

Main and secondary beams



HV Mesh panels



HV panels



TITAN HV slab forming system

A drop-head system with aluminium beams in three variations:

- with main and secondary beams
- with HV mesh panels
- with HV panels

with verified
typical calculations



TITAN HV slab forming system with main and secondary beams

Aluminium formwork beam system with drop-heads for early striking

- Main and secondary beams in the same plane = stable grid
- Erection and dismantling from below = high level of safety
- Lift shafts, columns, etc. easily incorporated by changing direction of span
- Compatible with
 - HV mesh panels
 - HV panels



TITAN HV slab forming system with HV mesh panels

Optional addition to system without restrictions on flexibility

- Good stability right from the first bay
- Supports foot traffic instantly = fast, safe laying of sheeting
- Suitable for any type of sheeting
- Ideal for supporting wood-wool lightweight building boards (= insulation) as permanent formwork



TITAN HV slab forming system with HV panels

Optional addition to system with integral GFRP sheeting

- Formwork supports and sheeting erected in one operation
- Perimeter wall junction on two sides
- Make-up panels only necessary along slab edges, around columns, etc.
- Compatible with main and secondary beams and standard 21 mm sheeting

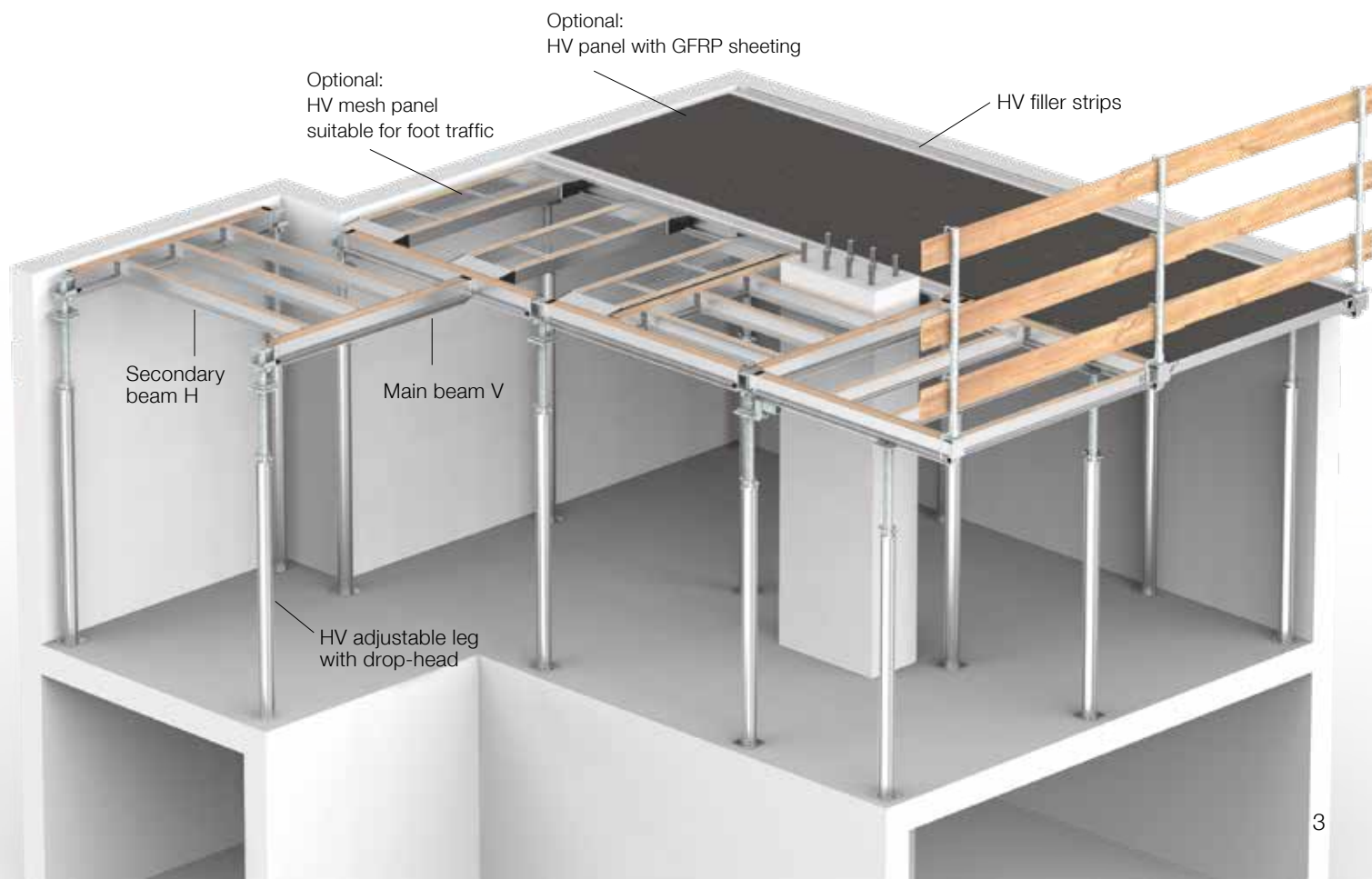
TITAN HV slab forming system

TITAN HV aluminium slab forming system is a drop-head floor slab forming system that can be used to assemble formwork for any floor slab quickly and economically.

The main components of the system are the drop-head and the main and secondary beams. Optional system components are the HV mesh panels and HV panels, which can be used instead of the secondary beams. All the system components can also be readily combined with each other.

The system boasts the following features:

- The main and secondary beams or panels all lie in the same plane and thus form a stable grid. This considerably reduces the need for tripods to stabilise the props.
- Formwork can be set up for any plan shape by changing the direction of span of the main beams by 90° and sliding individual components along the support ledges on the beams.
- The drop-head is a key element in the system and enables early striking without having to remove any props. All the main/secondary beams and/or panels are then immediately available for the next concrete pour.
- Erecting and striking from below means a high level of safety.
- The low deflection of the system with closely spaced components guarantees concrete surfaces in fair-face quality.

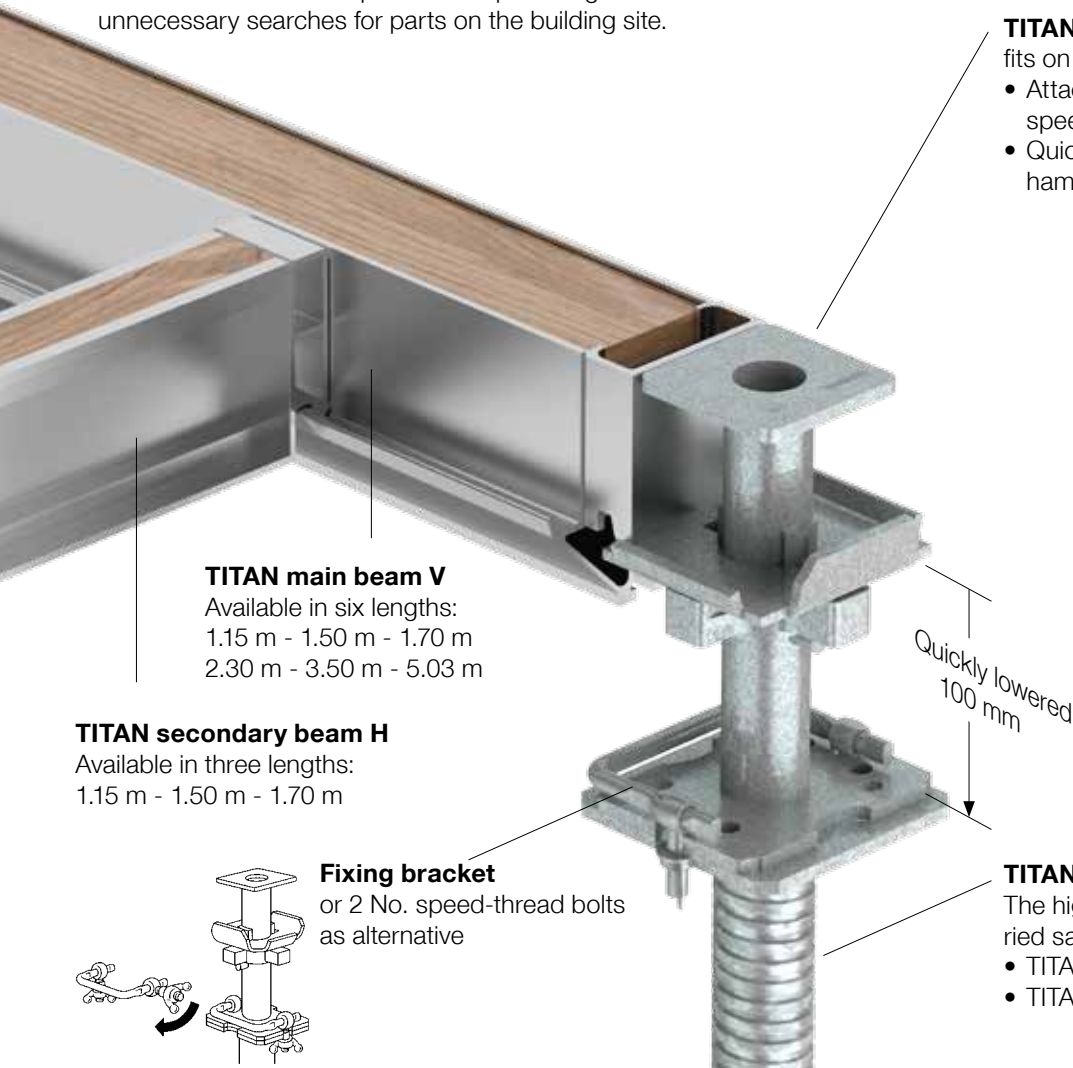


TITAN HV – drop-head system with aluminium beams

*No site cranes needed
for this system!*

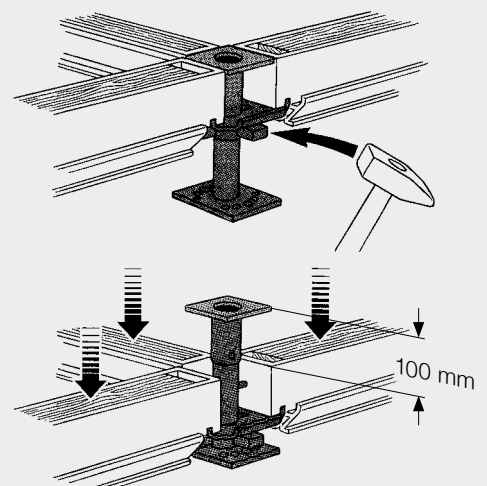
In contrast to conventional flexible formwork systems, in the TITAN HV system the main beams (V) and secondary beams (H) are fixed in the same plane. This is possible because there are support ledges on the main beams and drop-heads, and the incoming secondary beams are simply hooked onto these.

- The uneconomical overlapping of beams – the situation with conventional formwork – is absent from the TITAN HV system.
- The beams form an interlocking grid that is stable in itself – even without any sheeting.
- The low number of components simplifies logistics and avoids unnecessary searches for parts on the building site.



The **drop-head is quickly lowered** to enable (early) striking without having to remove any props.

- Release ring for quick lowering – also in corners
- No special tools needed – a few blows with a hammer are sufficient
- Beams and panels can be unhooked and used for the next concrete pour



Main (V) and secondary (H) beams are simply hooked together to cover a whole area very quickly (detail A). And by changing the direction of span (main beams are simply hooked onto other main beams), the grid of beams can be varied to suit any plan shape (detail B). Formwork around openings, columns, wall piers, make-up areas, curved walls, etc. is easily arranged as part of the system.

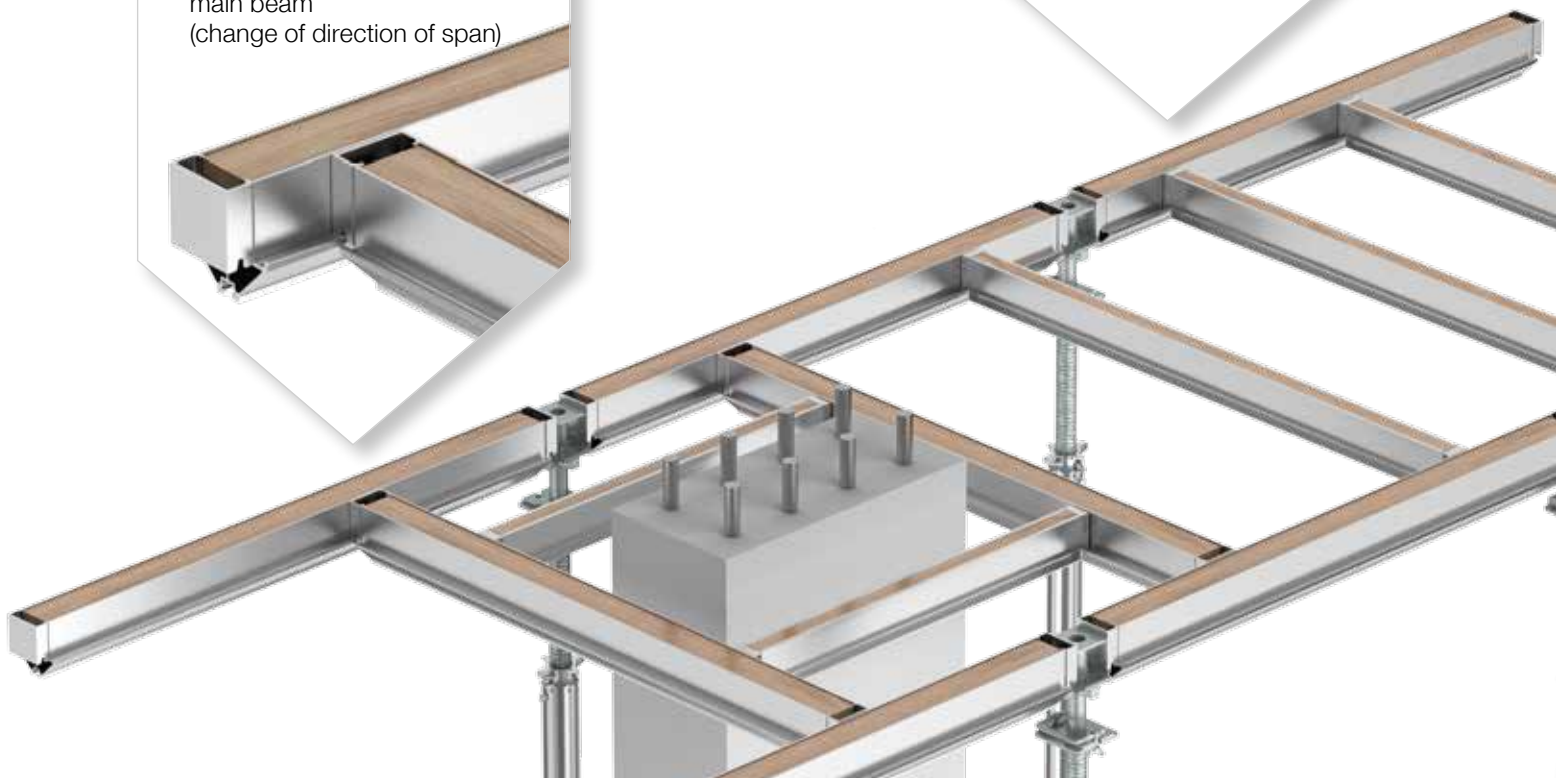
A. System grid size ensures quick erection

Secondary beam hooked onto main beam



B. Beams as close as possible to opening/penetration

Main beam hooked onto main beam
(change of direction of span)



The quick lowering feature results in significant savings:

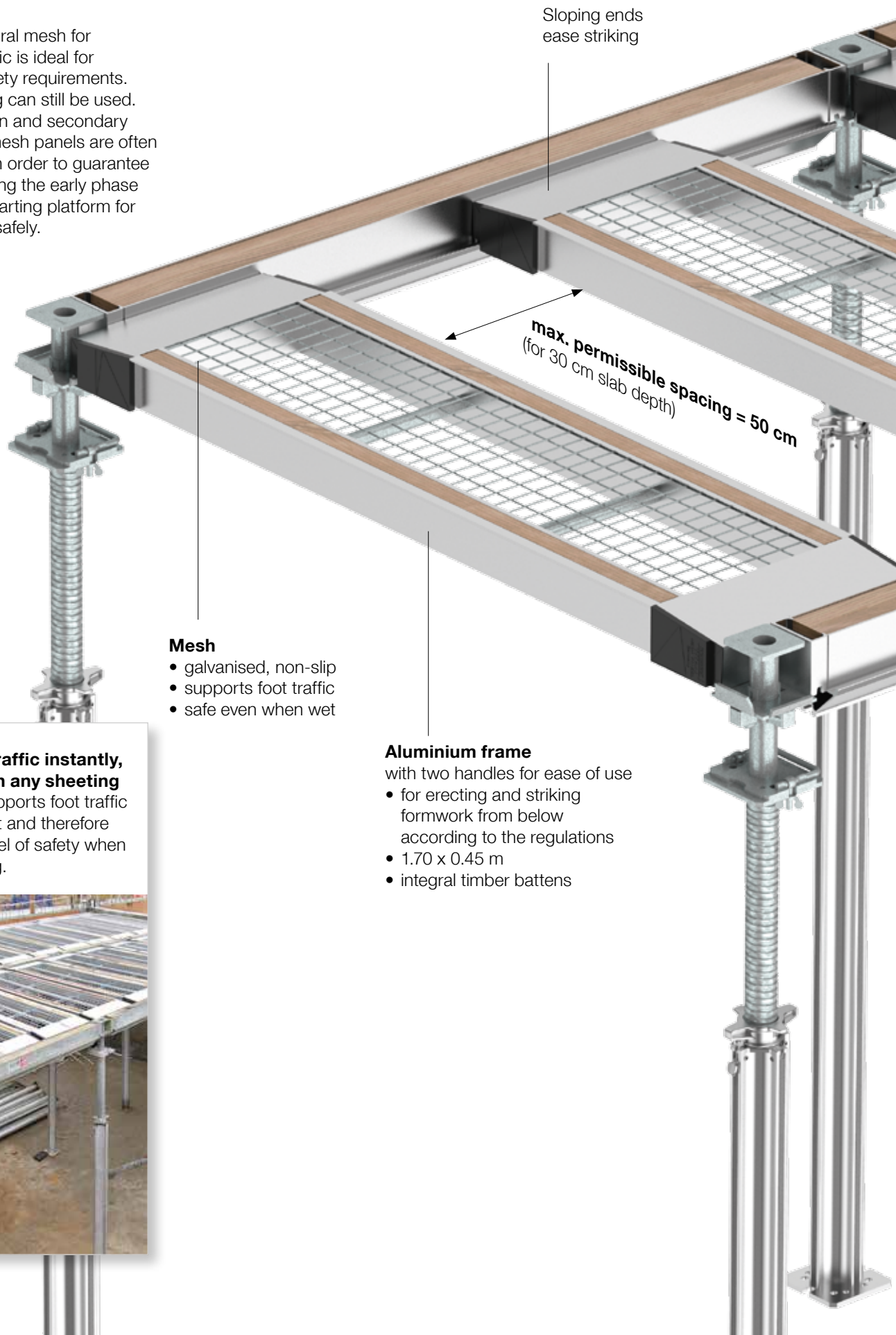
- all formwork beams are released
- approx. 2/3 of the formwork panels are released
- up to 50% of the props and drop-heads are released



Option I: HV mesh panel

Can carry foot traffic instantly, can be used with any sheeting

The panel with integral mesh for supporting foot traffic is ideal for areas with strict safety requirements. Any type of sheeting can still be used. When using the main and secondary beam system, HV mesh panels are often laid in the first bay in order to guarantee greater stability during the early phase and thus create a starting platform for laying the sheeting safely.



Mesh

- galvanised, non-slip
- supports foot traffic
- safe even when wet

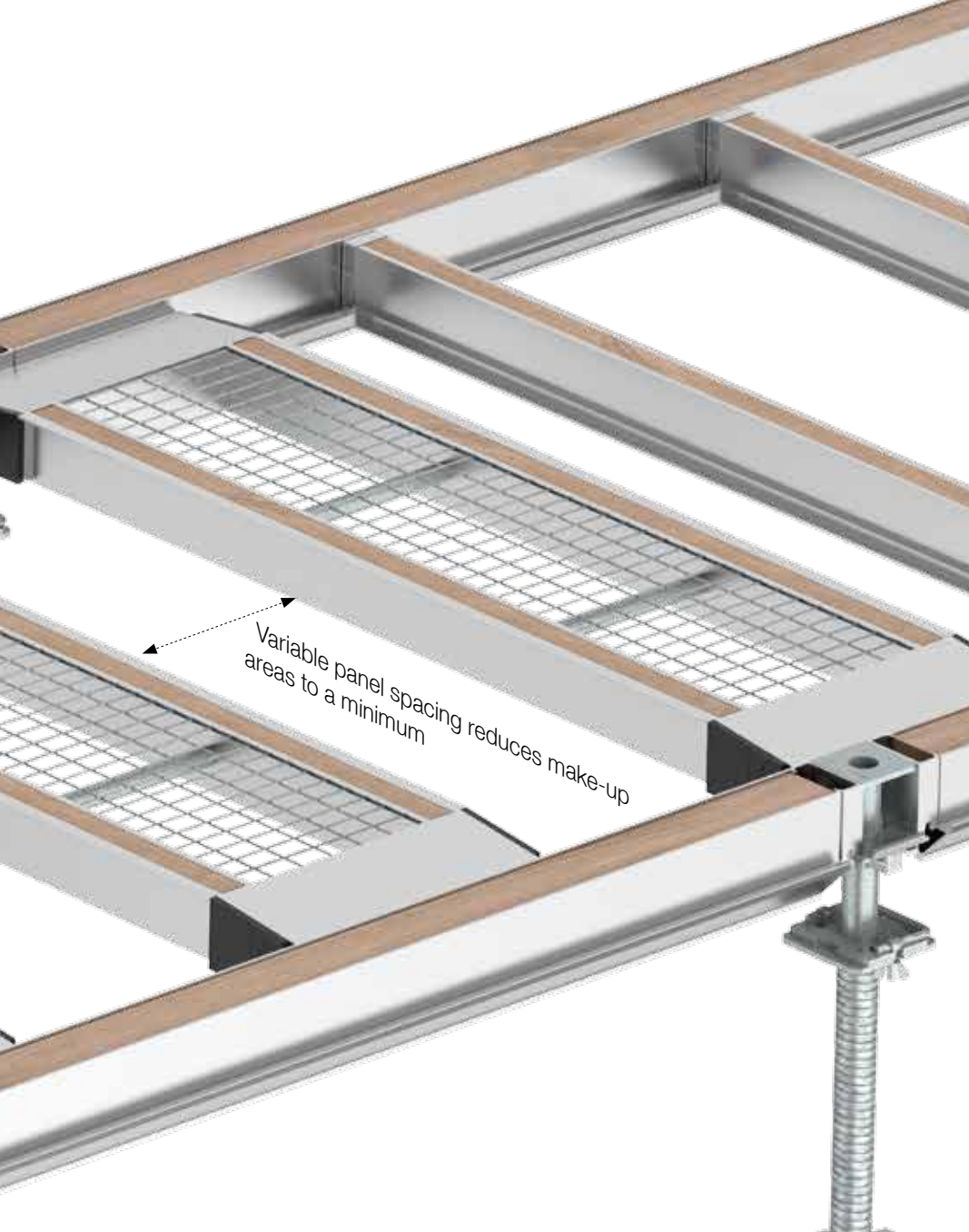
Aluminium frame

- with two handles for ease of use
- for erecting and striking formwork from below according to the regulations
 - 1.70 x 0.45 m
 - integral timber battens

Can carry foot traffic instantly, can be used with any sheeting

The stable bay supports foot traffic right from the start and therefore ensures a high level of safety when laying the sheeting.





The spacing between individual HV mesh panels depends on the concrete pressure:

- up to 30 cm slab depth = max. 0.50 m spacing
- up to 40 cm slab depth = max. 0.13 m spacing



Easy handling

The lightweight aluminium panel weighs a little over 15 kg. Two handles simplify handling during erection and striking.



Simple wall junctions

The panel can be slid up to 100 mm beyond the drop-head axis.



If the spacings between HV mesh panels are kept small, then cement-bonded wood-fibre boards, for instance, can be supported directly and used as permanent formwork.

Option II: HV panel

One operation saved – economic working

The HV panel consists of a lightweight aluminium frame with integral sheeting. It is hooked between the main beams and therefore permits the erection and striking of formwork from below according to the regulations. HV panels can be combined with all other system components. Make-up panels are constructed from 21 mm sheeting.

HV filler strip

- easy to lay
- fits tight between panels

Quick-release support

- at one end
- in ergonomic position for easy erection/striking from below

Aluminium frame

- light and easy to handle
- 1.70 x 0.45 m

Regular sheeting layout

After striking the formwork, the surface of the concrete presents a high-quality, uniform appearance.



Easy handling

Each panel weighs only 17.8 kg. Panels are stored in special "Barells", which can be stacked to save space.



Simple make-up panels

Formwork around openings and penetrations, e.g. columns, is easy to arrange with main or secondary beams and 21 mm sheeting.



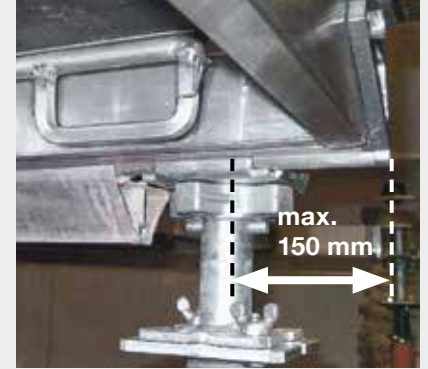
Sheeting

Solid 10 mm GFRP sheet

- does not absorb water and therefore does not swell
- requires less release agent and is easier to clean

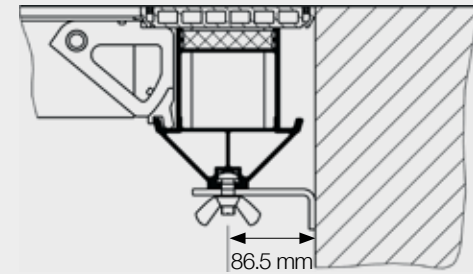
Wall junction – panel

A panel can be slid up to 150 mm beyond the drop-head axis to create a tight junction with the wall.



Wall junction – main beam

The wall spacer determines the position of the beam. This means that the erection of the slab formwork can begin in a corner.



Fast striking

The quick-release handle at one end of the panel makes it easy to remove the panel from below. It is possible to start striking the formwork at any position just two to three days after concreting.



Keeping to formwork timetable

Only a few HV filler strips supported by a few props remain in place during curing. HV panels and main beams can be reused immediately.



HV filler strip

An HV filler strip closes off the opening between panel and wall. The profiled underside is designed to drain any cement slurry clear of the main beam.



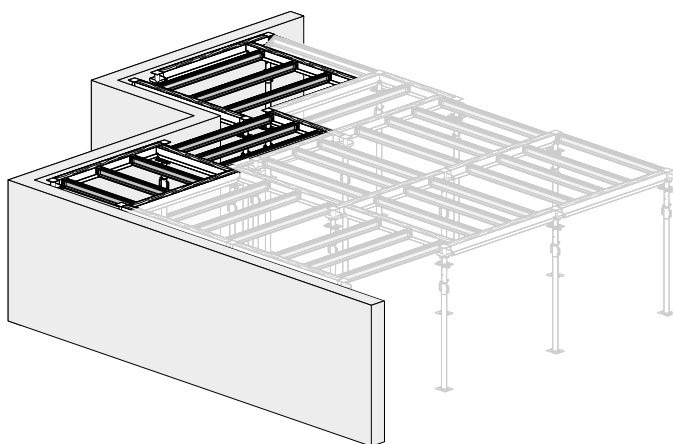
The joints permit up to 4 mm movement in the event of severe temperature fluctuations.

System solutions easily adjusted to suit different plan shapes



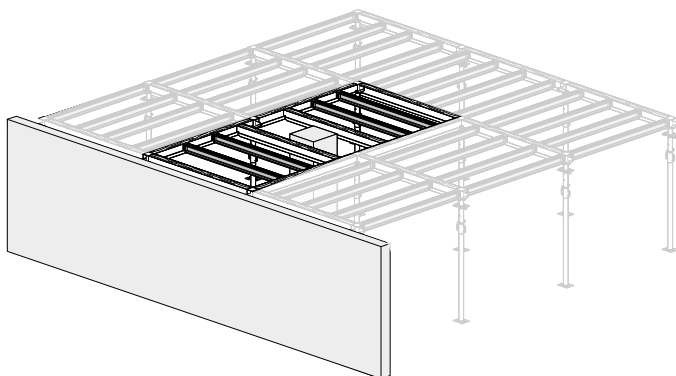
Direct wall junction within system

Formwork to the corners of almost all right-angled plan shapes can be continued right up to the walls by simply changing the direction of span.



Incorporating penetrations/openings

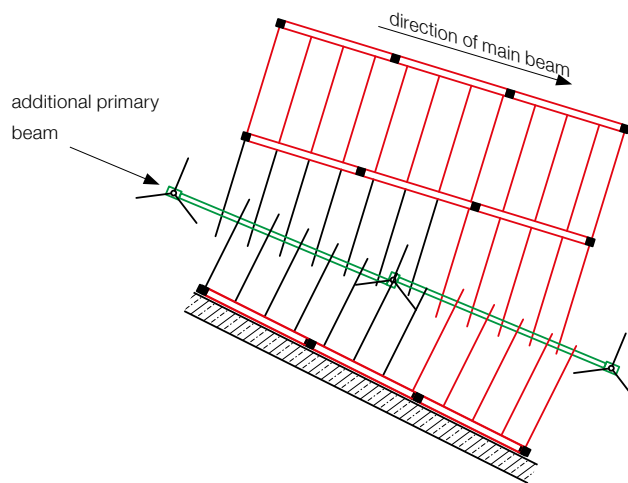
The direction of span is changed in the bay affected (main beams hooked onto main beams) and the secondary beams are simply slid sideways to suit. Beams are positioned as close as possible to the penetration/opening.



Wall at angle to main grid

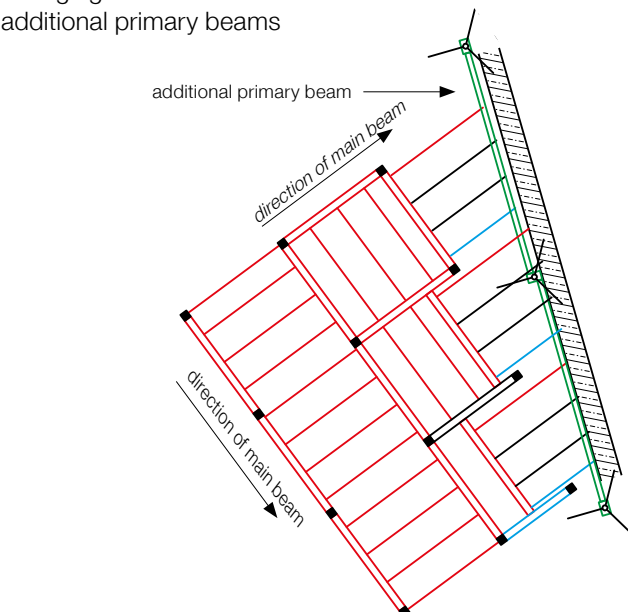
The junction with a wall can be arranged in different ways.

A. Secondary beams hooked onto a main beam along the wall. Another main beam carries the secondary beams from two sides, alternating with each other and overlapping the support beam.



B. Change direction of beams

The inclination is compensated through changing the direction of beams and additional primary beams



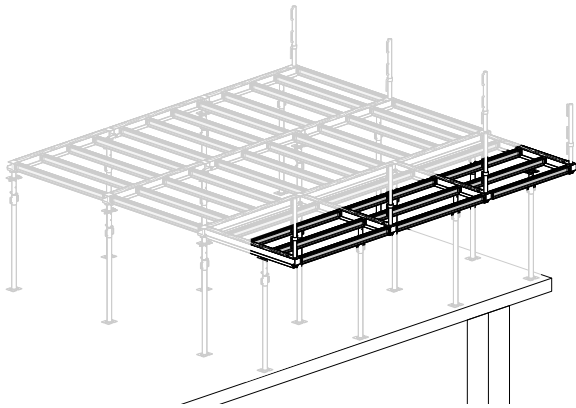
- Main beam 1,70 m
- Main beam 1,50 m
- Main beam 1,15 m
- Additional primary beam Main beam 3,50 m
- Secondary beam 1,70 m
- Secondary beam 1,50 m
- Secondary beam 1,15 m



System solutions for cantilevers

Formwork for edges

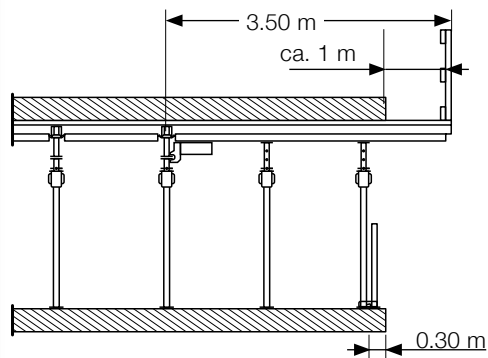
Cantilevering main beams 3.50 or 5.03 m long can be used to build formwork for edges and to create a working area approx. 1 m wide protected by a safety barrier. The alternative to cantilevering main beams is to use an RT edge table (see page 14).



Method 1

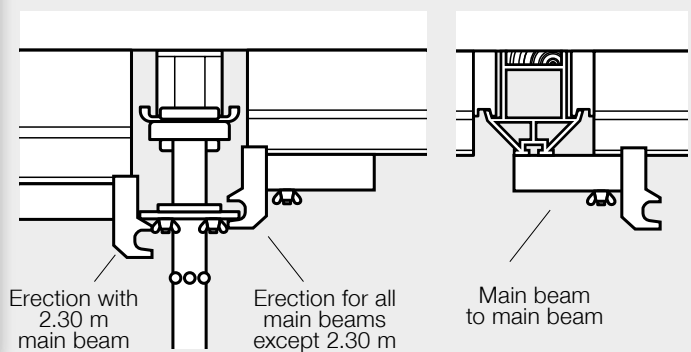
Main beams, 3.50 m

Each beam is hooked onto a drop-head approx. 2.50 m back from the edge and secured with a TITAN HV safety catch. Each beam is supported by a prop directly on the edge. Positioners attached to the beam beforehand make it easier to set up the props. The beam may cantilever max. 1.15 m beyond this final prop.



TITAN HV safety catch

prevents main beams from becoming disengaged.

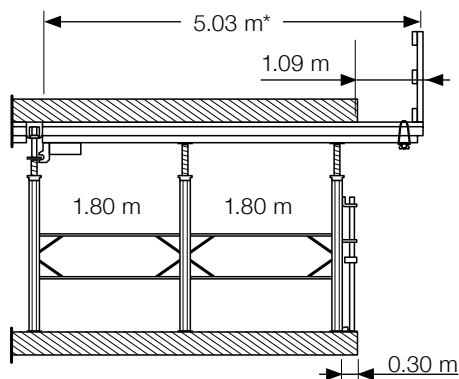


Edge table solution without changing systems

Method 2

Main beams, 5.03 m

The 5.03 m long main beam was developed for edges where the system formwork is to be used, e.g. with TITAN HV panels. Each beam is supported by the TITAN aluminium Megashore system stabilised with 1.80 m ledger frames and so can cantilever approx. 1.40 m. This arrangement ensures that the centre of gravity of the edge table remains within the building.



* Custom lengths on request

The system can therefore be used flexibly: as a table form, repositioned with C-hook, or reused as an HV system again without the need for a crane. Work on site is therefore not held up by the weather.



Panel connector

The panel connector prevents panels from falling out or being lifted by the wind and at the same time ensures safe formwork striking along the edge of the building. Pairs of panels are connected with the panel connector. They are therefore within reach and can be pulled in from a cantilevering section and taken down safely.



Wind clip

The wind clip is made of a robust plastic, and can protect beams from lateral shifting and uplift caused by a strong wind.



Stop end clip

The stop end clip prevents an HV panel at the end of a beam from falling out or sliding. The panel stop can be attached beforehand, before the beam is put into place.



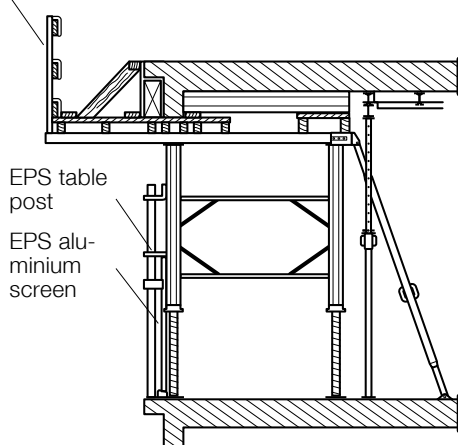
RT edge table for cantilevers

Safe formwork around the edges

Formwork for cantilevering slabs, perimeter downstand beams and spandrel panels is quickly and safely achieved with the **TITAN RT edge table**. The complete edge table is repositioned in the next storey by crane prior to beginning formwork erection so that the formwork for the critical perimeter zones is positioned first. The TITAN HV slab forming system can then be set up against this.

TITAN RT edge tables comply with all the safety requirements stipulated in the German regulations "UVV Bauarbeiten BGV C22" and in DIN 4420 part 1.

Guard rail post

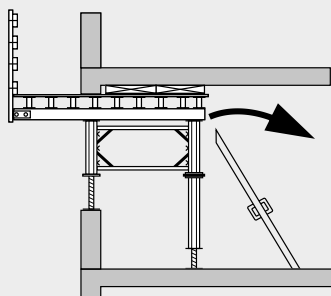


The edge table complete with edge protection (shown here with TITAN HS rail posts fitted at beam level) can be repositioned as one complete unit. All working areas remain safely protected even just after repositioning the form for the next storey.

As an alternative to guard rail posts, it is also possible to attach EPS aluminium screens to the edge table with table posts – at both beam and support level (see photo above right).

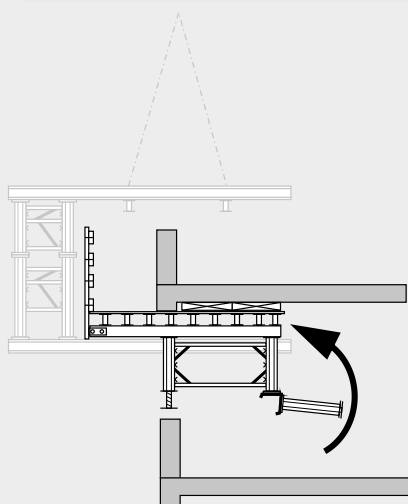
Repositioning TITAN RT edge table – also with spandrel panel

Hinge plate and C-hook simplify the repositioning of the complete edge table.



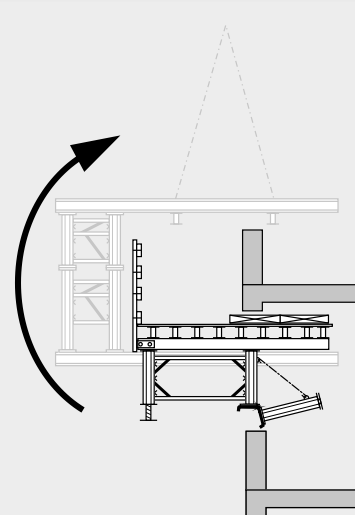
Step 1:

Remove push-pull props.



Step 2:

Fold up legs and secure.



Step 3:

Reposition edge table with C-hook.

TITAN U-HV beam formwork

Downstand beams easily incorporated to maintain progress



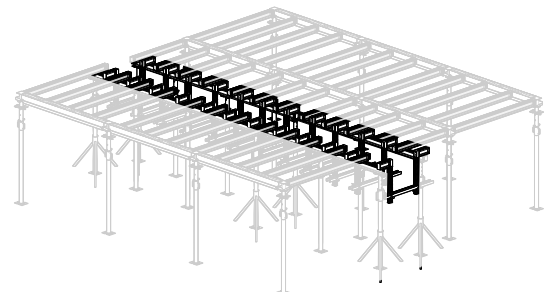
The **TITAN U-HV beam formwork** enables downstand beams to be easily incorporated anywhere. The beam clamp has established itself over decades as a non-twisting assembly for right-angled and dimensionally accurate beam formwork without the need for additional ties through the beam. The vibration-proof fixing with wedges simplifies striking.

- Extremely easy to set up and use
- Vibration-proof wedge fixings
- Low weight

Please refer to our TITAN beam formwork brochure for further information.



TITAN U-HV beam clamps, supported on additional beams, are positioned up against the TITAN HV slab forming system. The beam formwork is repositioned at the same time as the slab formwork.



TITAN U-HV beam formwork

Preassembled on the ground for effective formwork operations

1. Prepare a template to match the dimensions of the beam.

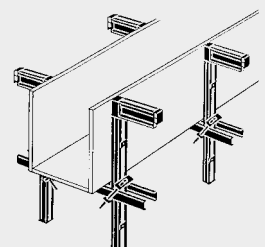
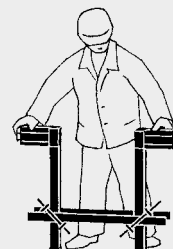
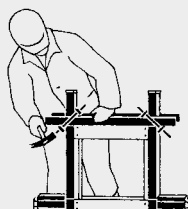
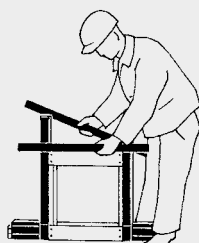
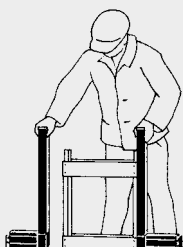
2. Place side frames upside down and align with template.

3. Lay bottom rails to left and right.

4. Clamp rails diagonally and hammer in wedges firmly upwards.

5. Turn the finished beam clamp up the right way and drop into slab formwork.

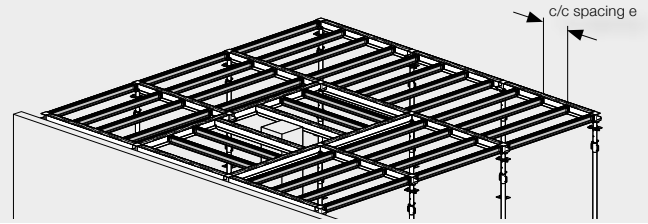
6. Cut sheeting to size for sides and base of beam and place in position.



Determine your requirements in just a few steps

The tables can be used for an initial estimate of requirements.

(1) Based on the slab depth, determine the potential beam combinations. The ensuing load per prop determines the (2) choice of prop depending on the ceiling height. (3) A rough calculation of the material requirements is possible for a square grid.



(1) Determine beam combination depending on slab depth.*

		Combination of main beams V and secondary beams H											
		Main beam 2300			Main beam 1700			Main beam 1500			Main beam 1150		
		with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam	with secondary beam
		1700	1500	1150	1700	1500	1150	1700	1500	1150	1700	1500	1150
Slab depth [cm]	(slab load) [kN/m²]	Secondary beam centre-to-centre spacing e [mm]											
		Ensuing prop load [kN]											
15	(5.75)	750	750	750	750	750	750	750	750	750	750	750	750
		25	22	17	19	17	13	17	15	12	13	12	9
20	(7.00)	750	750	750	750	750	750	750	750	750	750	750	750
		30	27	21	23	20	16	20	18	14	16	14	11
25	(8.25)	666	666	666	666	666	666	666	666	666	666	666	666
		36	32	25	27	24	19	24	21	17	19	17	13
30	(9.50)	-	-	666	500	666	666	666	666	666	666	666	666
				29	31	27	21	27	24	19	21	19	15
35	(10.88)	-	-	500	-	500	500	500	500	500	500	500	500
				33	-	31	24	31	28	22	24	22	17
40	(12.25)	-	-	-	-	-	500	400	500	500	400	500	500
							28	35	31	25	28	25	19
45	(13.63)	-	-	-	-	-	500	-	500	500	400	500	500
							31	-	35	27	31	27	21
50	(15.00)	-	-	-	-	-	-	-	-	500	375	500	500
										30	34	30	23
60	(17.75)	-	-	-	-	-	-	-	-	500	333	400	500
										36	40	36	28
70	(20.50)	-	-	-	-	-	-	-	-	-	285	400	500
											46	41	32
80	(23.00)	-	-	-	-	-	-	-	-	-	-	333	500
												46	36
90	(25.50)	-	-	-	-	-	-	-	-	-	-	-	400
													40
100	(28.00)	-	-	-	-	-	-	-	-	-	-	-	400
													44
105	(29.25)	-	-	-	-	-	-	-	-	-	-	-	400
													46
Area of slab carried per prop [m²]		4.32	3.84	3.00	3.24	2.88	2.25	2.88	2.56	2.00	2.25	2.00	1.56

(3) Calculate material requirements**

The table below can be used to obtain a rough estimate of the materials needed.
slab soffit [in m²] x material factor = number of components required

Main beams	0.25	0.28	0.35	0.34	0.38	0.47	0.38	0.42	0.53	0.49	0.54	0.68
Secondary beams	1.13	1.27	1.62	1.13	1.27	1.62	1.13	1.27	1.62	1.12	1.26	1.61
Props/Drop-heads	0.30	0.33	0.41	0.38	0.42	0.53	0.42	0.47	0.59	0.53	0.59	0.73
Tripods	15% of number of props											

* Design data: Calculation to DIN EN 12812, $g = g_e + g_b + p_1 + p_2$

Self-weight, formwork $g_e = 0.5 \text{ kN/m}^2$ where $0.75 < p_2 < 1.75 \text{ kN/m}^2$

Self-weight, concrete $g_b = 25 \text{ kN/m}^3 \cdot d$ up to 30 cm 0.75 kN/m^2

Imposed load $p_1 = 0.75 \text{ kN/m}^2$ from 70 cm 1.75 kN/m^2

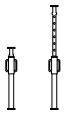
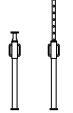
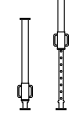
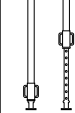
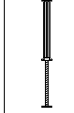

$p_2 = 0.1 \cdot g_b = 25 \text{ kN/m}^2 \cdot d$

max. deflection at mid-span $f_{\text{max}} < L/300$; 22 mm 3-ply core plywood (spruce/fir) with $E = 6000 \text{ N/mm}^2$

** The values are based on the following assumptions: room size approx. 15 x 15 m, secondary beam spacing 0.50 m. Material allowance for edges: approx. 5% (values may need to be increased for smaller room sizes). Please use our Excel design charts for other dimensions.

The cost-effectiveness of the HV system increases with the number of reuses per building site.
It is therefore advisable to keep the concrete pours relatively small. However, this must be considered in relation to the cost of the construction joints. Experience shows that the optimum size for concrete pours lies between 300 and 600 m² depending on the size of the structure. That results in four cycles/month.

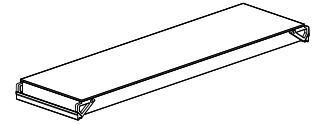
(2) Determine prop depending on ceiling height and prop load.



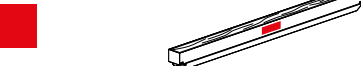
(2) Determine prop depen- ding on ceiling height and prop load.	TITAN S								TITAN HV				4-leg tower ¹⁾								
	S 2		S 3		S 4		S 7		HV		HV Maxi										
																					
	B 30 D 30	with HV System related	B 35 D 35	with HV System related	C 40 D 40	with HV System related	C 55 D 55	with HV System related	Screw jack at base	Screw jack at top	Screw jack at base	Screw jack at top									
1.70																					
1.80	30.0	39.0									96.1	63.9									
1.90	30.0	36.0									96.1	63.9									
2.00	30.0	33.0									89.4	59.1									
2.10	27.2	31.0									82.6	54.3									
2.20	24.8	29.0									76.4	50.1									
2.30	22.7	28.0	26.5	35.0									70.1	45.9							
2.40	20.8	27.0	24.3	34.0									64.4	42.3							
2.50	20.0	26.0	22.4	32.0									58.6	38.6							
2.60	20.0	25.0	20.7	31.0	35.0	39.0									53.3	35.6					
2.70	20.0	24.0	20.0	29.0	33.8	38.0									48.0	32.5					
2.80	20.0	23.0	20.0	28.0	31.4	37.0									43.2	30.1					
2.90	20.0	22.0	20.0	27.0	29.3	36.0									38.3	27.6	53.6	58.0			
3.00	20.0	21.0	20.0	26.0	27.3	35.0									34.0	25.8	53.6	58.0			
3.10			20.0	25.0	25.6	33.0									29.6	23.9	50.8	52.0			
3.20			20.0	24.0	24.0	31.0											47.9	46.0			
3.30			20.0	23.0	22.6	30.0											45.1	41.0			
3.40			20.0	22.0	21.3	29.0											42.2	36.0			
3.50			20.0	21.0	20.0	28.0											39.4	32.2	40.0		
3.60					20.0	27.0											36.6	28.3	39.8		
3.70					20.0	26.0											33.9	25.2	39.6		
3.80					20.0	25.0											31.1	22.0	39.4		
3.90					20.0	25.0											28.4	20.0	39.2		
4.00					20.0	24.0	20.6	22.5											25.7	17.9	39.0
4.10					20.0	23.0	20.0	22.0											23.0	16.9	38.8
4.20							20.0	21.8											20.3	15.9	38.7
4.30							20.0	21.4													38.5
4.40							20.0	21.2													38.3
4.50							20.0	21.0													38.1
4.60							20.0	20.0													37.9
4.70							20.0	20.0													37.7
4.80							20.0	20.0													37.5
4.90							20.0	20.0													37.3
5.00							20.0	20.0													37.1
5.10							20.0	20.0													36.9
5.20							20.0	20.0													36.7
5.30							20.0	20.0													36.5
5.40							20.0	20.0													36.3
5.50							20.0	20.0													36.2
5.60																			36.0		
5.70																			35.8		
5.80																			35.6		
5.90																			35.4		
6.00																			35.2		
6.10																			35.0		

¹⁾ We recommend using two ledger frames over the height for better stability.

Design

Flatness tolerances to DIN 18202 for HV panels with various main beams



Slab depth h [cm]	Main beam 115 			Main beam 150 			Main beam 170 			Main beam 170/2=85 (with central support)					
	Line	f = L/x	f ≤ L/300	Line	f = L/x	f ≤ L/300	Line	f = L/x	f ≤ L/300	Line	f = L/x	f ≤ L/300			
10	7	1223	ok	7	1031	ok	7	886	ok	7	1298	ok			
11	7	1120	ok	7	945	ok	7	812	ok	7	1188	ok			
12	7	1034	ok	7	872	ok	7	749	ok	7	1096	ok			
13	7	959	ok	7	809	ok	7	695	ok	7	1017	ok			
14	7	895	ok	7	755	ok	7	649	ok	7	949	ok			
15	7	839	ok	7	708	ok	7	608	ok	7	889	ok			
16	7	789	ok	7	666	ok	7	572	ok	7	837	ok			
17	7	745	ok	7	629	ok	7	540	ok	7	790	ok			
18	7	705	ok	7	595	ok	7	512	ok	7	748	ok			
19	7	670	ok	7	566	ok	7	486	ok	7	710	ok			
20	7	638	ok	7	538	ok	7	463	ok	7	676	ok			
21	7	609	ok	7	514	ok	6	442	ok	7	645	ok			
22	7	582	ok	7	492	ok	6	422	ok	7	617	ok			
23	7	558	ok	7	471	ok	6	405	ok	7	591	ok			
24	7	535	ok	7	452	ok	6	389	ok	7	568	ok			
25	7	515	ok	6	435	ok	6	374	ok	7	546	ok			
26	7	496	ok	6	418	ok	6	360	ok	7	525	ok			
27	7	478	ok	6	403	ok	6	347	ok	7	507	ok			
28	7	461	ok	6	390	ok	5	335	ok	7	489	ok			
29	7	446	ok	6	377	ok	5	324	ok	7	473	ok			
30	6	431	ok	6	364	ok	5	313	ok	7	457	ok			
31	6	418	ok	6	353	ok	5	303	ok	7	443	ok			
32	6	405	ok	6	342	ok	5	294		7	430	ok			
33	6	393	ok	6	332	ok	5	285		7	417	ok			
34	6	382	ok	5	323	ok	not permitted			7	405	ok			
35	6	371	ok	5	314	ok				6	394	ok			
36	6	361	ok	5	305	ok				6	383	ok			
37	6	352	ok	5	297					6	373	ok			
38	6	343	ok	5	289					6	363	ok			
39	6	334	ok	5	282					6	354	ok			
40	6	326	ok	5	275					6	345	ok			
41	6	318	ok	5	269					6	337	ok			
42	5	311	ok	5	262					6	329	ok			
43	5	304	ok	not permitted						6	322	ok			
44	5	297								6	315	ok			
45	5	290								6	308	ok			
46	5	284								6	301	ok			
47	5	278								6	295				
48	5	273								6	289				
49	5	267								5	283				
50	5	262								5	278				

ok L/300 satisfied
 Line 7 satisfied to DIN 18202 Line 6 satisfied to DIN 18202 Line 5 satisfied to DIN 18202

Flexible storage, stacking and transport

HV panels and HV mesh panels are stored and transported in specially designed racks, which help to improve efficiency on site.

- Quickly set up
- Clear storage
- Transport without cranes

Panel storage rack 30
for 30 HV panels



TITAN HV panels must be secured during transport.



Empty panel storage racks type 30 can be folded down and stacked to save space.



Fixed and swivel castors ensure simple transport across the building site.



Lifting slings can be attached to the welded eyes.

Panel storage rack 14/16
for 14 HV panels or 16 HV mesh panels, can be stacked to save space.









System components



Aluminium main beam V

with integral nailing batten and multi-purpose slot.

Length	Colour coding	Weight	Part No.
1.15 m		8.5 kg	0120490004
1.50 m		11.2 kg	0120490006
1.70 m		12.7 kg	0120490008
2.30 m		18.0 kg	0220490010
3.50 m		28.4 kg	0120490011
5.03 m*		40.6 kg	0120490014

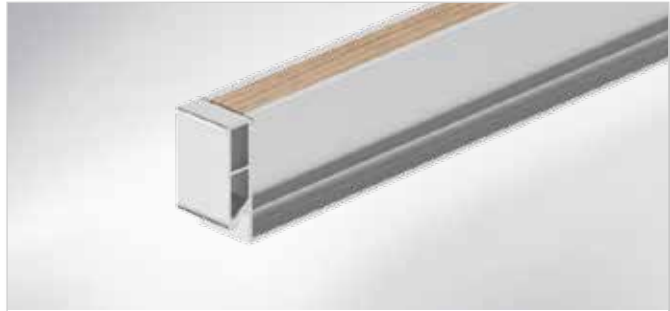
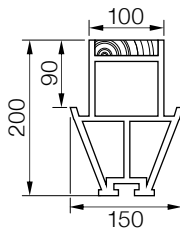
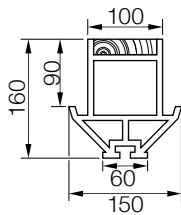
* Custom lengths on request

all main beams (except 2.30 m)

Moment of inertia (I)	559 cm ⁴
Section modulus (W)	60.8 cm ³
Bending stiffness (E-I)	391 kNm ²
perm. bending moment (M_{perm})	6.89 kNm
perm. shear force (Q_{perm})	27 kN




main beam 2.30 m

Moment of inertia (I)	1027 cm ⁴
Section modulus (W)	94.5 cm ³
Bending stiffness (E-I)	719 kNm ²
perm. bending moment (M_{perm})	10.8 kNm
perm. shear force (Q_{perm})	27 kN

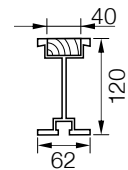


Aluminium secondary beam H

with integral nailing batten and multi-purpose slot.

Length	Colour coding	Weight	Part No.
1.15 m		3.7 kg	0120490015
1.50 m		5.0 kg	0120490018
1.70 m		5.3 kg	0120490021

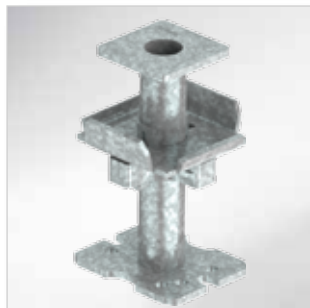
Moment of inertia (I)	175 cm ⁴
Section modulus (W)	29 cm ³
Bending stiffness (E-I)	122.5 kNm ²
perm. bending moment (M_{perm})	3.3 kNm
perm. shear force (Q_{perm})	9.25 kN



TITAN HV carbide cleaning scraper

for cleaning the slot in a main beam, 600 mm long.

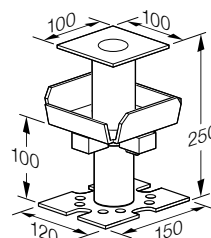
Weight	0.60 kg
Part No.	0620490022



TITAN HV drop-head

fits on all standard DIN props, hot-dip galvanised. Quickly lowered 100 mm with a hammer-blow to the release ring.

Weight	4.7 kg
Part No.	0120490030



Fixing bracket HV

simplifies the mounting of drop-heads on TITAN S steel props, TITAN HV LITE props and TITAN Megashore legs.

Weight	0.46 kg
Part No.	0620490090

Alternative:

Speed-thread bolt (not illustrated)
with quick-action thread and wing nut.

Weight	0.10 kg
Part No.	0620490039

TITAN S

Available in four sizes. The props have a paint finish (S).

Size 2, class B/D
Length 1.80 - 3.00 m
Weight 16 kg
Part No. 0120100001 (S)

Size 3, class B/D
Weight 18 kg
Length 2.30 - 3.50 m
Part No. 0120100005 (S)

Size 4, class C/D
Weight 26 kg
Length 2.60 - 4.10 m
Part No. 0120100009 (S)

Size 7, class C/D
Weight 33 kg
Length 4.00 - 5.50 m
Part No. 0120100016 (S)



1 TITAN HV LITE prop

Available in two sizes.

TITAN HV	Part No.
1.75 - 3.05 m	0220490027
TITAN HV Maxi	
2.95 - 4.25 m	0120490048

2 TITAN HV extension piece

4 No. M12 x 35 bolts + nuts or 2
No. HV connecting brackets are
required for a structural connection.
Length Part No.
1000 mm 0120490028
1250 mm 0120490032

3 HV connecting bracket

2 No. connecting brackets are
required per butt joint.
Weight Part No.
1.22 kg 0120490033

4 TITAN HV jack

Separate steel screw jack.
Galvanised.

870 mm long

500 mm adjustment
Weight 5.9 kg
Part No. 0120490045

1729 mm long

1300 mm adjustment
Weight 9.1 kg
Part No. 0120490031

5 TITAN HV retainer claw

2 No. retainer claws are required
to attach an additional screw jack.
Galvanised.
Weight Part No.
0.26 kg 0220490029



Universal tripod

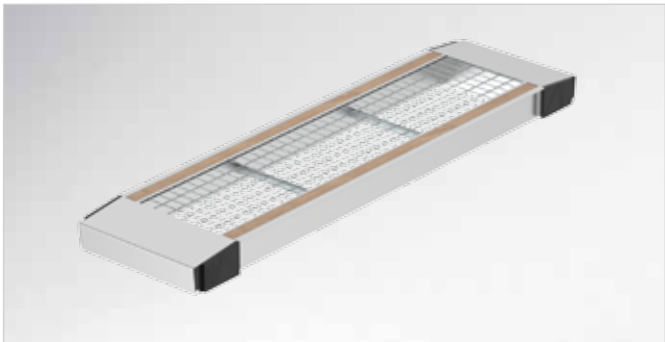
Secure stand for all custo-
mary telescopic props.
Folds for space-saving
transport and storage.
Weight 9.25 kg
Part No. 0620140010



Wall spacer

Ensures the correct spa-
cing between main beam
and wall when using HV
panels. Laying the form-
work can then begin with
an HV filler strip directly
adjacent to the wall.
Weight 0.55 kg
Part No. 0620490054

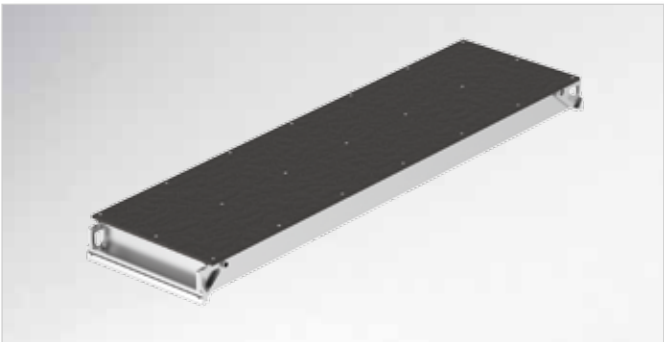
System components



HV mesh panel

Sheeting panel with aluminium frame and galvanised approx. 37 x 52 mm mesh, 0.45 x 1.70 m (W x L). Any type of sheeting can be used.

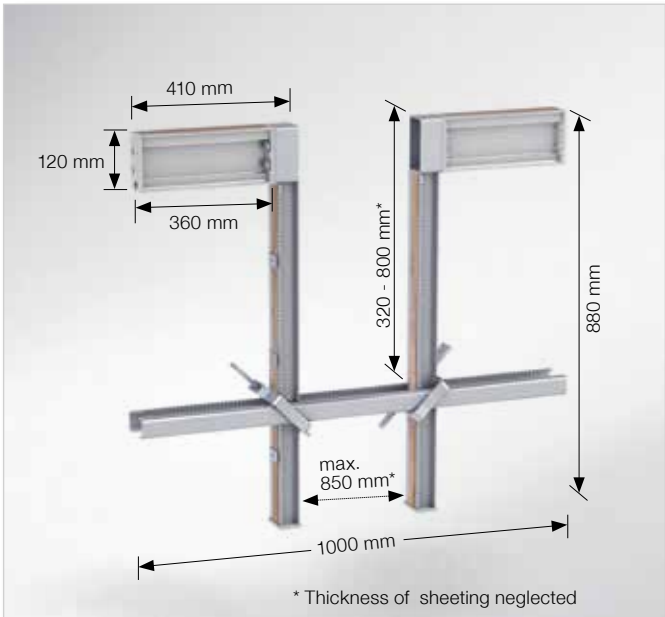
Weight 15.2 kg
Part No. 0220490051



HV panel

Sheeting panel with aluminium frame and integral 10 mm GFRP sheeting (riveted to aluminium frame), 0.45 x 1.70 m (W x L). Make-up panels are constructed from 21 mm sheeting.

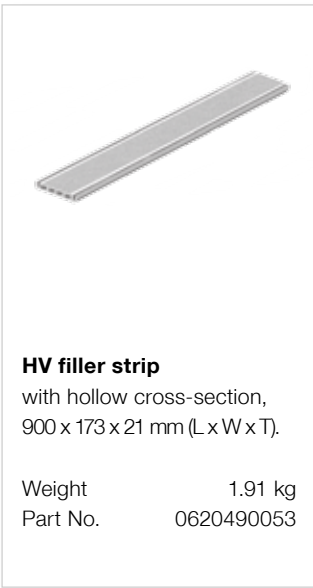
Weight 17.8 kg
Part No. 0620350009



TITAN U-HV beam form

for max. 800 mm deep x max. 830 mm wide downstand beams, galvanised.

Weight 19.0 kg
Part No. 0120494535



HV filler strip

with hollow cross-section, 900 x 173 x 21 mm (L x W x T).

Weight 1.91 kg
Part No. 0620490053



Panel connector

for clamping together two HV panels along edges and for preventing uplift.

Weight 1.34 kg
Part No. 0620490049



Wind clip

The wind clip is made of a robust plastic, and can protect beams from lateral shifting and uplift caused by a strong wind.

Weight 0.16 kg
Part No. 0620490065

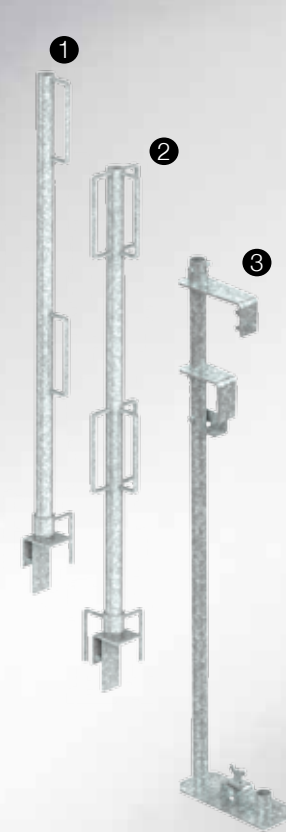
TITAN HV carbide concrete scraper (not illustrated) for cleaning HV panels, 54 mm wide.

Weight 1.56 kg
Part No. 0620490020

Stop end clip (not illustrated) complete, for TITAN HV panel, permissible resistance 2 kN.

Weight 0.51 kg
Part No. 0620490067

Safety at edges of scaffolds and buildings



① HV guard rail post
1.32 m high, simply inserted into main beam.
Weight 8.3 kg
Part No. 0120490060

② HV corner guard rail post
1.32 m high, used at corners and in areas where main beams run parallel with an edge from which persons could fall.
Weight 9.5 kg
Part No. 0120490061

③ Table form guard rail post
for fixing EPS aluminium screens to edge tables assembled from TITAN aluminium Megashore system components. The table form complete with edge protection can be repositioned as one complete unit. Spindle length 250 mm
Weight 11.10 kg
Part No. 0620620044

Storage and transport



Panel storage rack 14/16

for 14 HV panels or 16 HV mesh panels, can be stacked to save space, 1780 x 1070 x 1070 mm (L x W x H).
Weight 58 kg
Part No. 0120490053



Panel storage rack 30

for 30 HV panels, foldable, 1850 x 1000 x 1950 mm (L x W x H), 480 mm high when folded.
Weight 134 kg (629 kg full)
Part No. 0120490052

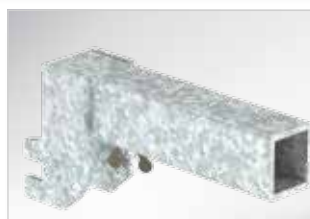


EPS aluminium screen

Aluminium frame (Ø48 x 35 mm), overall dimensions 2935 x 1275 mm (L x H), and galvanised steel mesh screen. For attaching to aluminium formwork beams (e.g. with universal EPS beam brackets, EPS slot-in posts and multi-clamps) or with EPS floor brackets bolted to concrete slab.

Weight 16.5 kg
Part No. 0620620030

Please refer to our TITAN edge protection system brochure for further information.



TITAN HV safety catch

prevents main beams from becoming disengaged. It is either clipped under the top plate of a prop or under an adjacent main beam where the direction of span changes.

Weight 1.54 kg
Part No. 0120490055



Fixed and swivel castors

with Ø200 mm dia. castors, permissible load 4 kN.



Swivel castor with brake

Weight 5.95 kg
Part No. 0120600011

Fixed castor

Weight 5.87 kg
Part No. 0120600010



Construction of new production building, Sundern

Access openings 3.60 m wide were necessary in some areas. The TITAN HV slab forming system with HV panels was combined with TITAN 225 type 2 bridging beams and the drop-heads for the HV formwork were mounted directly on the beams.

The access opening had a clear headroom of 6.77 m (TITAN aluminium Megashore tower T53, made from TITAN size 6 Megashore legs with additional screw jacks).

The photos reproduced in this brochure represent momentary snapshots of work on building sites. It is therefore possible that certain facts and circumstances do not fully correspond to the technical (safety) requirements.

Falsework and Formwork systems



Trench lining systems



Geotechnical solutions



Certified Management-System to DIN EN ISO 9001:2015 **DVS** ZERT



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