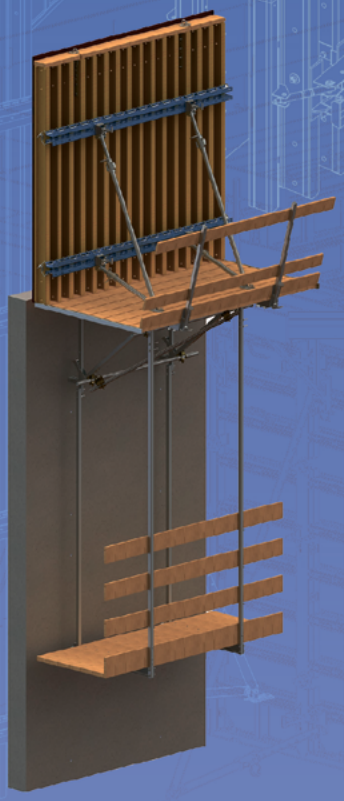
Folding brackets
CWP



VARIANT

USER MANUAL

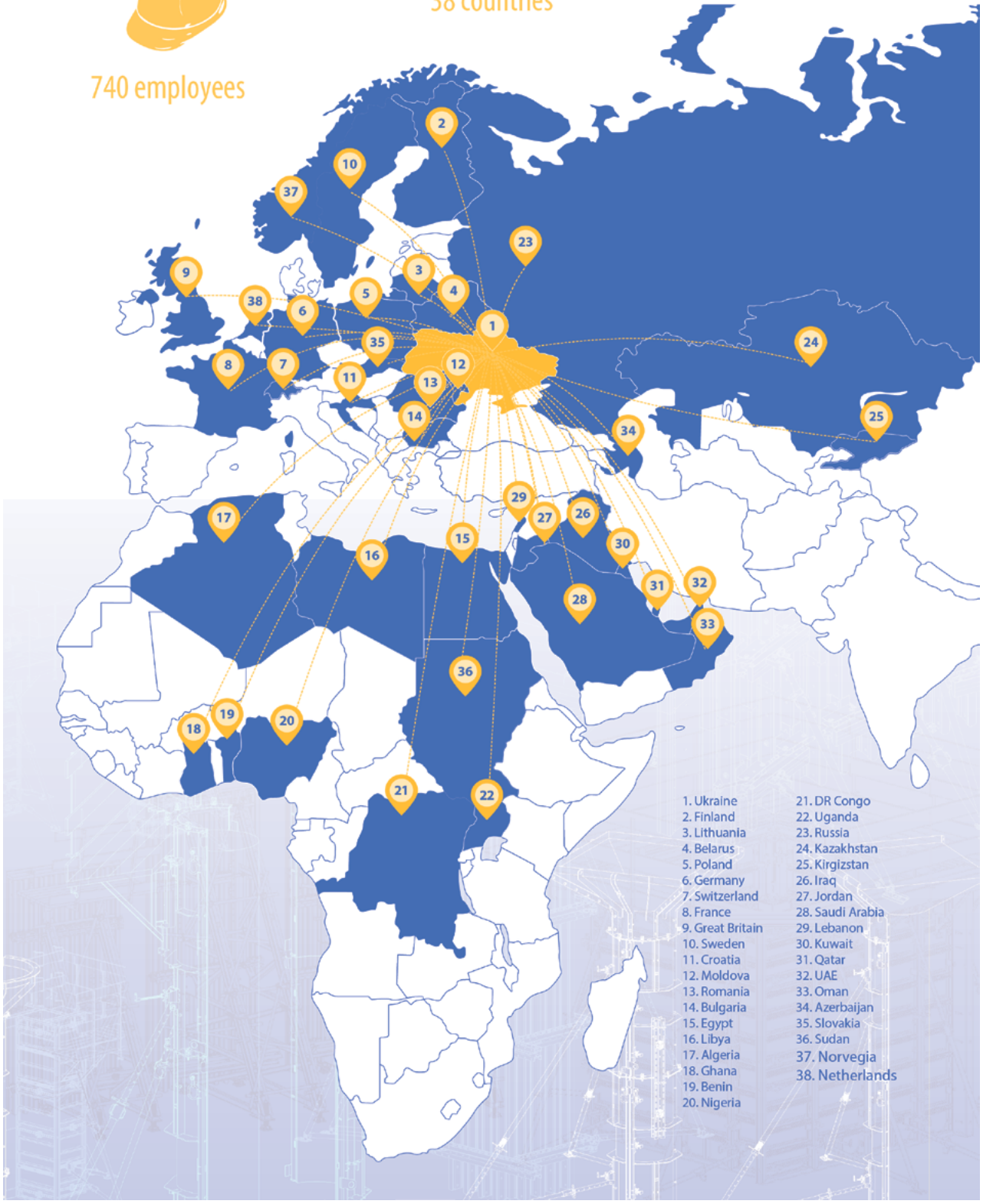
www.variant-factory.eu

ISO 9001
BUREAU VERITAS
Certification
Nº 9001

740 employees

38 countries

3 continents



Contents

GENERAL INSTRUCTIONS

This user manual (method statement) is aimed at everyone who will be working with the «VARIANT» product or system it describes. It contains information on how to set up this system, and proper use it.

All persons working with the product described herein must be familiar with the contents of this manual and with all the safety instructions it contains.

The customer is to ensure that the information materials provided by «VARIANT» are available to all users, and that they have been made aware of them and have easy access to them at the usage location.

Persons who are incapable of reading and understanding this booklet, or who can do so only with difficulty, must be instructed and trained by the customer.

Always observe all construction safety regulations and other safety rules applying to the application and using of our products in the country and/or region in which you are operating.

In the relevant technical documentation and formwork usage plans, «VARIANT» shows the workplace safety precautions that are necessary in order to use the «VARIANT» products safely in the usage situations shown. In all cases, users are obliged to ensure compliance with national laws, Standards and rules throughout the entire project and to take appropriate additional or alternative workplace safety precautions where necessary.

The customer is responsible for drawing up, documenting, implementing and continually updating a hazard assessment on every construction site. This document serves as the basis for the site-specific hazard assessment, and for the instructions given to users on how to prepare and use the system. It does not substitute for these, however.

This manual can also be used as a generic method statement or incorporated with a site-specific method statement.

The equipment/system must be inspected by the customer before use, to ensure that it is in suitable condition. Steps must be taken to rule out the use of any components that are damaged, deformed, or weakened due to wear, corrosion or rot.

The customer must ensure that this product is erected and dismantled, reset and generally used for its intended purpose under the direction and supervision of suitably skilled persons with the authority to issue instructions. These persons' mental and physical capacity must not in any way be impaired by alcohol, medicines or drugs.

The equipment/system must be assembled and erected in accordance with the applicable laws, Standards and rules by suitably skilled personnel of the customer's, having regard to any and all required safety inspections.

Many of the illustrations in this user manual show the situation during formwork assembly and are therefore not always complete from the safety point of view.

Combining our formwork systems with those of other manufacturers could be, but needs to be checked by customer compatibility «VARIANT» product/system with other independently under its responsibility.

It is not permitted to modify«VARIANT» products because of a safety risk.

Only original «VARIANT» components may be used as spare parts. Repairs may only be carried out by the manufacturer or authorized facilities.

We reserve the right to make alterations in the interests of technical progress.

WARNING NOTES

«VARIANT» products and systems must be set up in such a way that all loads acting upon them are safely transferred.

Do not exceed the permitted fresh-concrete pressures. Excessively high pouring rates lead to formwork overload, cause greater deflection and risk causing breakage.

The stability of all components and units must be ensured during all phases of the construction work.

All connections must be checked regularly to ensure that they still fit properly and are functioning correctly. It is very important to check all screw-type connections and wedge-clamped joins whenever the construction operations require (particularly after exceptional events such as storms), and to tighten them if necessary.

Remove any loose parts or fix them in place so that they cannot be dislodged or fall free.

It is strictly forbidden to weld «VARIANT» products – in particular anchoring/tying components, suspension components, con-nector components and castings etc. – or otherwise subject them to heating. Welding causes serious change in the microstructure of the materials from which these components are made. This leads to a dramatic drop in the failure load, representing a very great risk to safety. The only articles which are allowed to be welded are those for which the «VARIANT» literature expressly points out that welding is permitted.

If a person or object falls against, or into, the side-guard component and/or any of its accessories, the component affected may only continue in use after it has been inspected and passed by an expert.

Provide safe workplaces for those using the formwork (e.g. for when it is being erected/dismantled, modified or repositioned etc.). It must be possible to get to and from these workplaces via safe access routes.

Fire-sources are not permitted anywhere near the formwork. Heating appliances are only allowed if properly and expertly used, and set up a safe distance away from the formwork.

The work must take account of the weather conditions (e.g. risk of slippage). In extreme weather, steps must be taken in good time to safeguard the equipment, and the immediate vicinity of the equipment, and to protect employees.

Do not strike the formwork until the concrete has reached sufficient strength and the person in charge has given the order for the formwork to be struck.

When striking the formwork, never use the crane to break concrete cohesion. Use suitable tools such as timber wedges, special pry-bars or system features such as «VARIANT» stripping corners.

When striking the formwork, do not endanger the stability of any part of the structure, or of any scaffolding, platforms or formwork that is still in place.

Observe all regulations applying to the handling of formwork and scaffolding.

SYSTEM OVERVIEW

The system of working/protective platforms is based on Variant's folding brackets CWP. The system can be easily pre-assemble in ready to use platforms. With only one crane lift the whole platform can be installed/shifted or reinstalled into a new working area. Owing to system versatility the folding brackets CWP can be used for all types of construction and safety tasks.

Depending on your construction needs you can use the folding brackets CWP as:
- working platforms;
- protective platforms;
- sloping-rooftop fall barriers;
- protective canopies.

Load-bearing capacity:
• High load-bearing capacity up to 600 kg/m^2, meaning that wall formwork up to 5.5 m can be placed on the platforms;
• Depending on class load, live loads on working and pouring platforms per unit area vary:
  - Class 2 - 150 kg/m^2;
  - Class 3 - 200 kg/m^2;
  - Class 4 - 300 kg/m^2;
  - Class 5 - 450 kg/m^2;
  - Class 6 - 600 kg/m^2.
• Loads at the suspension point, using suspension cone as an anchoring system - Vertical load (V)=24 kN, Horizontal load (H)=14 kN.

Safe use:
• Safe working conditions provided by fully railed working platform;
• Dependable anchoring system of suspension cone.

Cost-effective:
• Reduced labour and crane times, due to pre-assembled units;
• Logical concept of the system makes planning and installation much easier;
• The system is ready for use straight away, after a very few quick and easy actions;
• Long service life, owing to its sturdy design and galvanized steel construction.

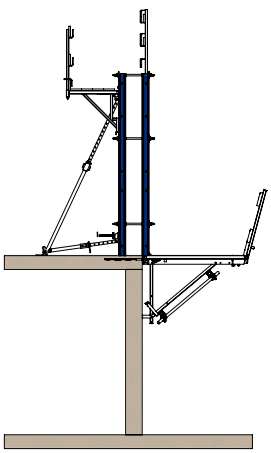
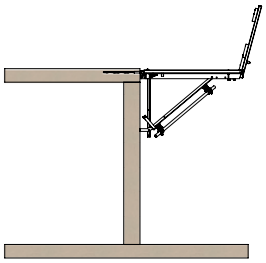
AREAS OF USE

Practical examples of load classes EN 12811-1

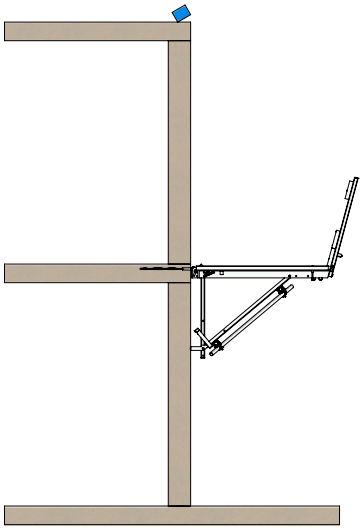
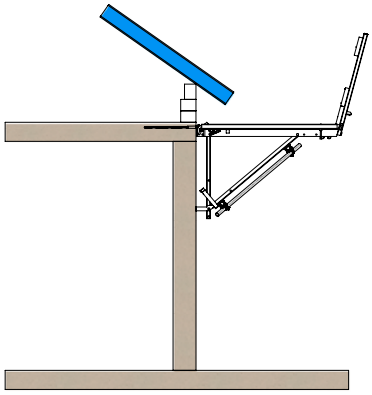
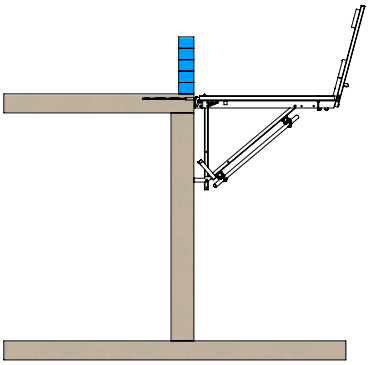
Load Class 2	Load Class 3	Load Class 4, 5, 6
For service and maintenance work, especially for cleaning work on facades	e.g. for external rendering and stucco work, coating, pointing or repair work; as a reinforcement or pouring platform in reinforced-concrete construction work.	Normally for masonry and external rendering work, tiling and squaredstone facing work, and heavy siteerectionwork.
Only for work in which it is not necessary to store building materials or parts on the platform decking.	The materials and equipment stored on the platform decking may not be set down on the platform by liftingappliances.	Building materials and parts may be set down on the platform by liftingappliances and stored on the platform decking.
	However: When materials are stored on the platform decking, a clear access passage at least 0.20m wide must be left free.	Necessary precondition: When materials are stored on the platform decking, a clear access passage at least 0.20m wide must be left free.
Permitted service load: 1.50kN/m²	Permitted service load: 2.00kN/m²	Load Class Permitted service load 4 3.00kN/m² | 5 4.50kN/m² | 6 6.00kN/m² or partial-area load
	The actual load is made up of the weight of the stored material and of the persons on the platform. For each person, a weight of 1.00kN must be assumed.	The actual load is made up of the weight of the stored material and of the persons on the platform. For each person, a weight of 1.00kN must be assumed.

POSSIBLE AREAS OF USE

as a working platform

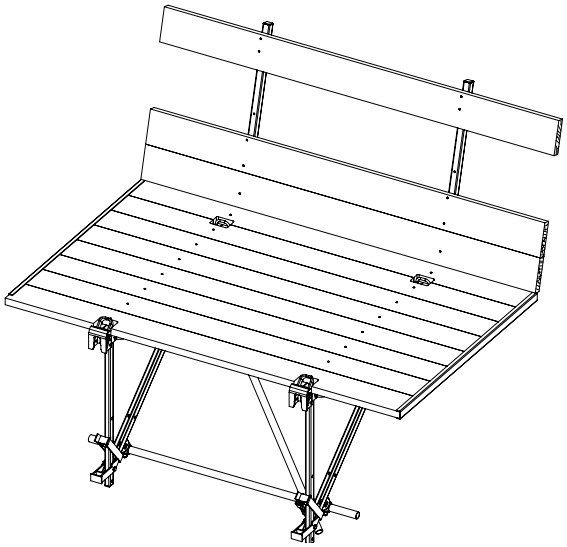
with formwork	without formworkt
	

as a protection platform

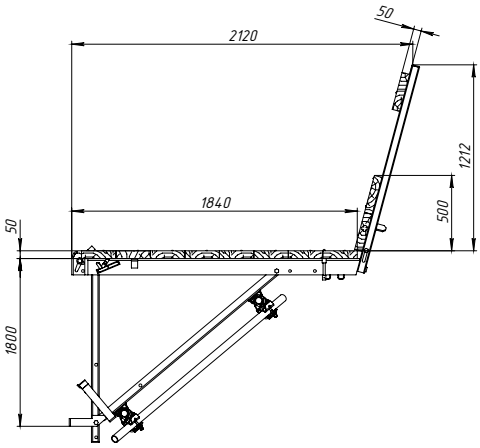
Fall barrier	Sloping-rooftop fall barrier	Protective canopy
		

SYSTEM IN DETAIL

Assembled with timber planks Folding platform:



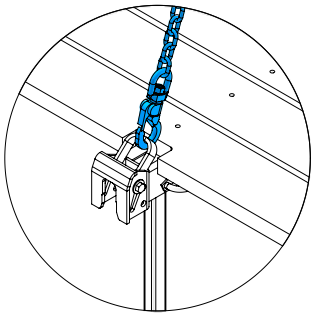
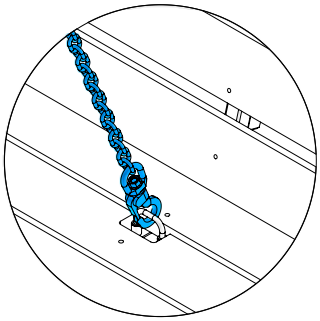
System dimensions:



• 2 typical lengths of CWP platform, as required by the situation:
- up to 3.00m (2 brackets);
- up to 4.50m (3 brackets).

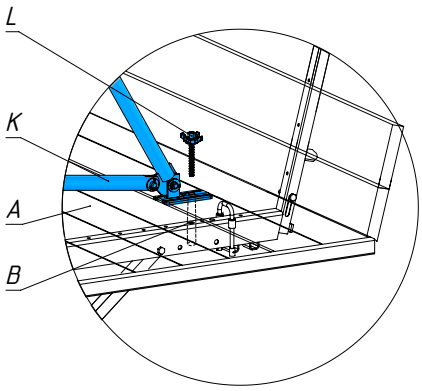
• The suspension points always have the same grid spacing as brackets (up to 1.50m).

CRANE HOISTING POINTS

Front crane hoisting point	Rear crane hoisting point
	

The retractable crane hoisting points leave an even, safe work-deck.

ATTACHING SUPPORTING STRUTS



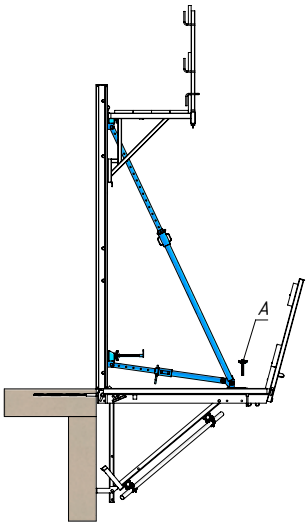
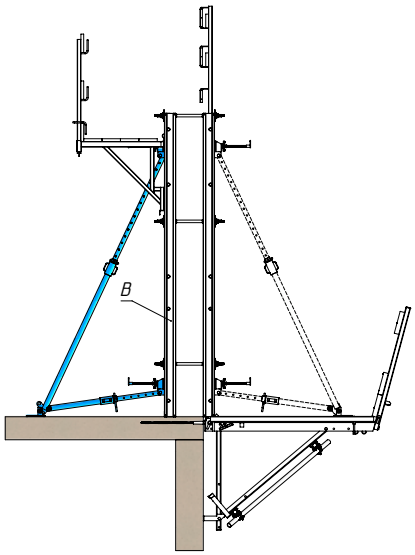
(A) Folding platform
(B) Connection socket
(K) Supporting strut 340
(L) Star screw CWP

Connection sockets for attaching the supporting struts are integrated in the brackets.

WORKING PLATFORM WITH FORMWORK

Horizontal and vertical load refer to the loads at the suspension point. These loads cover all the usage situations given here. The structure, and all parts of the structure, must be verified for stability on the basis of this data.

(A) Star screw CWP
(B) Opposing formwork

Formwork shored from folding platform	Formwork shored from floor slab
	

Load class 2. Permitted service load: 1.5kN/m^2 on folding platform and pouring platform Max. width of pouring platforms 1.20m		
Horizontal load Vertical load	H = 14.0 kN V = 24.0 kN	H = 14.0 kN V = 24.0 kN
Closures	1.00 m	1.00 m
Suspended platform	Allowed	Allowed
Formwork height	3.00 m*	5.50 m

* - Wind speeds up to 55 km/h. Formwork heights of up to 4.00 m are possible if the max. wind speed is up to 45 km/h. If higher wind speeds are likely, and when work finishes for the day or before prolonged work-breaks, the formwork must be closed. Fix the panel struts of the opposing formwork to the floor-slab stably.

The panel struts on the folding platform must:
- only be positioned in the axis of the folding bracket CWP
- only be fitted into the special connection sockets
- only be fixed with star screws CWP

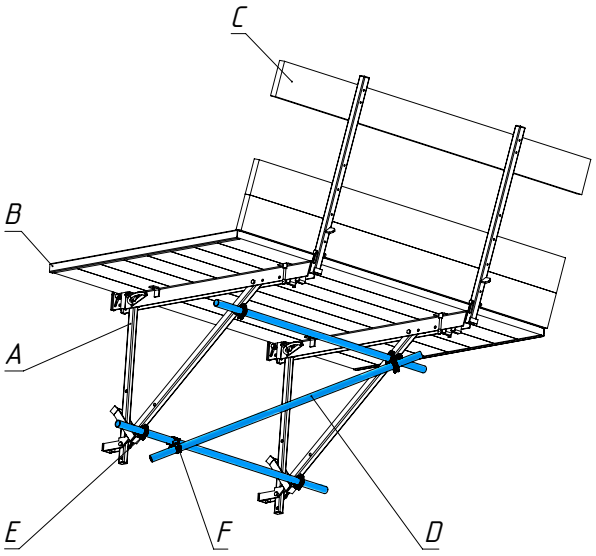
WORKING PLATFORM WITHOUT FORMWORK

Horizontal and vertical load refer to the loads at the suspension point.
These loads cover all the usage situations given here. The structure, and all parts of the structure, must be verified for stability on the basis of this data.

Types of suspension point	**Suspension cone**				
Load class	**2**	**3**	**4**	**5**	**6**
Permitted service load	1.5kN/m^2	2.0kN/m^2	3.0kN/m^2	4.5kN/m^2	6.0kN/m^2
Horizontal load	H = 16.2kN			H = 25.0kN	
Vertical load	V = 16.0kN			V = 26.0kN	
Closures	2.50m *	1.50m *	1.00m	0.75m	0.50m
	*for closures of longer than 1.00m, only use the Closure platform 3.00m				
Corners	Possible with Closure platform 3.00m or platform planking unit			Only allowed with prefabricated Corner folding platform, otherwise corner zones are reclassified down to Load class 4	

PLATFORM ASSEMBLING FROM SINGLE BRACKETS

Makes it possible to choose any bracket spacing and any length of platform, for constructing closure platforms (of e.g. less than 3.0m in length) and special shapes for use in corner zones.



(A) Folding bracket CWP
(B) Planks, min. 20x5cm (site-provided)
(C) Guard-rail boards, min. 15x3cm (site-provided)
(D) Framed tube 48mm
(E) Screw-on coupler 48mm 30
(F) Swivel coupler 48x48mm

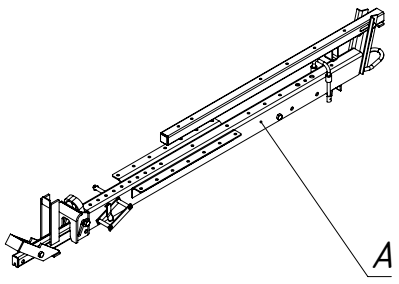
Max. influence width per bracket 1.50m

- When designing the platforms, always ensure that the loads are applied as centrally as possible.
- The stability of the platforms must be ensured during all phases of the construction work.

ASSEMBLY INSTRUCTIONS

Separating the brackets

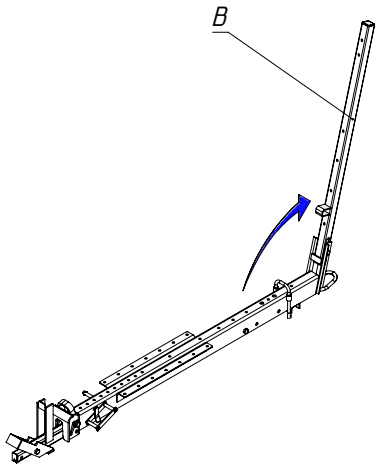
- Take the folding brackets CWP and set them down on a flat surface.



(A) Folding bracket CWP

Putting up the railings

• Tilt up the railings. When you reach the stop, lift the railings and slot them into place.

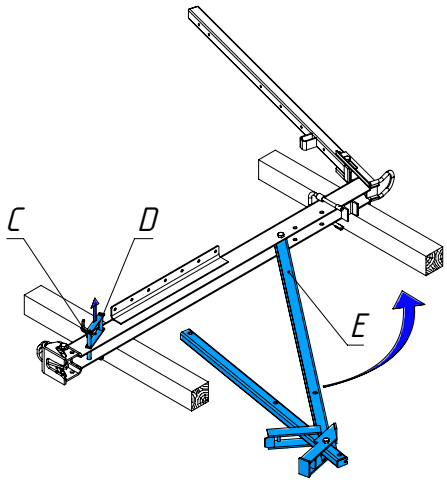


(B) Railing

• Place the folding bracket CWP on its side, on timber supports on the ground.

Pulling out the pressure rod

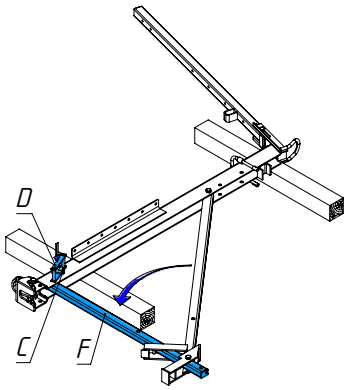
• Raise the safety clip and pull out the U-bolt as far as it will go.
• Pull out the pressure rod.



(C) Safety clip
(D) U-bolt
(E) Pressure rod

Bolting the vertical rod in place

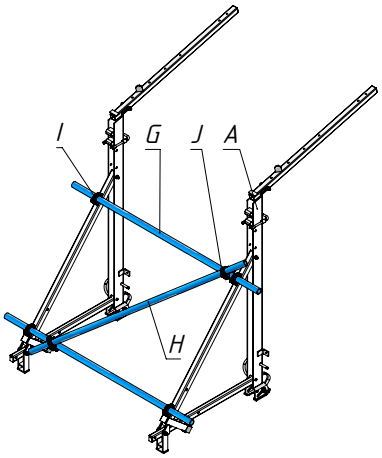
• Tilt up the vertical rod and fix it by inserting the U-bolt.
• Secure the U-bolt with the safety clip to prevent it being opened accidentally.



(C) Safety clip
(D) U-bolt
(F) Vertical rod

Fitting the bracing

• Prepare an assembly bench.
• Prepare the bracing.
• Tilt up the folding brackets CWP and stand them spaced the specified centre-to-centre distance apart (see assembly plan).
• Secure them so that they cannot topple over.
• The length of the scaffold tubes used will depend on the centre-to-centre spacing of the brackets.
• Brace the folding brackets CWP in the horizontal, with 4 screw-on coupler 48mm and 2 framed tubes 48mm.
• Mount a framed tube as a diagonal stiffening reinforcement between the brackets, using 2 swivel couplers 48x48mm.



(A) Folding bracket CWP
(G) Framed tube 48mm *
(H) Framed tube 48mm **
(I) Screw-on coupler 48mm 30
(J) Swivel coupler 48x48mm

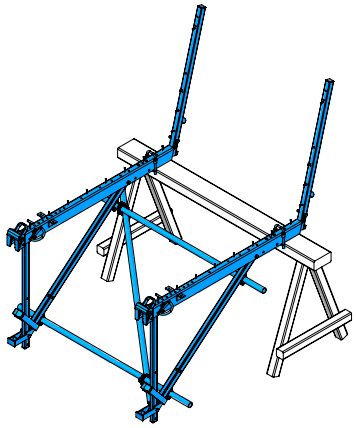
* length = centre-to-centre distance + 0.20m
** length = centre-to-centre distance + 0.50m

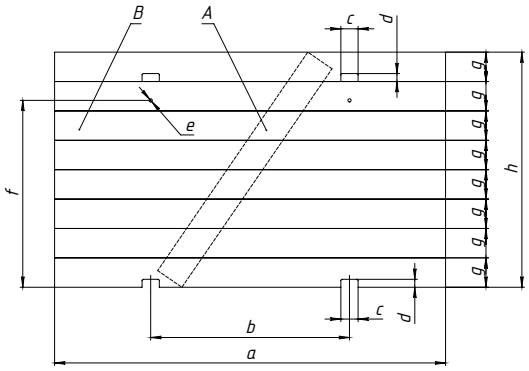
Distancebetweenscrew-oncouplerandswivelcoupler: max. 160mm.

This set-up scheme is for platform units with 2 brackets.
On platform units with 3 brackets, the number of couplers and scaffolding tubes will need to be adjusted accordingly.

Attaching the platform decking

• Place the braced folding brackets CWP onto a trestle.
• Lay deck-boards onto the bracket. (Cut them to size as shown below).





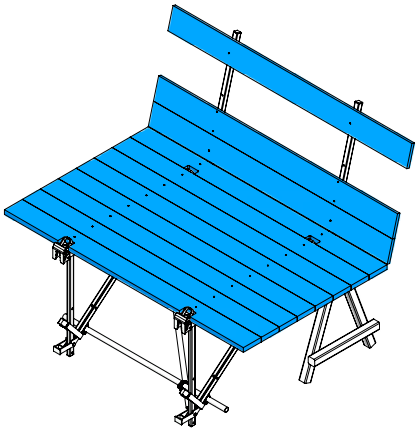
(A) Diagonal board

(B) Plank 250x50mm

a - length of platform
b -centre-to-centre distance
c = 130mm
d = 60mm
e = 24mm
f = 1410mm
g = 250mm
h = 1770mm

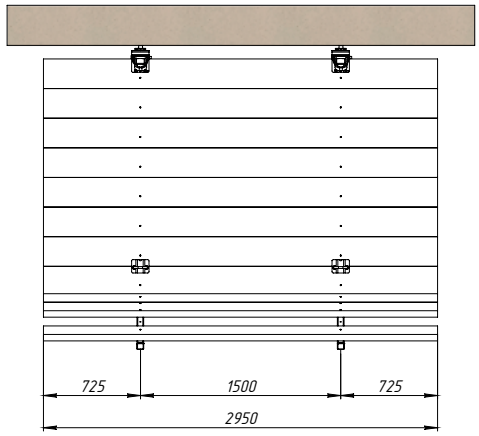
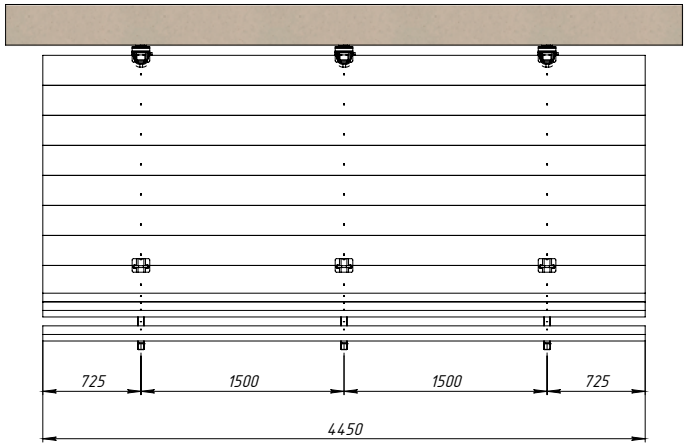
• Attach each deck-board with one M10x70 square bolt on each bracket.
• Fix a diagonal board to the underside, between the brackets (with 2 nails in each deck-board)
• On each bracket, fasten handrail planks onto the handrail post using square bolts M10x110, spring washers A10 and hexagon nuts M10.

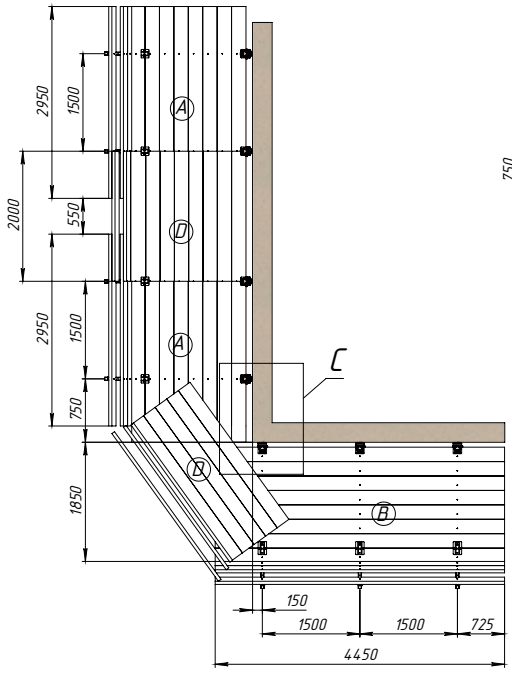
Observe all national regulations applying to deck-boards and guard-rail boards.

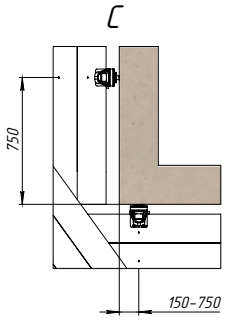


UTILISATION PLANNING

The suspension points are always spaced the same grid 150cm (centre-to-centre spacing of suspension points), and 75cm from the platform edge. This greatly facilitates planning and site erection.

Permitted possible spacing for typical sizes of platform	
Folding platform 3.00m	**Folding platform 4.50m**
	





(A) Folding platform 3.00m

(B) Folding platform 4.50m

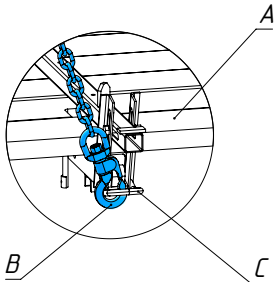
(D) On-site solution

SET-UP PROCEDURE

Separating the platforms

• Lift the stacked platforms off the truck by crane or forklift truck, and set them down on a flat surface.

• Attach the four-part lifting chain to the crane hoisting points at the front and to the extra lifting bows at the rear (C)



(A) Folding platform CWP

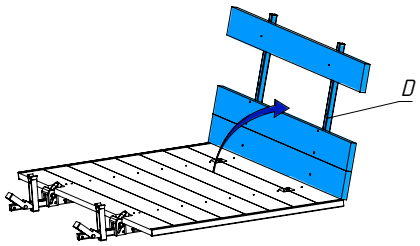
(B) Four-part lifting chain

(C) Lifting bow

Only attach and lift 1 platform at a time.

Putting up the railings

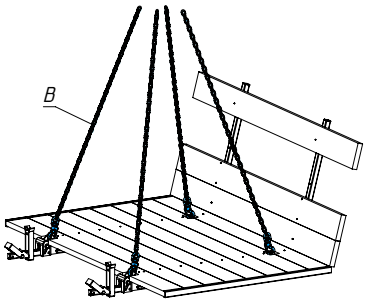
• Tilt up the railings (D) . When you reach the stop, lift the railings and slot them into place.



(D) Railings

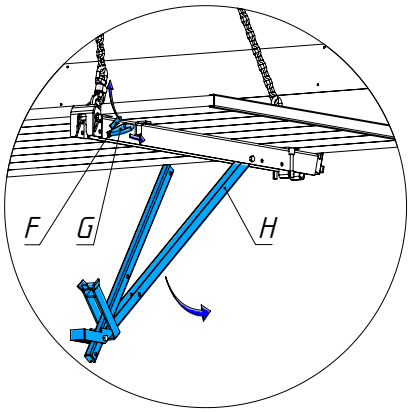
Attaching the crane

• Pull the lifting bows up out of their recesses, attach the four-part lifting chain (B) and raise the folding platform.



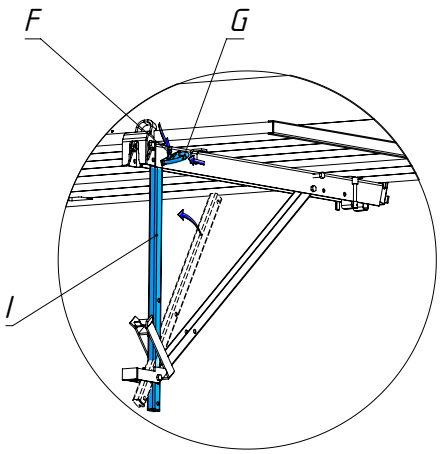
(B) Four-part lifting chain

Pulling out the pressure rod
After being released, the pressure rod swings downwards.
• Hold the pressure rod (H) in one hand.
• Then, with the other hand, lift up the red safety clip (F) and pull out the U-bolt (G) as far as it will go.
• Gradually lower the pressure rod by hand.



(H) Pressure rod
(F) Safety clip
(G) U-bolt

Bolting the vertical rod in place
• Tilt up the vertical rod (I) and fix it by inserting the U-bolt (G).
• Secure the U-bolt with the red safety clip (F) to prevent it being opened accidentally.
• The folding platform is now ready for use.

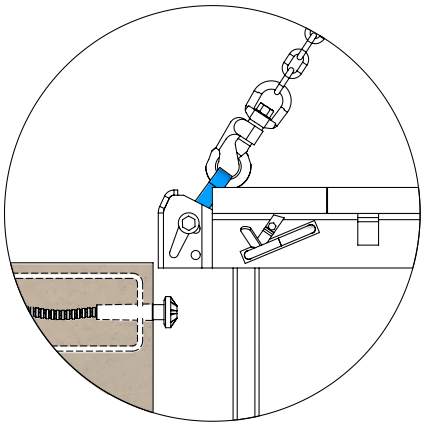


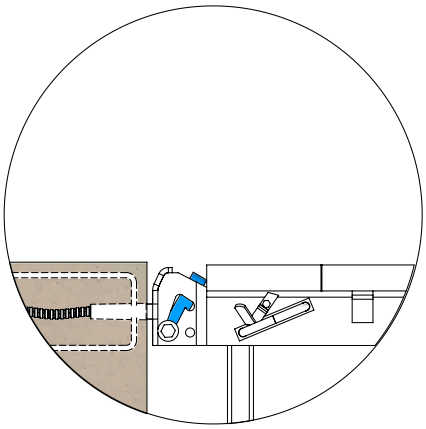
(I) Vertical rod
(F) Safety clip
(G) U-bolt

Hanging the folding platform into place

• Raise the folding platform with a four-part lifting chain. This raises the front Lifting bows, opening the anti-lift-out guard.

• Once the folding platform is suspended from the suspension cone, the load is removed from the four-part lifting chain. The lifting bows drop into the starting position, automatically securing the platform against accidental lift-out.





"Locked" position = lifting bow is flush with decking.

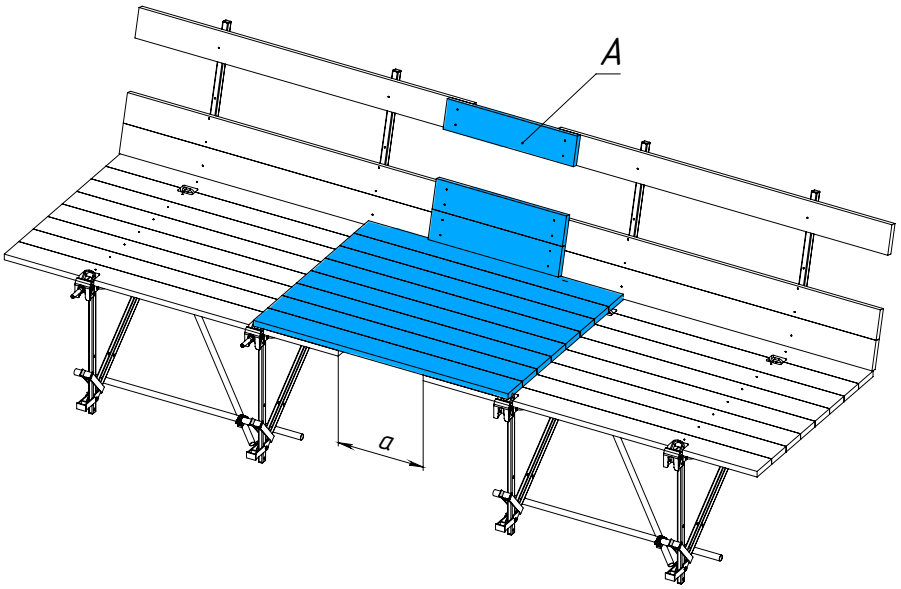
LENGTH ADJUSTMENT AND CORNER SOLUTIONS

Closures and corner transitions can be made using field-built solutions.

LENGTH ADJUSTMENT

Railings:
- Attach a guard-rail boards (min. 150x30mm) with two 2.8x65mm nails on each side
- Minimum overlap 150mm.

(A) Nailing

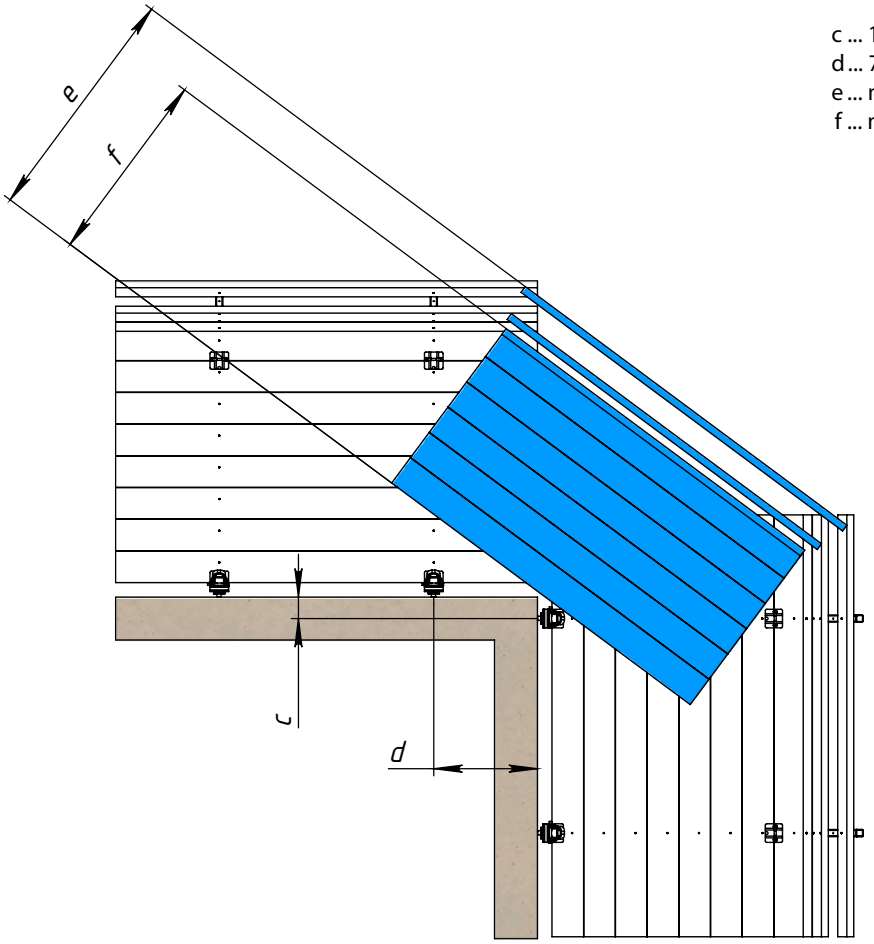


Floor planking:
- Lay down planks with a min. cross-section of 200x50mm.
- Minimum overlap 750mm.

Do not exceed the max. closures a, depending on the usage situation (see page 12).

CORNER SOLUTION

- Cover the corner zone with planks (min. 200x50mm).
- Minimum overlap 200mm.
- Fix the guard-rail boards (min 150x30mm) with two 2.8x65mm nails on each side.
- Minimum overlap 150mm.

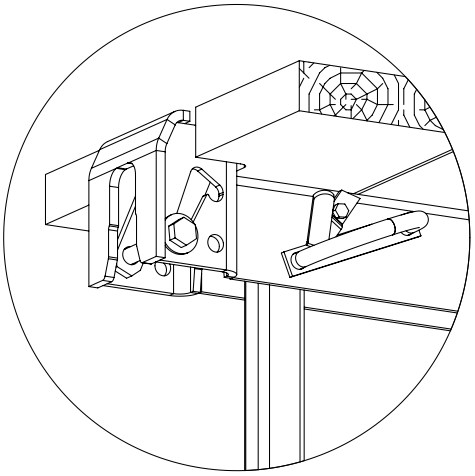


c ... 150 to 750mm
d ... 750mm
e ... min. 1. 30m
f ... min. 0.90m

CONE-TYPE SUSPENSION POINTS

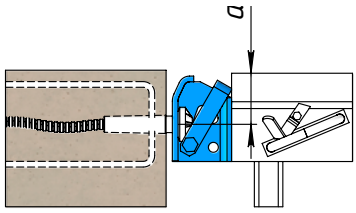
Warning against not screwing in the parts (e.g. stop anchors or pigtail anchors) far enough into the positioning cones: This may subsequently lead to reduced load-bearing capacity and to the failure of the suspension point - resulting in injury and damage.

• Always screw in components until they fully engage – that is, for the full length as far as the depth mark on the stop-anchor or pigtail anchor.
• Make sure that the parts then used for the suspension point are for the same depth of concrete cover.
• Do not use the positioning cone as a rod connector.
• Tie the pigtail anchor or stop anchor to the reinforcement with binding wire. This prevents it becoming detached during pouring and vibrating.
• Never weld or heat tie-rods - risk of fracture.



Expendable parts
Pigtail anchor 15.0mm or Stop anchor 15.0mm 0.16m 
Sealing sleeve 15 
Re-useable parts
Cantilever positioning cone 15 
Tie-rod 15 length approx. 0,20m & Superplate15 or Fixing plate 15 
Suspension cone 15 

SUSPENSION POINT IN CONCRETE



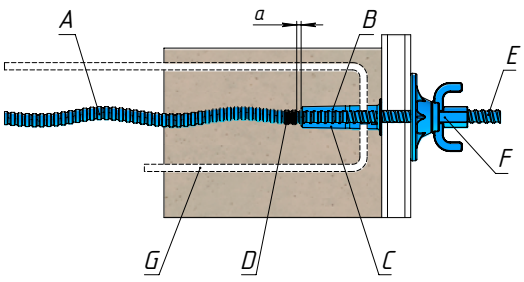
Cone axis to top of decking: a = 65mm

The required cube compressive strength of the concrete at the time of loading must be specified separately for each project by the structural designer. It will depend on the following factors:
· load actually occurring
· length of stop anchor or pigtail anchor
· reinforcement / extra reinforcement steel
· distance from edge

The introduction of the forces, the transfer of these forces into the structure, and the stability of the overall construction, must all be verified by the structural designer.
The required cube compressive strength $f_{ck,cube,current}$ must be at least 10 N/mm^2, however.

POSITIONING POINT

with hole drilled through the plywood
· drill a Ø18mm hole in the plywood.
· screw the stop anchor 15.0mm 0.16m or pigtail anchor 15.0mm into the cantilever positioning cone 15 until fully engaged.
· insert a tie rod 15.0mm (length approx. 0.20m) through the hole drilled in the plywood, screw it into the cantilever positioning cone 15 and tighten it with the superplate 15.

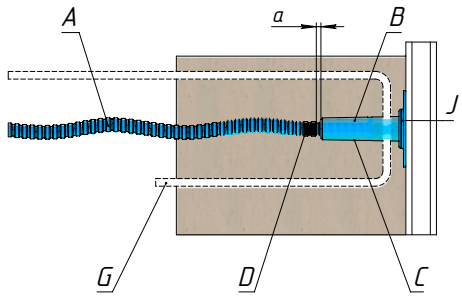


(A) Stop anchor 15.0mm 0.16m or Pigtail anchor 15.0mm
(B) Cantilever positioning cone 15
(C) Sealing sleeve 15
(D) Depth mark (depends on manufacturer)
(E) Tie rod 15.0mm
(F) Superplate 15
(G) Longitudinal reinforcement and U-reinforcements, min. Ø8mm, spaced max. 150mm apart

a = 10mm

with no hole drilled through plywood

· nail a cantilever positioning cone 15 to the plywood using a fixing plate 15.
· screw the stop anchor 15.0mm 0.16m or pigtail anchor 15.0mm into the cantilever positioning cone 15 until fully engaged.



(A) Stop anchor 15.0mm 0.16m or Pigtail anchor 15.0mm
(B) Cantilever positioning cone 15
(C) Sealing sleeve 15
(D) Depth mark (depends on manufacturer)
(J) Fixing plate 15
(G) Longitudinal reinforcement and U-reinforcements, min. Ø8mm, spaced max. 150mm apart
(G) Longitudinal reinforcement and U-reinforcements, min. Ø8mm, spaced max. 150mm apart

a = 10mm

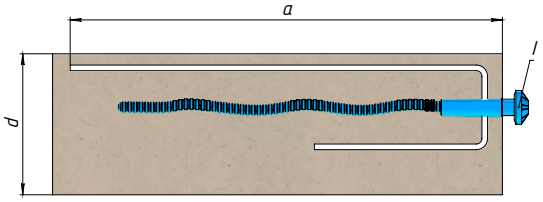
The positioning cones are re-used, fit them with new sealing sleeves first.
Check all positioning points and suspension points once again before pouring.

SUSPENSION POINT

· warning against not screwing in the suspension cones sufficiently far: the resulting reduction in the load-bearing capacity may cause the suspension point to fail, leading to injury and damage.
· never mix components that have different depths of concrete cover - this causes the screw-in depths to be insufficiently deep.
· always screw in components until they fully engage.

· use needed tools to unscrew the cantilever positioning cone 15 together with the fixing plate 15. When carefully fitted, and removed without using force, the fixing plate 15 can be used several times over.
· screw in suspension cone 15 until fully engaged, and tighten.

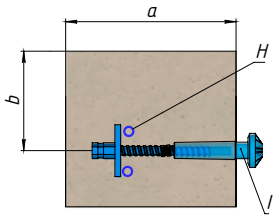
Pigtail anchor 15



(I) Suspension cone 15

a = 740mm (where there is 50mm concrete cover on both sides)
d = min. 160mm

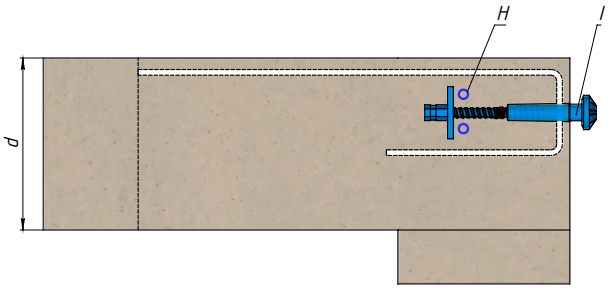
Stop anchor 15.0mm 0.16m



(I) Suspension cone 15

(H) Additional reinforcement

a = min. 260mm (where there is 50mm concrete cover on both sides)
b = min. 200mm



(I) Suspension cone 15

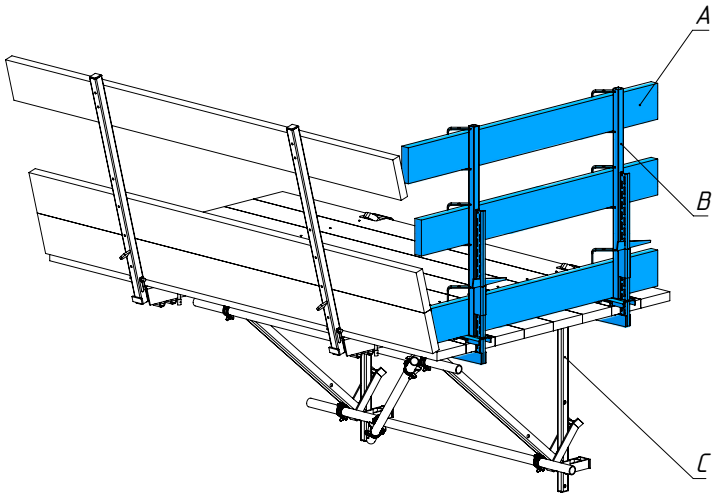
(H) Additional reinforcement

d = min. 160mm

SIDEGUARDS ON EXPOSED PLATFORM-ENDS

Suitable sideguards must be provided on exposed ends of platforms.

WITH GUIDE RAIL CLAMP

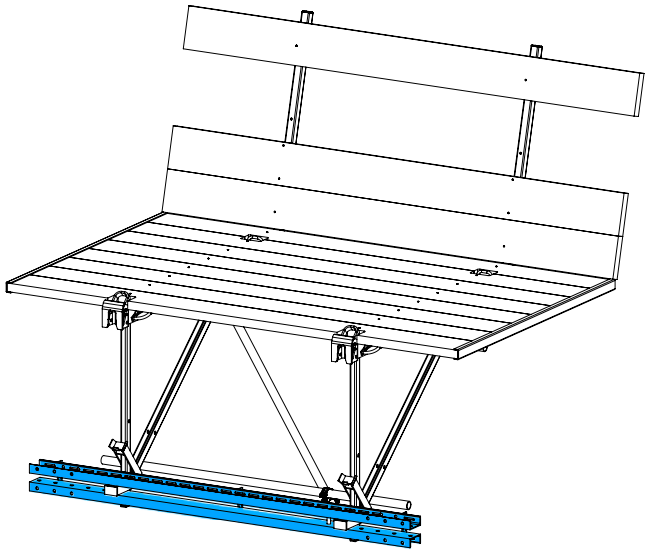


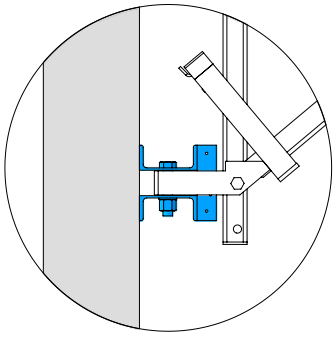
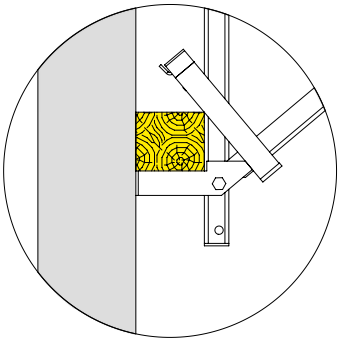
(A) Timber plank
(B) Guard rail clamp
(C) Folding bracket CWP

• Fasten the guide rail clamps to the decking of the folding platform using the wedge (clamping range 20 - 430mm);
• Secure the timber planks into loops on the guide rail clamp and secure them with nails (ø5mm).

BRIDGING OPENINGS IN WALLS

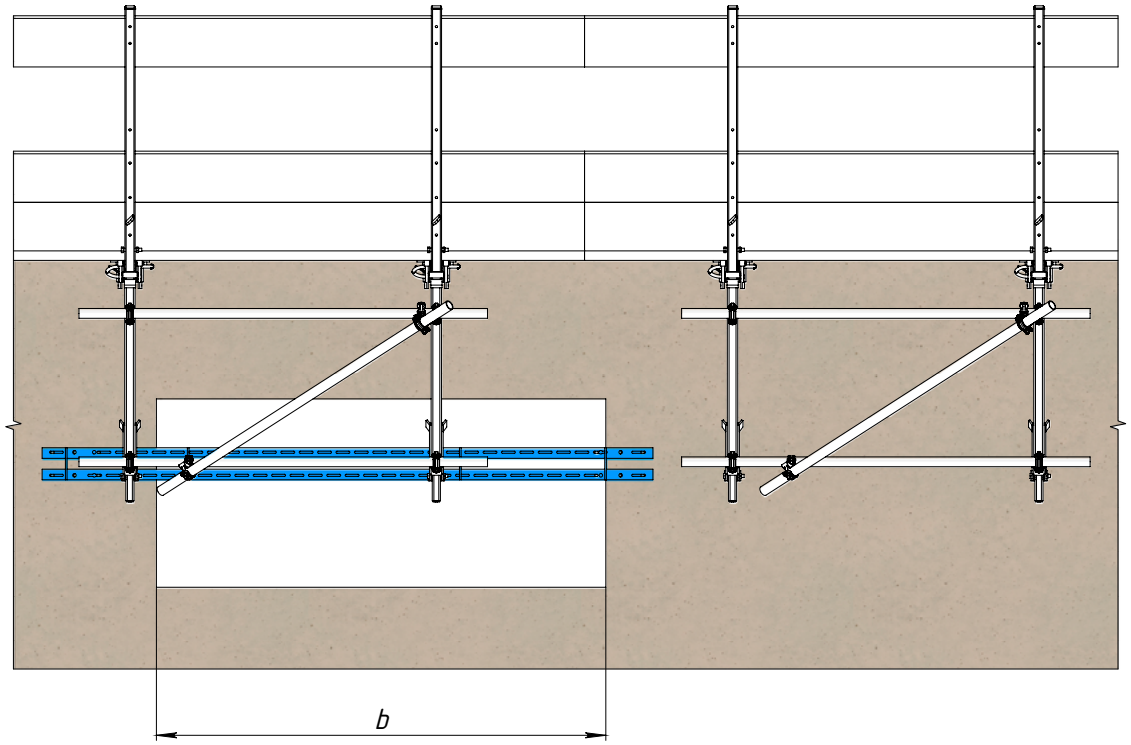
For bridging wall-openings in the horizontal, either of the following may be used:
• Waling 10 or waling 12 (length of waling: 2.75m or 3.50m);
• Squared timbers.
These bridging beams are also suitable for use as supporting profiles in masonry construction.



Waling 10 or waling 12 (additional holes along waling may be needed)	With squared timber 120x140mm
	
Fix with hexagon screw M20x90 with nut and spring washer	Fix with binding wire

AREAS OF USE

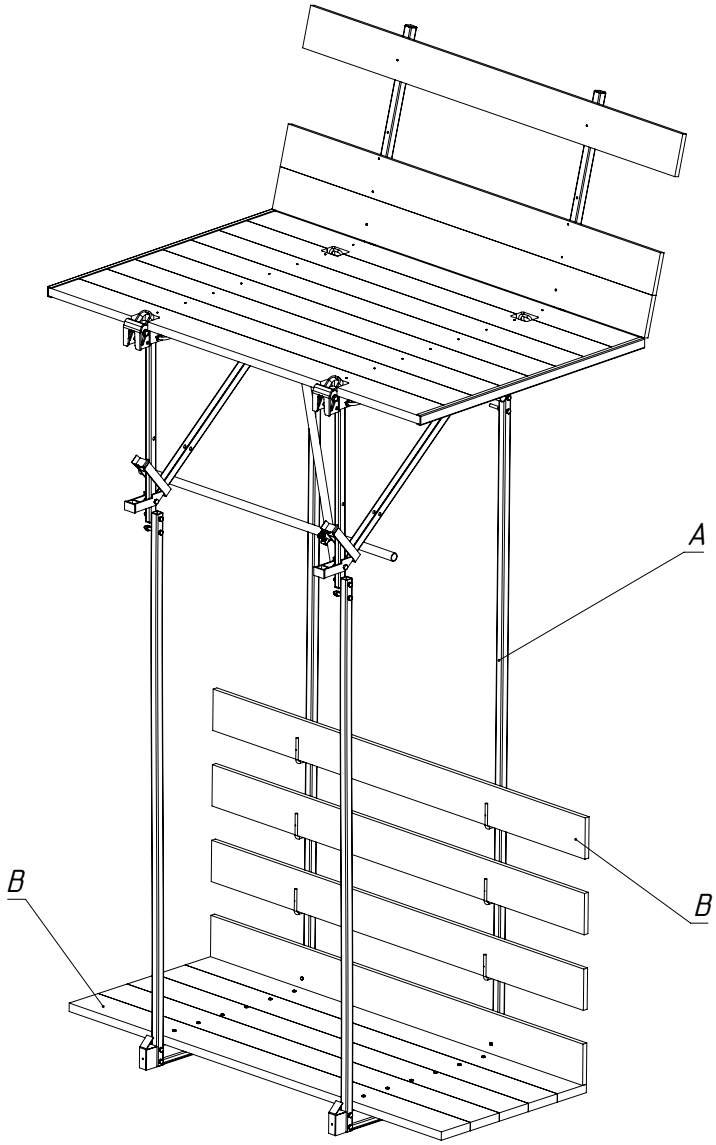
with	Opening width b	
	Working platform	Protection platform
Waling 10 or waling 12 (additional holes along waling may be needed)	2.20m	4.00m
Squared timber 120x140mm	–	1.90m



SECOND WORKDECK LEVEL

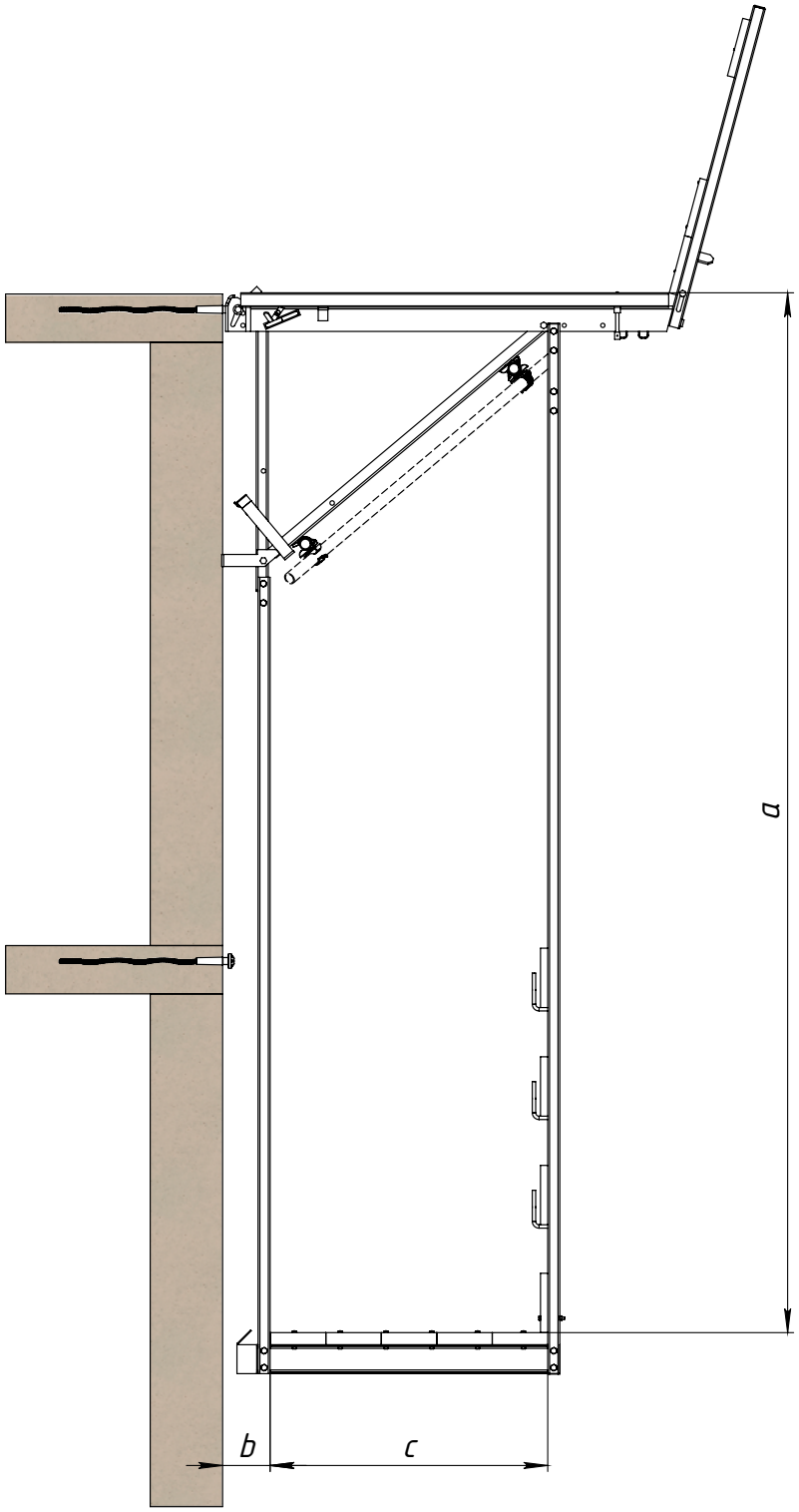
For finishing-work on cured concrete surfaces or for disassembly work (e.g. dismounting unneeded suspension points).

WITH SUSPENDED PLATFORM 3.30m OR 4.30m



(A) Suspended platform 3.30m or 4.30m

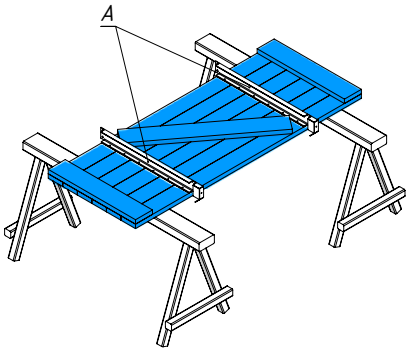
(B) Planks and guard-rail boards (site provided)



a ... 4.34 m
b ... 0.15 m
c ... 1.15 m

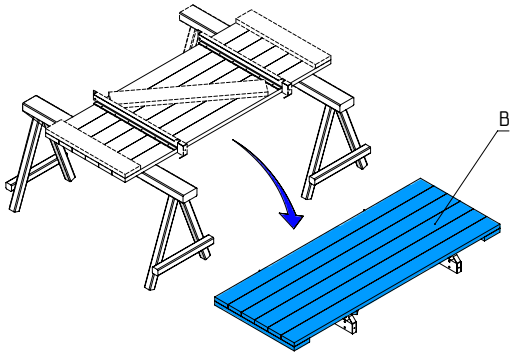
Preparing the platform decking

· place the deck-boards on trestles.
· place platform profiles onto the deck-boards, spaced apart at the centre-distance of the brackets.
· fasten the platform profiles to the deck-boards with M10x70 square bolts.
· fix planks to the ends of the platforms, and diagonally between the platform profiles. (2 nails per deck-board).



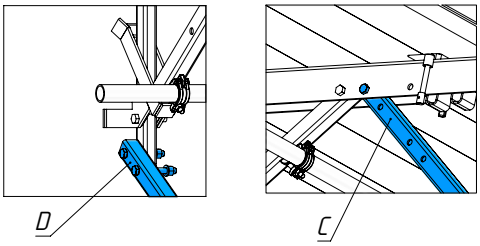
(A) Platform profiles

· turn over the pre-assembled decking and set it down on the ground.



(B) Deck board

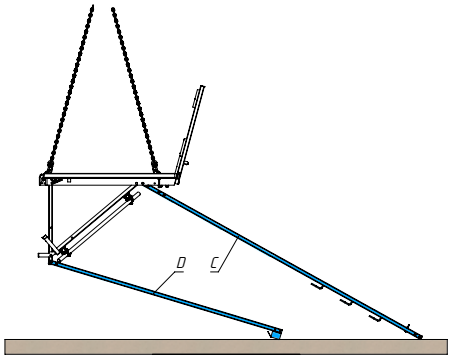
· bolt on the inside suspension profile with an M16x120 hexagon bolt.
· bolt on the outside suspension profile with an M16x90 hexagon bolt.



(C) Outside suspension profile

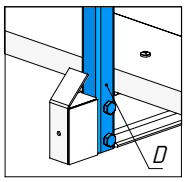
(D) Inside suspension profile

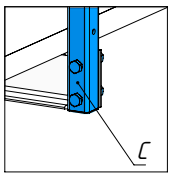
· lift the folding platform CWP by crane.



(C) Outside suspension profile
(D) Inside suspension profile

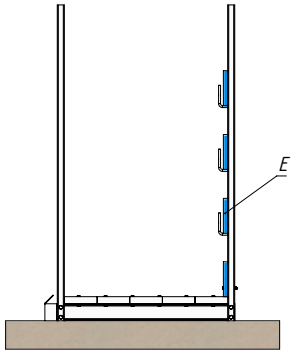
· mount the platform profiles of the pre-assembled platform decking to the suspension profiles with 4 hexagon bolts M16x90 for each profile.





(C) Outside suspension profile
(D) Inside suspension profile

· use an M10x120 square bolt to attach a timber plank (min. 150x30mm) as a toe board.
· insert timber planks (min. 150x30mm) into the handrail post plates and fix them with 28x65 nails.



(E) Timber plank min. 150x30mm

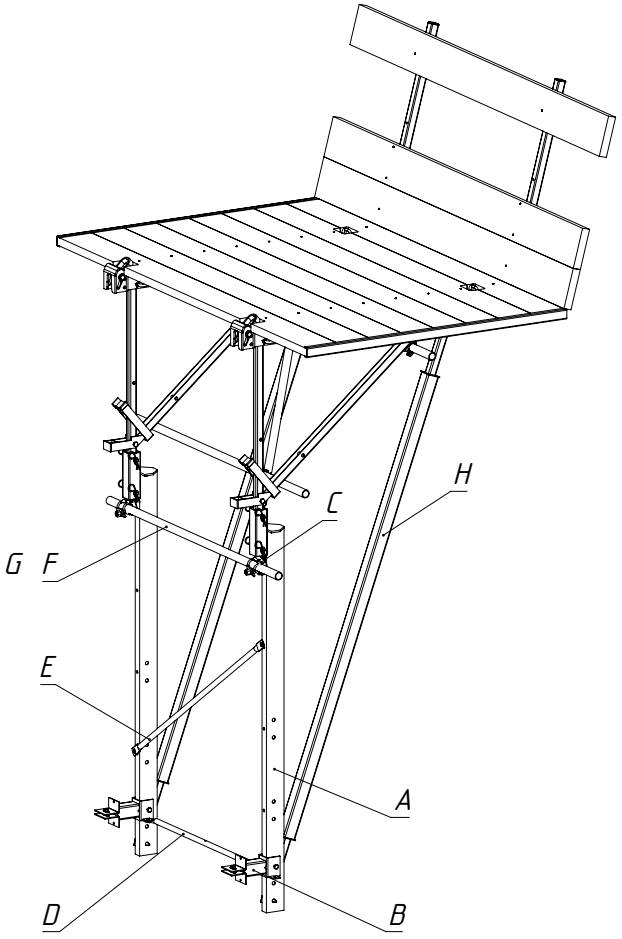
BRIDGING STOREY-HIGH OPENINGS

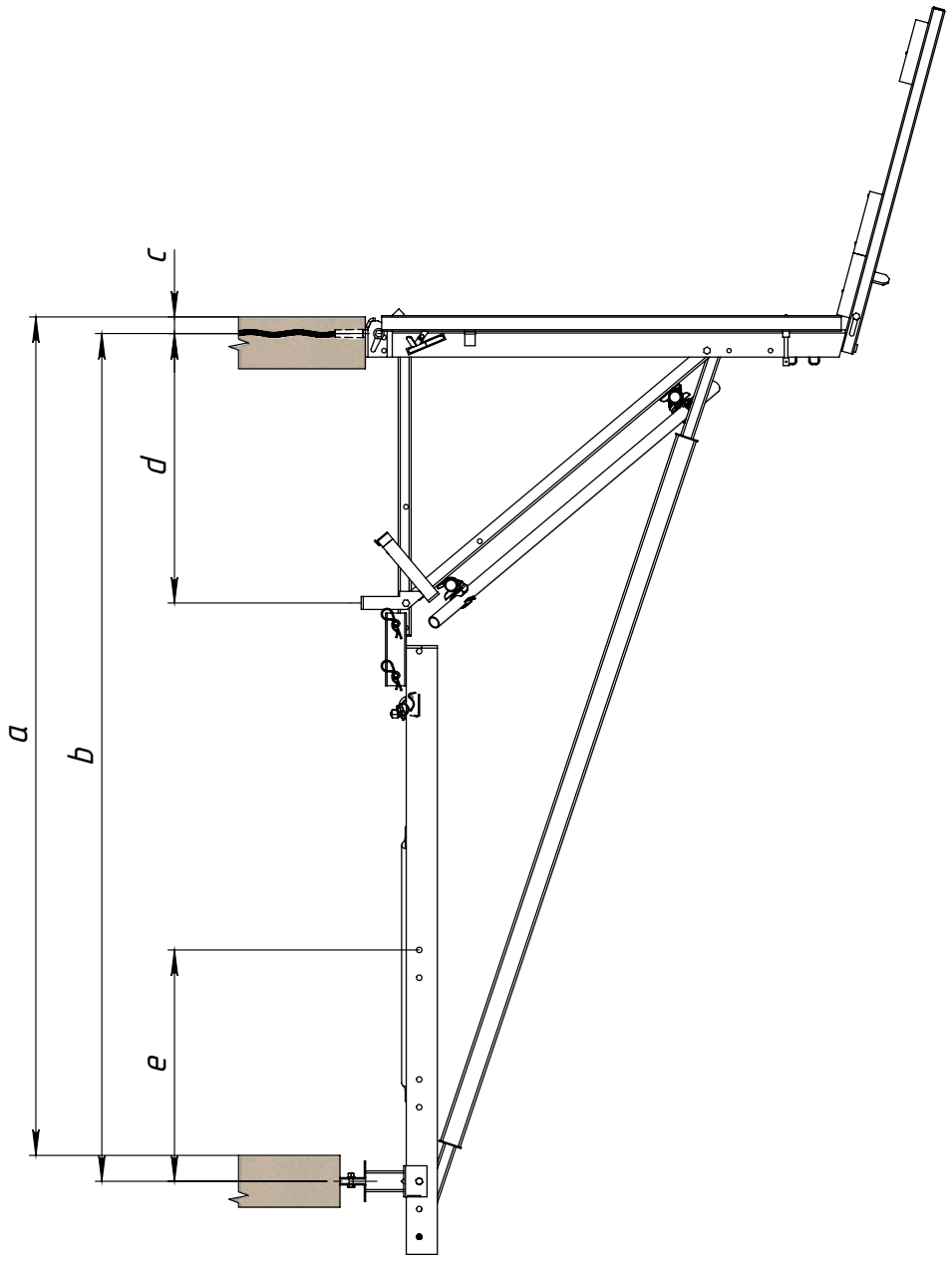
Support lengthening pieces are required in situations where the pressure point of the folding platform is not resting against part of the structure (as in e.g. skeleton-type construction, wall openings, etc.).

LENGTHENING PIECE WITH SUPPORT GIRDER AND STRUT

The support lengthening piece consists of:

Item	Name	Folding platform CWP 3.00m	Folding platform CWP 4.50m
A	Support girder CWP	2	3
B	Bearing profile CWP	2	3
C	Screw-on coupler 48mm 30	2	3
D	Horizontal strut 1.35m	1	2
E	Horizontal brace 175	1	2
F	Framed tube 48mm 2.00m	1	--
G	Framed tube 48mm 3.00m	--	1
H	Strut CWP	2	3



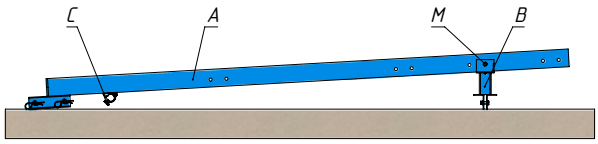


a ... Possible storey heights 2.12 to 3.34m
b ... 3.33m
c ... 64mm
d ... 1.07m
e ... Hole-grid 120x100mm = 1.20m

Assembly instructions

· place the support girder on level ground. Fasten the bearing profile onto the support girder in the desired position (will depend on the storey height), using a connecting pin D16/112, and secure with a spring cotter for connecting pin.

· mount the screw-on coupler 48mm 30 in the top hole on the support girder.



(A) Support girder CWP

(B) Bearing profile CWP

(C) Screw-on coupler 48mm 30

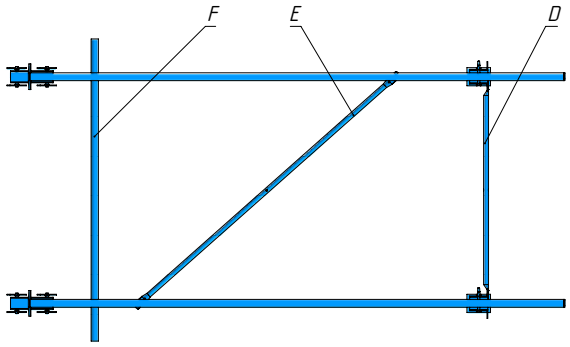
(M) Connecting pin D16/112

· place the 2nd support girder with assembled elements as described above on the floor beside the 1st. Centre-to-centre distance: 1.50 m. On 4.50m wide platforms, a 3rd support girder may also be needed.

· fasten the horizontal strut 1.35m to the bearing profile with M16x45 hexagon bolts.

· mount the horizontal brace 175 to provide diagonal bracing, bolting it on with M16x45 hexagon bolts.

· mount a framed tube 48mm into the screw-on couplers 48mm 30, to provide horizontal bracing.

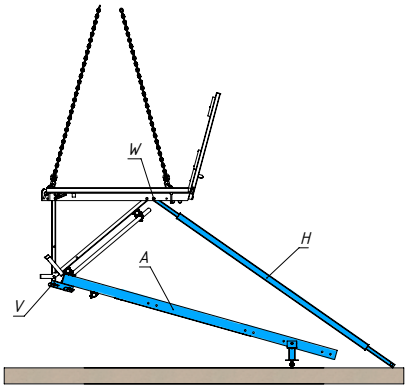


(D) Horizontal strut 1.35m

(E) Horizontal brace 175

(F) Framed tube 48mm

· using connecting pin D16/112, insert the support girder into the bottom borehole on the folding bracket and strut into the top borehole,secure them with spring cotter for connecting pin.



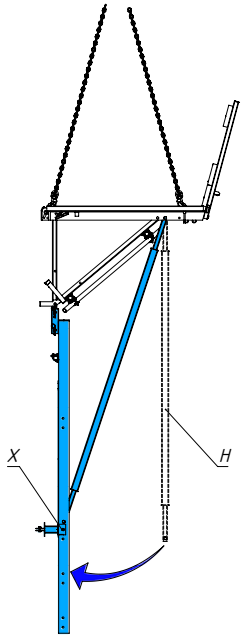
(A) Support girder CWP

(H) Strut CWP

(V) Bottom borehole on the folding bracket CWP

(W) Top borehole on the folding bracket CWP

· gradually raise the folding platform: the support girder and strut automatically pivot downwards.
· pivot the strut forward into the support girder, fix it in place in the borehole on support girder with connecting pin D16/112, and secure with a spring cotter for connecting pin.



(H) Strut CWP

(X) Borehole on support girder CWP

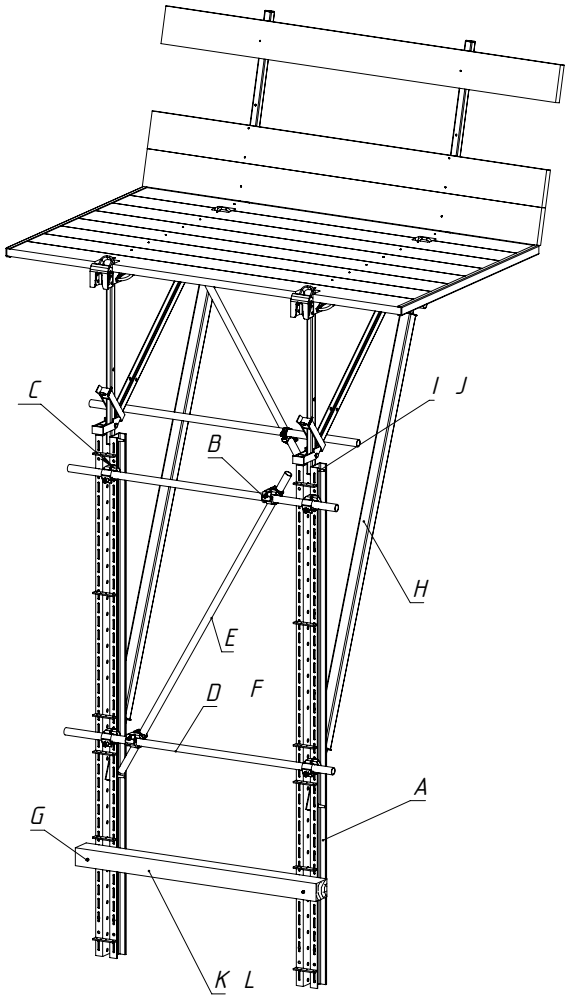
The folding platform CWP with support lengthening piece is now ready for use.

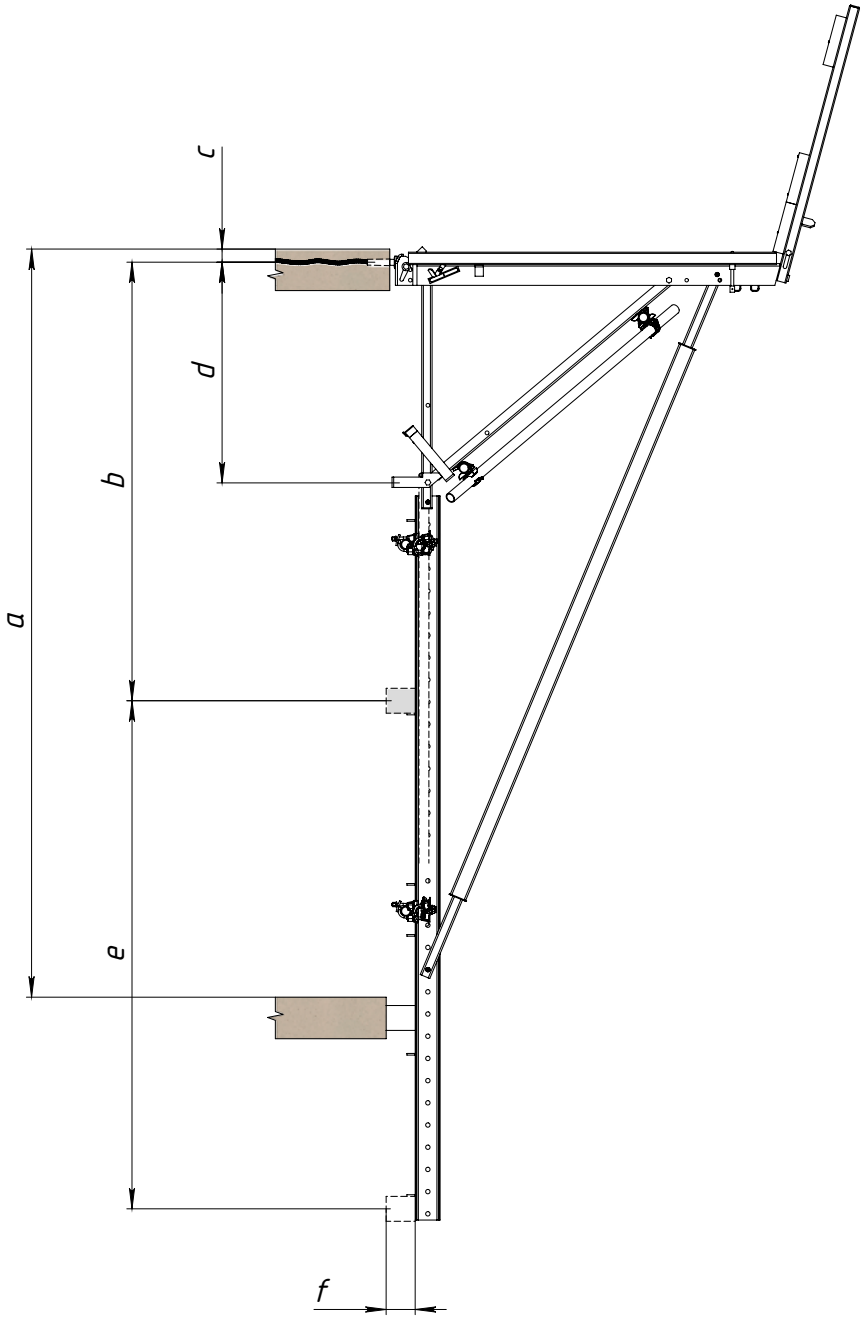
Dismantling
To dismantle, perform the above steps in reverse order.

LENGTHENING PIECE WITH WALING AND STRUT

The support lengthening piece consists of:

Item	Name	Folding platform CWP 3.00m	Folding platform CWP 4.50m
A	Waling 10 or waling 12 (additional holes along waling may be needed	2	3
B	Swivel coupler 48x48mm	2	4
C	Screw-on coupler 48mm 30	4	6
D	Framed tube 48mm 2.00m	2	--
E	Framed tube 48mm 2.50m	1	2
F	Framed tube 48mm 3.50m	--	2
G	Square bolt M10x160 with nut (site provided)	2	3
H	Strut CWP	2	3
I	Connecting pin D16/112	2	3
J	Spring cotter for Connecting pin D16/112	2	3
K	Squared timber 120x140mm 1.80m	1	--
L	Squared timber 120x140mm 3.30m	--	1



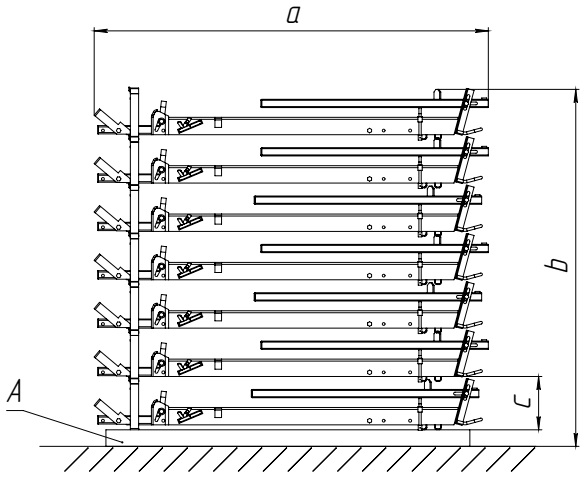


a ... Possible storey heights 2.12 to 4.57 m
b ... min. 2.11m
c ... 64mm
d ... 1.07m
e ... max. permitted pressure-point range 2.45m
f ... 130-140mm

TRANSPORTING, STACKING AND STORING

The folding platforms are pre-assembled once, can be stacked on each other for easy shifting and storage – no risk of slippage.

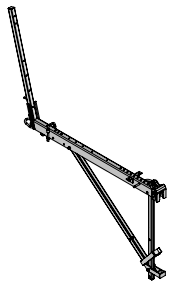
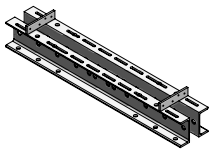
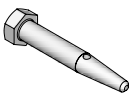
Stack of 7 assembled folding platforms:

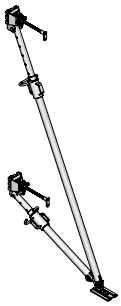
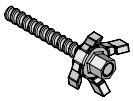
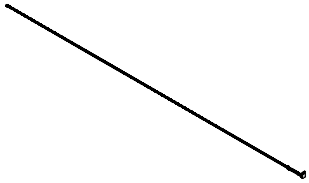
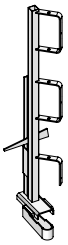
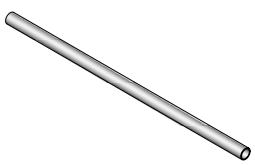


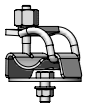
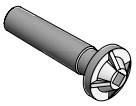
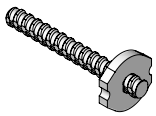
(A) 10cm high squared timbers

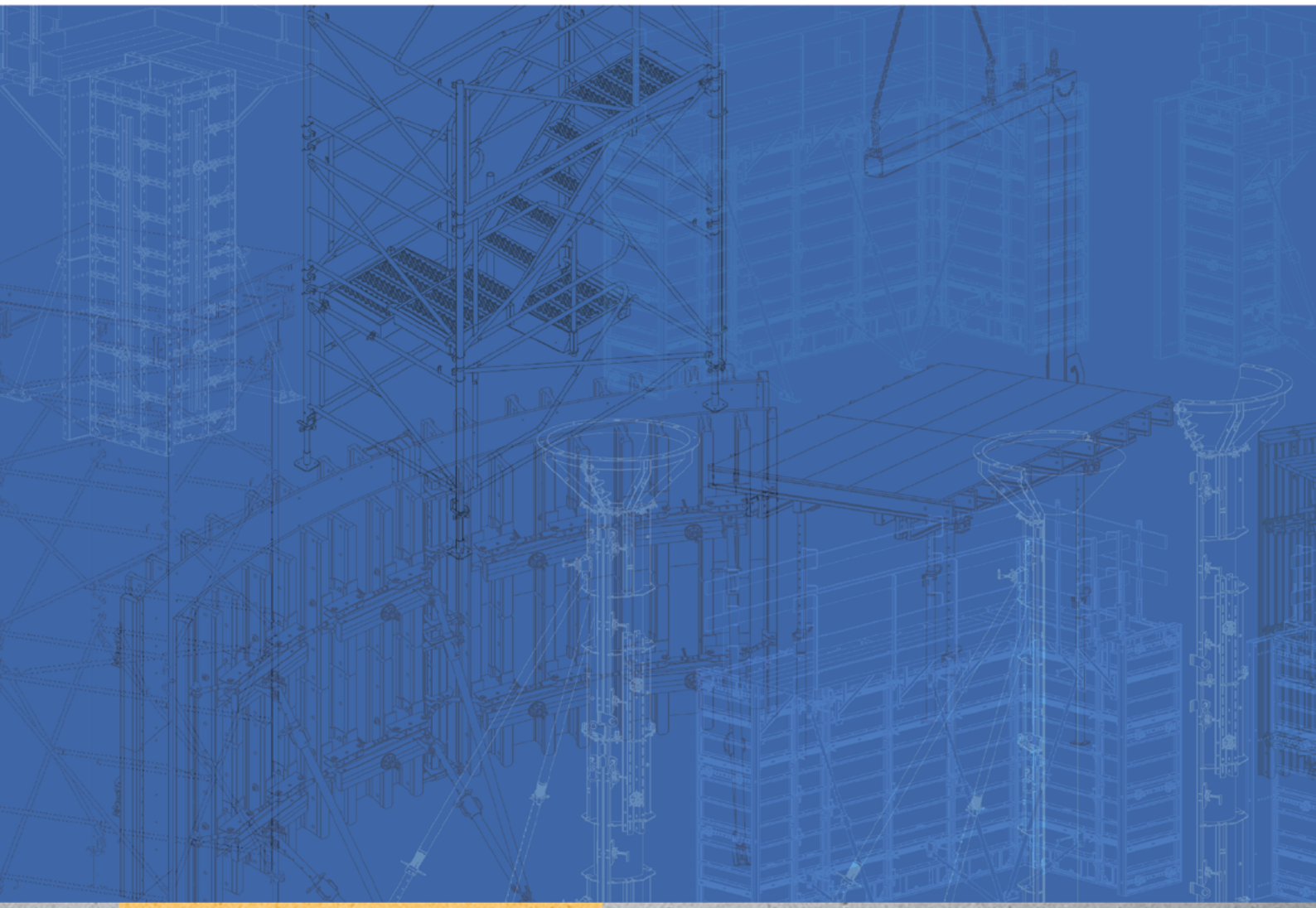
a ... 2.34m
b ... 2.21m
c ... 3.23m

COMPONENT OVERVIEW

Item		[kg]	Article nº
Folding bracket CWP 		65,40	73 100 200
Suspended platform CWP 	3.30m 4.30m	55,40 69,47	73 102 000 73 104 000
Waling 12 	3.00m 3.50m 4.00m	63,53 75,33 85,47	21 300 000 21 350 000 21 400 000
Connecting pin 		0,39	23 400 100
Spring cotter 		0,05	23 402 100

Item		[kg]	Article nº
Supporting strut 340 		37,38	11 928 100
Star screw CWP 		0,68	73 200 100
Wind bracing 	7.00m	17,47	73 114 100
Guide rail clamp 		12,40	52 400 100
Framed tube 48 mm 	1.00m 1.50m 2.00m 2.50m 3.00m	4,60 6,91 9,21 11,51 13,81	94 100 200 94 150 200 94 200 200 94 250 200 94 300 200

Item		[kg]	Article nº
Swivel coupler 	48x48mm	1,22	95 106 100
Screw-on coupler 48 mm 	30mm 70mm 100mm	1,21 1,26 1,33	95 100 100 95 102 100 95 104 100
Fixing plate 	15	0,18	95 400 100
Canrilever positioning cone 	15	0,53	95 402 100
Suspension cone 	15	0,95	95 404 100
Stop anchor 	15.0mm	0,43	99 200 100
Sealing sleeve 	15	0,008	99 104 400



VARIANT

Ukraine, 61070, Kharkiv,
st. Shevchenko, 325

Tel. +38 (057) 756-37-77
E-mail: international@variant-factory.eu