

DUO

The lightweight formwork for walls, columns and slabs

Product brochure



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Important notes

All current safety regulations and guidelines must be observed in those countries where our products are used.

The photos shown in this brochure feature construction sites in progress. For this reason, safety and anchor details in particular cannot always be considered as conclusive or final. These are subject to the risk assessment carried out by the contractor.

In addition, computer graphics are used which are to be understood as system representations. For ensuring a better understanding, these and the detailed illustrations shown have been partially reduced to certain aspects. The safety installations which have possibly not been shown in these detailed descriptions must nevertheless be available.

The systems or items shown might not be available in every country.

Safety instructions and load specifications are to be strictly observed at all times. Separate structural calculations are required in case of changes and deviations.

The information contained herein is subject to technical changes in the interests of progress. Errors and typographical mistakes reserved.

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Focus on the latest material sciences

Application of technopolymers in formwork and scaffolding technology

For several years, PERI has been carrying out research and development in polymer products. Thereby the focus is on the practical application of these materials in construction engineering. The result is polytech – a composite material on the basis of a polymer matrix. The material properties are optimised for the respective requirements of an application by adding additives. PERI material research focuses on technopolymers that are particularly robust and durable. All development activities are aimed at the specific use of these polymers in formwork and scaffolding technology. Apart from simple slab stopend angles for the slab edge and other small devices, the formwork system DUO has resulted from this novel material.



Polymer-coated fibres are the source material for the production of polytech components.



Main advantages of polytech

Low weight

Polytech is very light compared to steel or even wood. This allows for faster working and saves crane time.

High durability against moisture

Technopolymers are shrink-free, develop no moisture expansion and do not rust. This makes their application in formwork systems so advantageous compared to wood or steel.

High flexibility regarding product design

The simple, flexible shaping opens up new possibilities for the utilisation of components and for clever multiple functions.

Why polytech is sustainable

Zero waste production

The entire raw material used is processed into a product. No waste is generated during production.

Ideal transport weights

Polytech products are of a low weight. This minimises the transport weight and the transport costs and thus also exhaust gases.

100 % recyclable

All components made of polytech are 100 % recyclable. Used material can be used to produce new products in terms of a sustainable recycling economy.

In order to determine the ideal material composition for the respective application, the material behaviour is initially simulated using FEM methods.



The material tests during product development are carried out both in the laboratory and under practical conditions on construction sites.



The DUO system components are produced using specially developed injection moulds. No waste is generated.



DUO

The lightweight formwork for walls, columns and slabs

DUO is the innovative system formwork featuring a very low weight and extremely simple handling. It is not only the material used that is innovative, but rather the entire concept. It allows for efficient forming of walls, columns and slabs using a minimum number of different system components.

In addition to the panels including the formlining, most DUO accessories are made of the innovative composite material polytech. This newly developed material is extremely light and at the same time has a high load-bearing capacity.

Apart from the material, the developers focussed on ensuring that the formwork system was easy to handle.

Almost all operations with DUO can be carried out without tools, the working steps are easy to understand. Even less experienced users of system formwork are able to work with DUO quickly and efficiently. The fact that the majority of system components is used for walls, columns and slabs increases the performance additionally.

Universally applicable

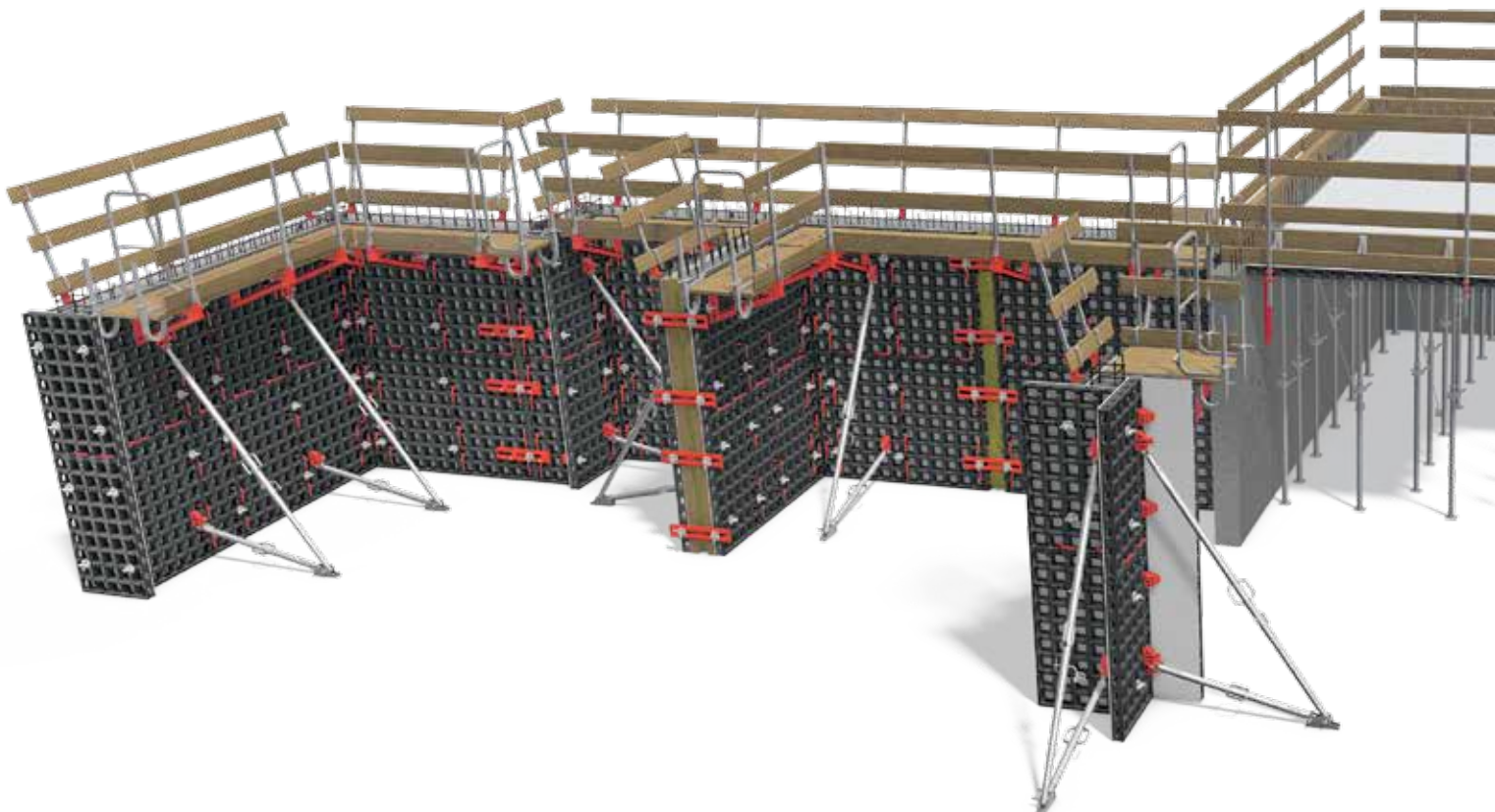
Flexible forming of walls, columns and slabs using only one system

Ergonomic in all respects

Low weights, crane-free handling and intuitive application

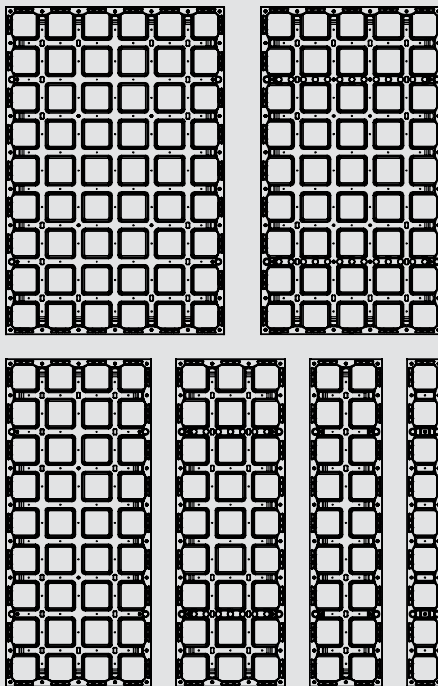
Easy replacement of formlining

Quick maintenance with just a few screws – without requiring special skills



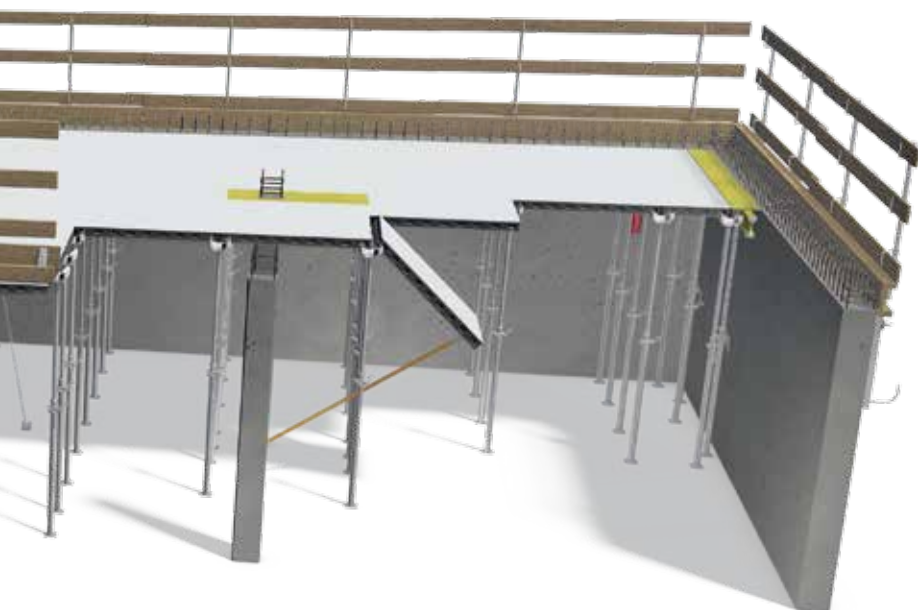
The DUO core components

The core components of the system are the DUO panels including the formlining and the DUO Couplers, entirely made of the composite material polytech.



The DUO Panels are 1.35 m high. Six different panel widths allow adjustments to be carried out in 15 cm increments.

The DUO Coupler connects the panels evenly. No tools are required for installation.



Universally applicable

Flexible forming of walls, columns and slabs using only one system

DUO Panels can be used for vertical and horizontal applications. Besides the investment and logistics costs, this also minimises the expenditure for the training of staff.

Versatility is the special advantage of the system. The panels can be utilised for forming walls, columns and slabs. In addition, all accessories such as couplers and corner posts have been designed so that they can be used for numerous applications. This concept reduces the number of different system components which in turn simplifies material requisitions on site.

The advantages become even more evident when looking at the entire period of use of DUO: users carry out the various formwork tasks more efficiently, less storage areas are required and transport costs are significantly reduced.

		Width					
		90 cm	75 cm	60 cm	45 cm	30 cm	15 cm
Panels	Height 135 cm						
		24.90 kg	22.80 kg	17.10 kg	14.10 kg	9.29 kg	5.21 kg

		5 cm	6 cm	7 cm	8 cm	9 cm	10 cm
Wall thickness compensations	Height 135 cm						
		2.86 kg	3.12 kg	3.38 kg	3.64 kg	3.90 kg	4.16 kg

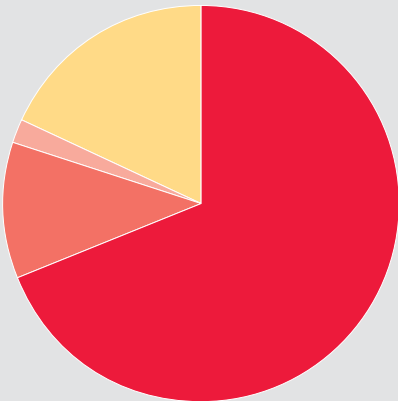
The system consists of 6 different panel widths, each with a height of 135, and the standard compensations are available with widths from 5 cm to 10 cm.

The DUO concept is based on the fact that as many system components as possible can be used in the wall, column and slab formwork. This significantly reduces the investment costs.

Based on the on-site material requirements for a 200 m² wall area and four columns, each with a height of 2.70 m, only about 20 % higher investment costs are to be taken into account if the system is also used as slab formwork. More than 2/3 of the DUO system components included in this package can be used in all applications.*

The investment costs are therefore significantly lower than for three comparable formwork systems for the applications wall, column and slab.

This concept also supports the principle of sustainability: fewer transports and considerably lower transport weights reduce the energy requirements for logistics.



- Universally applicable DUO system components for walls, columns and slabs
- DUO system components for walls
- DUO system components for columns
- DUO system components for slabs

* The calculation refers to the DUO system components (including tie technology, push-pull props and slab props, brackets and side protection, excluding wooden planks and boards).

DUO is designed for a standard floor height of 2.70 m – extended with 2 panels. Alternatively, panels can be extended horizontally.



With DUO Multi Panels, square and rectangular columns from 15 cm x 15 cm up to 55 cm x 55 cm can be realised in 5 cm increments.

DUO has been optimised for slabs up to 30 cm thick. The universal Fix Head DFH can be used with all standard steel props.



Ergonomic in all respects

Low weights, crane-free handling and intuitive application

Simple operations, low weights and uniform system components allow for a very high productivity on the construction site. Working with almost no tools additionally reduces the risk of injury and prevents noise.

No DUO system component weighs more than 25 kg, making DUO a real hand-set formwork system than can be handled without a crane. Working with low weights is less exhausting, resulting in improved concentration in everyday operations on the construction site and reduced risk of accidents. Furthermore, the composite system components have no sharp edges, which also minimises the risk of injury.

However, if a crane has to be used, one with a lower lifting capacity is sufficient. This saves additional costs and energy.

Manual assembly: Two height-extended panels with a height of 270 cm can easily be put into position by two persons.



The best example of easy-to-use system components is the DUO Coupler.

The DUO Coupler is guided through the frame openings and then turned 90°, without requiring any tools. This connection ensures the panels are arranged at even levels. The fact that the couplers are flush with the panel after installation and do not protrude, allows for flat stacking of pre-assembled large-sized units.

The coupler is used for

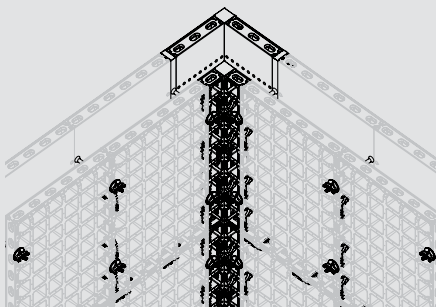
- connecting panels to each other,
- connecting corner posts with the panels and
- connections with wall thickness compensations and filler supports.



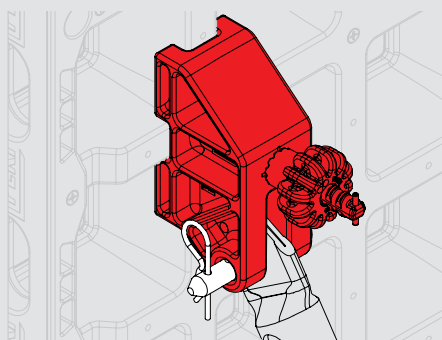
With DUO, the number of different individual components is reduced to a minimum.

One example: The same corner posts are used for the outside and inside corners. The compact, square post with an edge length of 10 cm only weighs 5 kg. DUO Couplers connect the post with the neighbouring panels.

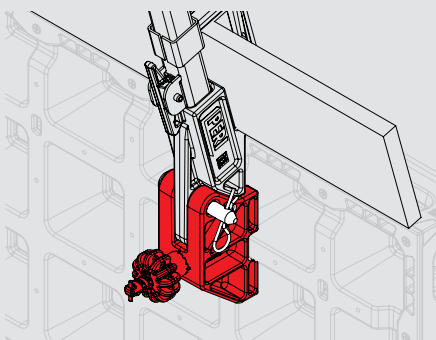
The number of accessories has been systematically minimized while the multi-functional use of individual components also plays an important role. The Brace Connector DUO is also used as a connection for the guardrail posts and as a tension sleeve for cantilevered panels in the slab formwork.



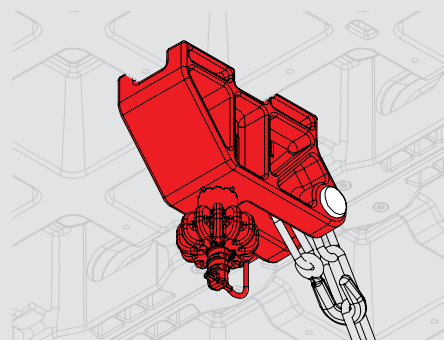
The same corner post for the inside and outside corner – an excellent example for the minimisation of individual components.



Use of a push-pull prop with the Brace Connector DUO.



The DUO Prop Attach can easily be converted for use as a connection for the guardrail post.



In addition, the Brace Connector DUO serves to brace the slab formwork.

Recessed grips on the DUO Panels facilitate easy handling and also serve as opening to install the Couplers.



Low weight and easy-to-use, small sizes – this characterizes all DUO system components.



The couplers smoothly align the panels. They fit flush with the panel frame.



Easy replacement of formlining

Quick maintenance with just a few screws – without requiring special skills

The special highlight of DUO: easy replacement of formlining guarantees quick maintenance – without requiring any special tools or skills.

DUO system components and the formlining made of polytech are very durable. With proper use and maintenance, the service life of DUO components can be maintained over many years.

Small indentations or scratches in the formlining can easily be repaired. If required, the formlining is simply replaced. Formlining replacements are available in the panel sizes and are quickly mounted with a few screws.



As with all system formwork, regular cleaning of the formlining ensures good concreting results and a long service life – this applies to the DUO system.

There is no reaction of DUO with the concrete which means that cleaning requirements are kept to a minimum. Nevertheless, it is advisable to use the release agent PERI Bio Clean and to remove any concrete adhesions after every use. They can quickly be removed with the DUO Cleaning Device.



Usual wear and tear on the formlining leads to poor quality concrete surfaces, therefore it is necessary to replace the formlining on a regular basis for all panelized formwork.

With DUO, the formlining can be replaced without special tools and skills. The appropriately dimensioned light formlining can easily be mounted by hand with a few screws – also on the construction site.



1. Loosening the screws



2. Removing the damaged formlining



3. Preposition the new formlining



4. Screwing on the new formlining



The cleaning device is used for cleaning after striking. Concrete residues can easily be removed with the device.



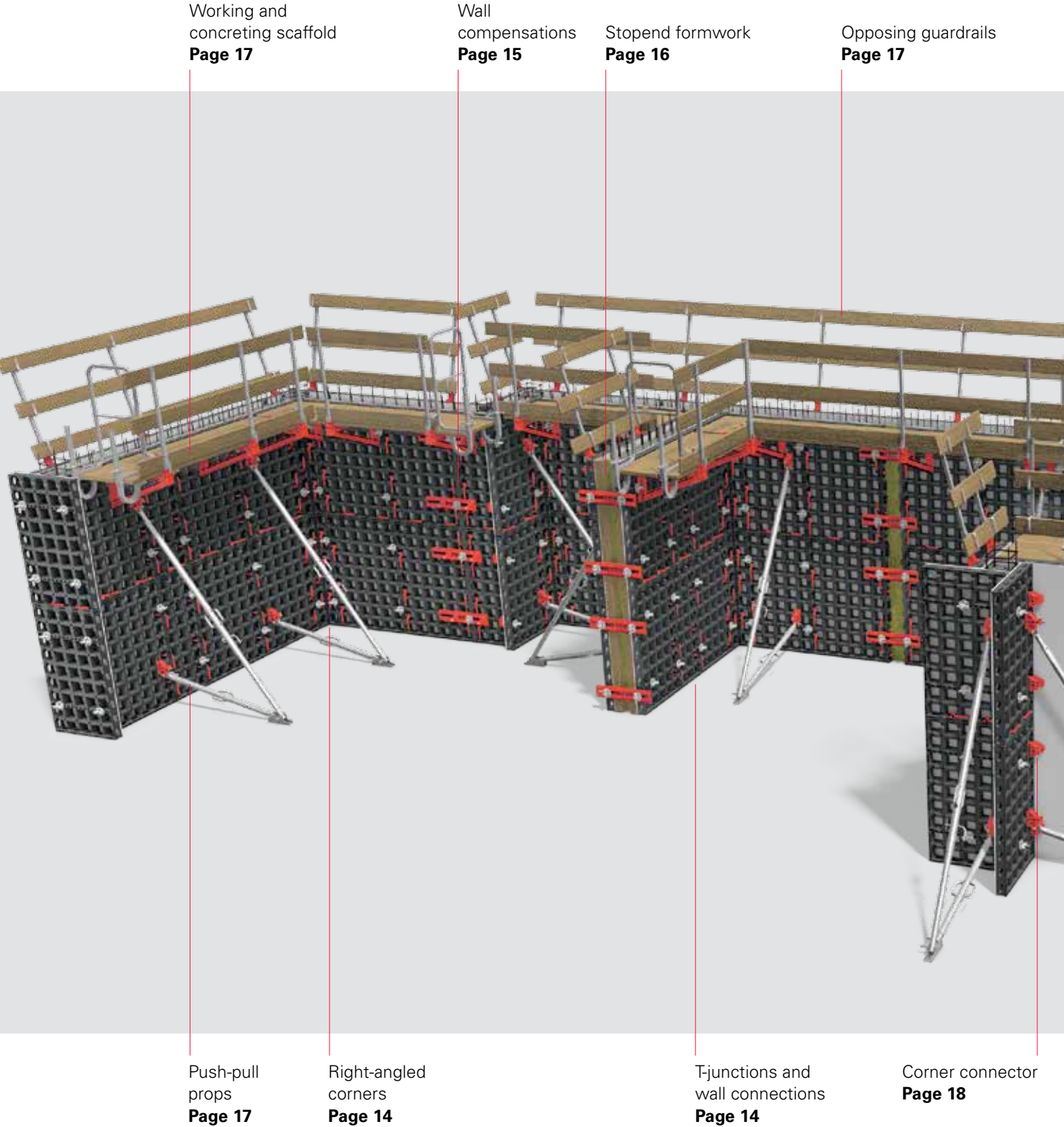
Particularly clever: The cleaning device can also be used to tighten the wingnut counterplate.

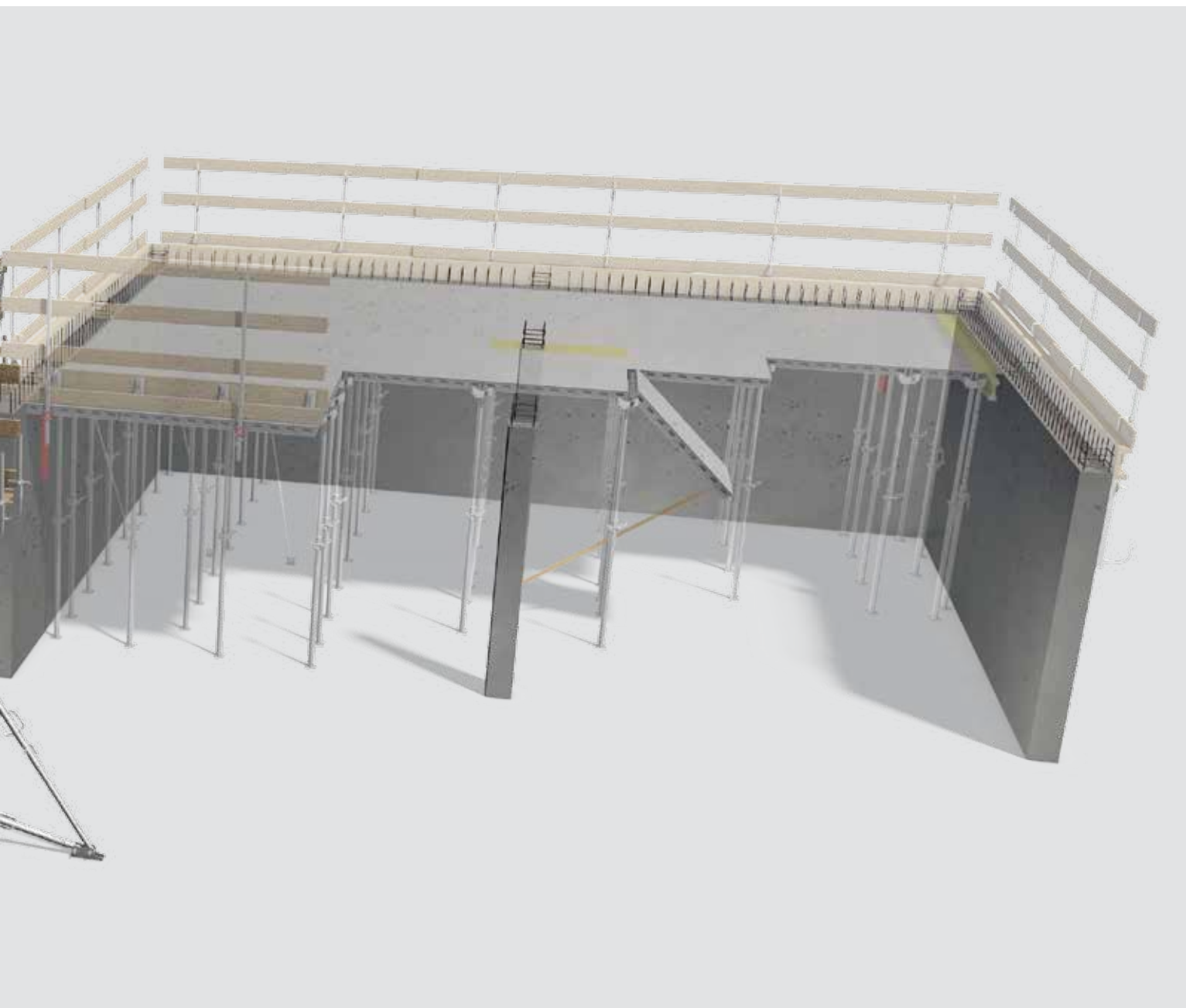


As the concrete hardly sticks to the panels, these can easily be released from the concrete during striking. This results in excellent surfaces.

DUO as wall, column and foundation formwork

Standard applications for vertical use





Standard applications for wall formwork

Right-angled corners, T-junctions and wall connections, wall compensations

DUO has been optimised for a wall height of 2.70 m and wall thicknesses from 15 cm to 40 cm. Extensions are possible in 15 cm increments.

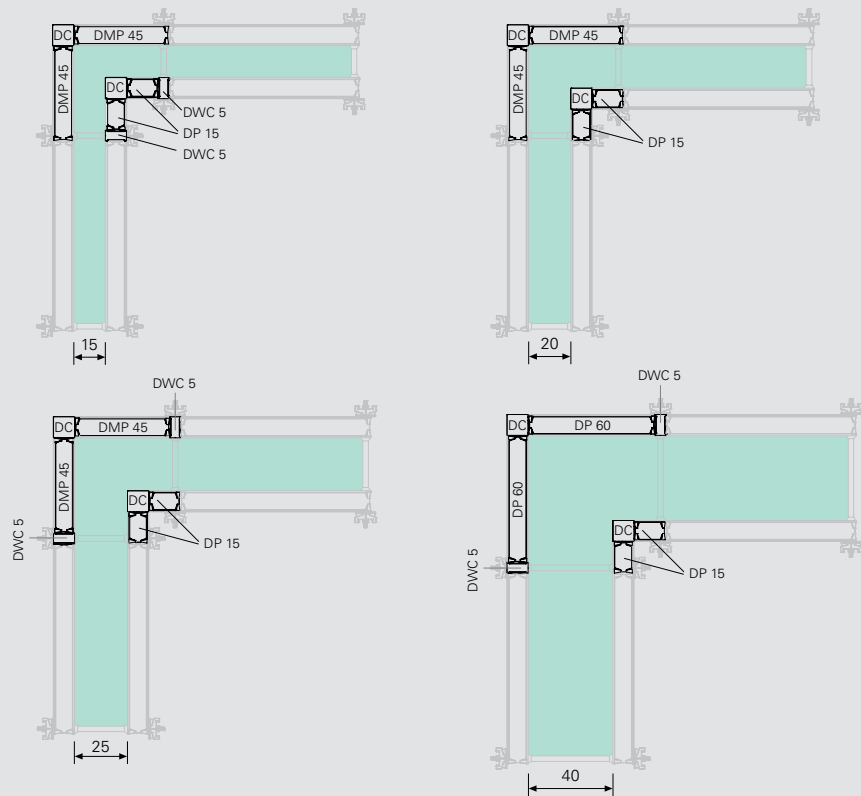
For the standard connections, 3 couplers are used on the longer side of the panel along with 2 couplers on the shorter side. Exceptions are the outside corners with 4 couplers at each longer side of

the panel as well as some length compensations.

Wall thickness of 15 cm to 40 cm can be formed in 1 cm increments using the DUO compensations.

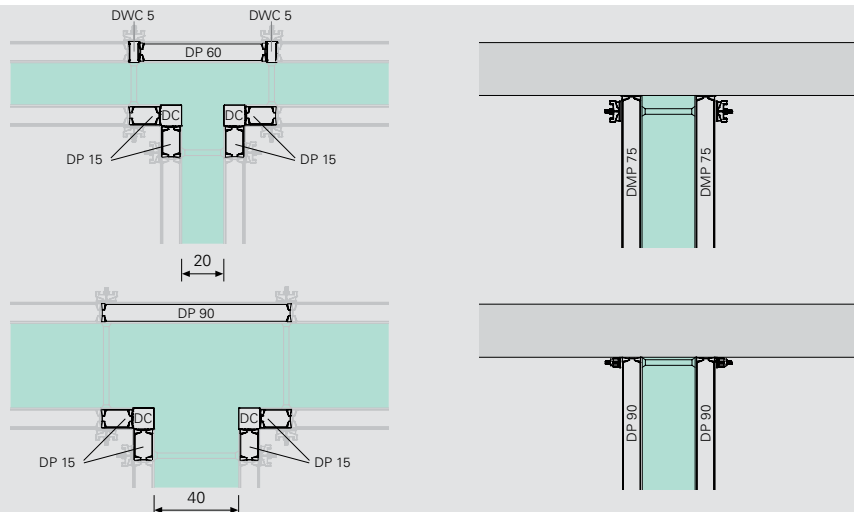
Right-angled corners

Continuous forming with Corner Post DC and (if required) Wall Thickness Compensator DWC for wall thicknesses from 15 cm to 40 cm.



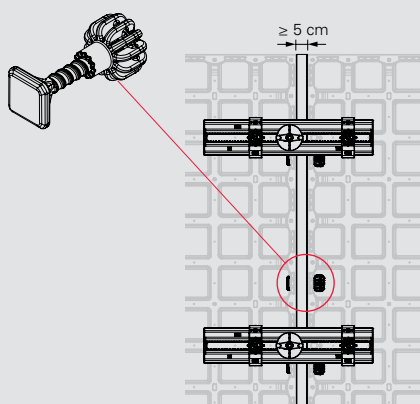
T-junctions and wall connections

Continuous forming with Corner Post DC and (if required) Wall Thickness Compensator DWC for wall thicknesses from 15 cm to 40 cm.

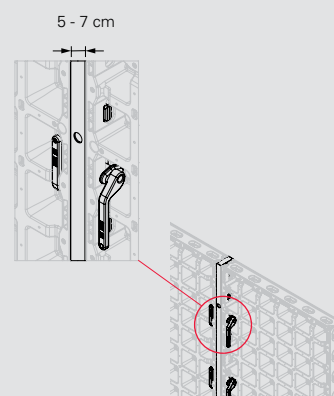




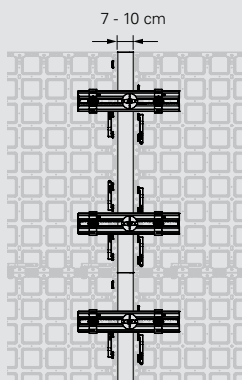
Wall compensations up to 5 cm
with filler timber, DUO Coupling Tie, and
Grip DW 15 DUO, Waler DUO 62 and
DUO Tube Holder.



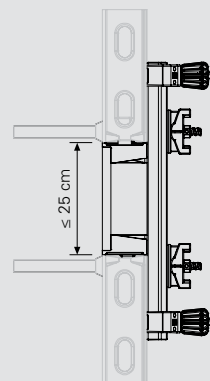
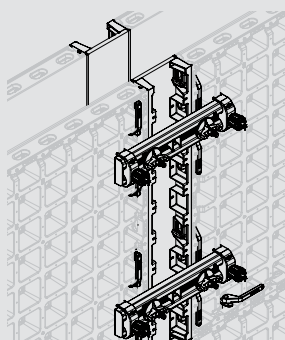
Wall compensations from 5 cm to 7 cm
with Wall Thickness Compensator
DWC 5 / 6 / 7 and DUO Coupler.



Wall compensations from 8 cm to 10 cm
with Wall Thickness Compensator
DWC 8 / 9 / 10, DUO Coupler, Waler
DUO 62 and DUO Tube Holder.



Wall compensations up to 25 cm
with Filler Support 18 DFS, filler plate,
DUO Coupler, Waler DUO 62 and DUO
Tube Holder.



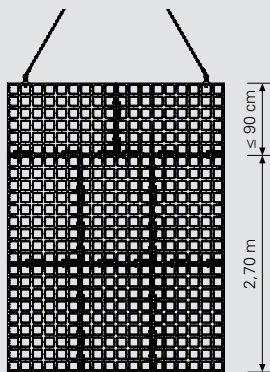
Standard applications for wall formwork

Height extensions, stopend formwork, working and concreting scaffolds, brace connector

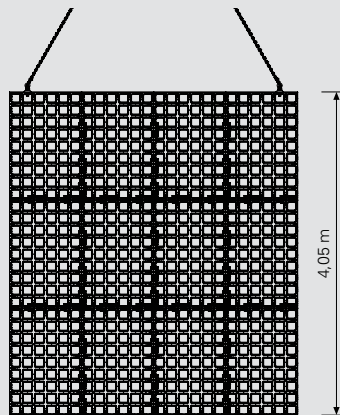
Height extensions

Depending on the panel arrangement, extensions with DUO Panels are possible in 15 cm and 30 cm increments. For extensions over 4.05 m, an additional waler is required at every horizontal connection.

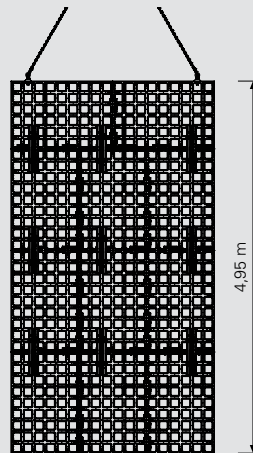
Extensions up to 3.60 m
with horizontally arranged panel in the third row.



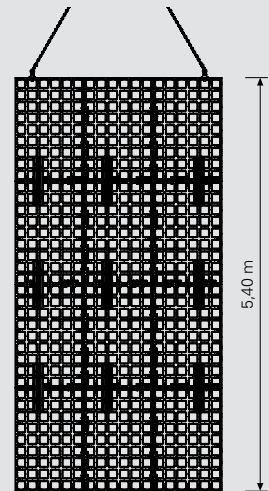
Extensions up to 4.05 m
with vertically arranged panel in the third row.



Extensions up to 4.95 m*
with horizontally arranged panel in the fourth row.

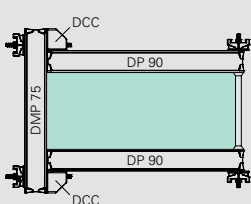


Extensions up to 5.40 m*
with vertically arranged panel in the fourth row.

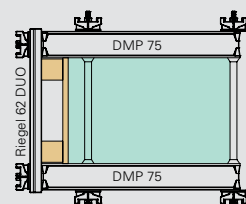


* For heights over 4.05 m, an additional Waler DUO 62 is required at every horizontal connection. The maximum lifting capacity of the crane hook must be taken into consideration.

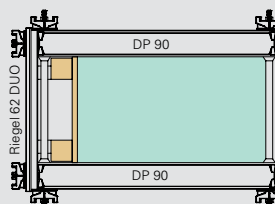
Stopend formwork for wall thicknesses up to 35 cm
with Panel DP 135 x 90 and Multi Panel DMP 135 x 75.



Stopend formwork for wall thicknesses up to 40 cm
with timber, filler plate and Multi Panel DMP 135 x 75.



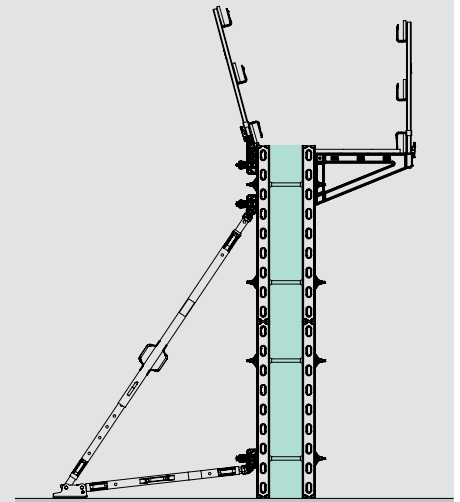
Stopend formwork for wall thicknesses up to 40 cm
with timber, filler plate and Panel DP 135 x 90.



Working and concreting scaffold as well as opposing guardrails

The DUO Scaffolding Brackets are used to realise a working and concreting scaffold on the formwork. The brackets are simply hooked into the openings of the panel; planking and guardrail boards complete the working platform. On the opposite side, the brace connector is assembled together with the post holder and the PERI Guardrail Post to form the opposing guardrails.

Section through the wall formwork with complete safety equipment and push-pull props.



The Scaffolding Bracket DUO 70 is hooked into the openings of the panel. PERI Guardrail Posts lock into place in this bracket without any additional fixings.



The Brace Connector DUO is assembled together with the DUO Guardrail Post Holder and the PERI Guardrail Post to form the opposing guardrails.



The 70 cm wide working platform and opposing guardrails provide optimum conditions for safe concreting operations.

The brace connector

Push-pull props and kickers are required in order to align the formwork as well as providing stability especially regarding wind loads. The choice of the push-pull prop and kicker brace is determined by the height of the formwork.

The appropriate Brace Connector DUO provides an easy and quick mounting possibility for the push-pull prop and can be mounted on the panel without tools.

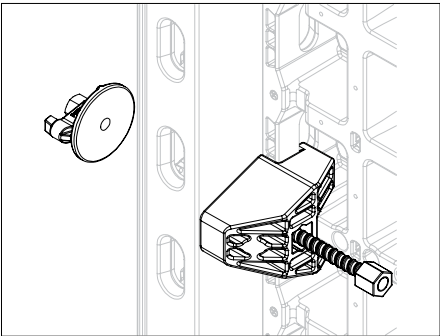
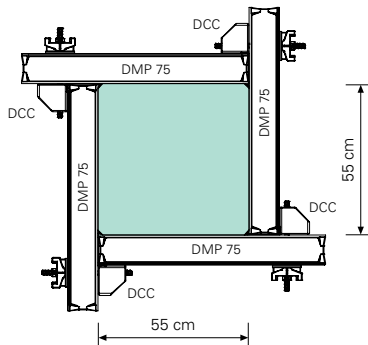
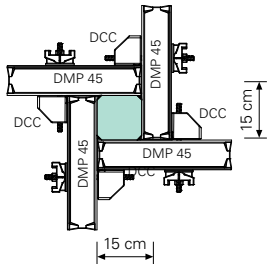


Standard application as column formwork

Square and rectangular columns in 5 cm increments

With DUO, square and rectangular columns with edge lengths from 15 cm to 55 cm can be formed in 5 cm increments without ties.

Multi Panels DMP 45 or DMP 75, Corner Connectors and DUO Chamfer Strips are used for realising columns.



With the DUO Corner Connector and the Corner Tie DUO, two Multi Panels can be connected at right angles to each other in 5 cm increments.



The corner connector is simply inserted into a panel ...



... and then securely bolted through the tie hole in the Multi Panel with the Corner Tie DUO.

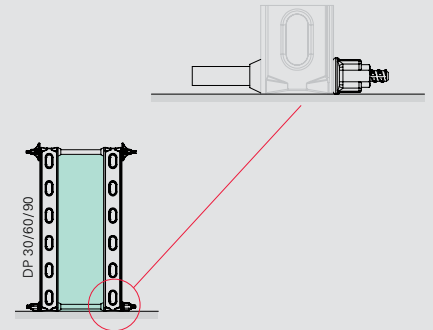
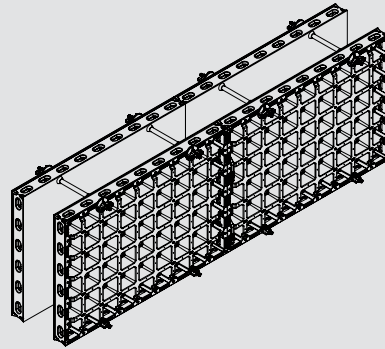
Standard application as foundation formwork

Foundations with standard panels or multi panels

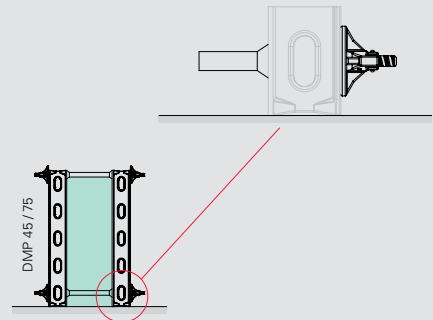
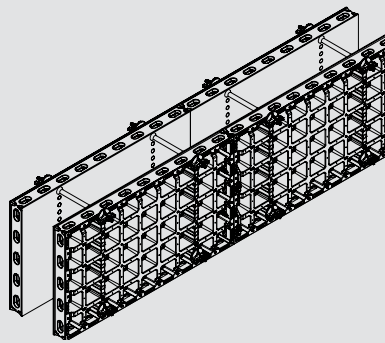
Due to its compact format and the easy handling, DUO is also ideally suited for forming foundations.

If foundations are realised with horizontal standard panels (30 cm, 60 cm or 90 cm), cam nuts are required on the bottom tie holes. If Multi Panels (45 cm or 75 cm) are used, Wingnut Counterplates DW 15 are used.

Foundations with standard panels



Foundations with multi panels



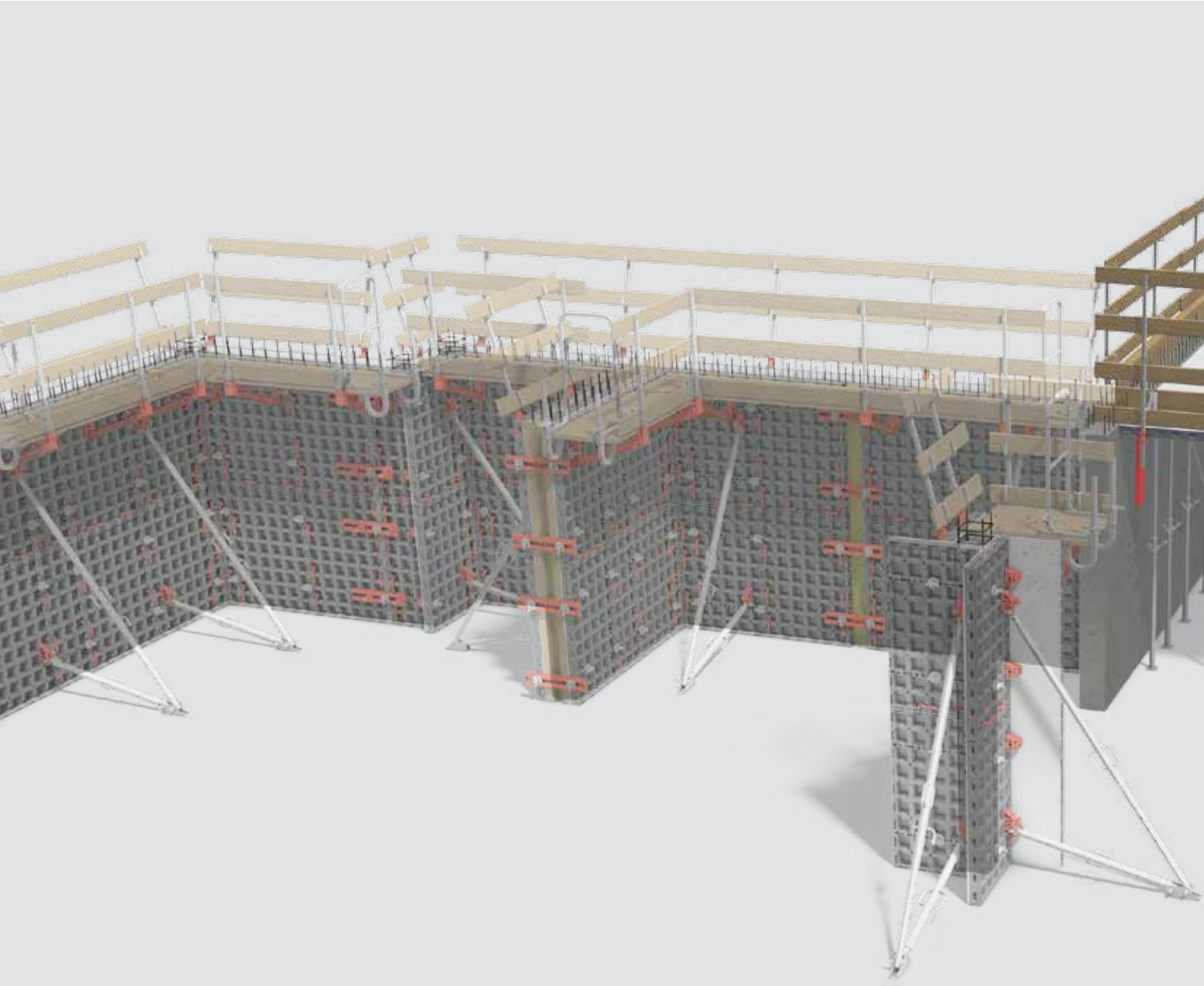
Moving the panels by crane

If the panels are moved by crane, the DUO Crane Eye is used. It has a maximum load-carrying capacity of 200 kg.



DUO as slab formwork

Standard applications for horizontal use



Guardrails
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Shuttering of columns
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Cantilevers
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Fix heads and slab props
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Wall holder
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Compensation on slab edges
Page 25

Standard applications as slab formwork

Systematic assembly from a safe position

DUO is a lightweight, beam-free panelized slab formwork for slabs up to 30 cm thickness. Practical accessories for filler areas and slab edges provide versatile application possibilities.

With DUO, the slab can be safely shuttered from the installation level. The panels are hooked in from below and pushed upwards by means of the shuttering aid. As the panel size determines the position of the slab props, measuring is not necessary.

With this simple formwork system, even untrained personnel can quickly learn how to handle the system.



Fix Head DFH

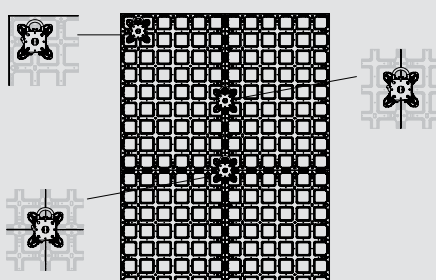
The Fix Head DFH fits on all PERI steel slab props. It is simply pushed onto the prop head until the integrated clip retention snaps into the locking position.

Dismantling is also very straightforward. After lifting the clip retention, the Fix Head can easily slide off the end plate.



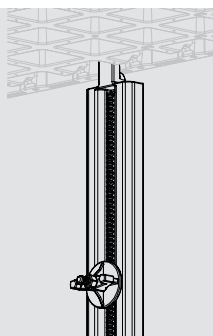
The Fix Head DFH can be pushed onto end plates with an edge length of up to 120 mm and a thickness from 5 mm to 8 mm.

The Fix Head can be positioned in different positions on the panel: it is used within a panel field, across the edges of two panels and in the joint area of 4 panels.



Wall Holder DUO 82

The Wall Holder DUO is used for horizontally supporting the slab formwork during assembly.

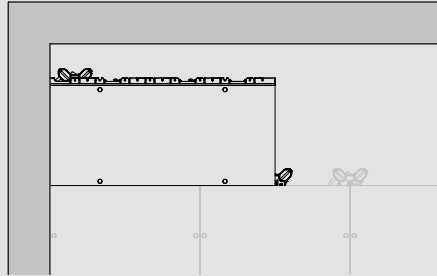


Standard applications as slab formwork

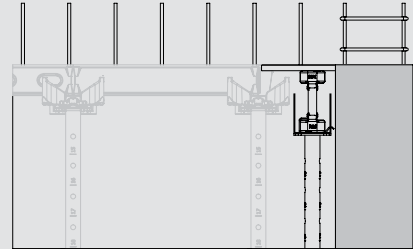
Compensations, shuttering of columns, cantilevers and guardrails

Compensations

Filler areas in front of rising walls can be filled with the Filler Support DUO and 18 mm thick plywood. In front of the wall a formwork girder on a slab prop serves as support for the filler plate.



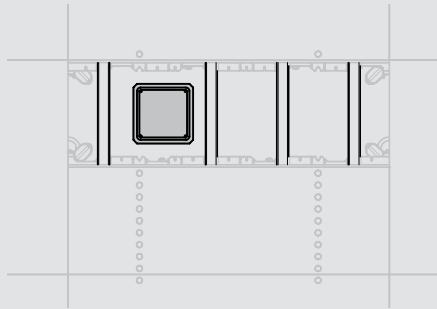
Before the panel is pushed upwards, the Filler Support DUO is fixed to the long side of the panel using 2 DUO Couplers.



In front of the wall, a VT 20 or GT 24 formwork girder is used as a support for the filler plate. For positional stability, the formlining is nailed on.

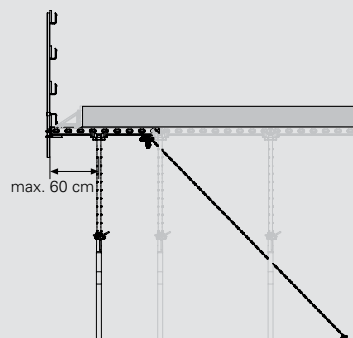
Shuttering of columns

With rising columns, plywood is used to close the filler areas. Two DUO Filler Supports on the adjacent panels and square timber inserted there form the support for the filler plate.



Cantilevers

With cantilevers, the Brace Connector DUO is used to brace the slab with a chain. This bracing must be installed before the panel is pushed upward.



Guardrails

The open slab edge is secured with the DUO Guardrail Post Holder, the Guardrail Post SGP and the guardrail boards. The guardrail posts are to be continuously installed at 1.80 m spacings on the panels.



PERI Slab Stopend Bar 105 with the PERI Guardrail Post provide a secure edge for stopends flush with the wall.

Project examples

DUO in use





Aspen Residence, George Town, Penang, Malaysia

Successful initial application of system formwork

The residential and commercial building Aspen Residence with a total of 26 storeys is being built in Penang. While the construction team worked on the first thirteen storeys with timber and boards, the DUO lightweight formwork was used for the shear walls of the upper storeys.

With horizontally and vertically arranged DUO panel extensions, up to 3.25 m

high units are mounted which are used 4 to 5 times per storey. Due to the low weight, no crane is required to assemble and move the formwork. As a result, no time is lost waiting for the crane which accelerates construction work.

The simple formwork logic very quickly ensures fast working with the innovative system. Furthermore, the reduced cleaning effort results in time savings:

as the concrete does not stick to the formlining, it can be easily and quickly cleaned after every use.

The couplers fit exactly into the openings in the panel frames and are mounted without tools.

As the panels are very light they can be installed manually. The construction team works efficiently and without having to wait for the crane.



Contractor
Rimbaco Sdn. Bhd.,
Malaysia
Field Service
PERI Malaysia



Ing. William Low, Project Manager:
"For the team it was the first time they used system formwork. Compared to the use of conventional formwork we were able to save around 50 % of working time. Especially the straightforward application is to be emphasised. The whole team quickly understood the system and worked with little training."



Los Ramones II Pipeline, San Luis Potosi, Mexico **PERI**

Easy to mount and move manually

Contractor

RUBA Arquitectos, SA de CV, Mexico

Field Service

PERI Mexico



A new control station for a gas pipeline is being set up in San Luis Potosi. The reinforced concrete frame supports of this control station are formed using the DUO lightweight formwork.

45 square supports of 2.00 m in height with edge lengths from 40 cm to 50 cm are to be installed. 5 sets of formwork are mounted with 4 DUO Multi Panels DMP 75 each – connected by means of DUO Corner PERI UP Connectors. A circumferential PERI UP working scaffold with a ladder access ensures safe working conditions.

Before starting the work, the construction team was trained by a PERI supervisor. The training comprised an instruction in forming, cleaning and storage as well as safe working. Therefore, the use of the innovative system formwork was extremely efficient and quick right from the beginning. “Especially the low weight of the panels is of great benefit on the construction site, as work carried out by hand saves crane times and accelerates construction progress”, the project manager Ismael Gomez explains.

Due to the instruction in assembly, cleaning and storage by the PERI supervisor, the construction team worked efficiently right from the start.

DUO is a real hand-set formwork: the largest panel with 90 cm x 135 cm weighs less than 25 kg and can easily be carried by hand.

DUO Multi Panels are used to realise reinforced concrete supports. A circumferential PERI UP scaffold ensures safe working conditions.



Infrastructure buildings, Pilbara region, Australia

Increased efficiency with optimized team capacity



DUO standard panels are used where possible; the inclined supplements are carpentered from wood by formwork craftsmen.



DUO Brackets and guardrail posts together with a supplementary timber construction are used to build safe working platforms and accesses.



DUO is particularly suitable for small-sized applications in civil engineering that are only subject to low requirements on the surfaces.



Contractor
Monford Group,
Australia
Field Service
PERI Glendenning,
Australia

Declan White, CEO:

"PERI DUO is an environmentally friendly, lightweight formwork system by means of which we were able to increase our productivity. It offers numerous advantages: the low weight reduces crane costs and the users' risk of injury. The easy assembly results in enhanced efficiency and ensures a better construction site result."

Monford Group utilises PERI DUO for various tasks within the scope of large-scale infrastructure projects. In the West of Australia, the contractor builds shaft walls, sewers and bottom slabs using the lightweight formwork.

A great advantage of the system for these applications is the low weight, making both crane and scaffolding unnecessary. Due to the simple assembly

logic of the system, even less experienced users were quickly able to carry out forming operations with DUO. Therefore, the trained formwork craftsmen of Monford Group can focus on those areas where more complex forms have to be carpentered by hand. This results in further cost savings for the construction project.



PDPU Hostel, Gujarat, India

Fast shuttering and striking

A new hostel is being built on the premises of Pandit Deendayal Petroleum University – one of the most significant universities in the West of India. For the nearly 2.90 m high walls, first of all a 25 cm high base is concreted with horizontally arranged DUO panels. For the second concreting section, the construction team makes an extension with 2 vertically arranged panels.

The low weight and the easy handling of the formwork enable the construction team to work very quickly. In addition, working almost without any tools is a significant advantage. This not only reduces the risk of injury but also prevents noise during forming operations.



Contractor
PSP Projects Pvt. Ltd.,
Gujarat, India
Field Service
PERI Mumbai, India

Jigar Sha, Construction Manager:
“DUO helped us a lot to speed up formwork operations. Not only because the system components are very light. But also because it was extremely easy for our construction team to understand and learn how to handle the system.”



Once the 25 cm high base has been built, the construction team concretes the remaining wall height with 2 panel extensions.



Choa Chu Kang Grove, Singapore

Reduced cleaning and post-treatment effort



A new residential quarter with several multi-storey buildings is being built in the West of Singapore. In total, the contractor TiongSeng is erecting 13 apartment buildings with luxurious condominiums and 20 to 25 storeys per building.

DUO is currently being used for the pier head of the substructure and is going to be used for the walls of the rising structures in the future. The lightweight panels are ideally suited for small-sized concrete elements with low requirements on the surfaces. The panels can easily be moved by hand and can also be cleaned extremely quickly.



Allan Moreno, Formwork Expert:

"Apart from other advantages – DUO can be cleaned very easily because the concrete hardly sticks to the form-lining. Furthermore, we are very satisfied with the concrete surface results. No post-treatment is necessary for the current requirements."

Contractor

TiongSeng Contractors (Pte) Ltd., Singapore

Field Service

PERI Singapore



Business Amazonas, Sao Paulo, Brazil

Rationalised construction site processes

Business Amazonas is a commercial building of the real estate project Alphaville in the western region of Sao Paulo. After its completion, the building will have 20 storeys, 3 of which are subterranean.

The DUO lightweight formwork is used for walls, columns and slabs. Due to its low weight, all work can be carried out by hand. In addition, the formwork system is very simple and thus easy to handle. The good quality of the system components guarantees a high reusability and at the same time provides good wall surface results.



Contractor
MPD Group, Brazil
Field Service
PERI Brazil

Guilherme Crivari, Site Manager:
“The DUO system rationalises the processes on the construction site and we were able to reduce the execution time as well as staff requirements. In addition, the service of PERI is very reliable as always, our enquiries are always attended to quickly.”

Edificio Copiapó – Portugal, Santiago de Chile, Chile

Significantly reduced noise on the construction site

A 22-storey residential building with a total of 259 apartments is soaring in Santiago de Chile. The construction team forms walls and columns as well as slabs with the DUO system. The team is achieving rapid progress due to the low weight and the easy handling: a whole storey is built per week.

Especially the fact that the panels can be connected quickly without any tools makes shuttering and striking possible with minimal effort. As no crane or tools are required, working with DUO generates hardly any noise. This ensures longer and unrestricted working on the construction site in the city area.



Contractor
Constructora Almagro
S.A.
Field Service
PERI Chile

Ignacio Fuenzalida, Project Manager:
“DUO is very easy to operate, our users quickly learned how to handle the system. The special advantage for us is that working is very quiet with DUO. As our construction site is located in the middle of a residential area, DUO enables us to work longer without the residents complaining.”

About PERI

Family-run. In the second generation.

On-site worldwide.

PERI can now look back on more than 45 years of experience in the industry. The great innovative force of the company and early internationalization are the cornerstones of our global success and continuous growth. The high level of customer orientation, superior quality systems and great expertise have created the trust that has made the company a leading global brand. With more than 60 subsidiaries, we are now operating on all continents with our experts, appropriate systems and services.

In Weissenhorn, located in the German state of Bavaria, we are continually investing in efficient production facilities and bundling our development activities.



Our services for your projects

Formwork, scaffolding and engineering.

From one source.



PERI provides the suitable formwork system for every concrete structure and component. The portfolio fully meets the global requirements of different construction methods and boundary conditions.

Efficient planning, selection of the most suitable system and the safe application save formwork costs. For this reason, we at PERI do everything we can to further rationalize operations and to increase user safety. The constant contact with users helps us to identify all the needs and implement developments wherever there is rationalization potential.



PERI scaffolds can be used for a wide variety of applications. Regardless whether it is frame or modular scaffold, the great flexibility leads to a high level of material utilisation.

Short installation times and maximum safety both during assembly and during operations – these are the users' essential demands on the scaffolding systems. We continuously implement these requirements and always offer the appropriate system solution. The special flexibility results in a higher material utilisation and equally high economic efficiency – with simultaneously optimised assembly times.



For PERI, engineering not only means product development and technical planning. Engineering also stands for the optimisation of all processes that are encompassed by formwork and scaffolding technology.

We consider process optimisation in particular and support our customers with the entire project handling. Our services help to further improve the entire process chain for every aspect of formwork and scaffolding. Beyond that we also carry out fundamental research, e.g. on new materials, to constantly improve our products.

The PERI philosophy

Increasing rationality. Enhancing efficiency.
Working more safely.



Behind all PERI developments is the idea of making work on the construction site more efficient and safer.

For every formwork and scaffolding system, our experts aim at as few individual parts as possible because this has numerous positive effects: the handling of a system is accelerated, search times are reduced and also logistics are substantially facilitated. Having only a minimum number of individual components thus saves working time and often investment as well.

In addition, the safety aspect is a central theme that runs throughout the PERI formwork and scaffolding programme. Users work faster and more efficiently if the sources of danger are minimised and the accident risk is reduced. That is why we integrate the factor safety in the system – where possible – or achieve safety by means of practical accessories.

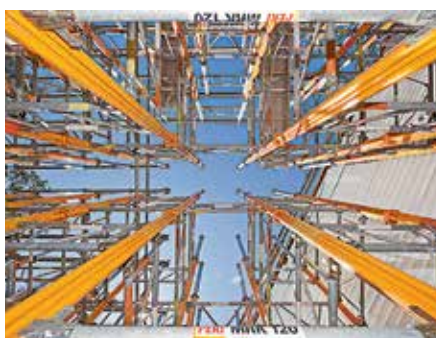
Last but not least we are also pioneers when it comes to using new materials. Despite initial concerns of the market, we were the first to use aluminium in formwork and scaffolding technology. Today this material has become indispensable for the industry owing to its many advantages.

We have also been using technopolymers for several years. The toothed strip of the SKYDECK longitudinal girder, for instance, has proven its worth on innumerable construction sites.



In 1992 PERI introduced slab props made of aluminium. The low weight, high load-bearing capacity and the self-cleaning thread are the key to the great success of MULTIPROP.

Since 2013, the PERI product portfolio has also featured the slab stopend angle made from the composite material polytech.

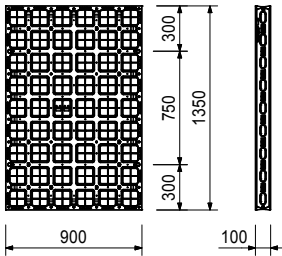
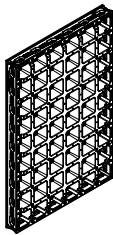


Since 1995 the toothed strip of the SKYDECK longitudinal girder has proven to be of value. It is made from the composite material based on polymer.



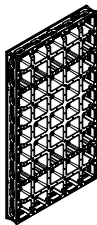
Item no.	Weight kg
128280	24,900

Panel DP 135 x 90
Panel with 5 mm formlining.

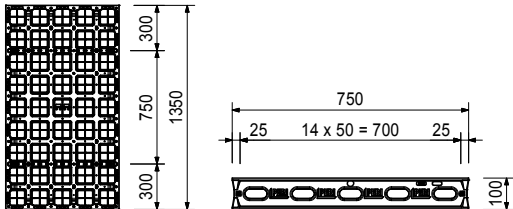


128281	22,900
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Multi Panel DMP 135 x 75
Panel with 5 mm formlining.
Also for columns, stopends etc.

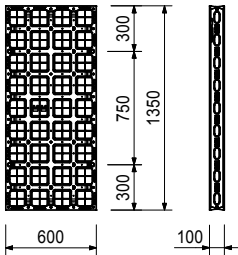
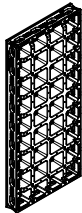


Complete with
26 pc. 128274 Plug Ø 20 mm DUO



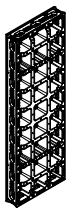
128282	17,100
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Panel DP 135 x 60
Panel with 5 mm formlining.

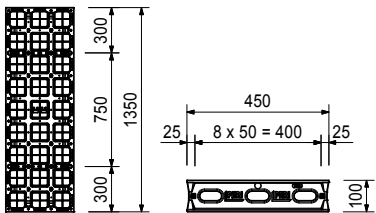


128283	14,200
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Multi Panel DMP 135 x 45
Panel with 5 mm formlining.
Also for columns, stopends etc.

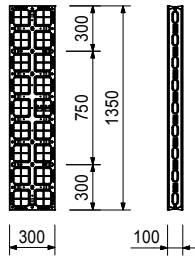
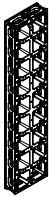


Complete with
14 pc. 128274 Plug Ø 20 mm DUO



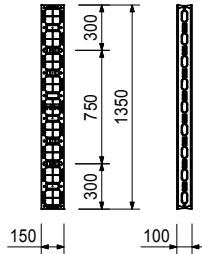
Item no.	Weight kg
128284	9,290

Panel DP 135 x 30
Panel with 5 mm formlining.



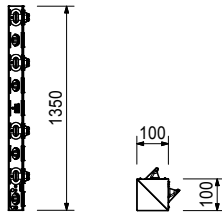
128285	5,210
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Panel DP 135 x 15
Panel with 5 mm formlining.



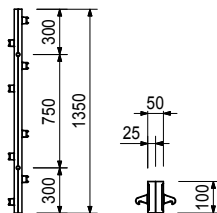
128286	5,130
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Corner DC 135 x 10
For 90° internal and external corners.



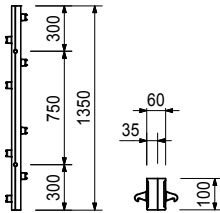
128287	2,860
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Wall Thickness Comp. DWC 135 x 5
For adjusting to wall thicknesses.



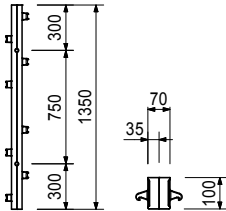
Item no.	Weight kg
128288	3,120

Wall Thickness Comp. DWC 135 x 6
For adjusting to wall thicknesses.



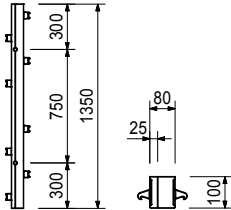
128289	3,380
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Wall Thickness Comp. DWC 135 x 7
For adjusting to wall thicknesses.



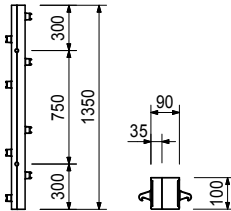
128290	3,640
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Wall Thickness Comp. DWC 135 x 8
For adjusting to wall thicknesses.



128291	3,900
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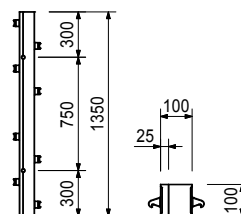
Wall Thickness Comp. DWC 135 x 9
For adjusting to wall thicknesses.



Item no.	Weight kg
128292	4,160

Wall Thickness Comp. DWC 135 x 10

For adjusting to wall thicknesses.



128245	1,410
128246	1,530

Filler Supports

Filler Support 18 DFS 135

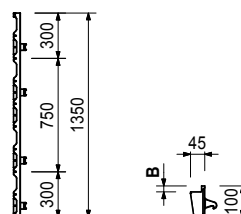
Filler Support 15 DFS 135

For compensations from 9 cm to 25 cm with 18 mm filler plates.

B

18

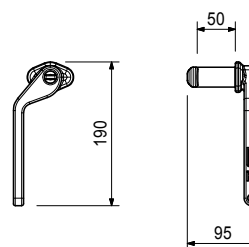
15



128247	0,160
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Coupler DUO

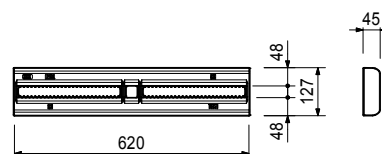
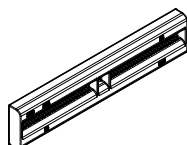
For all connections of panels, corners and compensations for DUO.



128255	2,420
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Compensation Waler DUO 62

For longitudinal compensation, height extensions and stopends with DUO. Maximum compensation width 25 mm.



Accessories

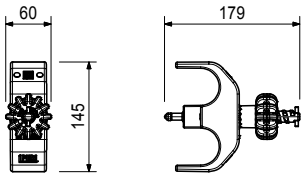
128293	0,492
128256	0,082

Tube Holder DUO

Coupling Tie DUO

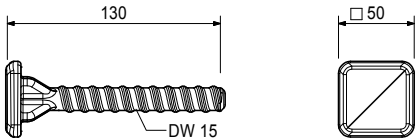
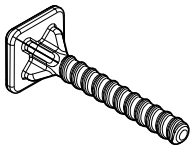
Item no.	Weight kg
128293	0,492

Tube Holder DUO
For fixing Compensation Waler DUO 62 and scaffold tubes Ø 48 mm for aligning to DUO panels.



128256	0,082
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Coupling Tie DUO
For connecting timber compensations up to 5 cm and for fixing Compensation Waler DUO 62 as stopend.

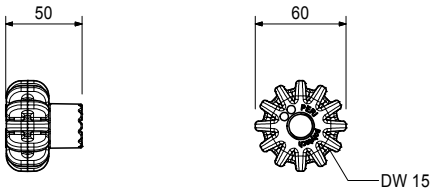


Accessories
Grip DW 15 DUO
Wingnut Counterplate DW 15, galv.

128254	0,064
030110	0,799

128254	0,064
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Grip DW 15 DUO
Accessory for Coupling Tie DUO.



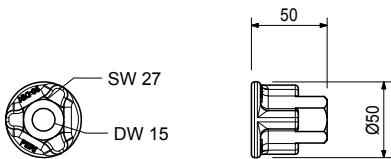
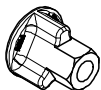
Accessories
Coupling Tie DUO

128256	0,070
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030130	0,318
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Cam Nut DW 15, galv.
For anchoring with Tie Rod DW 15 and B 15.

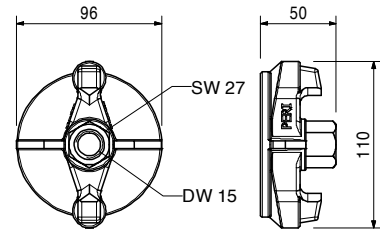
Technical Data
Permissible load 90 kN.



Item no.	Weight kg
030110	0,799

Wingnut Counterplate DW 15, galv.
For anchoring with Tie Rod DW 15 and B 15.

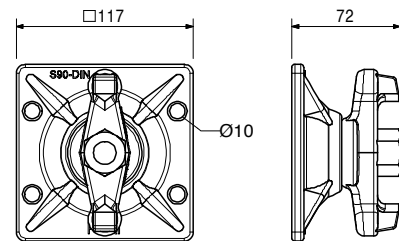
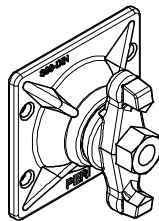
Technical Data
Permissible load 90 kN.



030370	1,660
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Wingnut Pivot Plate DW 15, galv.
For anchoring with Tie Rod DW 15 and B 15. With pivoting captive nut. Maximum angle of tilting 8°.

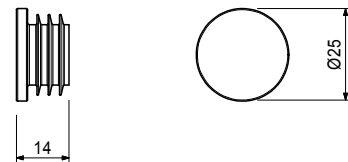
Note
Wrench size SW 27.
Technical Data
Permissible load 90 kN.



128274	0,002
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Plug Ø 20 mm DUO
For closing Ø 20 mm tie holes which are not required.

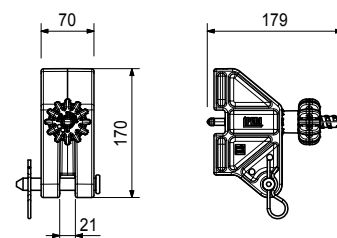
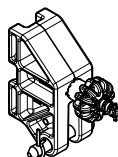
Note
Delivery unit of 250 pieces.



128294	0,909
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Brace Connector DUO
For connecting push-pull props and kicker braces to DUO panels.

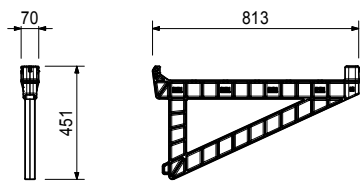
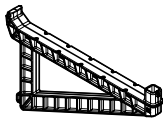
Complete with
1 pc. 018050 Pin Ø 16 x 65/86, galv.
1 pc. 018060 Cotter Pin 4/1, galv.



Item no.	Weight kg
128257	3,290

Scaffold Bracket DUO 70
For assembling a working and concreting scaffold with DUO. Mounted on the DUO panel edge profile, in every pocket.

Technical Data
Permissible load 150 kg/m² with maximum width of influence 1.8 m.



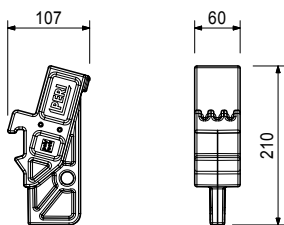
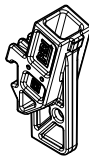
Accessories
Post PP

117325	4,270
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128297	0,600
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Guardrail Post Holder DUO
Accessory for Brace Connector DUO. For assembling a guardrail on the DUO panel edge profile.

Complete with
1 pc. 018050 Pin Ø 16 x 65/86, galv.
1 pc. 018060 Cotter Pin 4/1, galv.



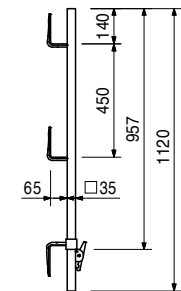
Accessories
Post PP
Brace Connector DUO

117325	4,270
128294	0,644

117325	4,270
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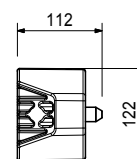
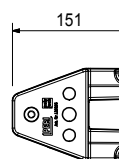
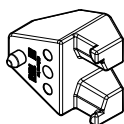
Post PP
For the fixation of the Side-Mesh-Barriers.

Technical Data
Maximum distance of posts with Side-Mesh-Barrier: PMB 260 max. 2.40 m, PMB 130 max. 1.20 m.



Item no.	Weight kg
128295	0,852

Corner Connector DUO



Accessories

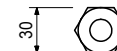
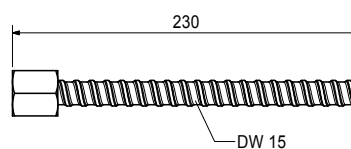
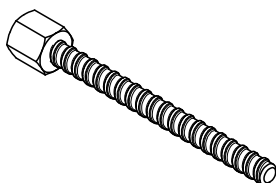
128265	0,476
030110	0,799

Corner Tie DUO

Wingnut Counterplate DW 15, galv.

128265	0,476
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Corner Tie DUO



Accessories

128295	0,837
030110	0,799

Corner Connector DUO

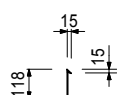
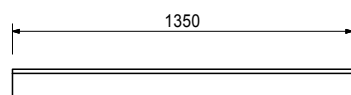
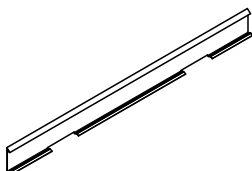
Wingnut Counterplate DW 15, galv.

128260	0,642
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Chamfer Strip DUP 135

For DUO column.

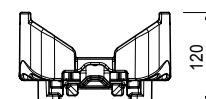
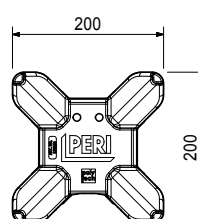
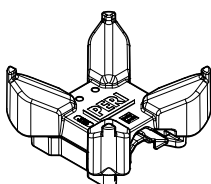
Edge length 15 x 15 mm.



128298	0,911
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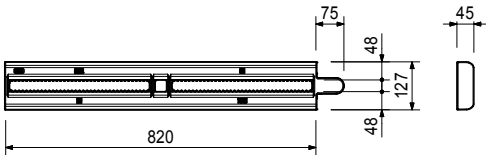
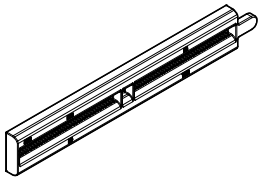
Fix Head DFH

With clip retention. Supports DUO panels as slab formwork.



Item no.	Weight kg
128263	2,970

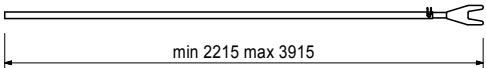
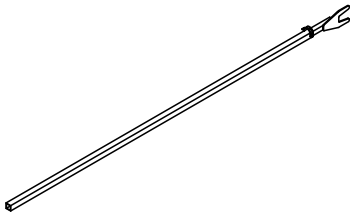
Wall Holder DUO 82
For horizontal anchoring on the wall. Attach to every third DUO panel as slab formwork.



128299	2,330
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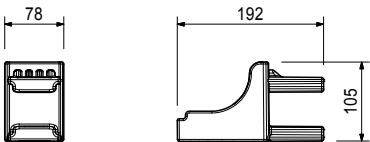
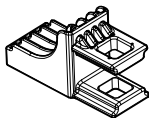
Shuttering Aid DUO
For forming of DUO Slab.

Technical Data
Adjustable in 7.5 cm increments.



128264	0,449
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Slab Guardrail Holder DUO
For assembling a guardrail on DUO panels as slab formwork.

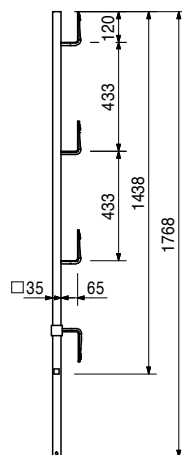


061260	6,150	Accessories
		Guardrail Post SGP

Item no.	Weight kg
061260	6,150

Guardrail Post SGP

As guardrail for different systems.



128296	0,652
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Crane Eye DUO

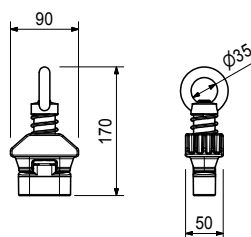
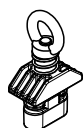
For transporting DUO panels.

Note

Follow Instructions for Use!

Technical Data

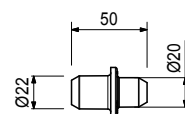
Permissible load-bearing capacity 200 kg.



128275	0,011
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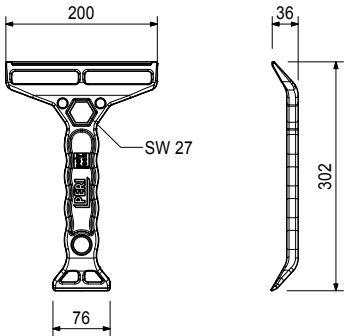
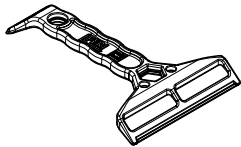
Stacking Aid DUO

Prevents panels sliding and protects the formlining against damage.



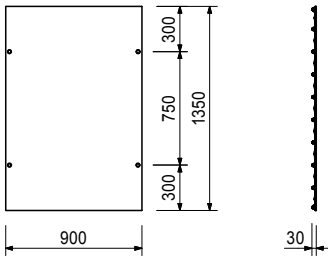
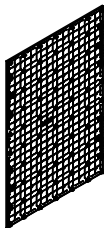
Item no.	Weight kg
128278	0,369

Cleaning Device DUO
For cleaning DUO formlining and panel edge profiles or tighten wingnut plates and cam nuts.



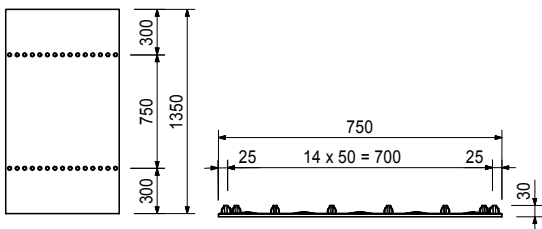
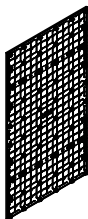
128228	7,120
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Formlining DP 135 x 90
5 mm formlining for replacement.



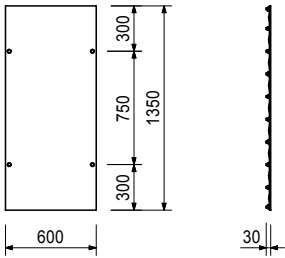
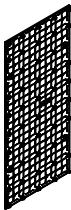
128229	6,040
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Multi Formlining DMP 135 x 75
5 mm formlining for replacement.



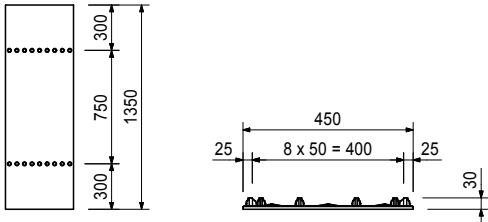
Item no.	Weight kg
128230	4,870

Formlining DP 135 x 60
5 mm formlining for replacement.



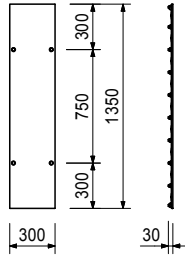
128231	3,580
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Multi Formlining DMP 135 x 45
5 mm formlining for replacement.



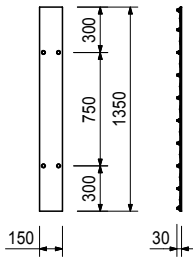
128232	2,460
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Formlining DP 135 x 30
5 mm formlining for replacement.



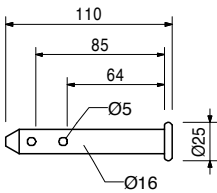
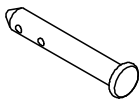
128233	1,250
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Formlining DP 135 x 15
5 mm formlining for replacement.



Item no.	Weight kg
018050	0,171

Pin Ø 16 x 65/86, galv.
For different connections.



Item no.	Weight kg
018060	0,030

Accessories
Cotter Pin 4/1, galv.

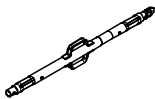
018060	0,030
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Cotter Pin 4/1, galv.

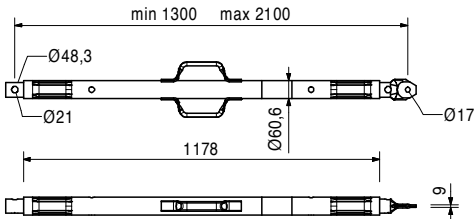


117466	10,600
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Push-Pull Prop RS 210, galv.
Extension length $l = 1.30 - 2.10$ m.
For aligning PERI formwork systems and precast concrete elements.

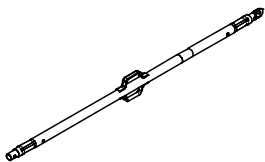


Note
Permissible load see PERI Design Tables.

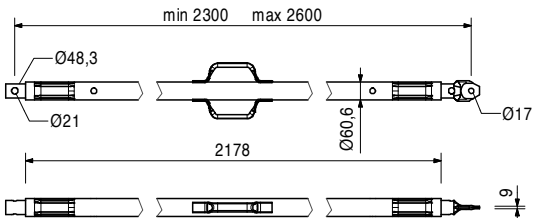


118238	12,200
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Push-Pull Prop RS 260, galv.
Extension length $l = 2.30 - 2.60$ m.
For aligning PERI formwork systems and precast concrete elements.



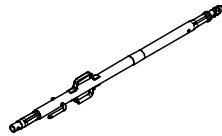
Note
Permissible load see PERI Design Tables.



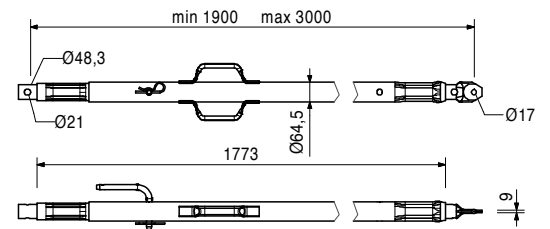
Item no.	Weight kg
117467	15,500

Push-Pull Prop RS 300, galv.

Extension length $l = 1.90 - 3.00$ m.
For aligning PERI formwork systems and precast concrete elements.

**Note**

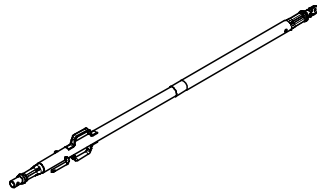
Permissible load see PERI Design Tables.



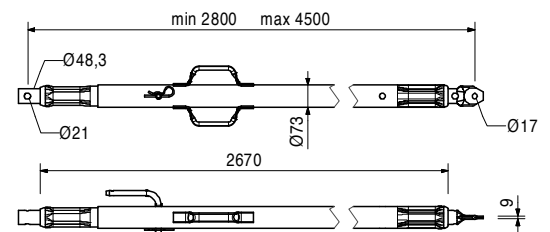
117468	23,000
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Push-Pull Prop RS 450, galv.

Extension length $l = 2.80 - 4.50$ m.
For aligning PERI formwork systems and precast concrete elements.

**Note**

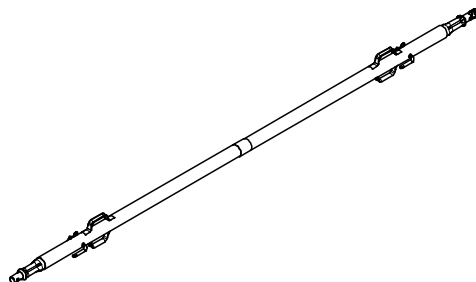
Permissible load see PERI Design Tables.



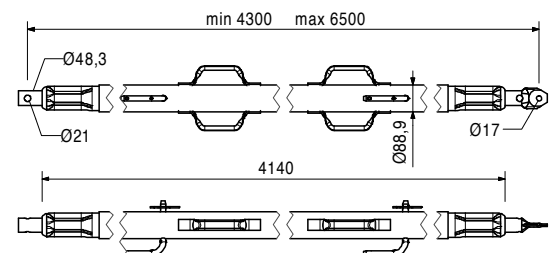
117469	40,000
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Push-Pull Prop RS 650, galv.

Extension length $l = 4.30 - 6.50$ m.
For aligning PERI formwork systems and precast concrete elements.

**Note**

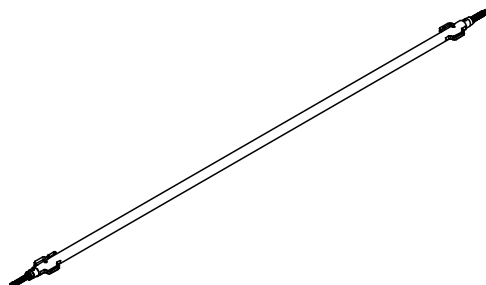
Permissible load see PERI Design Tables.



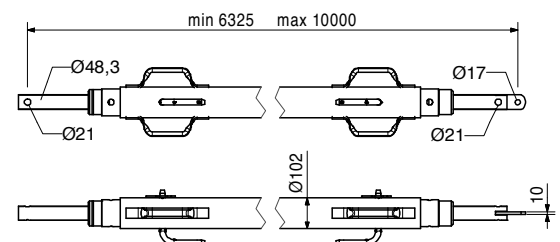
028990	115,000
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Push-Pull Prop RS 1000, galv.

Extension length $l = 6.40 - 10.00$ m.
For aligning PERI formwork systems.

**Note**

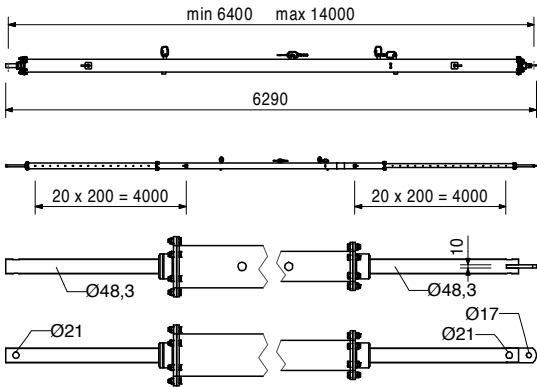
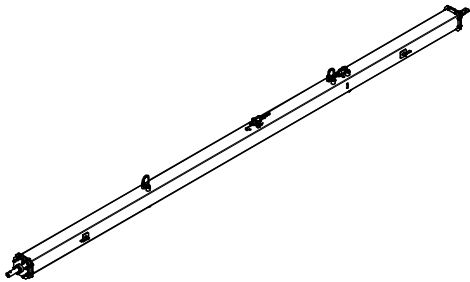
Permissible load see PERI Design Tables.



Item no.	Weight kg
103800	271,000

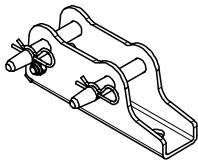
Push-Pull Prop RS 1400, galv.
 Extension length l = 6.40 – 14.00 m.
 For aligning PERI formwork systems.

Note
 Permissible load see PERI Design Tables.
 Chain can be operated from bottom.

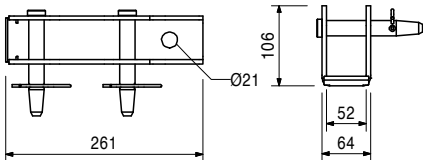


117343	3,250
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Base Plate-2 for RS 210 – 1400, galv.
 For assembly of Push-Pull Props RS 210, 260, 300, 450, 650, 1000 and 1400.



Complete with
 2 pc. 105400 Pin Ø 20 x 140, galv.
 2 pc. 018060 Cotter Pin 4/1, galv.



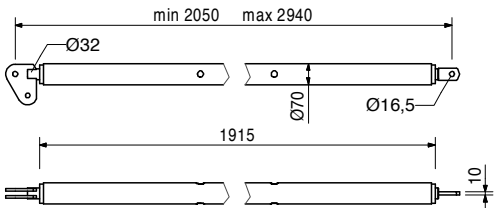
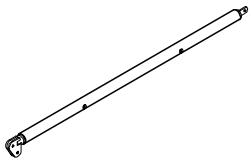
Accessories
Anchor Bolt PERI 14/20 x 130

124777	0,210
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028010	17,900
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Push-Pull Prop RSS I
 Extension length l = 2.05 – 2.94 m.
 For aligning PERI formwork systems.

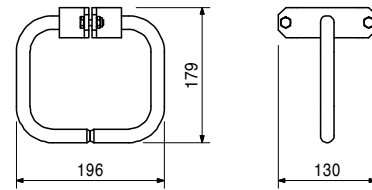
Note
 Permissible load see PERI Design Tables.



Item no.	Weight kg
113397	1,600

Spindle Handle RSS / AV

Spindle Handle for screwing on Push-Pull Props RSS I, RSS II, RSS III and Kickers AV 210 and AV 190 complete with 2 bolts and nuts M8.



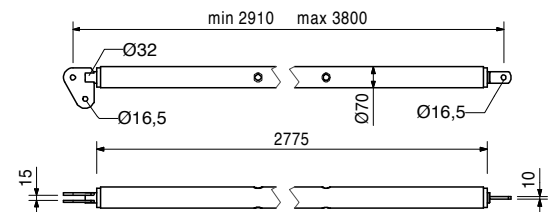
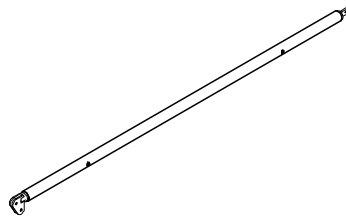
028020	22,000
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Push-Pull Prop RSS II

Extension length $l = 2.91 - 3.80$ m.
For aligning PERI formwork systems.

Note

Permissible load see PERI Design Tables.



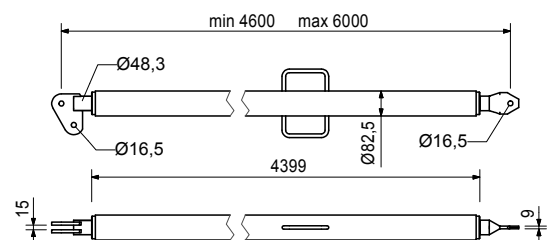
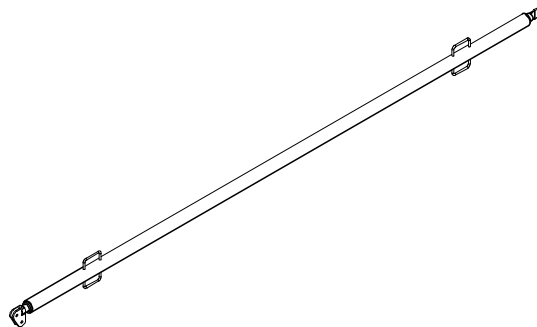
028030	38,400
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Push-Pull Prop RSS III

Extension length $l = 4.60 - 6.00$ m.
For aligning PERI formwork systems.

Note

Permissible load see PERI Design Tables.



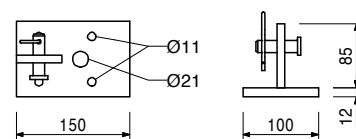
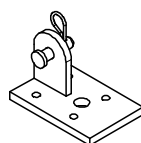
106000	1,820
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Base Plate-2 for RSS, galv.

For assembly of RSS Push-Pull Props.

Complete with

1 pc. 027170 Pin Ø 16 x 42, galv.
1 pc. 018060 Cotter Pin 4/1, galv.



Accessories

124777	0,210
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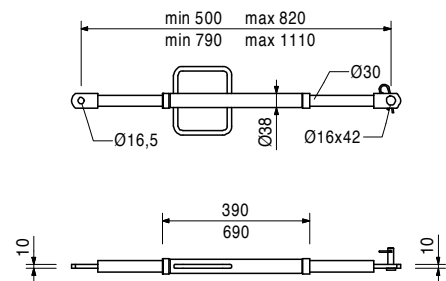
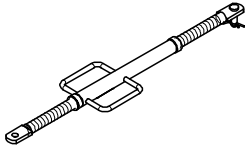
Anchor Bolt PERI 14/20 x 130

Item no.	Weight kg
057087	3,720
057088	4,410

Kickers AV
Kicker AV 82
Kicker AV 111
For aligning PERI formwork systems.

min. L	max. L
500	820
790	1110

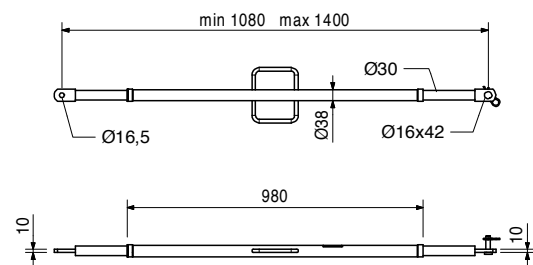
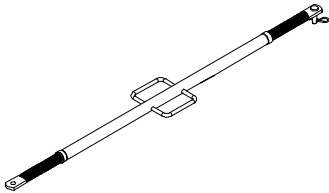
Complete with
1 pc. 027170 Pin Ø 16 x 42, galv.
1 pc. 018060 Cotter Pin 4/1, galv.
Note
Permissible load see PERI Design Tables.



028110	5,180
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Kicker AV 140
Extension length l = 1.08 – 1.40 m.
For aligning PERI formwork systems.

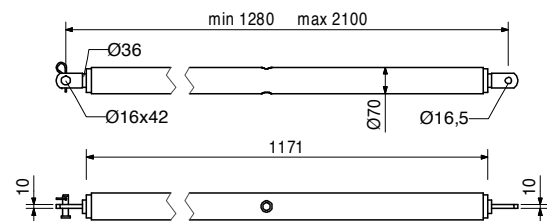
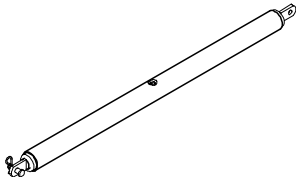
Complete with
1 pc. 027170 Pin Ø 16 x 42, galv.
1 pc. 018060 Cotter Pin 4/1, galv.
Note
Permissible load see PERI Design Tables.



108135	12,900
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Kicker AV 210
Extension length l = 1.28 – 2.10 m.
For aligning PERI formwork systems.

Complete with
1 pc. 027170 Pin Ø 16 x 42, galv.
1 pc. 018060 Cotter Pin 4/1, galv.
Note
Permissible load see PERI Design Tables.



Item no.	Weight kg
028120	17,000

Kicker AV RSS III

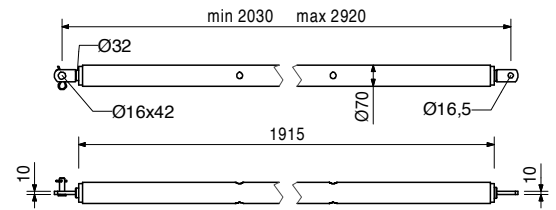
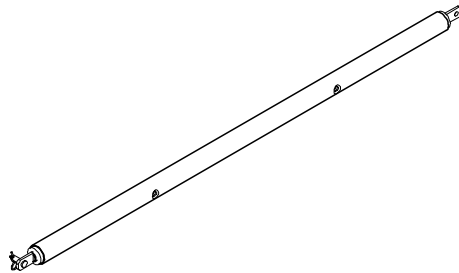
Extension length $l = 2.03 - 2.92$ m.
For aligning PERI formwork systems.

Complete with

1 pc. 027170 Pin $\varnothing 16 \times 42$, galv.
1 pc. 018060 Cotter Pin 4/1, galv.

Note

Permissible load see PERI Design Tables.



124777	0,210
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Anchor Bolt PERI 14/20 x 130

For temporary fixation to reinforced concrete structures.

Note

See PERI data sheet!
Drilling $\varnothing 14$ mm.

