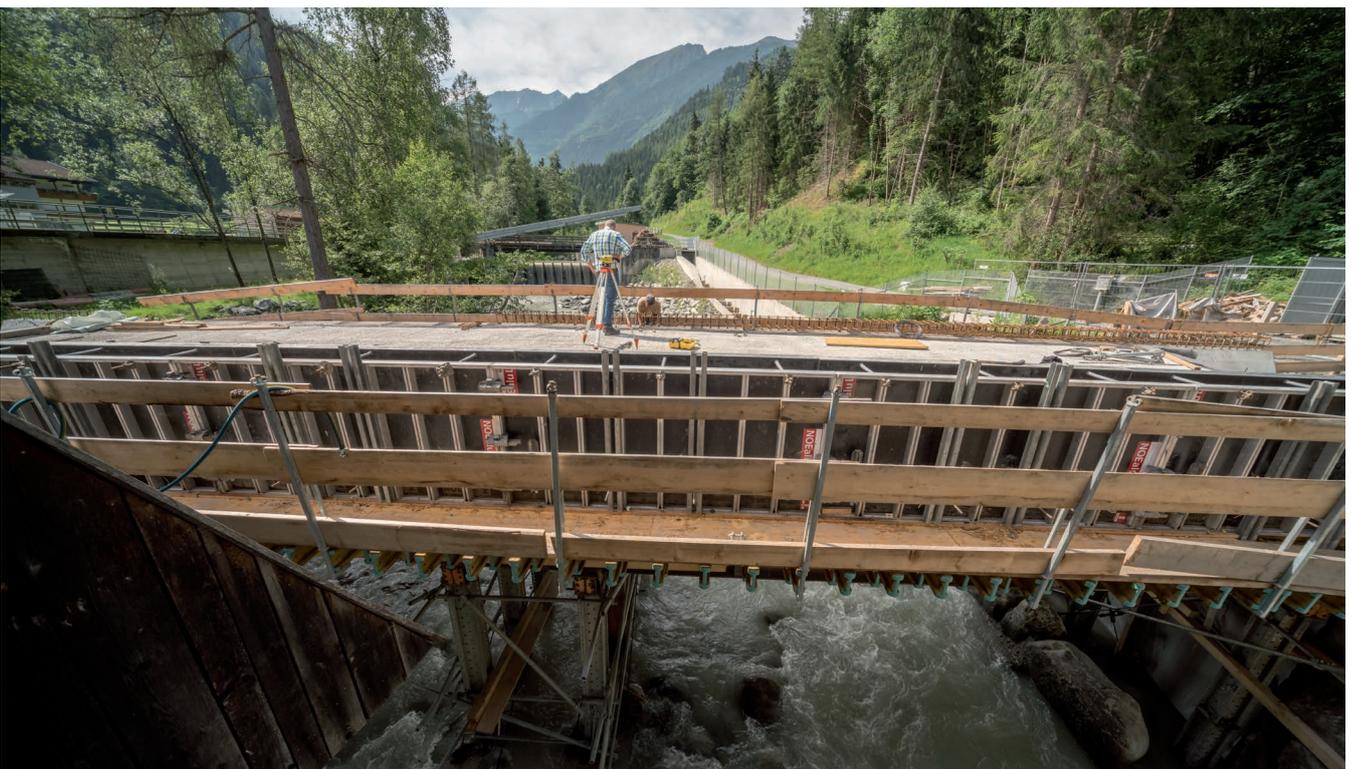
Tying without grid patterns

Forms tied together by tying claws and below with Perforated steel strap

Smart system

The foundation clamp connects the perforated steel strap to the formwork panel to resist tensile forces and thus creates the bottom tie

NOEalu L

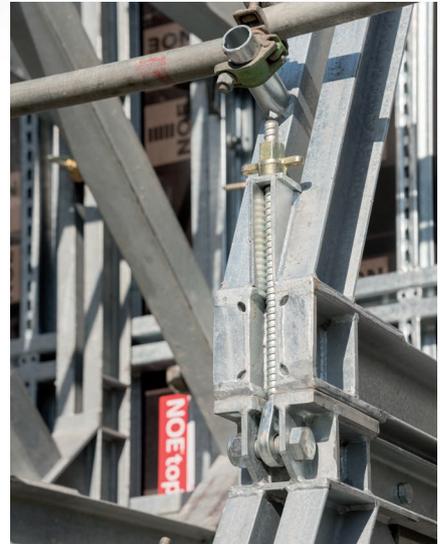


NOE® HBF support bracket

Modular single-sided

The NOE HBF support bracket is a modular support bracket for single-sided forms. The product is specially designed for high loads.

- For formwork heights 10 m
- 4 system components
- Simple assembly
- Very easy and safe to extend upwards
- Hot-dip galvanised



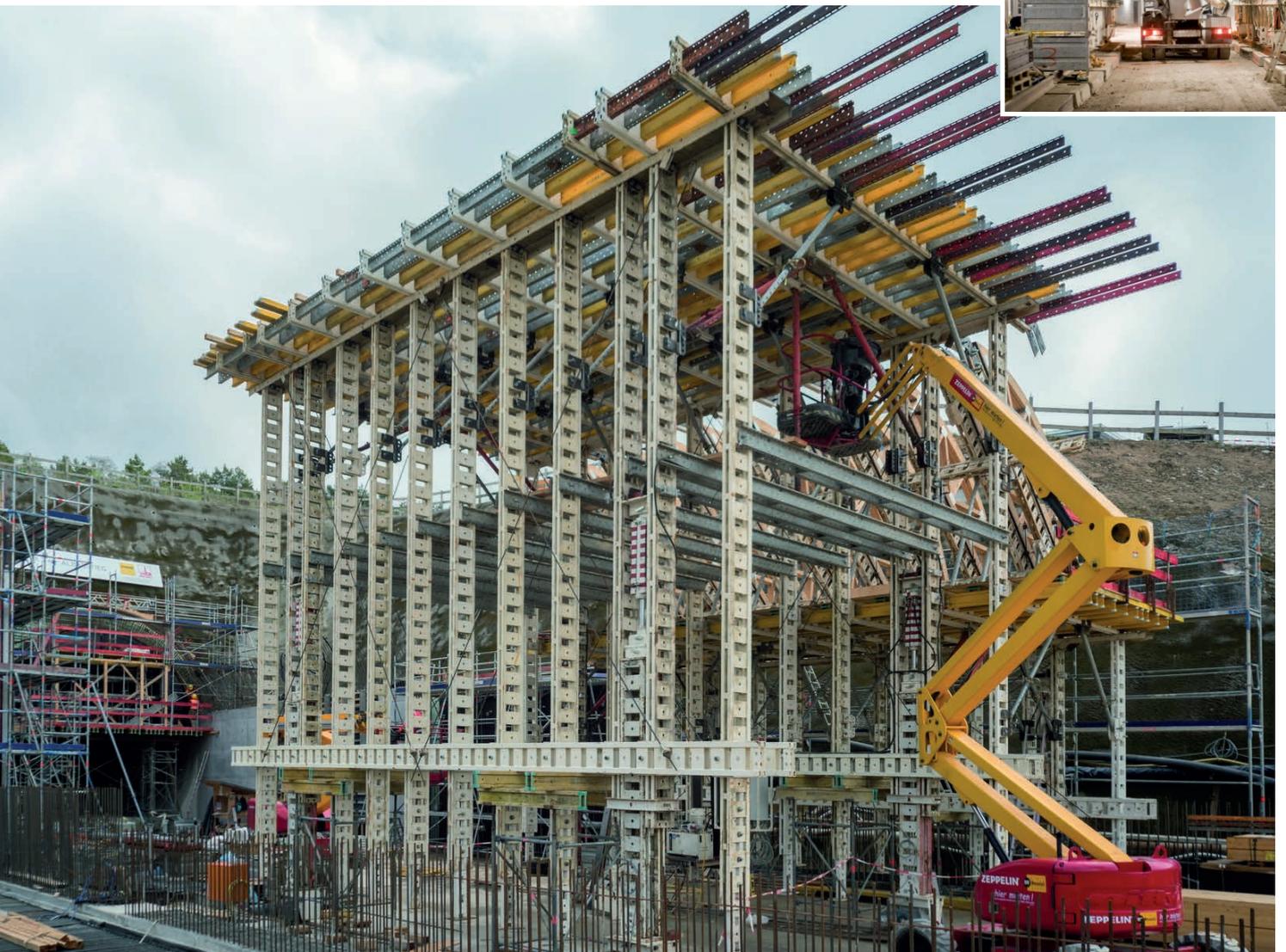
NOE[®]tec

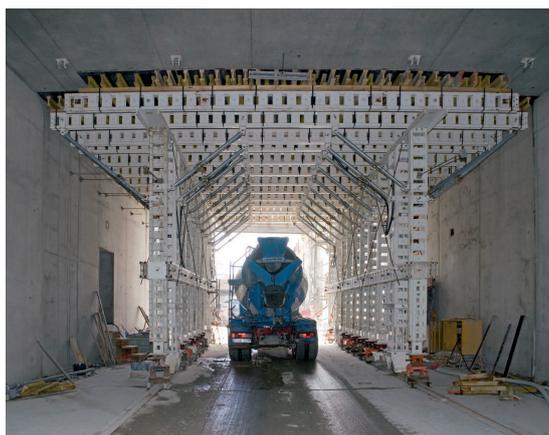
The all-rounder for engineering structures

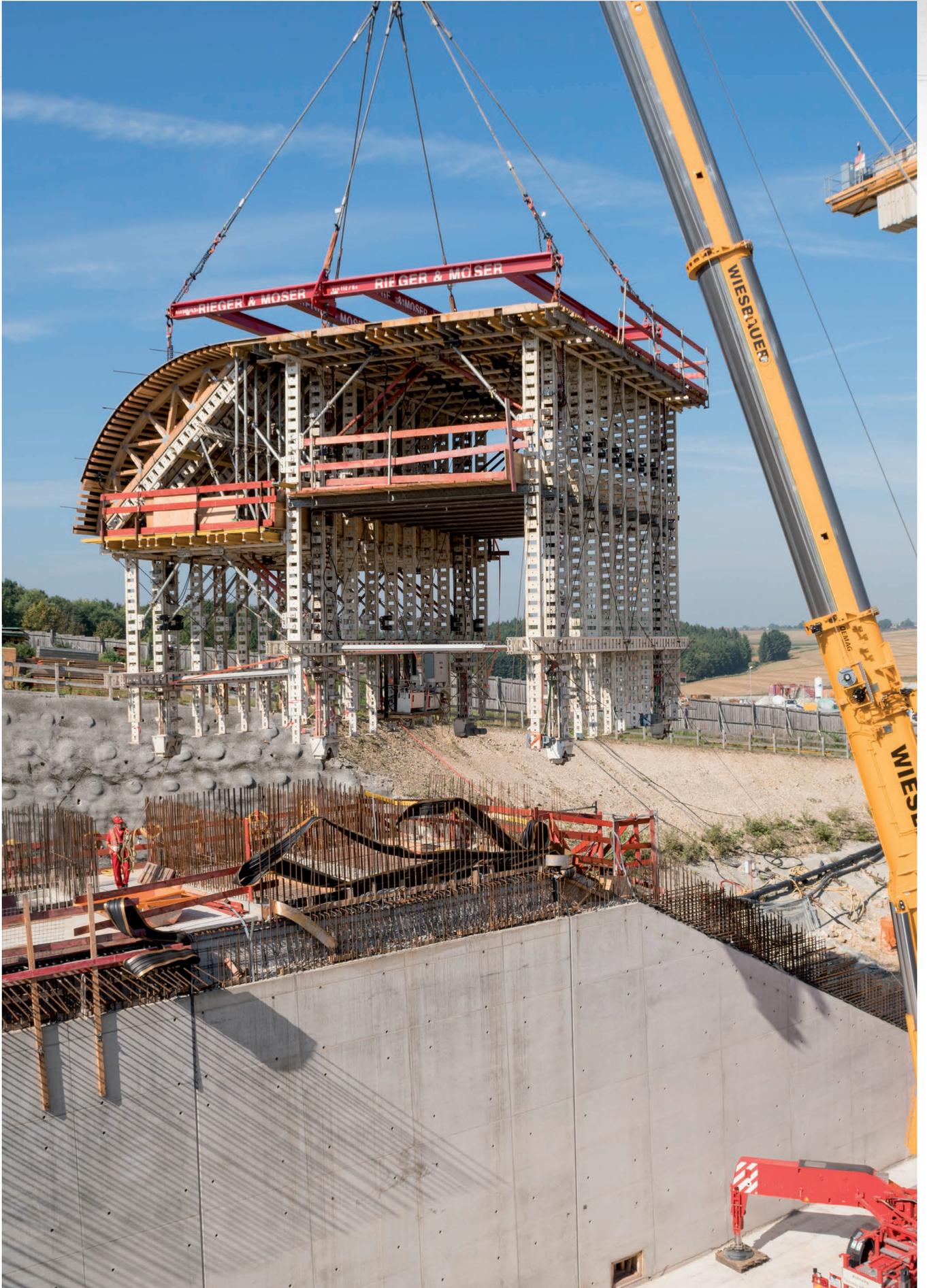
NOEtec is a highly flexible modular system and can provide an efficient solution for the majority of formwork tasks on engineering structures.

The system can be precisely tailored to suit the requirements of your project or site and produces solutions for challenging tasks while using very few system components

- Is notable for short installation times and self-explanatory assembly
- Excels through its high load capacity
- Flexible modular system







NOE® System 6-2-5

A successful synthesis of steel and timber

The NOE System 6-2-5 is an extremely flexible panel system for vertical building components. It impresses with a 625 mm height and width grid. System 6-2-5 is based on the proven NOE Combi 20 steel beams.

- Long service life due to hot-dip galvanised basic elements
- Diverse scope of use for walls, columns, decks and substructures
- Very easy to use
- Modular system with a 625 mm height and width grid
- Convincing price-performance ratio



NOE[®]prop

High-performance aluminium support system

NOEprop aluminium props are remarkable for their low self-weight and high load capacity of 160 kN per prop. In conjunction with NOEprop support frames, they form a flexible and highly loadable support system.

One frame – two widths.



NOEprop props

- Low self-weight
- Quick setting and simple fine adjustment
- High load capacity 160 kN/prop
- Self-cleaning threads
- Extendible max. 5.80 m
- Three prop types

NOEprop support system

- Four support frames for six widths
- Horizontally and vertically deployable support frames
- 90° swivelling NOEclamp connection
- Safety integrated into erection sequence
- Tower heights 15.20 m





NOE[®]deck

Modular deck formwork

NOEdeck impresses when used as formwork for large deck areas. The particular useful feature of NOEdeck: a 48 kN allowable drophead load.

- 800 mm maximum deck thickness
- Drophead enables early stripping
- No wear parts
- Drophead system
- Drophead load 48 kN
- Formwork erected quickly



NOE[®]table

Safety at the slab edge

NOEtable deck tables are delivered to site ready for use. This is made possible because the swivelling head is already mounted between the transverse support beams for receiving the deck props. The units do not have to be disassembled for transport and storage.

A further plus for your safety: service and working scaffolds can be integrated into this system. The assemblies are quickly moved with deck formwork carriages on the same floor or with a crane fork and transfer platform from floor to floor.

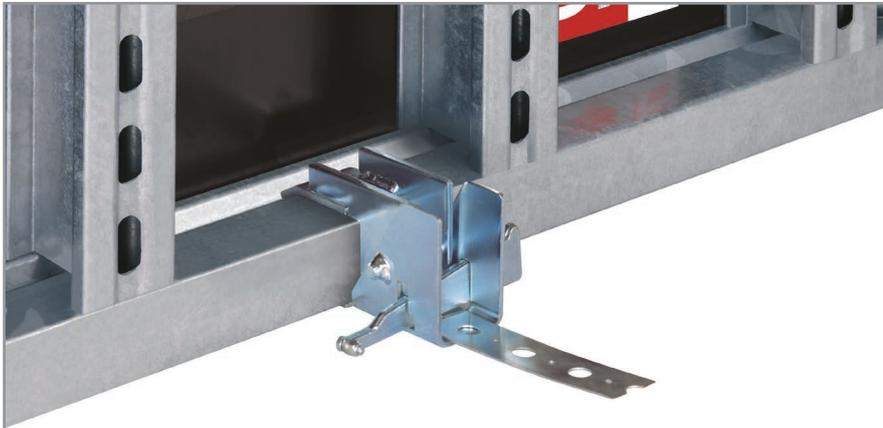
- Quickly moved
- Lateral protection can be integrated
- Up to 12.5 m² formwork area per deck table



Formwork and scaffold accessories

Formwork and scaffold accessories from NOE are designed to be used quickly and cost-effectively on building sites.

- Foundation formwork erected using the smart, perforated steel strap
- Triangular tying arrangement if a paired arrangement of tie rods and bearings is not possible
- One-sided tying with a conventional tie rod using the NOE FixKonus
- NOEplast year number in accordance with RIZ 1 (German guidance document)





NOE formwork facings



NOEform

Thickness	mm	21	15	12	9
Formats up to	mm	1500x3600	1500x3600	1500x3000	1500x3000
Large format	mm	2700x5300			
Surface		Phenolic resin coating 220 g/m ² (both sides)			
Weight	kg/m ²	14.70	10.50	8.40	6.30
Core construction		Glued birch plywood			
No. of plies		15	11	9	7

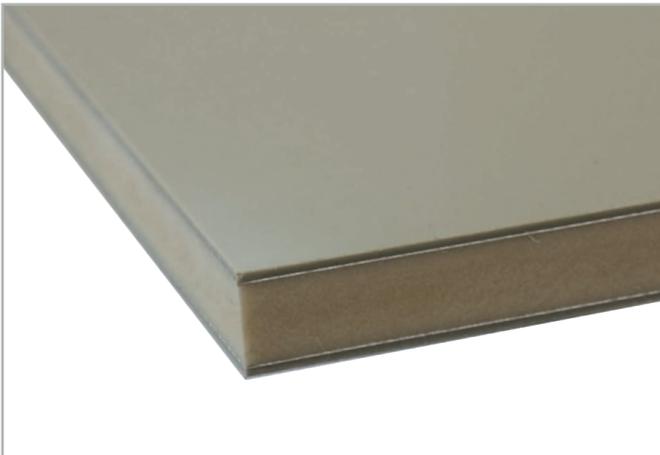
- Walls and decks
- Concrete surfaces with the highest requirements, flat, textureless appearance
- High-quality formwork board for smooth fair-faced concrete surfaces
- Plies glued crosswise
- Phenolic resin coating on both sides



Elliottis pine

Thickness	mm	21
Formats up to	mm	2500x1250
Surface		Untreated
Weight	kg/m ²	10.40
Core construction		Pine
No. of plies		7

- Shuttering plywood
- For secondary formwork
- Basic shuttering formwork
- C/C+ quality



alkus

With glass fibre reinforcement

Thickness	mm	15	12.5	11.5	10	5.7
Formats up to	mm	1200x4000				
Weight	kg/m ²	12.8	10.6	9.5	9	5.6

With aluminium reinforcement

Thickness	mm	10 - 27
Formats up to	mm	1370x4000
Weight	kg/m ²	8 - 19.6

- Durable plastic composite construction
- Extremely stable and wear resistant
- High-quality formwork board for smooth fair-faced concrete surfaces



Antislip embossed plywood

Thickness	mm	21	18	15	12	9
Formats up to	mm	2500x1250				
Surface		Phenolic resin coating 220 g/m ² one side 120 g/m ² embossed one side 120 g/m ² smooth				
Weight	kg/m ²	14.70	12.80	10.50	8.40	6.30
Core construction		Glued birch plywood				
No. of plies		15	13	11	9	7

- Antislip facing for site scaffolding boarding

NOE formwork facings



NOE Dreischicht, melamine resin coated

Thickness	mm	21		
Formats up to	mm	1500x500	2000x500	2500x500
Surface		Melamine resin coating 140 g/m ² (both sides)		
Weight	kg/m ²	10.80		
Core construction		Pine		
No. of plies		3		

- For walls and decks
- Concrete finish with slight wood texture
- Surface planed
- Melamine resin coating both sides
- Narrow edge fitted with steel edge (optional)



NOE Dreischicht, untreated

Thickness	mm	21		
Formats up to	mm	On request		
Surface		Untreated		
Weight	kg/m ²	10.80		
Core construction		Pine		
No. of plies		3		

- Walls and decks
- Concrete finish with slight wood texture
- Surface lightly sanded



Chinese film-faced plywood

Thickness	mm	21	
Formats up to	mm	2500x1250	
Surface		Phenolic resin coating 120 g/m ² (both sides)	
Weight	kg/m ²	11.20	
Core construction		Glued poplar plywood	
No. of plies		13/15	

- For secondary formwork
- Concrete surfaces with low requirements
- Phenolic resin coated both sides



Westag RS special (oiled / unoled)

Thickness	mm	21	10	
Formats up to	mm	5430x2050	5430x2050	2710x2050
Surface		Surface in acc. with WGK 1 (German Federal Water Management Act) Oiled with an environmentally compatible release agent		
Weight	kg/m ²	16.80	8.00	

- Large area formwork panels made from high-density wood-based material
- Finely sanded and absorbent surface
- For low-pore concrete surfaces with higher spalling resistance
- For use in sewage treatment plants, water tanks and on bridges

NOE[®]plast

Architectural design

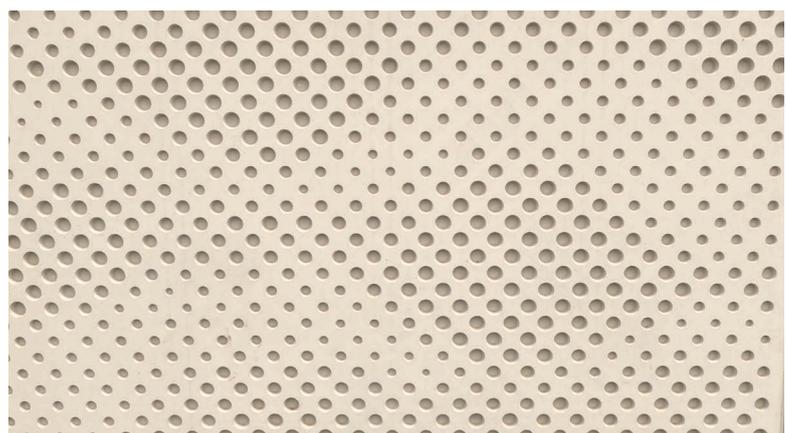
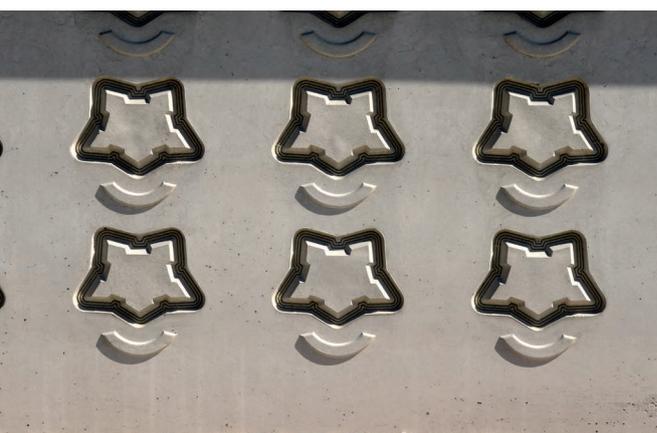
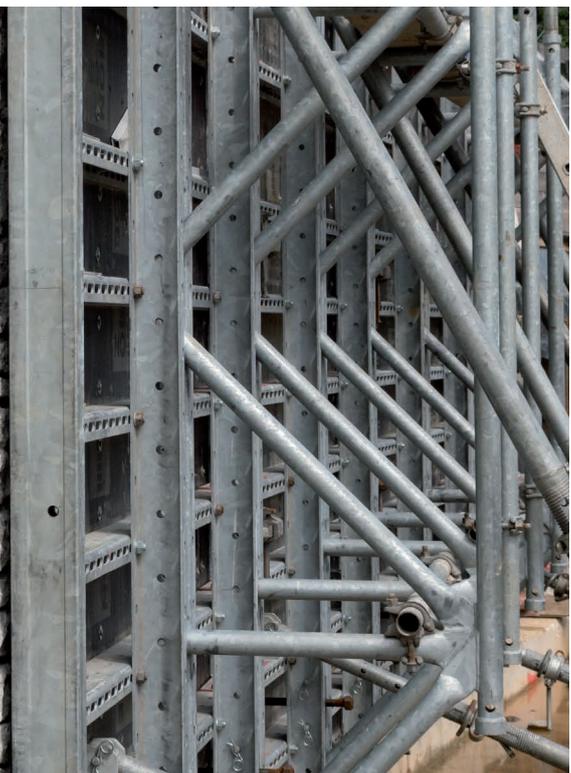
Creative concrete surfaces moulded with NOEplast textured formliners help communicate the architect's design objective. The motif can be selected to integrate with other materials or a spatial concept or to act as a dominant design feature. Textured concrete surfaces have a crucial advantage over their smooth counterparts: The texture brings the surface to life.



The formwork, associated system components and the means to texture the concrete surfaces can all be obtained from NOE.

You have a single point of contact and can be sure the various systems are compatible with one another

- Surfaces brought to life
- Formwork and textured formliners from the same supplier
- A single contact partner for textured formliners and formwork
- Backing fabric



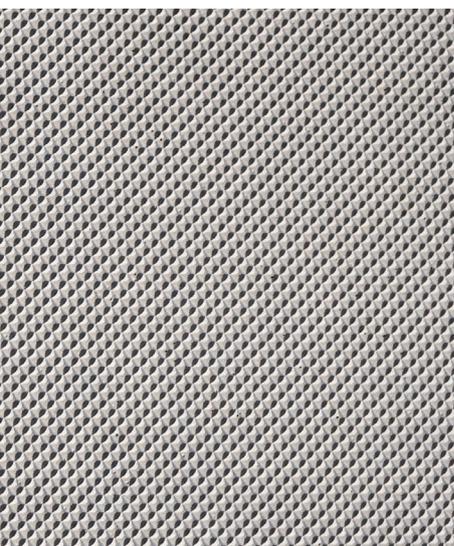


NOE[®]liner

Large area textured formliners

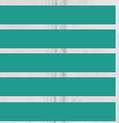
NOEliner textured formliners are manufactured out of hard-wearing PVC and have a fabric backing. As a result, they bond very well when glued to flat, even surfaces. Some of these textured formliners were developed specifically for creating anti-slip surfaces on the walkable areas of balconies, stairs, landings and in arcades.

- Up to 50 m long
- Only 2 mm thick
- Up to 5.80 m wide
- Anti-slip surfaces





THE FORMWORK



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