

# VINC'I® 80 WALL FORM







## VINC'I 80 WALL FORMWORK

VINC'I is a steel frame formwork system composed of high strength rectangular tube profiles, which could be easily combined with patented dial type REX panel locks. The steel frame profiles are designed to be able to connect at any point with the other panel. Panel facing is the plastic coated Birch Plywood namely WISA-Form Elephant (delivered by UPM), providing higher durability and longer life.

Panel widths are 30, 45, 60, 75, 90, 120, 240cm. whereas the heights are chosen as 330, 300, 270, 180, 150 and 120cm. The panel corners bear solid steel pieces which gives extra stiffness while also delivering strong inserts for levering and lifting holes for handling. Only the solid corner would double the panel life against similar systems.

REX formwork lock could be applied to any point on the frame profiles as well as transversals. REX can be fixed or released by the help of a hammer easily whether the lock is positioned high or low on the panel without necessitating the worker to climb on the panel or bend over extremely. The conical holes for DW15 tie-rods on panel are so positioned that formwork bears 80 kN/m<sup>2</sup> concrete pressure.

The formwork system consist of VINC'I panels, Rex VINC'I locks, SAH tie-rods, VINC'I crane hooks, VINC'I type cat-walk brackets, double push-pull props and accessories. (WISA-Form Elephant Facing is standard)



## VINC'I 80 PERDE KALIBI

VINC'I Perde ve Kolon Sistemi panoları kapalı torsiyona mukavim çelik çerçevelerden oluşmuş olup enlemeler kutu profillerden yapılmıştır. VINC'I panolar plastik yüzeyli plywood WISA-Form Elephant kaplıdır. Çelik çerçeve profili elemanın istenilen her çerçeve noktasında bir diğeri ile bağlantısını temin edecek şekilde tasarlanmıştır.

Pano genişlikleri 30, 45, 60, 75, 90, 120, 240 cm ve yükseklikleri ise 330, 300, 270, 180, 150, 120 cm olarak seçilmiştir. Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye veya inşaat demiri ile yer değiştirmesini sağlamaktadır. Bunun dışında bu köşelerdeki delikler kolay ve çabuk nakliye için kullanılmaktadır.

Kalıp kavraması REX her enlemeye ve çerçevenin enine boyuna herhangi bir noktasına yerleştirilebilir ve bir çekiş darbesiyle açılır veya kapatılabilir. Panolarda konik olarak açılmış ankraj delikleri DW15'lik tie-rod kullanımı için uygun olup 80 kN/m<sup>2</sup>'ye kadar beton basıncını karşılamaktadır.

Perdeler VINC'I panolar, REX VINC'I kilit, Dywidag tie-rod, VINC'I vinç kulbu, tipi beton döküm konsolları, çiftli itme-çekme tipi payanda ve pabuçlarından oluşmaktadır.

# VINC'I® 80 WALL FORM



Fully Automated Fixtures and Robotic Welding has been applied for VINC'I production.

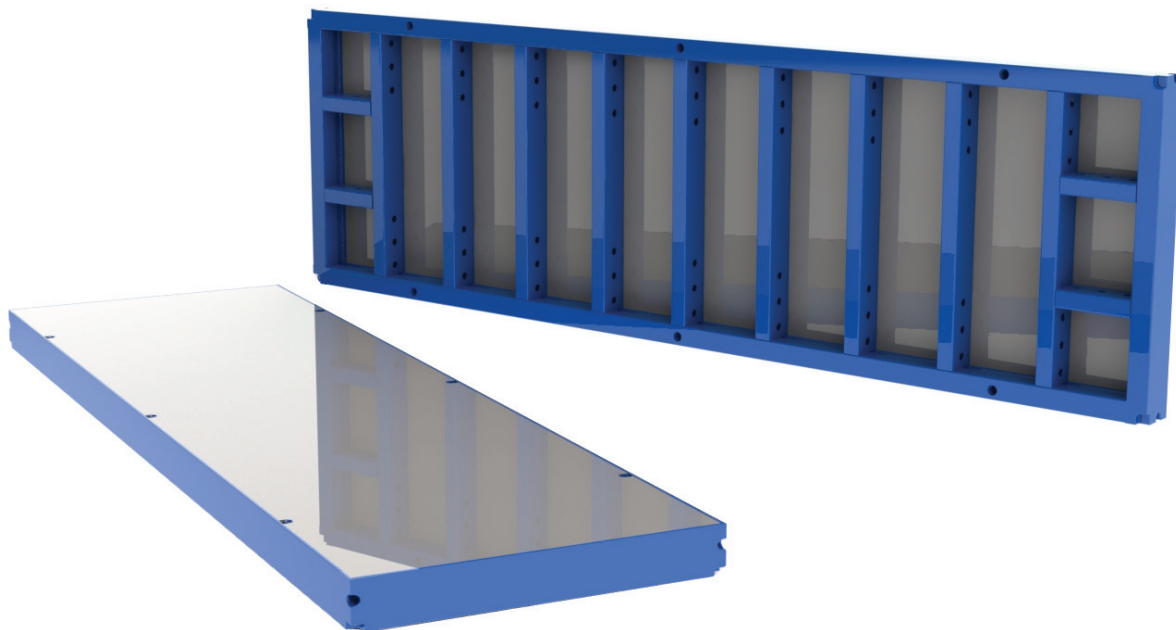




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The VINC'I Panel Formwork is a crane set modular panel formwork system for use in civil engineering projects having a wide range of applicability in constructing of industrial, infrastructural and residential buildings.

A complete formwork set including the accessories weighs about 72 kg/m<sup>2</sup>. The admissible load bearing capacity according to DIN EN 18202 Tab. 3, Line 7 for fresh concrete pressure is of 80 kN/m<sup>2</sup>

It should be noted that whenever used frame-work components are applied, the load bearing capacity and/or related deflections may deviate up to 20% from design calculations.

The high load bearing capacity of VINC'I panel formwork ensures faster concreting times. It is practically possible to concrete up to a 4.5 m/h rate of placing according to DIN EN 18218 (no retarder,  $t \geq 5^\circ\text{C}$ ).

The panels are either provided with 18 mm UPM WISA Form Elephant –i.e. a long life all birch plywood panel with polymer facing- or 20 mm LaminaeX AL PP –i.e. consisting of polypropylene and aluminum- forming face, both facing materials are fixed to the panel frames by flat-head rivets. In the frame the forming face is sealed with silicone for additional protection.

Examples shown are mostly standard applications which occur in practice most frequently. When using our products internationally, the regulations of the local professional associations of the respective country should have been observed.

It should be noted that what is shown on the following pages are assembly illustrations for demonstration purposes. In order to express the details in the illustrations more effectively, the safety aspects may not always been taken into full consideration.

Please adhere to these technical instructions together with full safety measures when applying the VINC'I Formwork, as any deviation requires an additional static calculation and evidence.

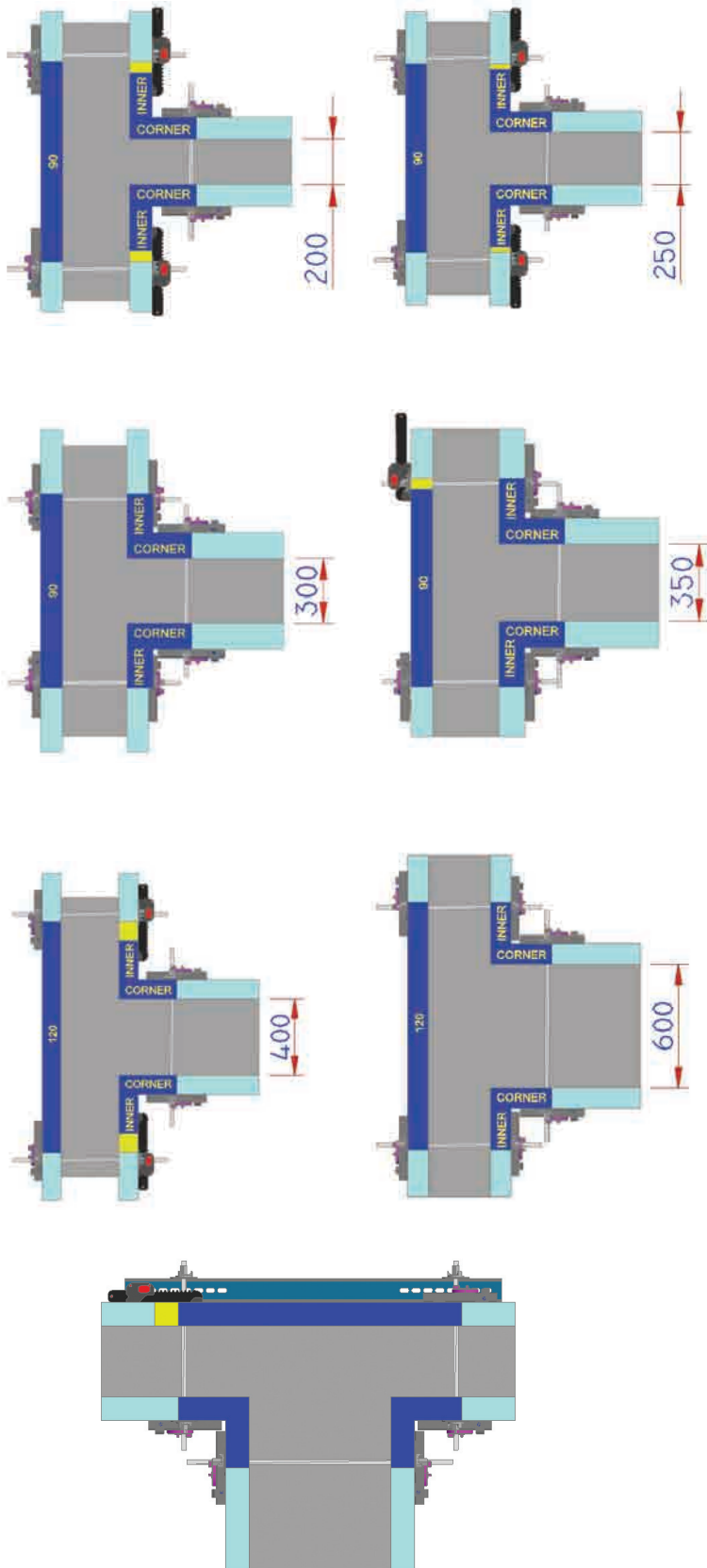
Only faultless material should have been used, damaged items should be avoided. Please make sure to apply only original TMS spare parts for any replacement.

P.S. The panel locks – i.e. REX & CONTI – should never be lubricated.



# VINC'I® 80 WALL FORM

## "T" WALL CONNECTION DETAIL

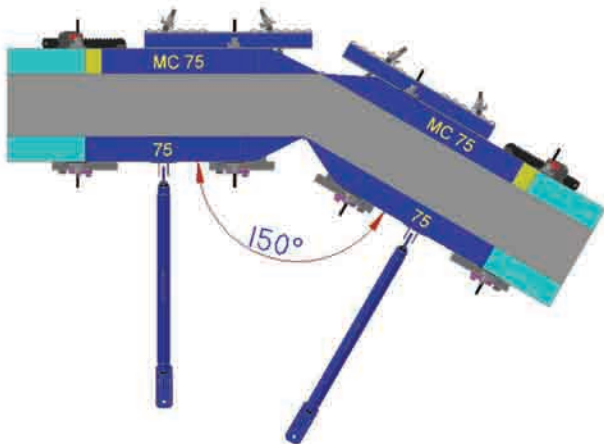


For T-Wall applications connection is provided by using two inside corners. Varying wall thicknesses could be compensated by means of timber fillers. When applying two or more panels at the straight wall side, where tie-rod anchoring is not possible a waler should be used for additional stiffening.

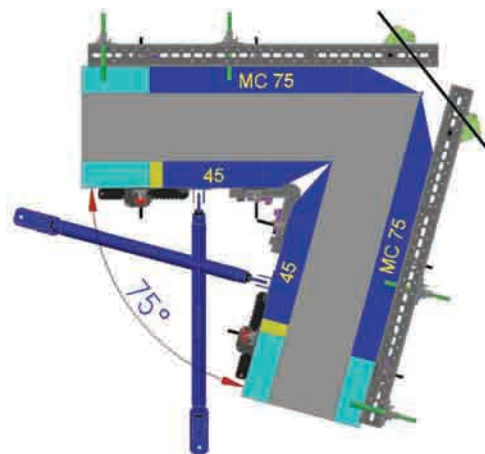
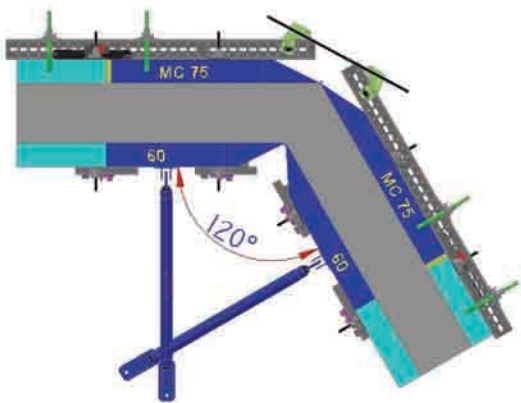


# VINC'I® 80 WALL FORM

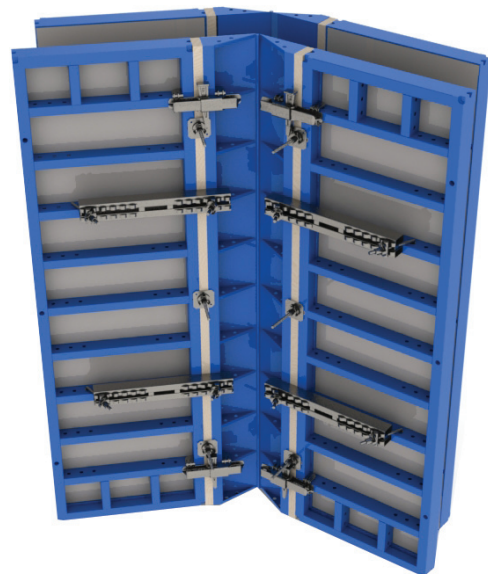
## ARTICULATED CORNER DETAIL



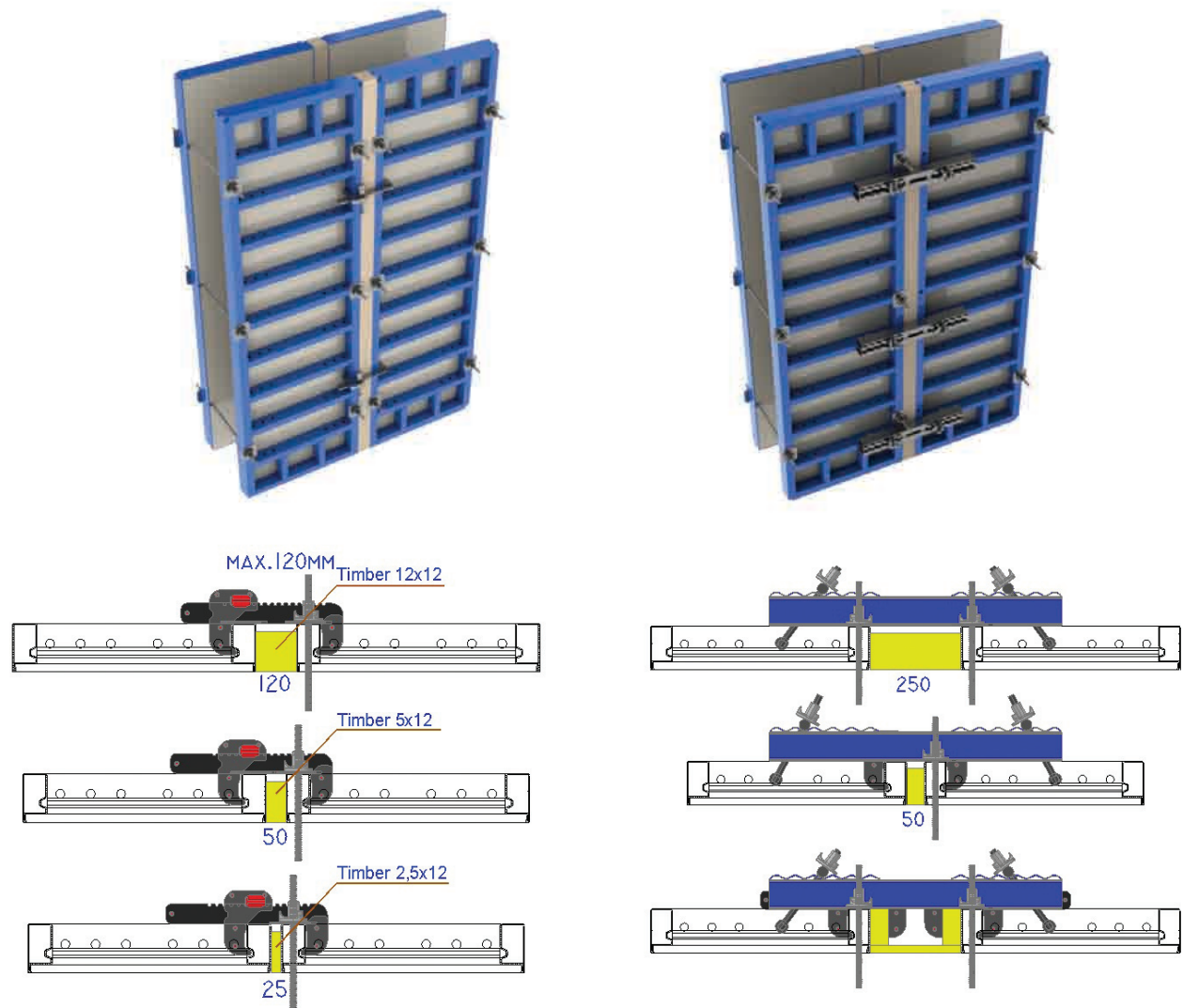
VINC'I PANEL LOCK QTY's		
h (cm)	OUTER	INNER
270	6 pc	4 pc
300	6 pc	4 pc
330	7 pc	5 pc
360	7 pc	6 pc
390	8 pc	7 pc
420	9 pc	7 pc
450	9 pc	8 pc
480	9 pc	8 pc
510	10 pc	9 pc
540	10 pc	9 pc
570	11 pc	9 pc
600	12 pc	10 pc
630	12 pc	10 pc
660	12 pc	10 pc



Angled corners are formed by using hinged inside and outside corners. Walers should be applied to the outside corner assembly in order to provide accurate alignment and correct load distribution. When timber fillers are used for compensation, panel connection should be done by CONTI locks. Adjustment range: 75° to 180°



## PANEL - TIMBER CONNECTION



### Timber Fillers

The compensation of length differences up to 12 cm is made with timber fillers together with VRS-20 and CONTI locks. If necessary the bracing of these areas must be made with walers.

### Temporary Timber Panel Applications

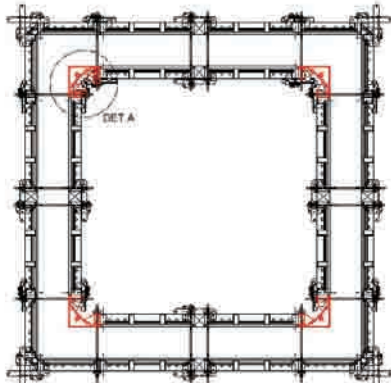
Regular 5x10cm timber beams could be applied together with a forming facing to compensate different dimensions and/or irregular shaped problem areas. A forming face should be cut to the exact size and the timber profiles should be fixed to the periphery, if necessary intermediate cross timbers could be applied in order to strengthen the forming face. These temporary timber backed panels are connected to the adjacent panels either by TUT-80 or CONTI locks.

PS. When compensating such length differences in the vicinity of the outside corners or stop ends the vertical tensile force has always to be taken into consideration.

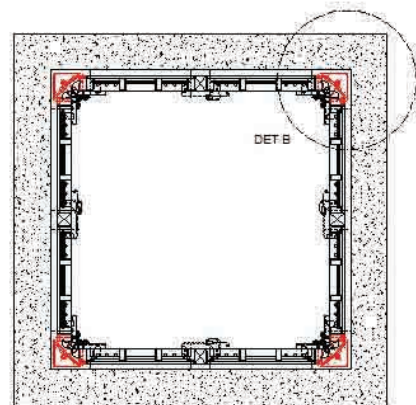


# VINC'I® 80 WALL FORM

## INNER SHAFT FORMWORK

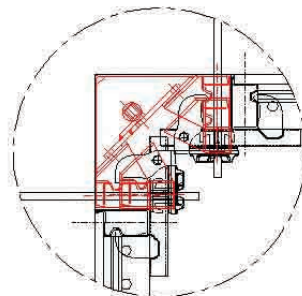


The various shaft dimensions could be formed with standard panels and, when necessary, retractable inner corners are available for easy dismantling at tight areas. For length compensations timber and/or VINC'I strip plate applications are possible.

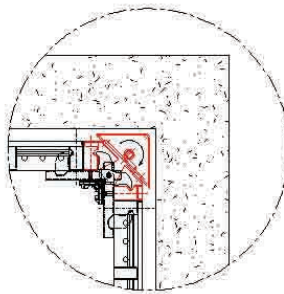
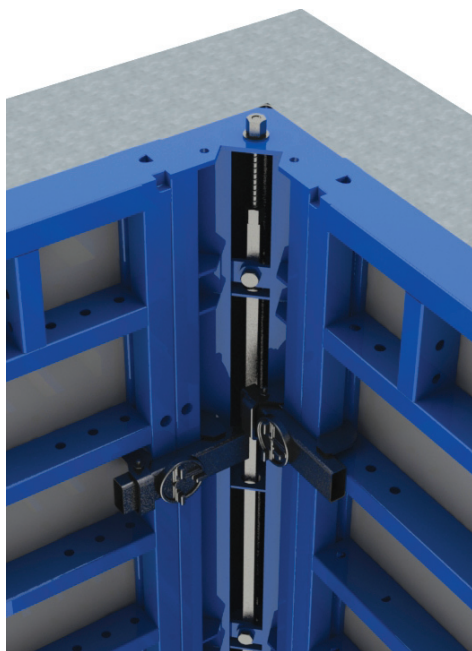


In order to form the inner formwork at smaller cross section shafts, either screw operated retractable corners could be applied or regular inner corners could be used together with the standard strip plates. With either assembly a contraction of the complete inner formwork could be provided for easy striking. Dismantling can start after the ties and alignment rails are removed, with the regular inner corners the inner formwork is contracted by means of push-pull props while the panels could slide over the strip plates respectively. For retractable corners, stripping is easy as using a ratchet at the top of the special corners which retract or open up with the rotation of the mechanism. Then the cranes are ready to lift the complete inner core and remove it to the next place of application. If foldable inner shaft platforms are used the platform could also be displaced together with the formwork at one crane strike.

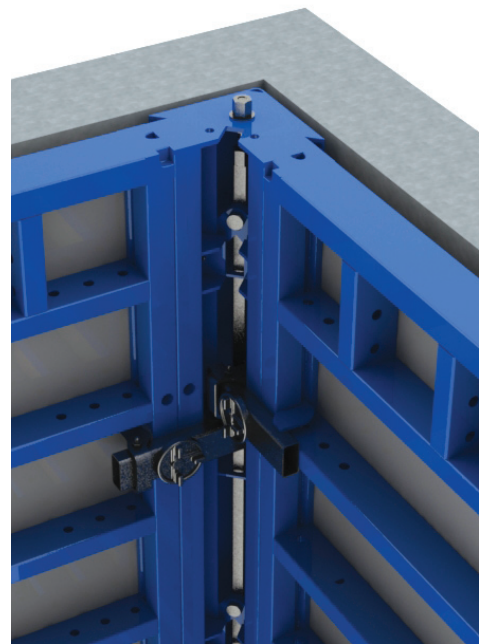
The CONTI lock also connects VINC'I 80 to VINC'I 70 formwork. The continuous clamping ability of CONTI offers a wide range of combinations, as shown in the illustrations. As a principle it is always recommended to start the formwork assembly at the corner.



DET A



DET B





## TRANSPORTING OF HORIZONTALLY STACKED PANELS

When unloading the truck and/or displacing horizontally stacked panels on the construction site, take care to use the appropriate crane slings together with the special VINC'I lifting attachments.

## FORM FACINGS

The state of the art composite polymer form facing material namely LaminaeX which is made of polypropylene and aluminum, has proved to be superior to the regular plywood with respect to working life, load bearing capacity, nailing and repairing ability. The jobsite advantages could briefly be explained as greatly reduced cleaning effort, minimum use of release agent, and high quality smooth concrete surfaces.

The other facing material option is an ingeniously developed form facing material namely WISA-Form Elephant which is an all birch forming plywood having a special wood impregnated polymer layer at the forming face, hence providing considerably enhanced working life and nailing ability. The jobsite advantages are reduced cleaning effort and release agent, as well as high quality smooth concrete surfaces.

The LaminaeX forming face could be recycled in order to reproduce new forming faces. Hence, protecting the environment.

## REX LOCK

The Patented REX assembly lock allows the easy connection of two panels while simultaneously aligning the formwork.

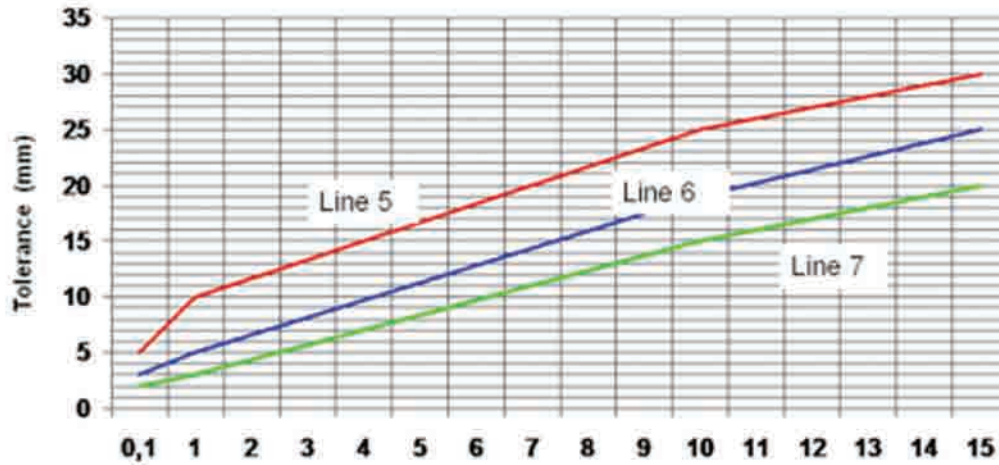
No matter if the panels are assembled side by side or on top of each the REX lock can be attached tightly on the frame at any position required. The REX lock pulls together the panels and while aligning them with only a couple of hammer blows. REX lock could be easily attached with one hand as for standard application at horizontal and / or vertical panel connection only two assembly locks per 270 cm and 300 cm panels will be sufficient, while for 330 cm panels three locks are required.





# VINC'I® 80 WALL FORM

Please note for stacking the panels higher than 2 panels further measures should be applied for safe working. The conical tie-rod sleeves could take DW 15 and DW 20 tie-rods. These sleeves are welded inside the panel frame and are protruding from profiles till the forming face for additional protection to the forming face, hence avoiding tear and wear on the facing material while the tie-rods are pushed through the anchor sleeves.



Distance of measurement (m)

* Panel width and Length * Größe der Tafeln [cm]	* Loading * Lastfall	*Concrete pressure in kN/m² acc. DIN 18220 * nachgewiesener Betondruck in kN/m² unter Einhaltung der DIN 18220 Zeile:			*Max Anchor Load (operational) (Anchor for 2 elements) * max. Ankerlast (Gebrauchslasten) (Ankerung von 2 Elementen)	* Anchor for one m² (Anchor of 2 elements) * Anker pro m² (Ankerung von 2 Elementen)
		5	6	7	[kn]	[ ]
120x270	* constant * Konstant 80kN/cm²	80	80	80	129,6	0,62
120x300	* constant * Konstant 80kN/cm²	80	80	80	96,8	0,83
120x330	* Hydrostatic max. * Hydrostatisch max. 82,5kN/cm²	82,5	82,5	82,5	85,6	0,76
240x270	* constant * Konstant 70kN/cm²	70	70	70	113,4	0,62
240x300	* constant * Konstant 80kN/cm²	80	80	80	96,6	0,83
240x330	* Hydrostatic max. * Hydrostatisch max. 82,5kN/cm²	82,5	82,5	82,5	85,6	0,76

The static calculations for formwork structure of VINC'I fulfills all requirements of GSV (Giteschutzverband Betonschalungen) according to DIN 18202 TAB. 3 Line 7 with a load bearing capacity of 80 kN/m² and max. 3 mm deflection. (The only exception is the 240x270 panel with 2 anchor points providing 70 kN/m according to Line 7)

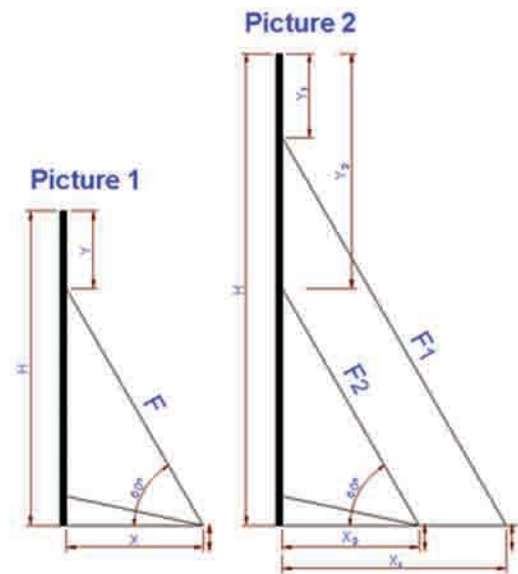


## VINC'I ASSEMBLY LOCK "CONTI"



## PUSH-PULL PROPS

Formwork height h [m]	picture 1						picture 2	
	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
Allowable prop spacing [m]	3,53	2,73	2,19	1,82	1,58	1,42	1,32	1,15
Actual prop load at maximum prop spacing [kN]	9,70	9,70	9,80	9,80	9,80	9,60	F <sub>1</sub> 6,40 F <sub>2</sub> 6,50	7,80 5,90
Actual kicker load at maximum prop spacing [kN]	2,10	2,30	2,20	2,20	2,30	2,60	1,80	1,60
x = Top connection point from top of formwork [m]	1,00	1,20	1,50	1,80	2,00	2,00	y <sub>1</sub> 1,50 y <sub>2</sub> 4,50	1,80 5,50
y = Dist. of base plate from front of formwork [m]	1,15	1,62	2,02	2,42	2,89	3,46	x <sub>1</sub> 4,30 x <sub>2</sub> 2,60	4,73 2,60



### Applying Push-Pull Props

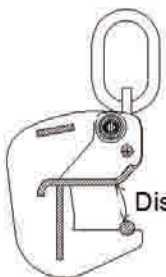
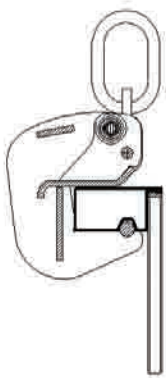
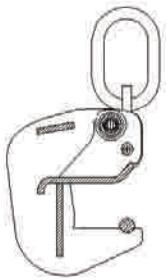
The push-pull props could be attached to the panels at the 3-holed inner profiles together with the special prop head delivered together with the system. Upper and lower push-pull props are fixed together to the double acting foot plate. Suggested distances between push-pull props for alignment of formwork  $\leq 4.00$  m height is max. 2.50 m, in order to resist wind loads.





# VINC'I® 80 WALL FORM

## CRANE HOOK



Distance  $\beta \leq 67$



The admissible load of a VINC'I crane hook is 15 kN. Operating the crane hook is quite simple, open the spring loaded safety lever as far as possible. Then position the crane hook on to the panel profile until the cross bar engages completely in the profile groove, let the safety lever back in order to lock the crane hook while lifting large size panel units, take care that each crane hook is attached so that the crane hook touches an inner side profile avoiding any slipping.

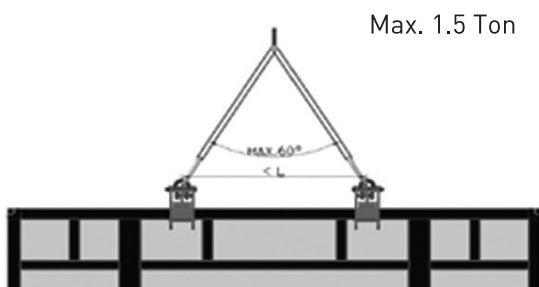
### Testing for Safety

The crane hooks are critical items for safety and should be regularly checked, especially before using them at a new project / job-site. It should be noted that, when the permissible load of the crane hook is exceeded the material could have been strained resulting a permanent deformation. Make sure to avoid using such crane hooks, while safe application can no longer be assured.

### Checking Criteria for Crane Hooks

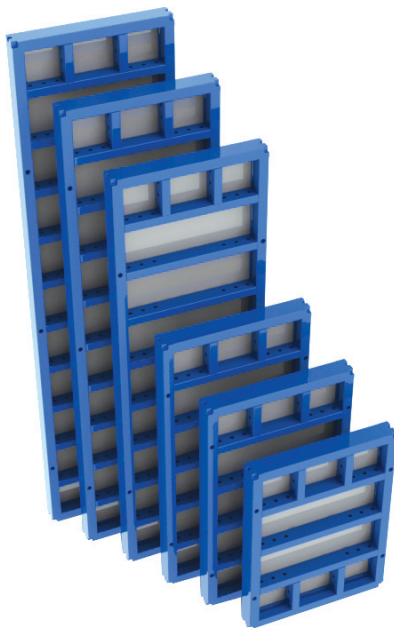
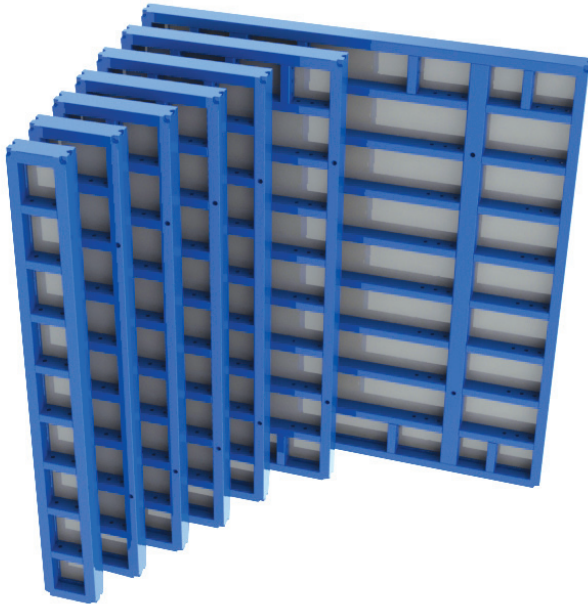
In case the measurement indicated in the supplied drawing exceeds 67 mm from either side of the hook, the crane hook should be replaced immediately. The local safety rules of the country where the crane hooks are being used must strictly be obeyed. For further details please refer to the Crane Hook Manual.

In order to provide additional rigidity and safety when raising and lowering stacked and / or ganged panel sets, walers could be mounted at the panel joints. While transporting panels horizontally, the crane hook must be attached near the transverse profile in order to avoid any slipping.



# VINC'I® 80 WALL FORM

## VINC'I 80 STANDART PANELS "Elephant Surface"

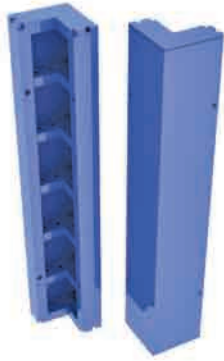


ITEM	ITEM NO	WEIGHT
VS-S 30 x 120	030 083 20312	34,90 kg
VS-S 45 x 120	030 083 20412	42,80 kg
VS-S 60 x 120	030 083 20612	54,30 kg
VS-S 75 x 120	030 083 20712	62,00 kg
VS-S 90 x 120	030 083 20912	73,00 kg
VS-S 120 x 120	030 083 21212	91,70 kg
VS-S 30 x 150	030 083 20315	42,20 kg
VS-S 45 x 150	030 083 20415	57,80 kg
VS-S 60 x 150	030 083 20615	65,00 kg
VS-S 75 x 150	030 083 20715	74,20 kg
VS-S 90 x 150	030 083 20915	86,80 kg
VS-S 120 x 150	030 083 21215	108,70 kg
VS-S 30 x 180	030 083 20318	49,60 kg
VS-S 45 x 180	030 083 20418	60,80 kg
VS-S 60 x 180	030 083 20618	75,70 kg
VS-S 75 x 180	030 083 20718	86,60 kg
VS-S 90 x 180	030 083 20918	100,70 kg
VS-S 120 x 180	030 083 21218	125,70 kg
VS-S 30 x 270	030 083 20327	73,00 kg
VS-S 45 x 270	030 083 20427	89,70 kg
VS-S 60 x 270	030 083 20627	110,50 kg
VS-S 75 x 270	030 083 20727	126,70 kg
VS-S 90 x 270	030 083 20927	146,20 kg
VS-S 120 x 270	030 083 21227	181,80 kg
VS-S 240 x 270	030 083 22427	397,70 kg
VS-S 30 x 300	030 083 20330	79,20 kg
VS-S 45 x 300	030 083 20430	97,10 kg
VS-S 60 x 300	030 083 20630	119,00 kg
VS-S 75 x 300	030 083 20730	139,00 kg
VS-S 90 x 300	030 083 20930	156,60 kg
VS-S 120 x 300	030 083 21230	194,20 kg
VS-S 240 x 300	030 083 22430	427,40 kg
VS-S 30 x 330	030 083 20333	86,50 kg
VS-S 45 x 330	030 083 20433	106,00 kg
VS-S 60 x 330	030 083 20633	129,60 kg
VS-S 75 x 330	030 083 20733	148,40 kg
VS-S 90 x 330	030 083 20933	170,40 kg
VS-S 120 x 330	030 083 21233	211,30 kg
VS-S 240 x 330	030 083 22433	466,40 kg



# VINC'I® 80 WALL FORM

## VINC'I 80 INNER CORNER ELEMENT



"Steel Surface"

ITEM	ITEM NO	WEIGHT
SI-K 120	030 085 01012	47,35 kg
SI-K 150	030 085 01015	57,20 kg
SI-K 180	030 085 01018	67,05 kg
SI-K 270	030 085 01027	96,60 kg
SI-K 300	030 085 01030	106,45 kg
SI-K 330	030 085 01033	116,60 kg

## VINC'I 80 INNER CORNER ELEMENT



"Elephant Surface"

ITEM	ITEM NO	WEIGHT
SI-K 120	030 085 21012	39,95 kg
SI-K 150	030 085 21015	47,90 kg
SI-K 180	030 085 21018	55,90 kg
SI-K 270	030 085 21027	79,80 kg
SI-K 300	030 085 21030	87,80 kg
SI-K 330	030 085 21033	96,00 kg

## VINC' 80 ARTICULATED INNER CORNER ELEMENT



ITEM	ITEM NO	WEIGHT
SM-K 120	030 085 04012	45,90 kg
SM-K 150	030 085 04015	56,30 kg
SM-K 180	030 085 04018	66,60 kg
SM-K 270	030 085 04027	97,80 kg
SM-K 300	030 085 04030	108,20 kg
SM-K 330	030 085 04033	118,60 kg

## E-Z STRIP CORNER PANEL



ITEM	ITEM NO	WEIGHT
SV-K 120	030 085 03012	86,30 kg
SV-K 150	030 085 03015	103,20 kg
SV-K 180	030 085 03018	120,10 kg
SV-K 270	030 085 03027	175,60 kg
SV-K 300	030 085 03030	192,50 kg
SV-K 330	030 085 03033	209,40 kg

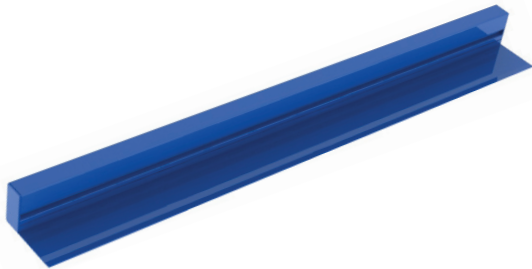
# VINC'I® 80 WALL FORM

## VINC'I 80 OUTER CORNER ELEMENT



ITEM	ITEM NO	WEIGHT
SD-K 120	030 085 02012	20,20 kg
SD-K 150	030 085 02015	23,50 kg
SD-K 180	030 085 02018	28,80 kg
SD-K 270	030 085 02027	40,90 kg
SD-K 300	030 085 02030	46,20 kg
SD-K 330	030 085 02033	49,60 kg

## VINC'I 80 STRIP PLATE



ITEM	ITEM NO	WEIGHT
SS-P 120	030 085 08012	16,20 kg
SS-P 150	030 085 08015	20,20 kg
SS-P 180	030 085 08018	24,20 kg
SS-P 270	030 085 08027	36,20 kg
SS-P 300	030 085 08030	40,20 kg
SS-P 330	030 085 08033	44,20 kg

## VINC'I WALER (80 cm)



VINC'I 80 SPANNER ELEMENT

ITEM	ITEM NO	WEIGHT
SC-K	030 180 00250	9,85 kg
SC-E	030 180 00255	1,75 kg

## VINC'I 80 STOP END SPANNER



PROP HEAD PLATE (Vinc'i 80 Type)

ITEM	ITEM NO	WEIGHT
SC-A	030 180 00294	3,70 kg
PV-S	030 112 00080	3,20 kg

## VINC'I 80 SPANNER BRACKET



VINC'I 80 MULTI PANEL LOCK

ITEM	ITEM NO	WEIGHT
ST-Y	030 180 00298	2,50 kg
SM-K	030 180 00290	4,15 kg



# VINC'I® 80 WALL FORM

## VINC'I PANEL LOCK "REX 80"



VINC'I PANEL LOCK "CONTI"

ITEM	ITEM NO	WEIGHT
SR-K	030 180 00100	4,75 kg
CN-T	004 135 00240	6,00 kg

## VINC'I PANEL LOCK "SP-K 20"



VINC'I PANEL LOCK "TU-T 80"

ITEM	ITEM NO	WEIGHT
SP-K	030 180 00120	5,00 kg
TU-T	030 180 00110	4,90 kg

## CRANE HOOK "VINCI 80 TYPE"



PANEL LIFTING DEVICE

ITEM	ITEM NO	WEIGHT
SK-V	030 180 00155	11,50 kg
SY-K	030 180 00303	3,15 kg

## CAT-WALK BRACKET VINC'I 80



BD-K 80 VS



BD-K 100 VS

ITEM	ITEM NO	WEIGHT
BD-K 80 VS	030 080 00180	13,20 kg
BD-K 100 VS	030 080 00210	11,30 kg
GA-S 4810	030 097 04810	3,65 kg
GA-S 4811	030 097 04811	3,90 kg
GA-S 4812	030 097 04812	4,20 kg

# VINC'I® 80 WALL FORM

