JeanFour
Coffrages - Formworks

MODALU-MODACIER

MODULAR FORMWORK

MANUAL TECHNICAL & SAFETY

2026

Contents

Field of application

The purpose of this manual is to define, install and use modular formwork panels.

It consists of an assembly of sub-units of various categories (forming faces, connections, safety, propping, etc.).

For what use:
This formwork set is used to build straight or faceted concrete walls, ground beams, etc.

For whom:
Assembly and use of this equipment require qualified, competent personnel accustomed to this kind of work, equipped with the appropriate tools and personal protective equipment such as: helmets, safety footwear, gloves, etc.

Where and how:
The location of such an assembly is determined by the nature of the ground and the weather conditions. If the ground is too soft to carry the vertical loads, i.e. the self-weight of the panels, propping, etc., or if the environment is unfavourable (high wind, heavy snow, very low temperatures, etc.), the modular formwork panels cannot be assembled.

The permissible concrete pressure is 60 kN/m² to standard DIN 18218 (2010-01) for the standard Modalu – Modacier range.

For any further information, please contact the technical department of JEAN FOUR – EUROBRESS SAS – contact@jfed.fr

Field of application

This guide is designed to help you assemble your modular formwork panels step by step, as easily as possible.

Before starting assembly or using this equipment, everyone must read the instructions in this manual, and in particular the warnings marked with the symbol:

The modular formwork panels must be assembled by qualified, competent personnel accustomed to this kind of work.

A minimum of two people is required to carry out this assembly.

Everyone taking part in assembling the modular formwork panels must have read the panel-layout drawings provided.

Tools required: spirit level, hammer, 30 mm spanners, etc.

Setting-out and safety instructions

Field of use:

⚠ WARNING – SAFETY FIRST. This equipment must be used only by trained, authorised and equipped personnel. Failure to follow the assembly, handling or use instructions can cause serious risks to the safety of people and of the site.

Unloading and storage area:

Unloading operations are carried out under the supervision of an authorised person.
Provide an area for unloading and storing the equipment, close to the work area.
When using a crane, avoid travelling over work areas.
No one must stand under moving loads during unloading or loading.

Recommendations when using lifting equipment:

Any lifting operation using a crane is carried out in the presence of a banksman.
Forklifts may be used only by people holding a driving authorisation.

Inspection and maintenance of the equipment:

Every part must be inspected before each return to service. Parts that have suffered damage such as permanent deformation, drilled holes, notches, oxidation, etc. must be scrapped and replaced.
Between pours, the formwork panels must be oiled on the forming face and the four edges to prevent soiling by laitance.
Before each pour, make sure plugs are fitted in unused tie-rod holes. Insert the plugs into the panels with a mallet (not a hammer, to avoid breakage).

Assembly and use precautions:

The hand-set modular formwork may be supplied with stabilising props; these must be anchored to the ground or to concrete blocks — see the recommendations on the attached sections.

Make sure the pouring pressures in use do not exceed the formwork's permissible pressure of 60 kN/m².

Check that the tie components used (tie rods and nuts) withstand loads of 3.75 tonnes per tie rod.

Do not approach live electrical cables.

Use reliable, appropriate lifting gear fitted with safety hooks to ensure secure attachment.

Load capacities: 

Working brackets, in pairs spaced at most 2 metres apart, can carry 2 people and their tools, i.e. 200 kg. The customer must ensure the strength of the decking they use.

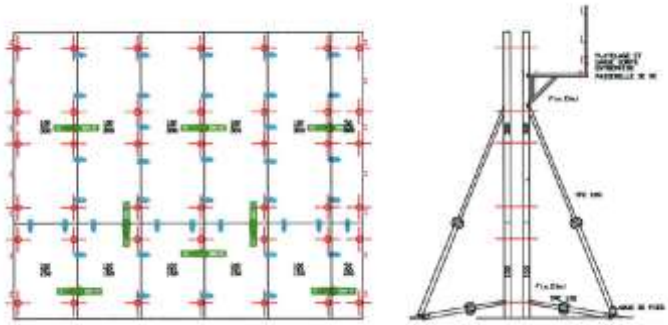
Bad weather: 

Assembling the modular formwork becomes dangerous and may justify stopping the site in weather conditions such as:

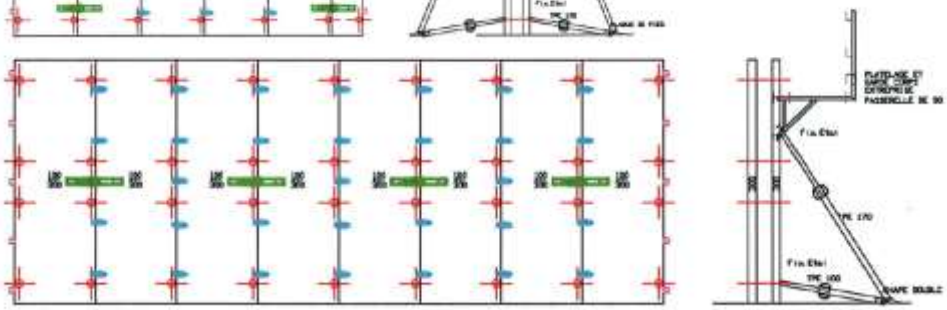
Frost / Heavy rain / Snow / Black ice
Wind (above 85 km/h)

When the equipment is not in use or in extreme weather, the panels must be laid flat on timbers in a storage area provided for the purpose.

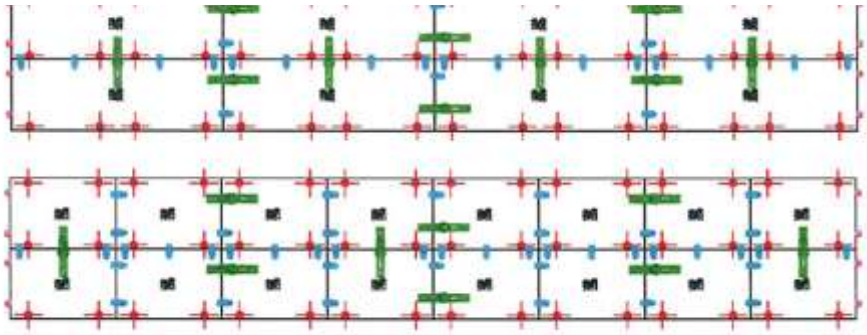
Setting-out and safety instructions

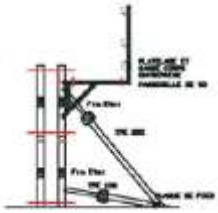


4.5 m height configuration:
3m + 1,5m

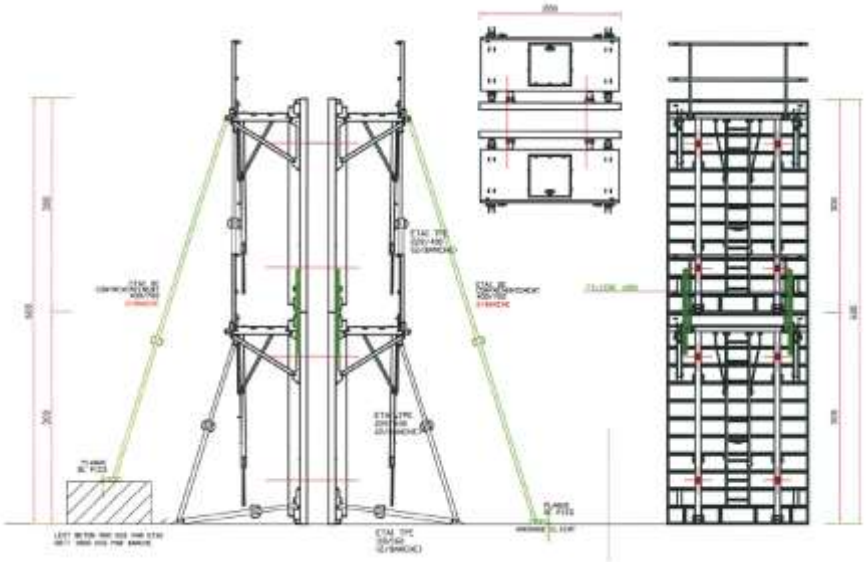


3 m height configuration





2 m height configuration:
1m + 1m



6 m height configuration:
3m + 3m

Use 4 clamps over the 3 m height / 3 clamps over the 2 m width + 2 walings.

DO NOT LEAVE ANY PLAY IN YOUR STABILISING PROPS AFTER ADJUSTMENT.

Parts list

Standard aluminium panel

Description	KG	KG CO2	Part no.
Modalu panel 0200x1500	9,9	11,6	101065
Modalu panel 0200x3000	19,5	22,8	104590
Modalu panel 0250x1000	7,7	9	100296
Modalu panel 0250x1500	11,2	13	100297
Modalu panel 0250x2000	14,8	17,3	100298
Modalu panel 0250x2700	19,1	22,3	104935
Modalu panel 0250x3000	22	25,7	100299
Modalu panel 0300x2700	20,1	23,5	104647
Modalu panel 0450x2700	27	31,6	104694
Modalu panel 0500x1000	12,8	15	100300
Modalu panel 0500x1500	18,4	21,5	100301
Modalu panel 0500x2000	24	28	100302
Modalu panel 0500x2700	30,5	35,7	104644
Modalu panel 0500x3000	35,2	41,2	100303
Modalu panel 0600x2700	33,2	28,4	104641
Modalu panel 0750x1000	17,3	14,8	100304
Modalu panel 0750x1500	24,8	21,2	100305
Modalu panel 0750x2000	32,5	38	100306
Modalu panel 0750x2700	41	48	104726
Modalu panel 0750x3000	47,7	55,9	100307
Modalu panel 0900x1500	30,3	35,5	105242
Modalu panel 0900x2700	48,2	56,4	104611
Modalu panel 1000x1000	22,4	26,2	100308
Modalu panel 1000x1500	32	37,4	100309
Modalu panel 1000x2000	41,6	48,7	100310
Modalu panel 1000x3000	60,8	71	100311
Modalu GF/V1 panel 2000x3000 Modalu GF/V2 panel 2000x3000	235 310,9	275	207676 700636
Modalu GF panel 2000x3000 with safety set V1	390	704,8	208413
Modalu GF panel 2000x3000 with safety set V2	486,1	-	700495

Image

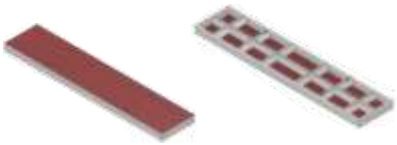
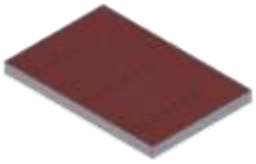
Other sizes available on request!

Parts list

Light aluminium panel (export)

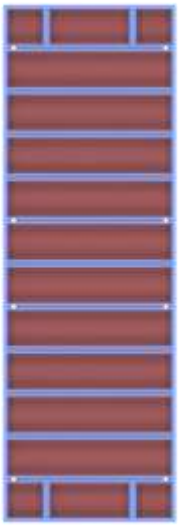
Description	KG	KG CO2	Part no.	Image
Modalu light panel 0250x1500	10,7	12,5	700659	
Modalu light panel 0250x3000	21,1	24,7	700662	
Modalu light panel 0500x1500	17,6	20,6	700666	
Modalu light panel 0500x3000	33,5	39,2	700669	
Modalu light panel 0750x1500	23,3	27,3	700672	
Modalu light panel 0750x3000	44,4	52	700675	

Special aluminium panel

Description	KG	KG CO2	Part no.	Image
Modalu splay panel 1000x1500	49	57,3	212428	
Modalu splay panel 1000x0500	16	18,7	213179	
Modalu extension panel 0500x2400 MS-compatible	67	78,4	212394	
Multi-hole panel 0750x1500	26	30,4	211393	
Multi-hole panel 1000x1500	34	39,8	212112	
Multi-hole panel 0750x3000	50	58,5	212116	
Multi-hole panel 1000x3000	65	76	212120	
Skimmer panel 1000x0850	19,1	22,3	210948	
Skimmer panel 1000x0650	15,8	18,5	210949	

Parts list

Standard steel panel

Description	KG	KG CO2	Part no.	Image
Modacier panel 0200x1500	18,9	45,6	207094	
Modacier panel 0200x3000	37	89	207156	
Modacier panel 0250x1500	20,9	50,4	207095	
Modacier panel 0250x3000	25,4	61,2	207157	
Modacier panel 0500x1500	32,5	78,3	206495	
Modacier panel 0500x3000	61,6	148,5	206491	
Modacier panel 0750x1500	38,4	92,5	207100	
Modacier panel 0750x3000	76,1	183,4	207162	
Modacier panel 1000x1500	54,2	130,6	205201	
Modacier panel 1000x3000	101,5	244,6	206487	
Modacier GF panel 2000x3000 V1 Modacier GF panel 2000x3000 V2	302 382,5	727,8	207688 700637	
Modacier GF panel 2000x3000 with safety set V1 Modacier GF panel 2000x3000 with safety set V2	410 554,7	1157,6	207688 700602	

Light steel panel (export)

Description	KG	KG CO2	Part no.	Image
Modacier light panel 0250x1500	19,5	46,8	700677	
Modacier light panel 0250x3000	38	92,2	700679	
Modacier light panel 0500x1500	30,1	72,3	700682	
Modacier light panel 0500x3000	56	134,5	700684	
Modacier light panel 0750x1500	38,4	92	700686	
Modacier light panel 0750x3000	71,5	171,5	700688	

Corner

Description	KG	KG CO2	Part no.	Image
Internal corner panel 300x300x3000	36,8	43,1	104288	
Internal corner panel 300x300x2700	31,3	36,6	104672	
Internal corner panel 300x300x1500	18,8	22	101077	
Stripping corner H1500 ALU	86,8	9,11	801029	
Stripping corner H3000 ALU	175	-	800978	

Other sizes available on request!

Parts list

Props and accessories

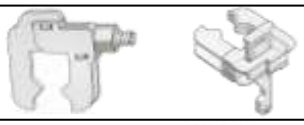
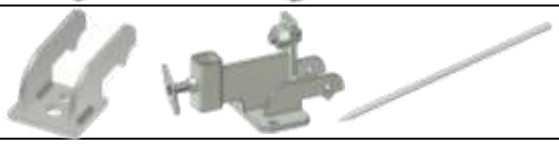
Description	KG	KG CO2	Part no.	Image
JF L2 prop 285-505 with reducer	19,5	88,75		
JF L2 prop 235-405	17,5	81,59		
JF L1 prop 175-305	8,5	39,80		
JF L1 prop 110-175	6,0	27,86		
RAS-TP prop 400/705 + reducer	48	191,96	102080	
Prop reduction assembly	3,2	12,74	101341	
RAS-TP prop 400/705	45	179,10	105445	
Push-pull prop 1800-2840	19	-	102780	
Push-pull prop 6-10	100	398	103034	
Bracing prop 180-300	15,1	-	101333	
Fixed raker prop Ø40/49 lg974mm	3,0	-	104976	
Fixed raker prop Ø40/49 lg1195mm	4,3	-	101605	
5 m extension for 6-10 m prop	65,3	260,29	101749	
Outer tube S/A Ø101.6x4x5600 (prop 6-10)	53,9	214,52	103038	
Outer tube S/A Ø57x1650	7,3	-	102783	
Inner tube S/A Ø48x3x650, prop 1800-2840	5	-	102784	
Inner tube S/A Ø48x3x1050, prop 1800-2840	6	-	102785	
Inner tube S/A Ø88.9x3x2900 RH, prop 6-10	18,8	-	102784	
Inner tube S/A Ø88.9x3x2900 LH, prop 6-10	18,8	74,82	103031	
Prop assembly lever 6-10	2,3	9,2	103048	
4-head spreader	3,9	15,6	101614	
Screw S/A Ø45 RH, prop 6-10 m	3,6	14,3	103032	
Screw S/A Ø45 LH, prop 6-10 m	3,6	14,3	103033	
Pin Ø 24 lg 160 mm	0,6	2,4	101751	
Pin Ø 16 lg 70 mm	0,1	0,4	102779	
Pin Ø24, length 163 mm, prop 6-10 m	0,6	2,4	103045	
Pin Ø14x85 bent 100°	0,2	0,8	100029	
Pin Ø14x70 PM bent 90°	0,2	0,8	100038	
Clip pin Ø4.5	0,01		103848	
Double-fork prop head, fitted lg 190	1,75	6,8	104907	
Fitted prop socket	2,5	6	209689	
Fitted base plate	4,0	15,1	102989	

Handling

Description	KG	KG CO2	Part no.	Image
Lifting eye A-CL-RES	3,4	13,53	204790	
Pallet ring A-CL	1,2	4,8	204937	
Crowbar socket	1,6	6,4	212794	
Removable galv.nised handle	1	3,98	800448	

Parts list

Panel assembly

Description	KG	KG CO2	Part no.	Image
Screw assembly clamp	1	3,98	208236	
Drive-in assembly clamp	1,2	3,98	207852	
Alignment clamp F0-0100, screw type	4,7	19,5	800879	
Corner packing clamp 0-0100, screw type	3,7	14,7	204518	
Offset clamp 0 to 6 cm	2,6	10,3	205136	
Corner offset clamp 0 to 20 cm	6	23,9	205144	
Floor-fixing clamp + SP corner	0,7	3,2	102633	
Double floor-fixing clamp	2,8	11,1	209262	
Solid steel stake Ø30x100 cm	5,3	21,1	205673	
1000 galv. waling (UPN 60)	10,7	42,6	104663	
2000 galv. waling (UPN 80)	30,6	121,8	700654	
3000 galv. waling (UPN 80)	45,5	181	700712	
Corner waling 300x300 galv.	4,7		701404	
Tie plate	0,9	3,6	101107	
Single-side tie plate	1,5	6	207596	
Single-side tie plate GF	2,5	10	209541	
Upper tie-rod plate	0,5	2	104721	
Foundation plate D23	0,75	-	701338	
Fixed ground-beam spacer(20cm)	12,214	48,6	211961	
Adjustable ground-beam spacer (16-30 cm)	15	59,82	103851	
Filler plate 0200x3000	33,4	88,2	104363	
Filler plate 0200x2700	30	79,2	104680	
Filler plate 0200x1500	16,7	44,1	102118	
Arteon wing nut 3LØ17 base 065	0,6	2,71	100117	
Arteon wing nut 3LØ23 base 078	1,05	4,38	103813	
Arteon wing nut 2L Ø17	0,3	1,35	104374	
Arteon wing nut 3LØ17 base 110	0,9	2,98	105155	
Arteon square locking nut Ø23	0,9	3,58	103764	
Arteon nut 6P Ø17x25 galvanised	0,1	0,44	100828	
Arteon T-head bolt Ø17x150	0,25	0,99	105245	
Arteon T-head bolt Ø17x250	0,4	1,59	105272	
Arteon T-head bolt Ø17x40	0,08	0,36	105246	
T-head bolt M16x40	0,1	0,4	200712	
T-head bolt M16x60	0,13	0,52	200713	
Plastic plug Ø26	0,01	0,02	105142	
Arteon tie rod Ø17 lg 0750 black	1,3	2,39	104275	
Arteon tie rod Ø17 lg 1000 black	1,7	3,18	103962	
Arteon tie rod Ø17 lg 1500 black	2,5	4,77	103937	
Arteon tie rod Ø17 lg 2000 black	3,4	-	104276	
Arteon tie rod Ø23 lg 1500 black	4,6	8,84	103932	
Arteon tie rod Ø23 lg 2000 black	6,1	11,93	104277	
Modacier base jack (with screw)	8,9	35,4	209145	

Parts list

Panel assembly

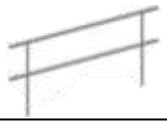
Description	KG	KG CO2	Part no.	Image
End rail 1000	13,2	52,5	104652	
End rail 1000 sp	25	99,5	212253	
Wall-stop clamp	0,8	3,2	212191	
SP MODALU SPACER-SET CLAMP	7,0	28,78	212247	

Safety

Description	KG	KG CO2	Part no.	Image
Working bracket with guardrail post	10,5	41,8	209212	
Guardrail post + Ø14 pin	2,9	11,5	104788	
Guardrail-post socket on panel	1,8	7,2	205181	
Locking guardrail post D25	3,8	11,78	701397	
Guardrail-post adapter D25	0,2	15,20	701390	
Aluminium decking 2000 mm	21	12,1	212150	
Aluminium decking 2000 hatch	21	12,1	212865	
Steel decking V2 2000 hatch	75	299	700328	
Steel decking hatch aluminium 2000	62	247	101426	
Aluminium ladder 2,25m	7	4	212869	
Ladder locking latch	0,2	0,8	212877	
Aluminium + steel ladder brace	2,6	6,6	212878	
Rear steel guardrail 2000 V1	19	76	101429	
Rear aluminium guardrail 2000mm	6,2	3,6	212149	
Steel access gate with fasteners	8	32	102202	
Aluminium access gate	3,7	2,1	212156	
Guardrail fixing	0,6	2,4	212845	
Complete 2000 V1 safety set	151	600	207877	
Complete V2 safety set	148	589	700347	
Aluminium walkway + bracket and guardrail post	62	105,5	212159	
Fixation platelage/console	0,1	0,4	212148	
Decking/post locking pin	0,3	1,2	212832	
Aluminium corner decking	8,5	4,9	212813	
Aluminium corner guardrail	4,9	2,8	212822	
Aluminium corner walkway + bracket and guardrail post	41	91,3	212829	
Aluminium safety set 1250 hatch/ladder for column	82	124,8	212971	
Safety support for column	18,5	73,6	212968	
Aluminium ladder brace for safety set	2,8	11,1	212878	
Aluminium guardrail 1200 for column	6,5	3,7	212981	
Aluminium guardrail 0765 for column	6	3,4	212983	
Aluminium guardrail 0805 for column	5,7	3,3	212982	
Aluminium guardrail 0675 for column	5,5	3,2	212984	

Parts list

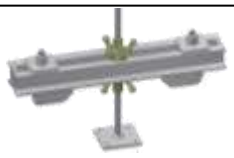
Safety

Description	KG	KG CO2	Part no.	Image
Aluminium decking hatch 1250 poteau	26	15	212964	
Ladder locking key + pin	0,25	1	212965	
Front steel guard 2000 mm	12	47,76	210935	

Corner or radius configuration

Description	KG	KG CO2	Part no.	Image
External corner 0x0x3000	26,1	69	104287	
External corner 0x0x2700	23,2	61,2	104679	
External corner 0x0x1500	13,1	34,6	101090	
Hinged corner 150x150x3000	62	163,7	104589	
Hinged corner 150x150x2700	55,2	145,7	104683	
Hinged corner 150x150x1500	31,2	82,4	103730	
Internal polygon 125x3000	21,6	57	100005	
Internal polygon 125x2700	19,4	51,2	104688	
Internal polygon 125x1500	10,7	28,2	100384	
U-channel (UPN 60, lg.0350mm)	1,9	7,6	203630	
External polygon 150x3000	22,9	60,5	100001	
External polygon 150x2700	20,6	54,4	104689	
External polygon 150x1500	11,3	29,8	100381	

Column configuration

Description	KG	KG CO2	Part no.	Image
Adjustable end rail 600	11,9	47,4	209750	
Adjustable stop-end + T-head bolt M16x40	2,2	6,8	212410	
Windmill-wing clamp 200 to 400	11,5	45,8	203942	
Windmill-wing clamp 200 to 650	17,6	70	204155	
Multi-hole clamp (without nut)	2,6	10,3	212177	

Parts list

Pad-footing configuration

Description	KG	KG CO2	Part no.	Image
Modalu bracket for pad footing 300x300	0,96	0,5	800614	

Pit or stairwell configuration

Description	KG	KG CO2	Part no.	Image
Stairwell spacer	12,1	48,2	208897	

Infinity-pool or single-sided configuration

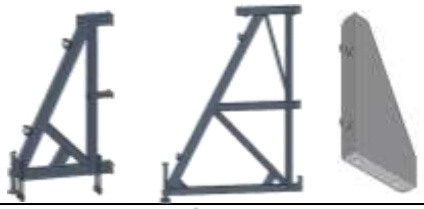
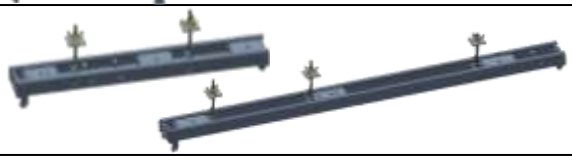
Description	KG	KG CO2	Part no.	Image
Infinity-pool chute lg 1000	10,5	27,7	800236	
Infinity-pool chute lg 0500	4,4	11,6	800238	
Jib arm, infinity pool and single-sided formwork	4,9	19,5	800233	
Infinity-pool corner chute	8,4	22,2	800252	

Slab formwork configuration

Description	KG	KG CO2	Part no.	Image
Telescopic prop pole	2,8	7,7	800309	
Slab head	1,5	6	800315	
Wall fixing rail	5	20	800322	
Aluminium make-up profile 500 mm	0,9	0,5	800334	
Slab-edge profile with guardrail-post socket 500 mm	1,6	0,9	800338	
Slab-edge clamp, fitted	7,7		700049	
Lifting eye	2,5	10	800347	

Parts list

Trestle configuration

Description	KG	KG CO2	Part no.	Image
Extension trestle 1390 single-sided Base trestle 2450 single-sided Ground-beam trestle 500x250	53,6 120 4,3	141,5 317 17,11	208792 208786 700730	
1500 SP waling rail, trestle support 3000 SP waling rail, trestle support	39,1 65,1	103,2 172	208769 204360	
Gusset-waling set for trestle 2m Waling for trestle 2.00ht Waling for trestle 1.00ht Fitted waling joining piece 1m/2m	92 30 15,1 4,1	243 79,4 39,9 10,8	209977 209974 213289 213330	

Tunnel configuration

Description	KG	KG CO2	Part no.	Image
UPN080 waling set (3000x3000 h) SP Modalu culvert formwork	229	200,6	213213	

Transport

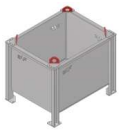
Description	KG	KG CO2	Part no.	Image
Aluminium panel container 1000x1500 Aluminium panel container 1000x3000	44,7 54	177,9 214,9	210924 210918	
Transport heel GF-Modacier V1	4,2	16,7	209007	
Comegal container 700x1545x475 Container 800x1000x800	79 80	314,4 318,4	200680 213234	

Parts list

Precast

Description	KG	KG CO2	Part no.	Image
MODALU PRECAST PANEL 1000X2500 ADJUSTABLE	314,1	335,71	700899	
PRECAST BEAM STIRRUP	47,3	-	700747	

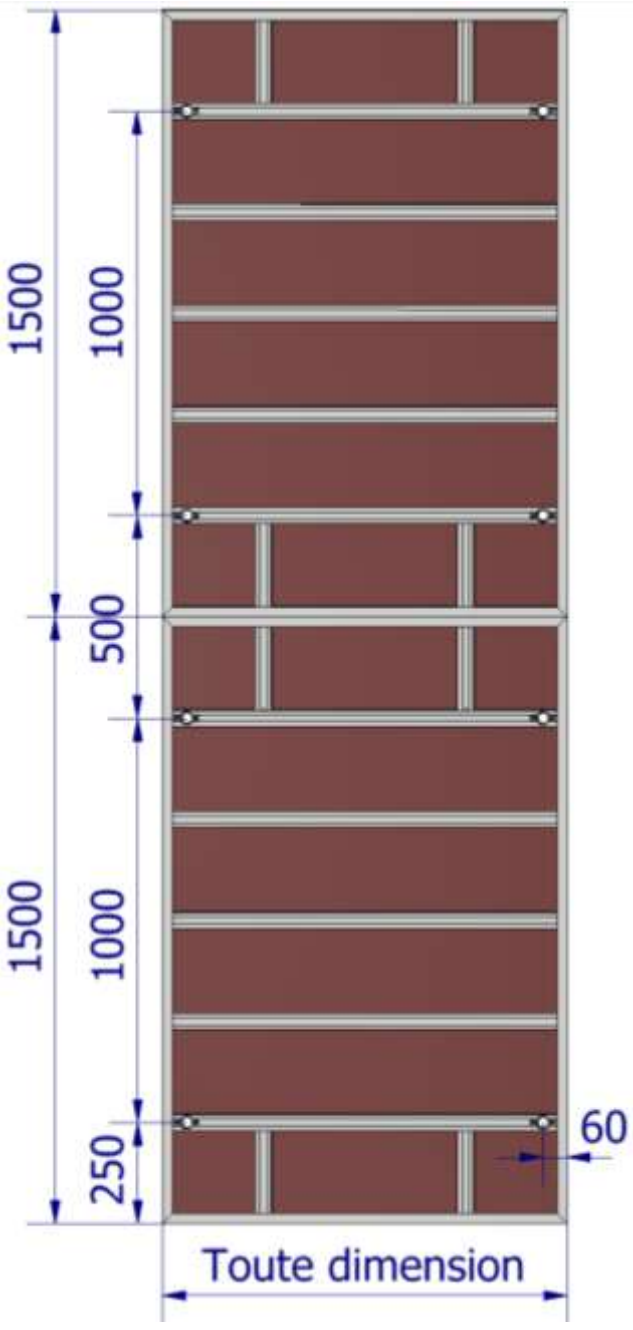
Container

Description	KG	KG CO2	Part no.	Image
COMEGAL container 800x1000x690 (D. INT.) 1050x1230x890 (D. EXT.) open on 4 sides, for props	64,8	258,06	213120-E	
COMEGAL container 700x1545x475 (D. INT.) 800x1665x694 (D. EXT.) closed on 4 sides	82,3	317,6	200680	
COMEGAL container 700x880x670 (D. INT.) 800x1000x800 (D. EXT.) closed on 4 sides	80,3	322,38	213234	
COMEGAL container 700x880x670 (D. INT.) 800x1000x800 (D. EXT.) ouvert 2 faces	67,3	268,33	211324	
Accessory box for modular panel	13,6	54,17	304291	

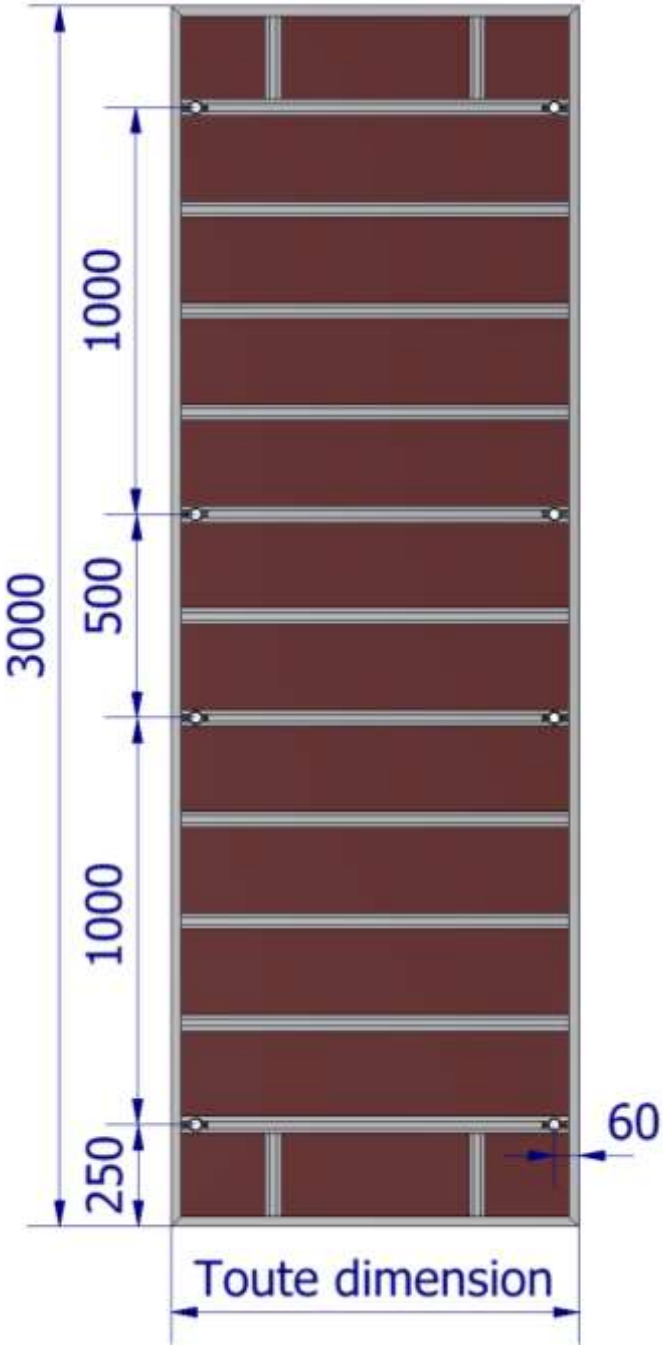
Straight panel

Dimensions

1500 panels



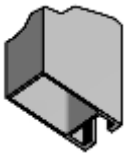
3000 panels



Profile details

(Aluminium 6005 T6)

external

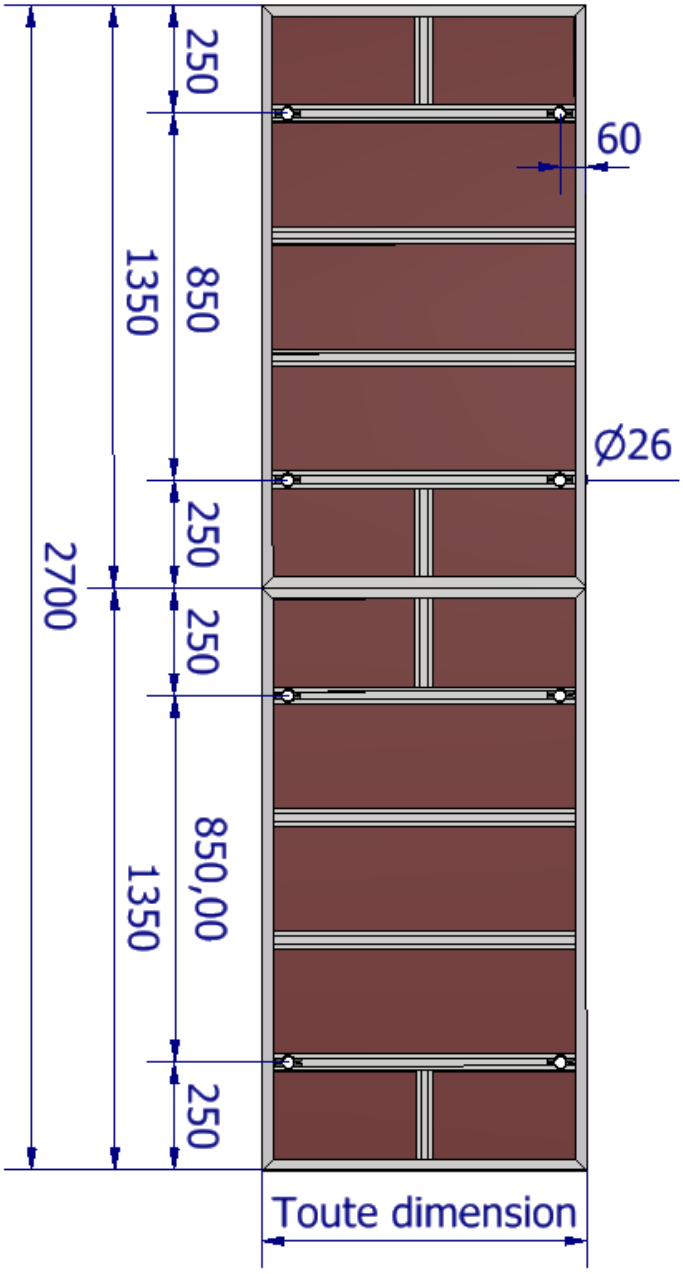


internal

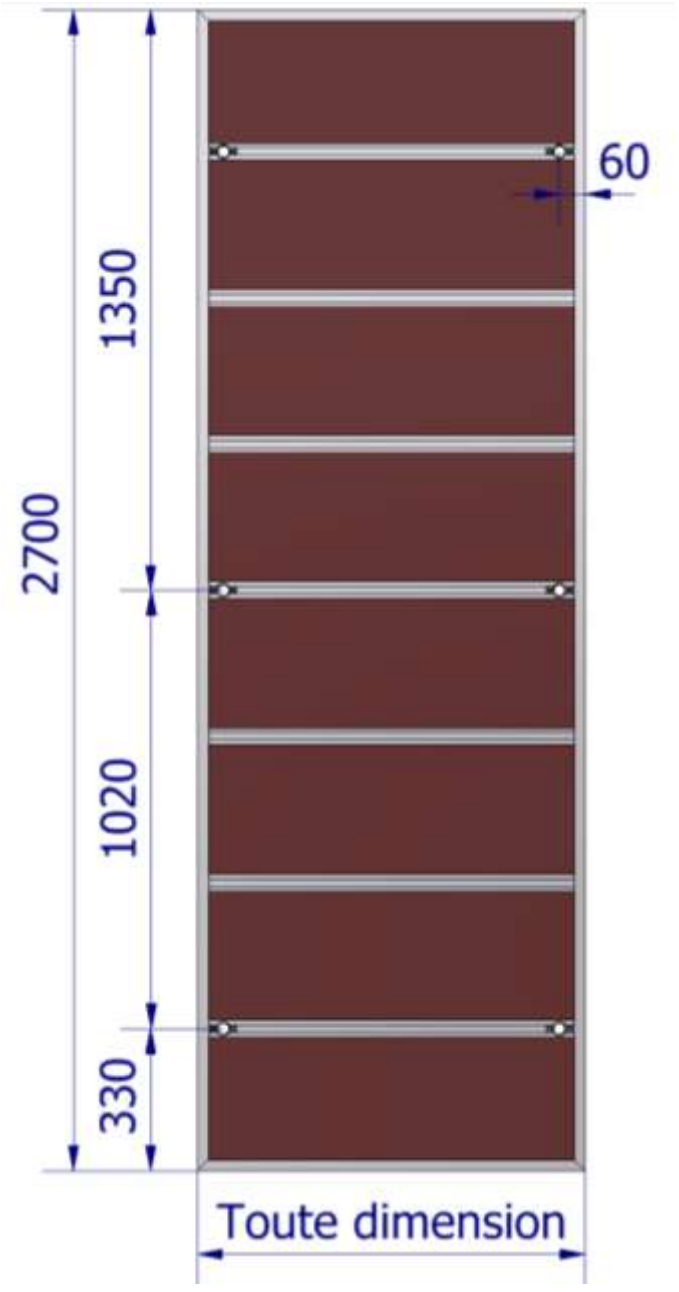
Straight panel

Dimensions

1350 panels



2700 panels

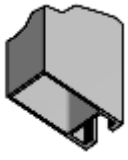


Profile details

(Aluminium 6005 T6)

external

internal

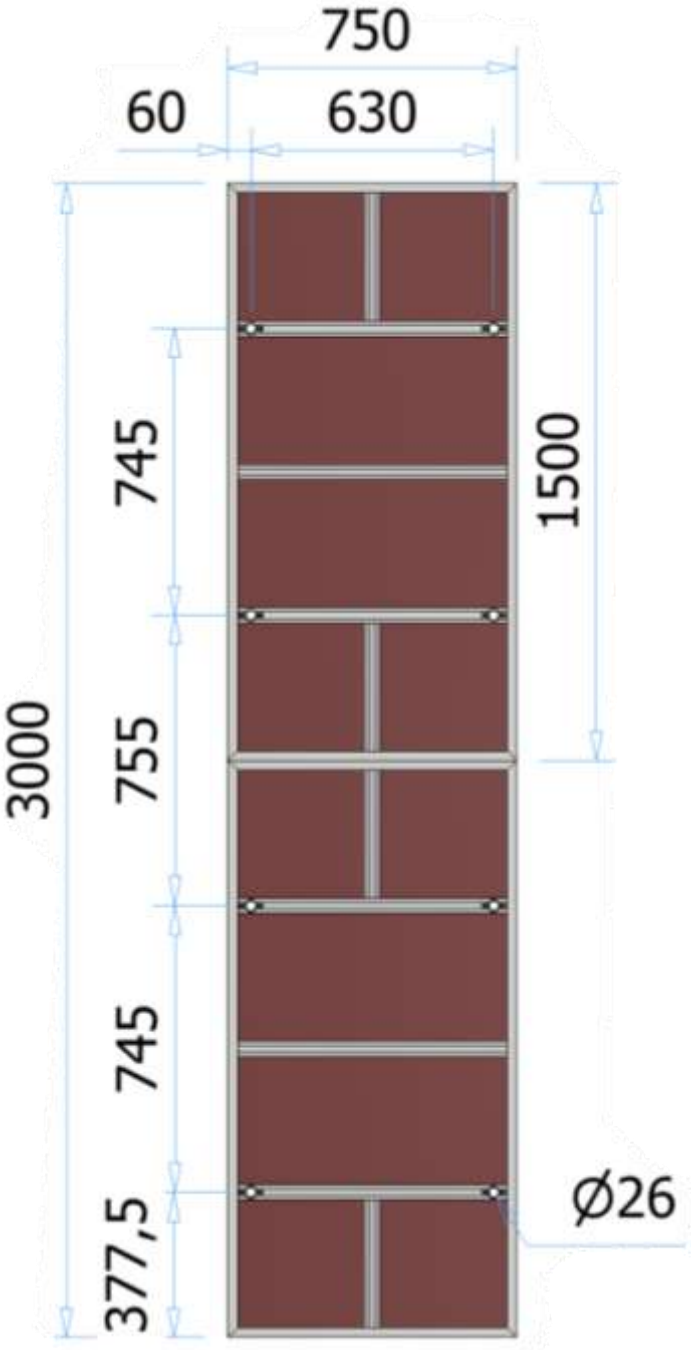


Straight panel

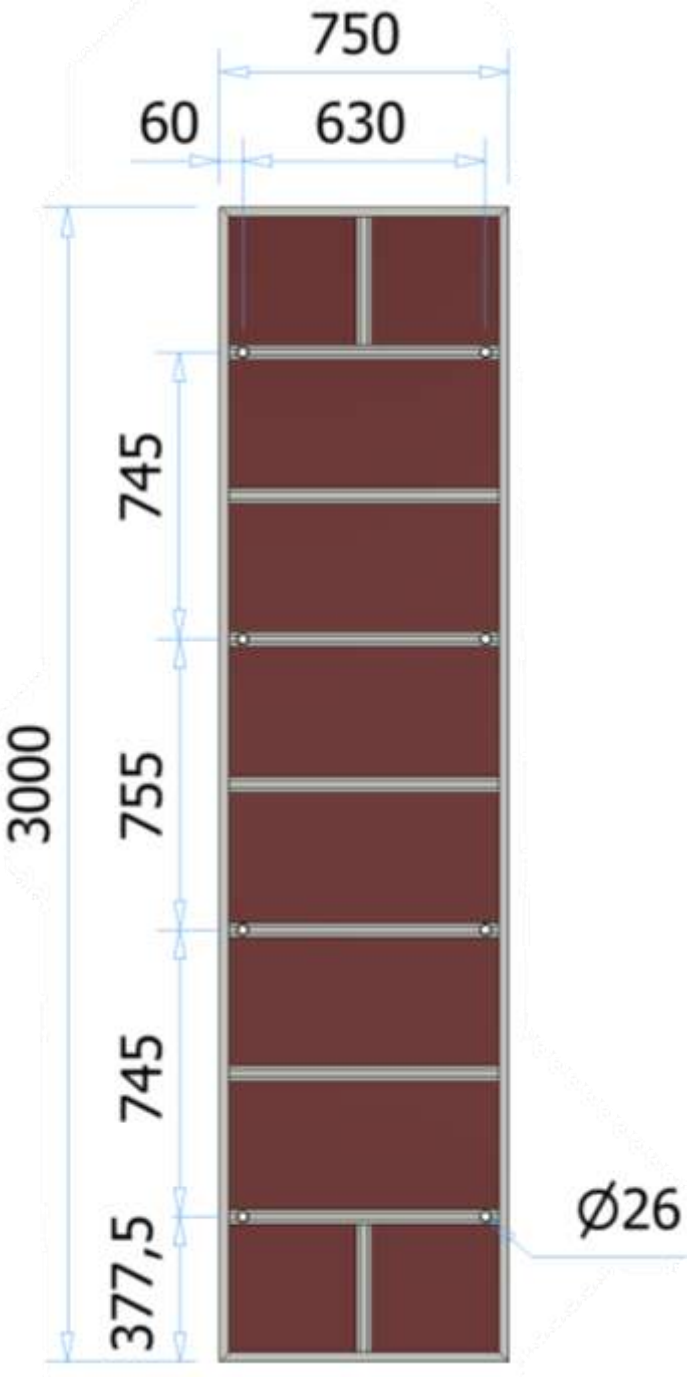
Dimensions

Aluminium or steel frame
Available widths: 250/500/750

Light 1500 panels



Light 3000 panels

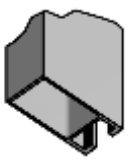


Profile details

(Aluminium 6005 T6)

external

internal

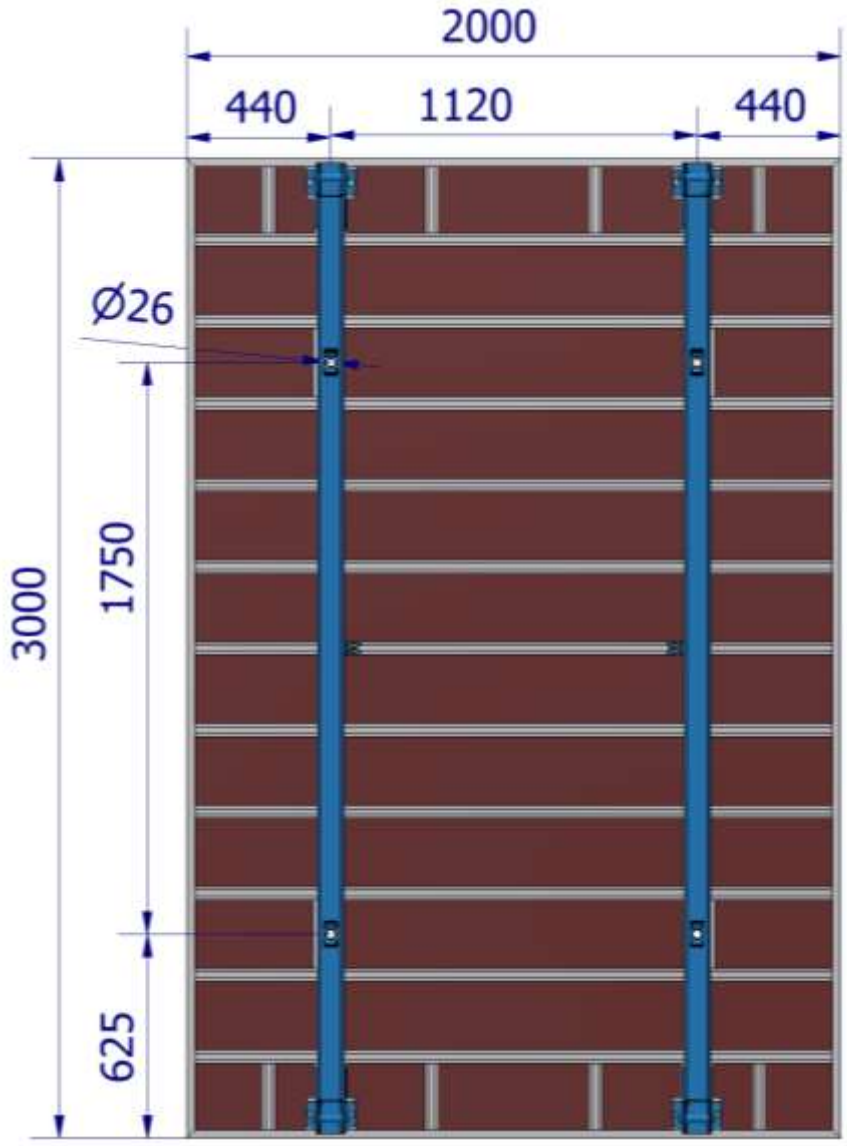


Straight panel

Dimensions

GF V1 2000x3000 panels

Compatible with Ø23 mm tie rods for greater strength

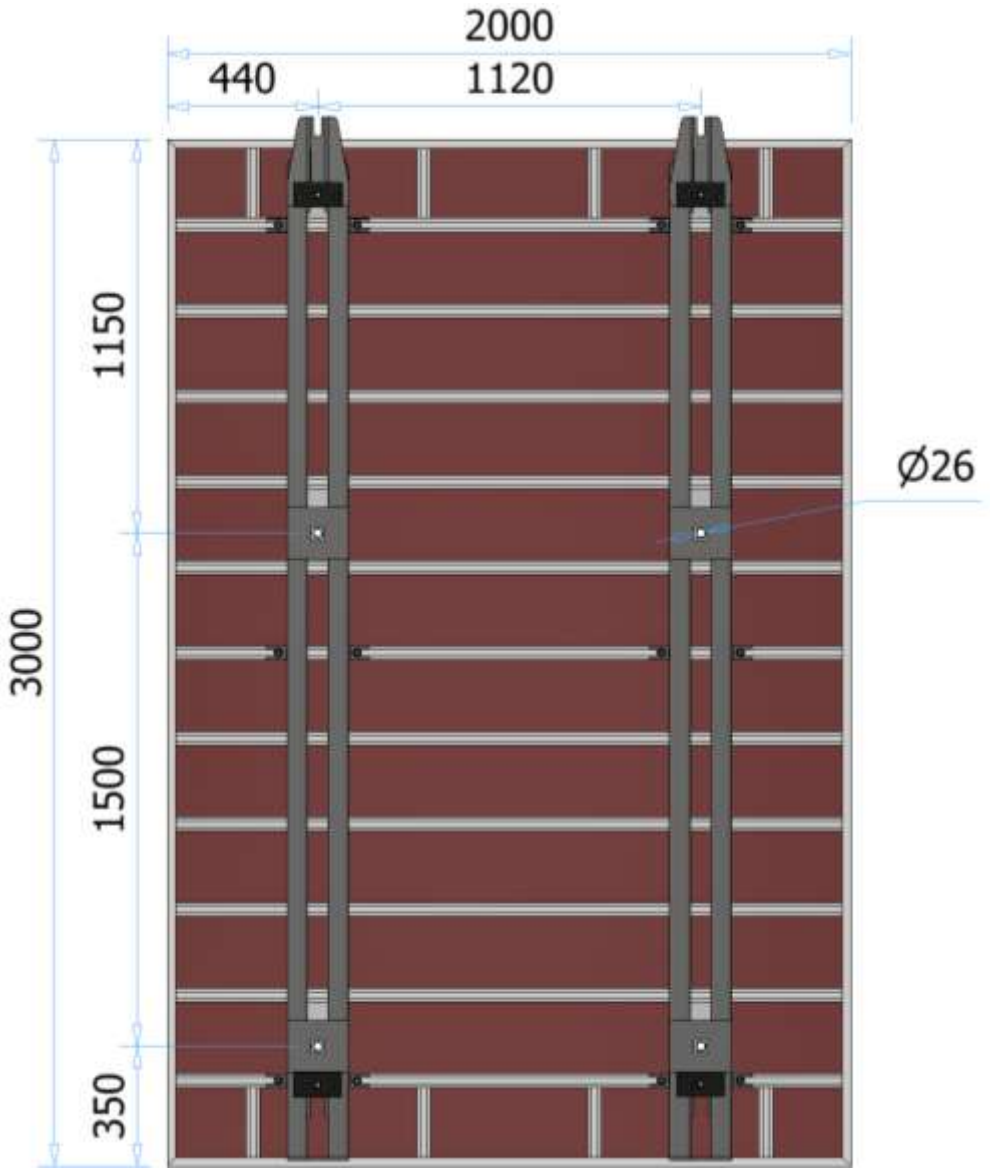


GF beam

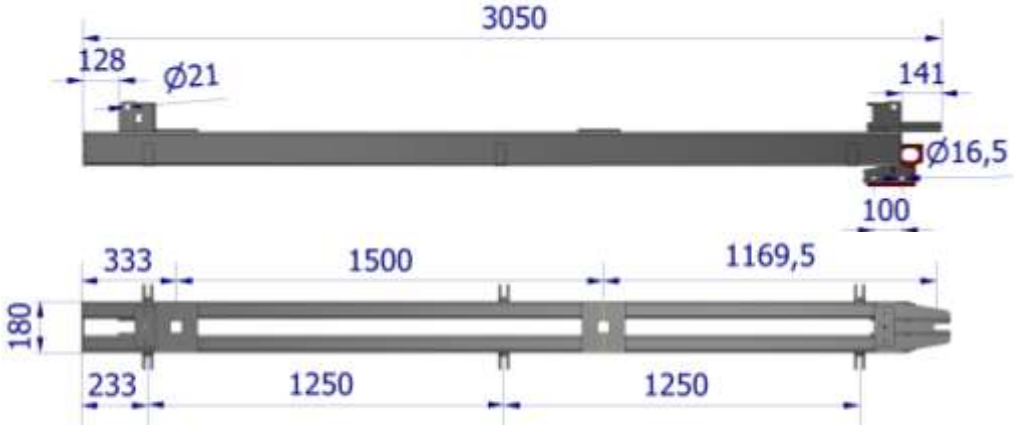
Straight panel

Dimensions

GF V2 2000x3000 panels



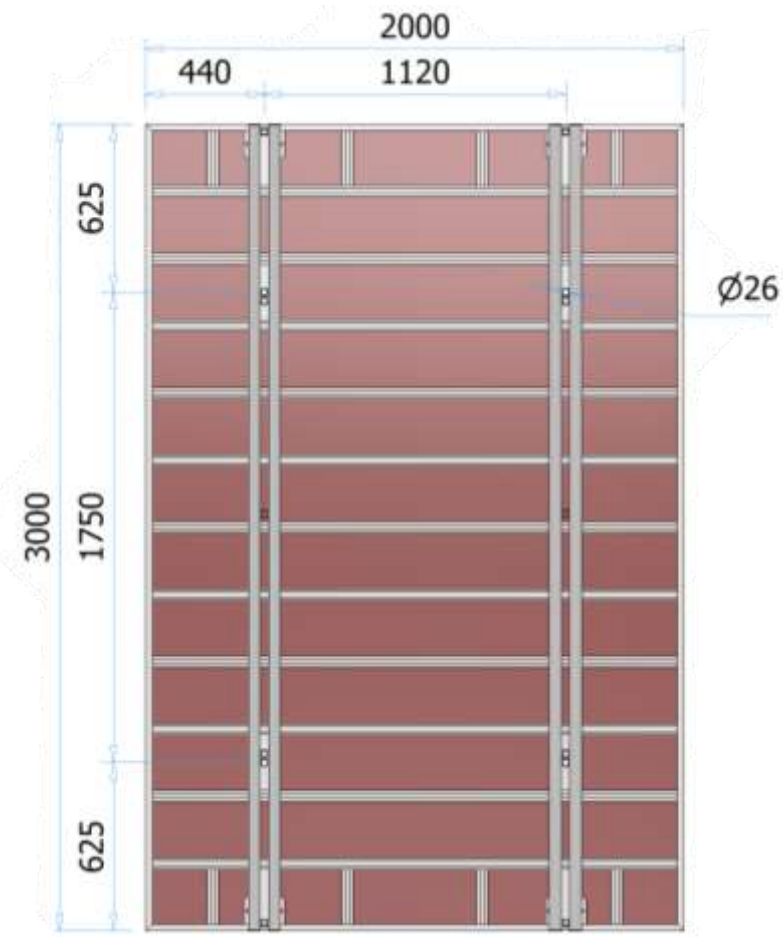
Metasteel / GF V2 beam



Straight panel

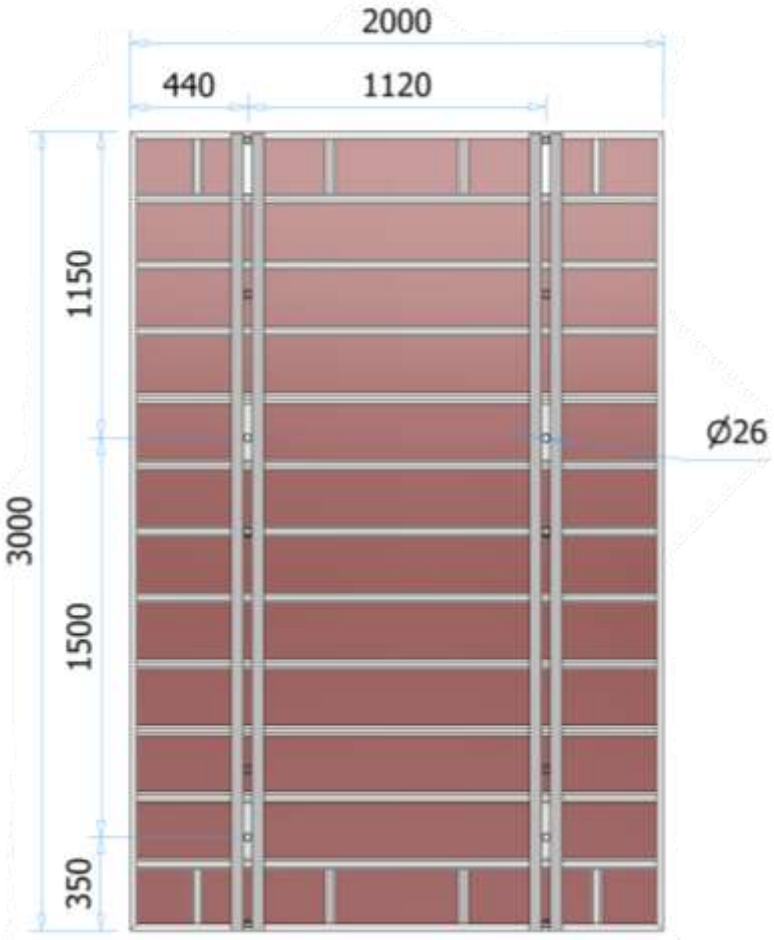
Dimensions

GF V1 2000x3000 panels



GF panel fitted with 3 m waling

GF V2 2000x3000 panels



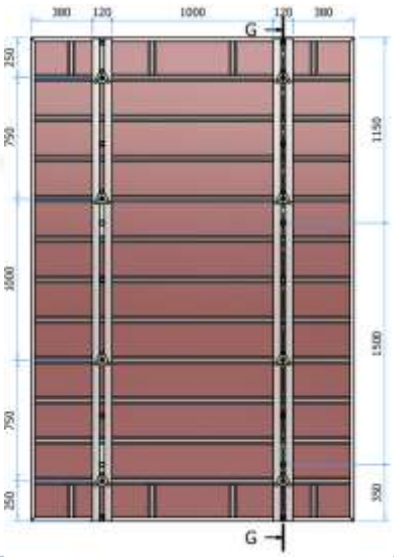
3 m U80 waling

T-head bolt

Height of the waling connection points

Tie-rod hole

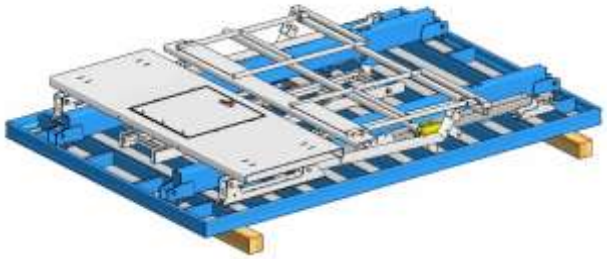
The walings are fixed with 4 T-head bolts, 150 mm long.



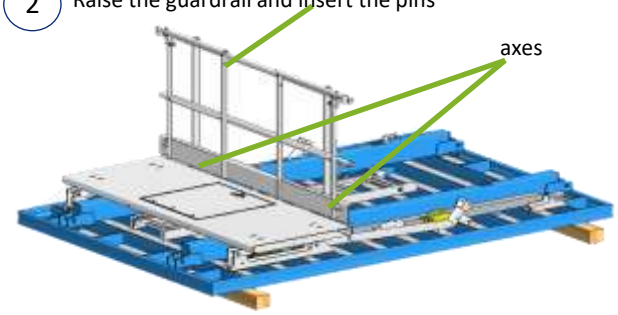
Straight panel

Assembly GF V1

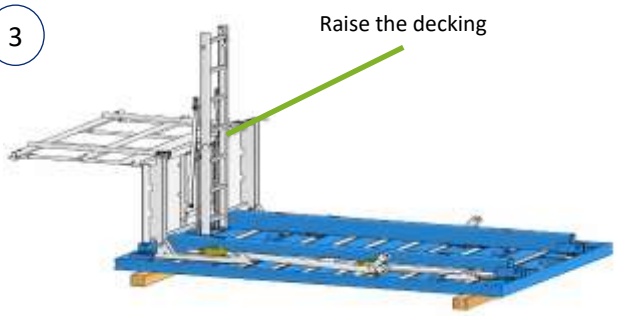
1 Placing the formwork panel on bearers in order to install it



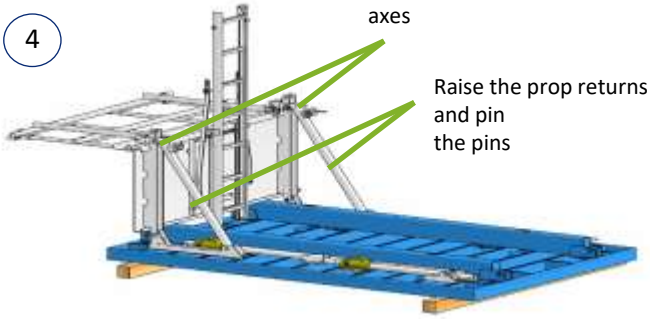
2 Raise the guardrail and insert the pins



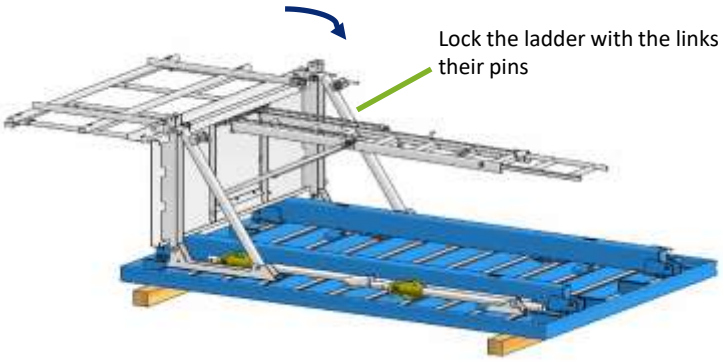
3



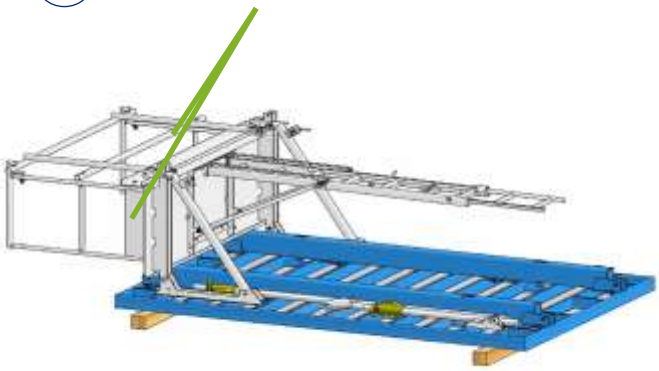
4



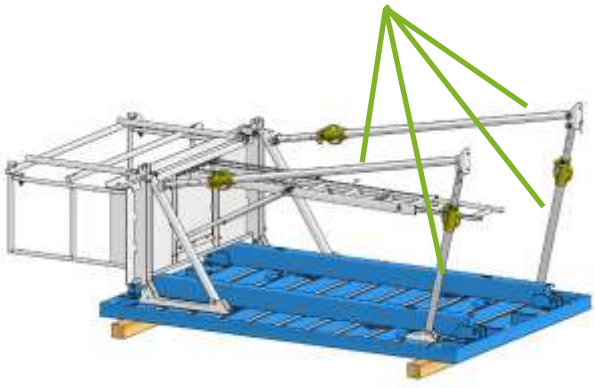
5 After removing the pins and links, raise then swing the ladder



6 Deploy the access gates



7 Install the stabilising props with their base plate

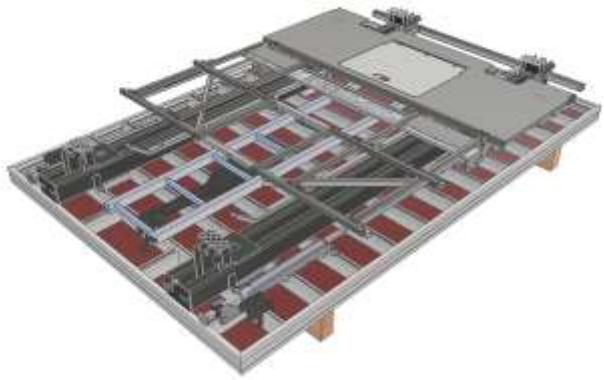


8

Straight panel

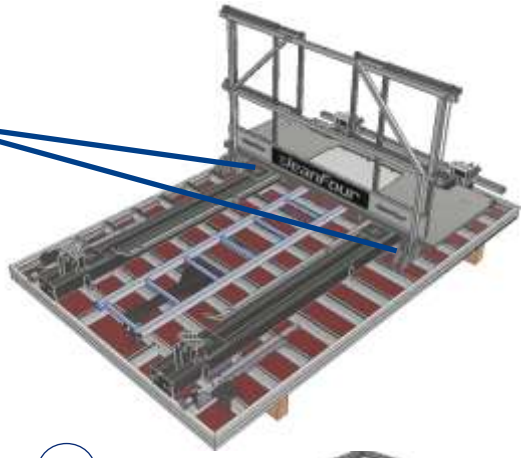
Assembly GF V2

1 Placing the formwork panel on bearers in order to install it



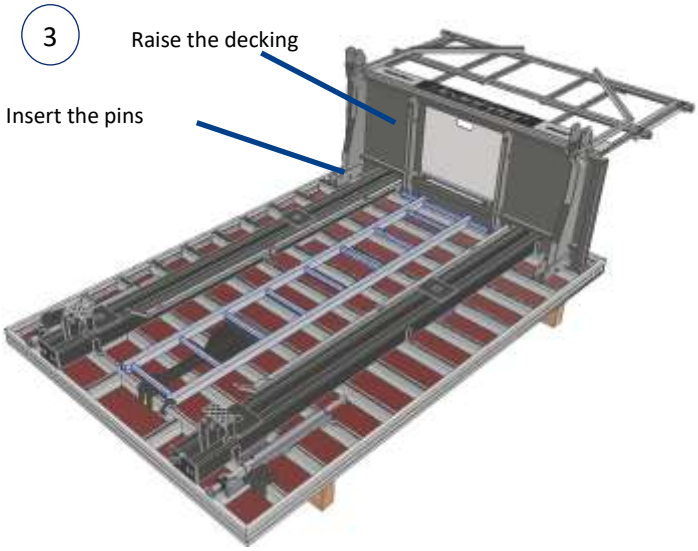
2 Raise the guardrail and insert the pins

axes

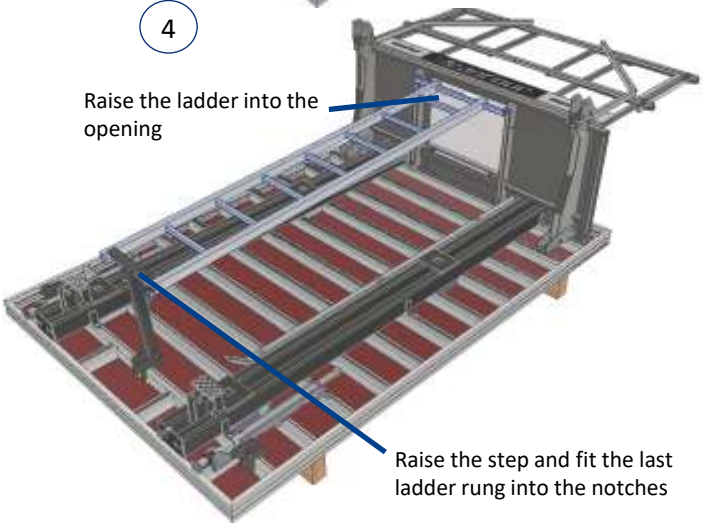


3 Raise the decking

Insert the pins

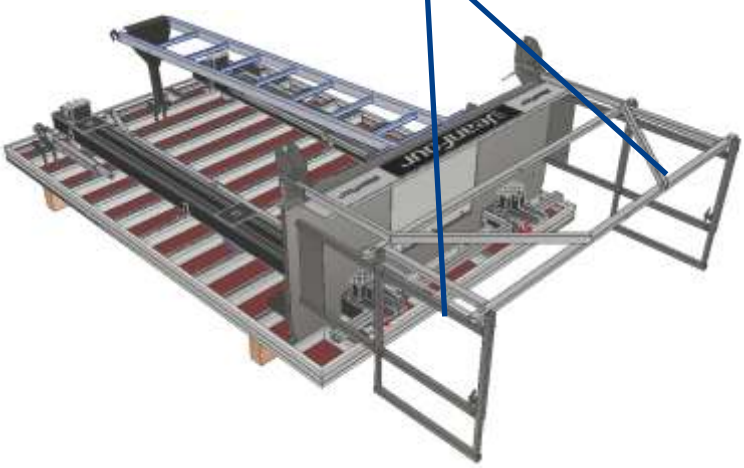


4 Raise the ladder into the opening

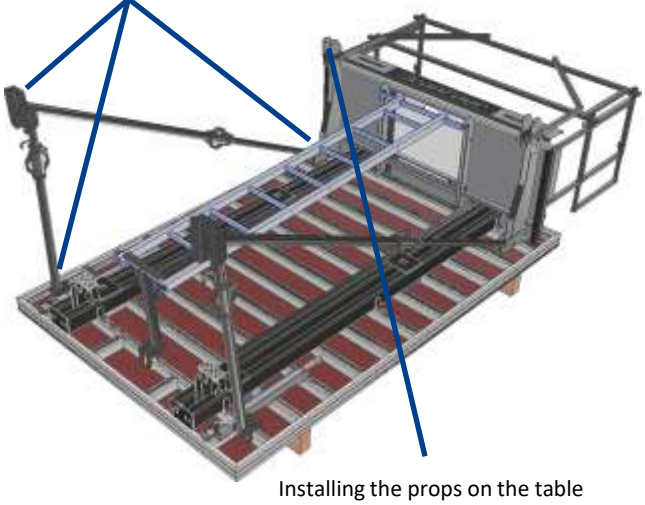


Raise the step and fit the last ladder rung into the notches

5 Deploy the access gates



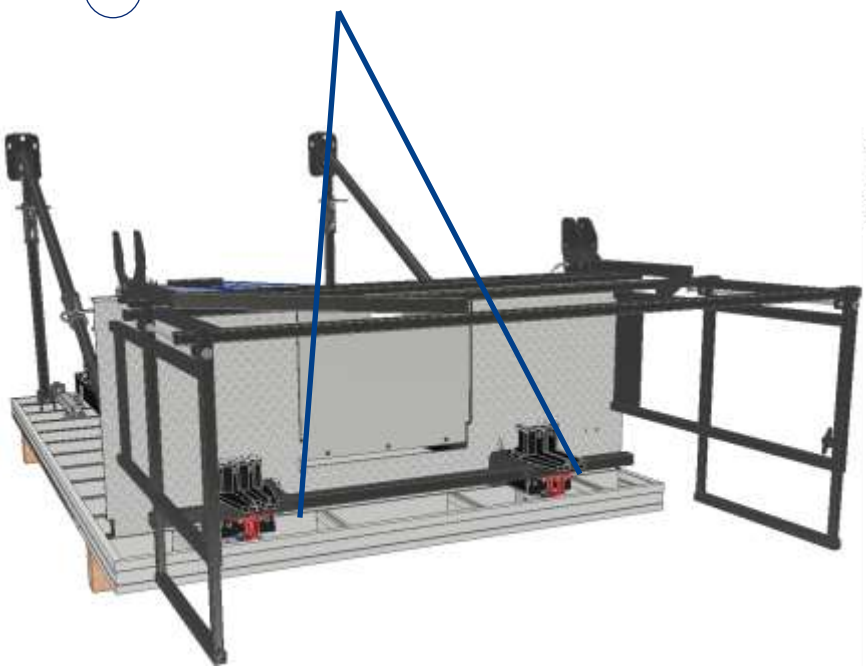
6 Install the stabilising props with their base plate



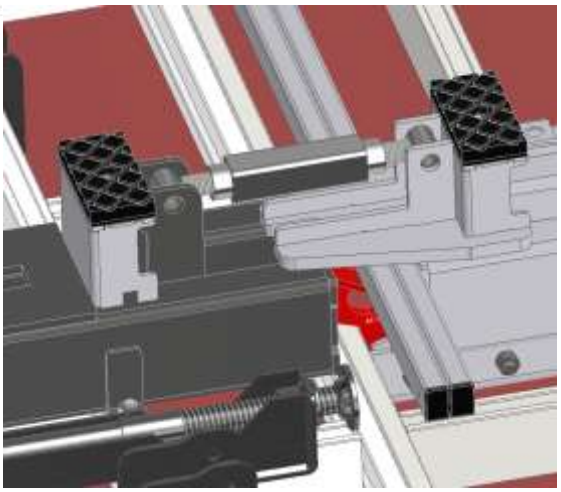
Installing the props on the table head or table-end arm

Straight panel
Assembly GF V2

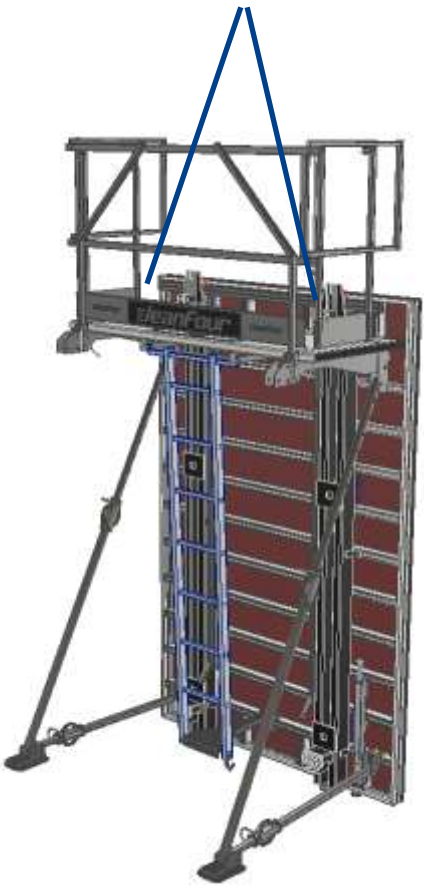
7 Use the panel's lifting eyes at the top of the beam



In the case of stacking: install the alignment jacks to stiffen the connection between the two panels.



8 Once the panel is upright and stabilised, unhook the slings

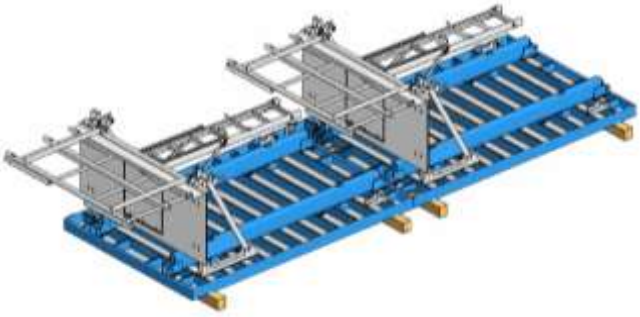


Straight panel

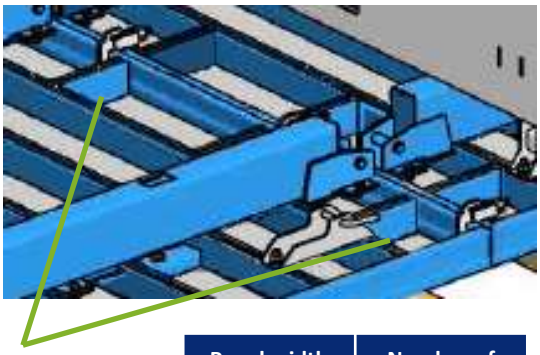
V1 and V2 assembly

9 In the case of stacking, prepare the panels as follows: safety sets deployed and props removed from the panels

10 Bring the panels together until they touch



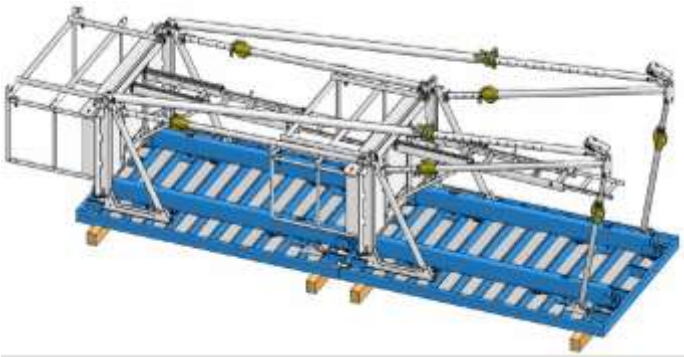
11



When the profiles are well aligned, lock the assembly clamps

Panel width (m)	Number of clamps / panel
2	3
1,5	2
1	2

12 Fit the props and their base plates

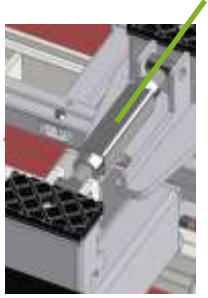


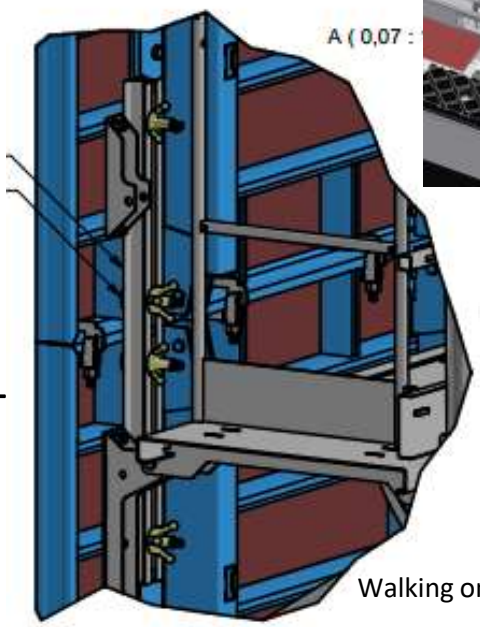
Raise the panels by the lifting eyes

GF V2: for stacking we recommend using alignment jacks.

13 Stacking reinforcement

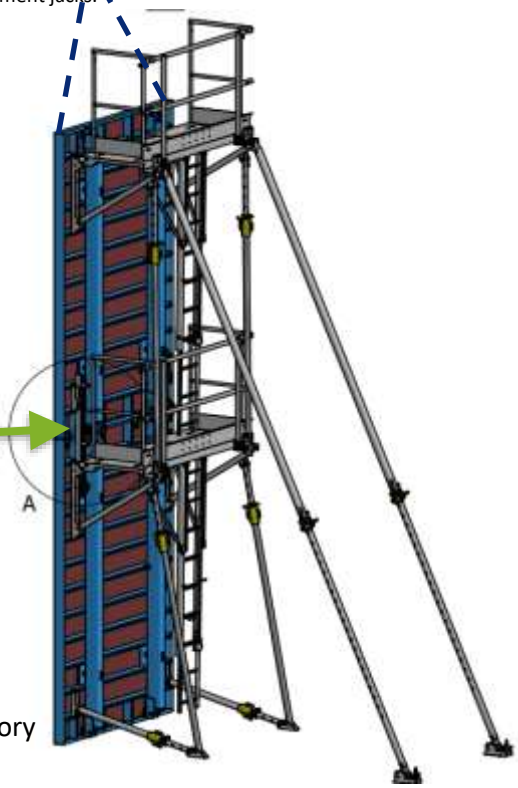
GF V2





1000 waling

GF V1



Walking on a closed hatch is mandatory

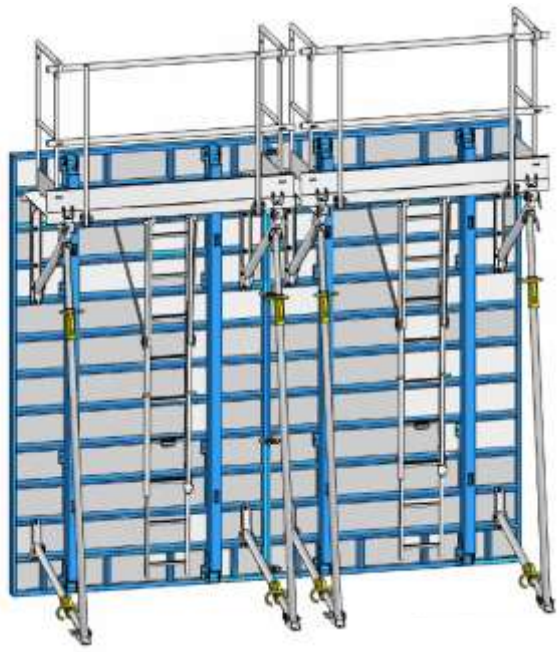
GF V1: for stacking we recommend using a 1.00 m waling

Straight panel

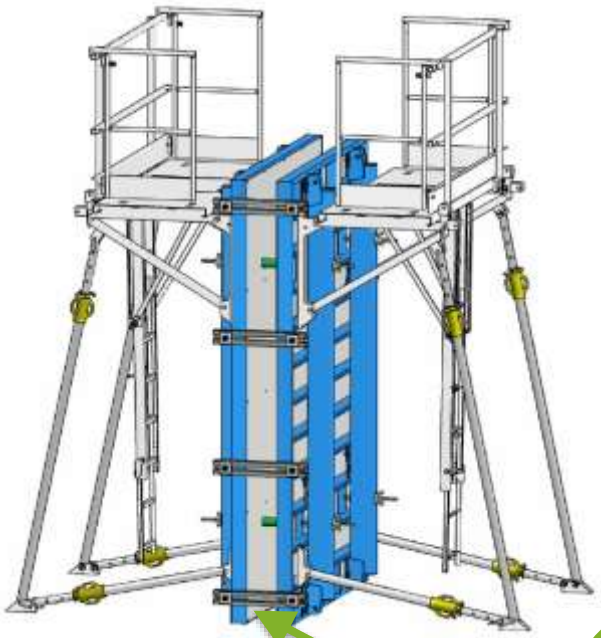
Assembly

14 Bring the panel to be added as close as possible to the panel in place

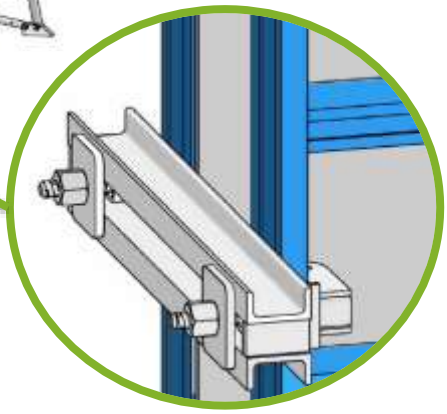
15 Fit the assembly clamps working from bottom to top and lock them



16



Panel height (m)	Number of clamps / panel
3	4
1,5	2
1	2
0,5	1

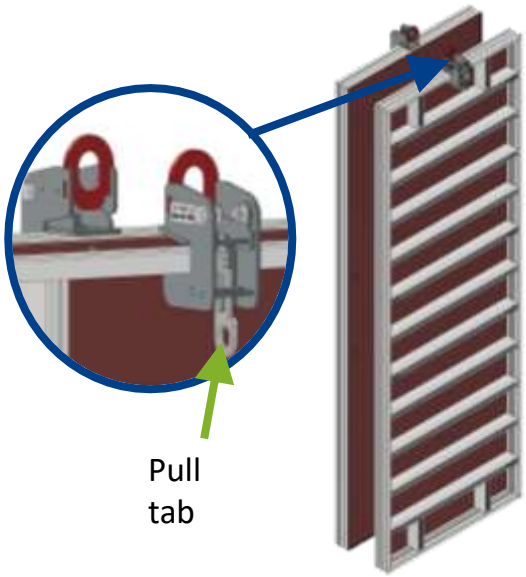


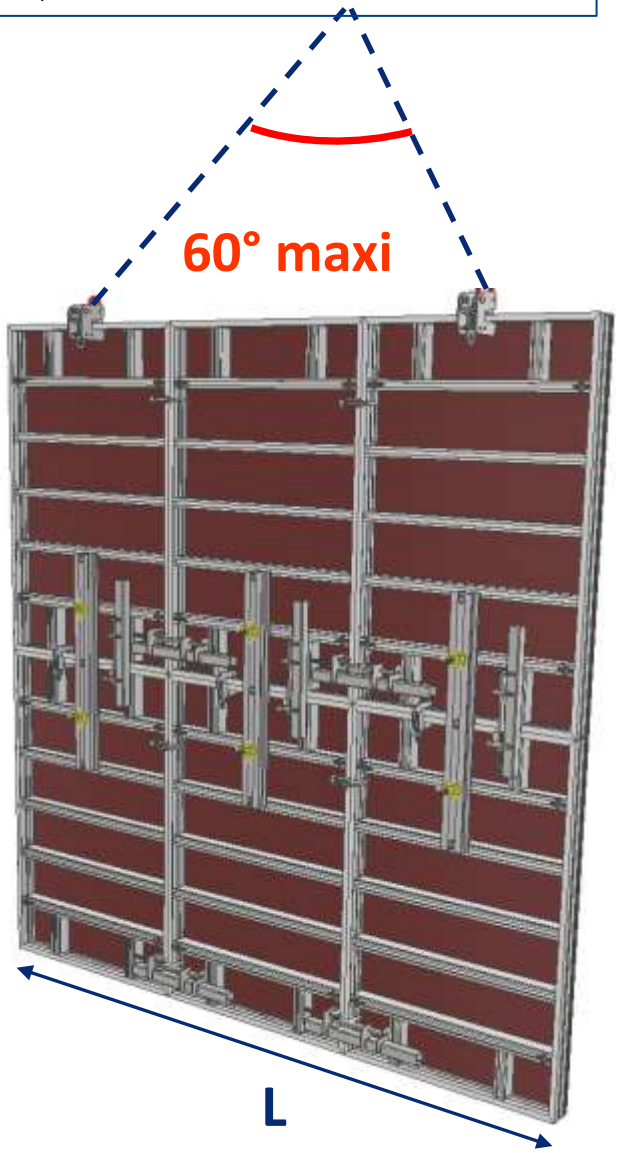
17 Assembly details of the spacer set

Handling

Lifting eye

To fit the lifting eye,
pull the tab to unlock it,
fit it, then release the tab.





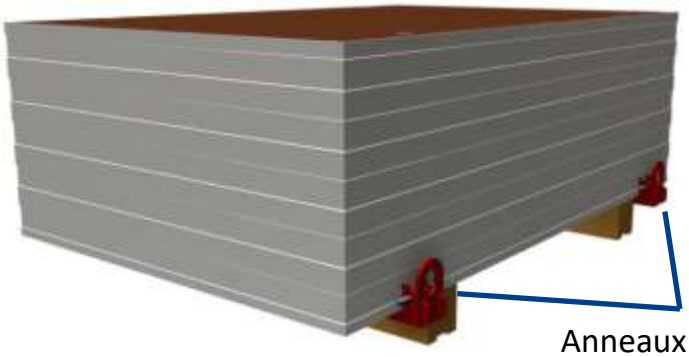
- Panel lifting limit

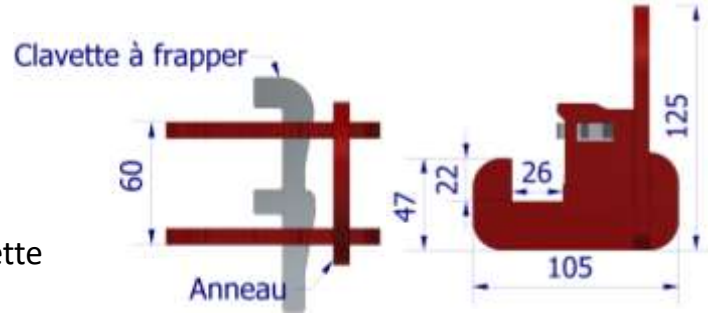
For lifting, we advise fitting a waling every 2 m according to the height to be lifted:

- Up to 4.5 m, 1 m waling
- Up to 6 m, 2 m waling
- From 6 m to 9 m, 3 m waling

The ring can be fitted on two frames provided it is not clamped over the welds

Follow the clamp assembly instructions carefully. Lift on 2 balanced legs with 2 lifting eyes. Maximum liftable area = 16 m² with maximum L = 5 metres. Maximum package weight = 400 kg.

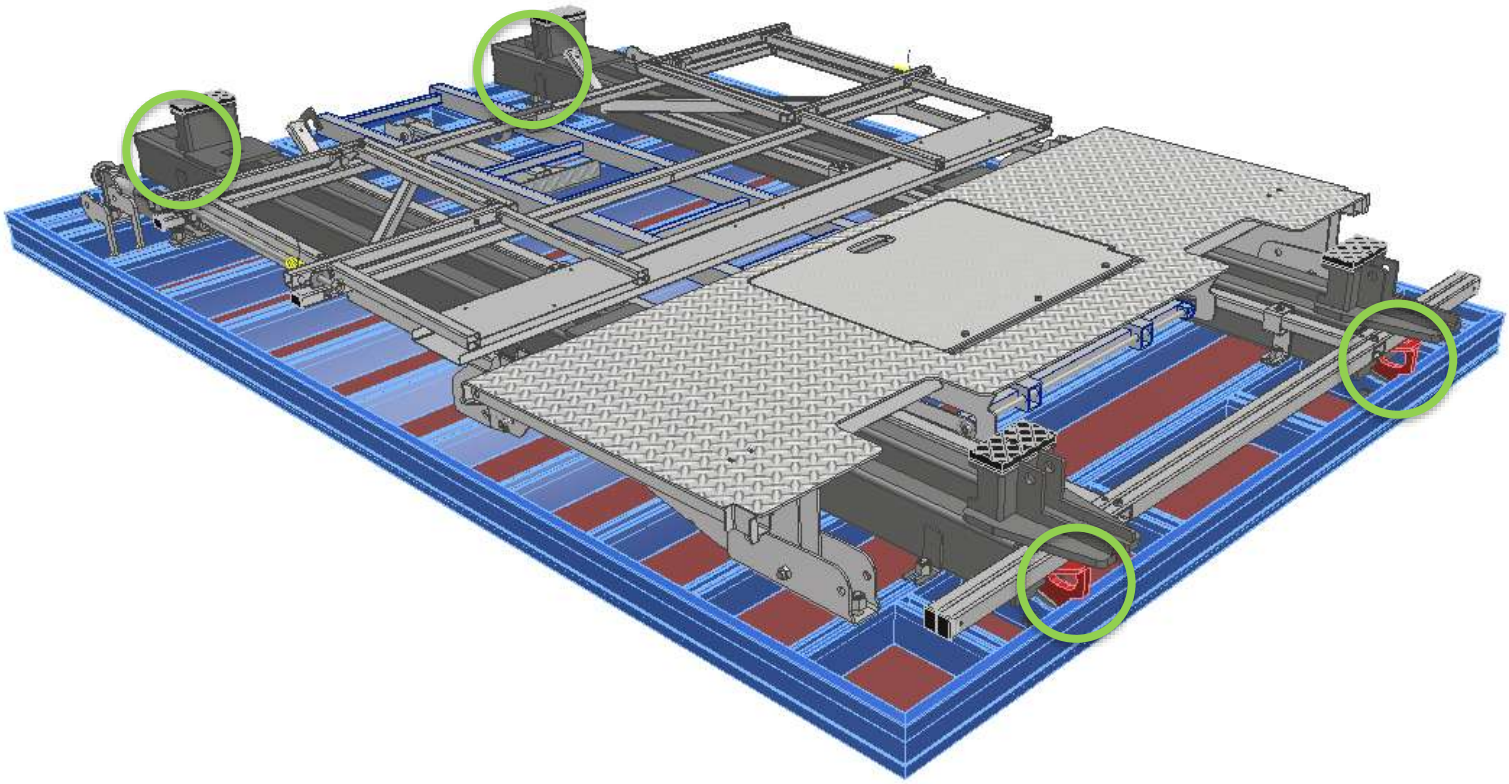




Handling

GF panel lifting eye

For flat lifting of GF panels, use the lifting eyes together with the bottom of the beams. This allows one GF panel to be lifted at a time.



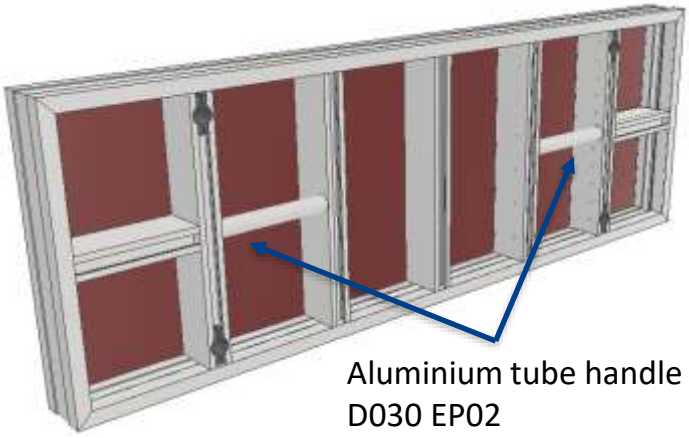
Using textile slings is recommended to avoid damaging the paint.

For balancing, remember to keep a 60° angle for the slings relative to the plane of the panel.

Handling

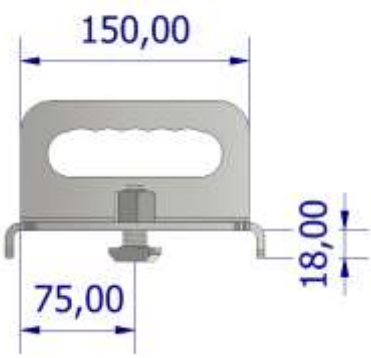
Option: handle

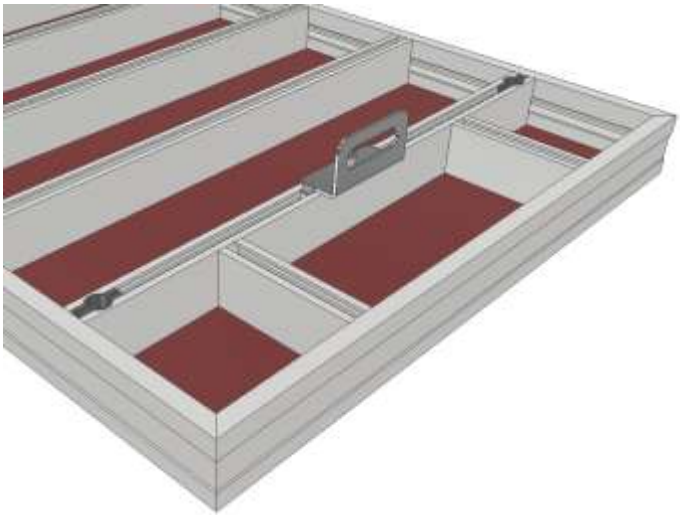
Handles can be welded on request to the frame.



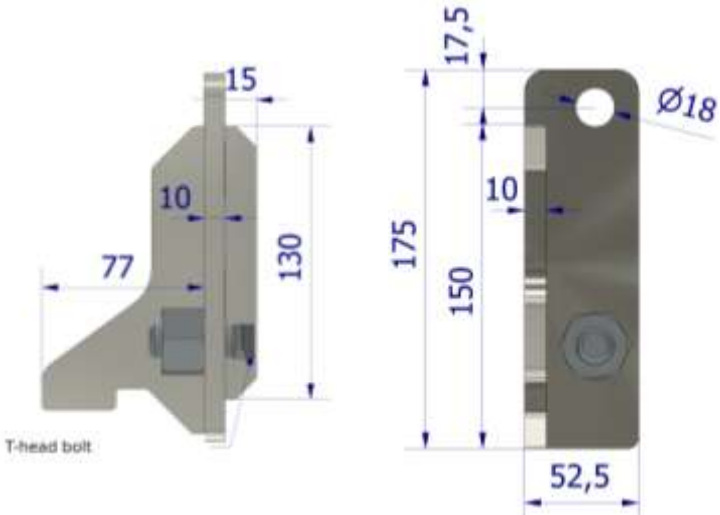
Aluminium tube handle
D030 EP02

Removable handle in galvanised folded sheet
tightened with two Ø16 Halfen screws.





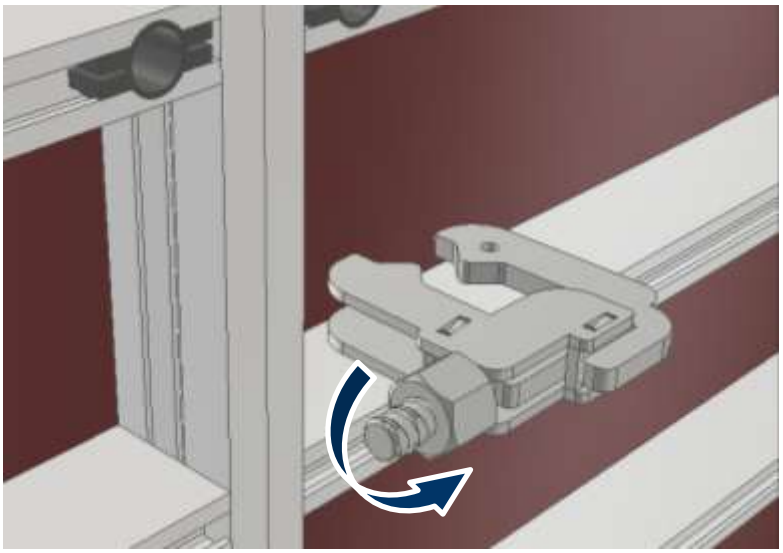
Crowbar socket



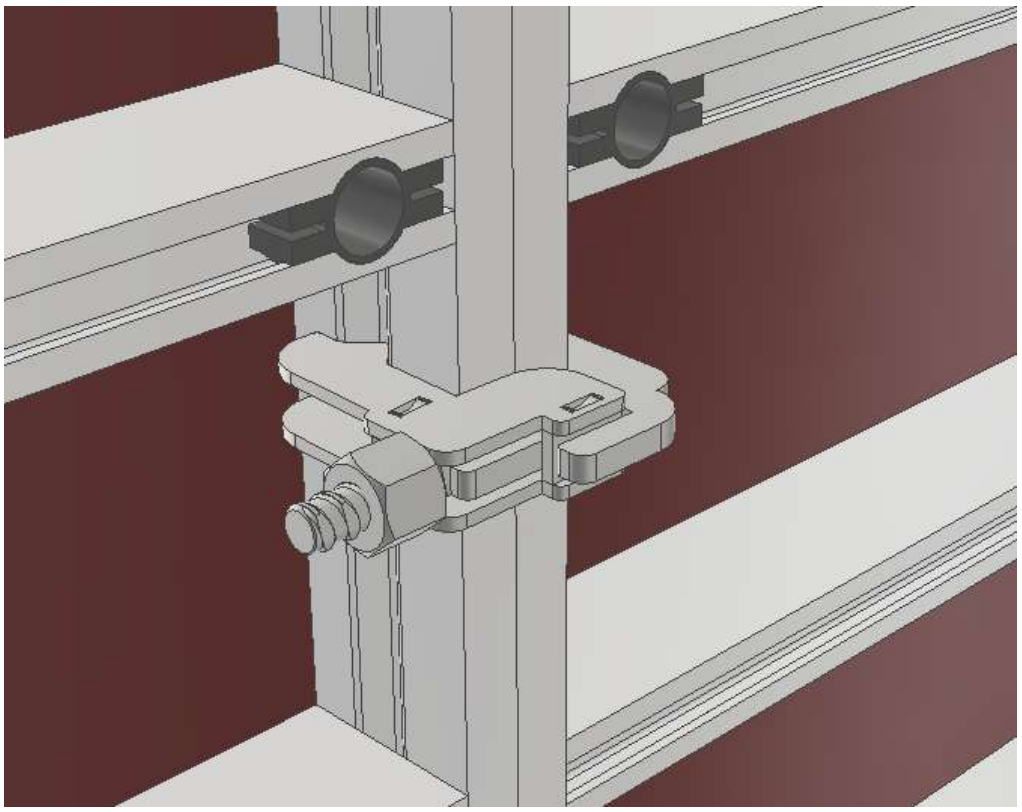
Panel assembly

Assembly clamp

When the panels are correctly placed and aligned, fit the assembly clamps.



IMPORTANT: assembly clamps (with nut) can accept packing up to 2 cm thick.



Clamp en position

Panel assembly

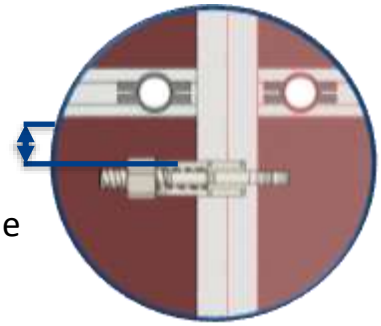
Assembly clamp

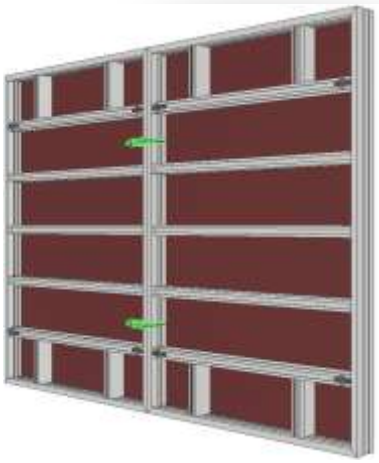
Clamp positioning

3m

2,7m

Min 20mm so as not to clamp over the soudure





1,5m

Panel height	***Number of clamps***
250	1
500	2
750	2
1000	2
1500	2
2700	3
3000	4

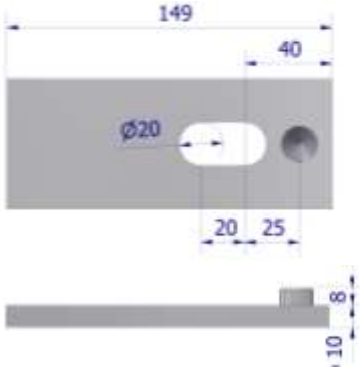
Panel assembly

Tie-rod hole

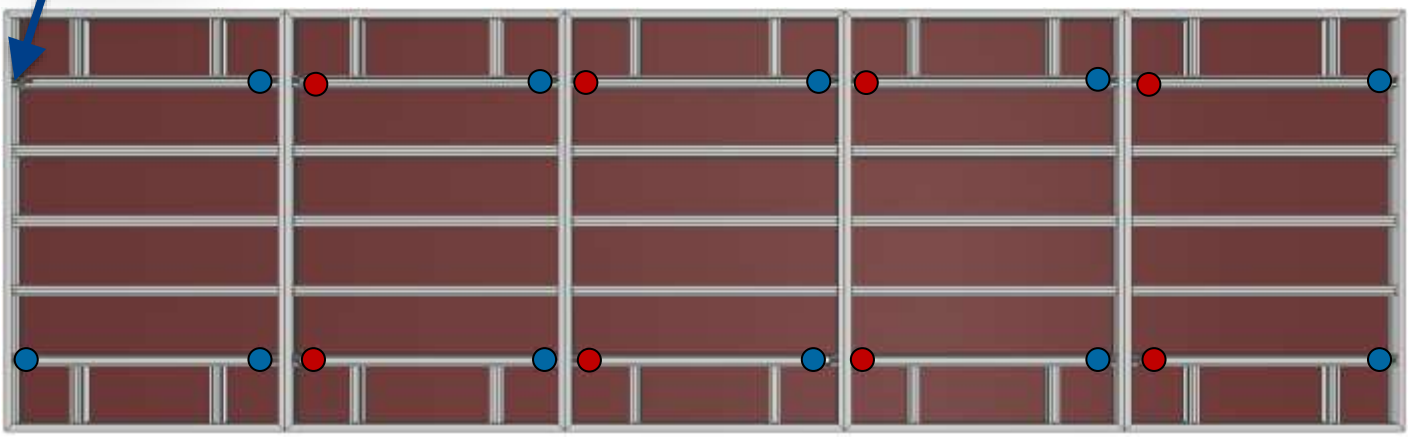
1 - Panels upright

Tighten the two wing nuts. Check carefully that holes without tie rods have plugs on the forming-face side.

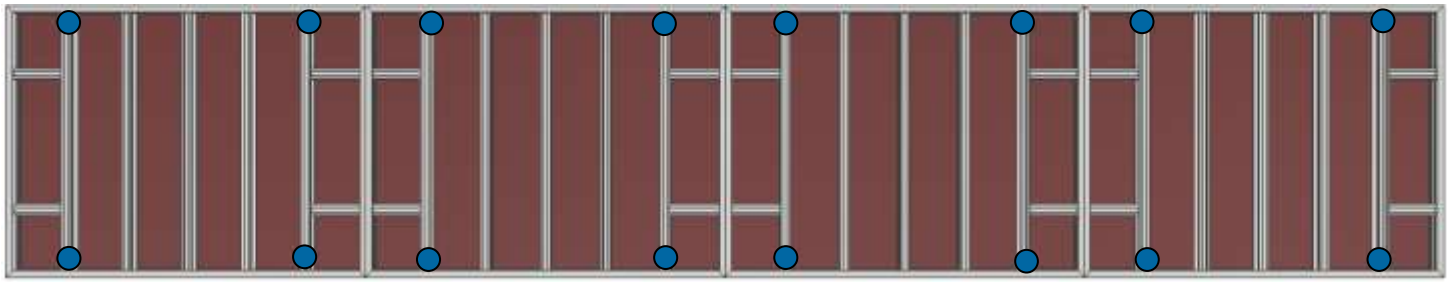
The use of tie plates is mandatory



Panel height	*Number of tie rods*
1500	2
2700	3
3000	4 ou 3 (suivant pression)



2 - Panels laid flat



- A clamping tie rod present
- No clamping tie rod

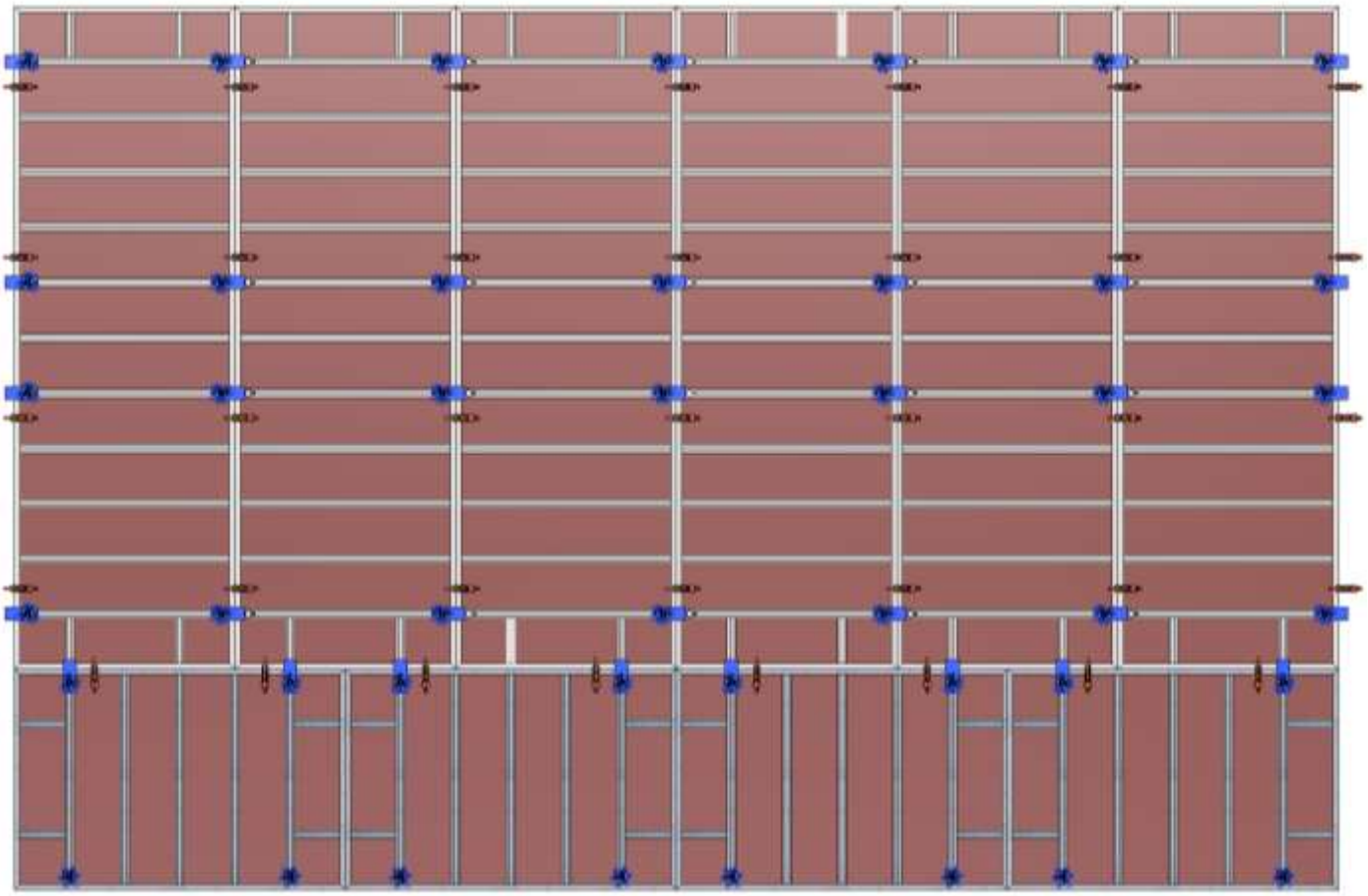
Illustration with 1500 mm panels

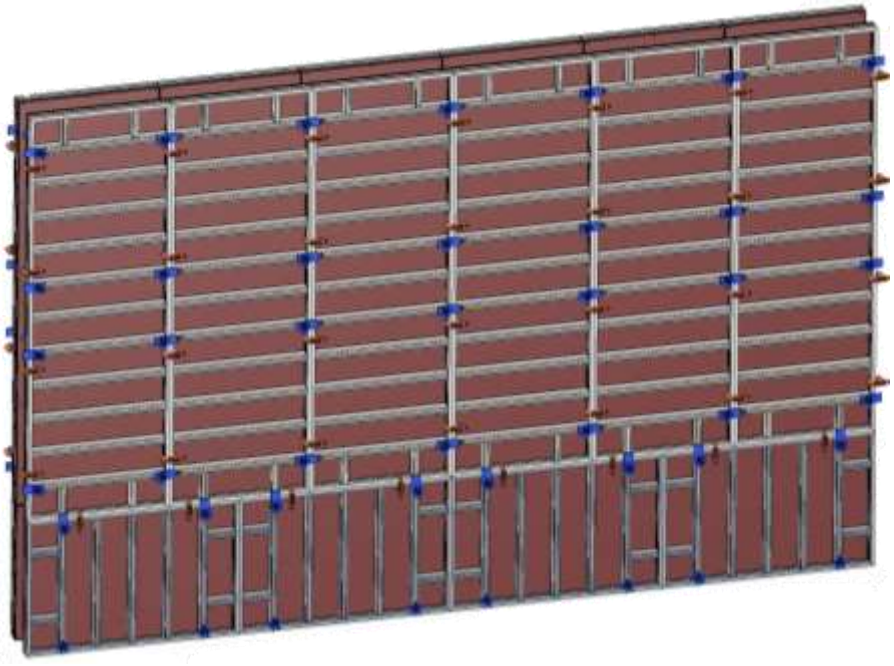
Panel assembly

Tie-rod hole + assembly clamp

3 - Superposition

Illustration with 1000x1500 panels laid flat
1000x3000 upright





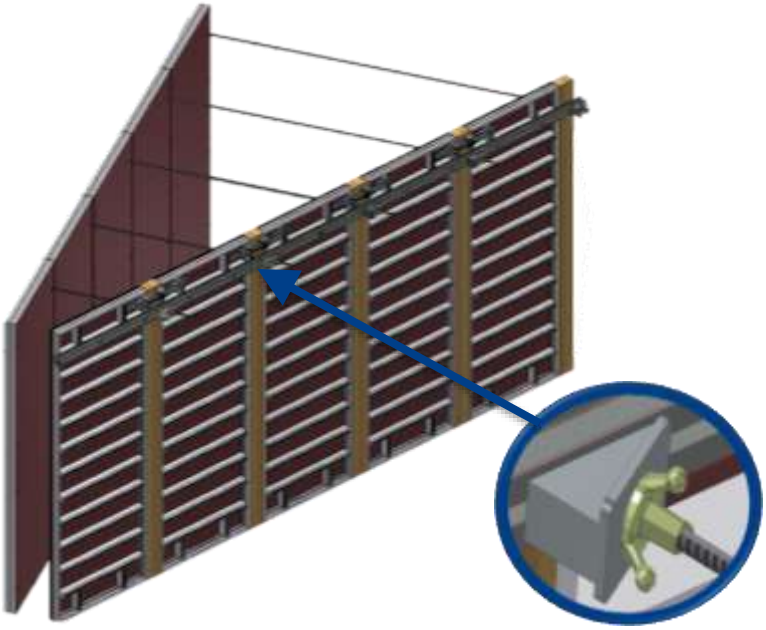
Assembly clamp

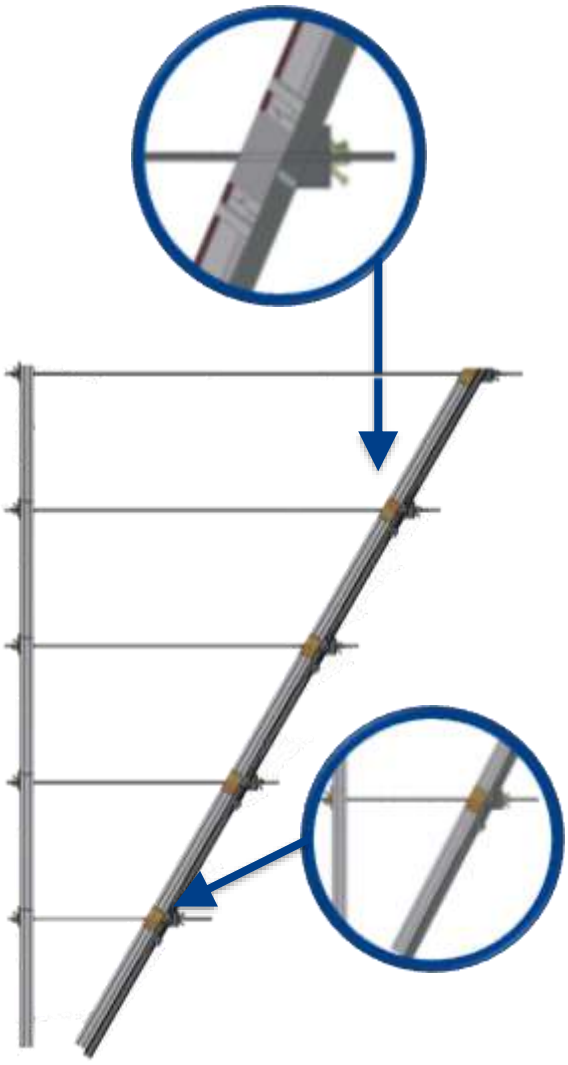
Clamping tie rod + tie plate + wing nut

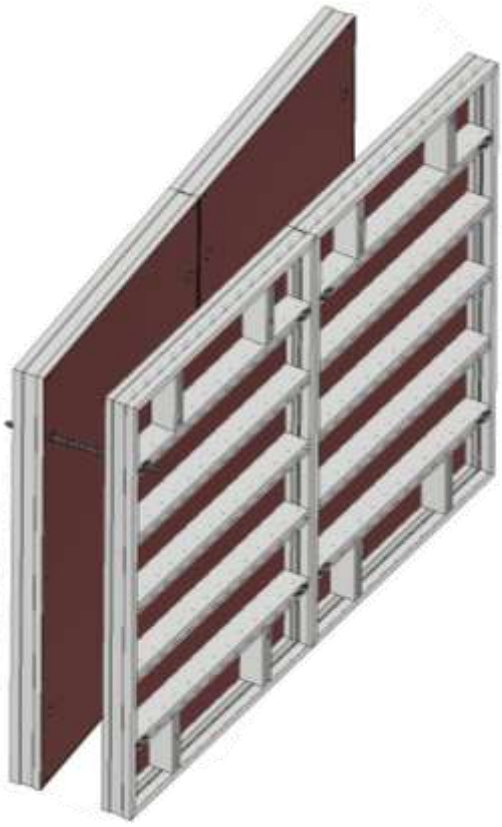
Panel assembly

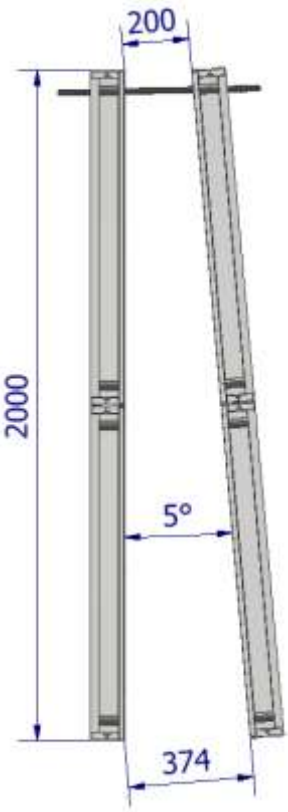
Tie-rod hole with tilt

With a custom tool
+ compensation bois

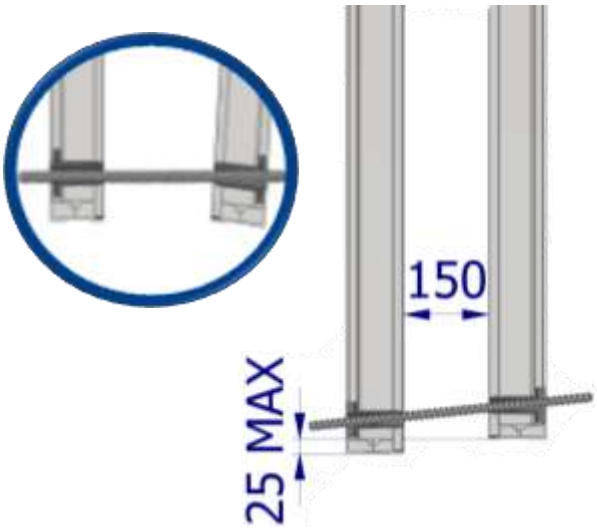








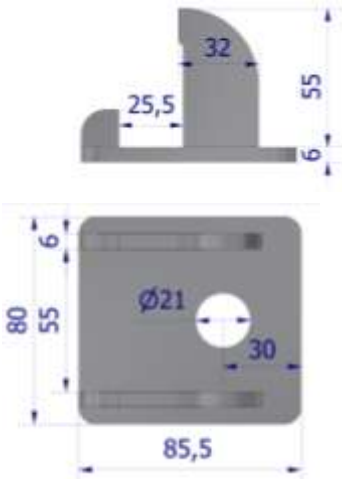
Maximum tilt with a single panel

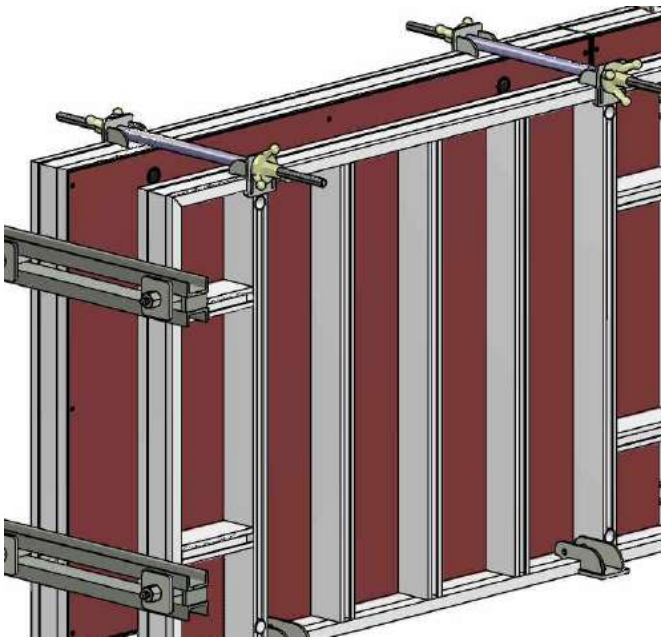


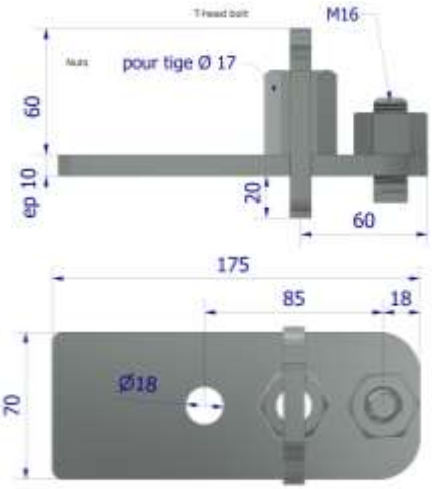
Panel assembly

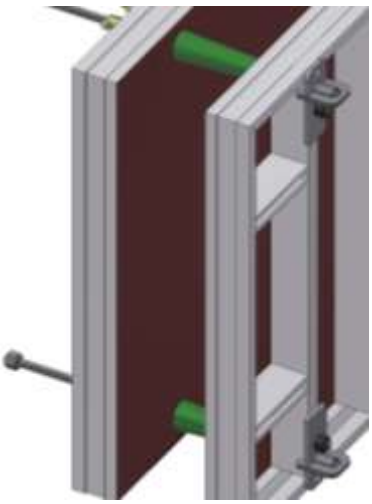
Single-side tie plate and clamping

Upper tie-rod hole

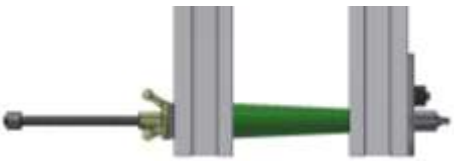


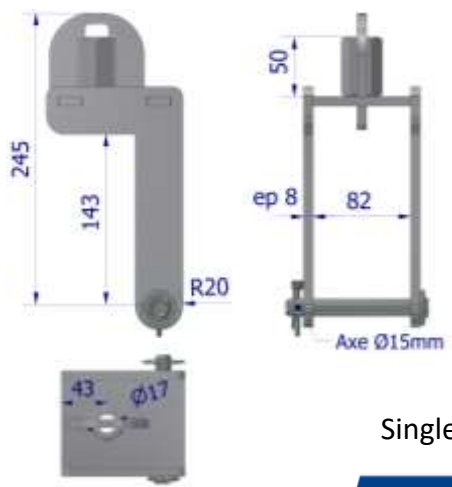


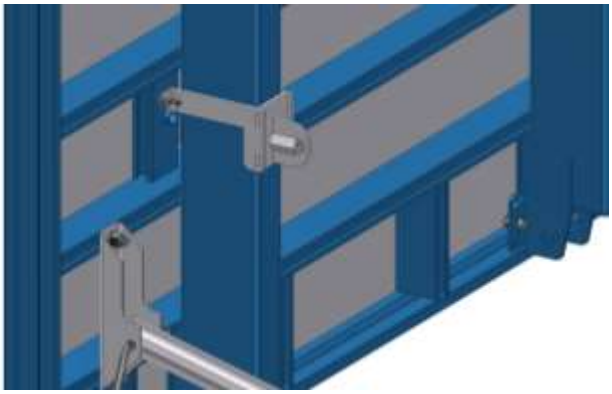




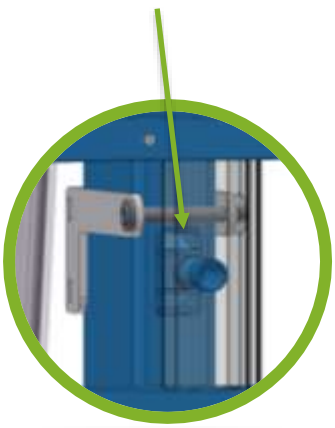
This tie plate allows the elements to be clamped where access is diffi on one side.







Pin Ø15 + split pin



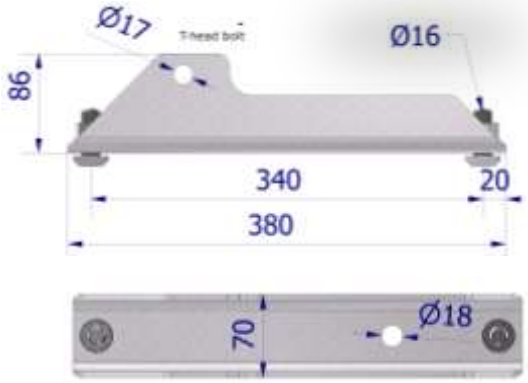
Single-side tie plate for GF V1

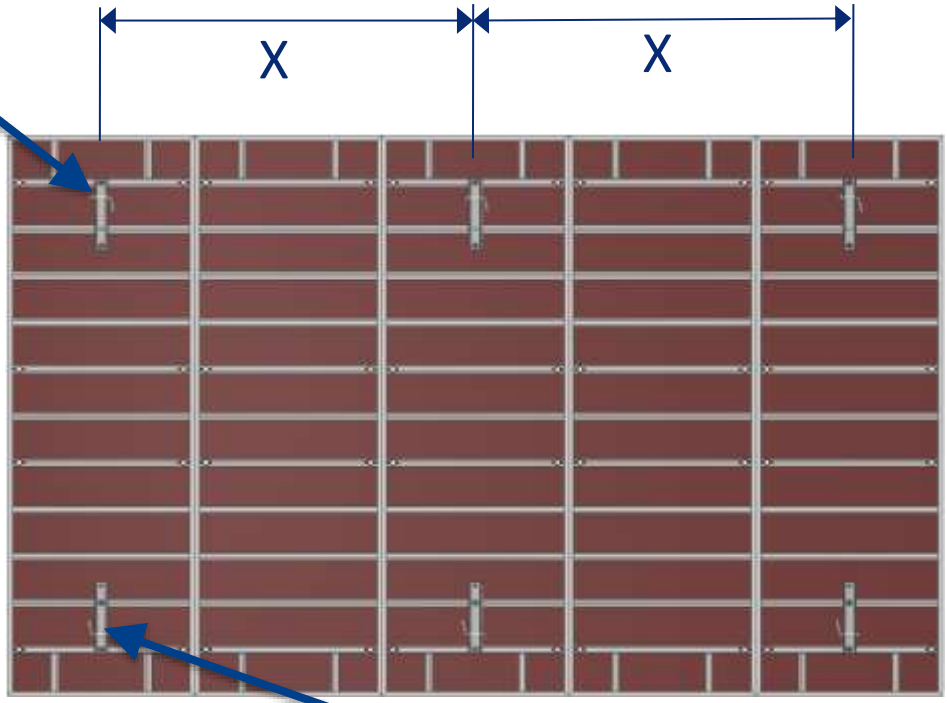
Panel assembly

Prop socket

Slide the T-bolts into the panel groove, turn them a quarter-turn to the right, then tighten the nuts with the 30 mm spanner to lock the prop sockets.

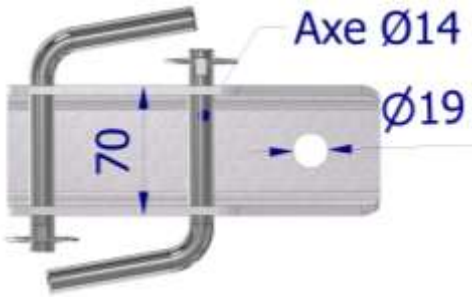
The prop socket at the top of the panel must have the pin pointing towards the top of the panel





2 metres ≤ X ≤ 3 metres

The prop socket at the bottom of the panel must have the pin pointing towards the bottom of the panel



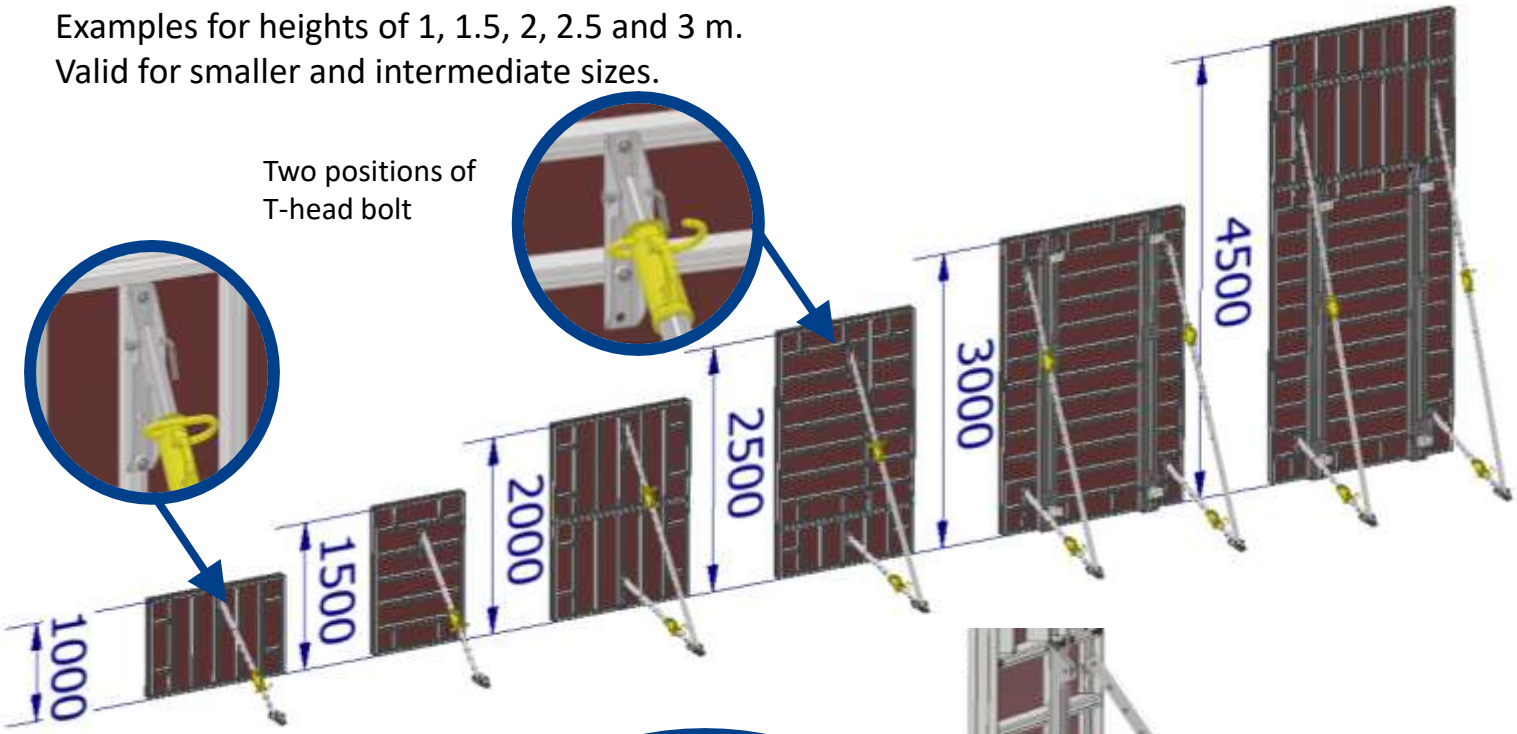
Double prop fork head

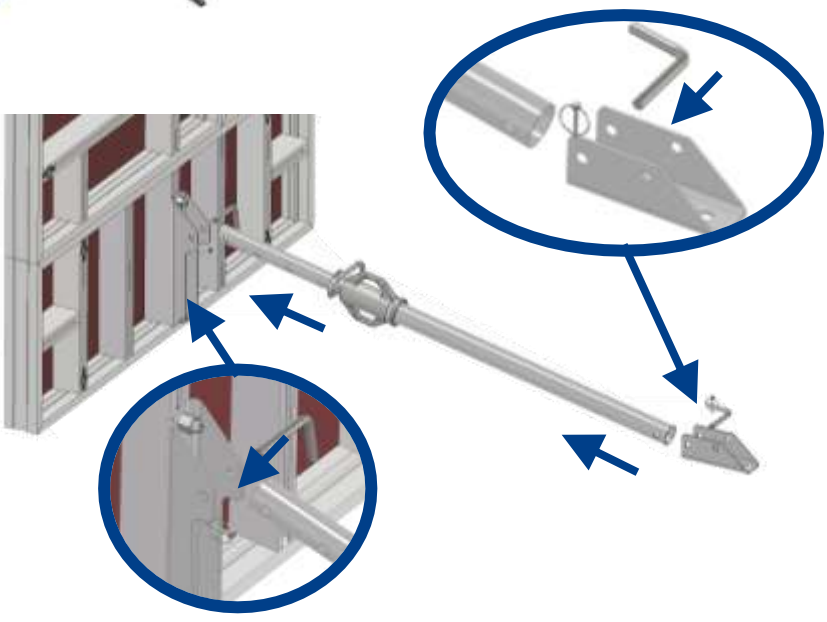
Panel assembly

Prop socket

Hauteur(m)	Prop type	Type bracon
1	100/175	-
1,5	170/300	-
2	170/300	100/170
2,5	220/400	100/170
3	220/400	100/170

Examples for heights of 1, 1.5, 2, 2.5 and 3 m.
Valid for smaller and intermediate sizes.





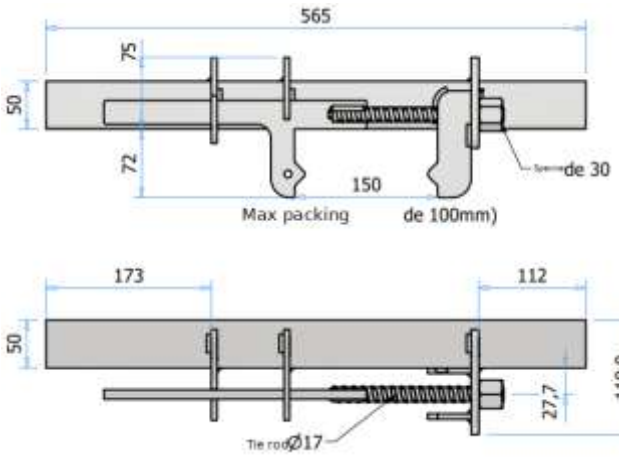
Step 1

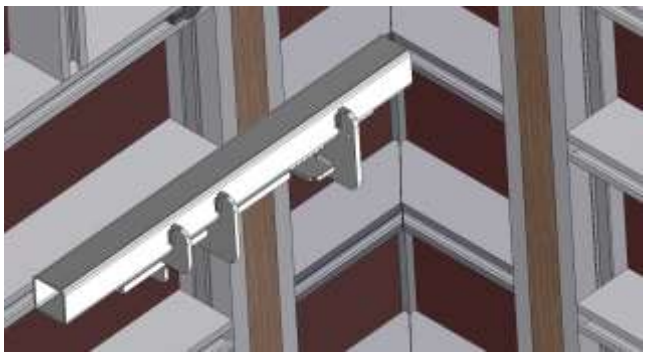
Step 2

Panel assembly

Alignment clamp

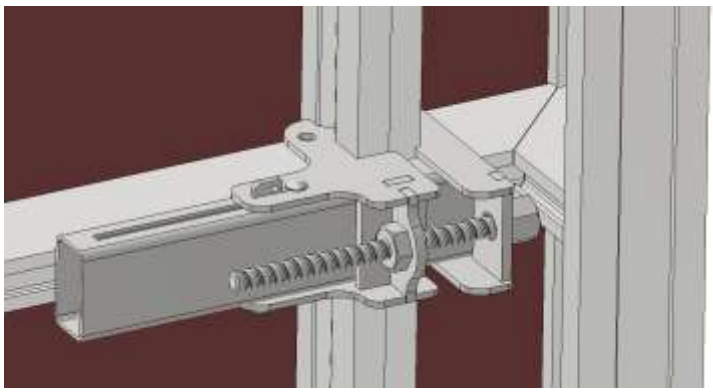
Where higher strength is needed,
or when adding packing,
fit the alignment clamps



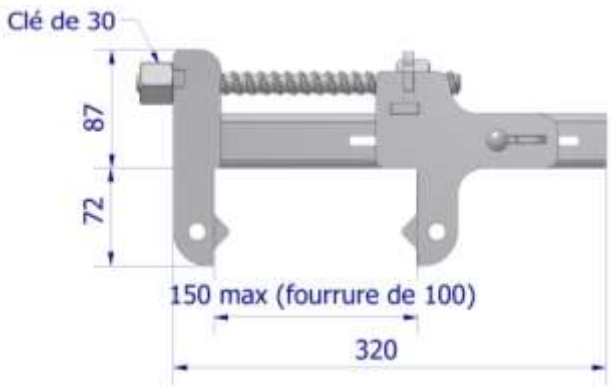


This clamp takes packing up to 100 mm in corners of 0300x0300 minimum.

Corner / packing clamp

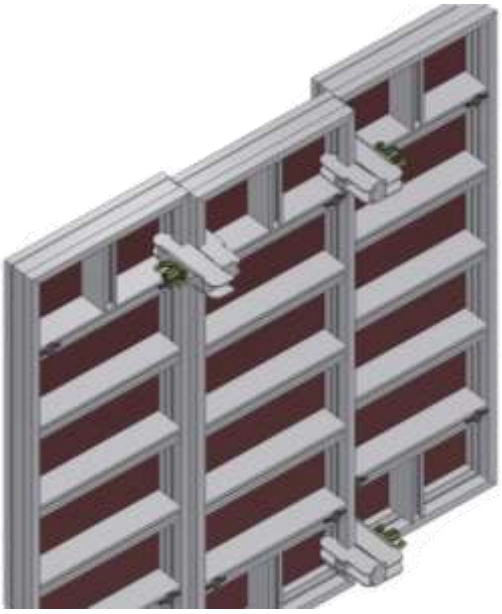


This clamp takes packing up to 100 mm even in corners of 0200x0200 minimum.



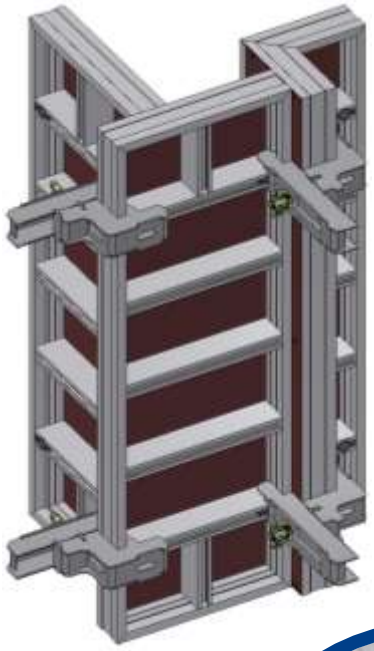
Panel assembly

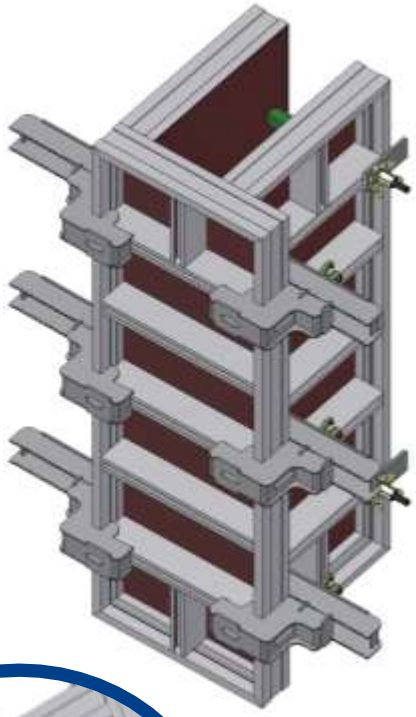
Offset clamp

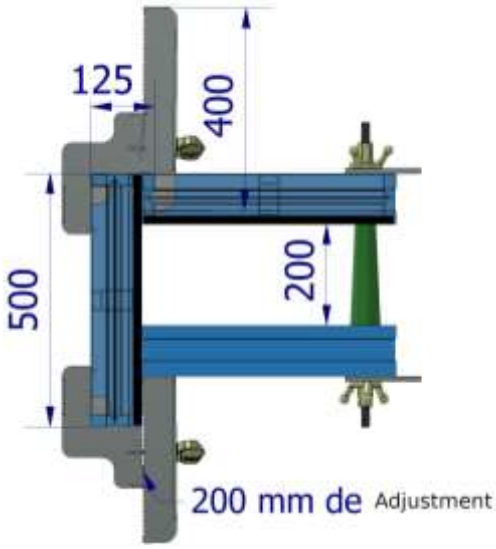


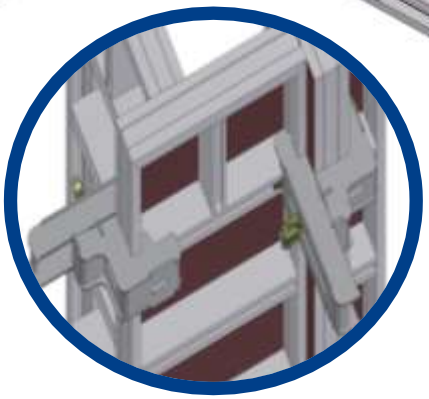
Offset clamp adjustable from
0 to 60 mm

Wall-stop offset clamp from 0 to 20 cm





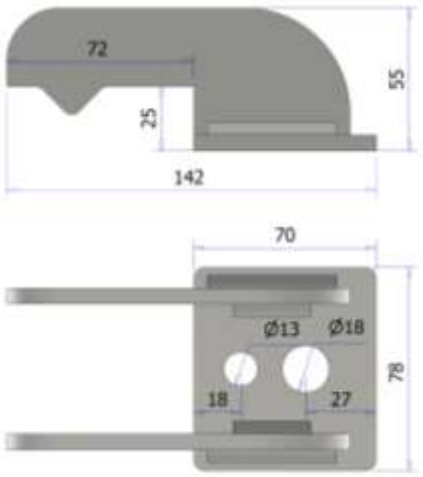


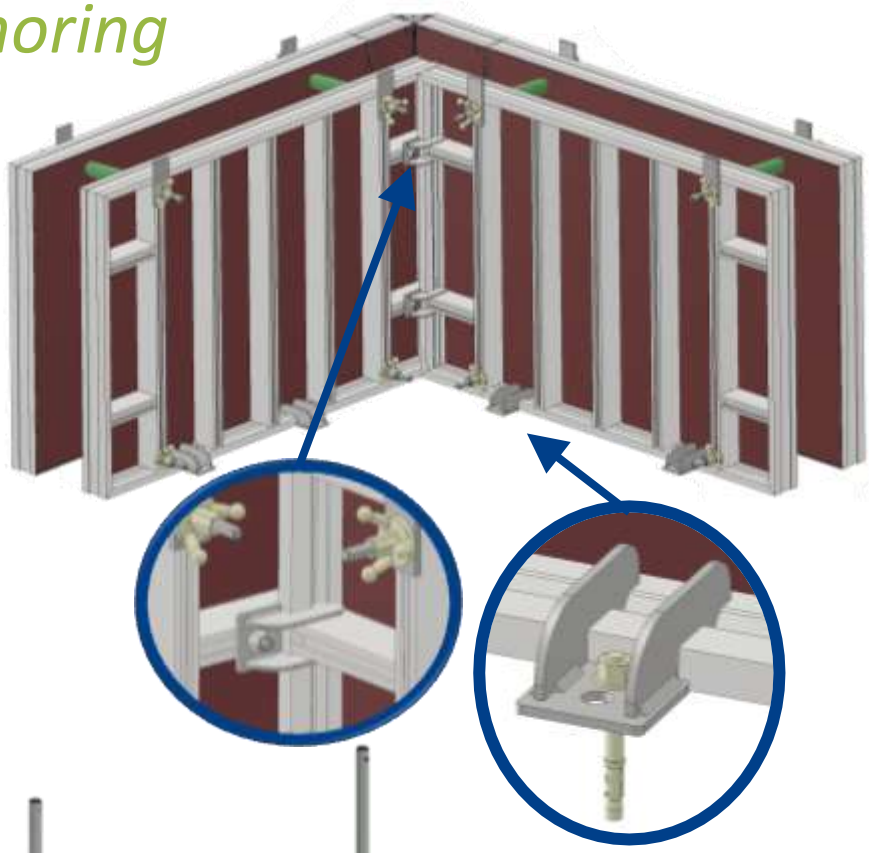


This clamp creates panel wall stops (20 mm max)

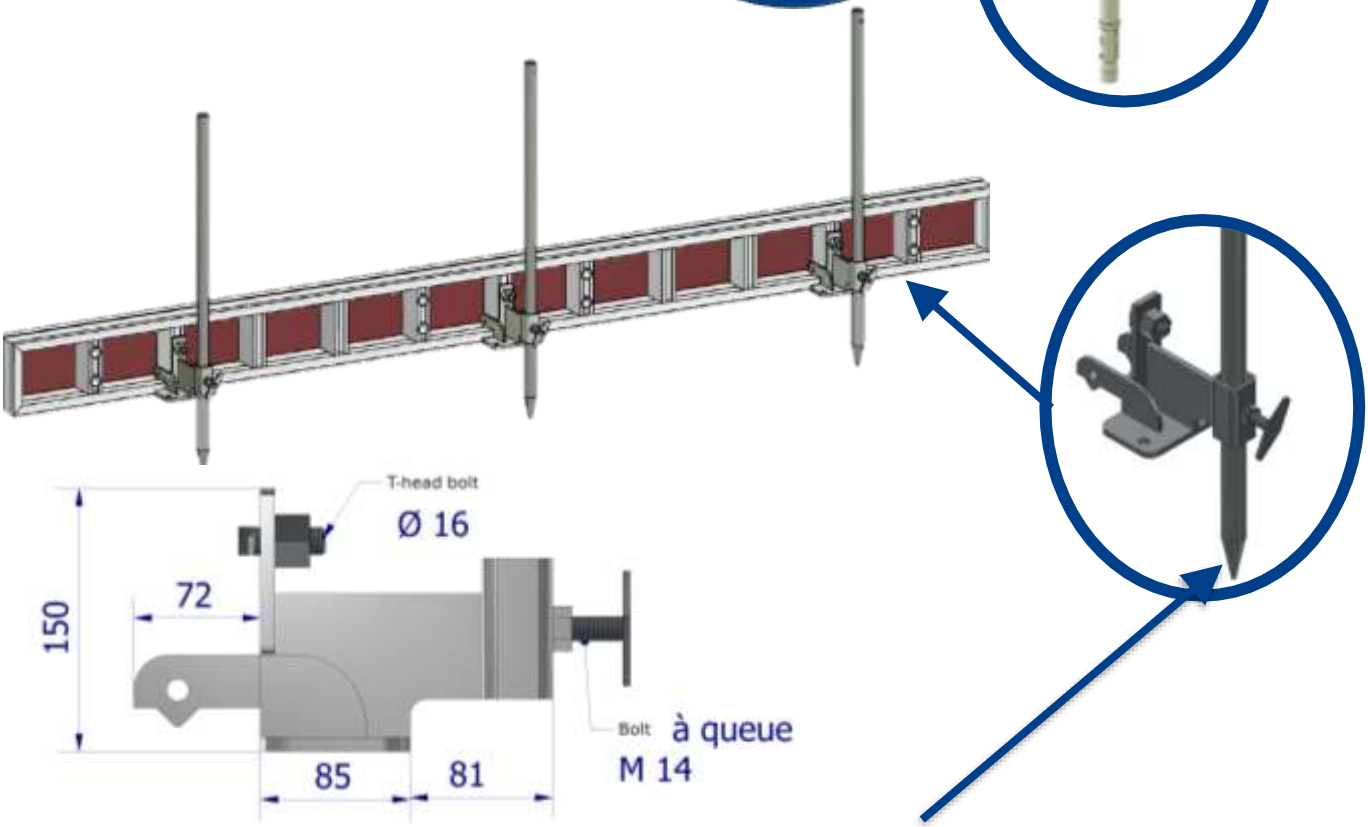
Panel assembly

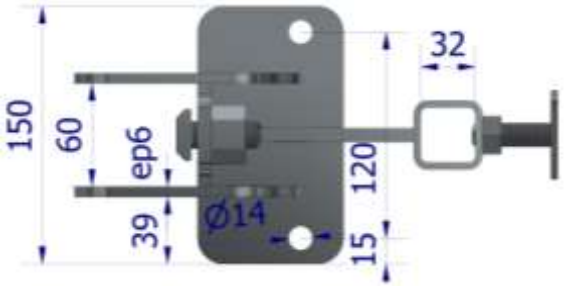
Ground anchoring





Floor-fixing clamp
Fixing with anchor stud Ø12 max

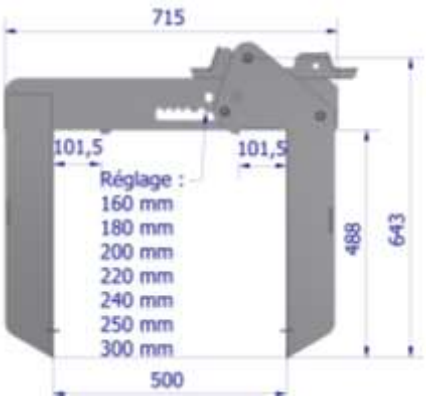


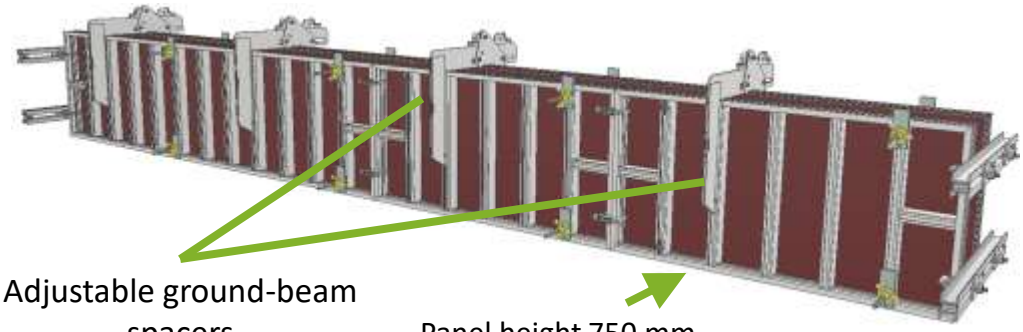


Solid steel stake fixing Ø30

Panel assembly

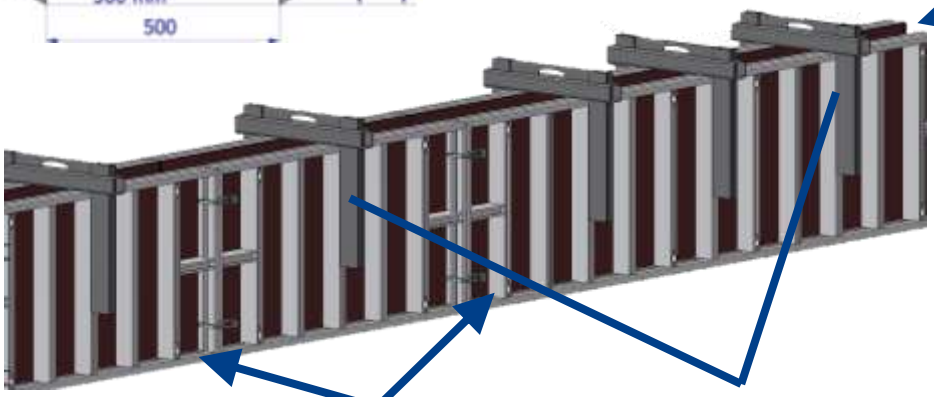
Ground-beam spacer

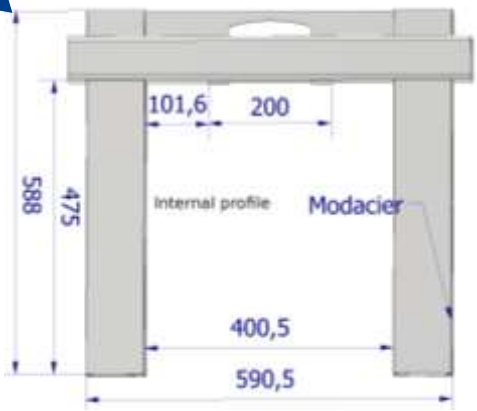




Adjustable ground-beam spacers

Panel height 750 mm

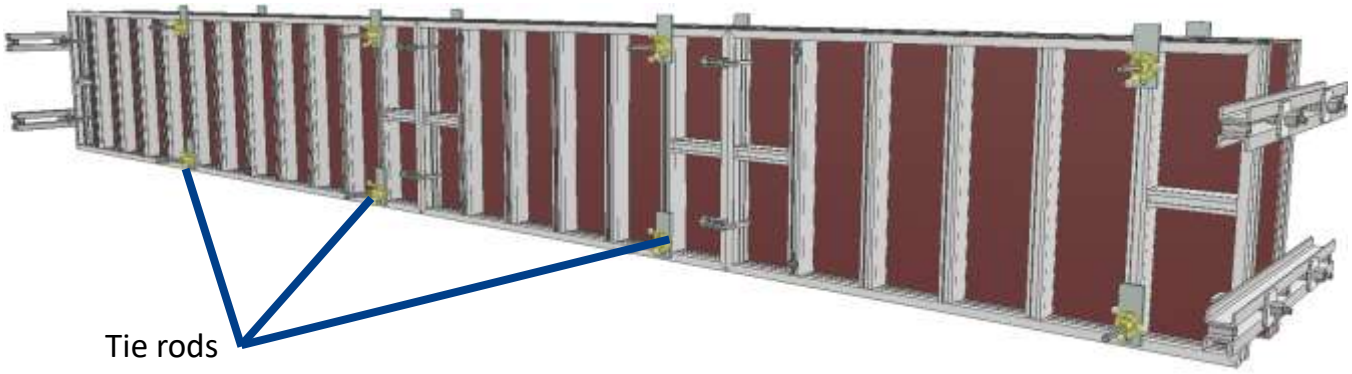




Fit tie rods at the bottom for 1000 and 750 mm panels.

Fixed ground-beam spacers

Position the ground-beam spacers at the middle of the panels at 1.5 m intervals, and spread 2 spacers evenly on 3 m long panels. Adaptable to panels from 0.5 to 1 m.

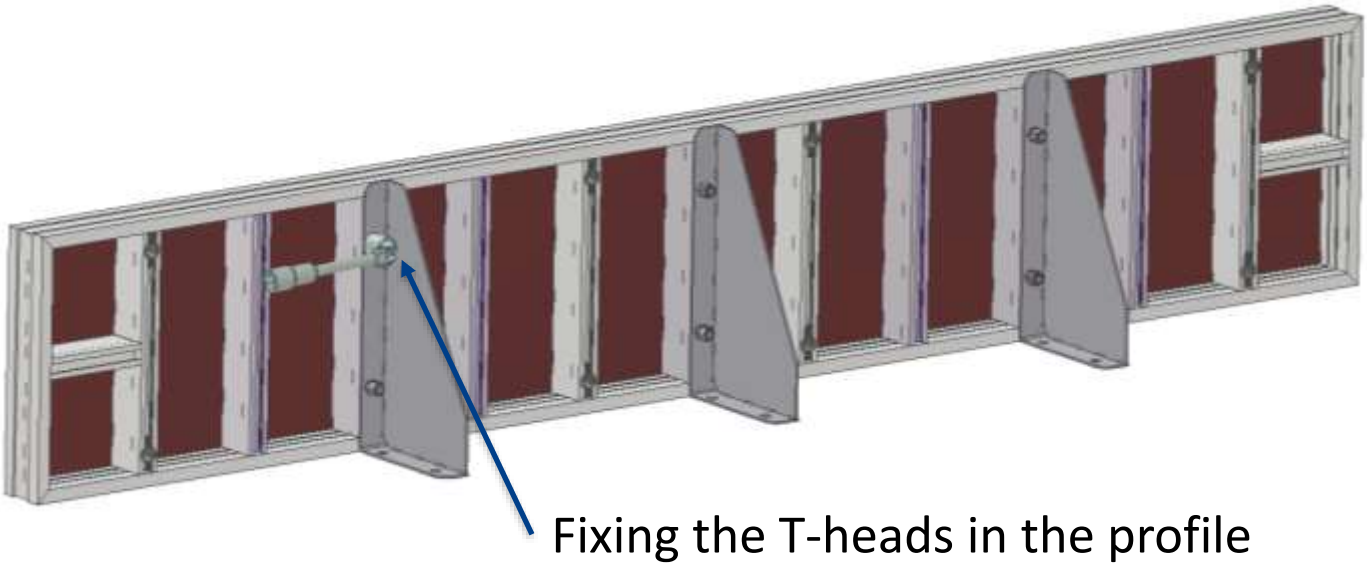


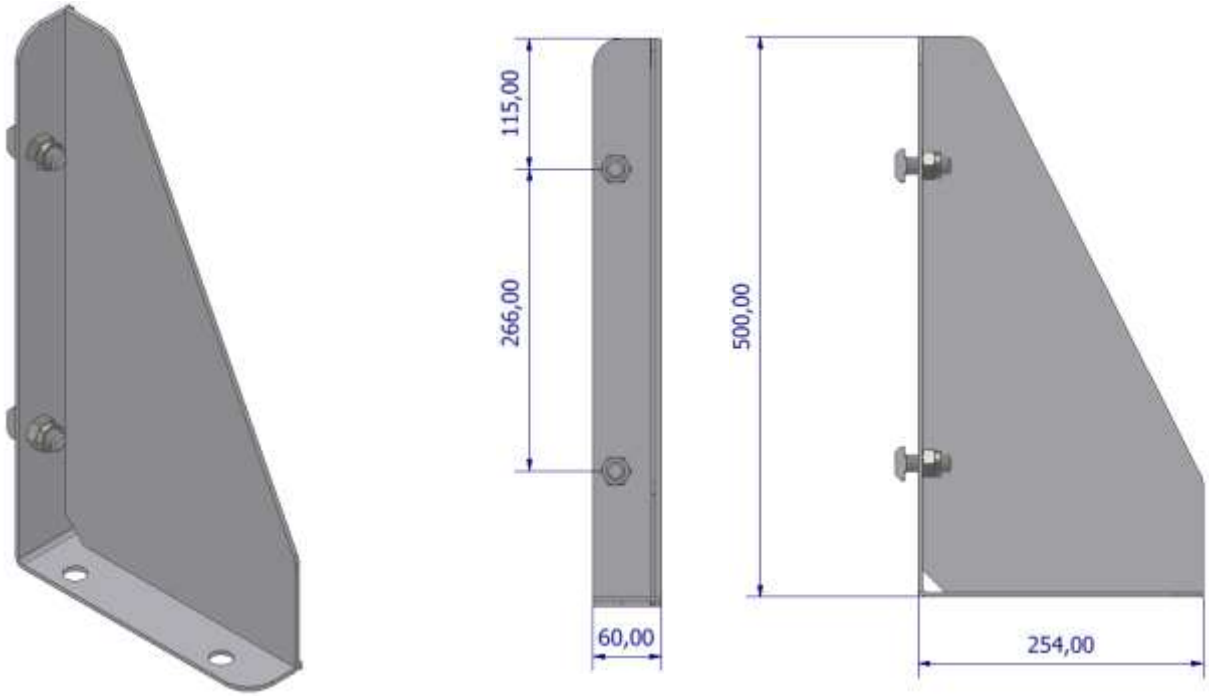
Tie rods

Ground-beam configuration with through tie rods positioned approximately every 1500 mm.

Panel assembly

Ground-beam trestle assembly

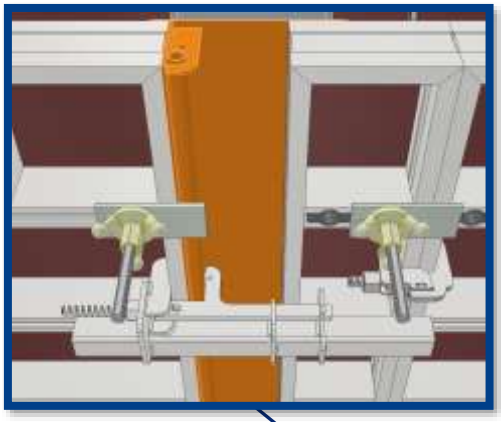




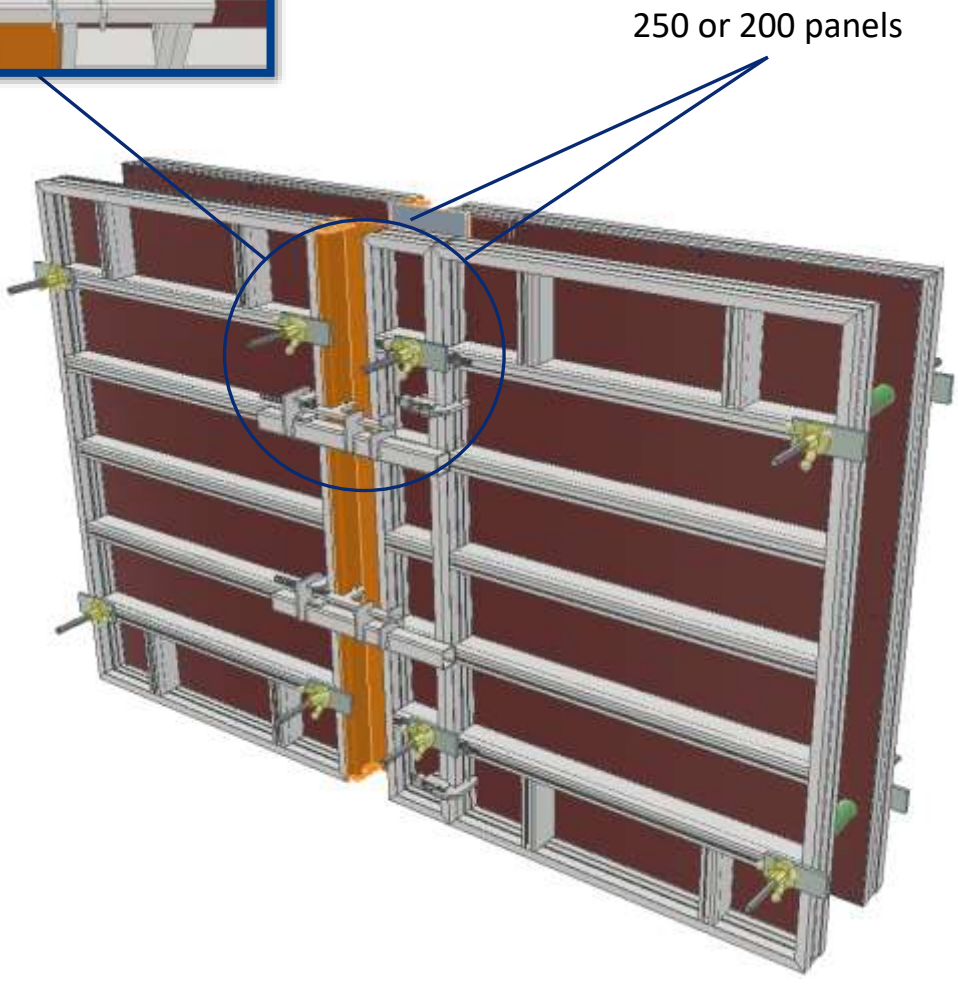
Place a trestle every 3 cross-members at regular intervals. Tighten the T-head bolts with a 24 mm spanner.

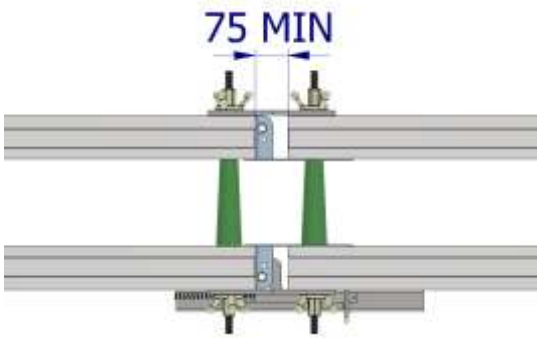
Panel assembly

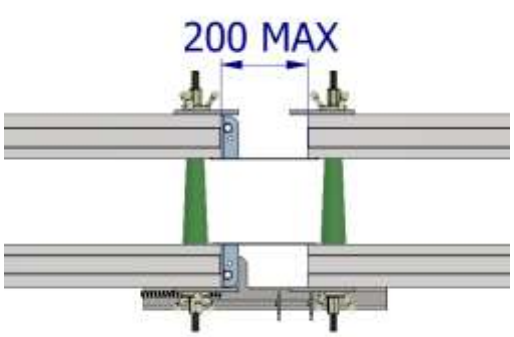
Filler plate



The filler plate allows the gap between two panels to be adjusted between 75 mm and 200 mm.

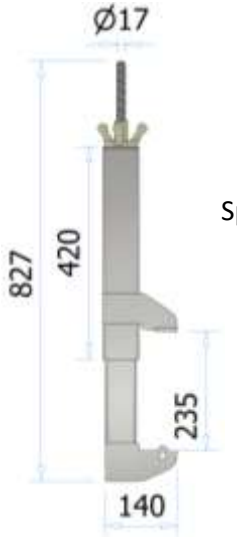






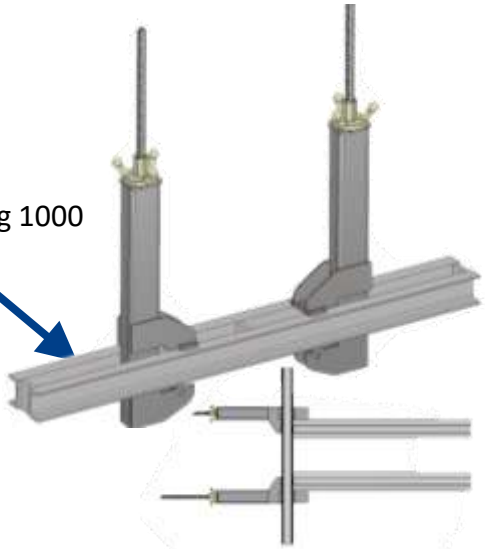
Panel assembly

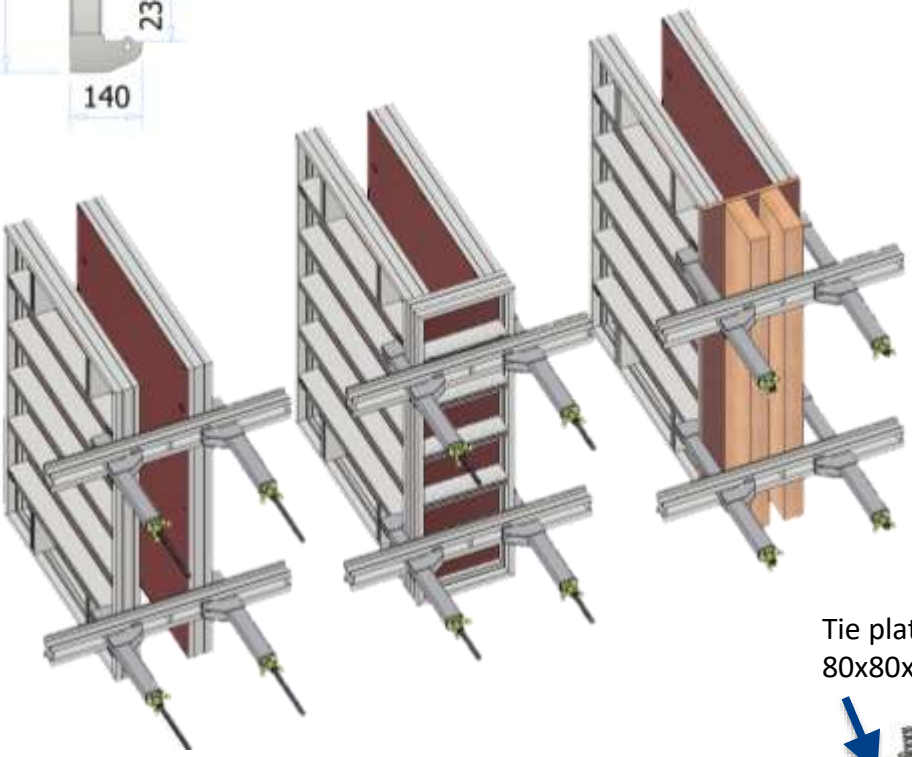
End rail and waling

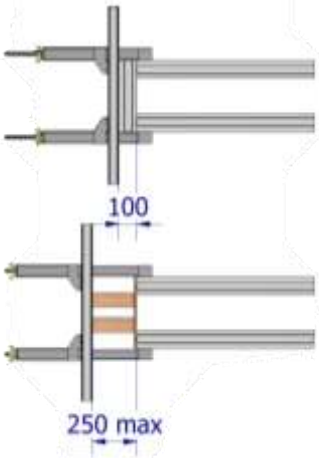


Special spacer-set clamp

Modalu waling Lg 1000

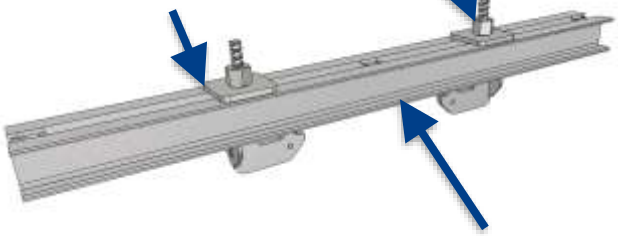






Tie plate
80x80x8

30 mm
spanner



End rail standard 1000 mm

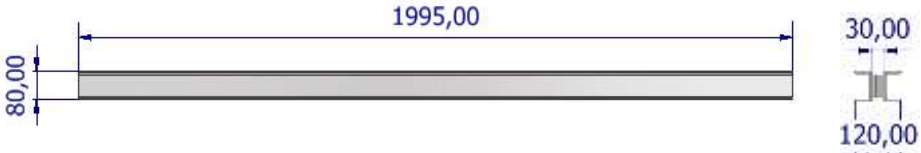
Modalu waling Lg 1000

Panel assembly

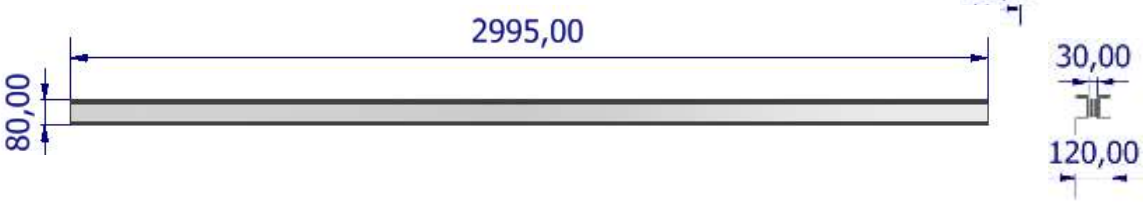
End rail and waling

1 m U60 waling

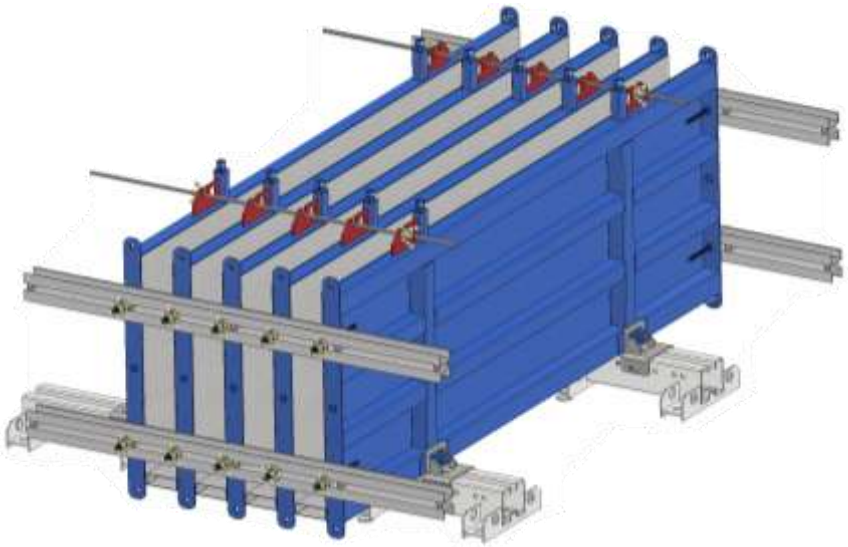
2 m U80 waling

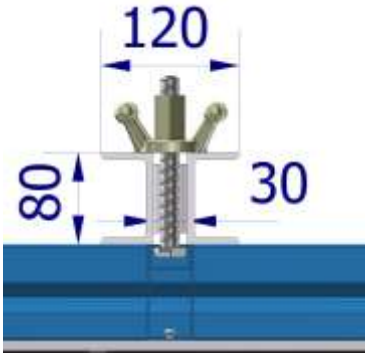


3 m U80 waling



The walings carry the loads during vertical or horizontal assembly.
The 3 m waling can replace the beams of GF panels.
The 2 m waling is also used as an end waling for our METAPREF.
The 1 m waling is often used as a wall stop.



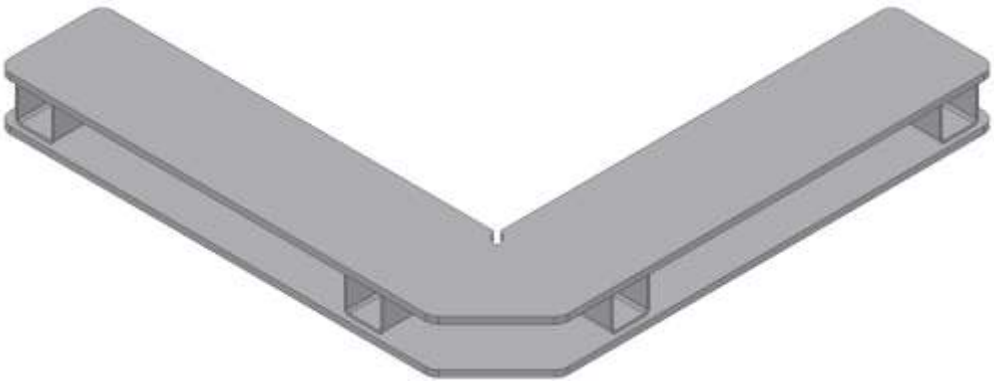


T-head bolt LG0150 (105245)
+ 3-wing nut D17

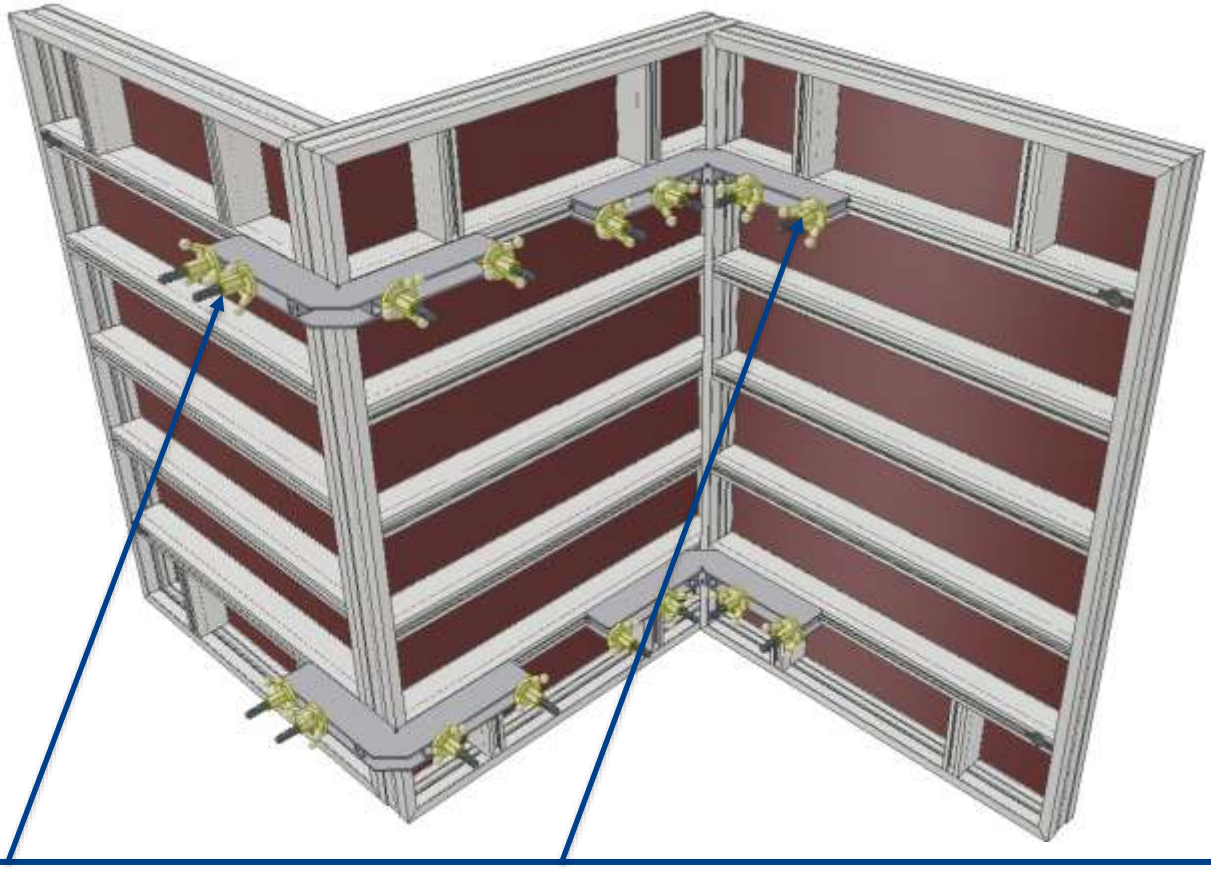
Panel assembly

Corner waling

0300x0300 corner waling, height 040 mm



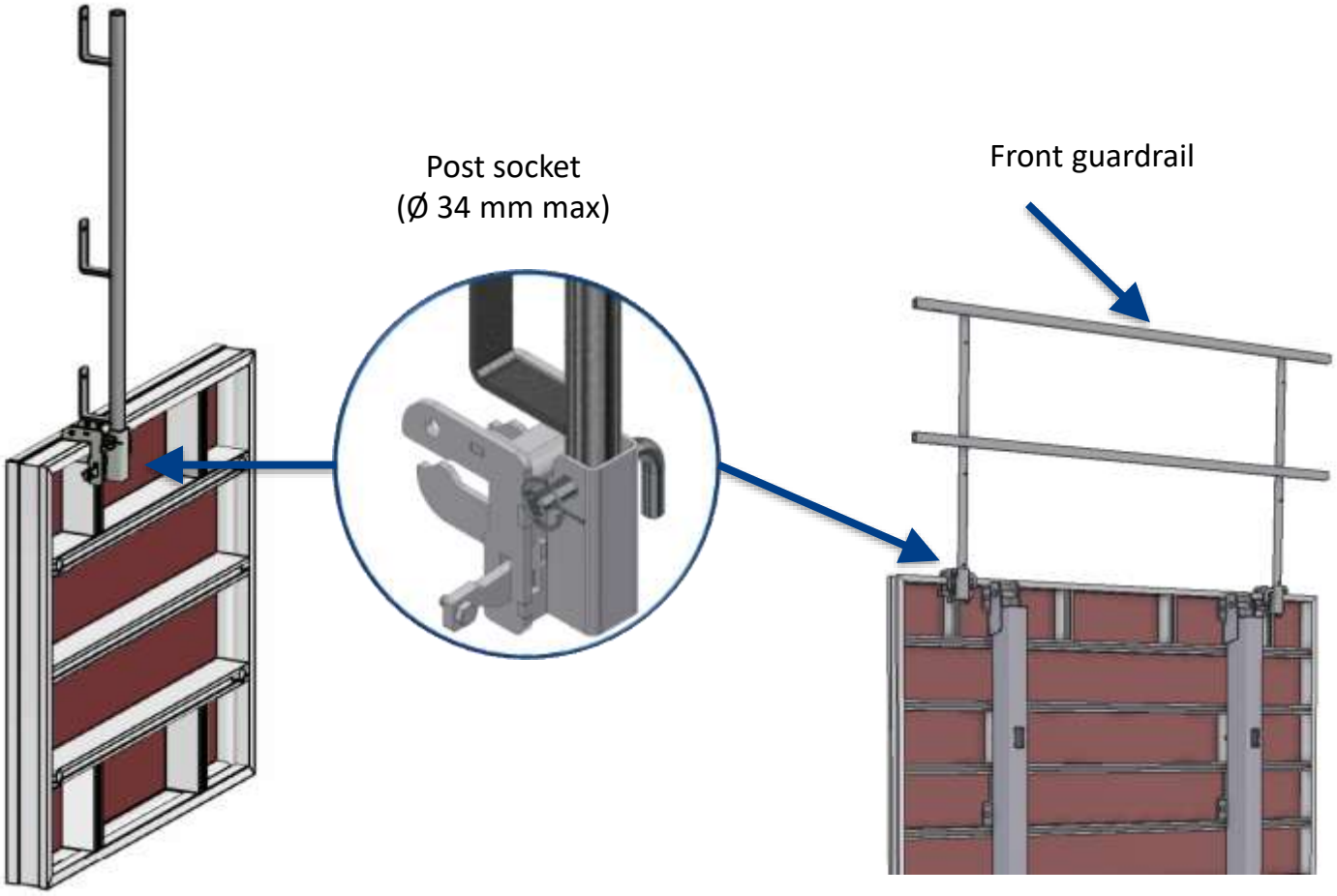
The corner waling reinforces formwork corners. It is used on both internal and external corners.



Fitted using T-head bolts (length: 150 mm) and 3-wing nuts. The corner waling can also be used with tie-rod holes.

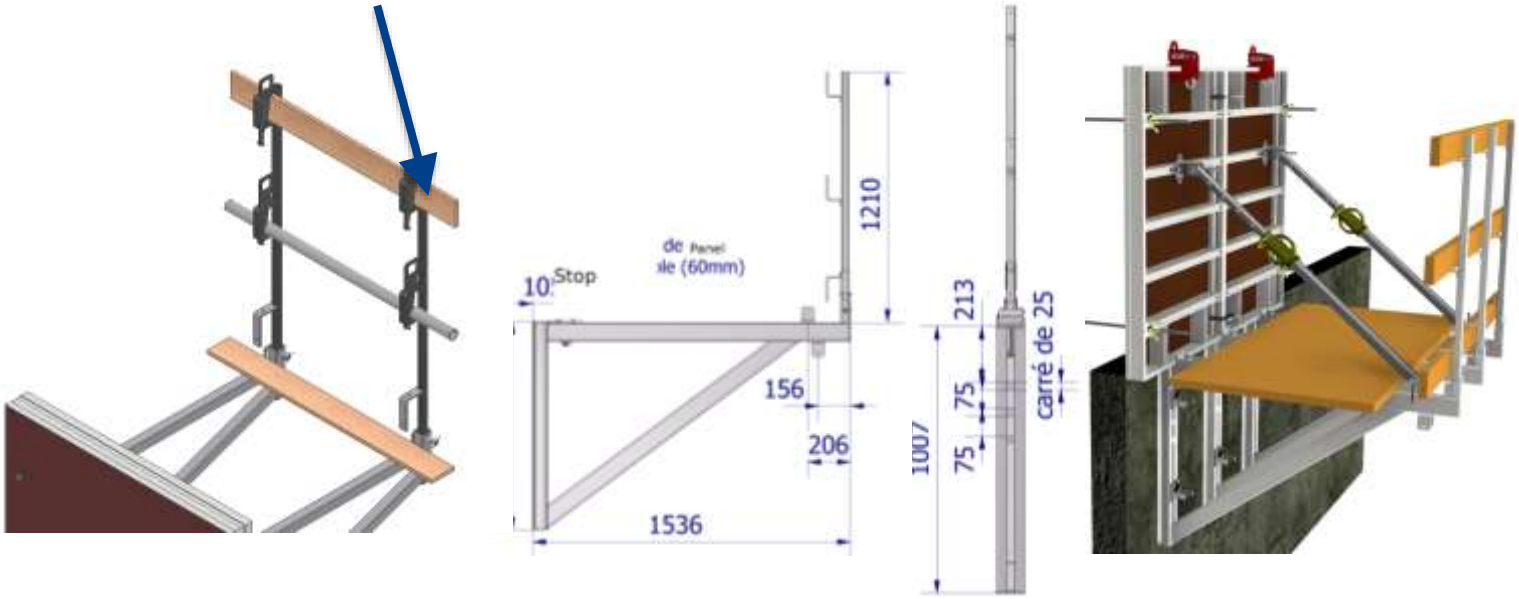
Safety

Post socket



Blocker
Max Tube: D40
Max Board: H100 EP20

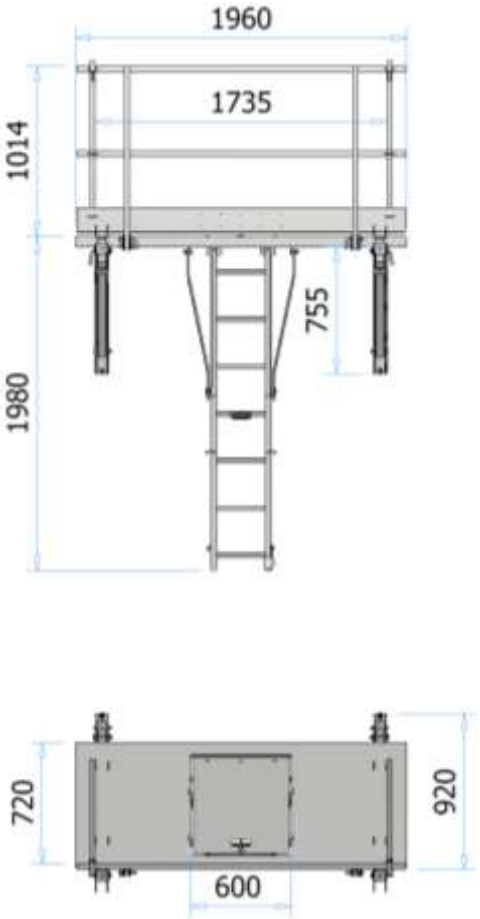
Reinforced panel support + guardrail post

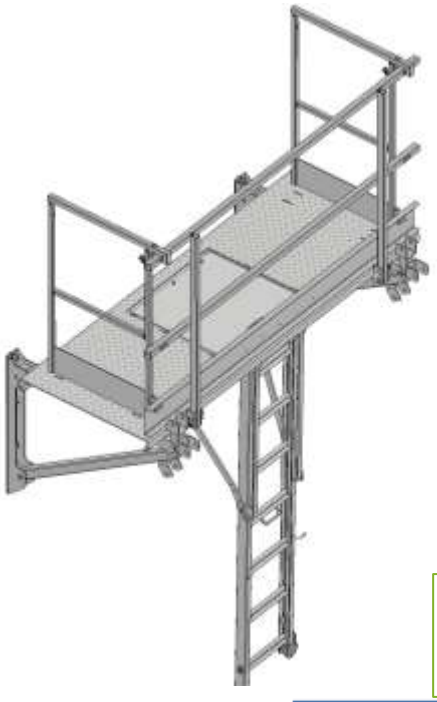


Safety

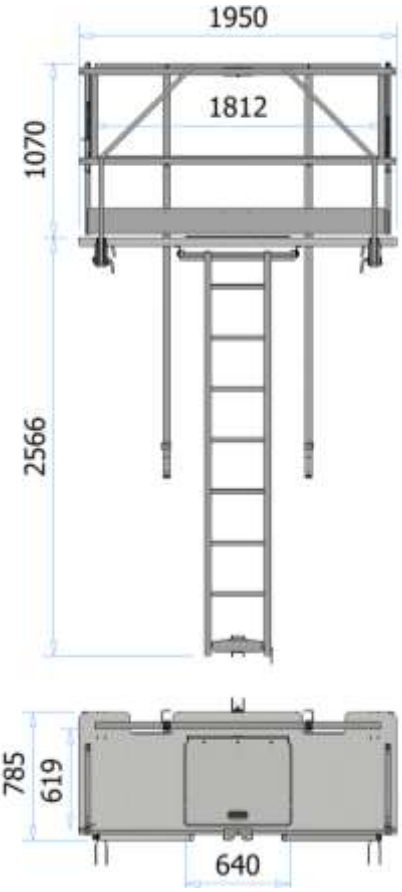
Safety steel GF V1/V2

GF V1





GF V2

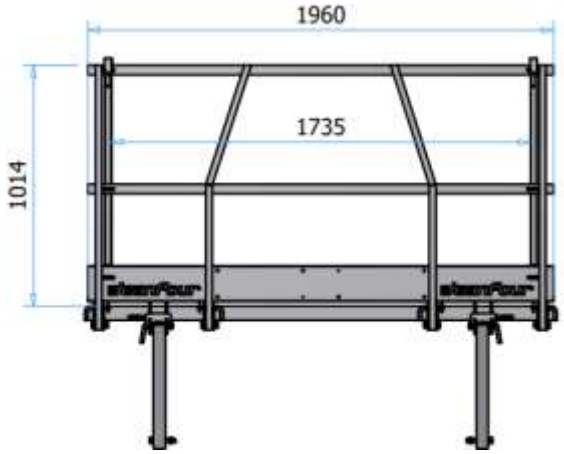


Access gates are optional

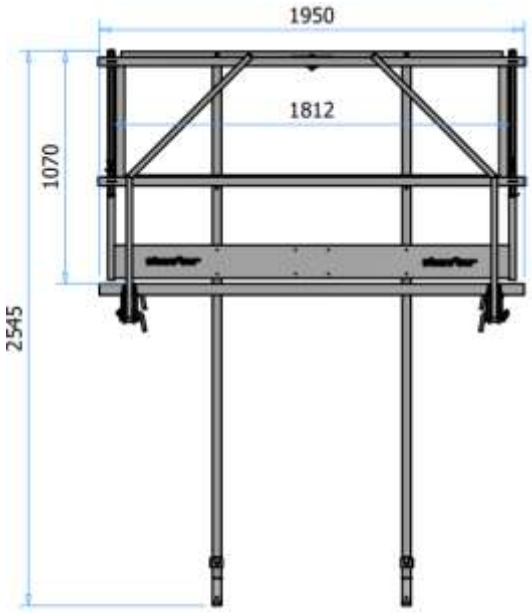
Safety

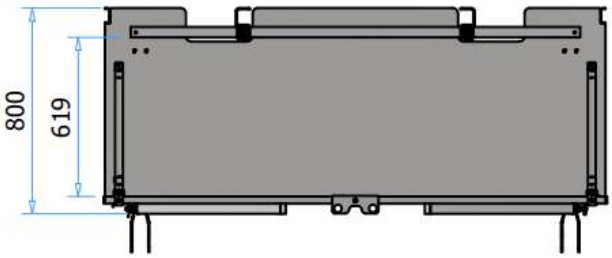
Steel safety without hatch GF V1/V2

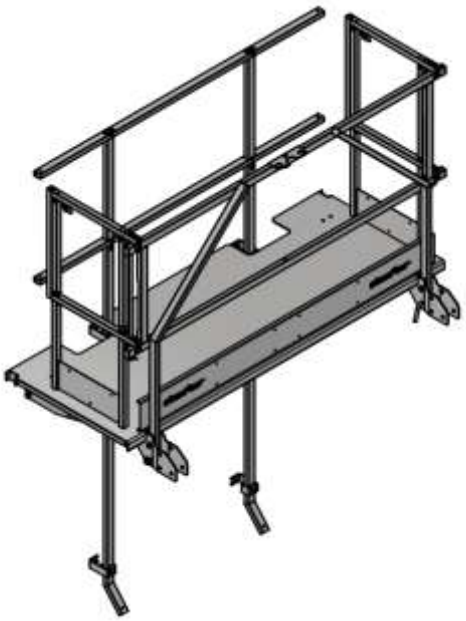
GF V1



GF V2

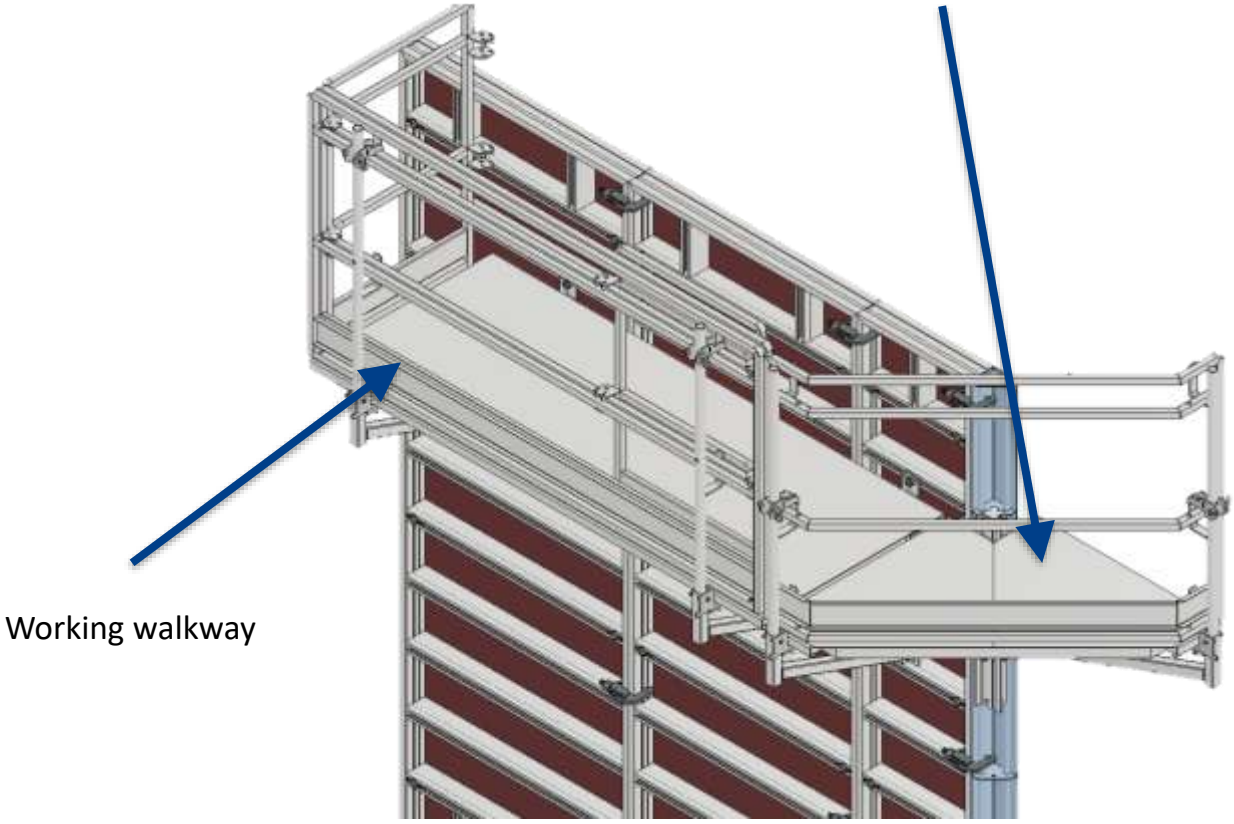


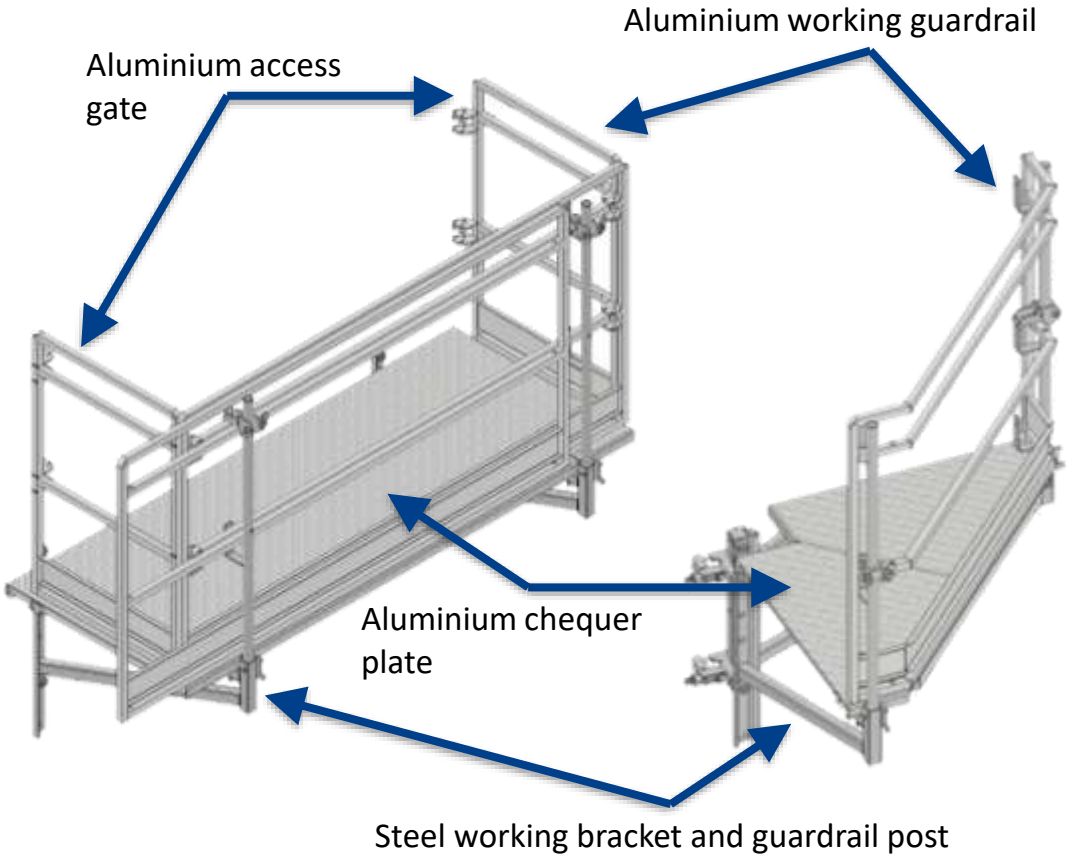




Safety

Safety aluminium straight + corner

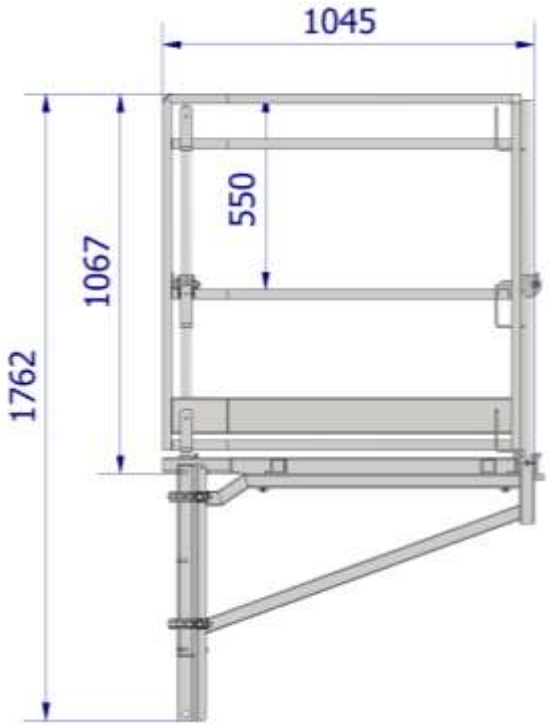


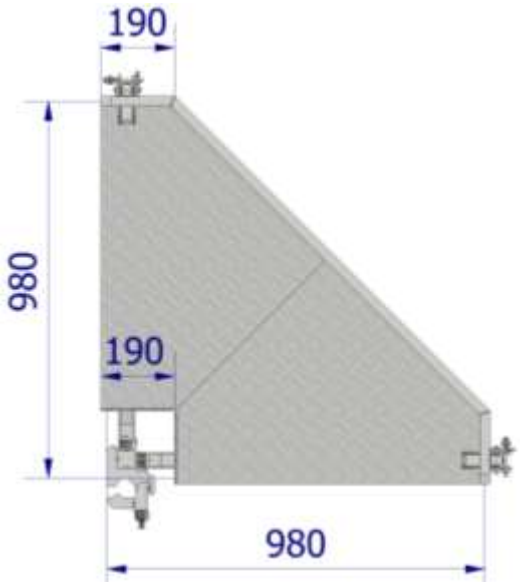


Safety

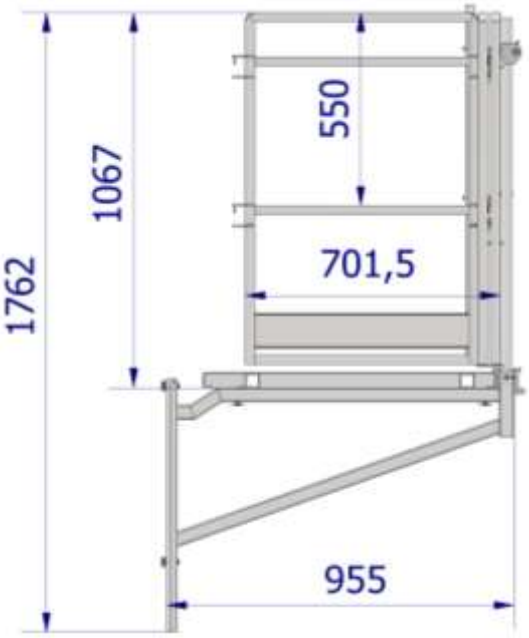
Straight decking + angle

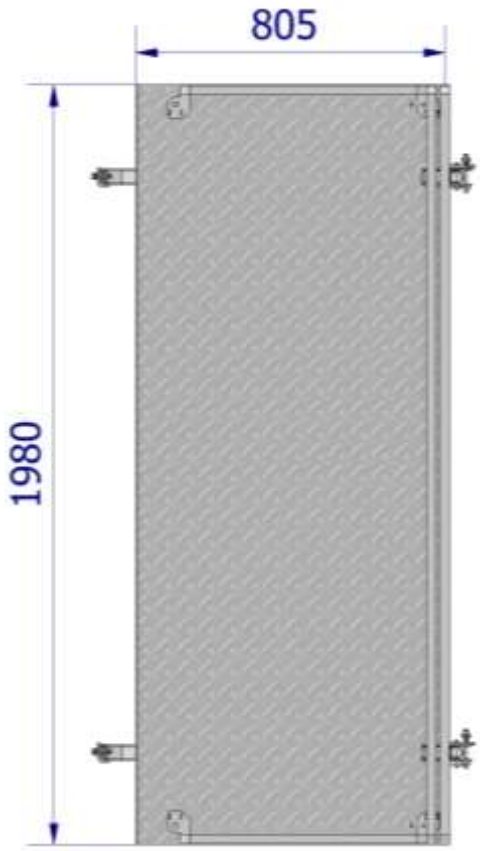
Safety walkway for external corner





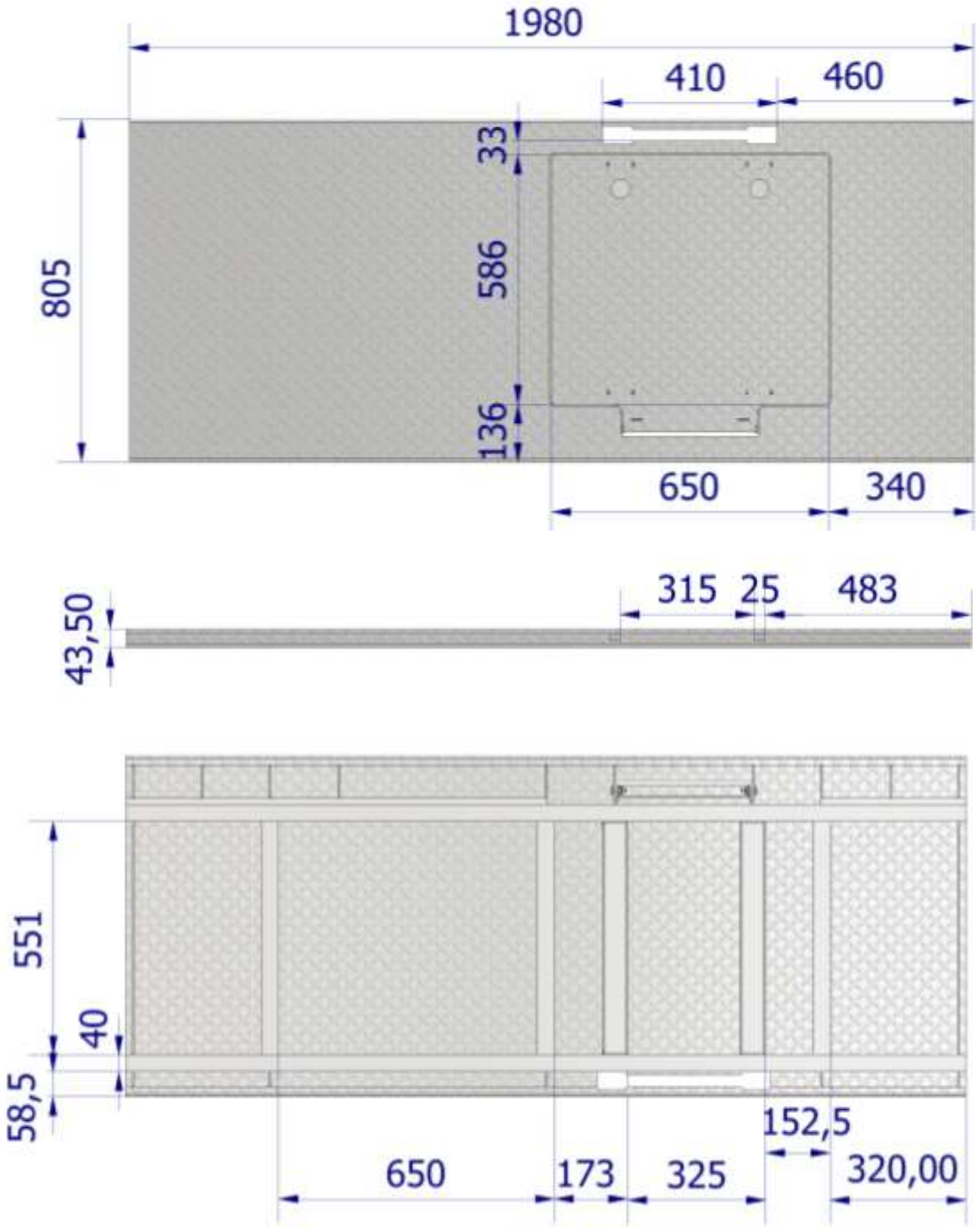
Safety walkway





Safety

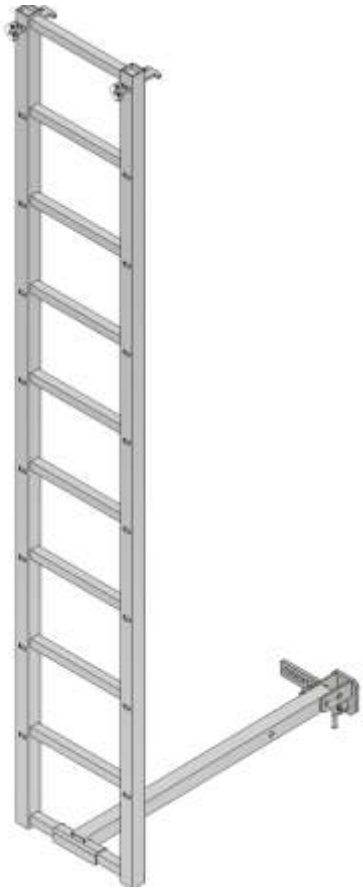
Aluminium decking dimensions with hatch

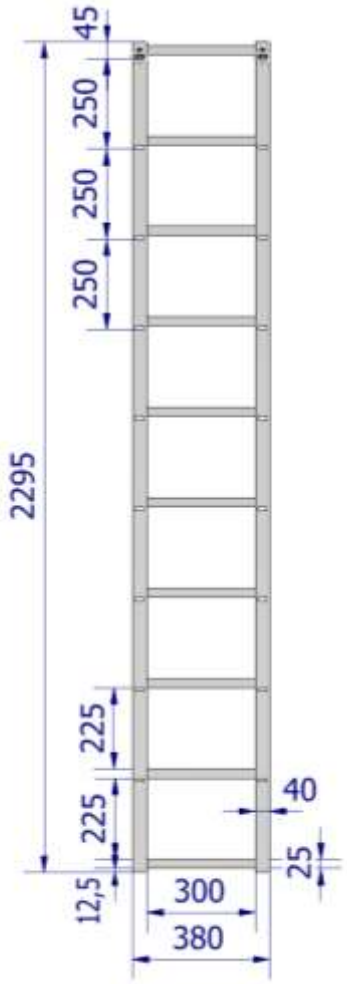


Safety

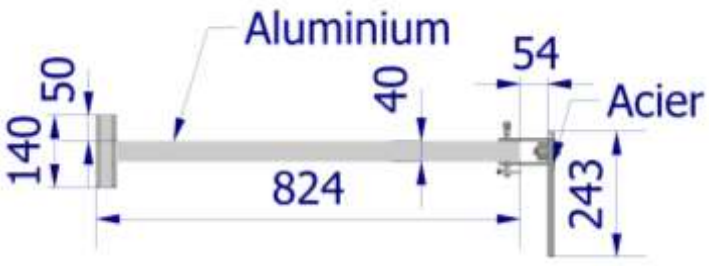
Aluminium ladder dimensions

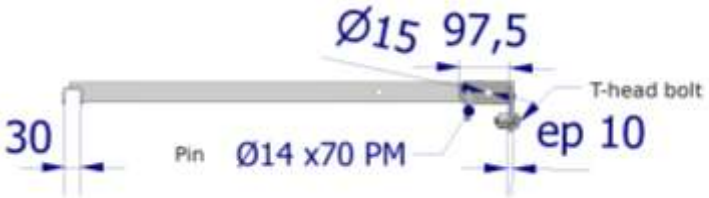
Ladder for working walkway with hatch



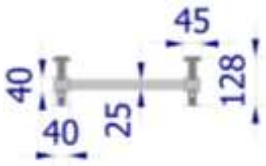


Ladder brace





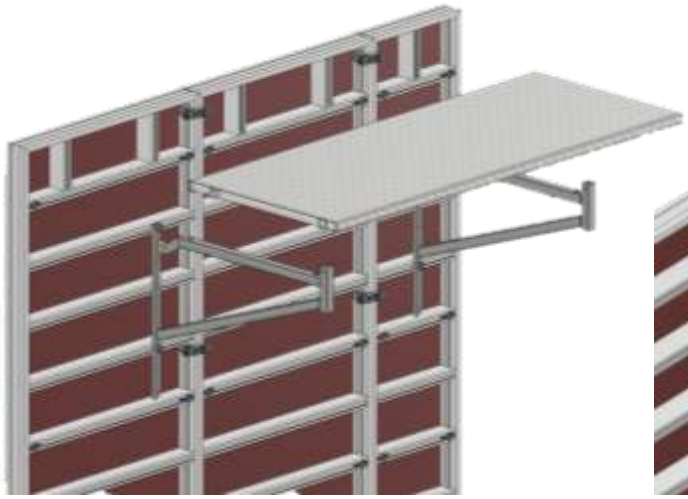
M16x40



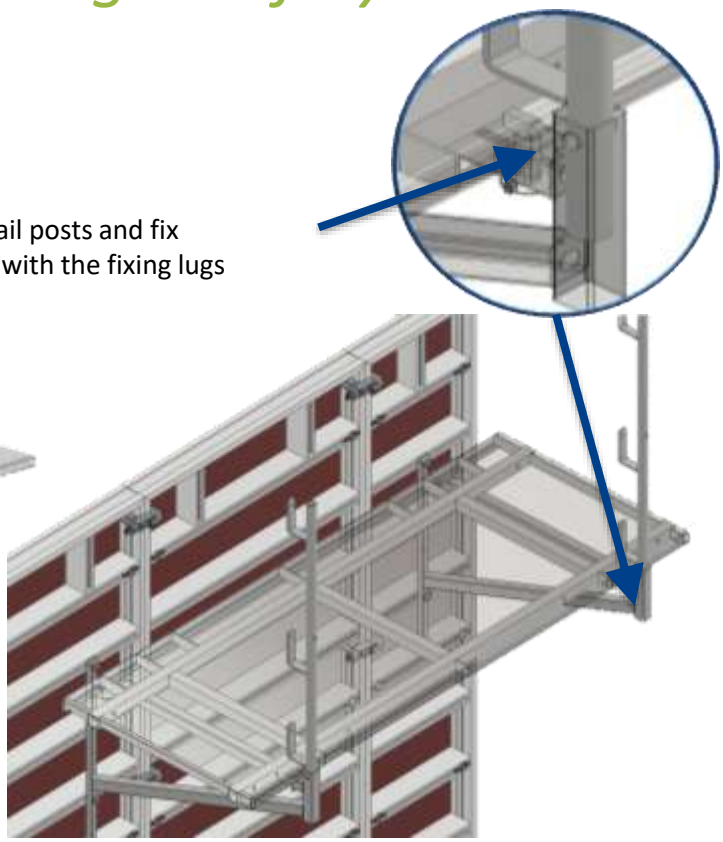
Safety

Assembly step, straight safety set

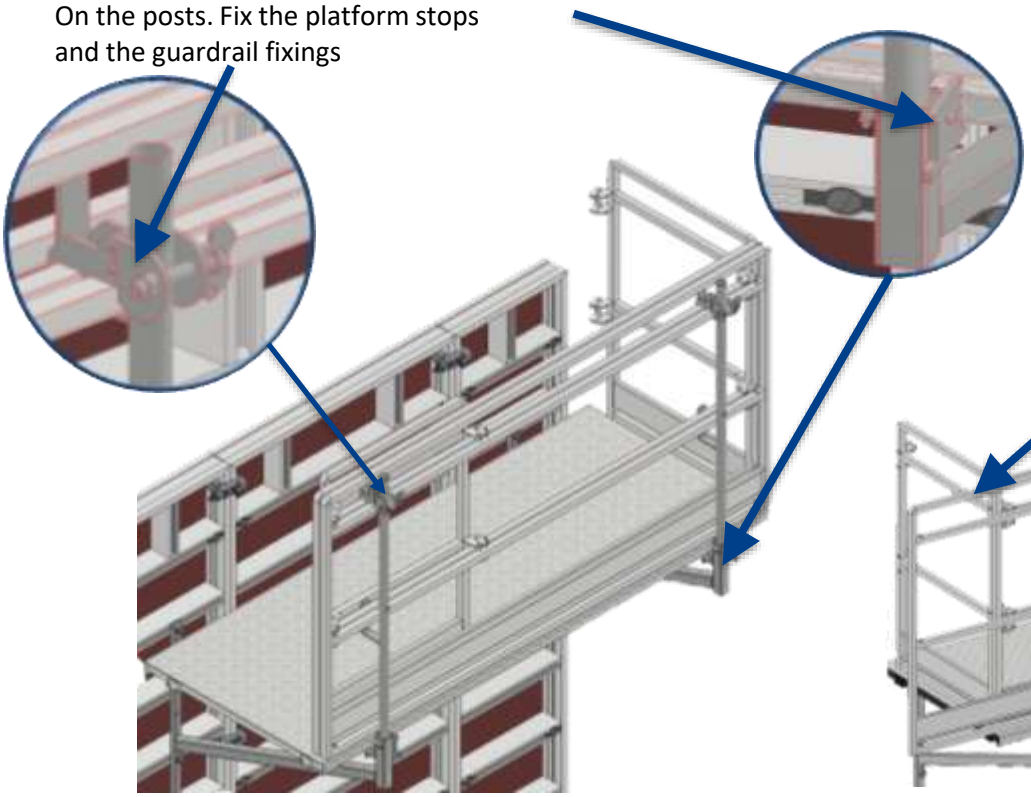
Etape 1 :
Screw the brackets onto the panels
Place the platform on the brackets



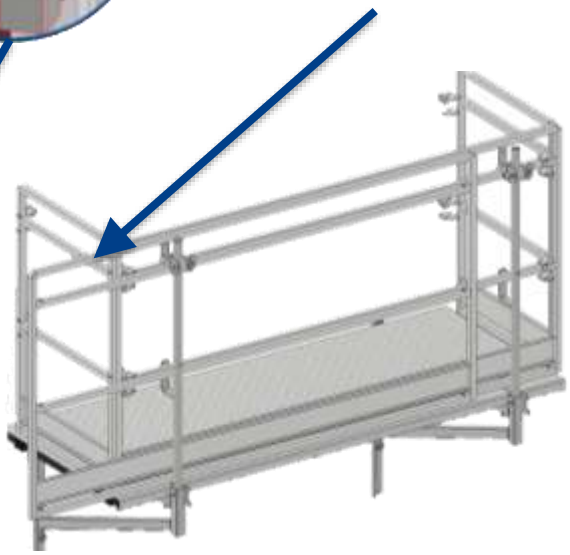
Etape 2 :
Fit the guardrail posts and fix
the platforms with the fixing lugs



Etape 3 :
Position the guardrail and access-gate set
On the posts. Fix the platform stops
and the guardrail fixings



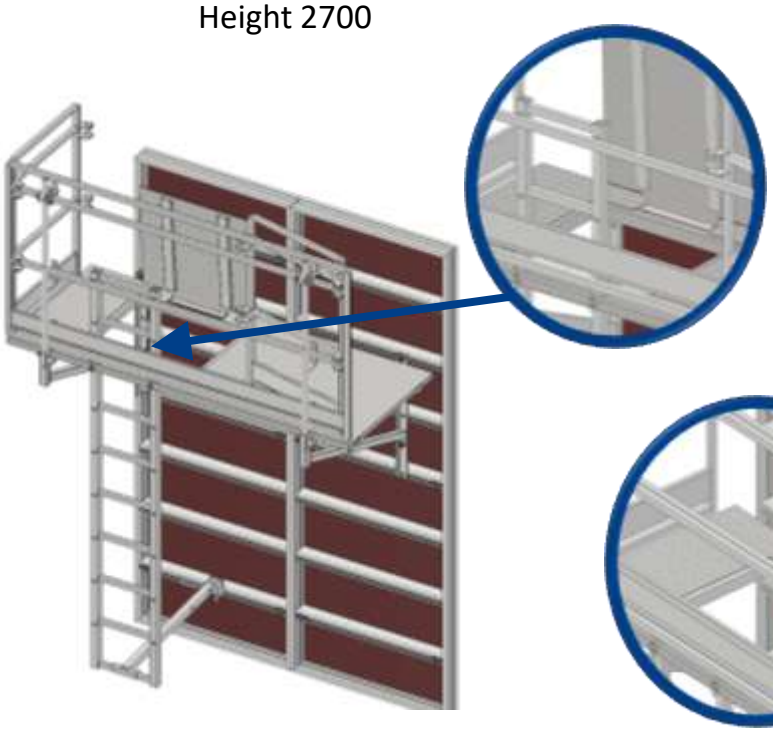
Double guardrail.
It is possible to fill the
espaces entre deux passerelles
by sliding the second
guardrail



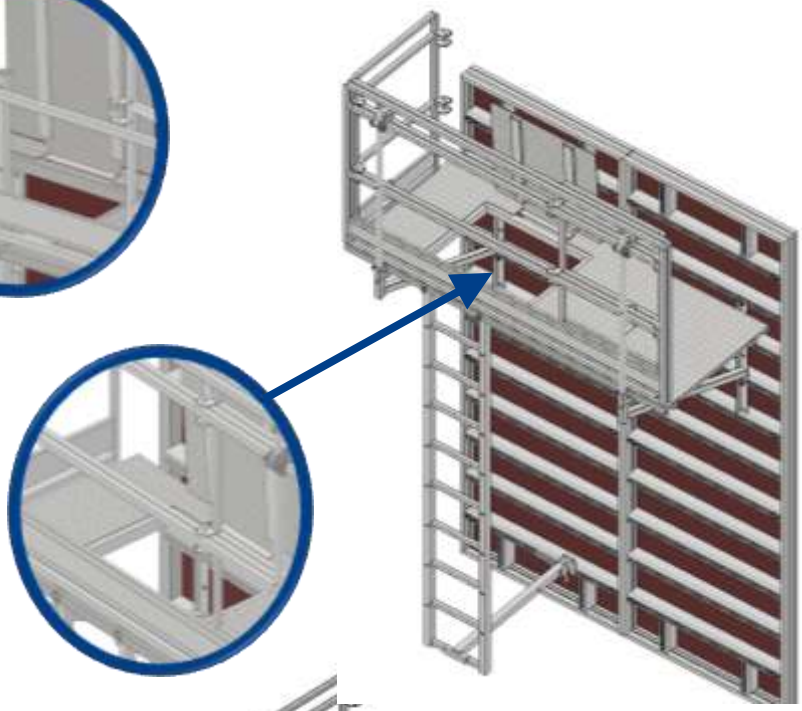
Safety

Assembly step, safety set with hatch

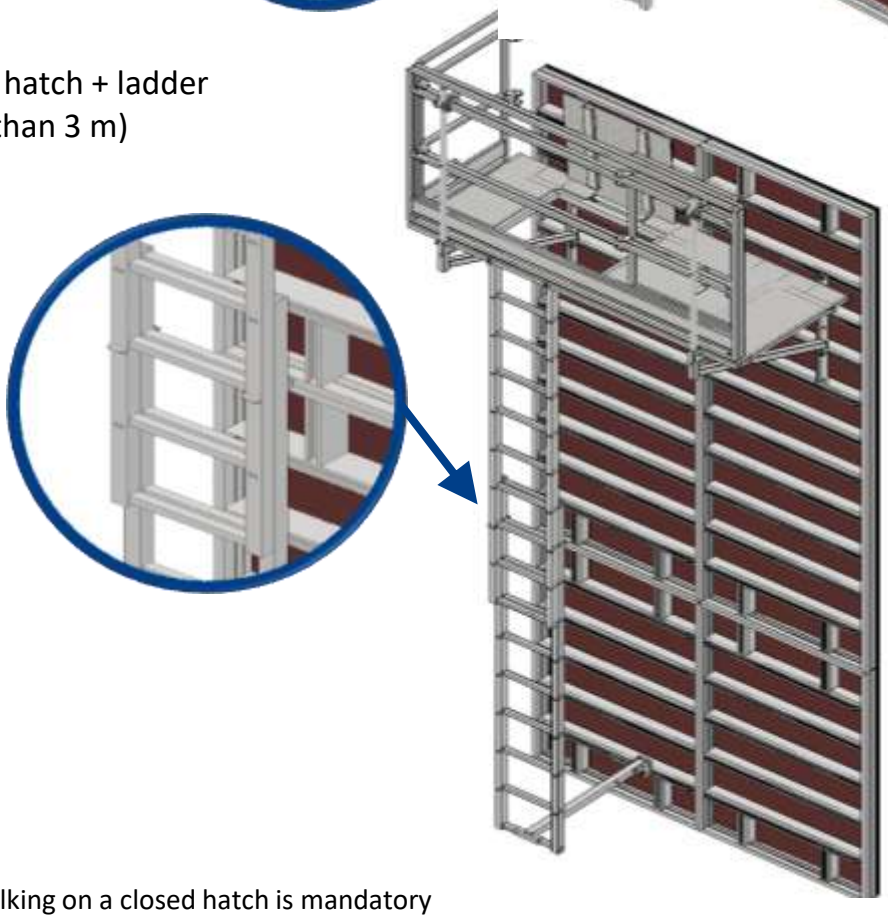
Working walkway with hatch + ladder
Height 2700



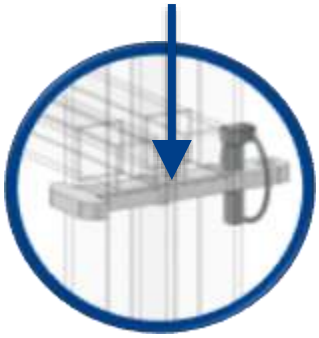
Working walkway with hatch + ladder
Height 3000



Working walkway with self-tilting hatch + ladder
Stacking (more than 3 m)



Joining two ladders
using locking latches

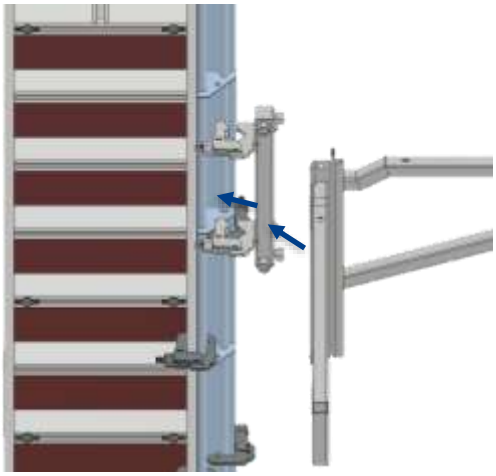


Walking on a closed hatch is mandatory

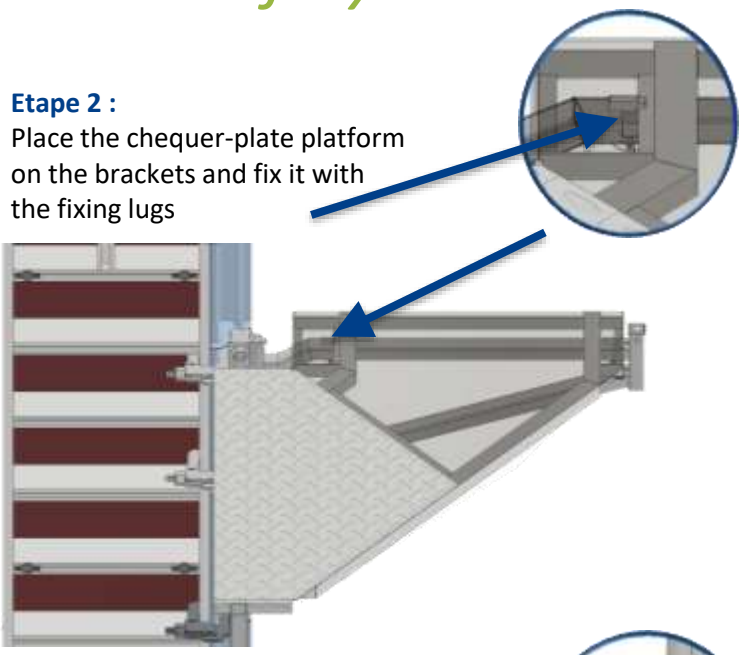
Safety

Assembly step, corner safety set

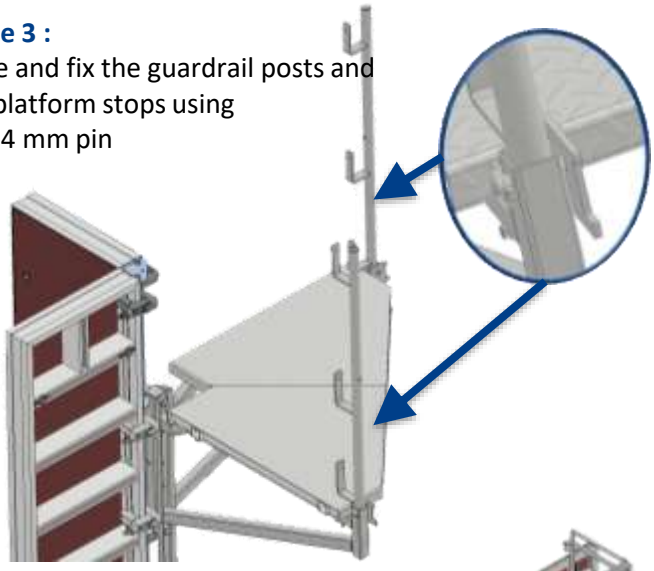
Etape 1 :
Screw the bracket fixing support onto the external corner, then the two brackets onto the support



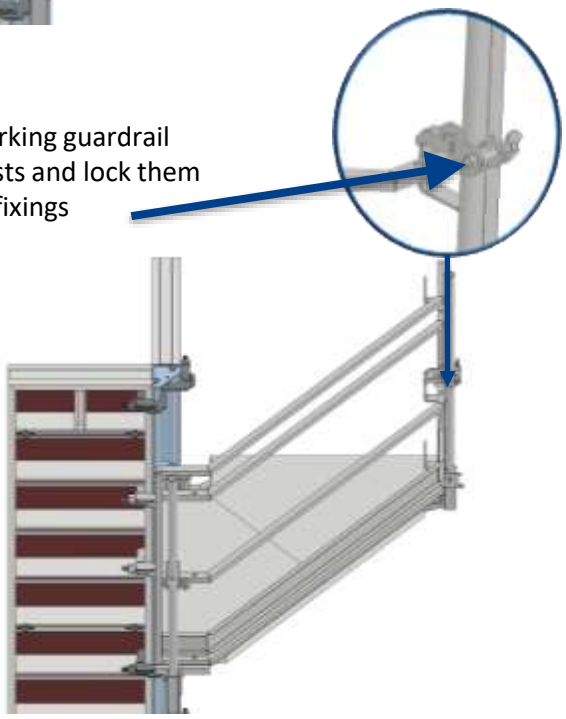
Etape 2 :
Place the chequer-plate platform on the brackets and fix it with the fixing lugs

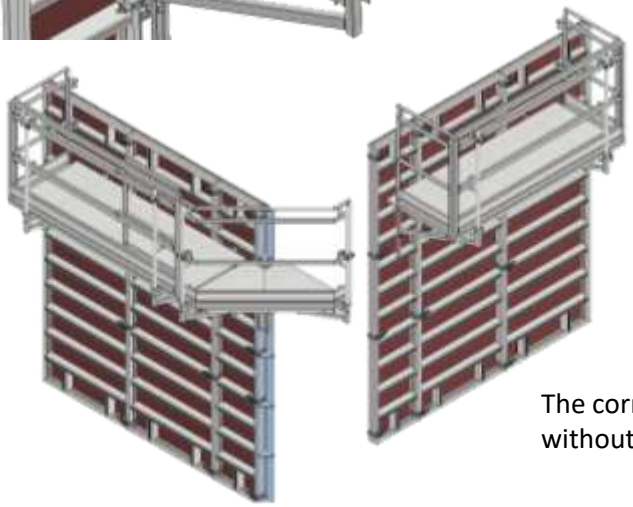


Etape 3 :
Place and fix the guardrail posts and the platform stops using a Ø14 mm pin



Etape 4 :
Fit the working guardrail on the posts and lock them using the fixings



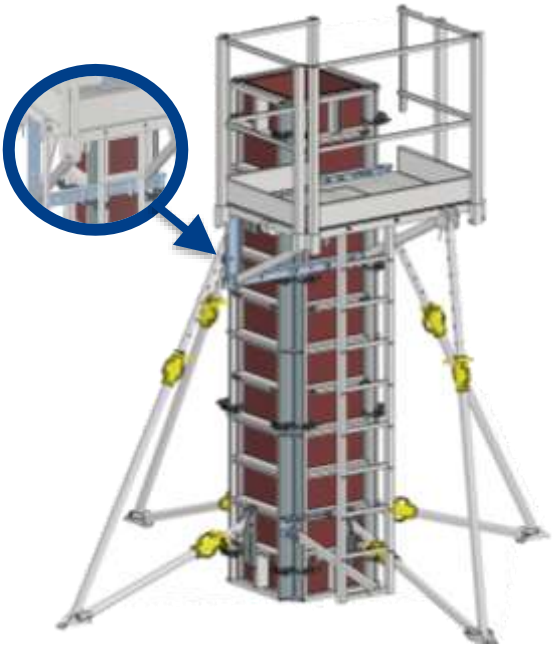


The corner can be stripped without removing the corner safety set

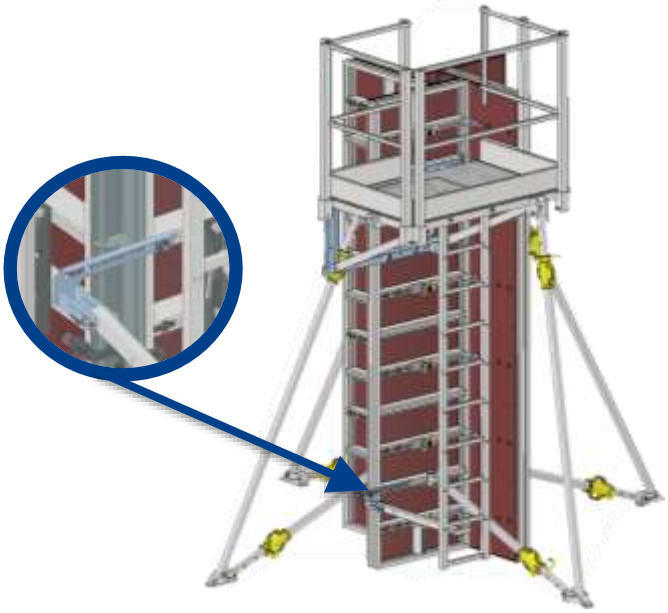
Safety

Aluminium safety set for column

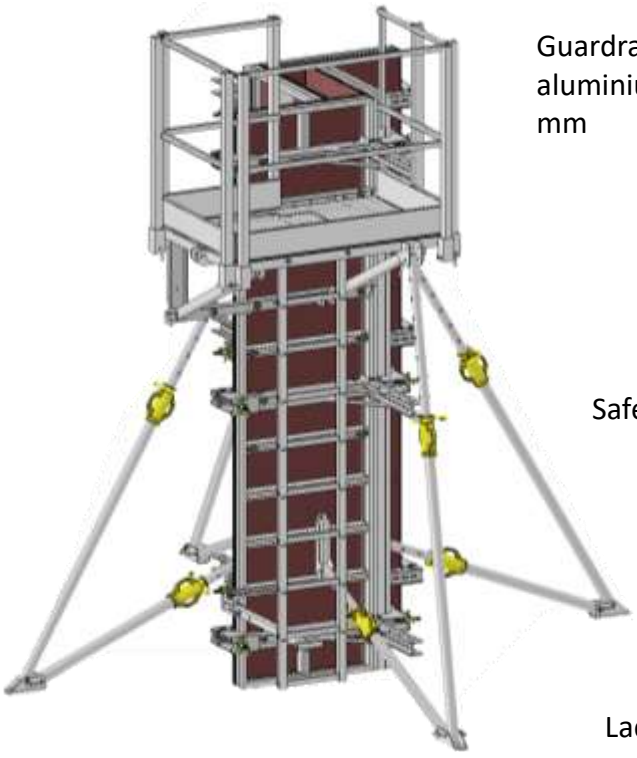
Column 500x500 with external corner



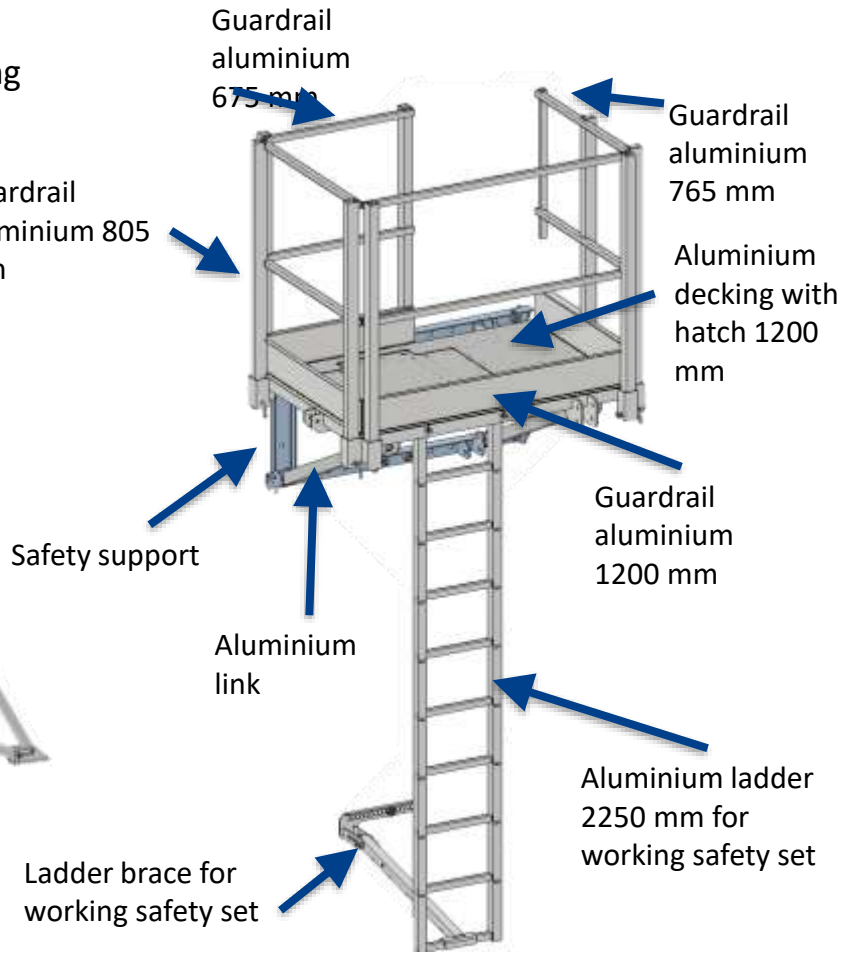
Column 200x200 with Multi-hole panel 750x3000



Column 200x650 with windmill-wing clamp 200 to 650

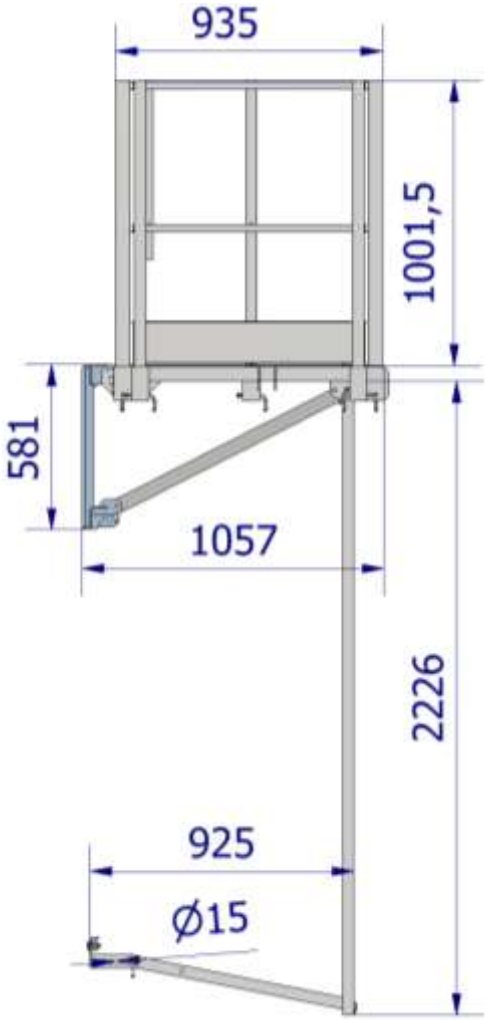


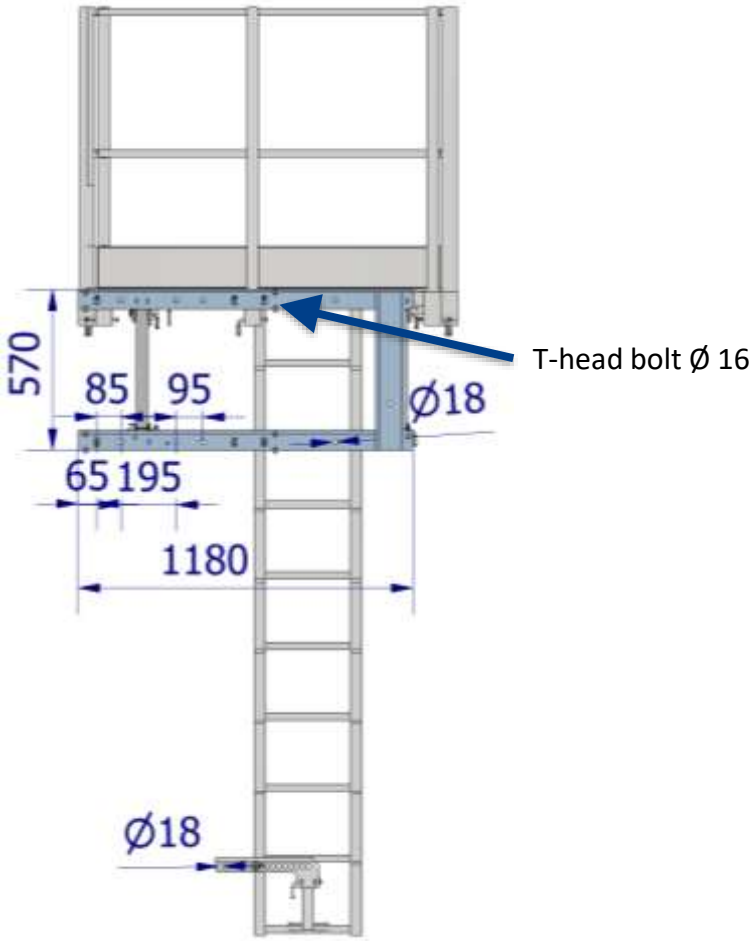
Walking on a closed hatch is mandatory

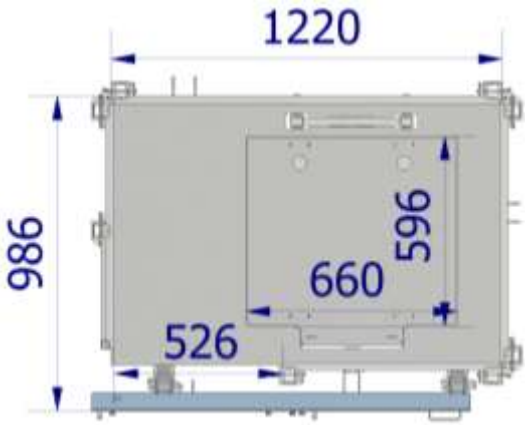


Safety

Aluminium safety set for column







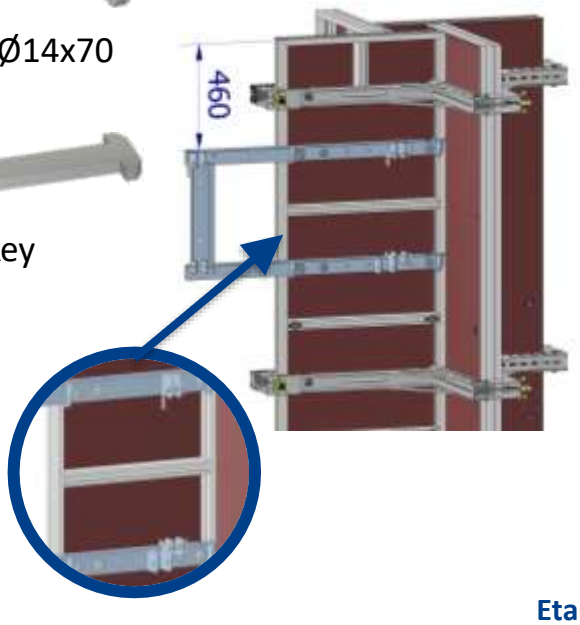
Safety

Aluminium working decking for column

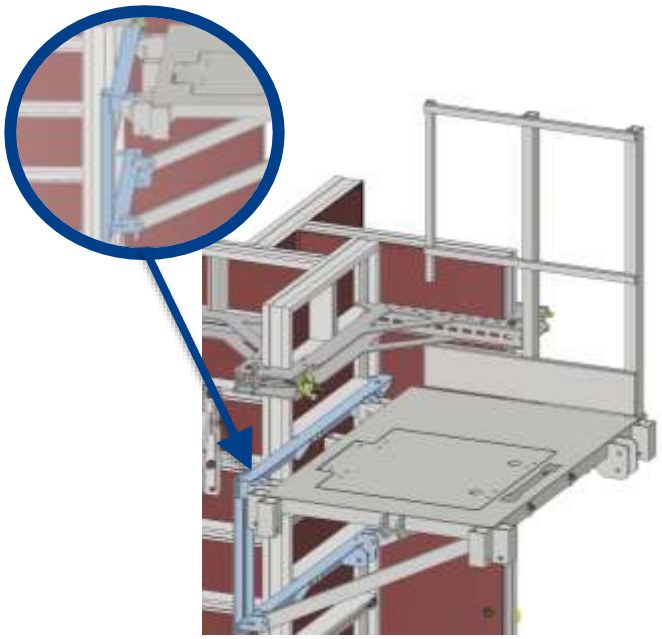
Assembly step on column 200x200 with windmill-wing clamp 200-650

Etape 1 :
Follow the windmill-wing clamp assembly steps, adding the column safety support to a panel. Fix it 460 mm from the top of the column using Ø16 T-head bolts.

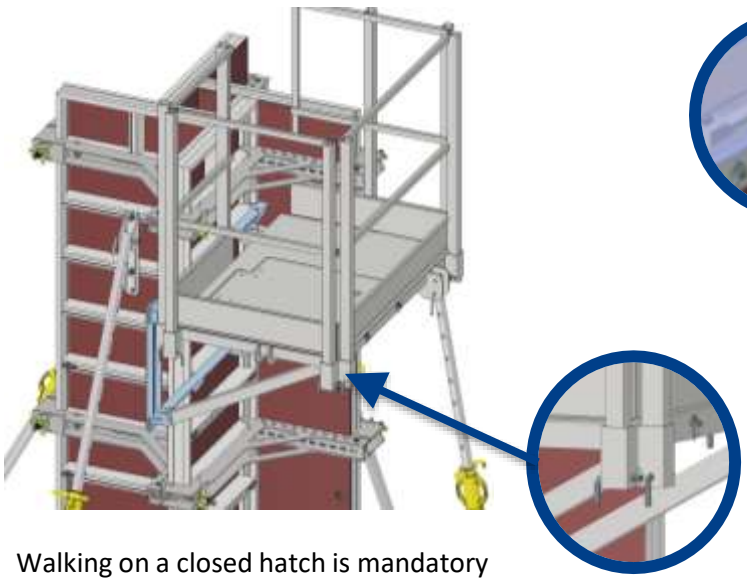
Locking key



Etape 2 :
Fit the aluminium decking with 1250 mm hatch, complete with links and the notched guardrail. Fix them with Ø14 pins.

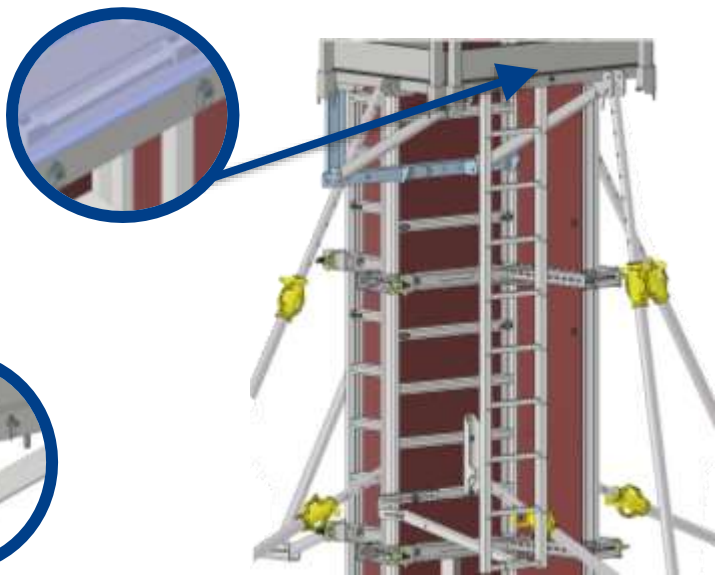


Etape 3 :
Position the rest of the guardrail and the prop on the socket at the rear of the decking. Fix them with Ø14 pins.



Walking on a closed hatch is mandatory

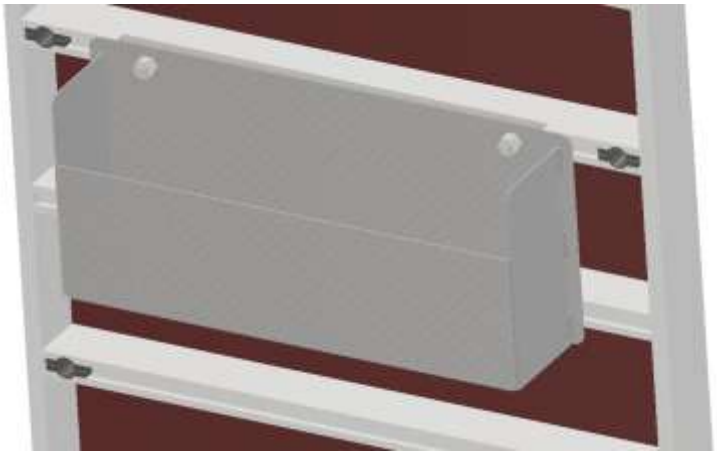
Etape 4 :
Insert the ladder into the platform at the place provided and lock it with the locking keys. Then fit the ladder brace with T-head bolts on the panel to stabilise it.

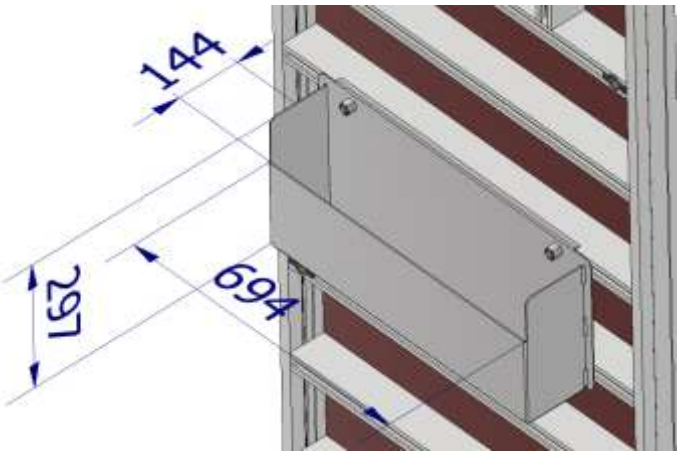


Safety

Accessory box

The Accessory Box for Formwork Panels is a robust, modular storage solution designed to mount directly on formwork structures (columns, panels). It organises the essential equipment for assembly and installation on site.





Self-locking pin

The self-locking pin is a fast, robust and secure fastener, essential for assembling and aligning your formwork panels and accessories on site. Fitted with a tilting catch at one end, the pin is inserted in a single movement through the holes of the profiles to be joined. Once inserted, the catch swings down naturally by gravity and locks the device automatically. This mechanism prevents any accidental removal, ensuring perfect retention during concrete pouring and vibration.

Key benefits
Optimal safety: the gravity-locking system ensures a reliable, anti-release assembly.

Time saving: fitting and removal are instant and require no tools (no hammer, no spanner).

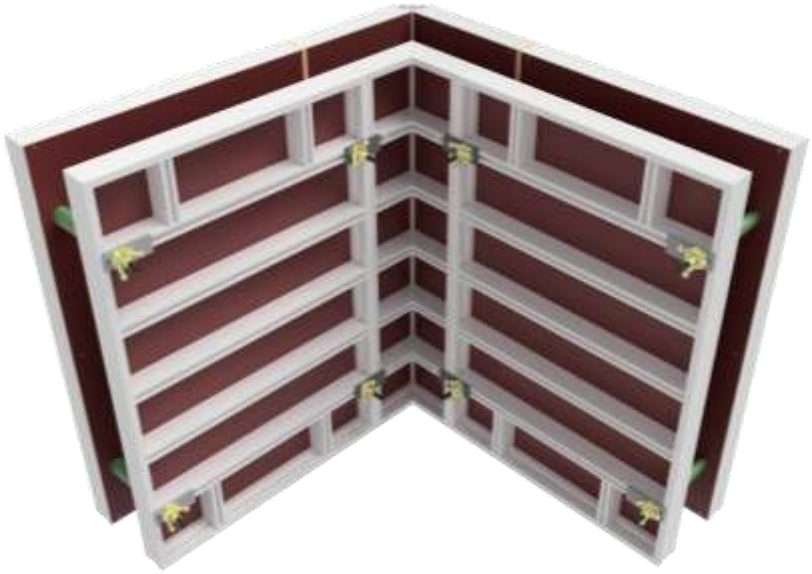
Ergonomics: its bent handle gives an intuitive grip and makes handling easier for operators, even wearing protective gloves.

Robustness: made of high-strength steel to withstand extreme mechanical stresses and the impacts inherent in structural work.

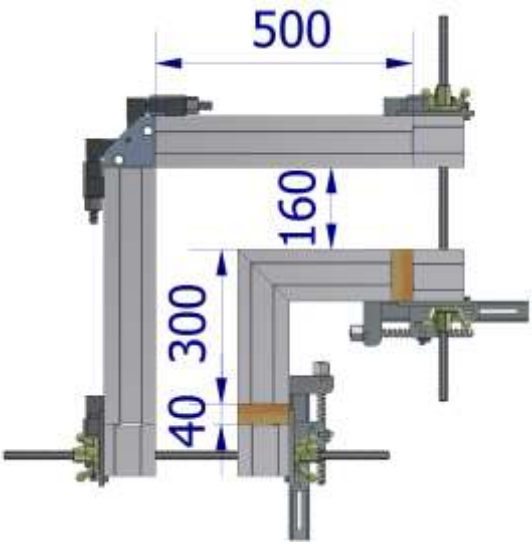
Optional accessory only.

Configuration en angle

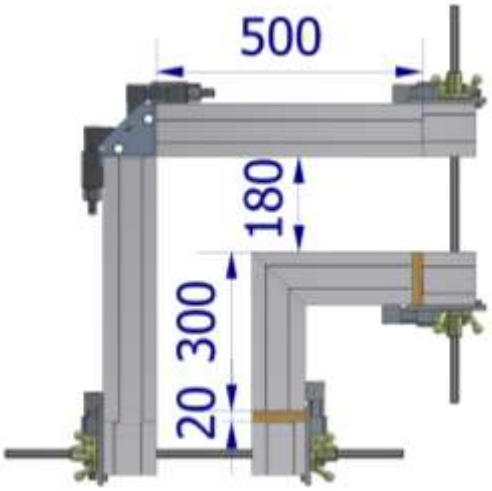
Internal corner



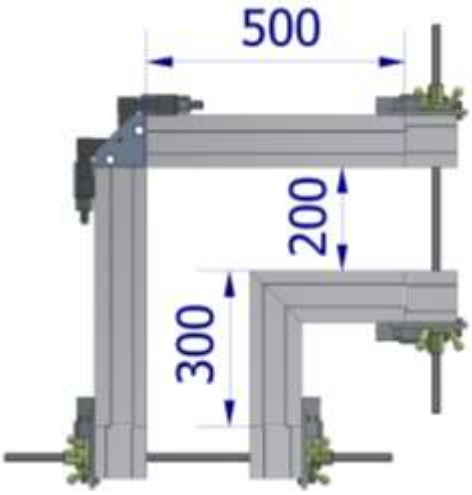
Wall thickness 160



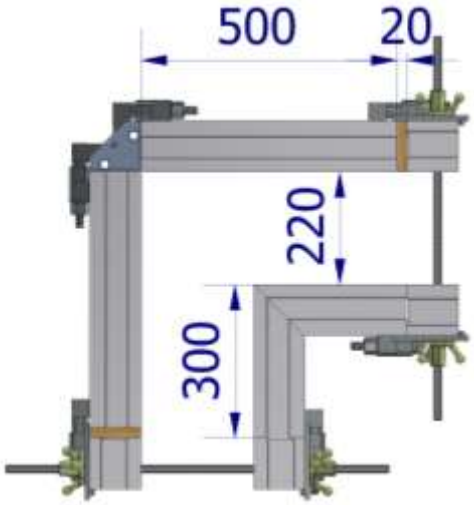
Wall thickness 180



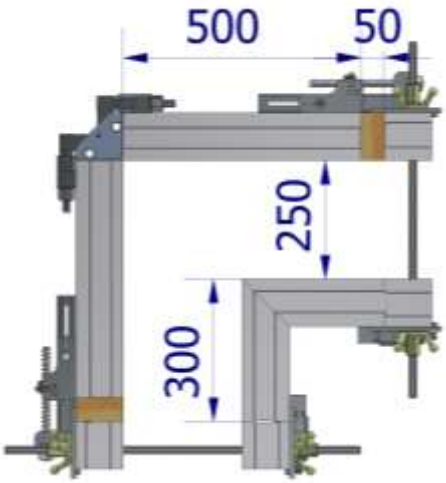
Wall thickness 200



Wall thickness 220



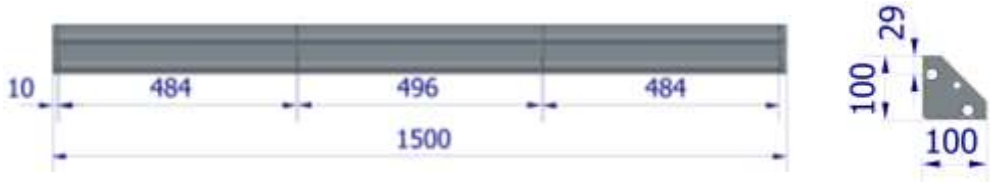
Wall thickness 250

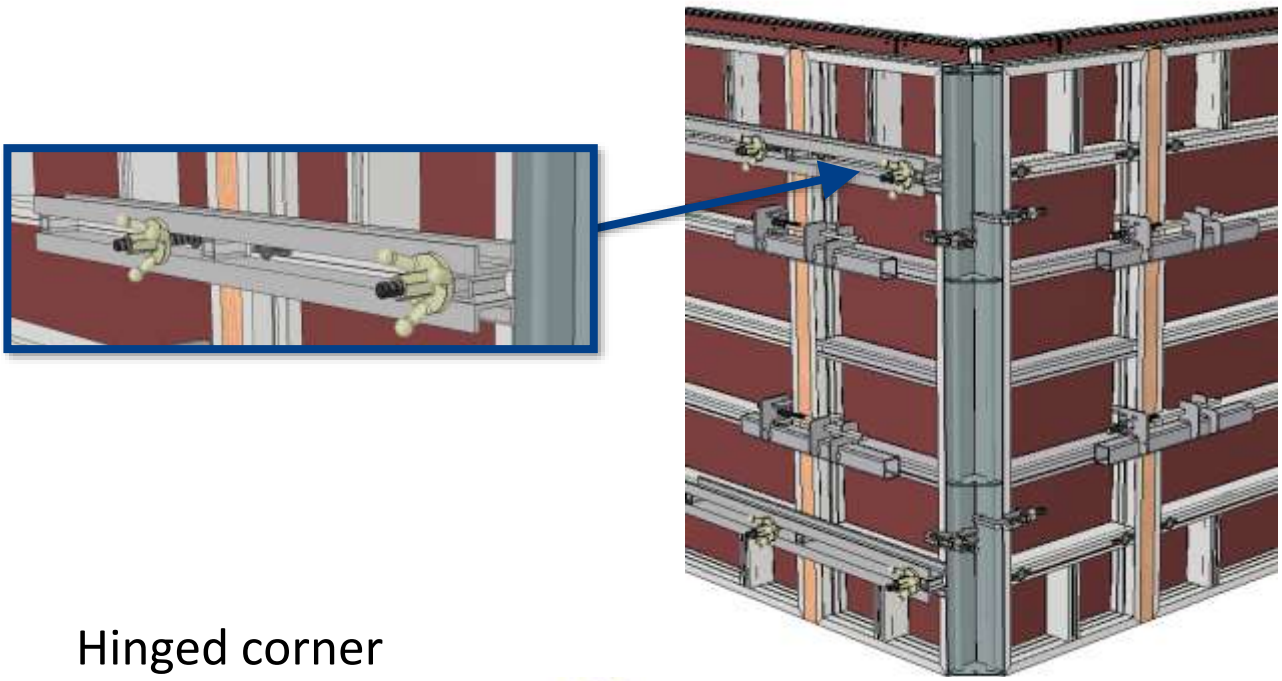


Corner configuration

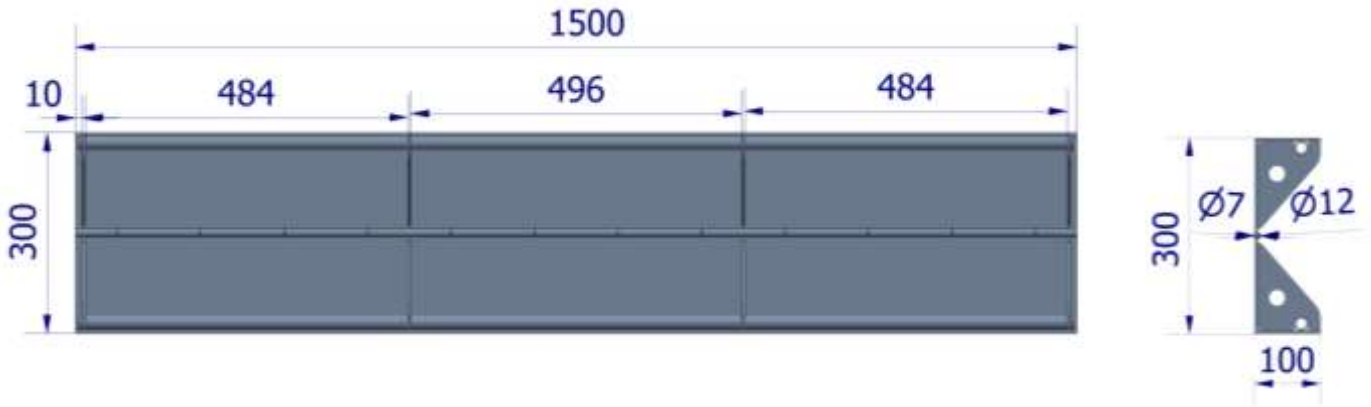
External corner

When using packing at the limit of the assembly clamps' range, and for better retention, it is advisable to use walings.





Hinged corner



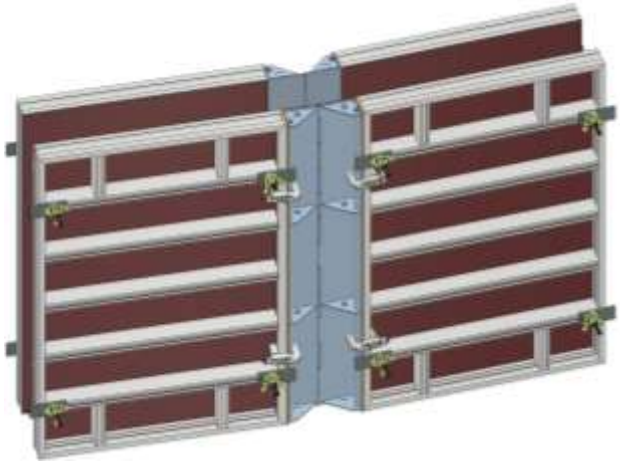
Corner or radius configuration

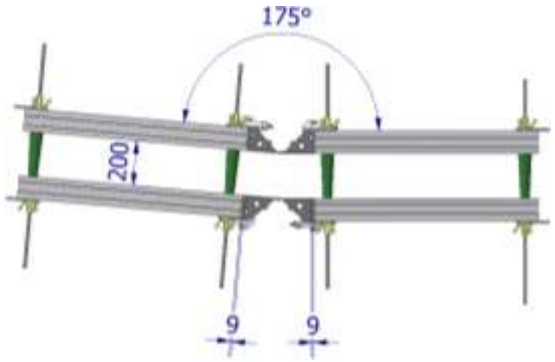
Hinged corner

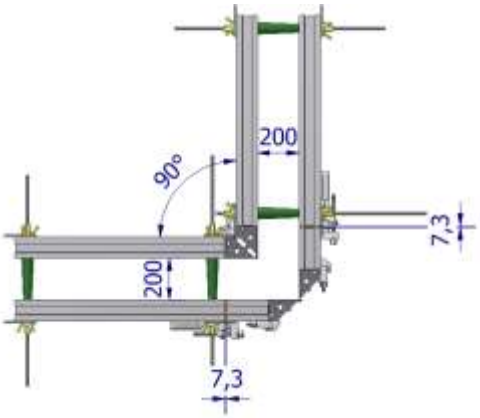
Wall thickness 200

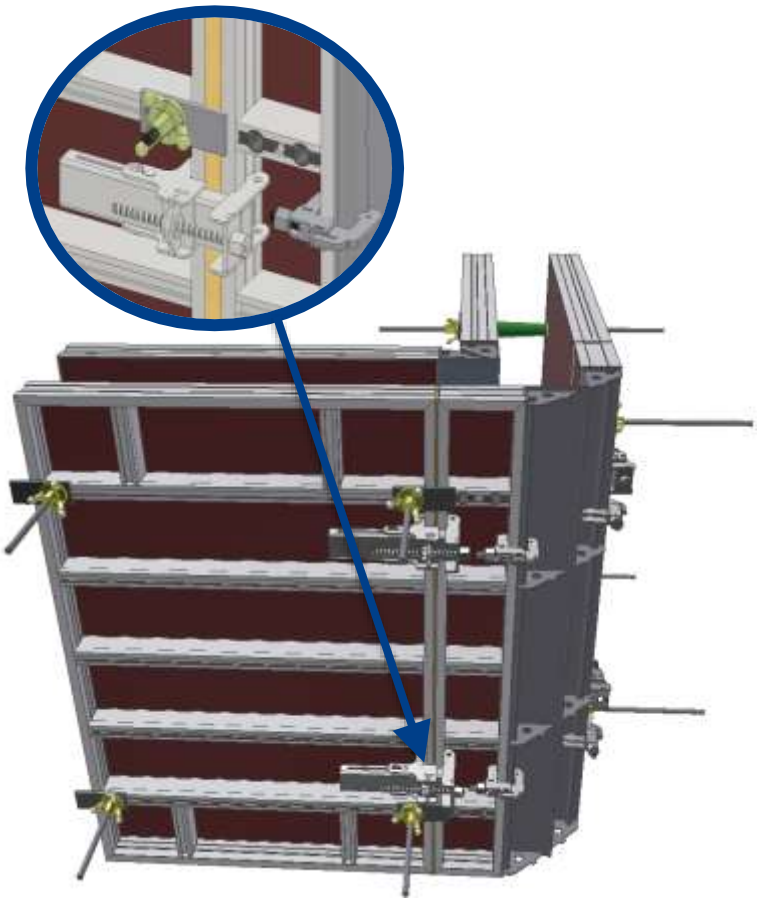
The addition of packing or extra panels must be determined according to the angle and the wall thickness.

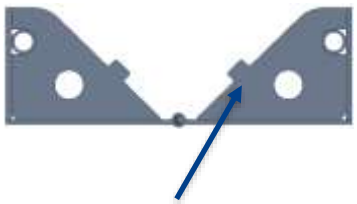
Corner min 90°
Corner maxi 180°











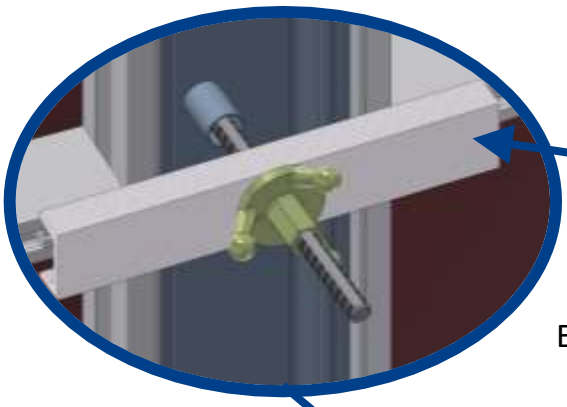
The hinged corner is fitted with an anti-pinch system

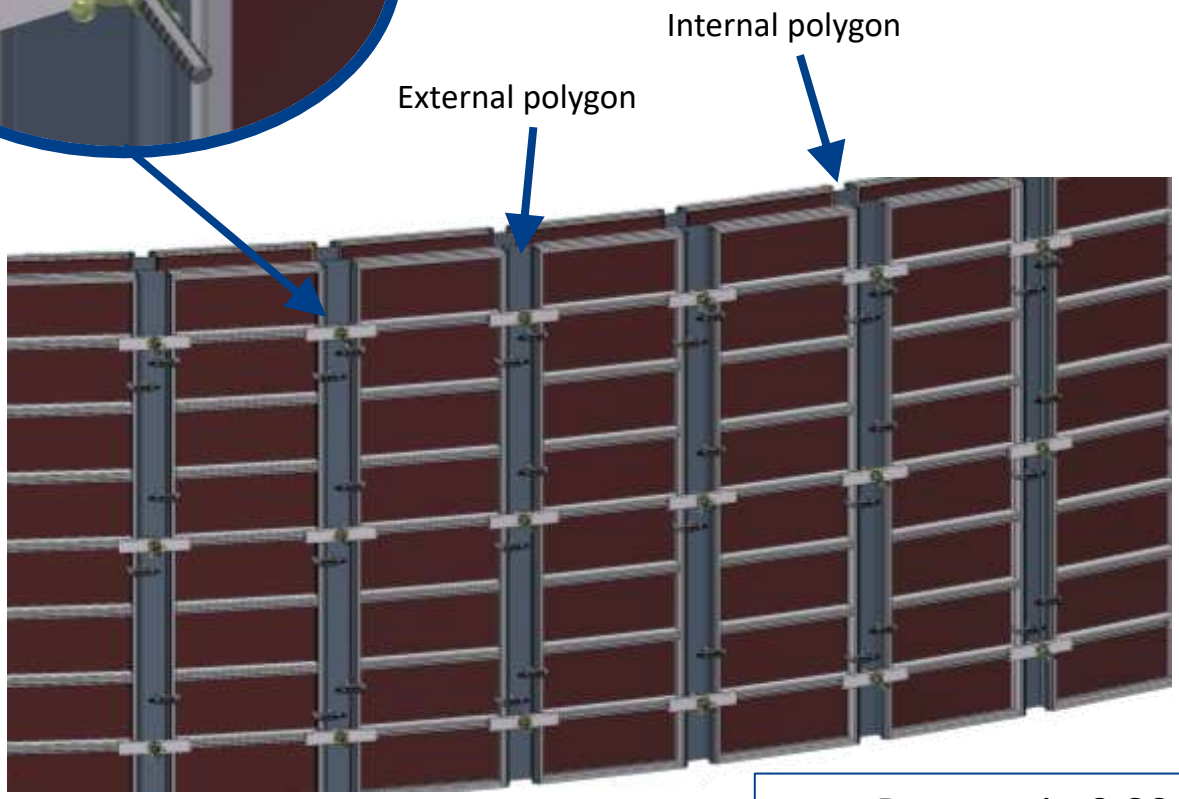
Other thicknesses possible

Corner or radius configuration

Polygone

The internal and external polygons allow faceted curves to be built. They are assembled facing each other using through tie rods and U-channel (UPN 60, length 350 mm).

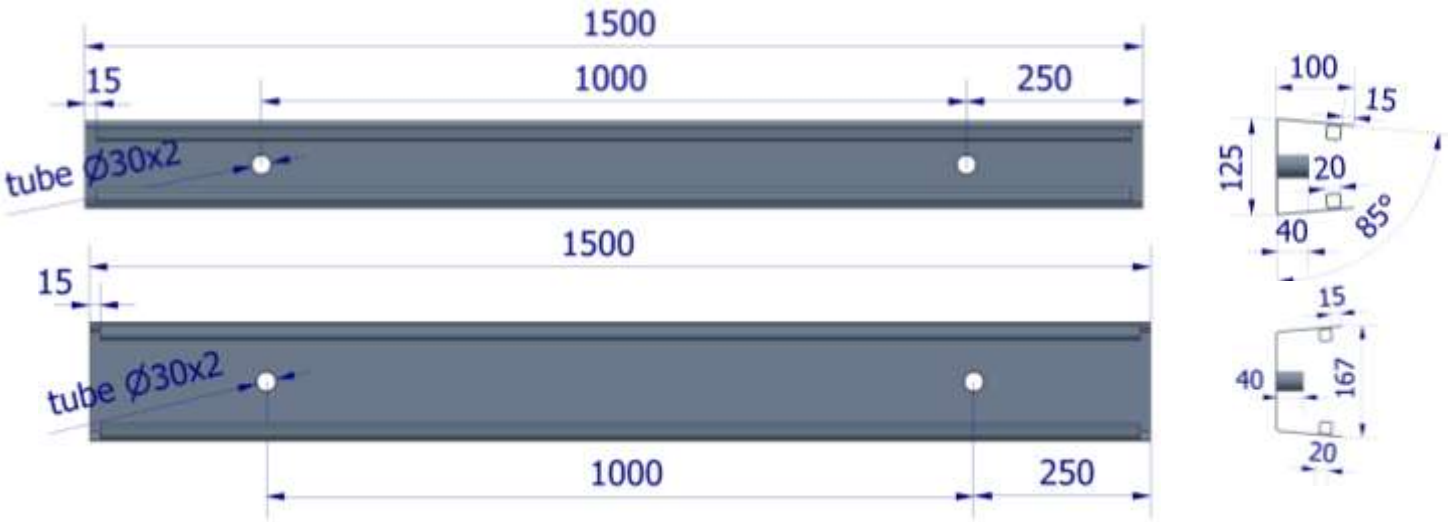




Rayon min 0,80m

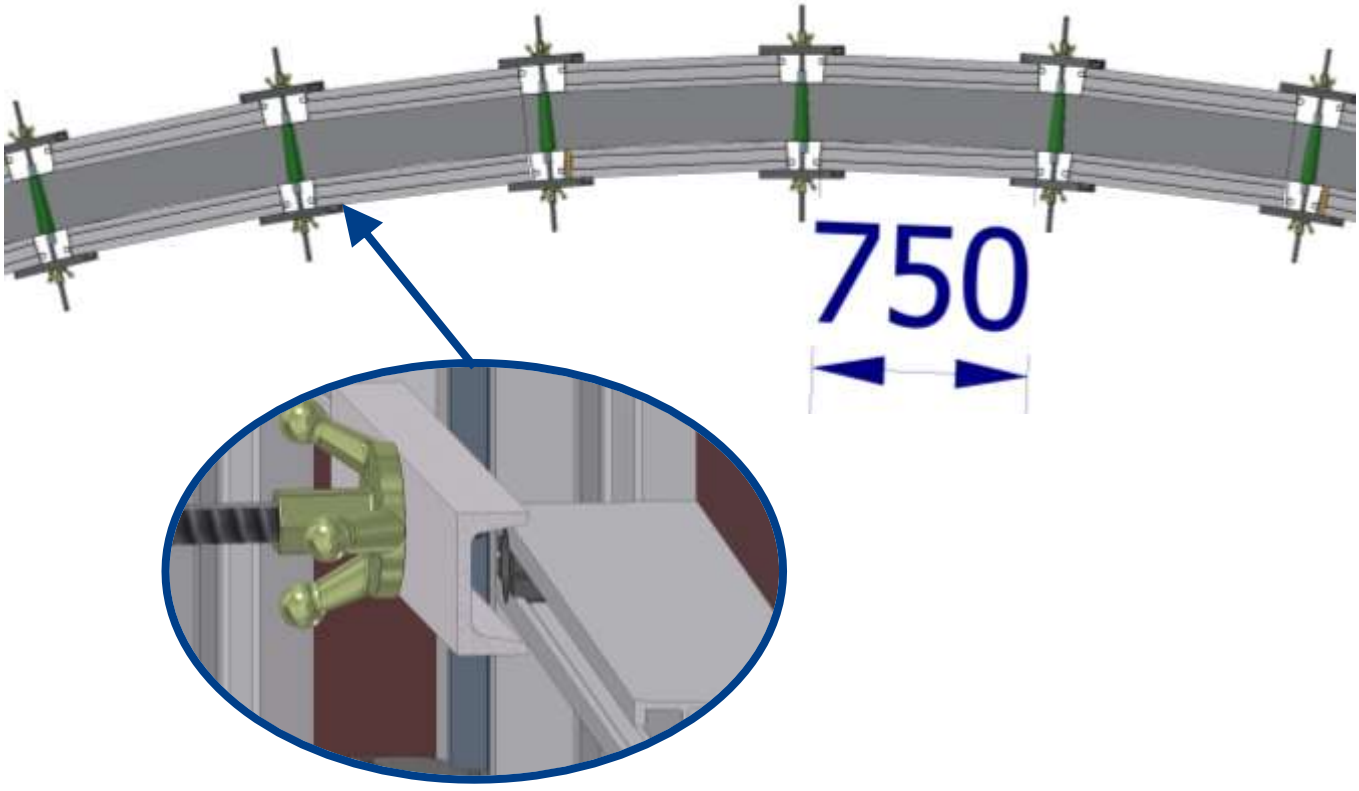
The radius depends on the panel width. Please consult us.

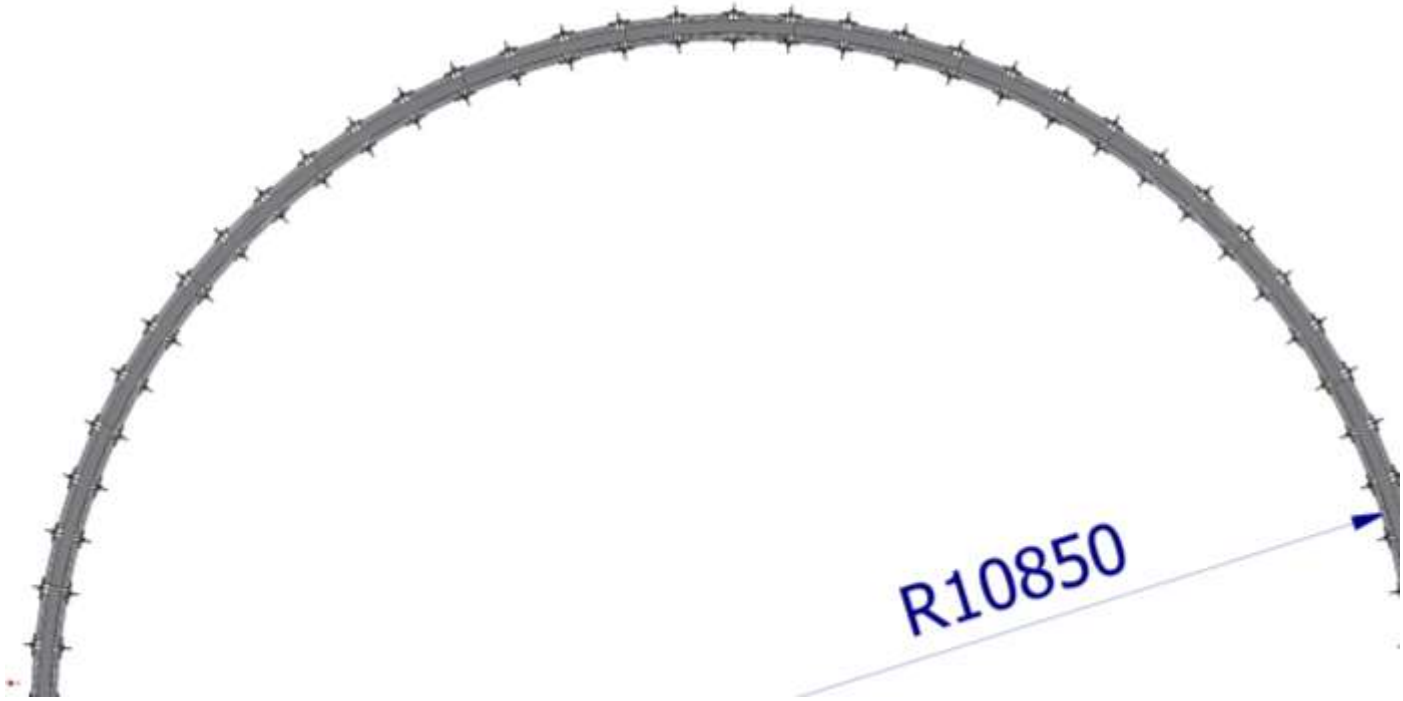
Internal polygon lg 1500/2700/3000
INTERIOR: Width 125
EXTERIOR: Width 150



Corner or radius configuration

Polygone





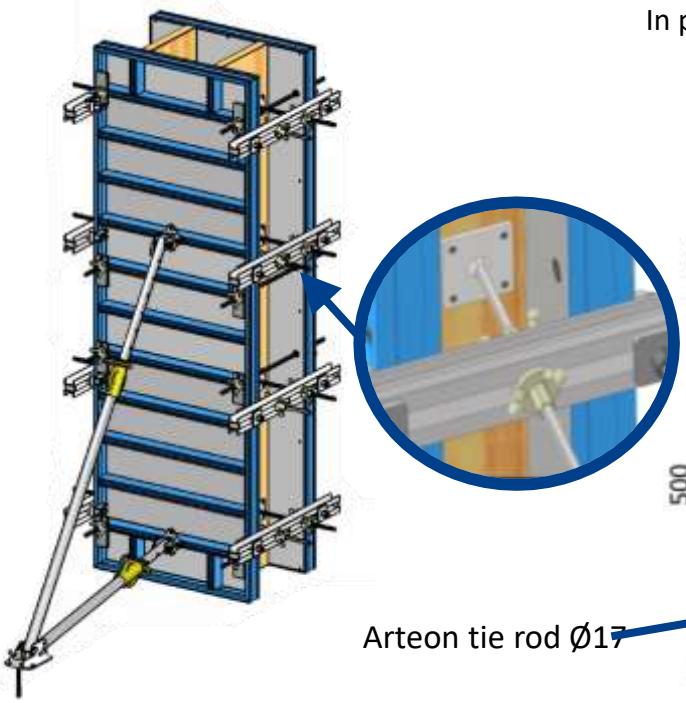
Column configuration

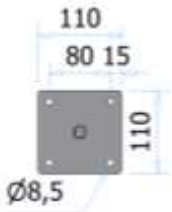
Adjustable end rail

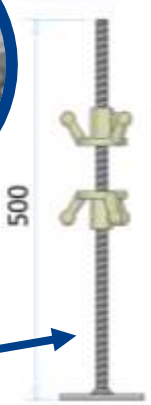
When the panels are correctly placed and aligned, spread the 2 clamps as far apart as possible in the waling of the spacer set, fit the set pressing the waling against the panel profile, then fit one clamp and then the other and lock them at the desired height.

Construction column
with wall stop

Wall stop
In position





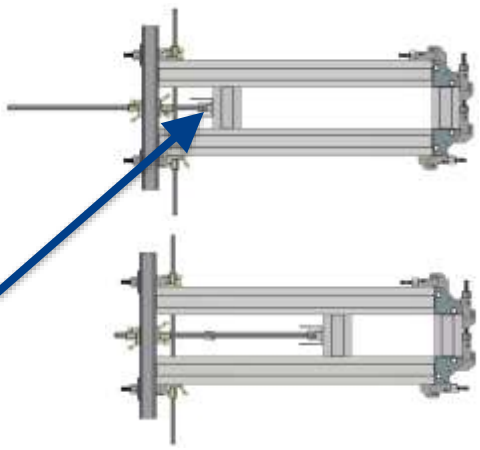


Arteon tie rod Ø17

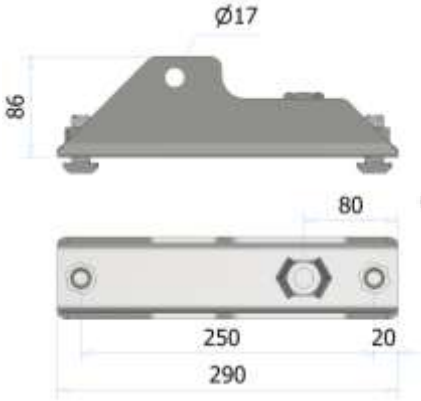
Panel height	Number of wall stops
250	1
500	2
750	2
1000	2
1500	2
2700	3
3000	4

Wall stop	Max. wall thickness
1000 mm	690 mm

Adjustable stop-end Modalu
Fixing with T-head bolt M16x40



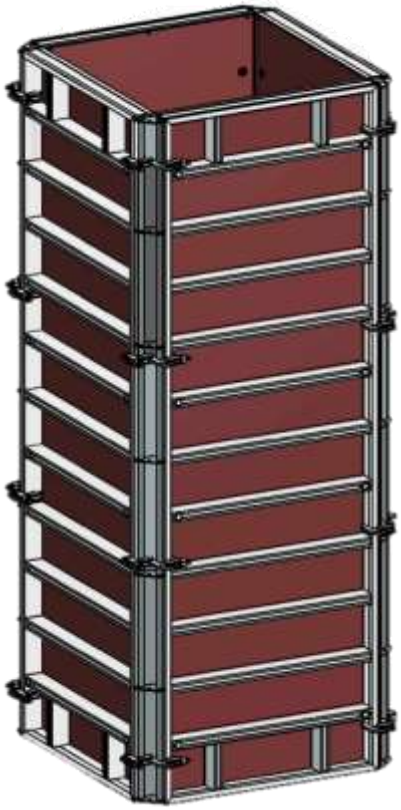
Version with adjustable wall stop
(500 mm formed maximum)



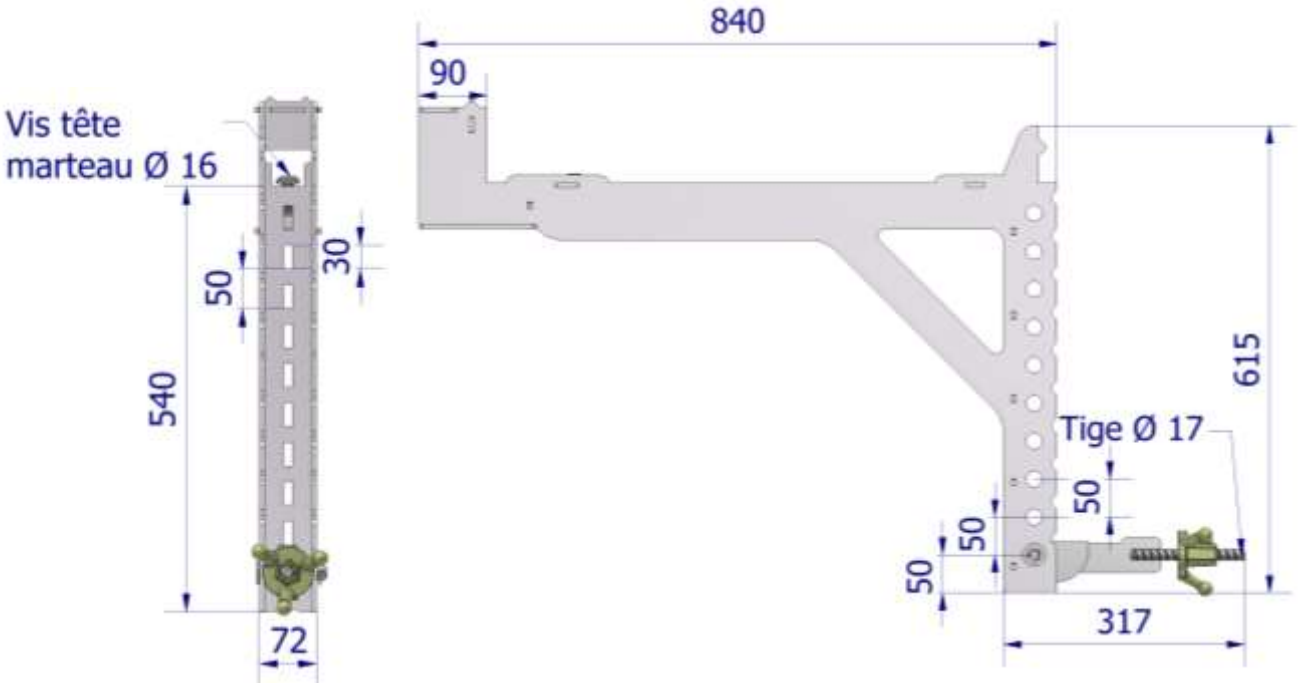
Column configuration

Corner 0x0

Column formwork with Modalu 1000x3000
(Add your timber packing to reach your dimensions)



Windmill wing for 750 panel (500 version available)

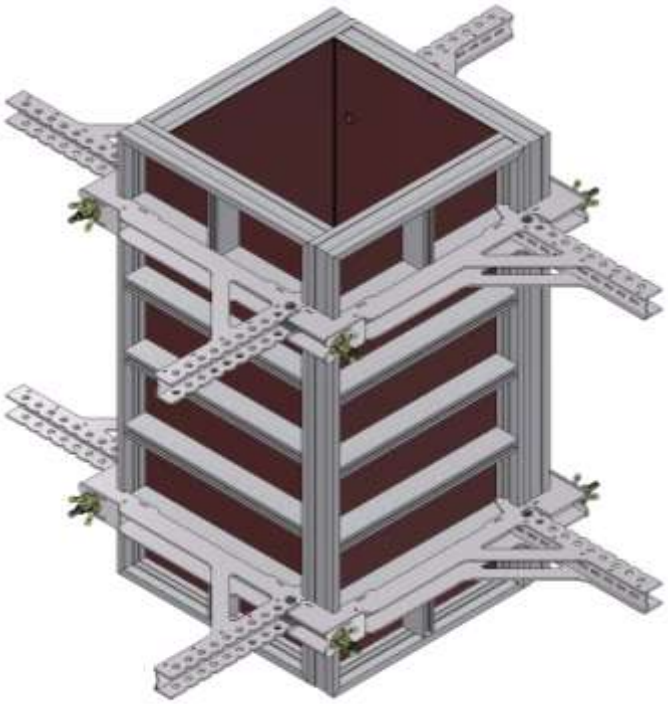


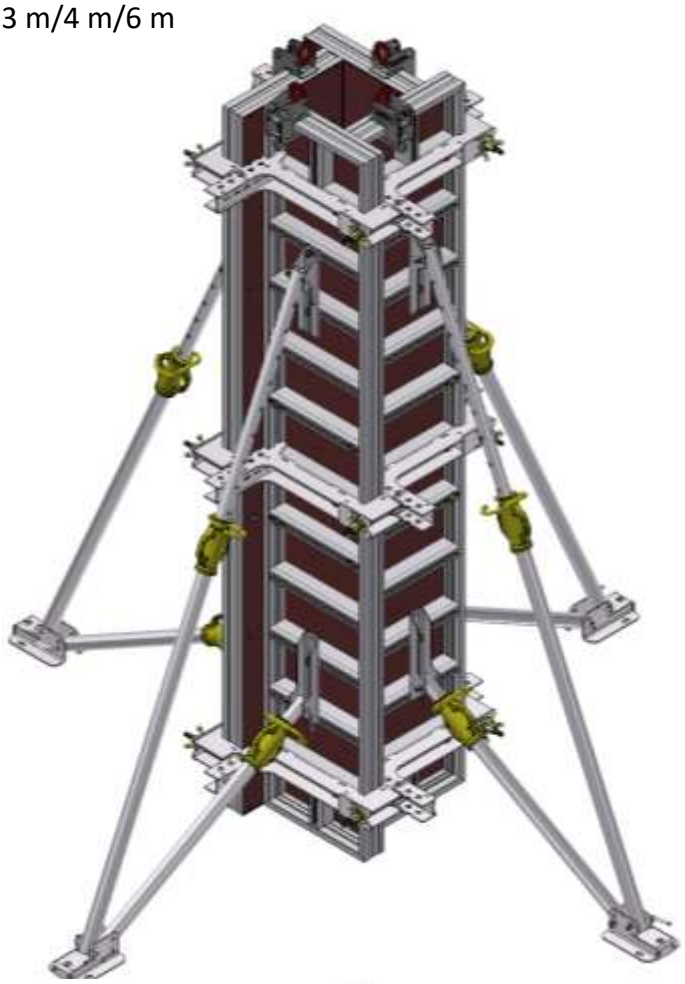
Column configuration

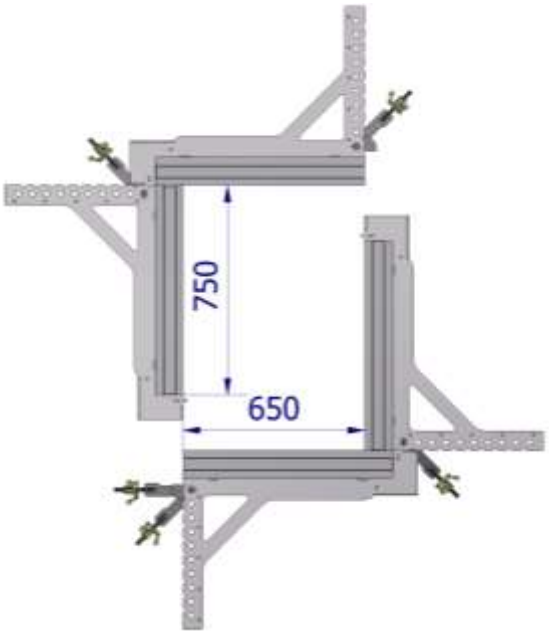
Windmill wing

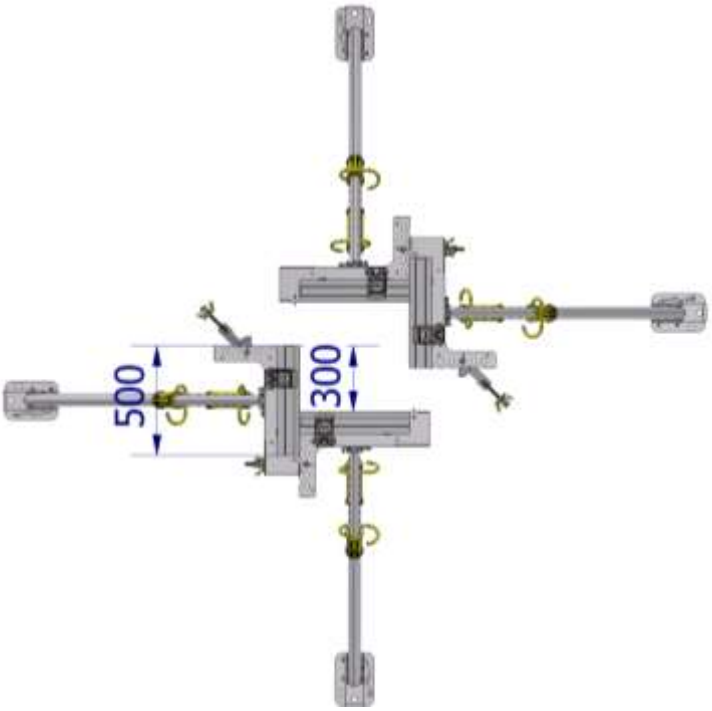
Column construction with windmill-wing clamp 3 m/4 m/6 m

Dimensions min / max :
200 - 650 with 750 mm wide panel
200 - 400 with 500 mm wide panel



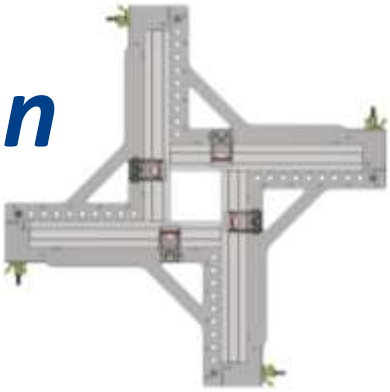






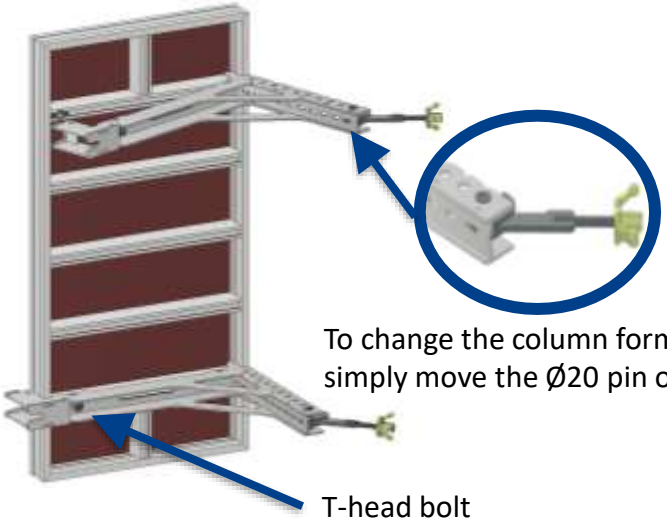
Column configuration

Polygone



Etape 1 :

Position the clamps and tighten the T-head bolts

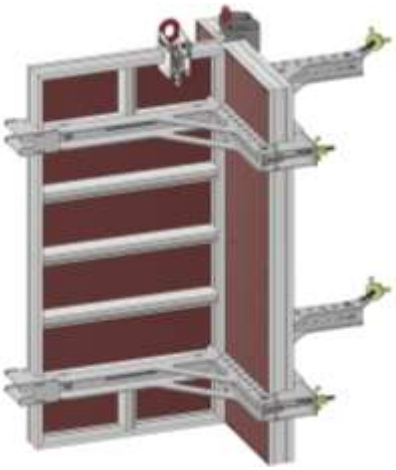


Etape 2 :

Fit the lifting eye on the panel and repeat for the other 3 panels

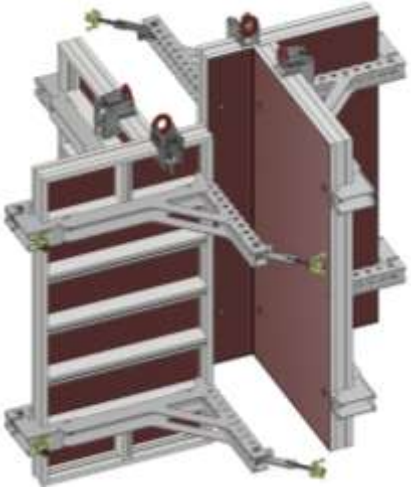
Etape 3 :

Assemble the panels as a half-formwork and tighten the wing nuts



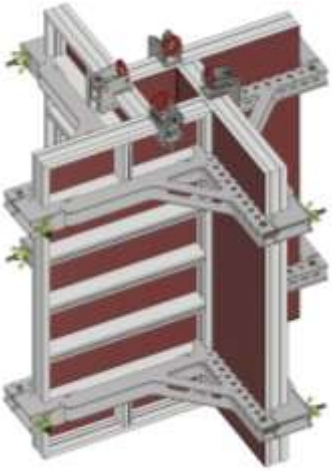
Etape 4 :

Bring the 2 half-formworks together for forming (or stripping)



Etape 5 :

Assemble the 2 half-formworks and tighten the wing nuts



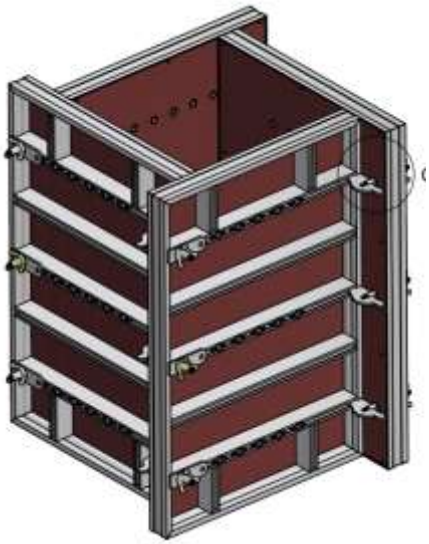
Example for column 200x200 with windmill-wing clamp 750 and 750x1500 panels

Column configuration

Multi-hole panel

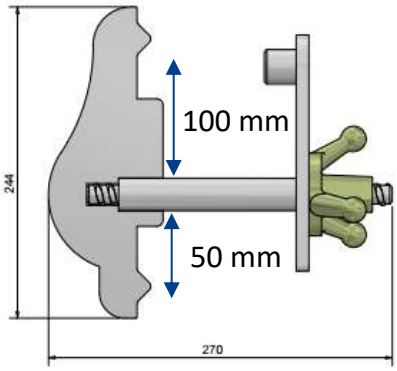
Column construction using the Multi-hole panel + twin-head clamp

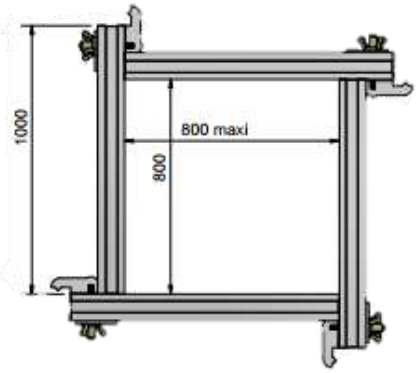
*Multi-hole panel 1000x1500



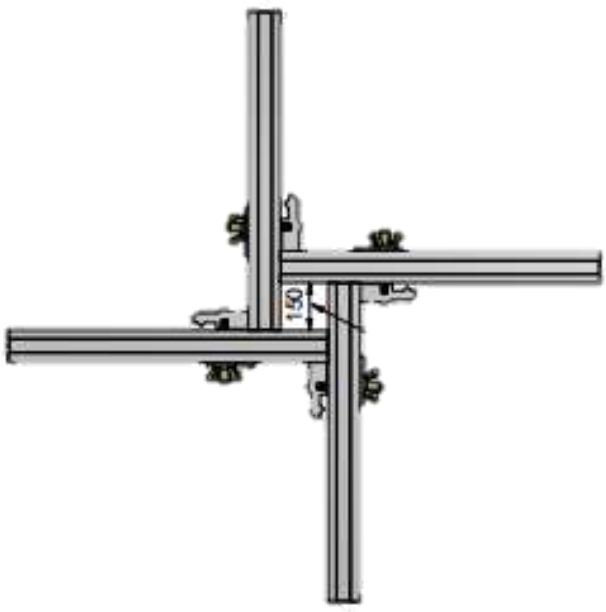
Available sizes	Number of tie-rod holes across the width:
750x1500mm	4
1000x1500mm	7
750x3000mm	4
1000x3000mm	7

Height panel	Number of clamps
1,5m	3
3m	6
4,5m	9
6m	12



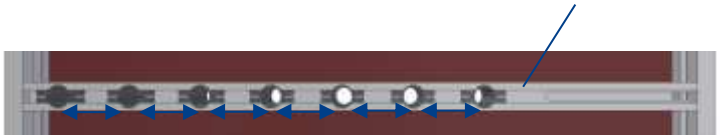


Twin-head clamp



*Multi-hole panel 1000x1500

Clamp opening slot



100 mm pitch

Dimensions min / max :
200 - 550 with 750 mm wide panel
150 - 800 with 1000 mm wide panel

Column configuration

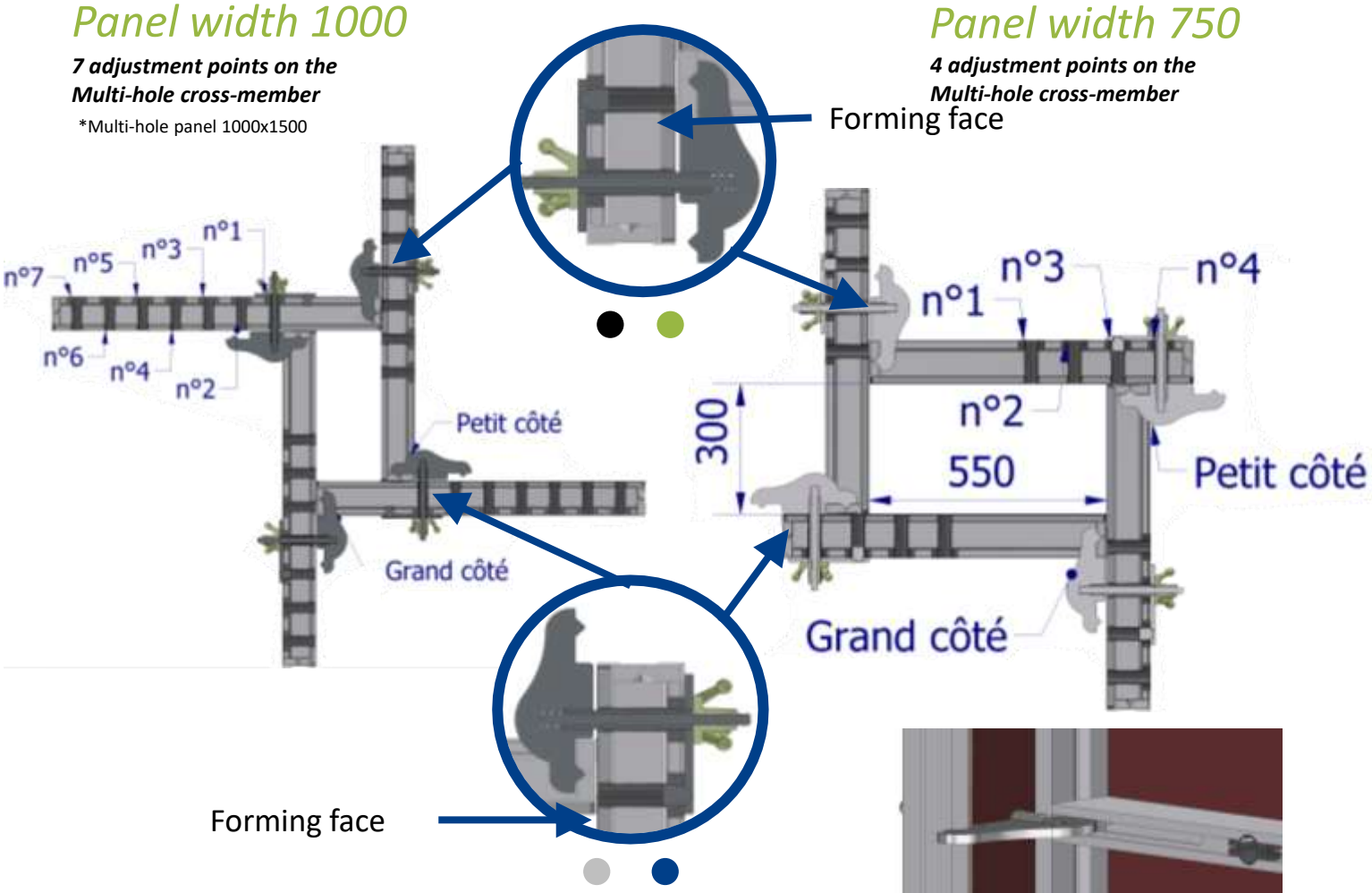
Panel width 1000

7 adjustment points on the Multi-hole cross-member

*Multi-hole panel 1000x1500

Panel width 750

4 adjustment points on the Multi-hole cross-member



	Required column section													
	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Tie-rod hole no.1	●	● ●	●											
Tie-rod hole no.2			●	● ●	●									
Tie-rod hole no.3					●	● ●	●							
Tie-rod hole no.4							●	● ●	●					
Tie-rod hole no.5									●	●				
Tie-rod hole no.6											●	●		
Tie-rod hole no.7													●	●

Panel width 750 (200 to 550 mm)

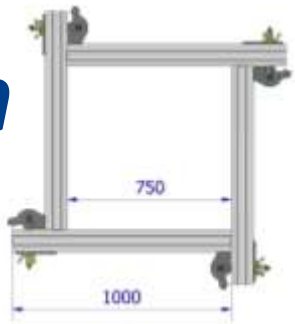
● Long-side clamp ● Short-side clamp

Panel width 1000 (150 to 800 mm)

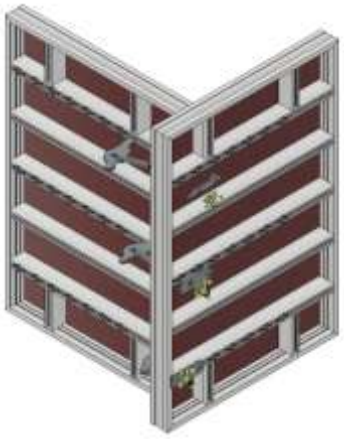
● Long-side clamp ● Short-side clamp

Column configuration

Multi-hole panel



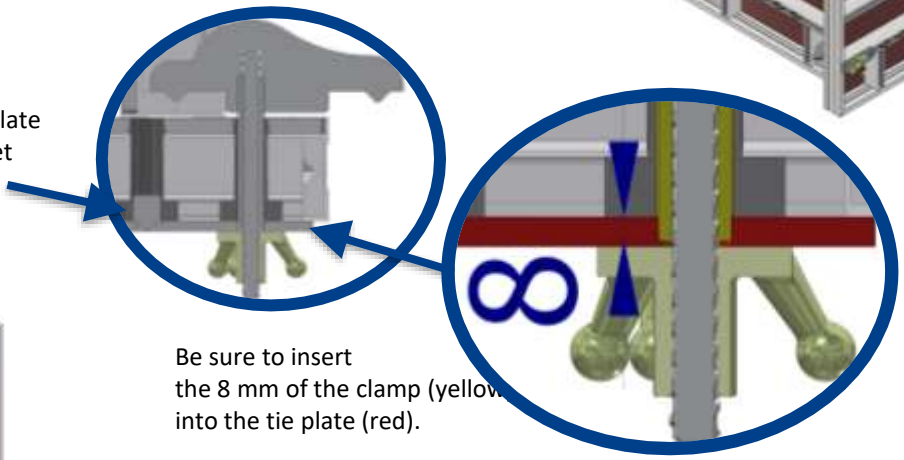
First step:
Position the clamps in the holes matching the column size to be formed.



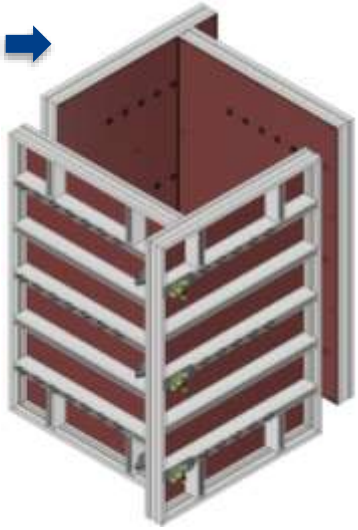
Second step:
Assemble the clamps and tie plates and tighten the nuts.

Third step:
Plug the unused tie-rod holes with a plug on the right-hand panel.

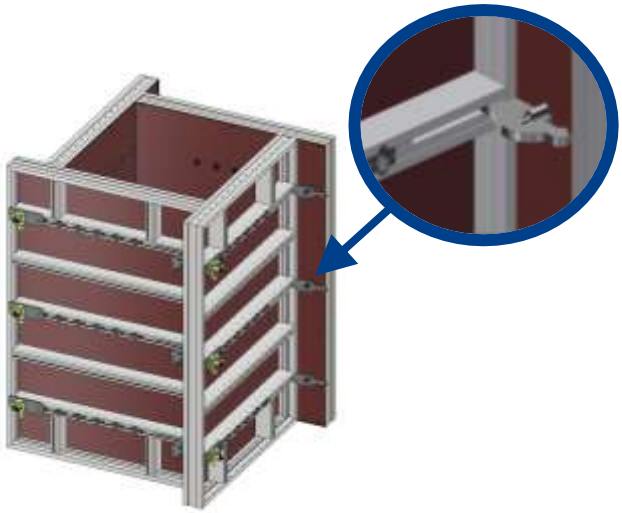
Ø27.2 mm dowel of the tie plate located in the adjacent socket



Be sure to insert
the 8 mm of the clamp (yellow)
into the tie plate (red).



Fifth step:
Assemble the 2 half-formworks, fit the clamps and tie plates and tighten the nuts.



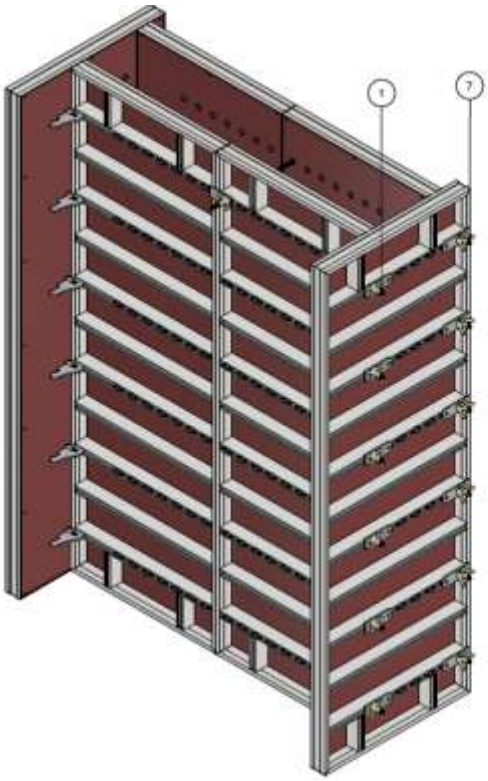
Fourth step:
Bring the 2 half-formworks together and repeat the same procedure on the other panels; plug the unused tie-rod holes.

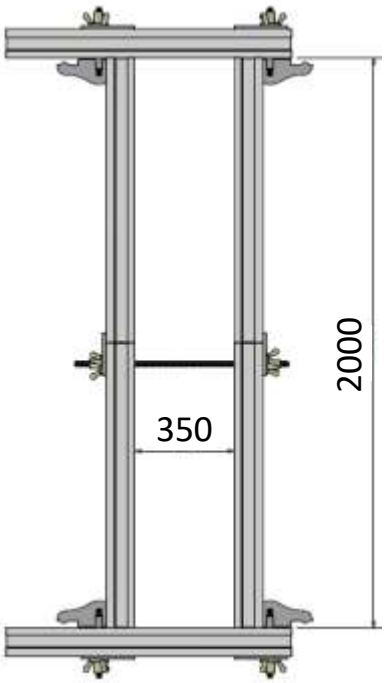
Column configuration

Multi-hole panel

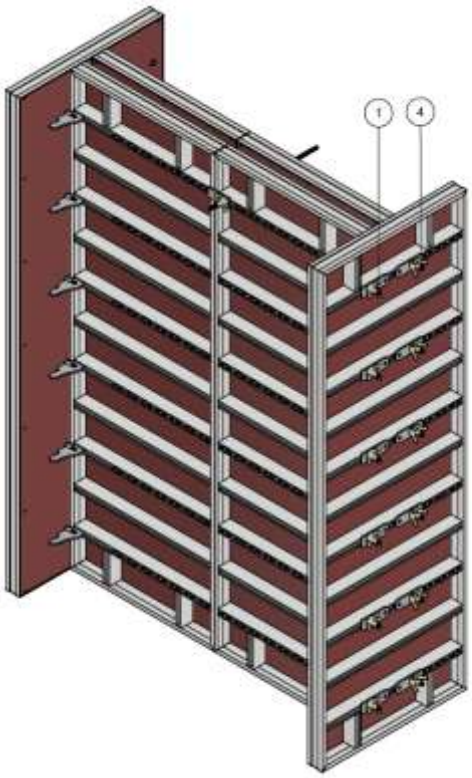
Multi-hole panel 1000

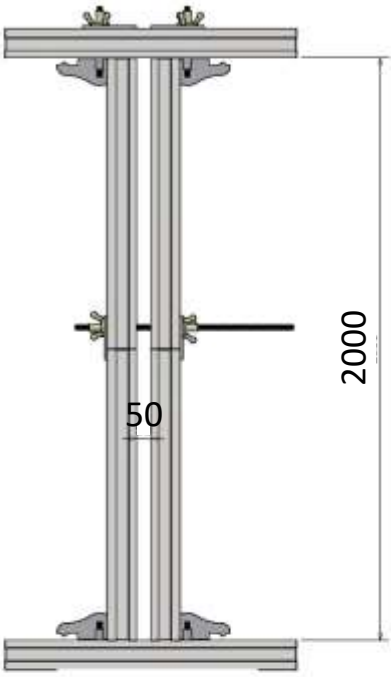
Twin-head clamp only
Position max en 6 panels





Max position





Min position

Multi-hole panel 1000

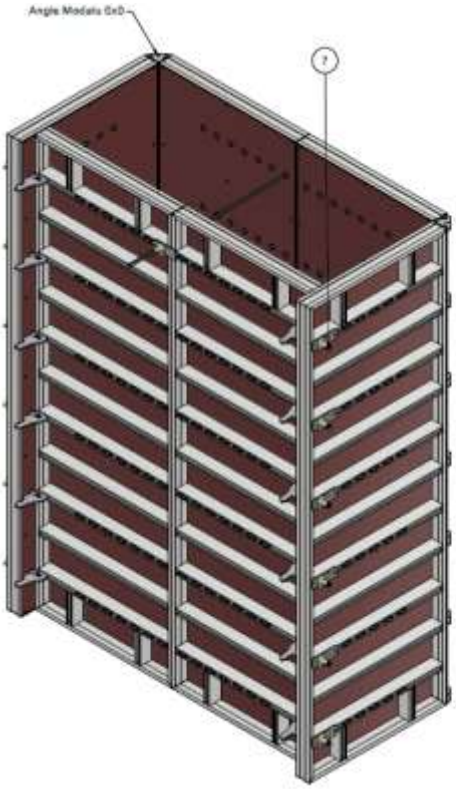
Twin-head clamp only
Position min en 6 panels

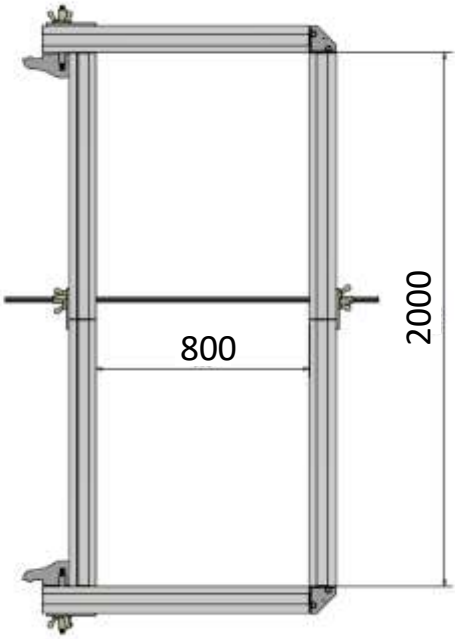
Column configuration

Multi-hole panel

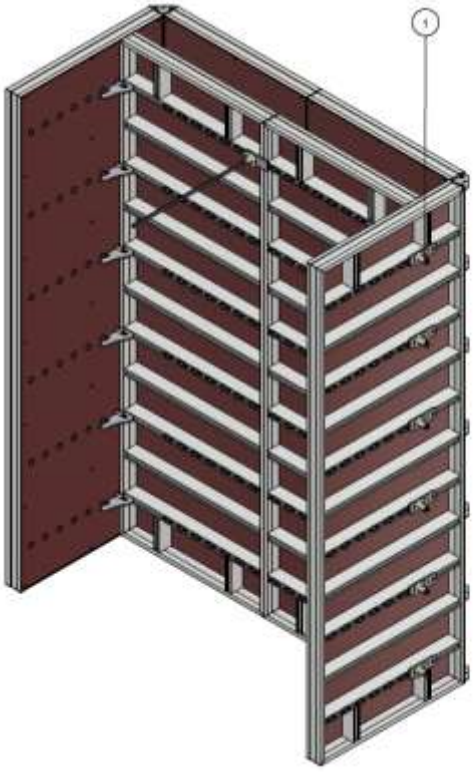
Multi-hole panel 1000

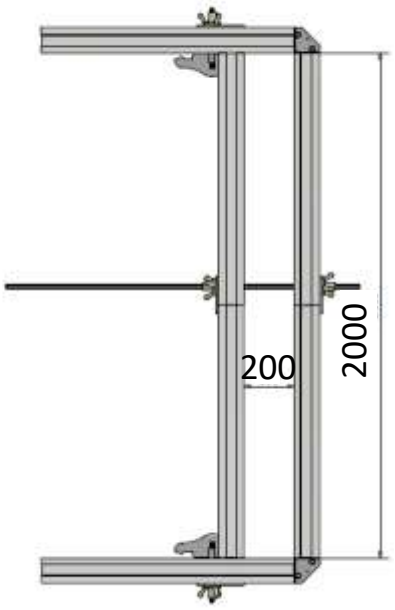
Twin-head clamp and 0x0 corner
Position max en 6 panels





Max position





Position Min

Multi-hole panel 1000

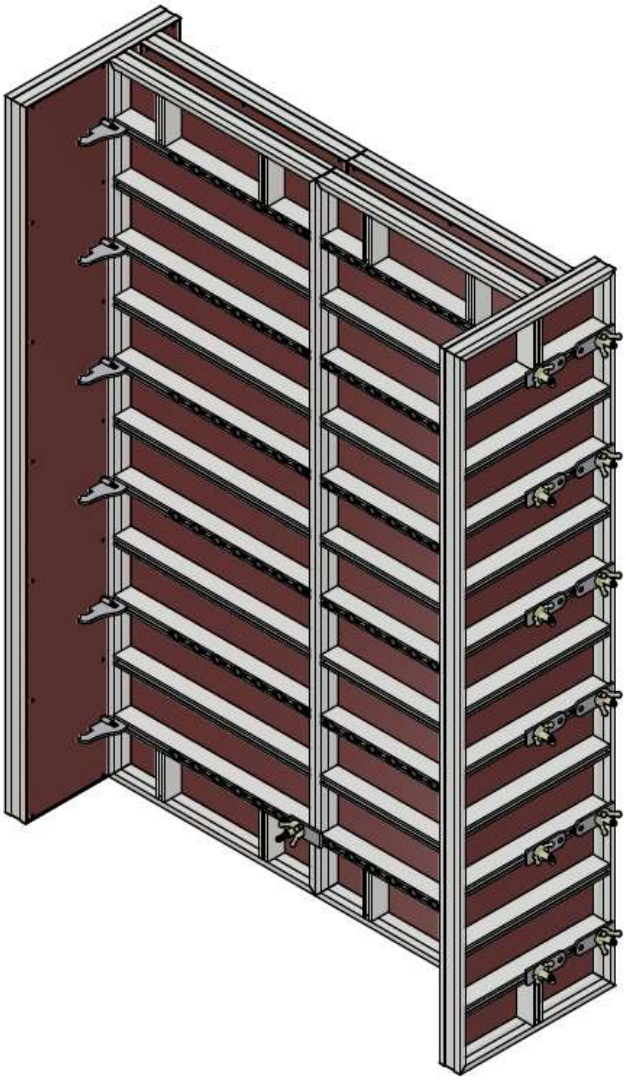
Twin-head clamp and 0x0 corner
Position min en 6 panels

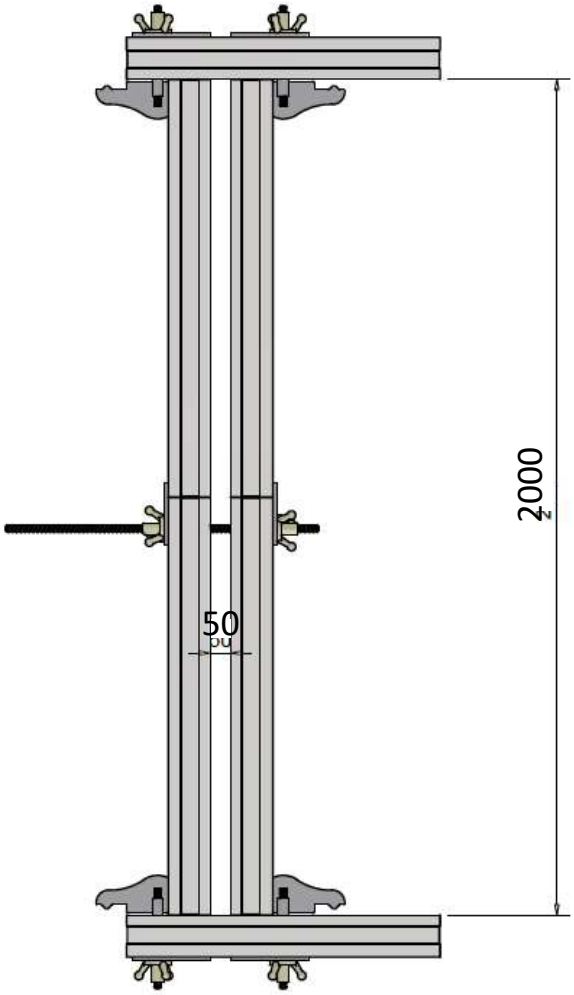
Column configuration

Multi-hole panel

Multi-hole panel 750

Twin-head clamp only
Single position in 6 panels



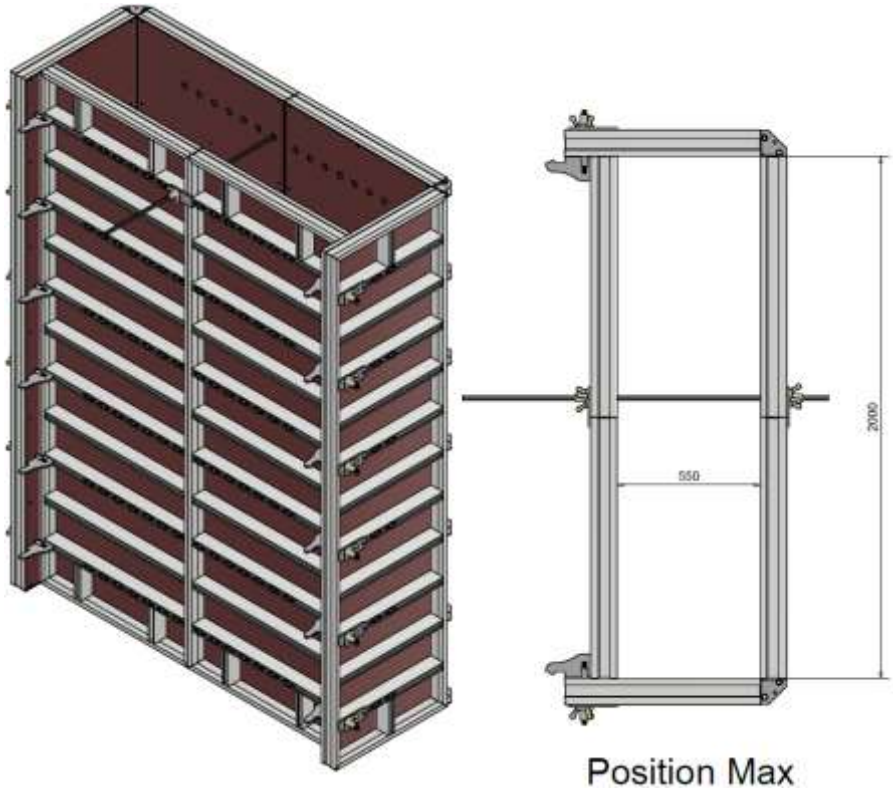


Column configuration

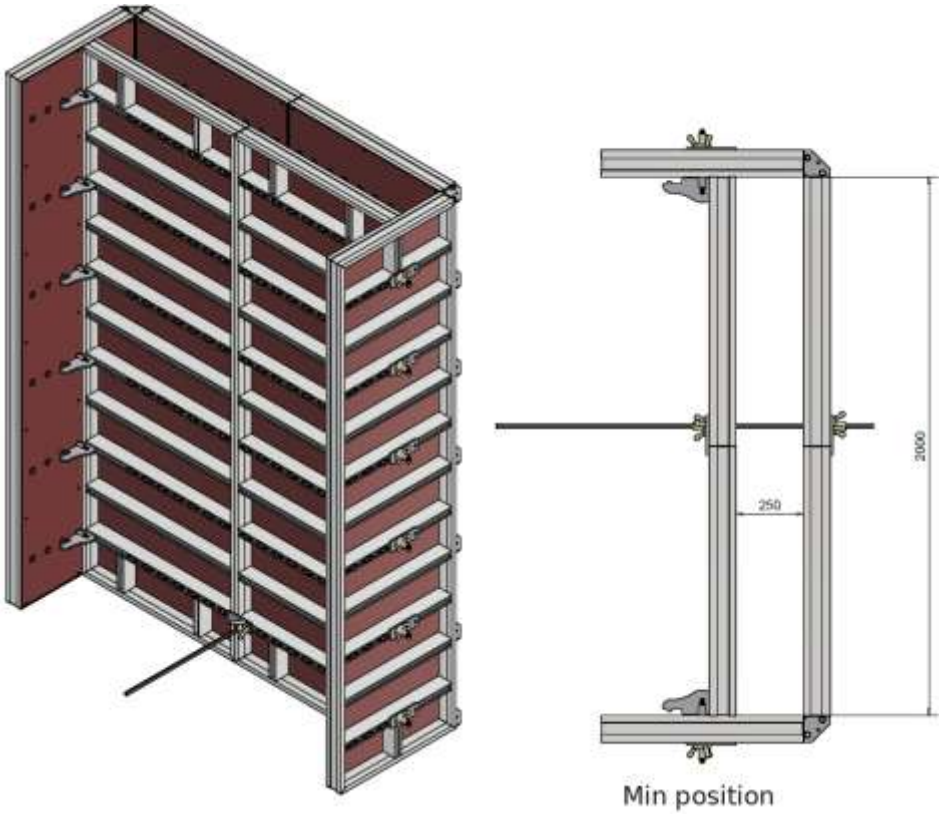
Multi-hole panel

Multi-hole panel 750

Twin-head clamp and 0x0 corner
Position max en 6 panels



Position Max



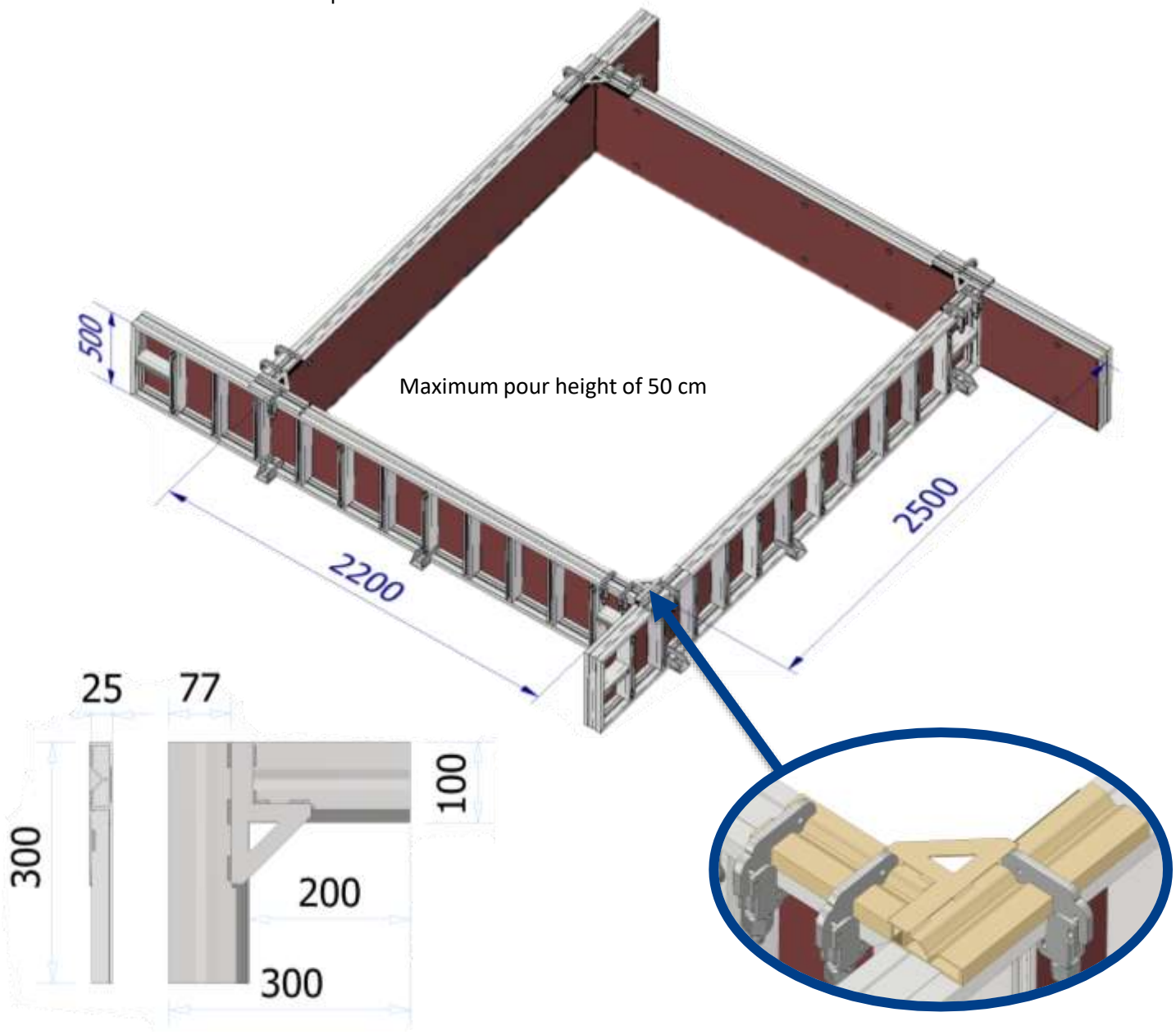
Min position

Multi-hole panel 750

Twin-head clamp and 0x0 corner
Position min en 6 panels

Pad-footing configuration

To form a pad footing you can use panels laid flat with external corners and packing with the constraint that the footing is the same size as the panels used. It is also possible to use a windmill-wing configuration (below) using assembly clamps, floor-fixing clamps and a connecting bracket made of external aluminium profiles



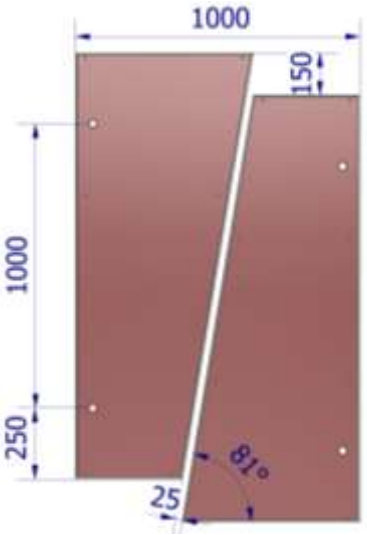
Pour height above 50 cm with props, and length above 2500 with walings

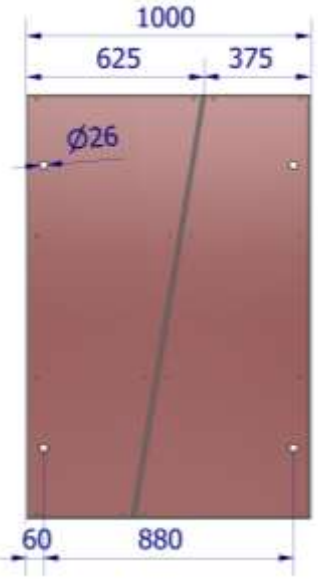
For any different configuration, please contact the Jean Four design office.

Pit and stairwell

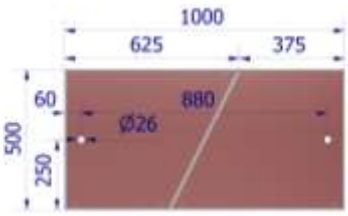
Splay panel

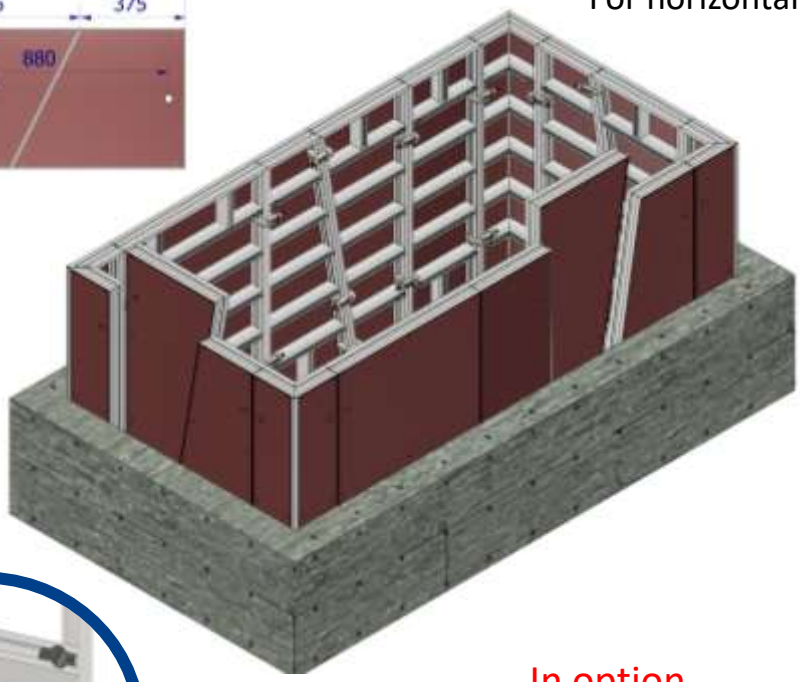
Panel for use in width-limited locations (pits). A standard Modalu 1000x1500 panel becomes two 1500x625 panels with an 81° angle, which makes stripping easier.





It is recommended to add a 1 m waling
For horizontal reinforcement





Versions with an integrated crowbar socket exist.

A part made of several laser-cut plates welded to the frame

In option

The profile is notched and reinforced by a folded plate welded to the frame.

Pit and stairwell

Spacer

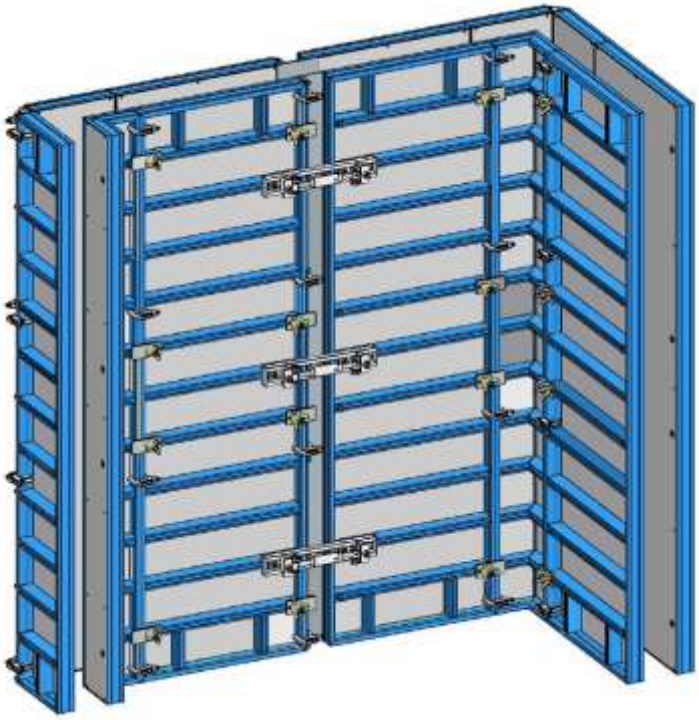
Stage 1 :

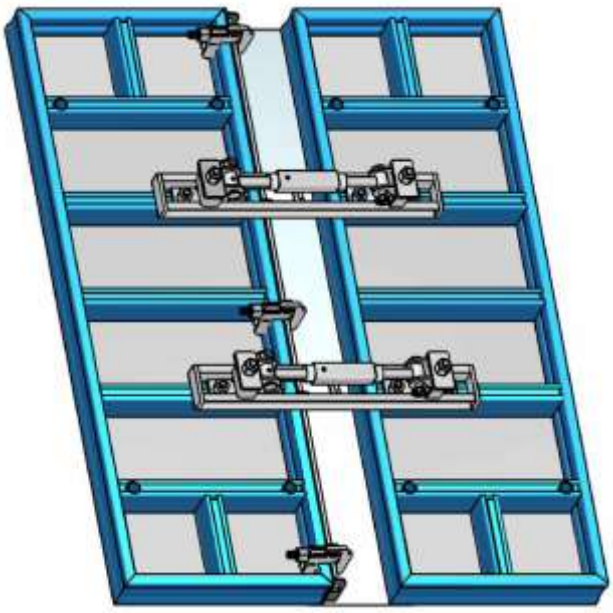
Stage 2 :

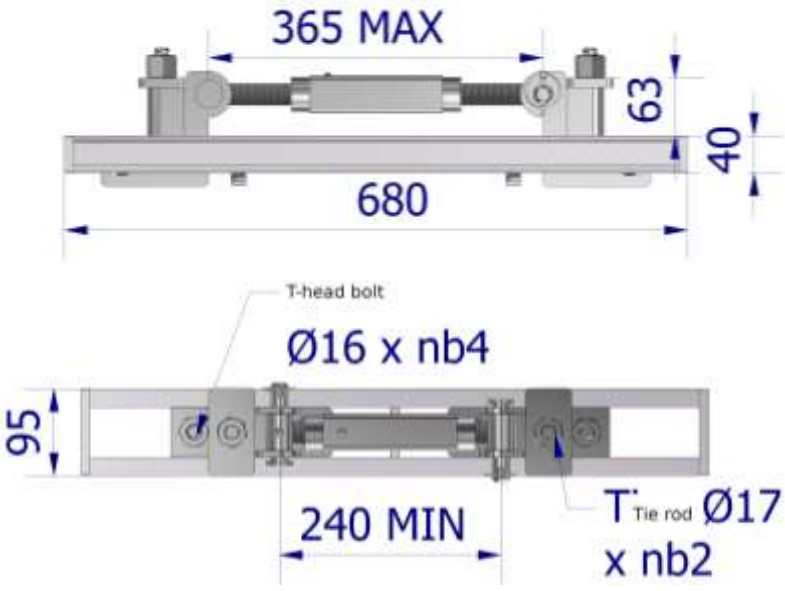
Stage 3 :

Stage 4 :

The spacers for filler plates allow internal formwork to be stripped by a decompression action thanks to the built-in jacks

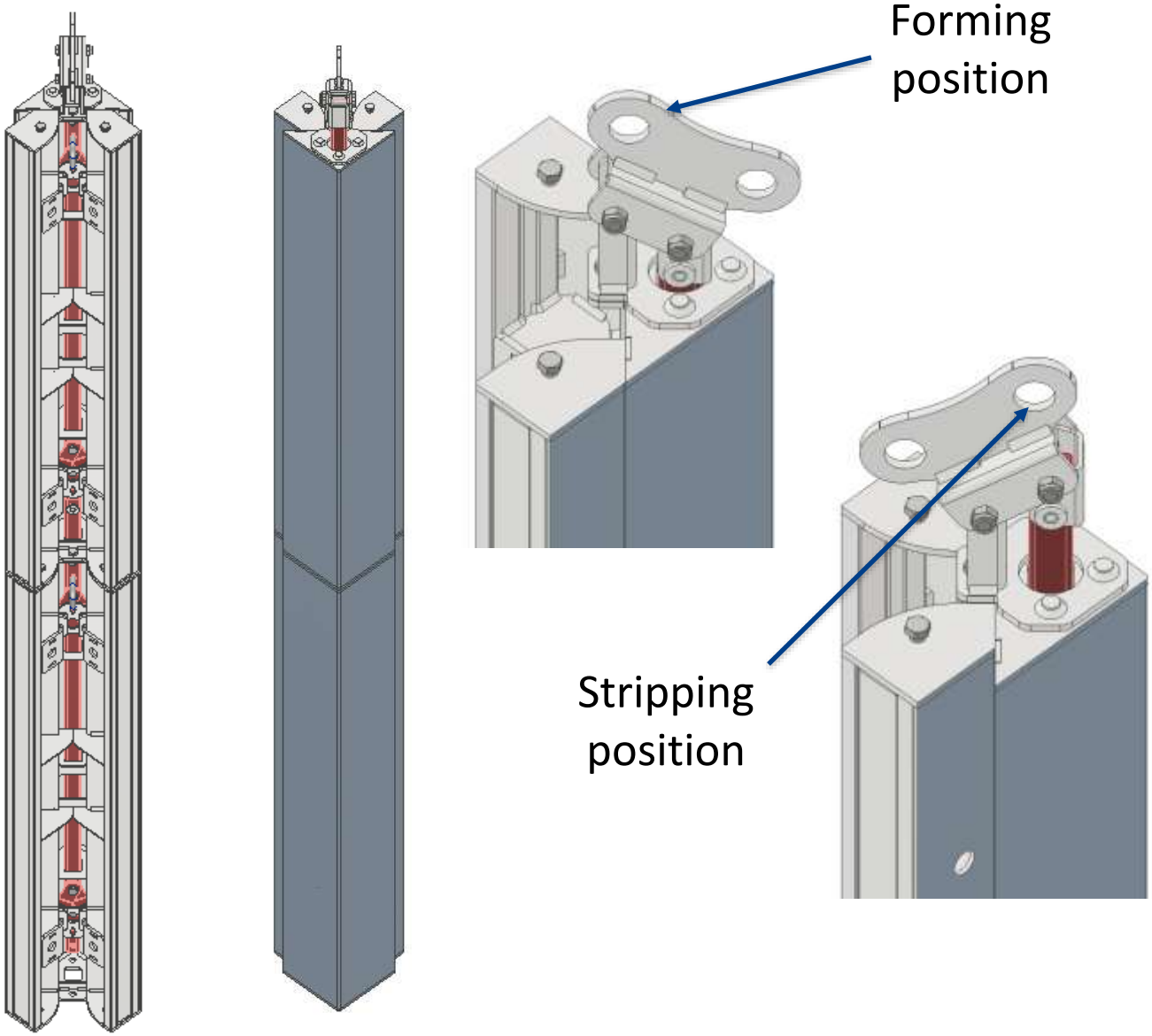






Pit and stairwell

Stripping corner

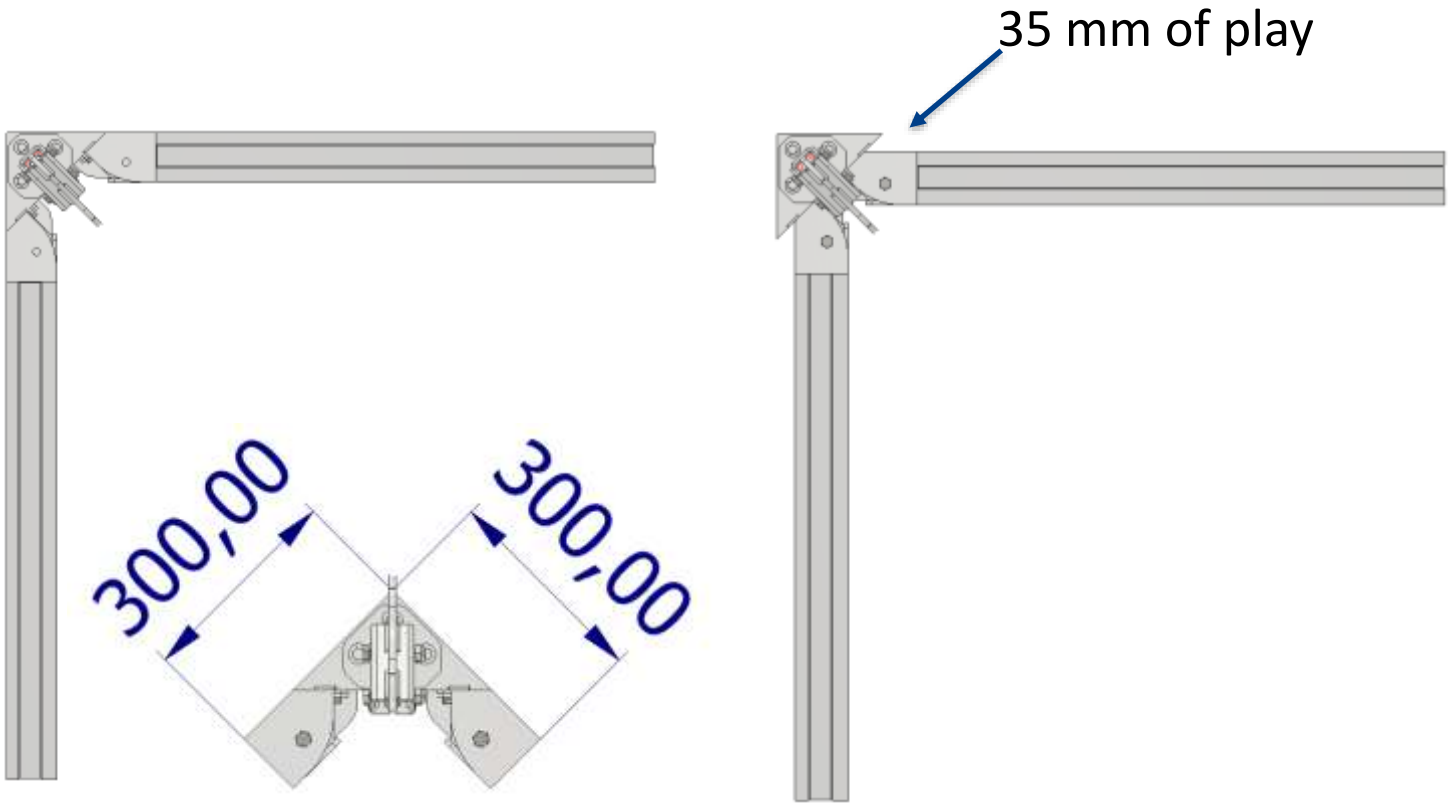


The stripping corner has 35 mm of play. It has two positions allowing it to form and, at stripping, to pull the forming face away from the concrete.

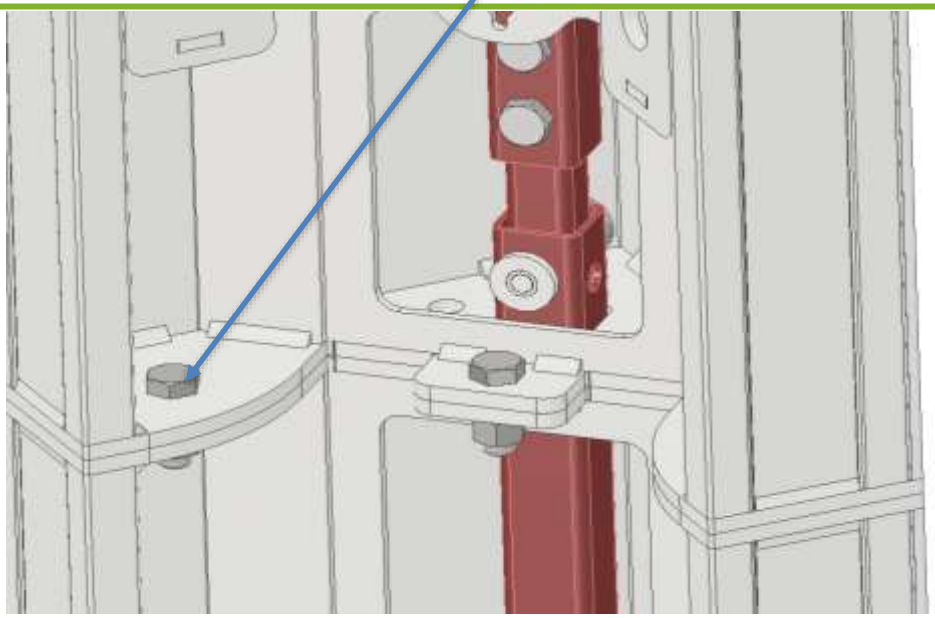
Method: the plate projecting from the stripping corner has two holes; lifting one or the other sets the position of the stripping faces.

Pit and stairwell

Stripping corner



The stacking screws are supplied with the corner



- Stripping corners can be stacked and tied together up to a height of 3 m.

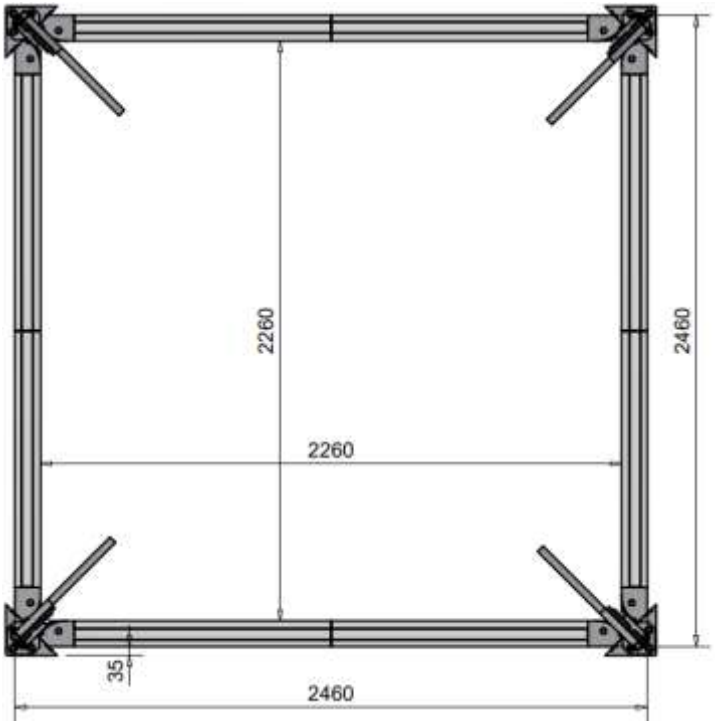
- This corner is mainly used for stairwells where there is often little room for stripping.

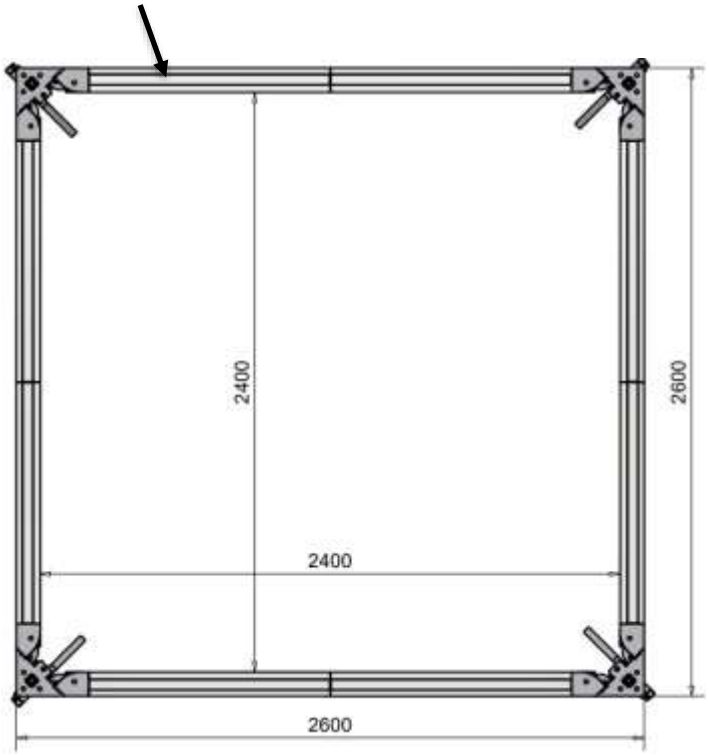
- It saves time on site because the panels assembled at the corner do not need to be dismantled.

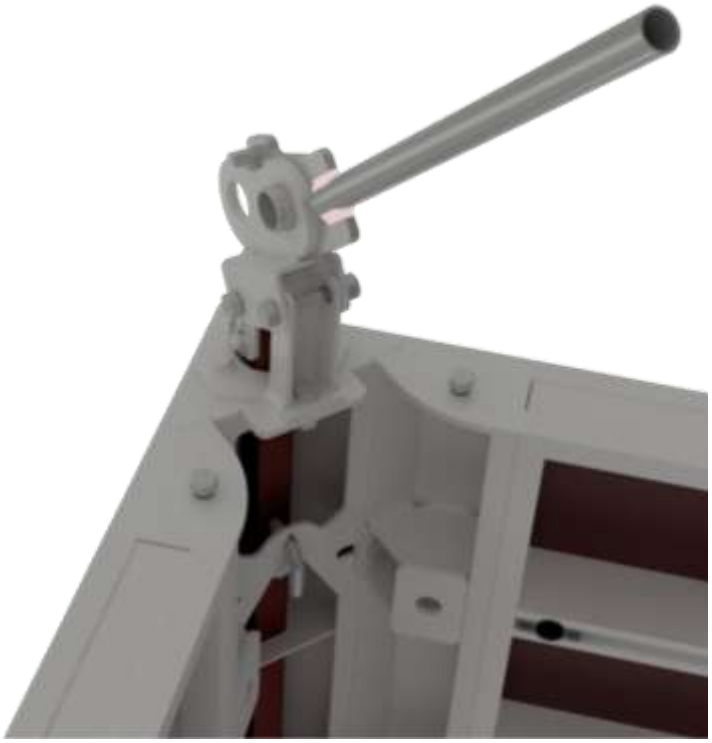
Pit and stairwell

Stripping corner

Start by installing a first panel with a prop, then fix the corner to the panel.



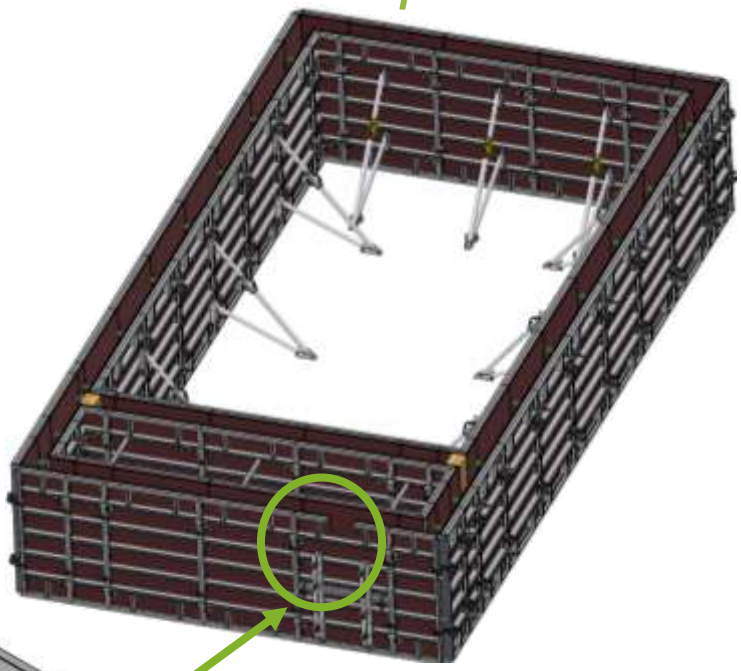


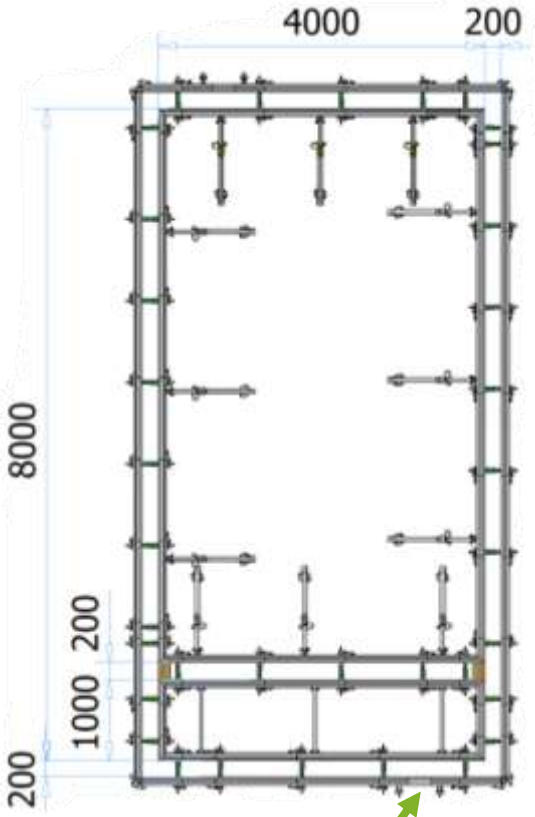


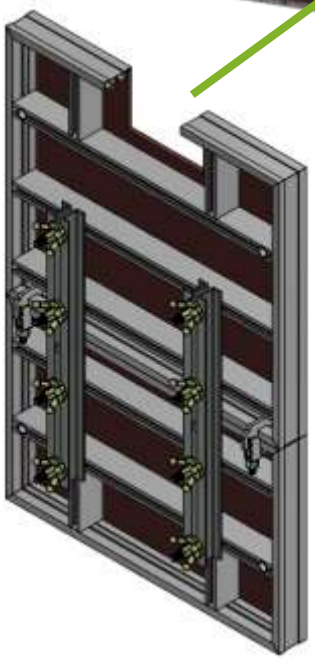
Configuration piscine

Skimmer panel

8x4 m pool formwork with integration of a roller-shutter housing

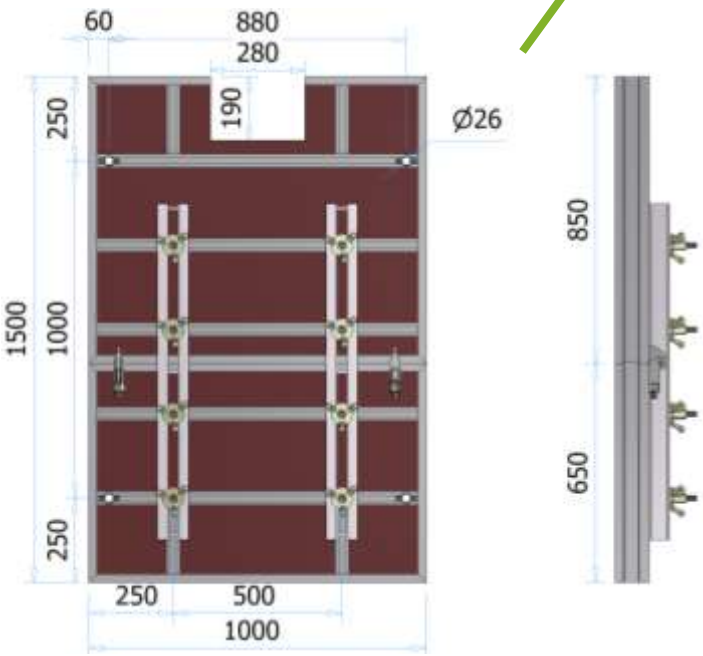


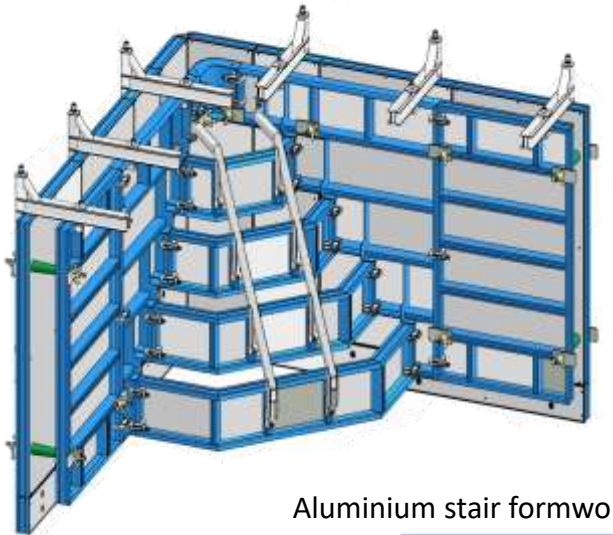




Special panel for skimmer stripping

Special opening on request

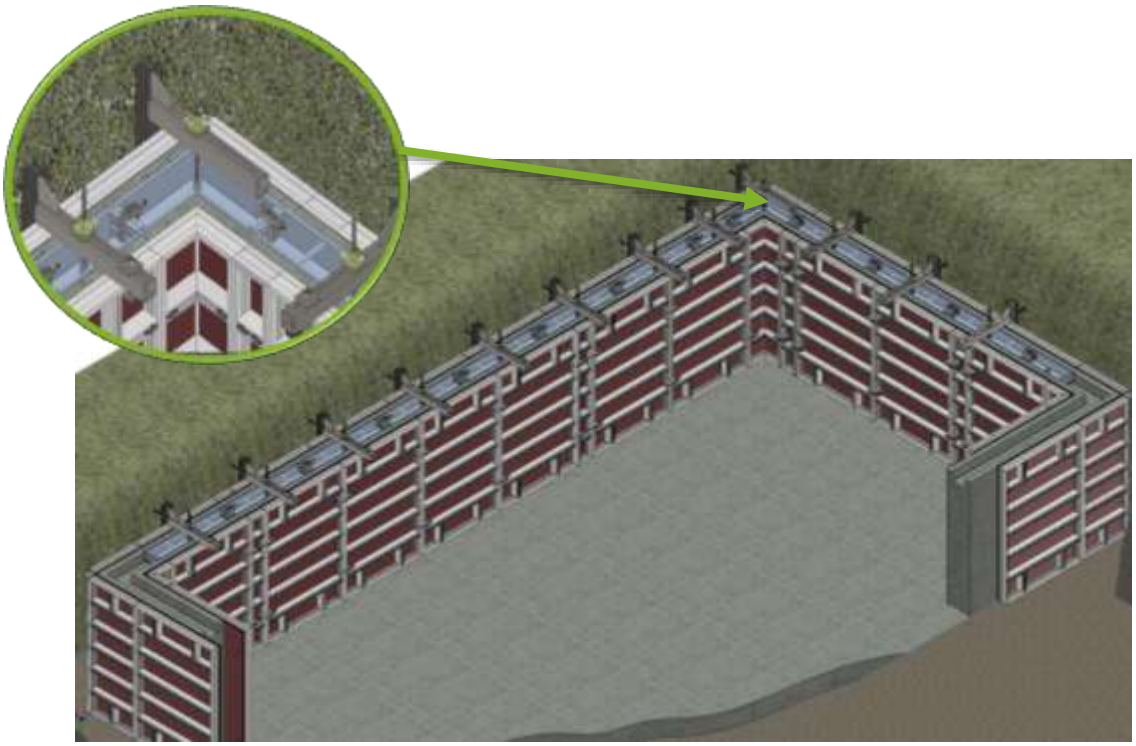


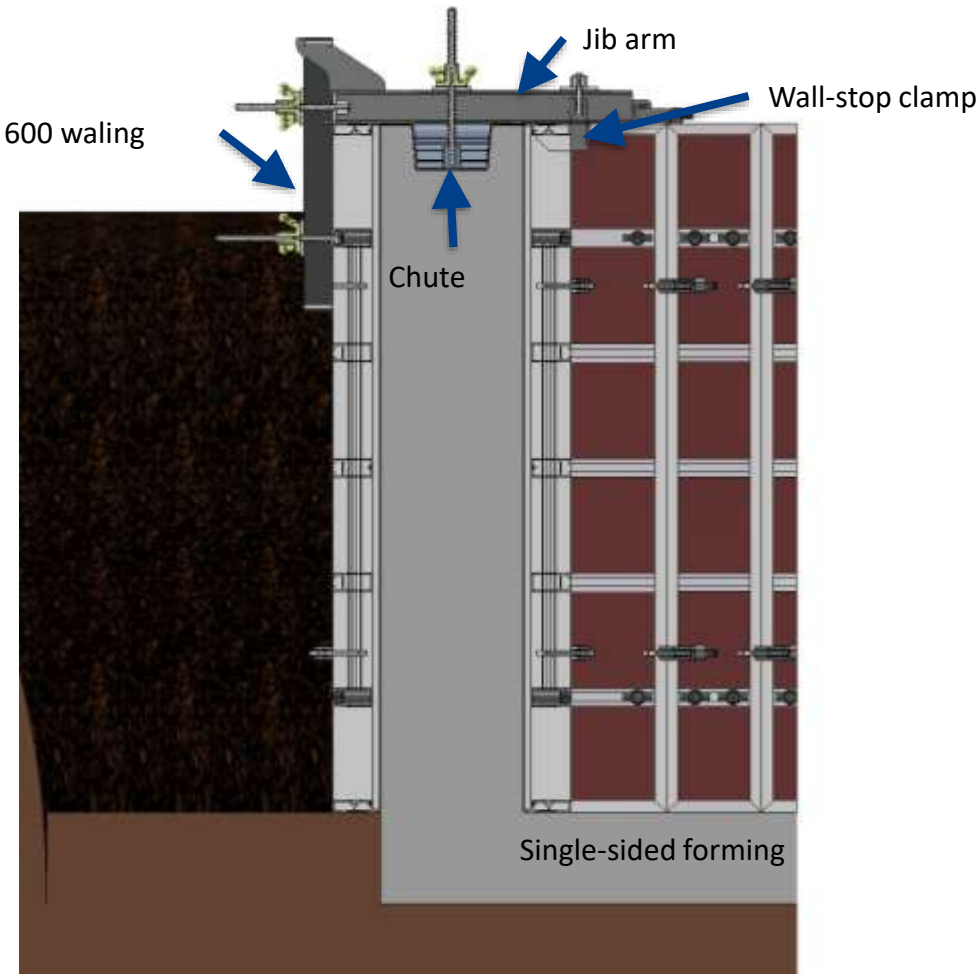


Aluminium stair formwork

Configuration piscine

Infinity-pool or single-sided formwork kit

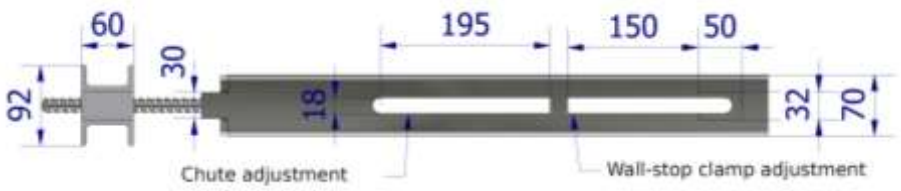


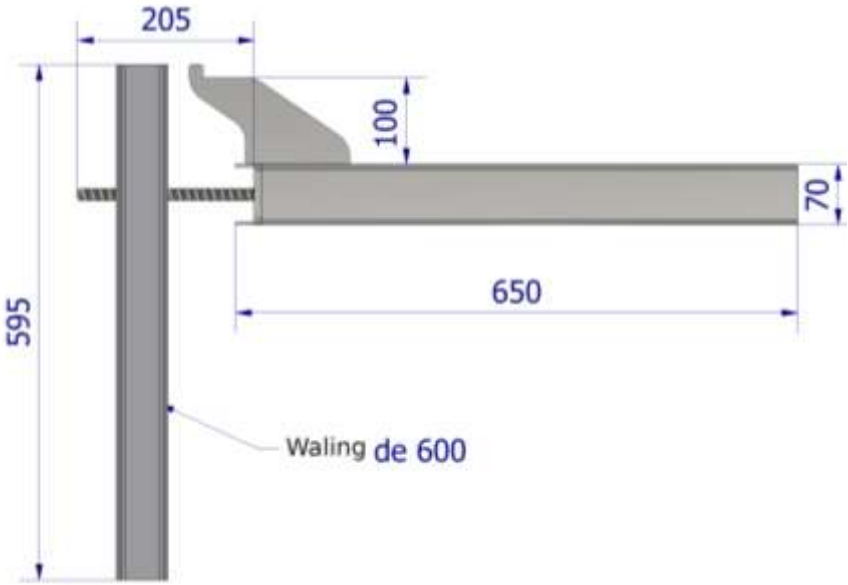


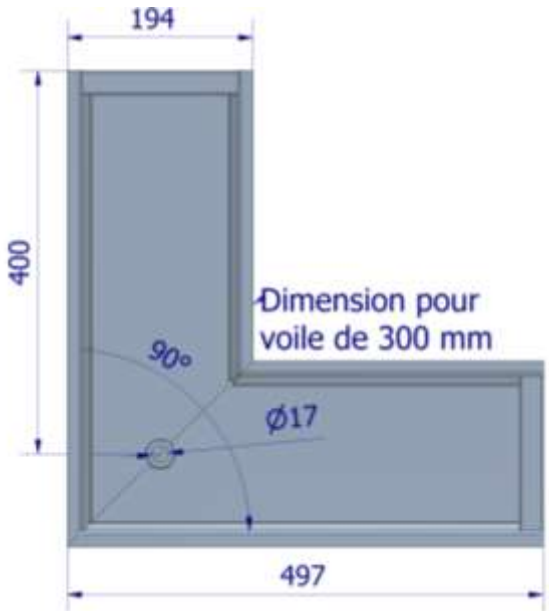
Configuration piscine

Infinity-pool or single-sided formwork kit

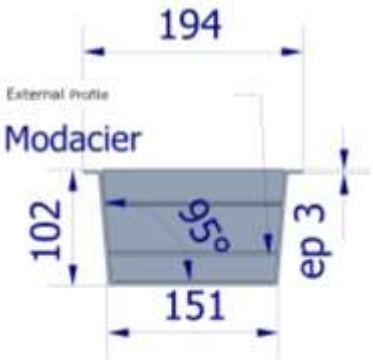
Jib

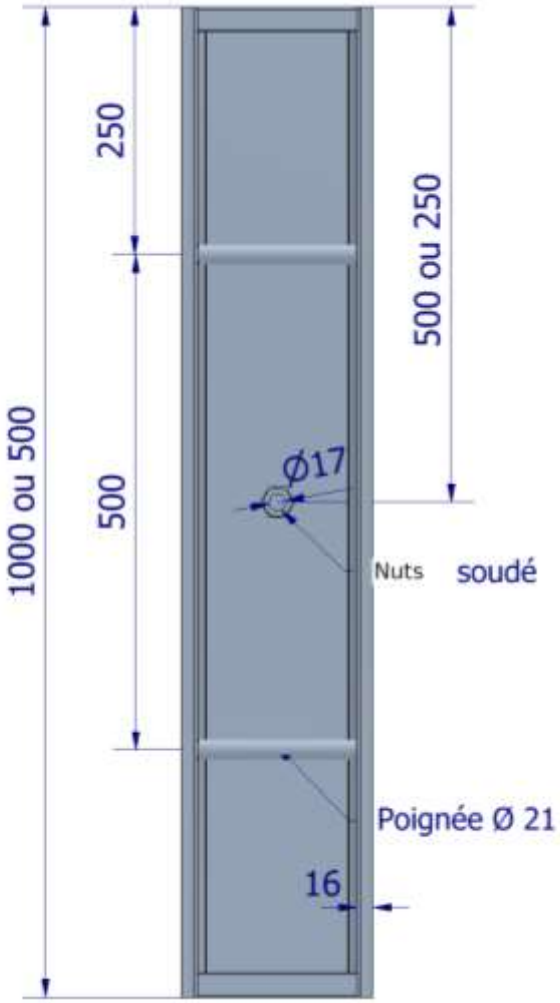






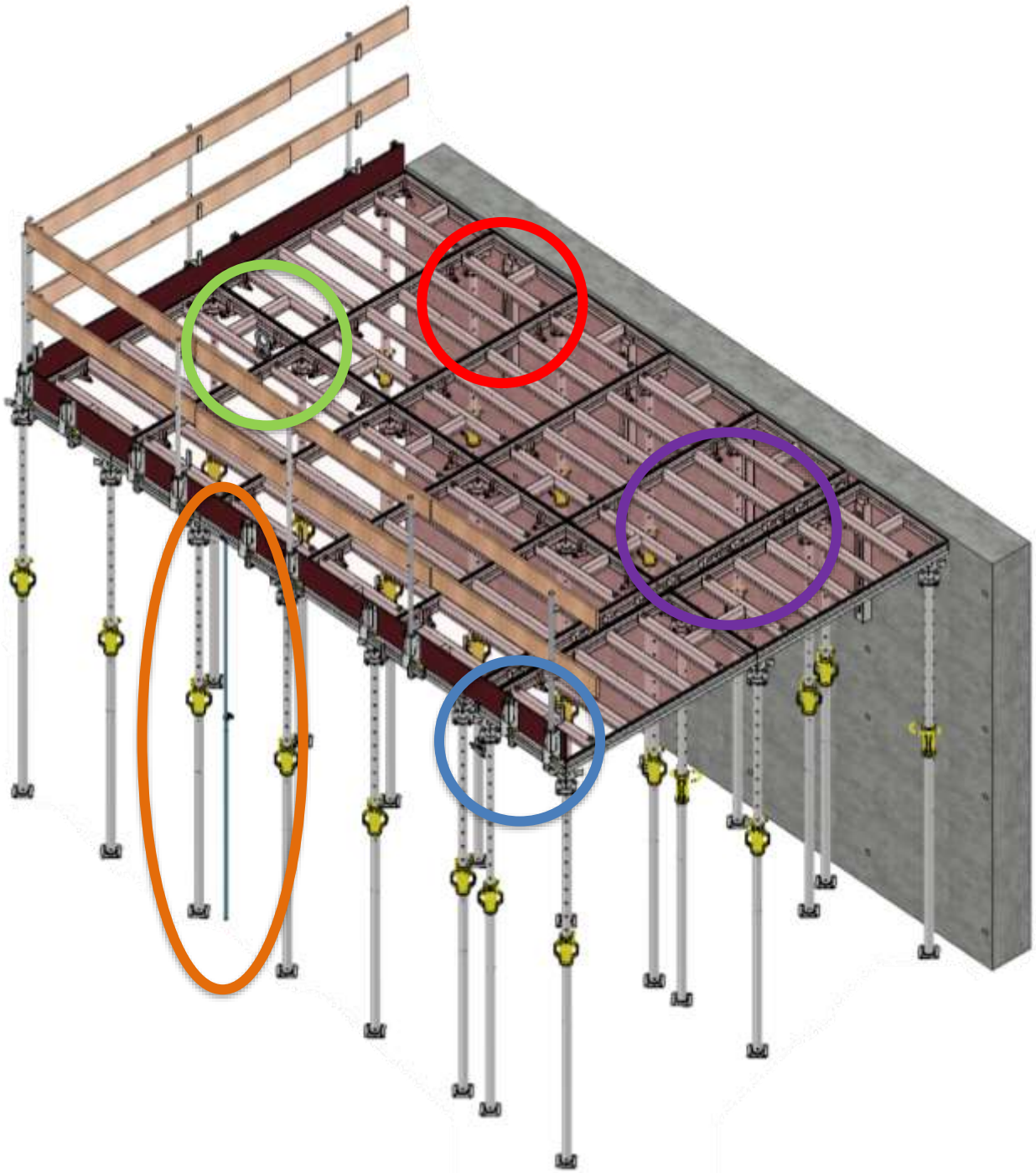
Chute





Slab formwork configuration

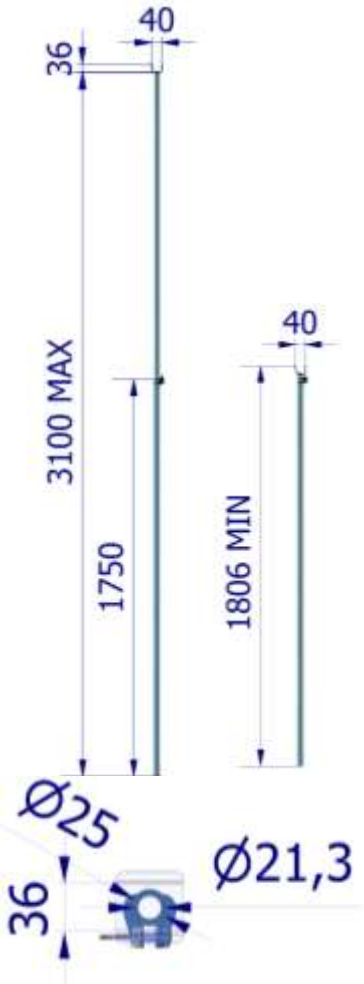
Slab formwork with Modalu panels

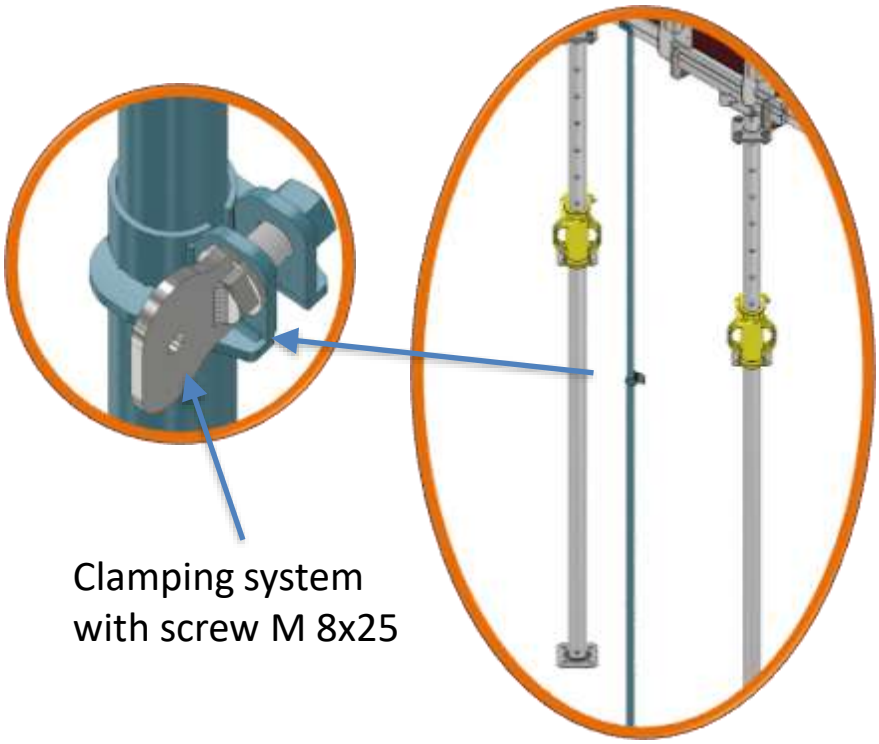


Telescopic holding pole
Wall fixing rail
Ensemble compensation aluminium lg 500
Slab edge with guardrail-post socket, length 500 mm
Lifting eye for slab formwork

Slab formwork configuration

Telescopic prop pole

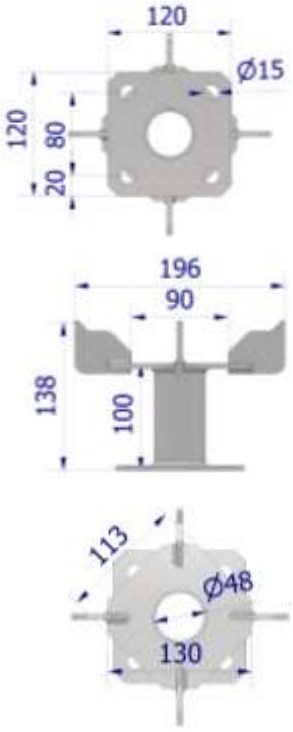




Clamping system
with screw M 8x25

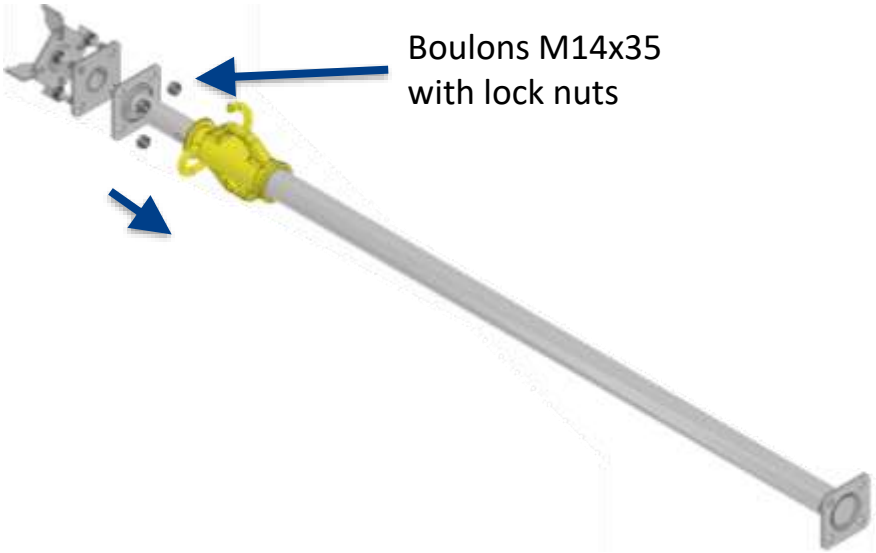
The pole allows the panels to be positioned horizontally while waiting for the props to be fitted.

Slab head



Etape 1 :

Use props fitted with a slab head.

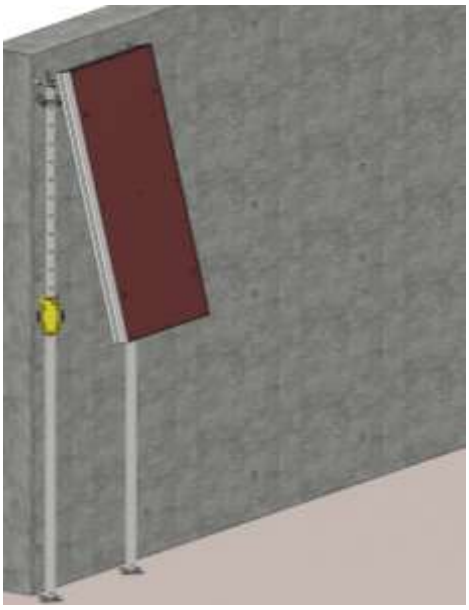


Boulons M14x35
with lock nuts

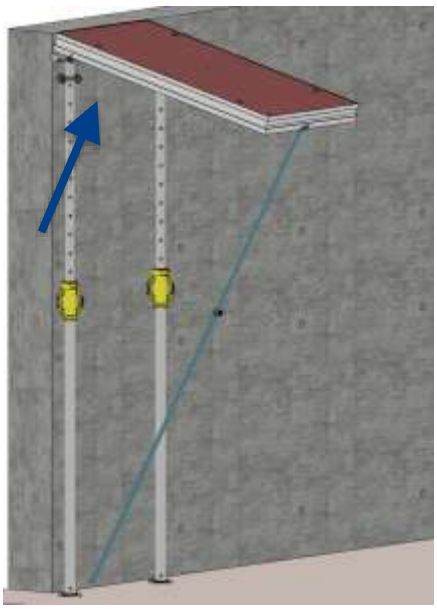
Slab formwork configuration

Telescopic prop pole

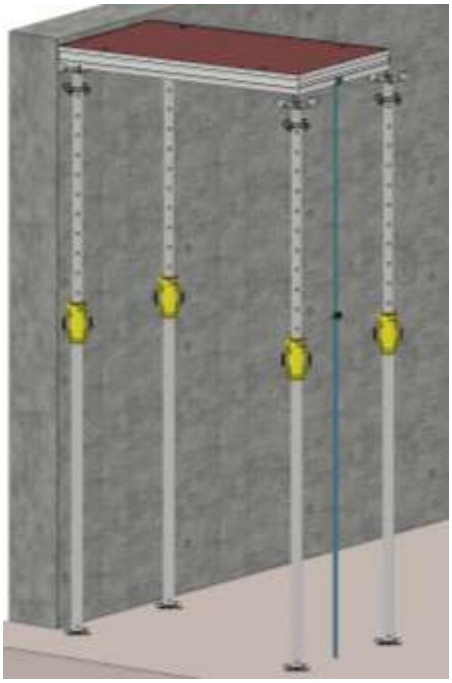
Telescopic holding pole



Etape 2 :
Place the 0750x1500 panel waiting vertically on two props fitted with slab heads
and a tripod prop support



Etape 3 :
Straighten the panel by hand, then use the pole to set it to the desired height (+ a few mm).

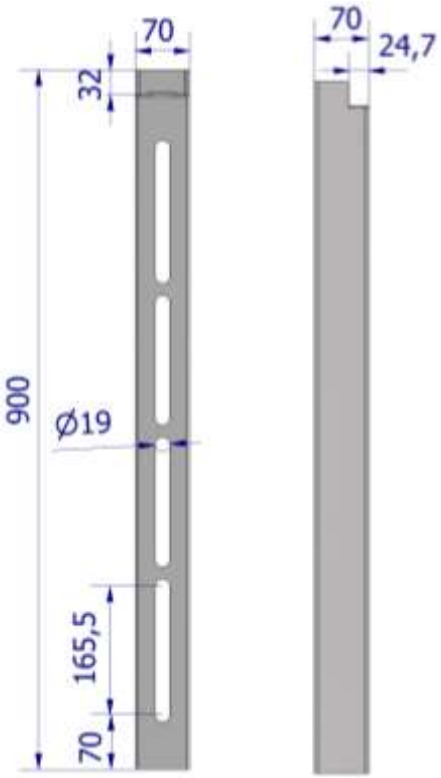


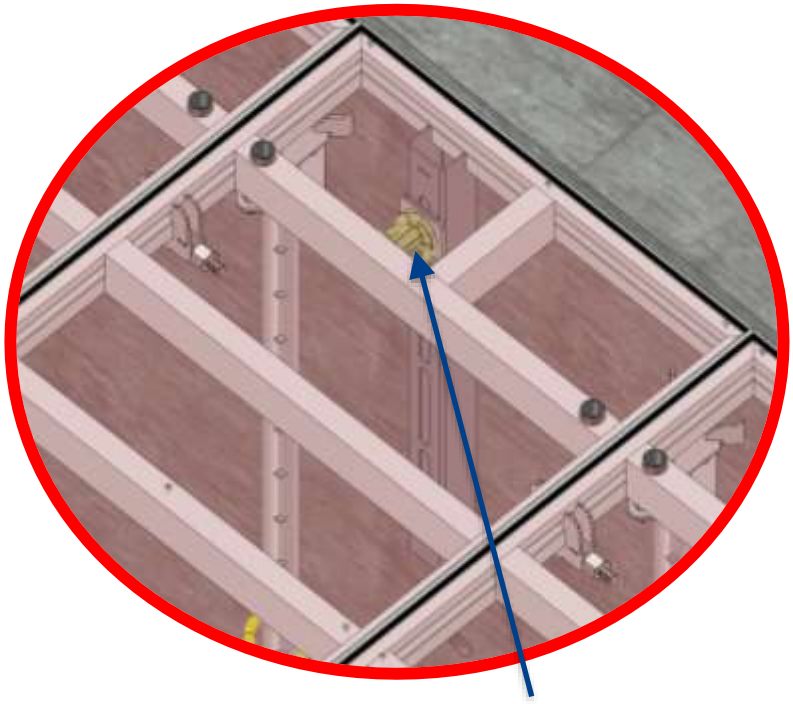
Etape 4 :
Set the pole vertically as a stay while waiting for the props. Remove the pole while placing the panel on
the last two props.

Slab formwork configuration

Wall fixing rail

The wall rail holds the panels
pressed against the existing wall

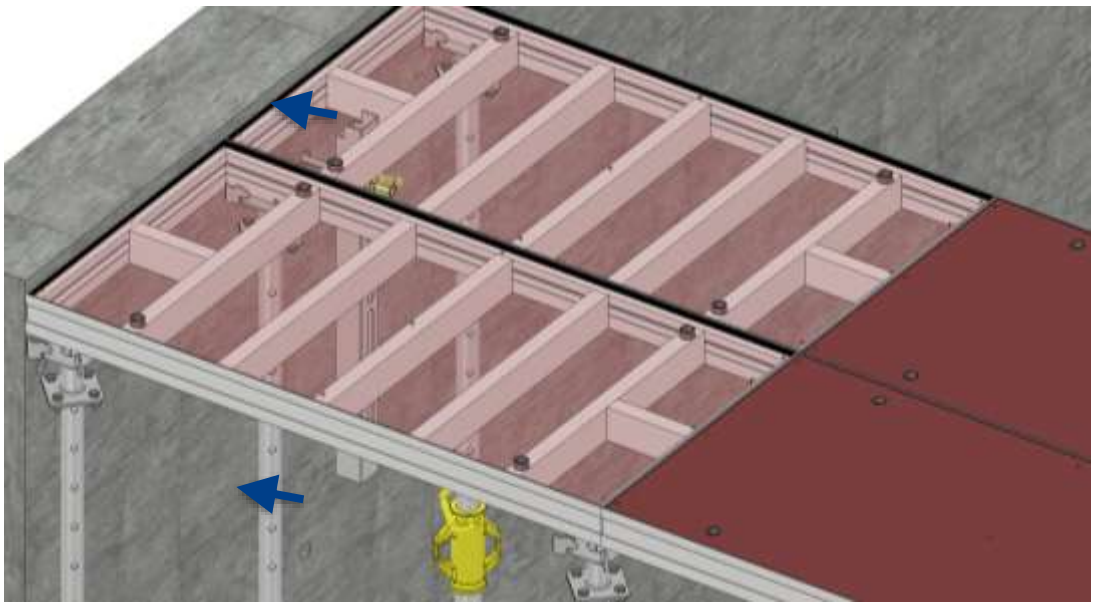




Arteon tie rod Ø17 + 3-wing
nut VM3.65 Ø17 + tie plate
80x80x08 - Ø20

Etape 1 :

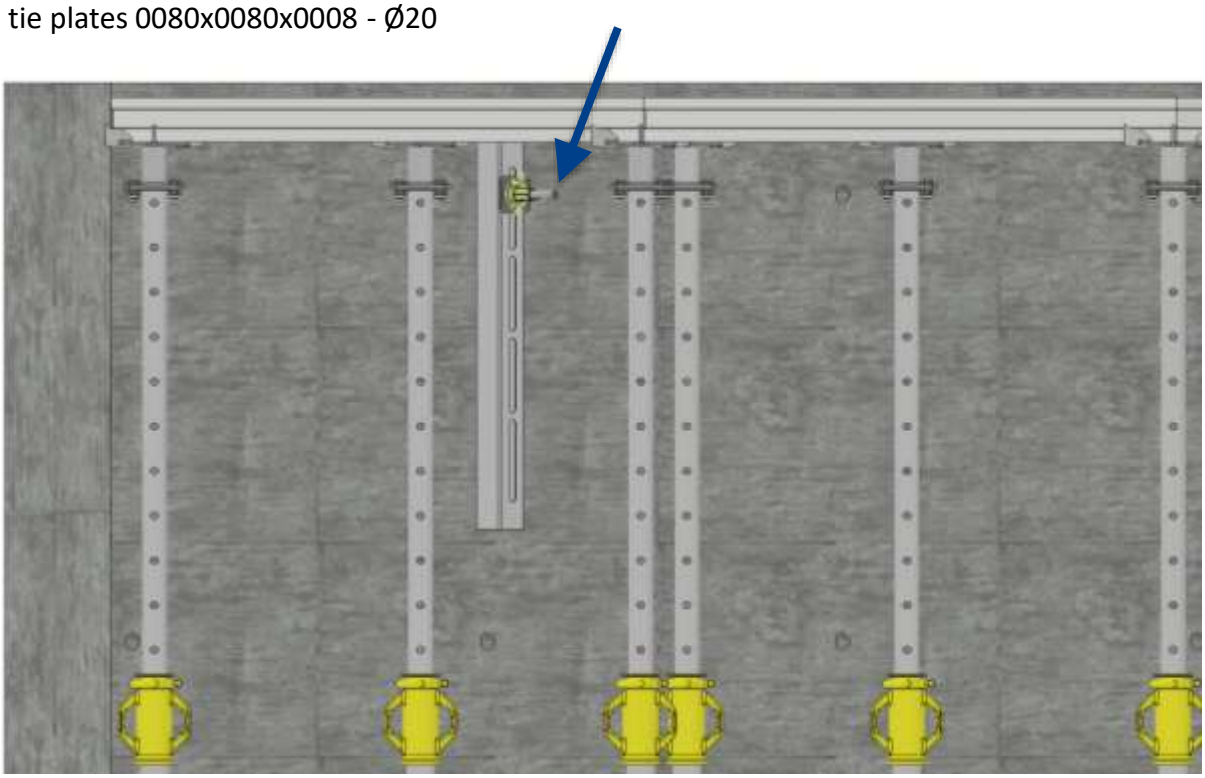
Position the rail against the wall and the panel
while aligned with a tie-rod hole in the existing wall



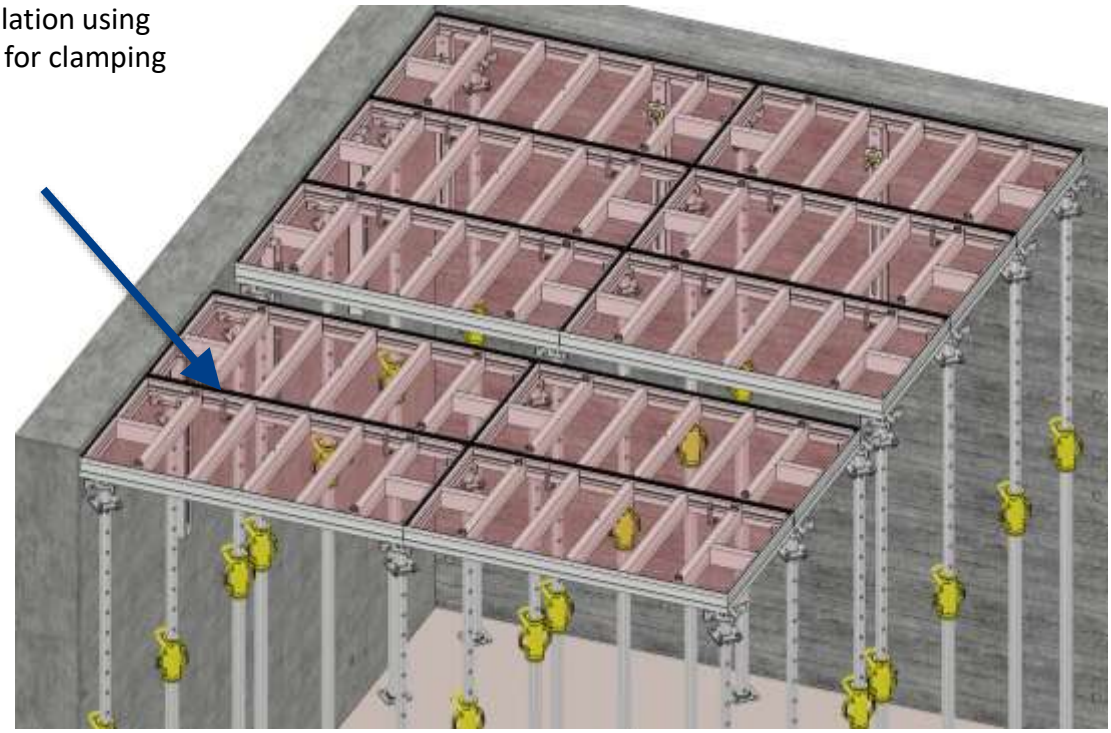
Slab formwork configuration

Wall fixing rail

Etape 2 :
Once in position, clamp the rail using an Arteon tie rod Ø17 and 2 3-wing nuts VM3.65 Ø17
And 2 tie plates 0080x0080x0008 - Ø20



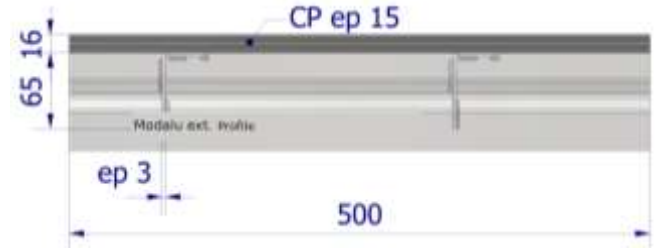
Step 3:
Finish the installation using Modalu clamps for clamping the panels

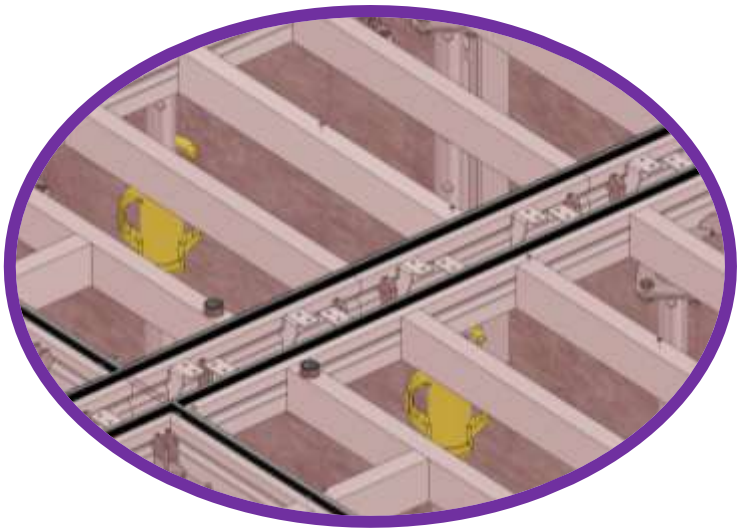


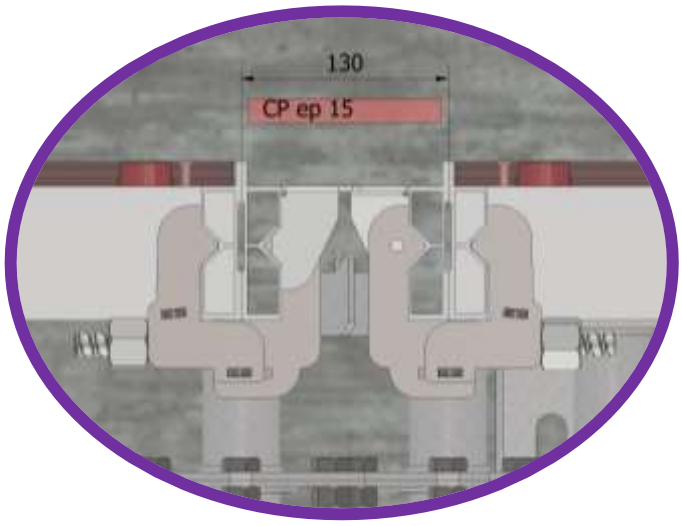
Slab formwork configuration

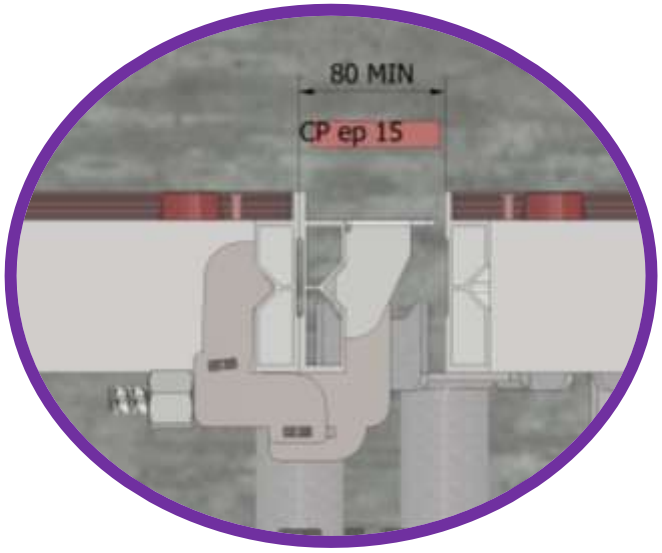
Make-up profile

The make-up profile fills the remaining gaps. It can fill a minimum width of 80 mm; beyond 105 mm, it is advisable to fit packing on each side against the elements.







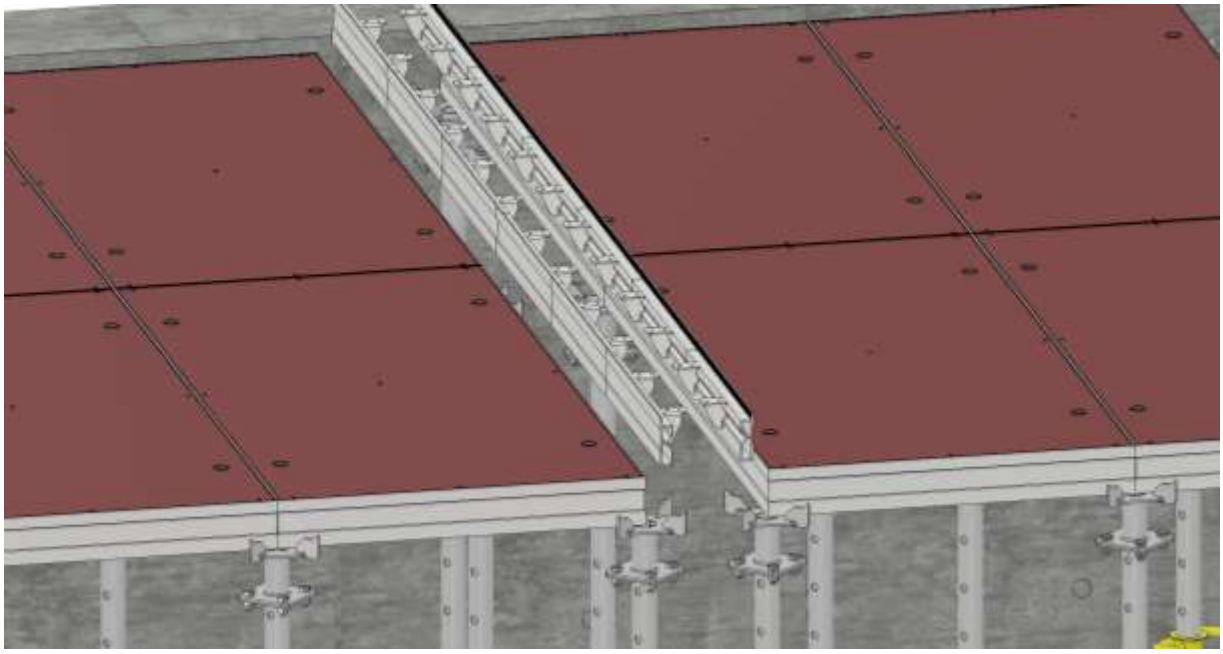


Slab formwork configuration

Make-up profile

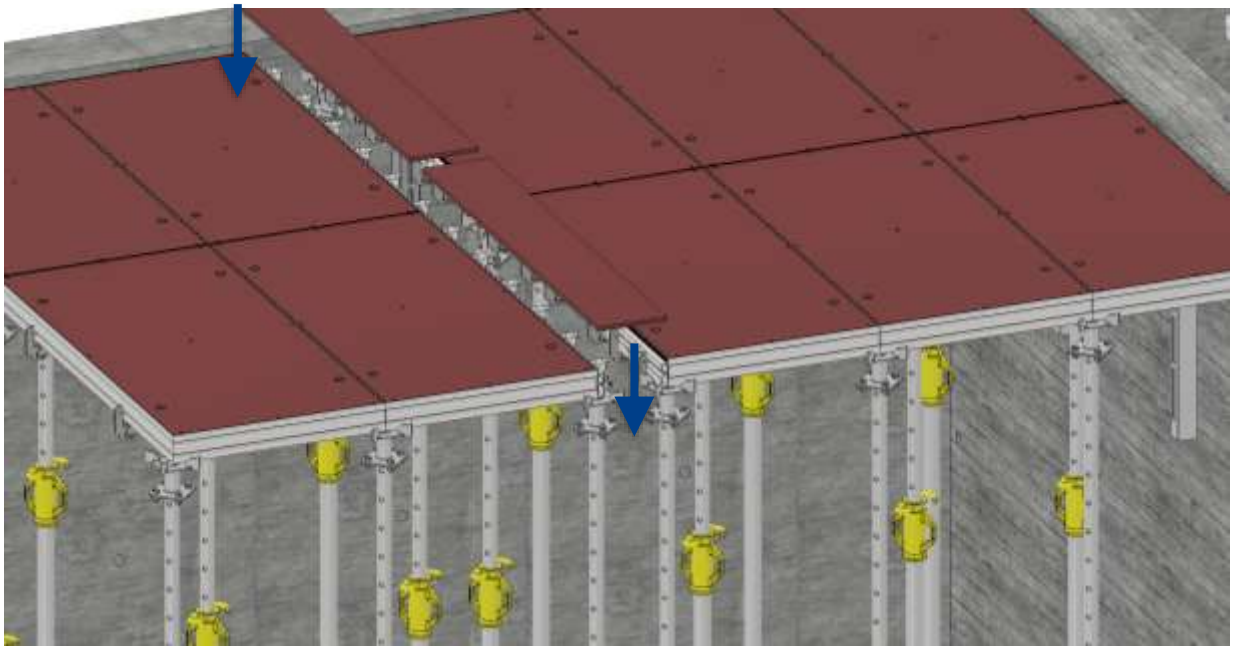
Step 1:

Position the make-up profiles at the ends of the elements,
then clamp them with the Modalu clamps



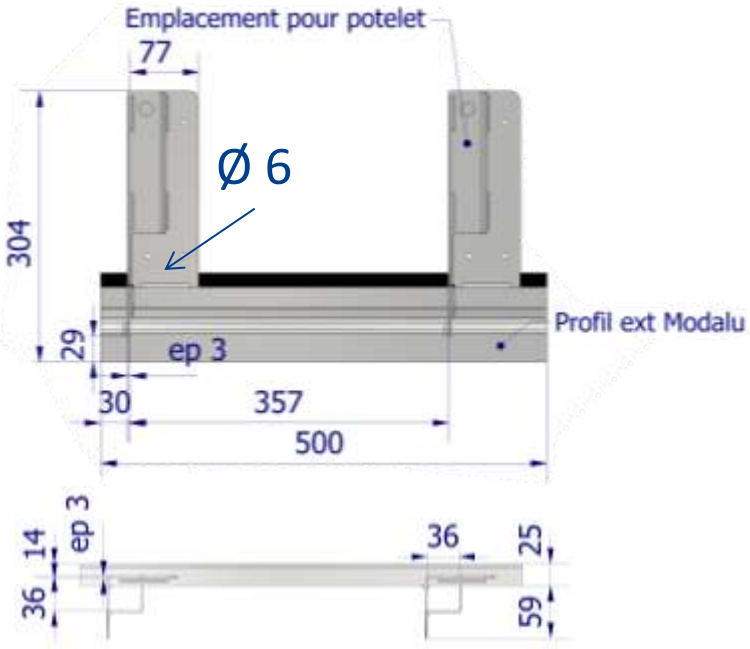
Step 2:

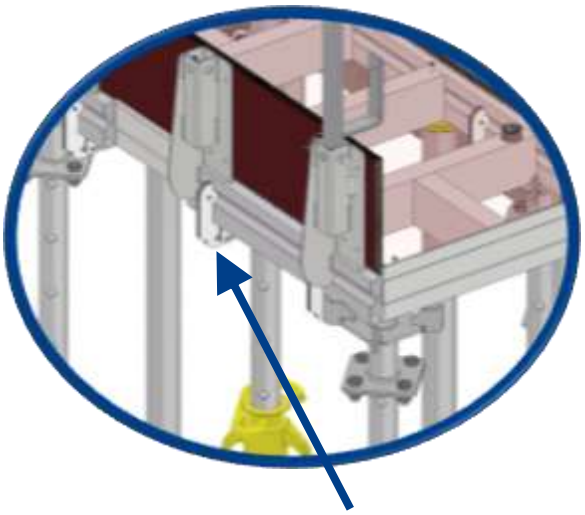
Once the profiles are fixed, cut a 15 mm plywood sheet to the required size,
then screw it from underneath with wood screws Ø5x18 max.



Slab formwork configuration

Slab-edge profile with guardrail-post socket



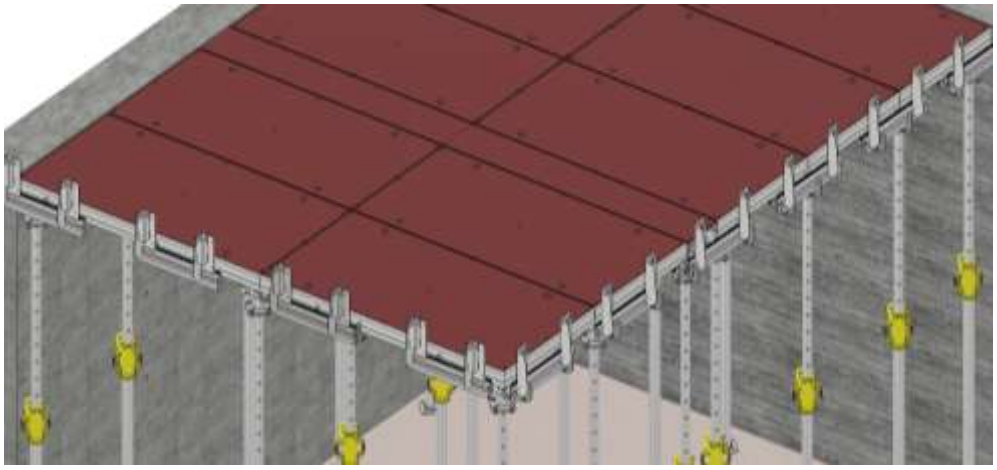


Fixing with
Modalu clamps

Step 1 :

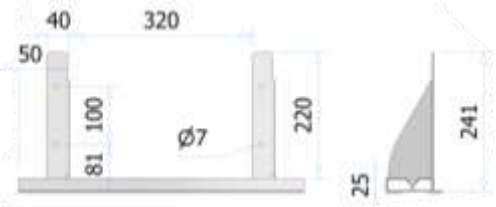
Position the slab edges at the ends of the panels then fix them with the Modalu clamps.

Spacing between edges is 300 mm maximum.

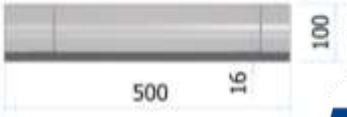


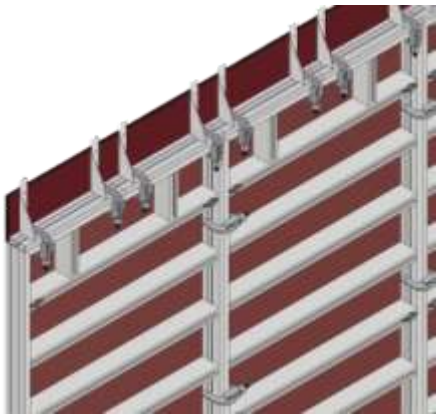
A slab-edge profile on a vertical panel is also available.

It consists of an external profile and is fixed with assembly clamps.



External profile



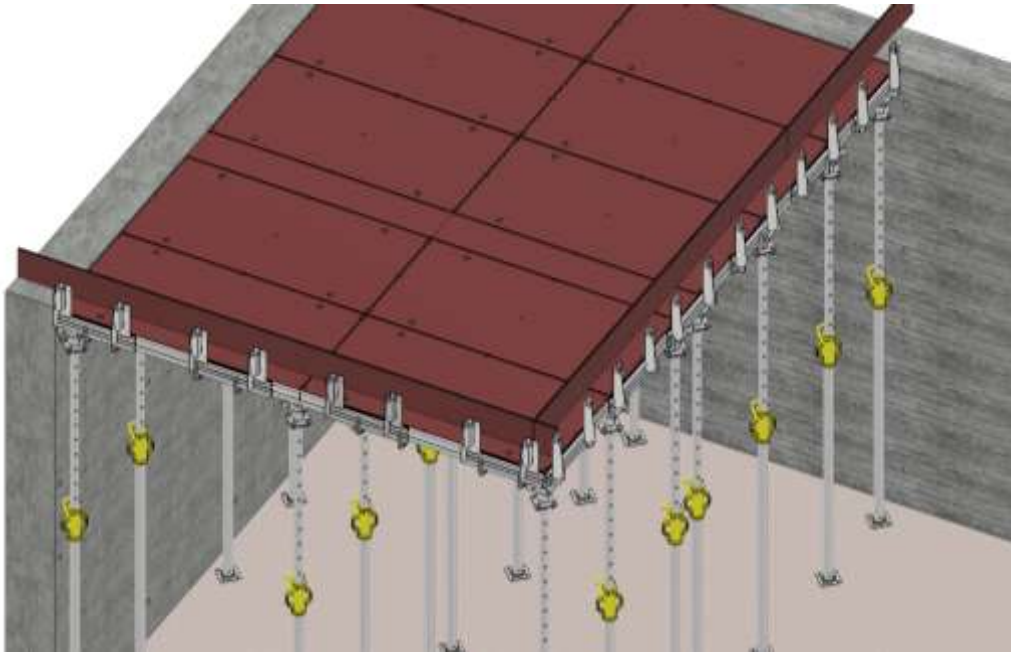


Slab formwork configuration

Slab-edge profile with guardrail-post socket

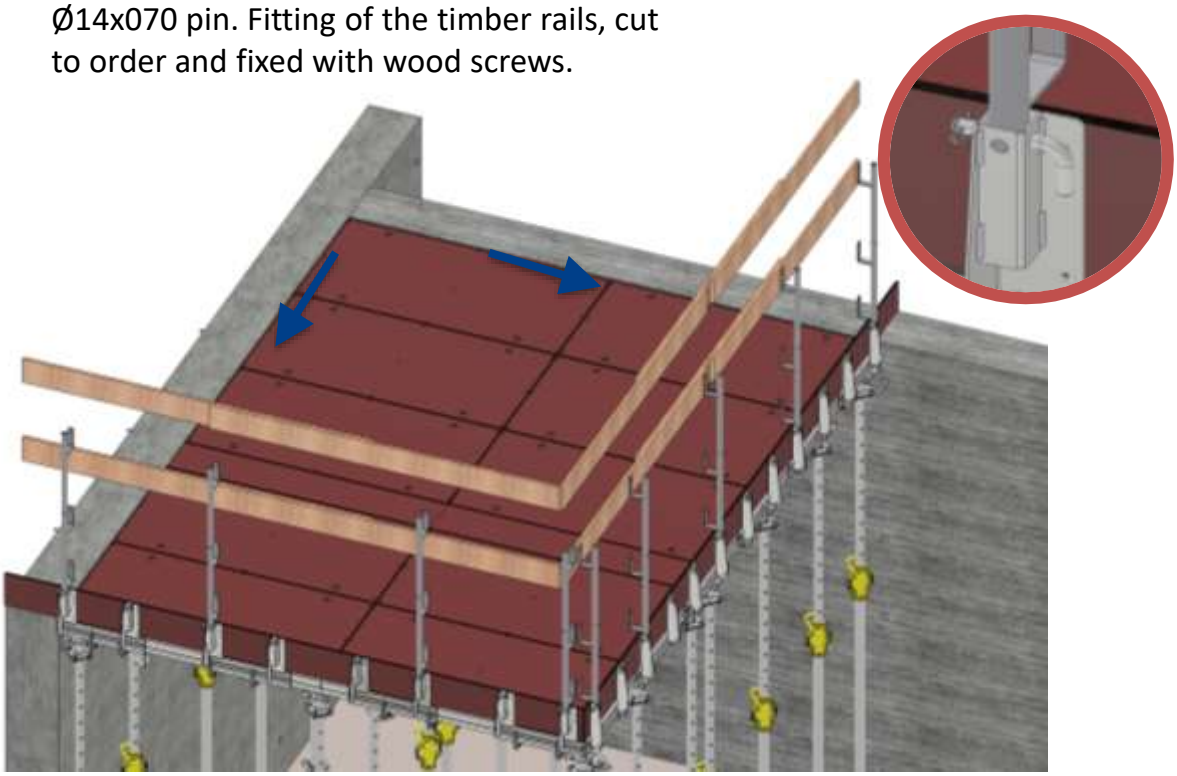
Step 2 :

Fix an edge board, cut to order, min. 15 mm thick, with wood screws Ø6 mm maximum



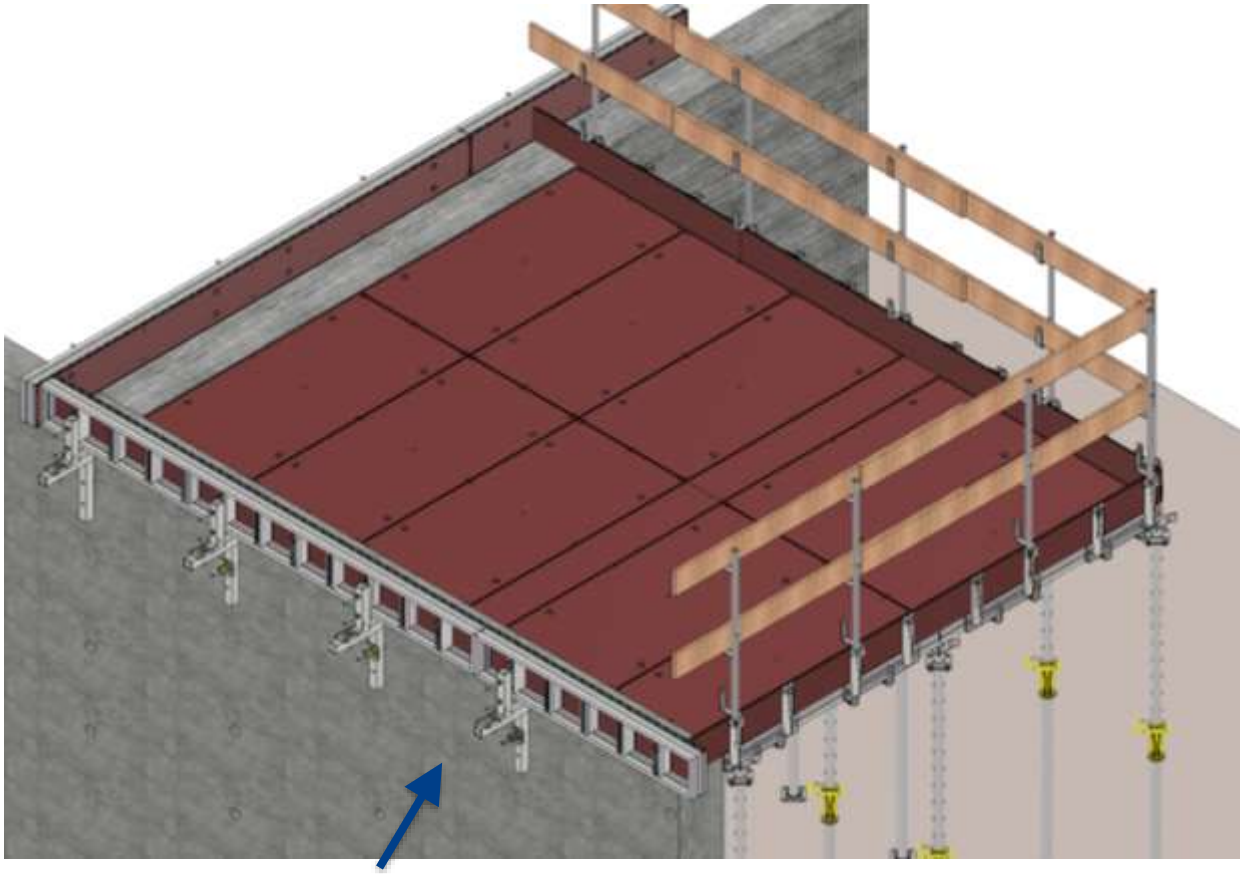
Step 3 :

Positioning and fixing of the guardrail posts with a Ø14x070 pin. Fitting of the timber rails, cut to order and fixed with wood screws.

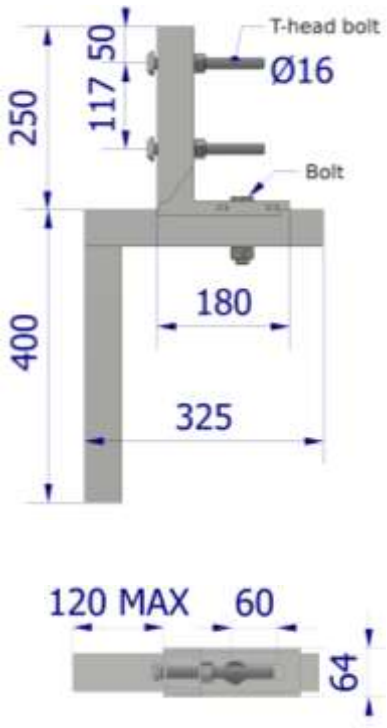


Slab formwork configuration

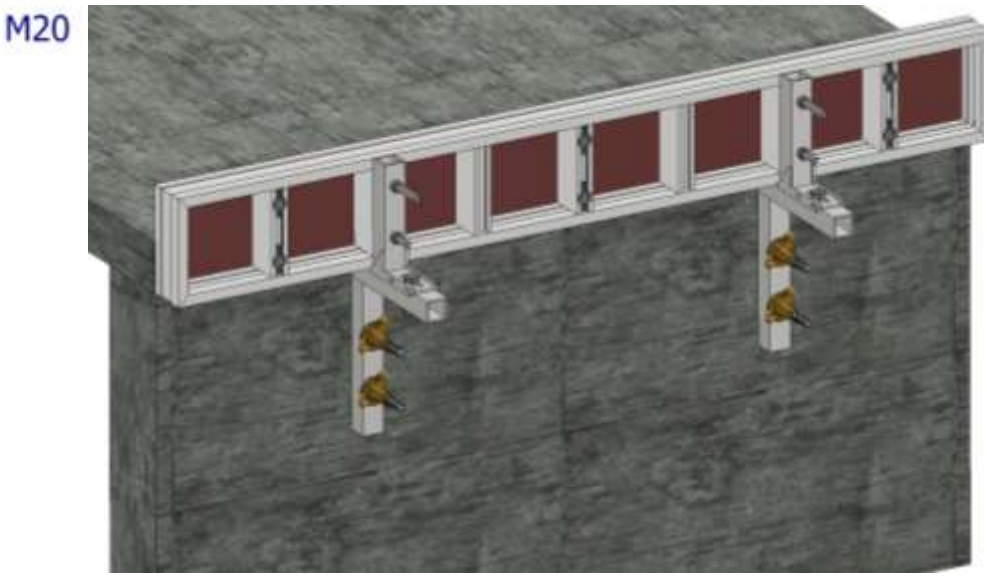
Slab-edge profile



Assembly with slab edge on an existing wall.



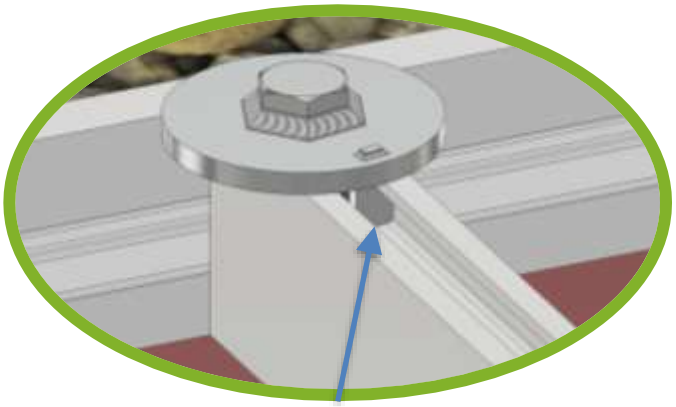
Slab-edge clamp



Slab formwork configuration

Lifting eye

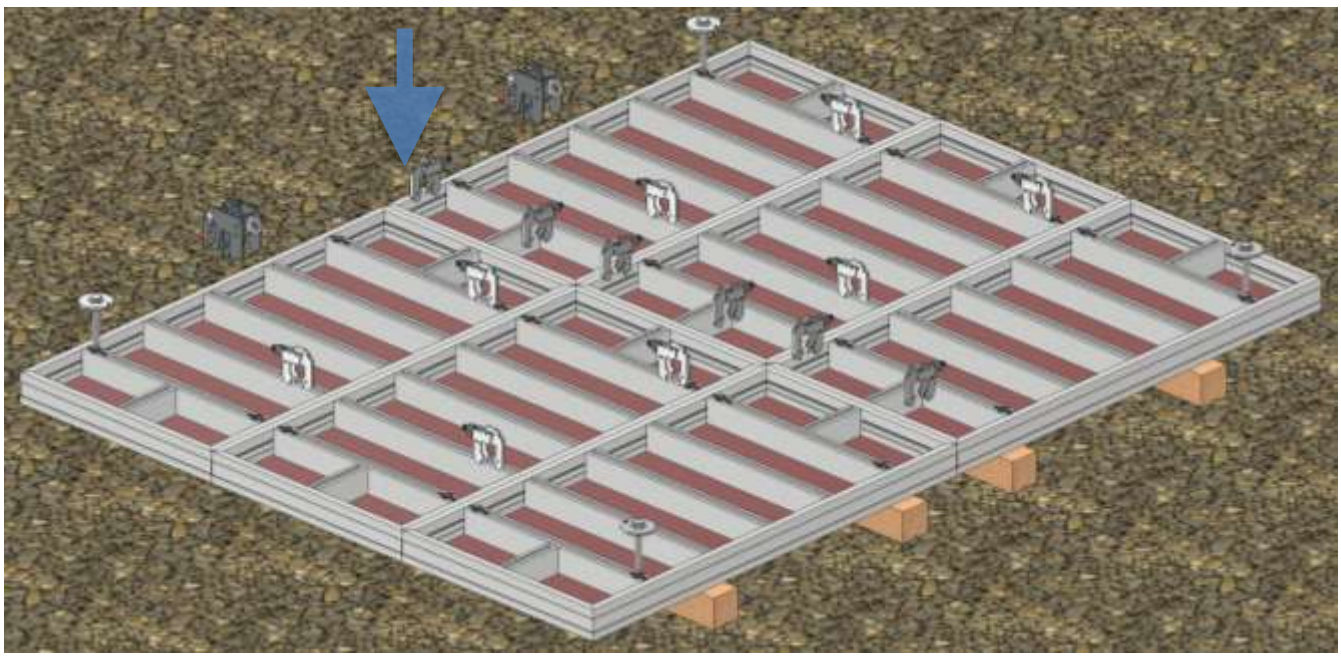
The lifting eye for slab formwork allows working in blocks of 0750x1500 panels (6 panels max). For use by a single operator with a crane. Its assembly is done in several steps



Lower body with the holding hook in position

Step 1 :

Assemble the 6 panels 0750x1500 on the ground using Modalu clamps. Fit the block with two Modalu lifting eyes as well as the lower bodies of the lifting eyes for slab formwork.



Slab formwork configuration

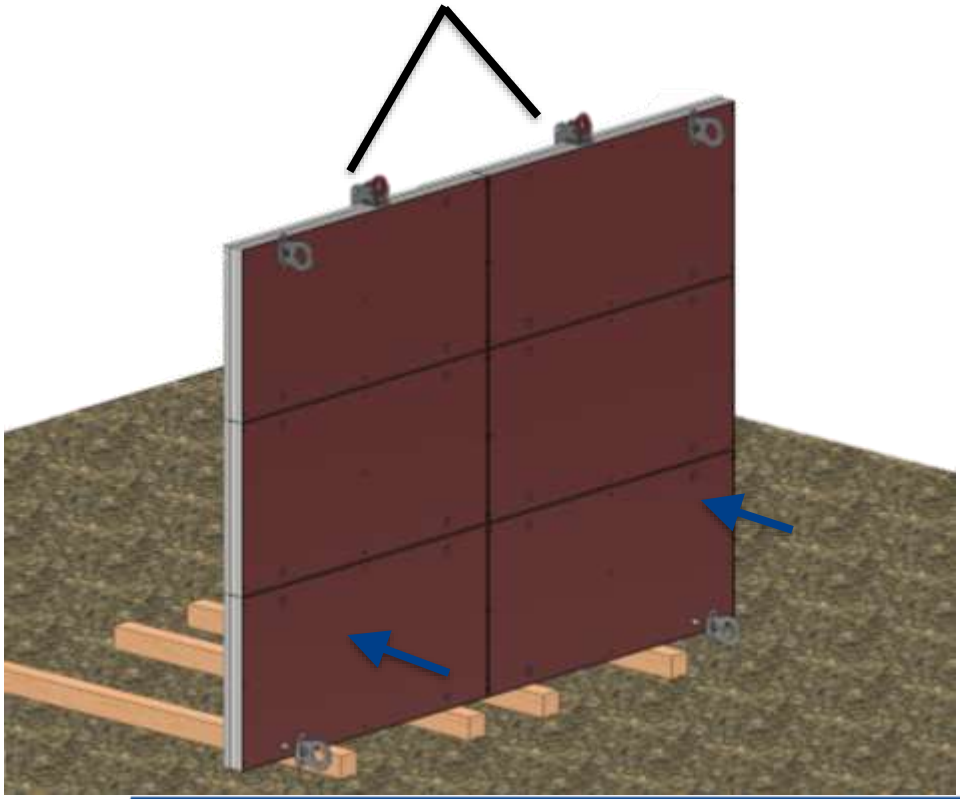
Lifting eye

Step 2 :

Lift slightly with the crane to screw on two upper bodies.
Hand-tighten.

Step 3 :

Set the block vertical, resting on the rafters,
and screw on the last two upper bodies.

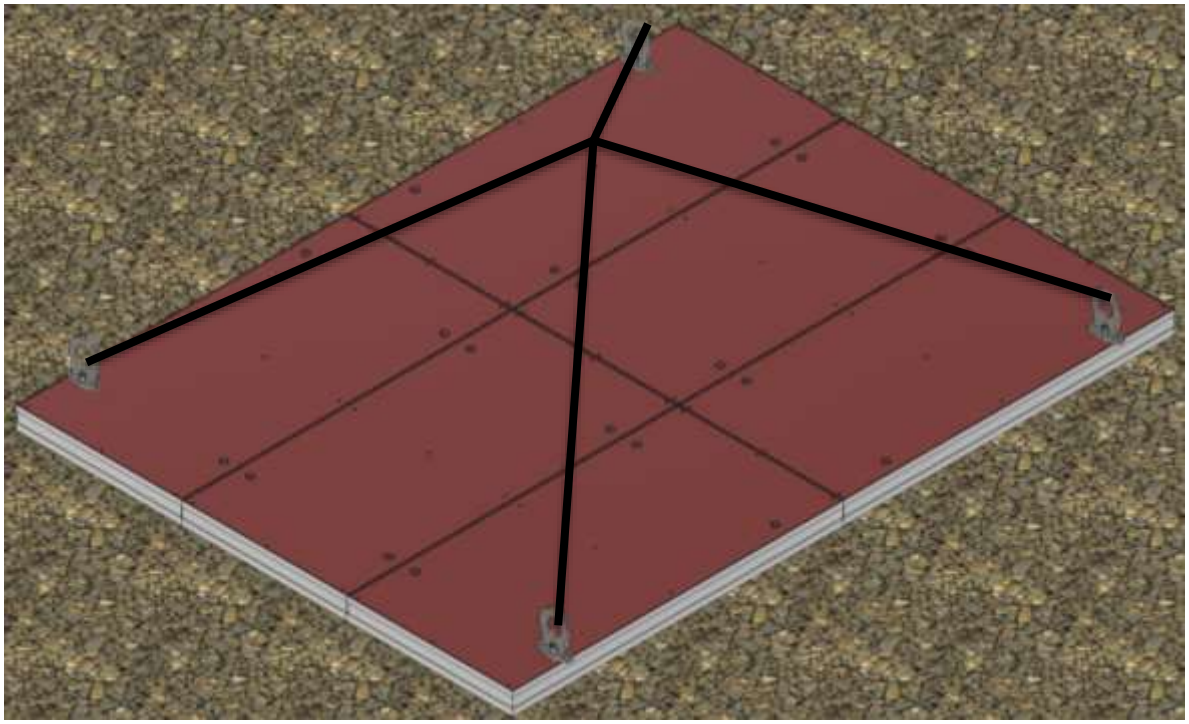


Slab formwork configuration

Lifting eye

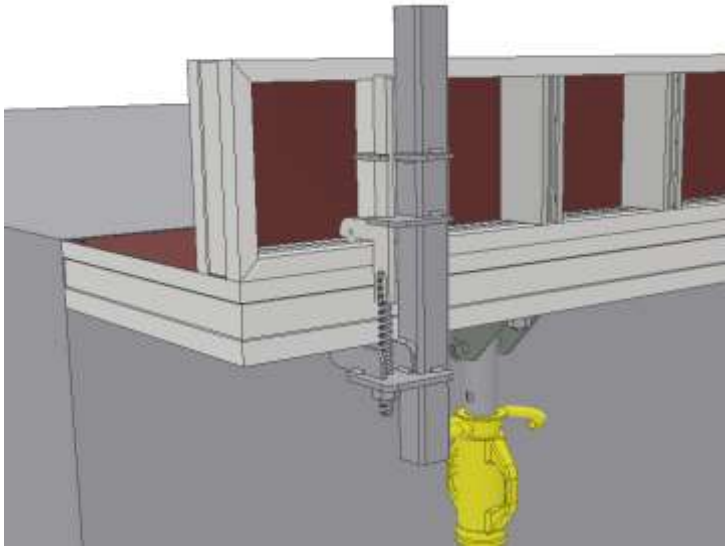
Step 4 :

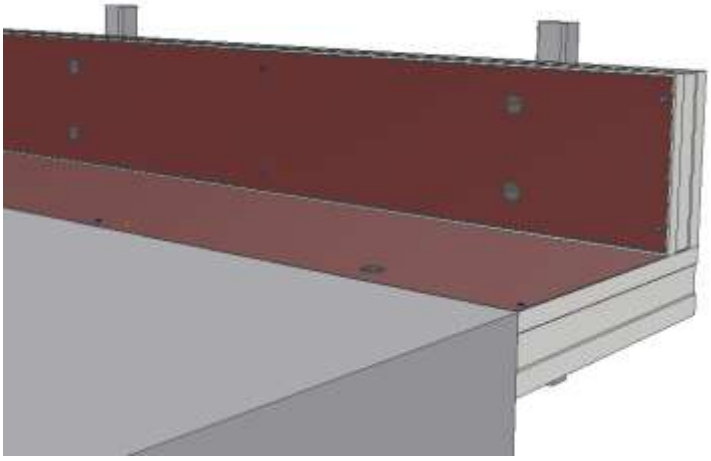
Place the block on the rafters, forming face up.



Slab formwork configuration

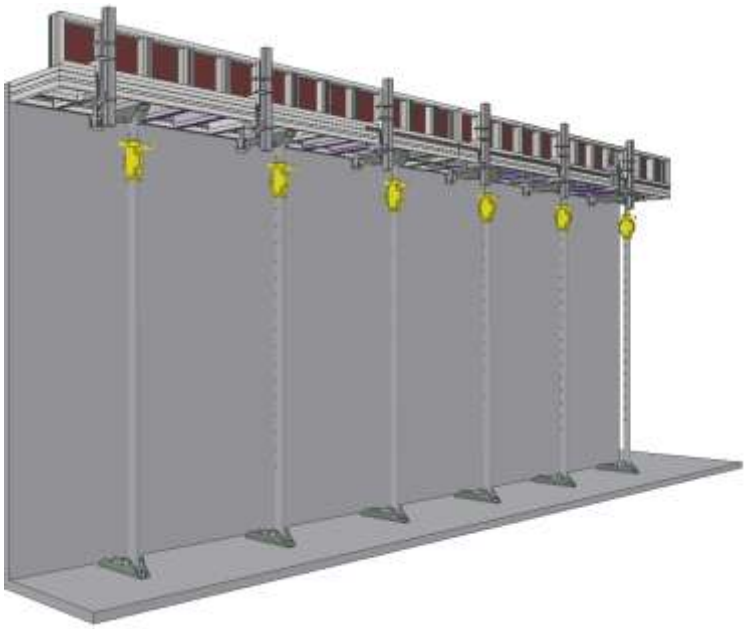
« Casquette » configuration

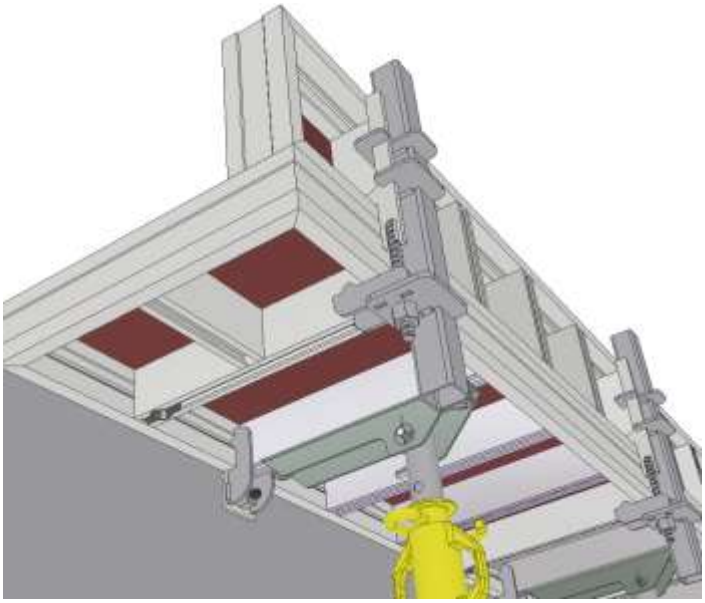




The cantilever ("casquette") configuration creates overhanging elements with a lip.

This set is assembled from Modalu panels, alignment clamps, props with their fork heads, and floor-fixing clamps. Assembly can be done on the ground for easier fixing to the wall.



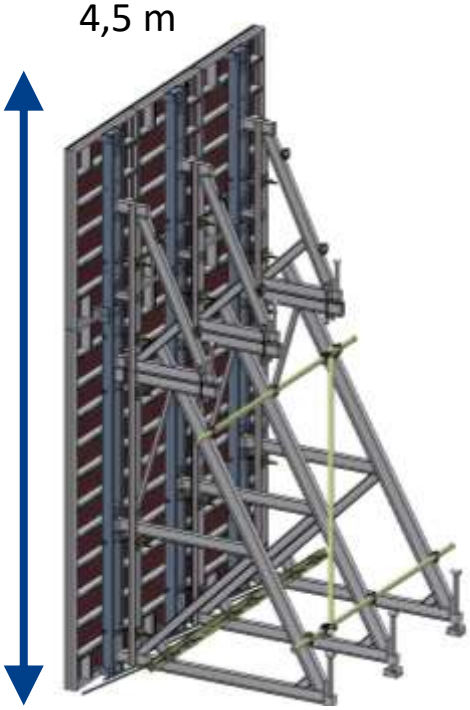


Configuration with trestles

Single-sided formwork trestle

Base trestle ht 2450
+ extension trestle h.1390

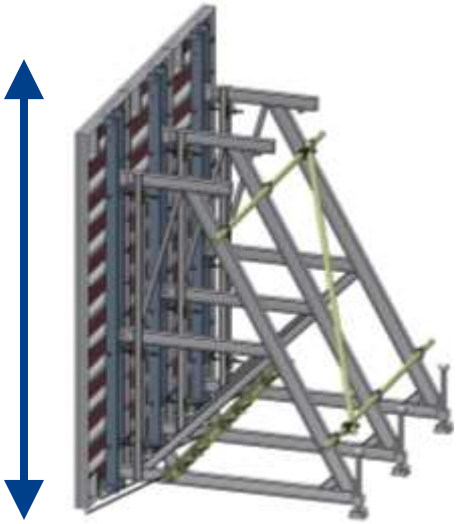
4,5 m



Place one trestle per linear metre

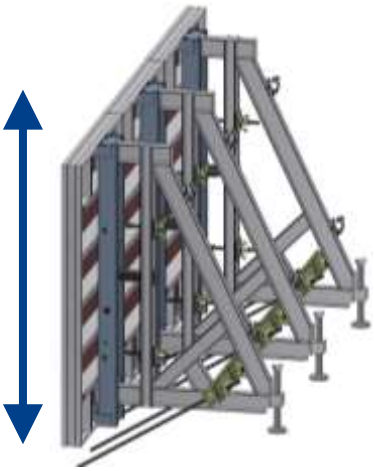
Base trestle ht 2450

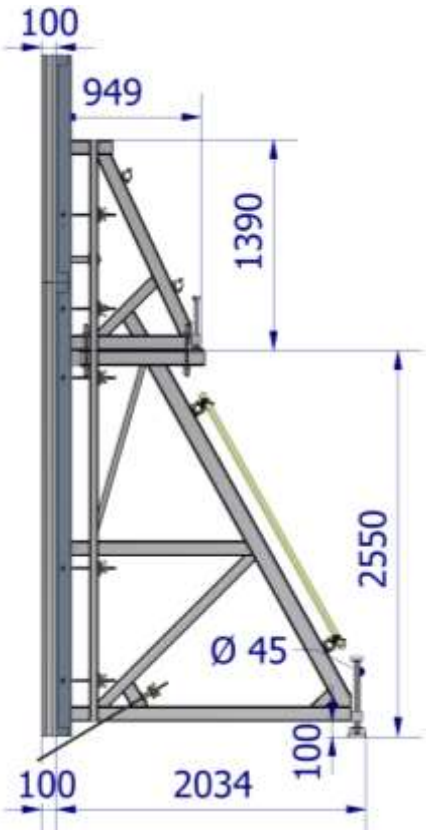
3 m

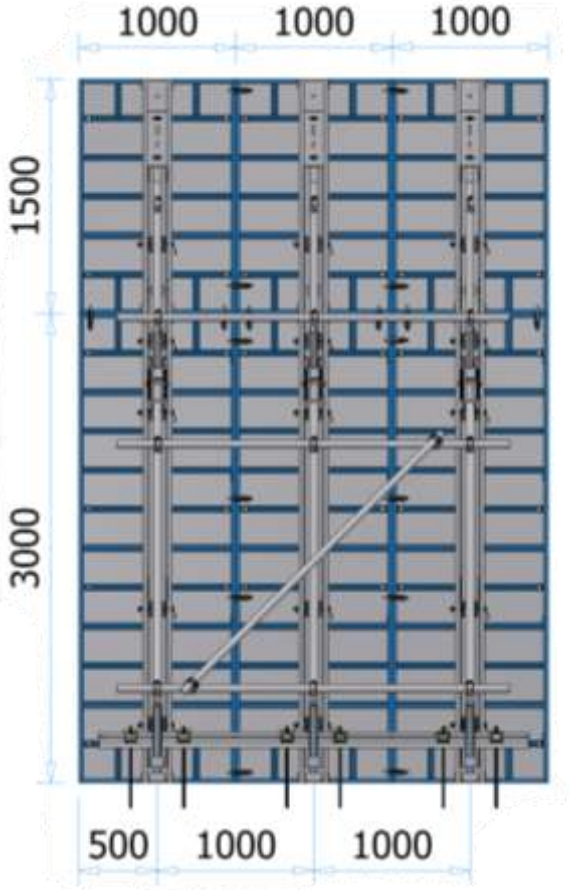


Extension trestle ht 1390

1,5



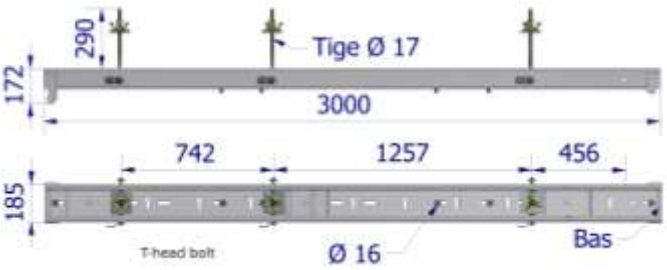




Configuration with trestles

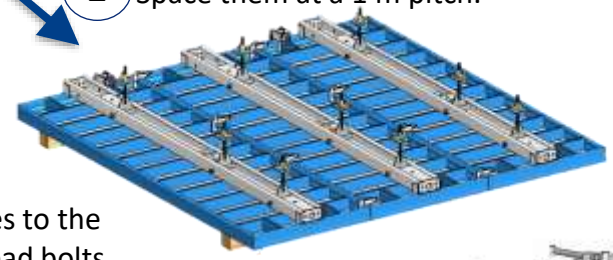
Trestle assembly

1 Assemble the panels using Modalu clamps.



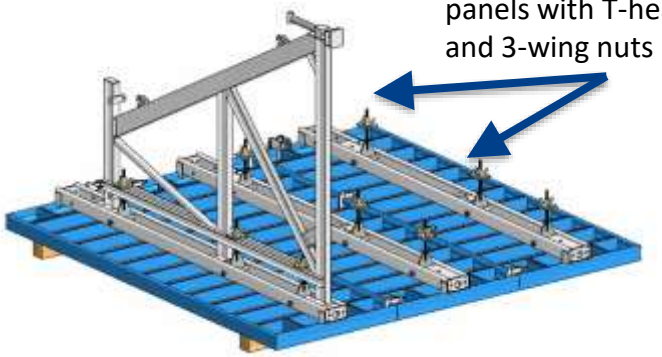
Installing the SP-Waling trestle-support rails (screws supplied) with T-head screws. Space them at a 1 m pitch.

2



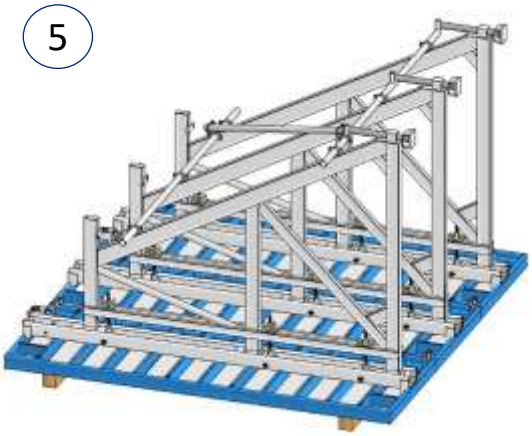
3

Fixing the trestles to the panels with T-head bolts and 3-wing nuts



4

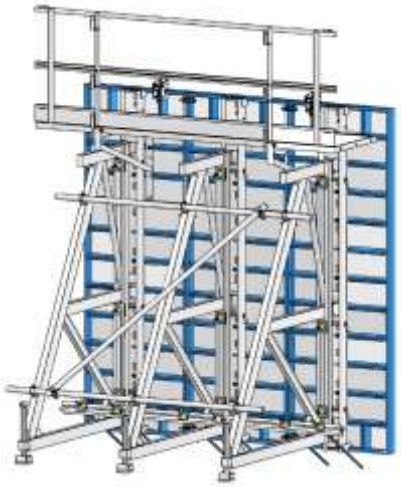
5



6

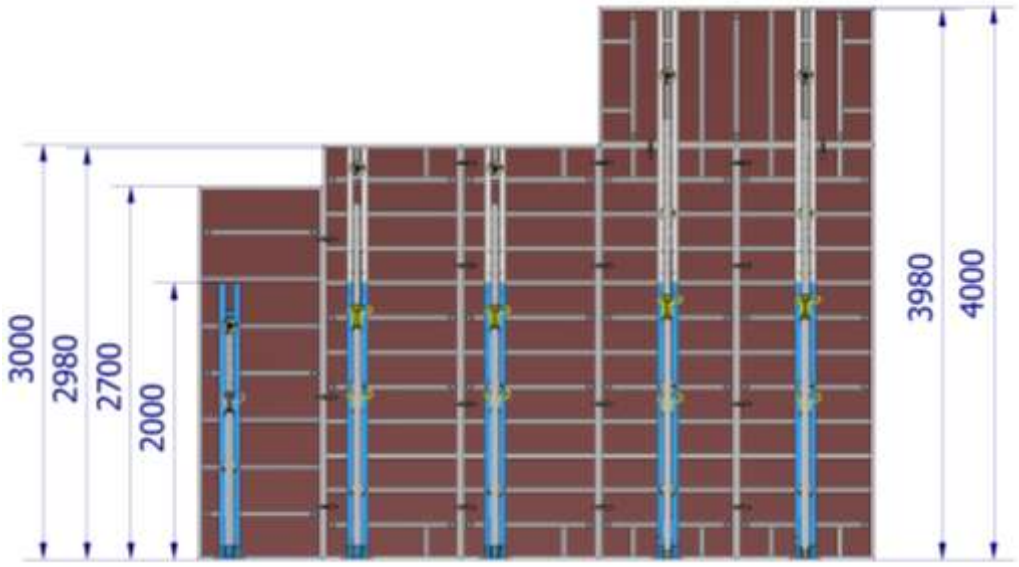
Connect the trestles together using a Ø48.3 tube and the couplers welded to those trestles

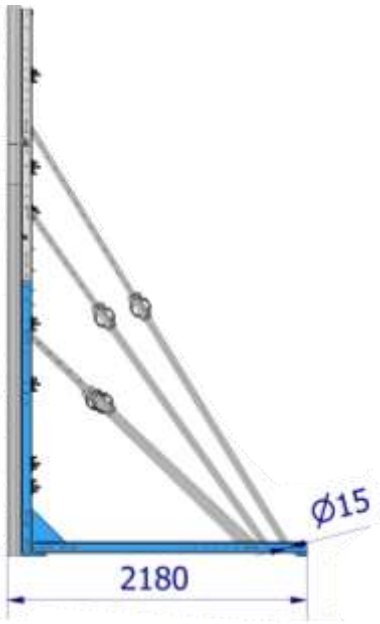
7



Configuration with trestles

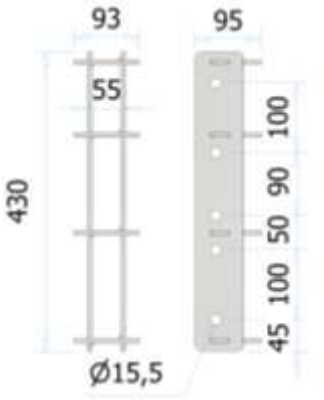
Single-sided formwork trestle





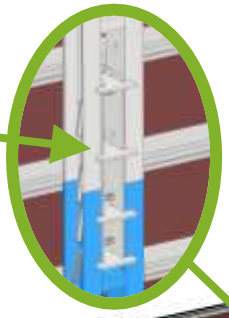
Prop 170/300
Prop 220/400
Prop 220/400

Joining piece



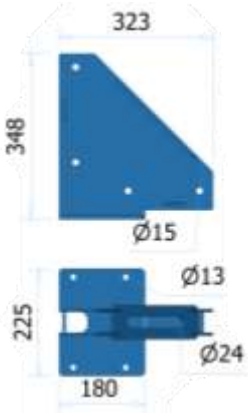
Do not exceed 40 kN of pressure

Props with a strength of at least 50 kN must be used.



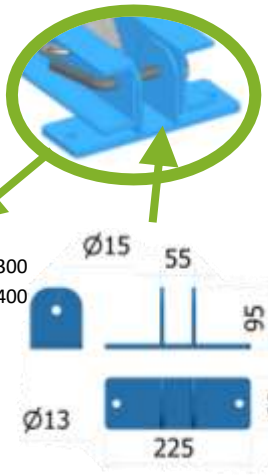
1 m walings en U80

2 m walings in U80



Gusset

Base plate



Prop 170/300

Prop 170/300
Prop 220/400

Prop 170/300
Prop 220/400

Prop 170/300
Prop 220/400

Prop 170/300
Prop 220/400

***The props are not included with the trestle**

Configuration with trestles

Single-sided formwork trestle assembly

Step 3: the trestle is set up for a height up to 2.70 m

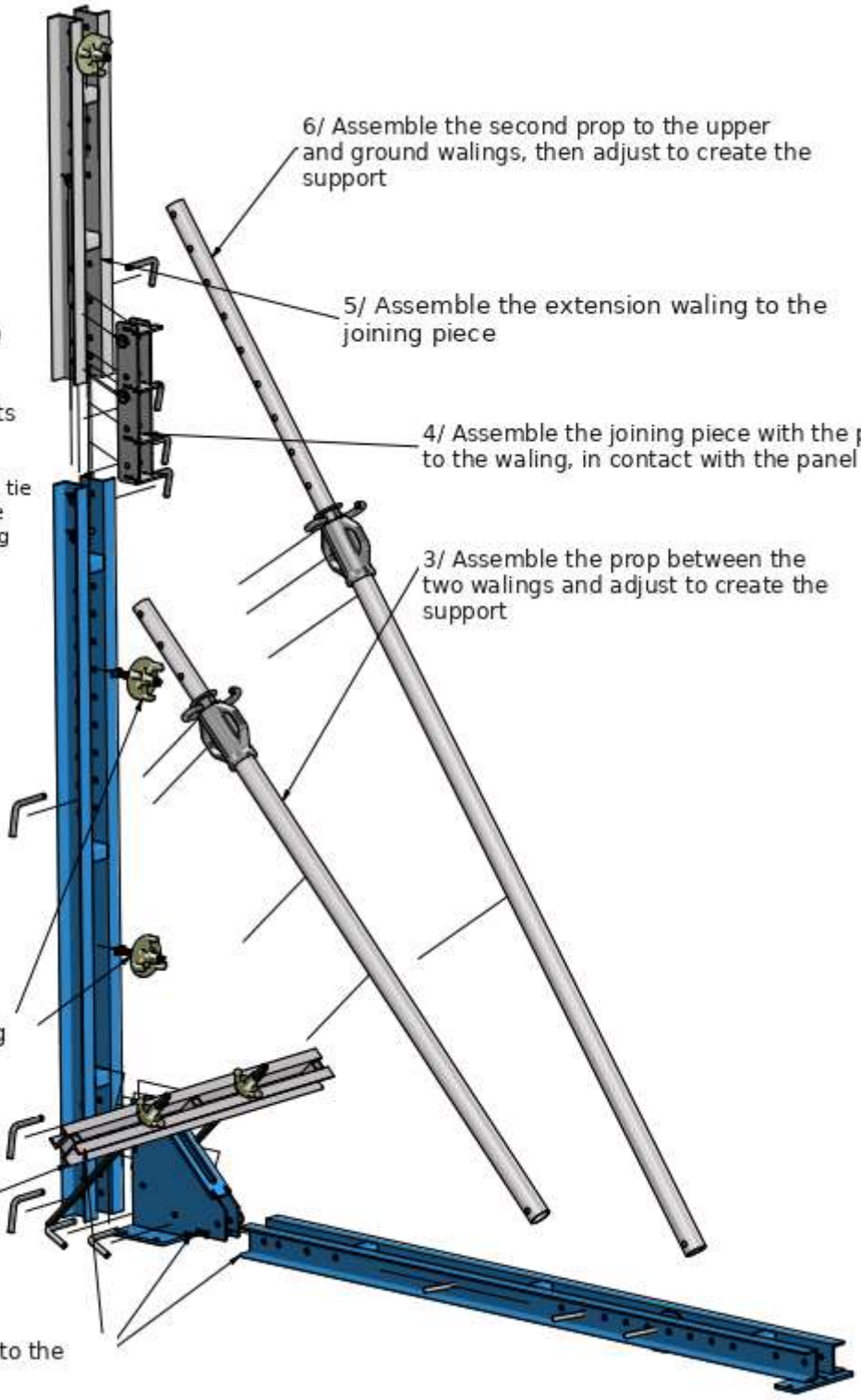
Step 6: the trestle is set up for a height up to 3 m

For any greater height, repeat steps 4 to 6

Walings are fixed at one fixing point (T-head bolt, 150 mm long, with nut) every metre

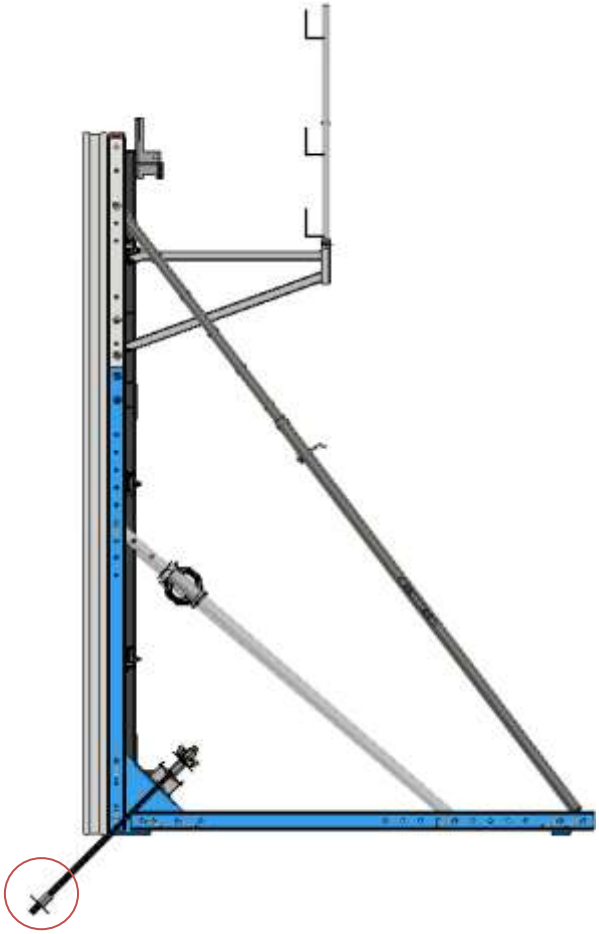
Example: height 3 m = 3 fixing points spread over the height

Trestles anchored into the raft slab by 2 tie rods Ø20/23 (1 right, 1 left of the trestle foot), through a horizontal UPN80 waling

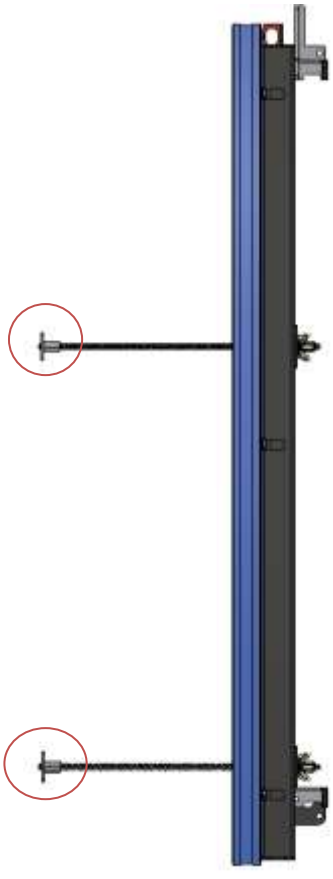


Configuration with trestles

Use of the foundation plate



The foundation plate is a small part to be pre-installed when the slab is poured; it creates a reliable anchorage in the slab.

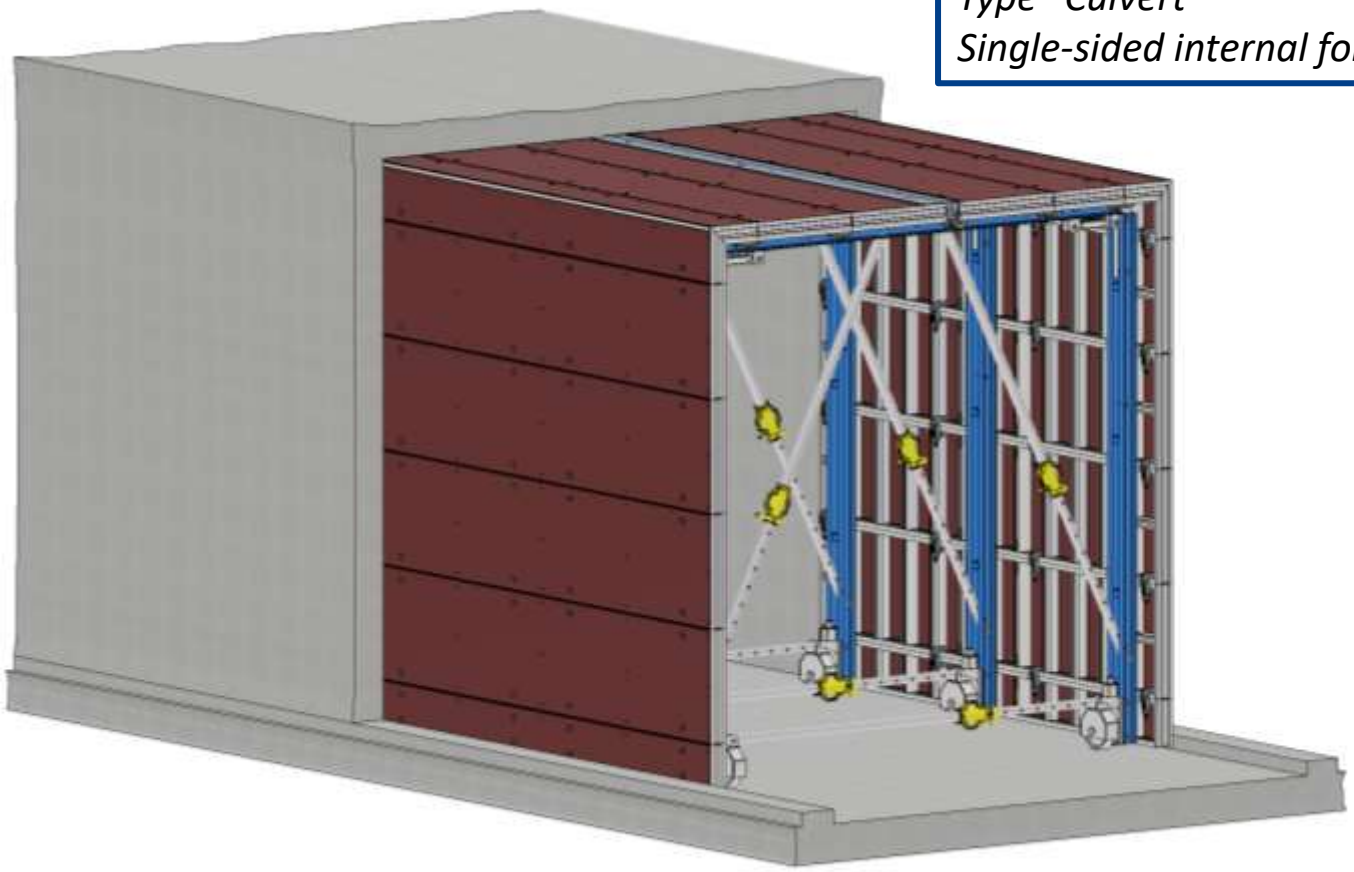


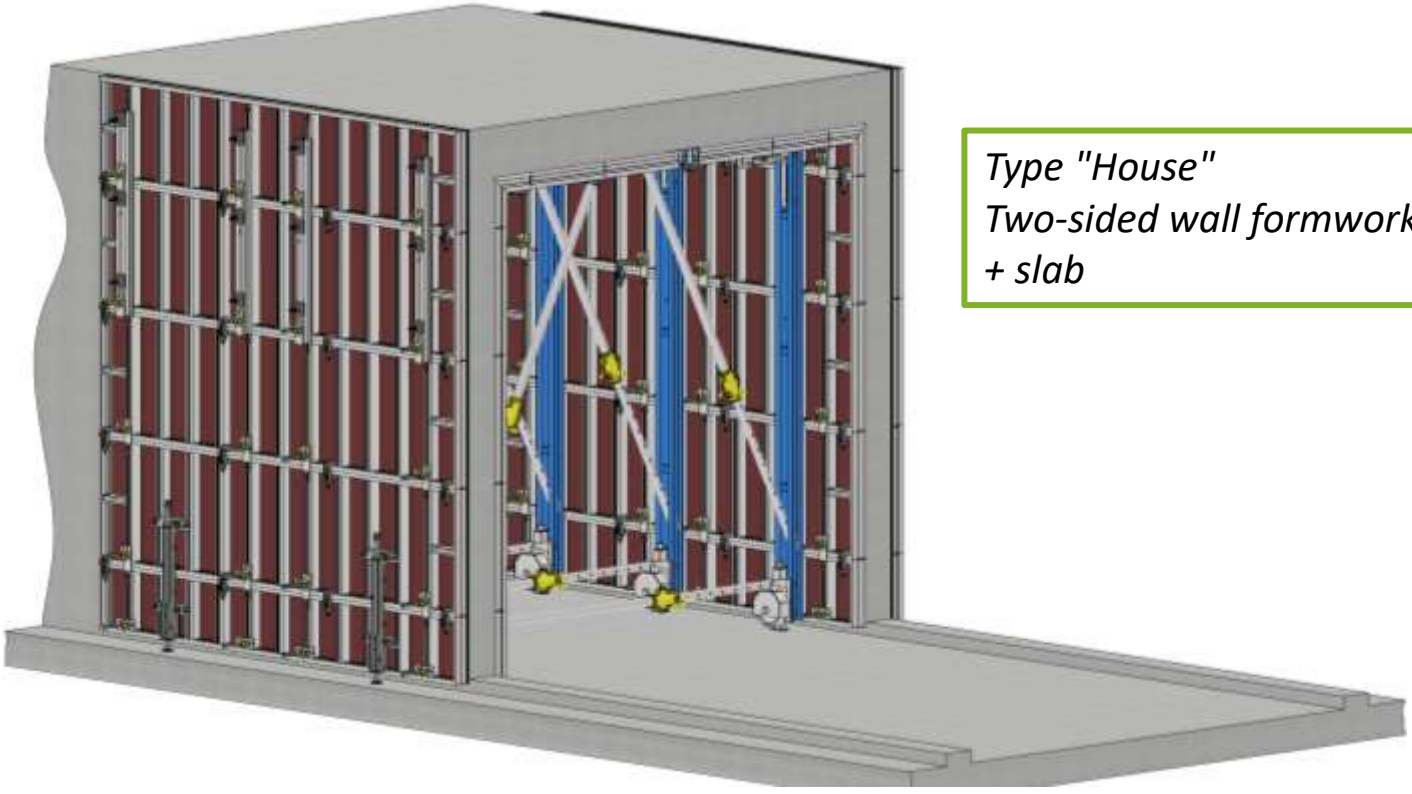
When using single-sided formwork it can also be used on the non-forming face to create an additional support for the formwork.

For any single-sided configuration above 3.5 m in height, contact the Jean Four design office.

Tunnel configuration

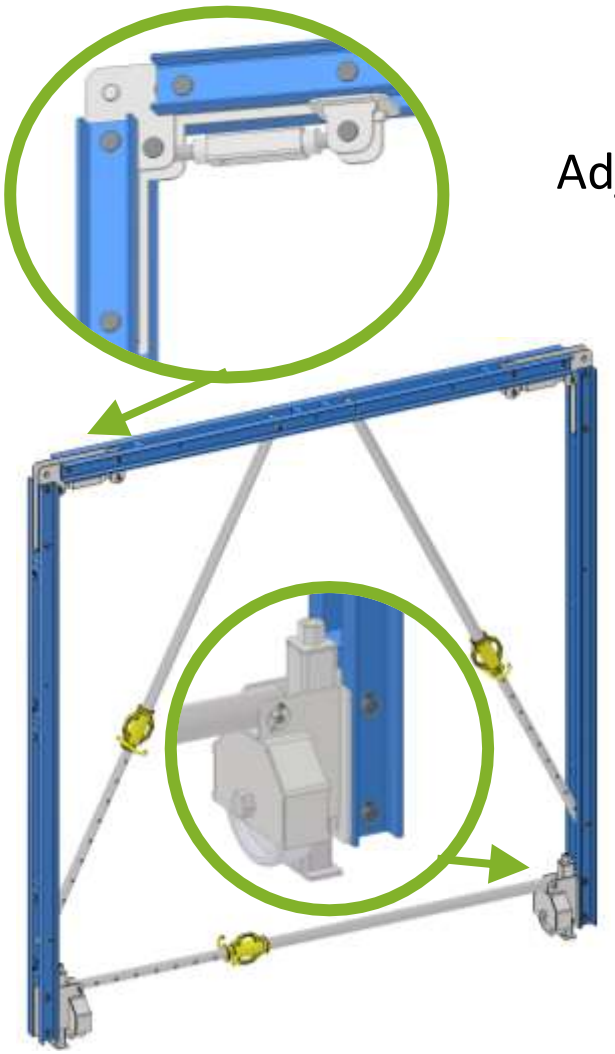
Type "Culvert"
Single-sided internal formwork



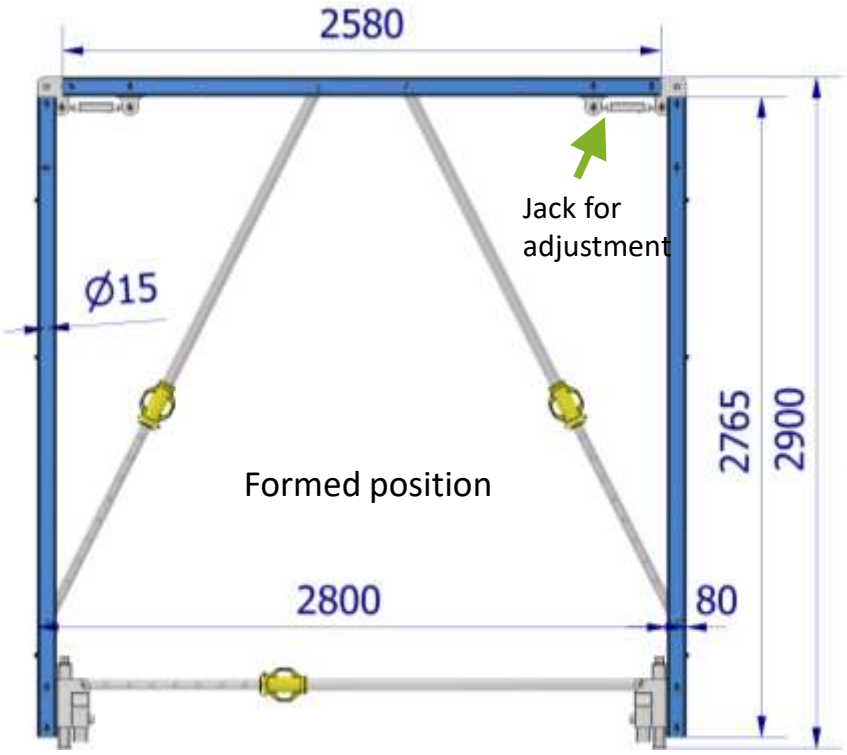


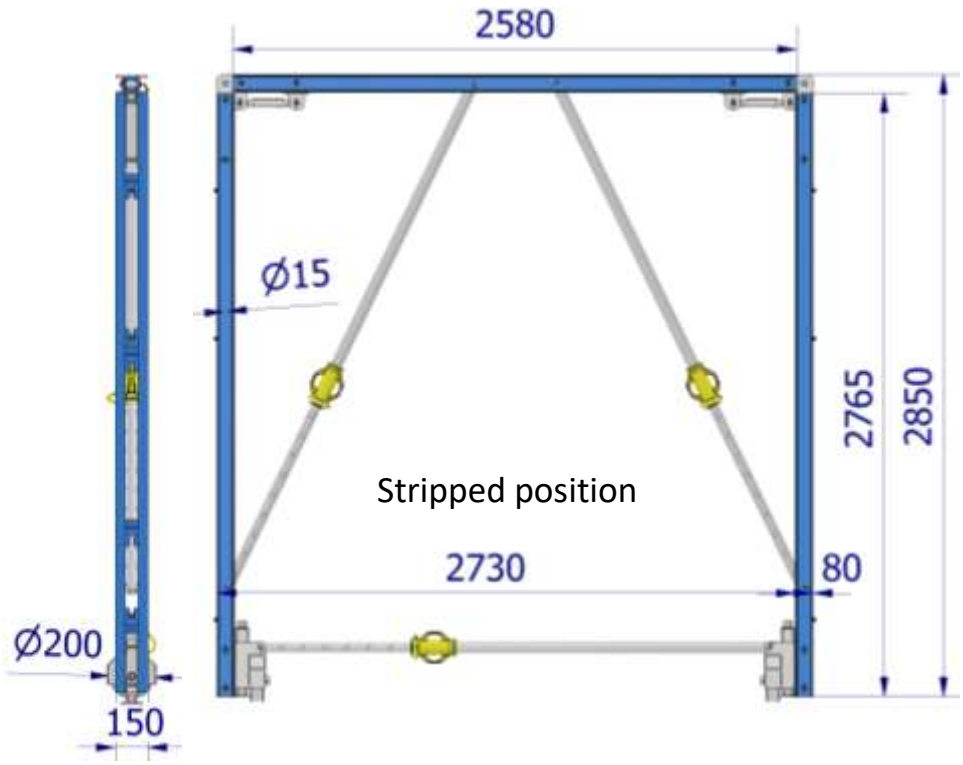
Type "House"
Two-sided wall formwork
+ slab

Tunnel configuration



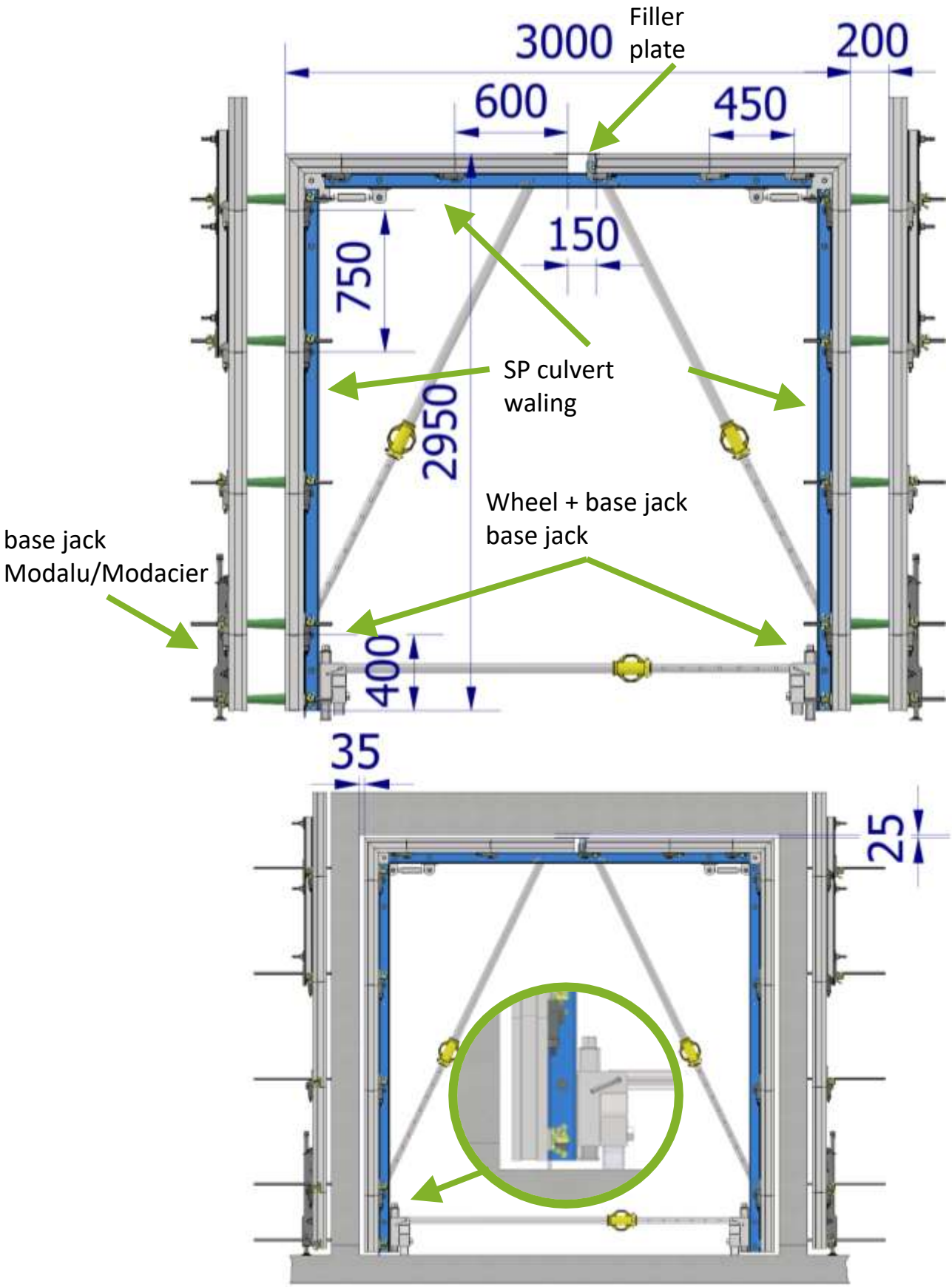
Adjustment system with walings and jacks





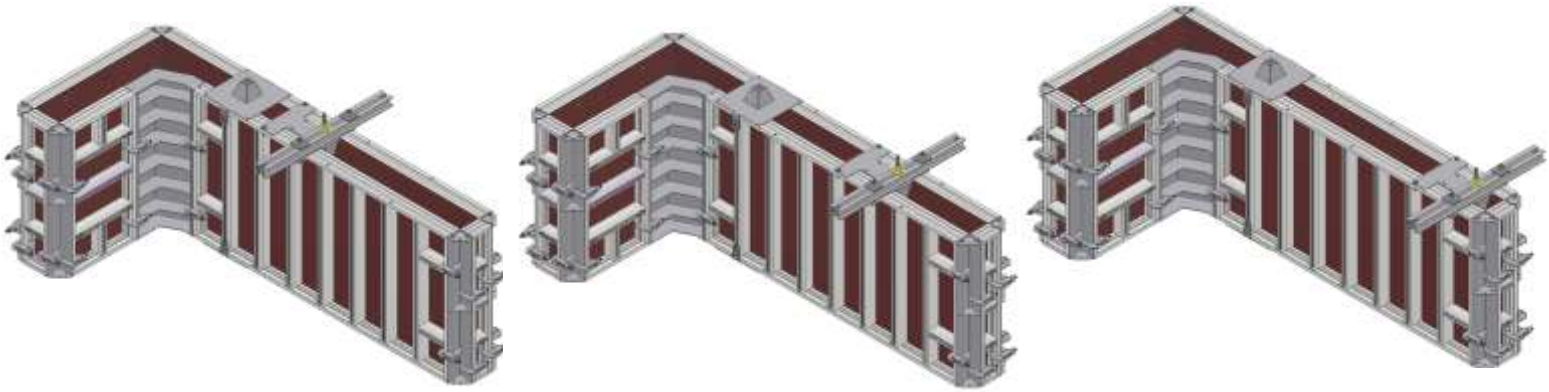
Tunnel configuration

Culvert formwork

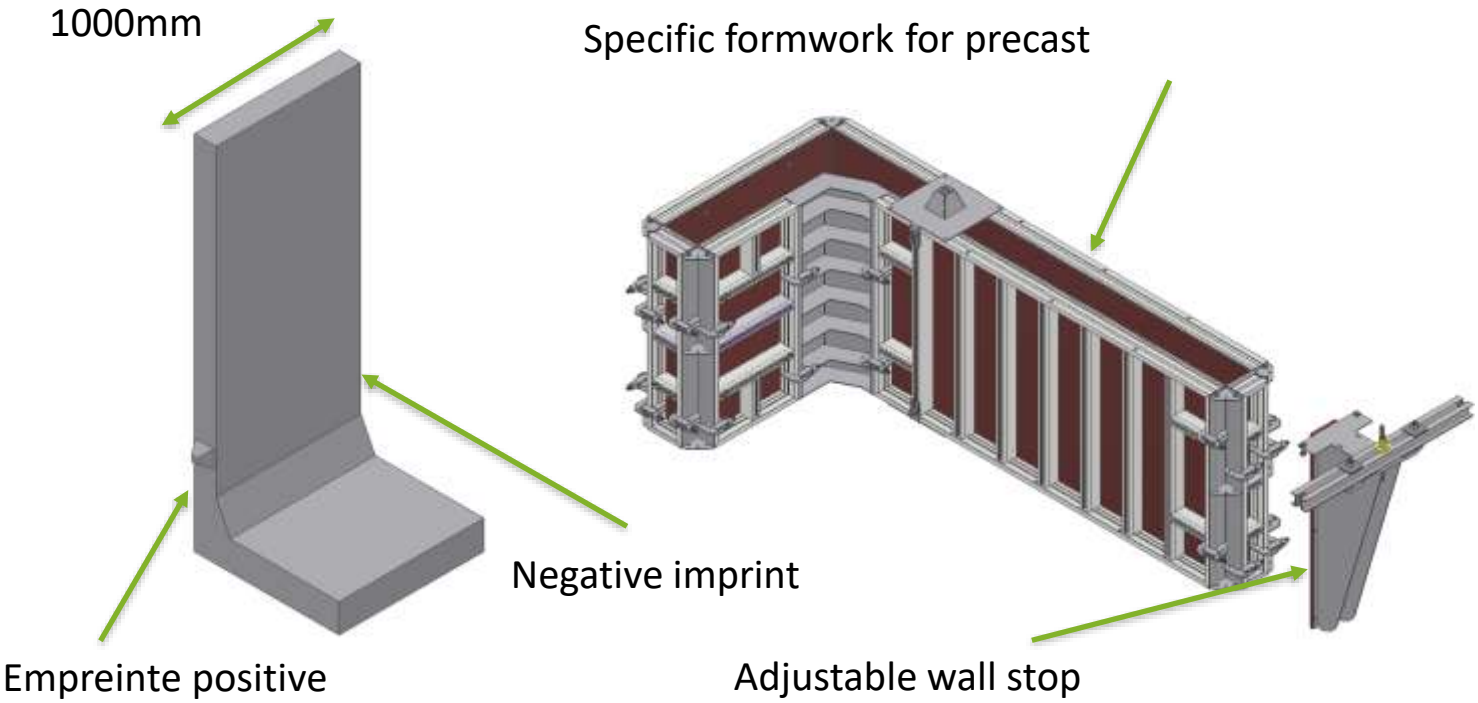


Precast configuration

Precast module



This configuration creates precast modules to be joined together by an imprint. The element is adjustable to make precast units from 1000 to 2500 mm.

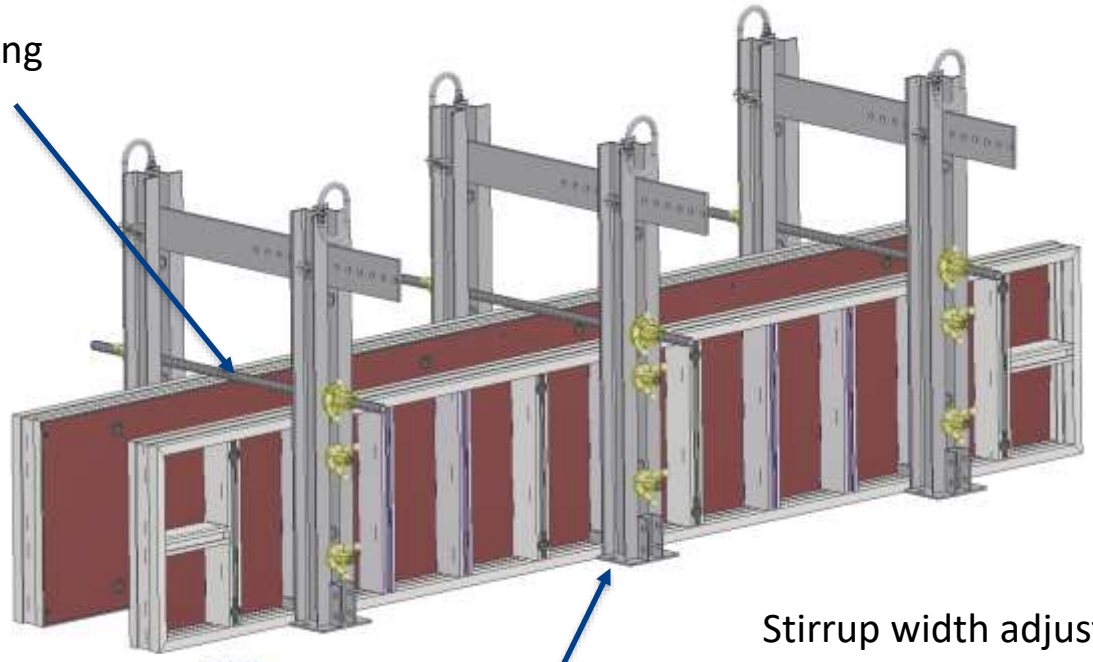


The module is offered as a self-assembly kit.

Precast configuration

Stirrup for beam formwork

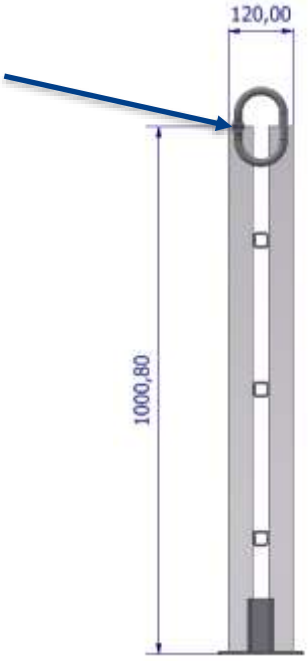
Stirrup clamping

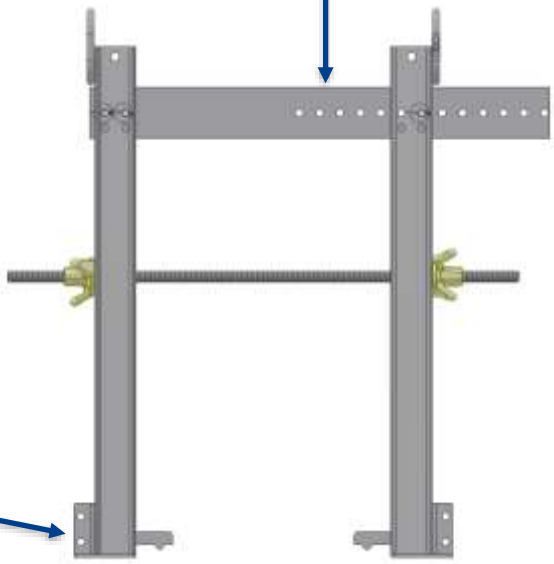


Ground anchoring

Stirrup width adjustment

Lifting eye





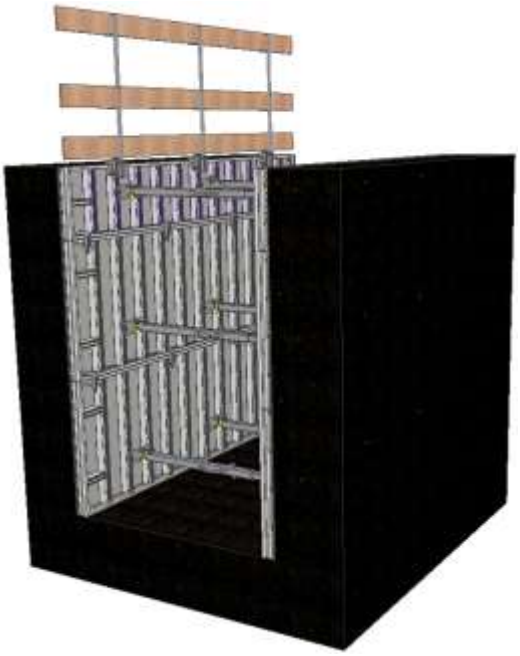
Socket for base jack

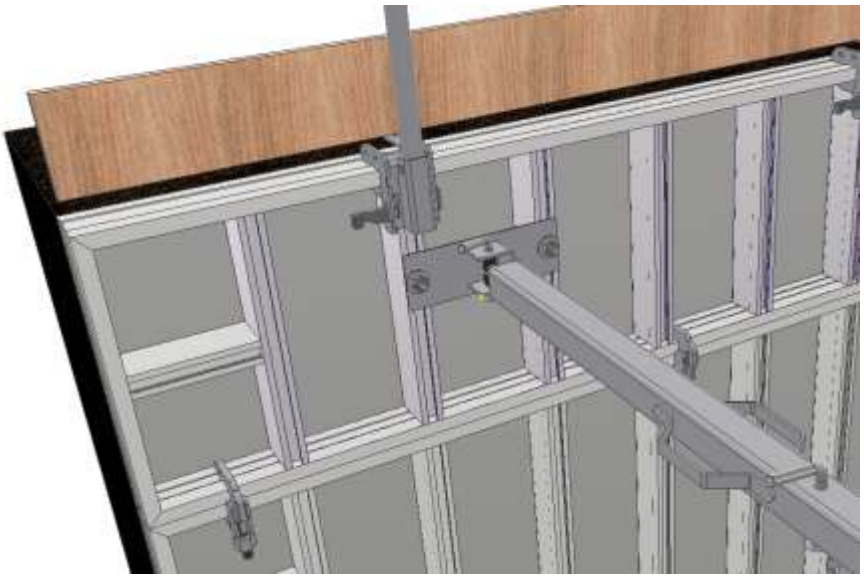
Fixing on profile

Adjustment range from 100 to 550 mm wall thickness.
Maximum wall height: 600 mm.
Fix the stirrup with T-head bolts, 150 mm long.
Use with D17 tie rod.

Configuration blindage

Shoring formwork



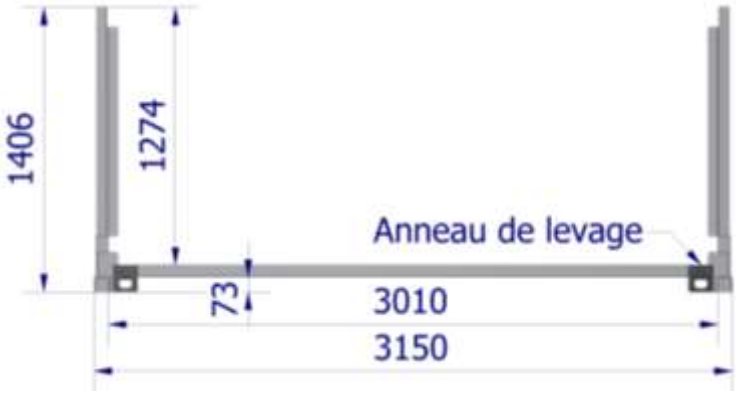


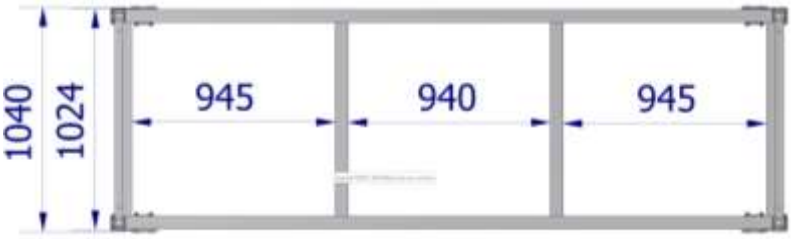
This type of formwork supports and retains failing walls. The props adjust the spacing of the wall. The panels are made entirely of aluminium.

The configuration includes 9 props for 15 m² of area.

Transport

Panel packing





Single cradle using a horizontal panel

Single cradle using vertical panels

RACK FOR PANELS	CMU
1000x3000	1250 Kgs
0900x2700	1000 Kgs
1000x1500	650 Kgs

Other sizes available on request

ON THE CRADLES, THE 1st PANEL MUST IMPERATIVELY BE FLAT AND MATCH THE RACK SIZE

USE LIFTING EQUIPMENT APPROPRIATE TO THE WEIGHT

Transport

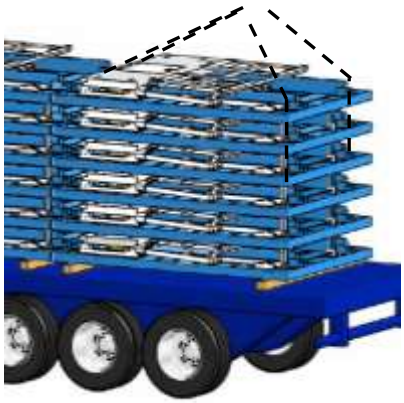
Packing of GF V1/V2 panels

1) Livraison

⚠ 6 panels high maximum, for transport only

2) Lifting during loading and unloading

GF V1 ⚠ **60° maxi**



3 panels maximum on 4 balanced legs

GF V2

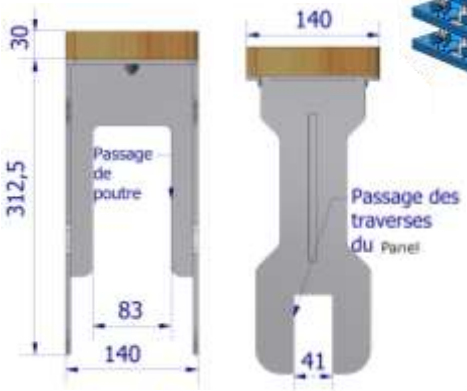
Unloading by forklift only

3) Stockage

Keep the panels at least 40 cm off the ground

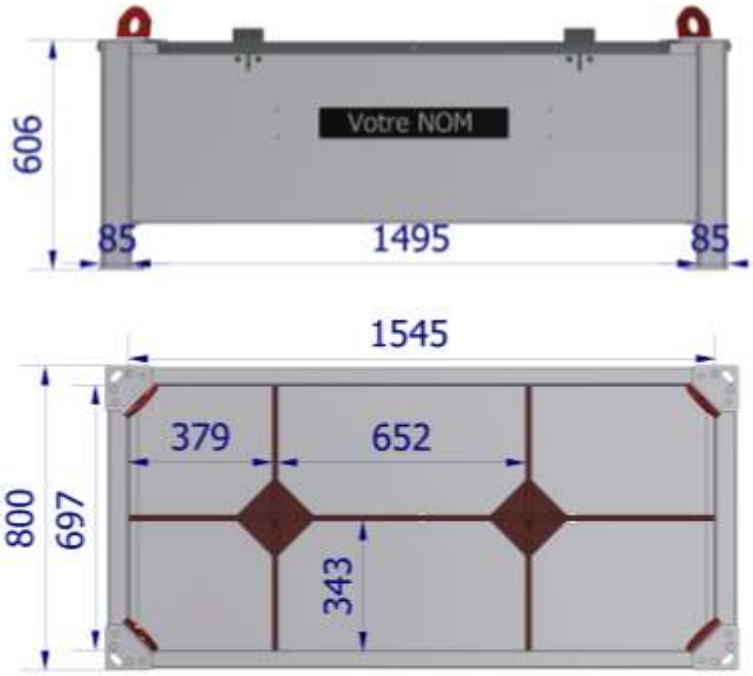
Maximum 6 panels high

With transport heel for the V1

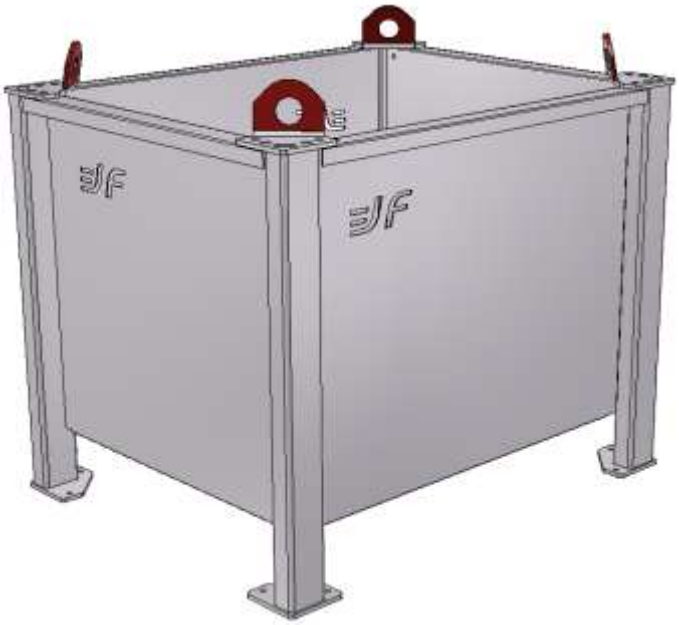


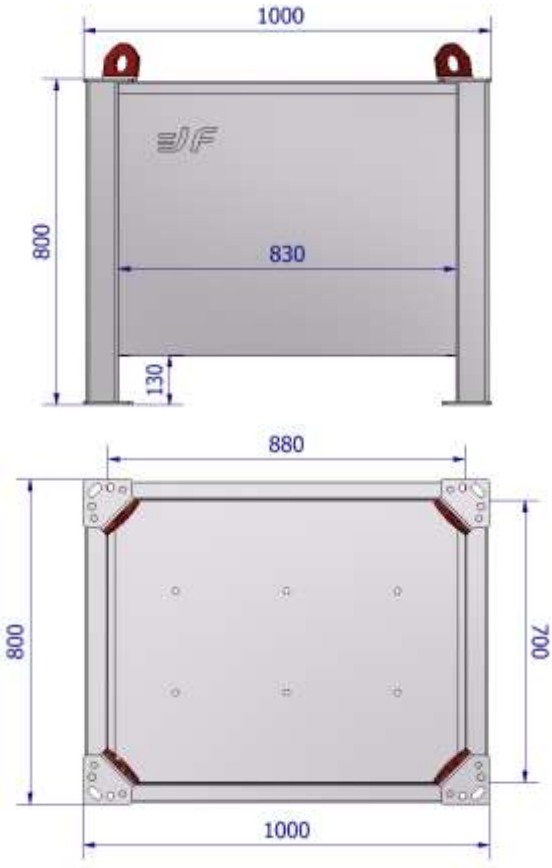
Transport

Comegal container 700x1545x475
(Timber or steel lid & partitions optional)



Container 800x1000x800
These containers are stackable.

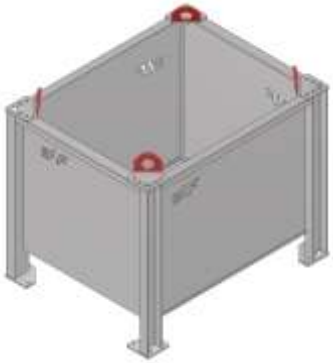




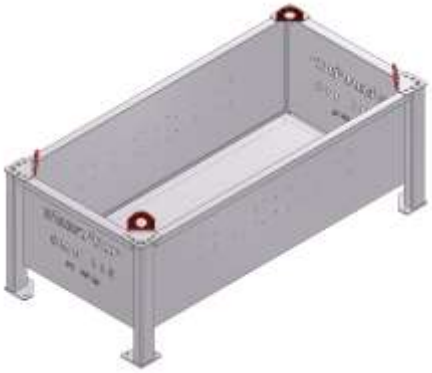
Other sizes available

Transport

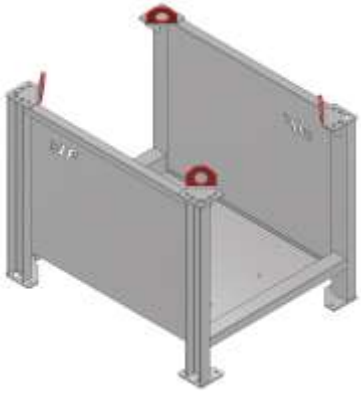
COMEGAL container 800x1000x690 (D. INT.)
1050x1230x890 (D. EXT.)
open on 4 sides, for props



COMEGAL container 700x880x670 (D. INT.)
800x1000x800 (D. EXT.)
closed on 4 sides

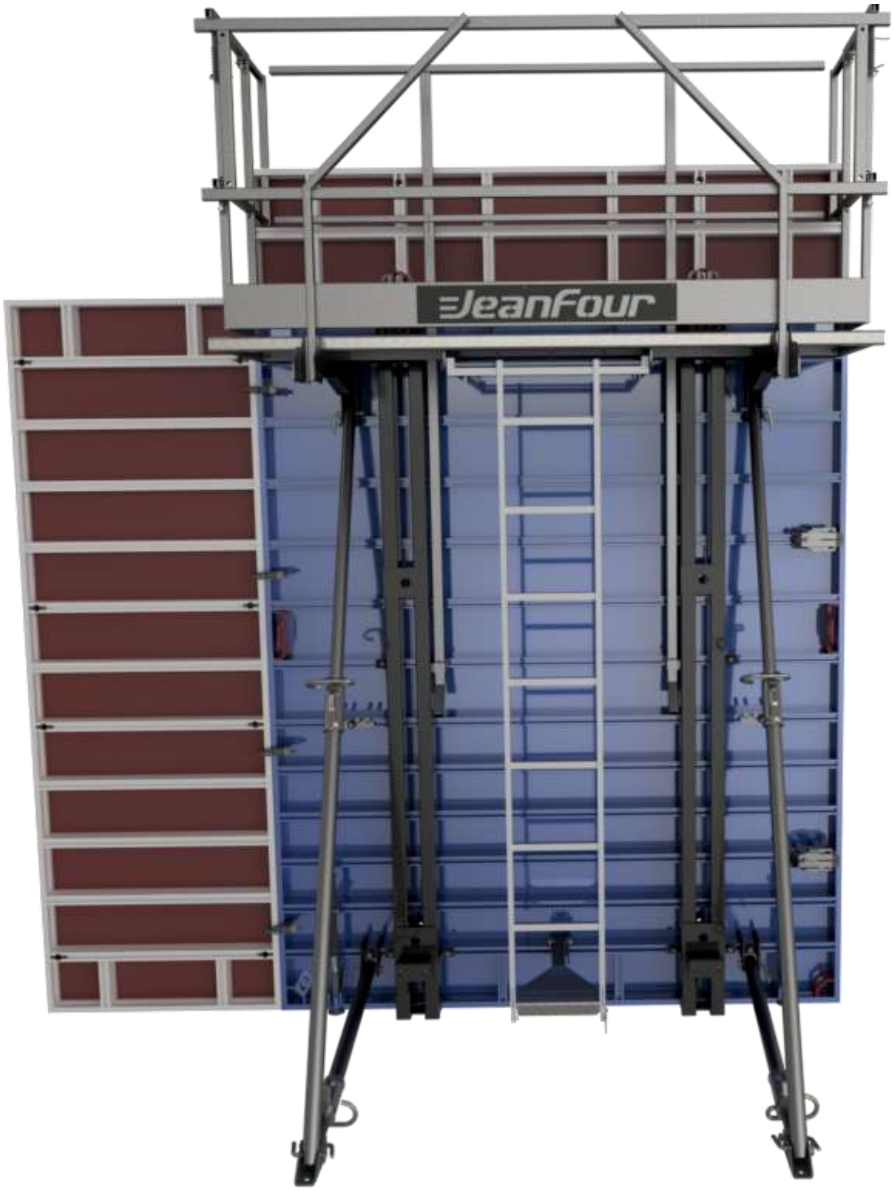


COMEGAL container 700x1545x475 (D. INT.)
800x1665x694 (D. EXT.)
closed on 4 sides

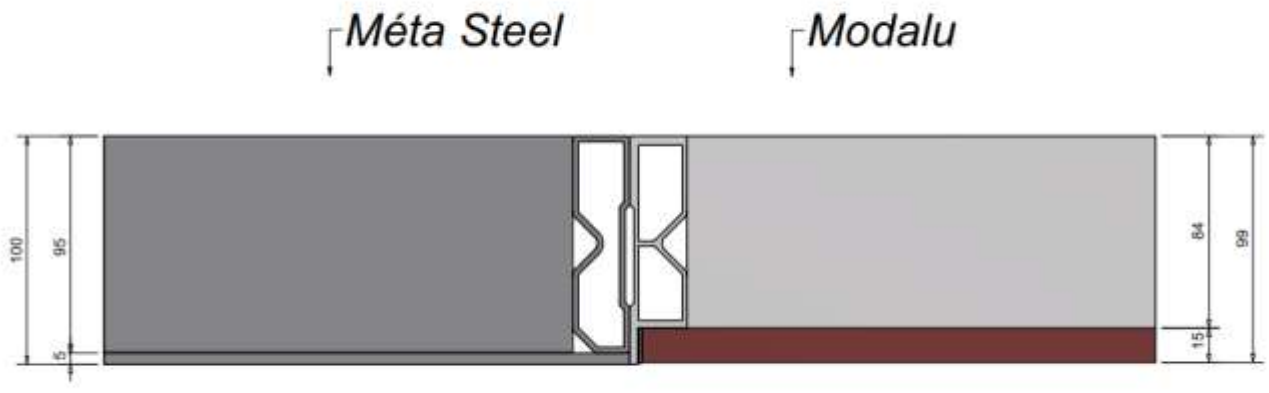


COMEGAL container 700x880x670 (D. INT.)
800x1000x800 (D. EXT.)
open 2 sides

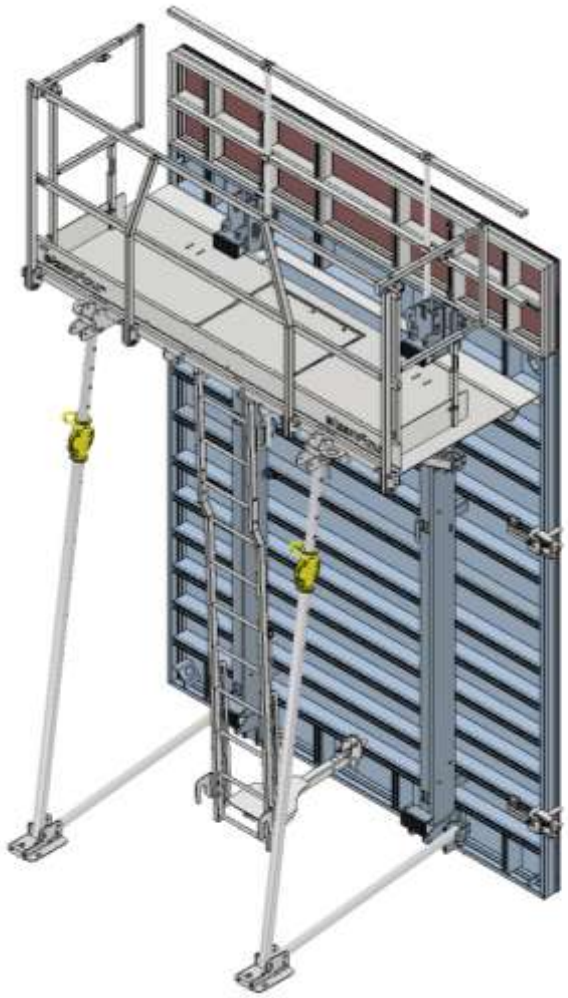
METASTEEL

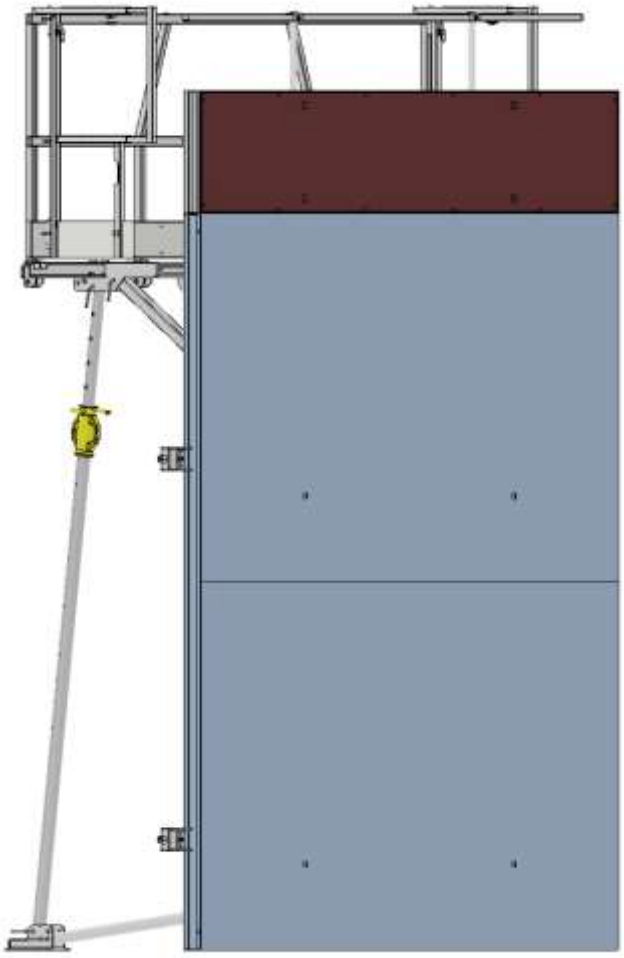


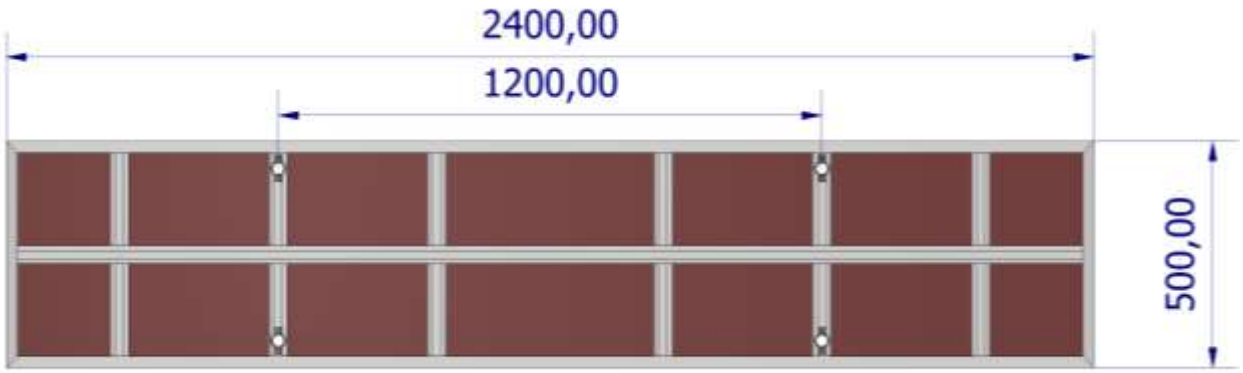
Metal panel compatible with the modular system



METASTEEL + extension MODALU

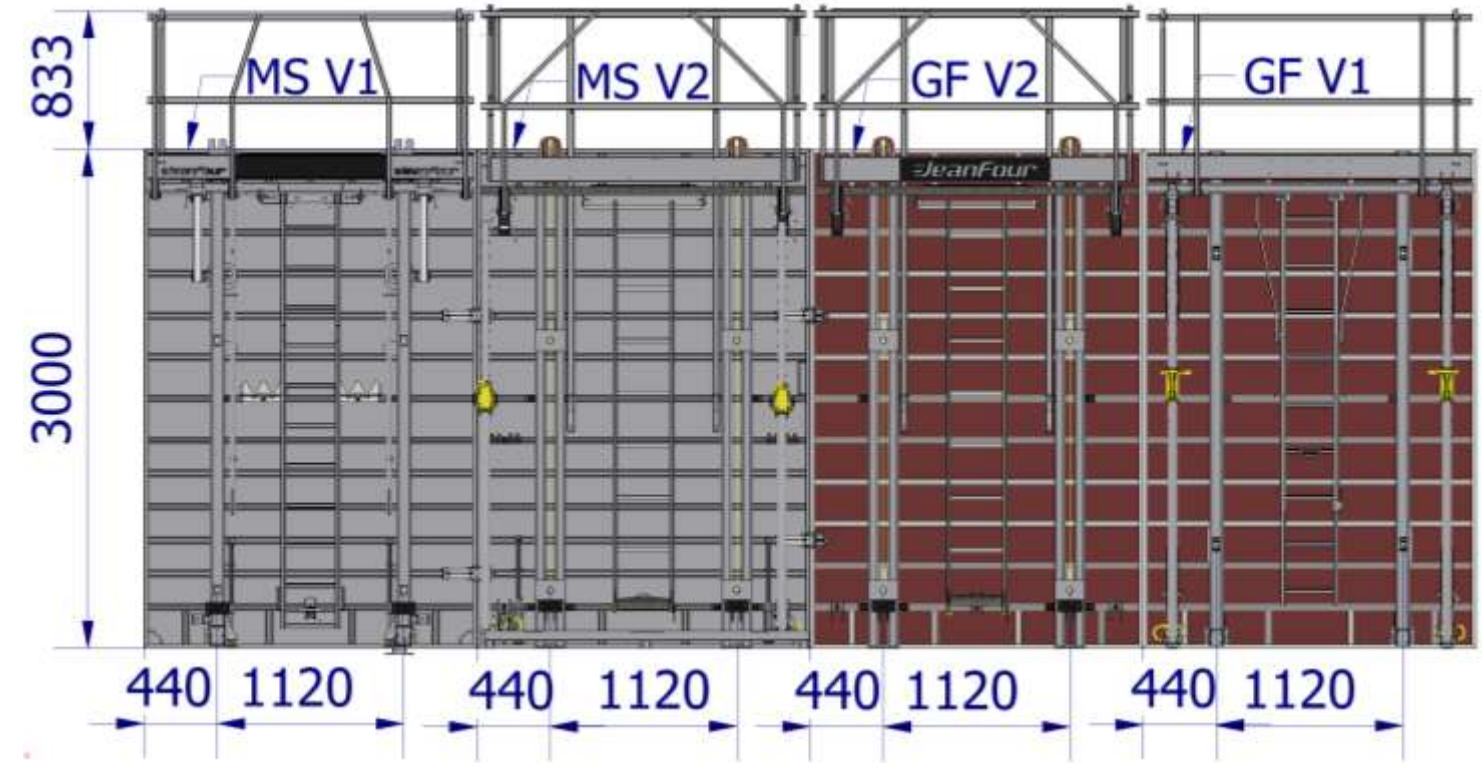


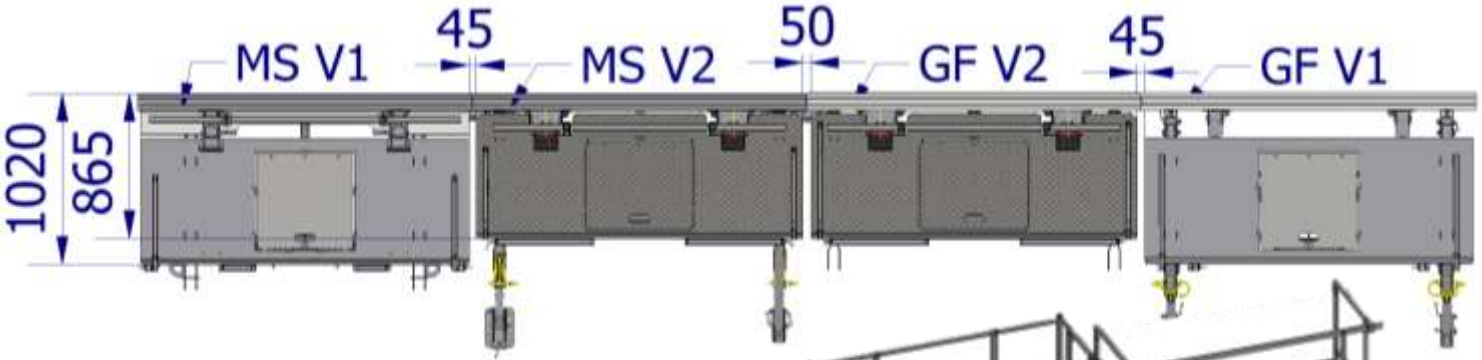


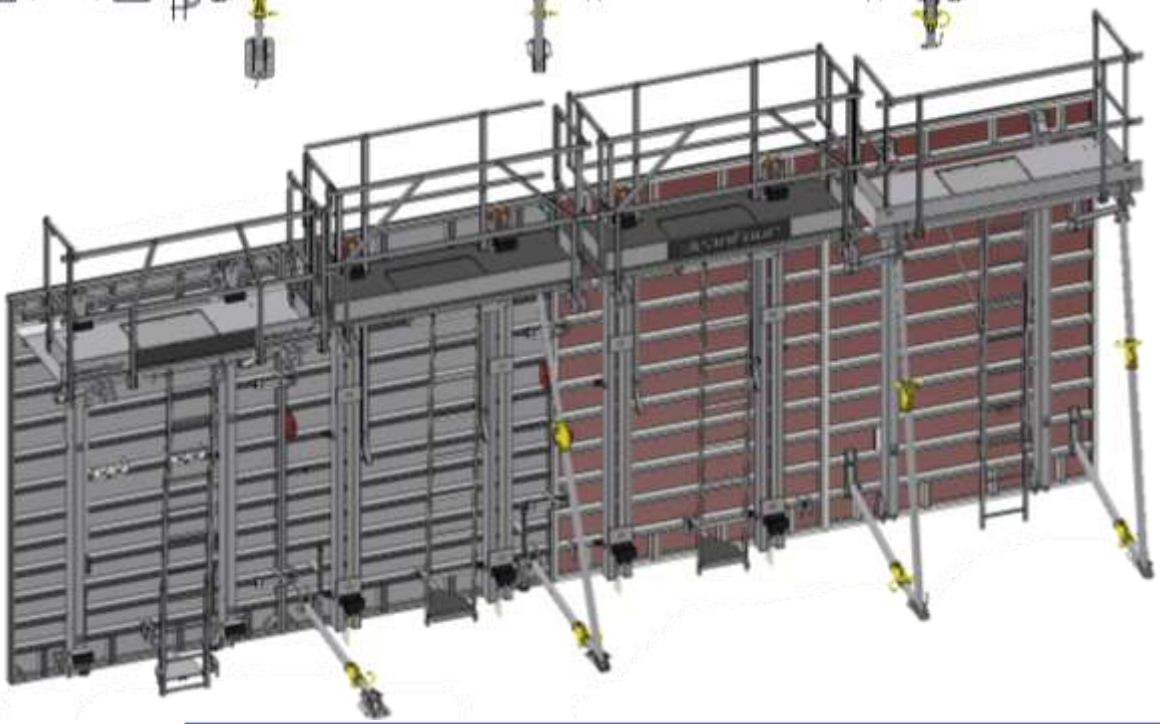


Other sizes available on request!

METASTEEL V1 / V2 compatibility

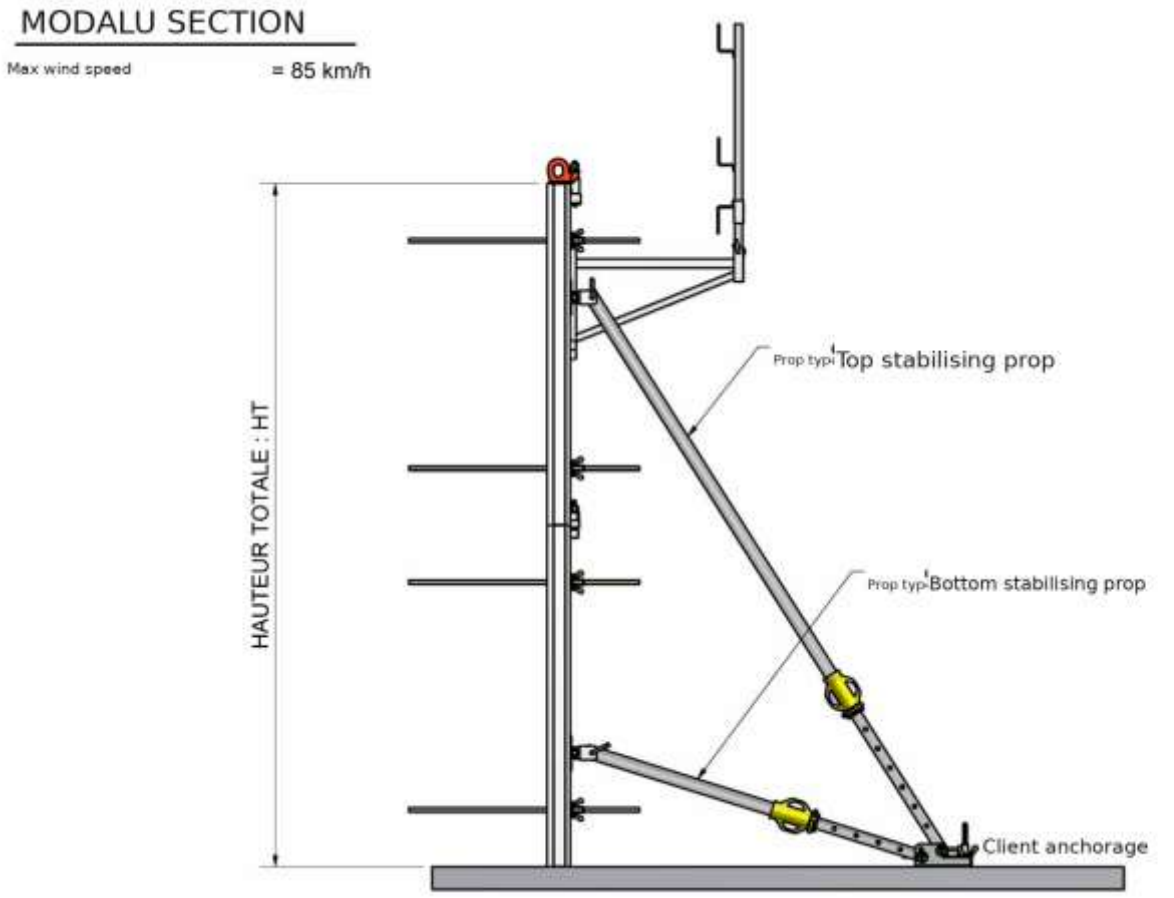






Prop characteristics

REFER TO THE PANEL-LAYOUT DRAWING



HT(m)	Panel details	EH	EB
1.0	1 x 1m	JF1 100/175	Ø
1.5	1 x 1.5m	JF1 170/300	Ø
2.0	2 x 1m	JF1 170/300	JF1 100/175
2.0	1 x 0.5m + 1 x 1.5m	JF1 170/300	JF1 100/175
2.5	1 x 1m + 1 x 1.5m	JF2 220/400	JF1 100/175
2.5	1 x 0.5m + 2 x 1m	JF2 220/400	JF1 100/175
3.0	2 x 1.5m	JF2 220/400	JF1 100/175
3.0	3 x 1m	JF2 220/400	JF1 100/175
3.0	1 x 0.5m + 1 x 1m + 1 x 1.5m	JF2 220/400	JF1 100/175

Contact us for other configurations

Prop characteristics

PTS 1800 L1 (1050 mm / 1791 mm) weight 7.00 kg without plates

Extension	Compression		Traction
(m)	Ph (kN)	Pa (kN)	Pz (kN)
1,80	25,77	36,44	14,76
1,70	25,77	36,44	14,76
1,60	25,77	36,44	14,76
1,50	25,77	36,44	14,76
1,40	29,50	41,71	14,76
1,30	29,50	41,71	14,76
1,20	29,50	41,71	14,76
1,10	29,50	41,71	14,76
1,05	29,50	41,71	14,76

PTS 3000 L1 (1700 mm / 2991 mm) weight 10.00 kg without plates

Extension	Compression		Traction
(m)	Ph (kN)	Pa (kN)	Pz (kN)
3,00	5,10	10,20	22,00
2,90	5,60	11,20	22,00
2,80	6,20	12,40	22,00
2,70	6,85	13,70	22,00
2,60	7,60	15,20	22,00
2,50	8,55	17,10	22,00
2,40	9,65	19,30	22,00
2,30	11,00	22,00	22,00
2,20	11,00	22,00	22,00
2,10	11,00	22,00	22,00
2,00	11,00	22,00	22,00
1,90	11,00	22,00	22,00
1,80	11,00	22,00	22,00
1,70	11,00	22,00	22,00
1,60	11,00	22,00	22,00

PTS 4000 L2 (2413 mm / 4175 mm) weight 20.50 kg without plates

Extension	Compression		Traction
(m)	Ph (kN)	Pa (kN)	Pz (kN)
4,00	3,65	7,29	36,70
3,90	3,89	7,79	36,70
3,80	4,17	8,33	36,70
3,70	4,47	8,94	36,70
3,60	4,81	9,62	36,70
3,50	5,19	10,38	36,70
3,40	5,62	11,24	36,70
3,30	6,11	12,22	36,70
3,20	6,67	13,34	36,70
3,10	7,32	14,65	36,70
3,00	8,10	16,20	36,70
2,90	9,03	18,07	36,70
2,80	10,19	20,39	36,70
2,70	11,69	23,37	36,70
2,60	13,71	27,42	36,70
2,50	16,64	33,29	36,70
2,40	18,35	36,70	36,70

PTS 5000 L2 (2993 mm / 5385 mm) weight 23.00 kg without plates

Extension	Compression		Traction
(m)	Ph (kN)	Pa (kN)	Pz (kN)
5,00	2,42	4,84	36,70
4,90	2,55	5,11	36,70
4,80	2,70	5,41	36,70
4,70	2,87	5,73	36,70
4,60	3,05	6,09	36,70
4,50	3,24	6,49	36,70
4,40	3,46	6,93	36,70
4,30	3,71	7,41	36,70
4,20	3,98	7,96	36,70
4,10	4,29	8,58	36,70
4,00	4,64	9,28	36,70
3,90	5,04	10,09	36,70
3,80	5,51	11,02	36,70
3,70	6,06	12,12	36,70
3,60	6,71	13,42	36,70
3,50	7,47	14,95	36,70
3,40	8,34	16,69	36,70
3,30	9,21	18,43	36,70
3,20	9,89	19,77	36,70
3,10	10,33	20,65	36,70
3,00	10,65	21,31	36,70
2,90	10,96	21,91	36,70

Prop characteristics

Screw prop (1000mm / 1800mm)
weight 13.30 kg without plates

Extension	Compression		Traction
(m)	Ph (kN)	Pa (kN)	Pz (kN)
1,80	25,77	36,44	14,76
1,70	25,77	36,44	14,76
1,60	25,77	36,44	14,76
1,50	25,77	36,44	14,76
1,40	29,50	41,71	14,76
1,30	29,50	41,71	14,76
1,20	29,50	41,71	14,76
1,10	29,50	41,71	14,76
1,05	29,50	41,71	14,76

Screw prop (2200 mm / 4000 mm) weight
25.80 kg without plates

Extension	Compression		Traction
(m)	Ph (kN)	Pa (kN)	Pz (kN)
4,00	3,65	7,29	36,70
3,90	3,89	7,79	36,70
3,80	4,17	8,33	36,70
3,70	4,47	8,94	36,70
3,60	4,81	9,62	36,70
3,50	5,19	10,38	36,70
3,40	5,62	11,24	36,70
3,30	6,11	12,22	36,70
3,20	6,67	13,34	36,70
3,10	7,32	14,65	36,70
3,00	8,10	16,20	36,70
2,90	9,03	18,07	36,70
2,80	10,19		36,70
2,70	11,69		36,70
2,60	13,71	Extension	36,70
2,50	16,64	(m)	36,70
2,40	18,35	36,70	36,70
2,30	18,35	36,70	36,70

TPE prop (2200mm / 4000mm)
weight 19.78 kg without plates

Extension	Compression	Traction
(m)	Pa (kN)	Pz (kN)
4,00	9,00	
3,80	11,00	
3,50	13,00	
3,00	15,00	
2,20	18,00	

TPE prop (3000mm / 5000mm)
weight 19.78 kg without plates

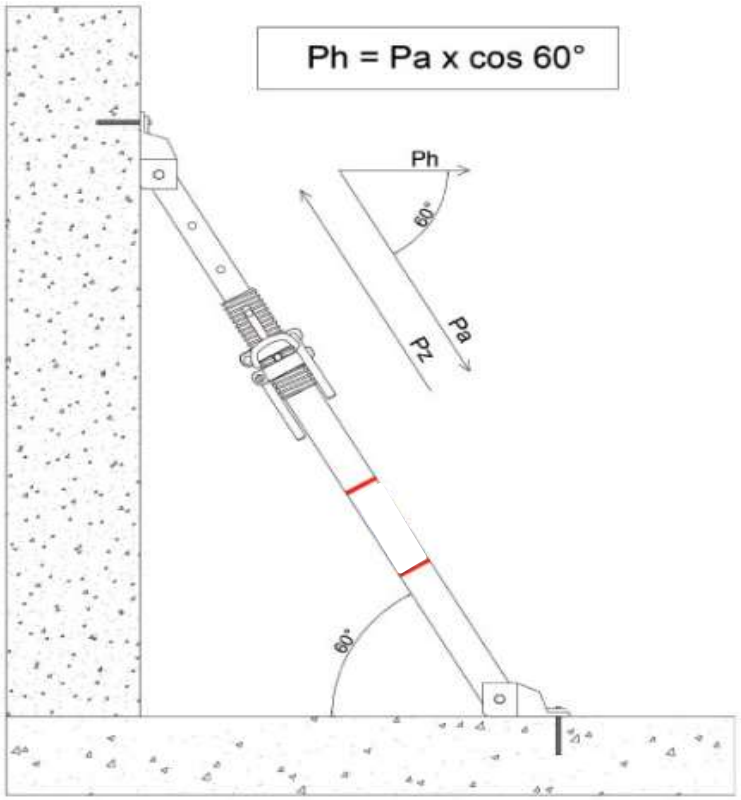
Extension	Compression	Traction
(m)	Pa (kN)	Pz (kN)
4,00	6,00	
3,80	7,00	
3,50	11,00	
3,00	17,00	
2,20	18,00	

RAS-TP prop (4050mm / 7050mm)
weight 40.00 kg without plates

Extension	Compression	Traction
(m)	Pa (kN)	Pz (kN)
7,05	9,00	
6,50	11,00	
5,95	13,00	
5,00	22,00	
4,50	30,00	
4,05	30,00	

Prop characteristics

	Screw prop (6000mm / 10000mm) weight 13.30 kg without plates					Screw prop (11650mm / 15900mm) weight 13.30 kg without plates	
Extension	Compression	Traction			Extension	Compression	Traction
(m)	Pa (kN)	Pz (kN)			(m)	Pa (kN)	Pz (kN)
10,00	10,00	35,00			15,90	5,50	35,00
9,50	12,00	35,00			15,50	6,00	35,00
9,00	14,00	35,00			15,00	7,00	35,00
8,50	19,00	35,00			14,50	8,00	35,00
8,00	22,00	35,00			14,00	9,00	35,00
7,50	23,00	35,00			13,50	10,00	35,00
7,00	25,00	35,00			13,00	11,00	35,00
6,50	26,00	35,00			12,50	13,00	35,00
6,00	26,00	35,00			12,00	14,00	35,00
					11,65	15,00	36,00



Prop characteristics

Wind force calculation

Wind pressure calculation
Fv = 60 x H x L

FV is then / number of props for the rest of the calculations

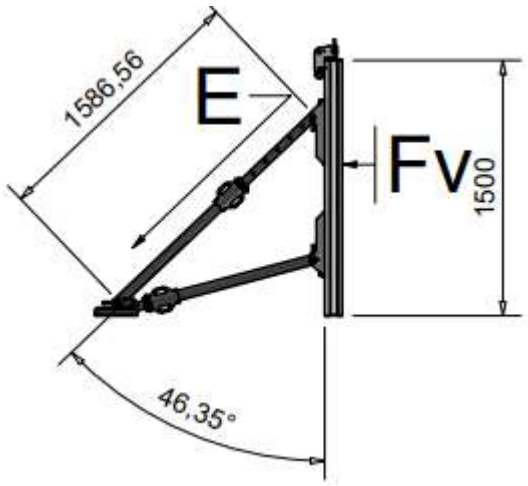
60 = wind Q 60 daN/m² (85 km/h wind)

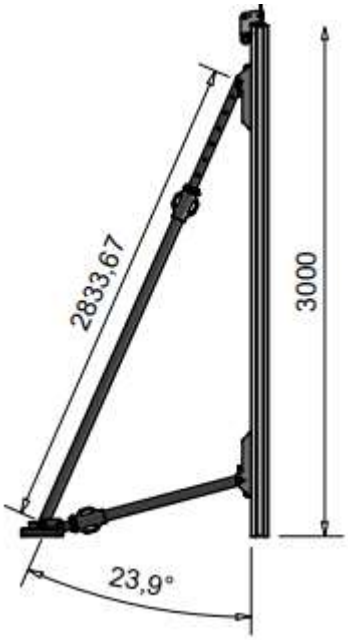
Calculation of the wind force in the bracing props:

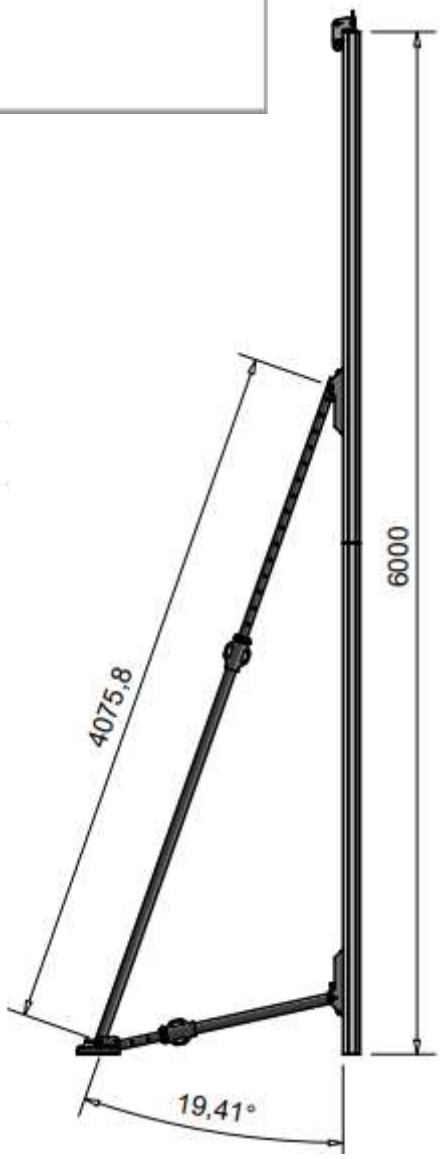
E = Fv / (cos α)

α = prop inclination angle

Make sure you have at least 2 triangulations for any formwork width over 1 m, to stabilise the whole assembly







Example: Panel 1000x1500. FV = 60 x 1.5 x 1 = 90; FV = 90 daN/m²; E = 90 / (cos 46.35) = 130.4. The resultant wind force in the prop is 130.4 daN. The prop used is a 105/180 extended to 1586.56 mm. From the prop resistance table in the manual, when the prop is extended to 1600 mm it has a strength of 3644 daN; 3644 > 130.4, so one triangulation is enough to carry the wind load.

Example: Panel 1000x3000. FV = 60 x 3 x 1 = 180; FV = 180 daN/m²; E = 180 / (cos 23.9) = 196.9 daN. Prop 220/400, extended length: 2834 mm; 1807 > 196.9.

Example: Panel 1000x6000. FV = 60 x 6 x 1 = 360; FV = 360 daN/m²; E = 360 / (cos 19.41) = 381.7 daN. Prop 290/500, extended length: 4075.8 mm; 858 > 381.7.

If the prop strength is lower than the applied force, add a triangulation.

Plywood characteristics

Base panel:
The all-birch plywood is made of 11 cross-bonded, thin-ply rotary-cut birch veneers, 15 mm total thickness.
Bonded with a weather- and boil-proof phenolic resin, with faces of grade II / II quality (BB/BB)
Weight kg/m²: 10.50

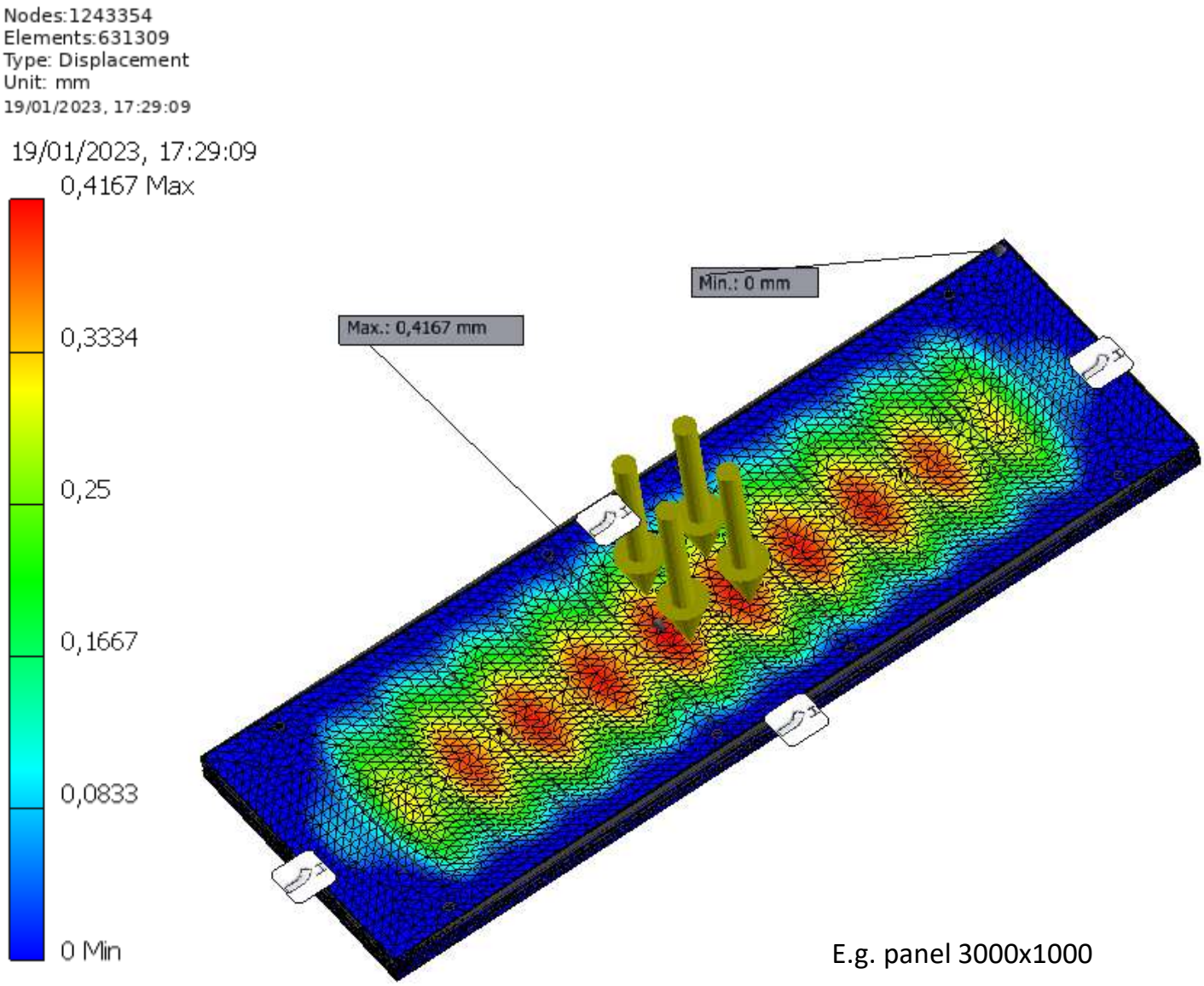
Coating:
The panel is coated on both faces with dark-brown phenolic film, compliant with the Taber test (EN 438-2 / DIN 53799)

Collage :
The panel is bonded with a WBP (Weather and Boil Proof) phenolic resin of class 3 to standard EN 314-2 / class 3 and EN 636-3 - exterior bonding, and class A to standard EN 712-2, corresponding to low formaldehyde emissions matching class E1 in accordance with standard EN 13986.

Technical details:

Panel range	Coating gr/m²	Abrasion resistance (Taber)	Grain direction	Elasticity (N/mm²)	
				II	_I_
2000x3000	250	600	Travers	10316	7184
1500x3000 and remainder 3000	220-240	350	Travers	10316	7184
900x2700 and remainder 2700	250	600	Travers	10316	7184

Deflection



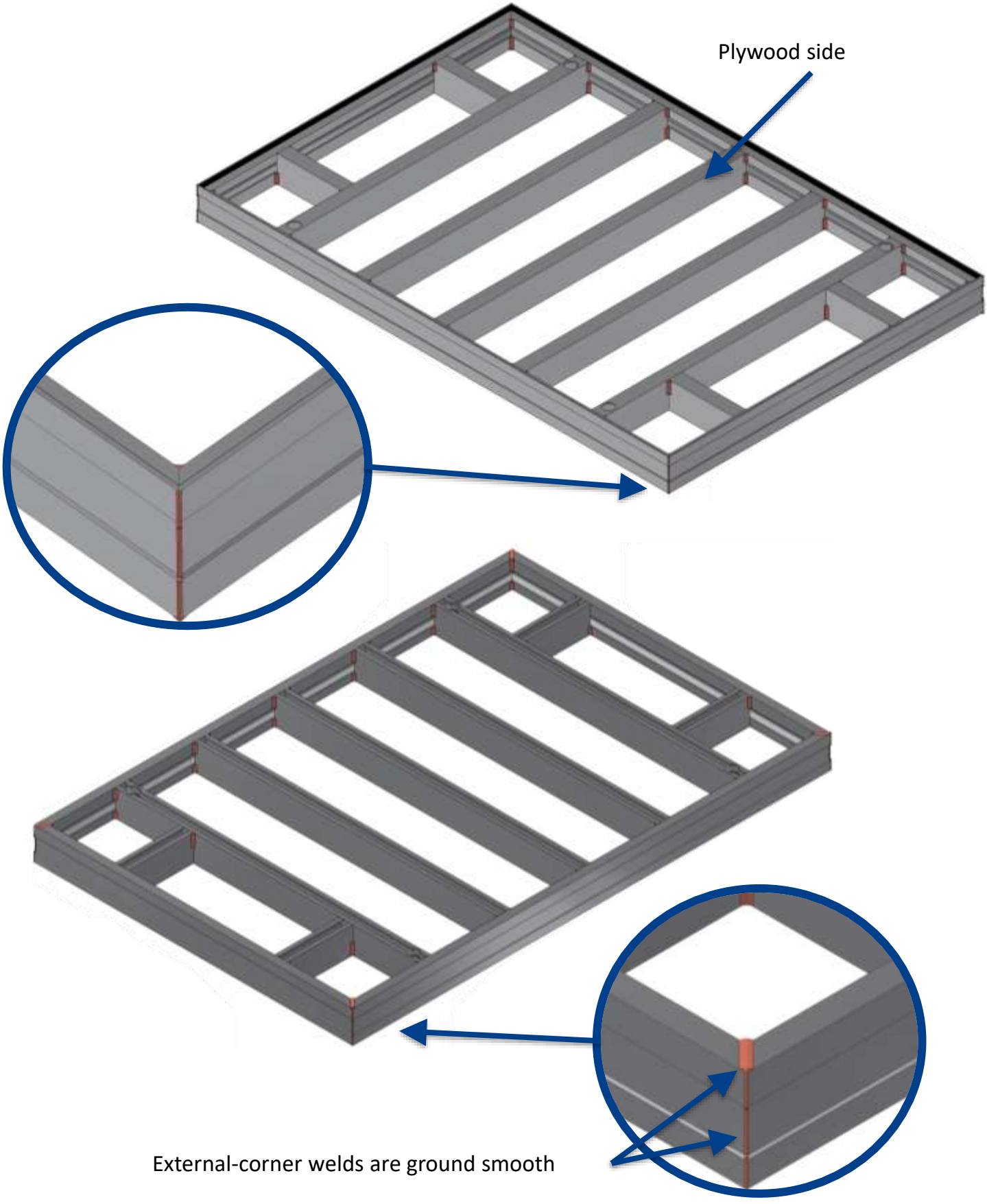
E.g. panel 3000x1000

Taille:	Modalu:		Modacier:	
	5T	6T	5T	6T
900/2700	0,947mm	1,136mm	0,593mm	0,712mm
1000/1500	0,797mm	0,956mm	0,426mm	0,510mm
1000/3000	0,801mm	0,961mm	0,417mm	0,500mm
2	Deflection			

To standard NF P93-350TC WI: 2019(F):
Overall flatness measured against the 2 m straightedge must be less than 3 mm
To the construction tolerances of DIN 18202

Panel welds

Example on a 1000x1500 panel



Conditions of use and maintenance

Through tie rods and nuts

The spacer tie rods supplied have a diameter of 21/23 mm or 15/17 mm (compliant with standards EN 10045-1 and NF P 93-350). These are the only tie rods authorised for use.

The maximum permissible clamping force is 2.5 tonnes, to avoid any irreversible deformation of the forming face and the spreader cones.

Tie-rod holes above the panel (out of the concrete) must be used only for standard pours (standard concrete, no stacking and standard wall thickness).

Please be sure to refer to the pour-rate and concrete-pressure charts for standard concrete and standard use.

For any specific use (height, thickness, non-standard concrete, specific site configuration, etc.), please be sure to contact our design office.

Front-face safety

For a pour height above 3000 mm, we remind you that front-face safety is mandatory. This includes deploying the front-face guardrails from the bottom.

Stabilisation when stacking

For two stacked panels, the forming face must be stabilised by triangulation (inclined prop and horizontal foot prop).

For three or more stacked panels, we recommend stabilising both forming faces and consulting our design office.

Pour rate

For optimum use of the Modalu - Modacier panels, please refer to the pour-time charts on the next page (these data are given for a pour with standard wall height and thickness, using standard concrete without admixture or plasticiser).

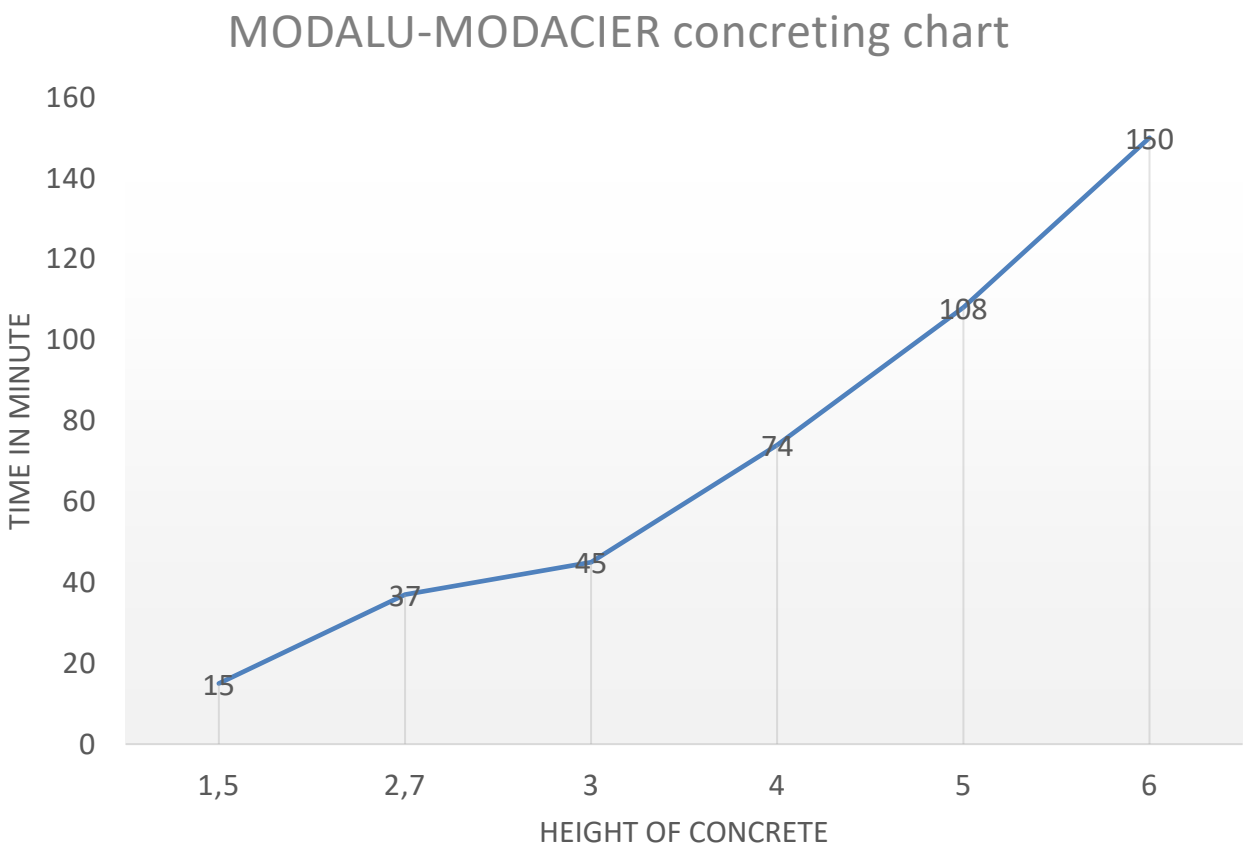
For a specific site configuration, a pour with standard height and non-standard wall thickness, or any use differing from our technical recommendations, please consult our design office. They will advise on the pouring procedure and the appropriate safety instructions.

Concreting rate

The MODALU-MODACIER range is designed for a permissible pressure of 6 T/m².

To avoid exceeding this pressure, we advise you to refer to the chart below.

The times given are valid for standard concrete without plasticiser or admixture at an average temperature of 15°C.



These data, based on the CIRIA Report 108 method, are for guidance only and do not replace the use of a pressure sensor.

Conditions of use and maintenance

Use and maintenance instructions (in case of hire):

It is the user's responsibility to keep the modular formwork panels they use in the same compliant condition, without modification, from receipt. They are the custodian of the modular formwork panels and therefore responsible for any damage the equipment may cause.
Like any equipment, the modular formwork panel requires ongoing maintenance. Periodic checks of this panel are necessary to ensure its compliance and effectiveness.
Additional checks are required after any failure of the installation, any abnormal pouring pressure, or when the modular formwork panel has been damaged.
This is why the modular formwork panels must be inspected regularly, with the aim of checking:
-The condition of the forming face
-The retention of the forming face on the aluminium frame.
-The presence of the silicone seal around the forming face (except GF).
-The absence of concrete on the panel edges
This check is the user's responsibility: after bad weather, after a site shutdown, before putting the modular formwork panels into service, and at least every month.
The results and dates of these checks, together with the names and qualifications of the competent persons who carried them out, must be recorded in the site safety register.

Information on panel sealing

Sealing is provided by a silicone seal.
On the most common sizes, this seal is applied robotically before the plywood is fitted by the same robot. The result is a seal on the lower part that is less visible but definitely present, with greater durability over time (see photos of the respective ageing). The peripheral space for the seal is 2 mm with a tolerance of ±1 mm. On panels of specific sizes, however, the operation is carried out manually and the operator applies a seal around the previously fitted plywood.

The seal is then visible on the surface (see photos below).

Manual flooring

New

Aged

Automatic Flooring

New

Aged

Conditions of use and maintenance

Rippling

Rippling is the wave-like phenomenon visible on some plywood.
For reasons of quality and appearance, the plywood is generally stored under cover, protected from outdoor weather conditions.
When the panels are delivered to site, the plywood quickly absorbs
moisture from the environment and begins to swell.
These ripples are caused by water quickly penetrating the plywood fibres; this phenomenon appears with rain and showers.
Water generally enters:
-Through the film.
-At drilled points for fixings or tie-rod holes.
- At the least protected points, such as the panel edges.
Water passes through the film and soaks the first ply while the second is still dry, so the wet ply swells but not the second.
As long as all the plies are not soaked, this phenomenon will remain.

Exemple rippling

Result on a wall

The ripples disappear as soon as the plywood is stabilised, namely:
Plywood leaves the factory with a moisture content between 10 and 12%, whereas during pouring it reaches 27%.
This means that the more you pour with the plywood, the more the ripples disappear.
Also, when your panels are stored under cover without being used for a while, the plywood dries out and therefore stabilises and the ripples disappear.
The swelling of plywood under dry conditions is a natural phenomenon independent of production.
Complaints about rippling will be rejected by all plywood manufacturers because it cannot be avoided.

Conditions of use and maintenance

Repair of scratches on Edlo or Alkus forming face:

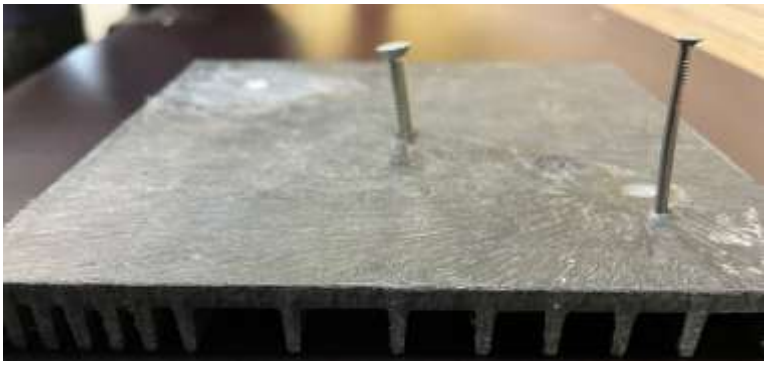
Remove dirt and oil residue with a scraper

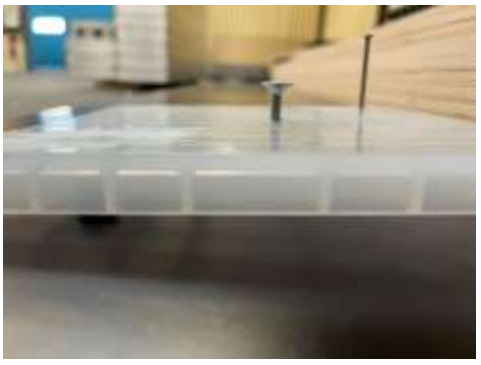
Use a hot-air plastic welder with PP welding rods to fill the scratches

Remove the excess with the scraper

Hole repair

Holes up to 30 mm diameter can be repaired with a plug
For Alkus, the D35 repair patch can be used





Nailing and screwing are possible

Inserting a screw is preferable and will leave a smaller mark

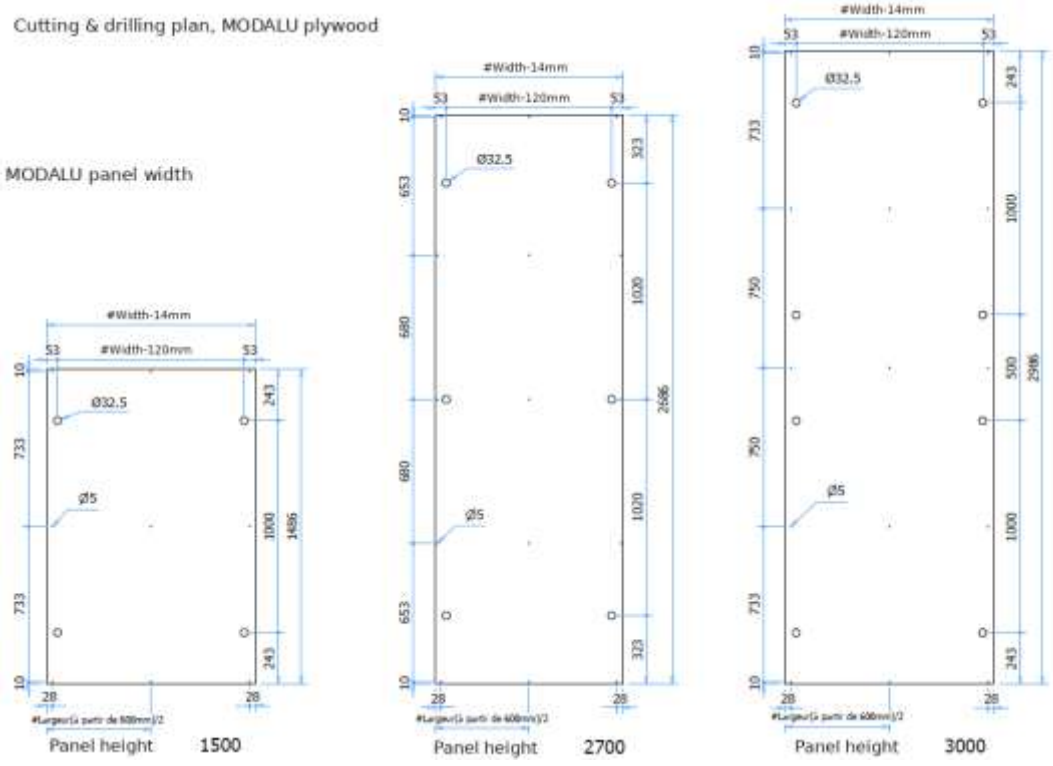
Conditions of use and maintenance

Nettoyage

- Clean the 4 sides of a stack of panels with un nettoyeur haute pression (maxi 500 bars)
- Scrape the panel edges with a scraper to remove excess concrete
- If there is a hole or scratch in the plywood, apply silicone sealant to fill it.
- Clean the plywood with a cloth or a grinder with a soft disc.
- Use a rotary hammer to clean the tie-rod holes.
- Use a hand chisel to clean the profile.
- Use an angle grinder if there is a nail in the plywood.

Replacing the plywood

- If the plywood is in too poor a condition, start by drilling out the rivets
- Turn the panel over and use a ram to break the plywood.
- Fit new plywood
- Drill the plywood according to the drawing below with a 5 mm bit.
- Fit 4.8x40 flat-head rivets.
- Apply neutral construction silicone sealant and clean with the scraper.



Conditions of use and maintenance

Frame repair

- If the plastic socket is broken, replace it.
- If a crack appears on the corner welds,

weld it again and grind it to obtain
an appropriate angle.

- If a profile is bent, you can try to straighten it.
- If a profile is damaged, stop using the panel.

Weld renovation

Jean Four offers a renovation of welds damaged over time. This extends the service life of your panels.
The weld-renovation steps:

- Cleaning of the area concerned by the customer with a high-pressure washer (max 500 bar)
- Grinding off the old weld bead
- New weld on the panel

To renovate the welds in good conditions, we ask you to send us
clean panels. This service is offered for all brands of panels.
For welding, degrease the area to be welded thoroughly, tack the part if necessary, then check the dimensions. For welding, use a wire of diameter 1 to 1.2 mm. For MIG welding currents:

- External corner of the panel / Current 70 A
- Internal corner of the panel / Current 110 A
- Cross-member welds / Current 130 to 150 A

After welding, check that the weld does not interfere with the plywood or overhang, to avoid any risk of injury. Grind and clean the weld.

Conditions of use and maintenance

Vibrating needle

- When using vibrating pokers, make sure not to contact the forming face. The pokers may damage your forming face.

Laitance information

Laitance is a surface layer of water, fine cement particles and fine aggregate that forms on the surface of fresh concrete. It results from bleed-water rising during pouring and compaction of the concrete, combined with separation of the materials due to excessive vibration or an unsuitable mix.
Laitance often appears on the forming face due to the build-up of water and fine particles at the surface, encouraged by contact with the formwork and compaction of the concrete. Excessive vibration, too high a water content or premature stripping can accentuate this phenomenon. The presence of laitance can impair the adhesion of subsequent layers or require extra preparation before finishing work.

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