



VARIO GT 24

The variable Girder Wall Formwork System

Tips for ensuring smooth construction progress

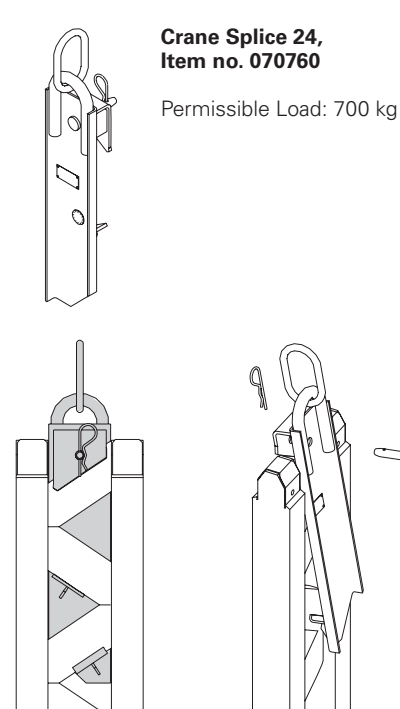
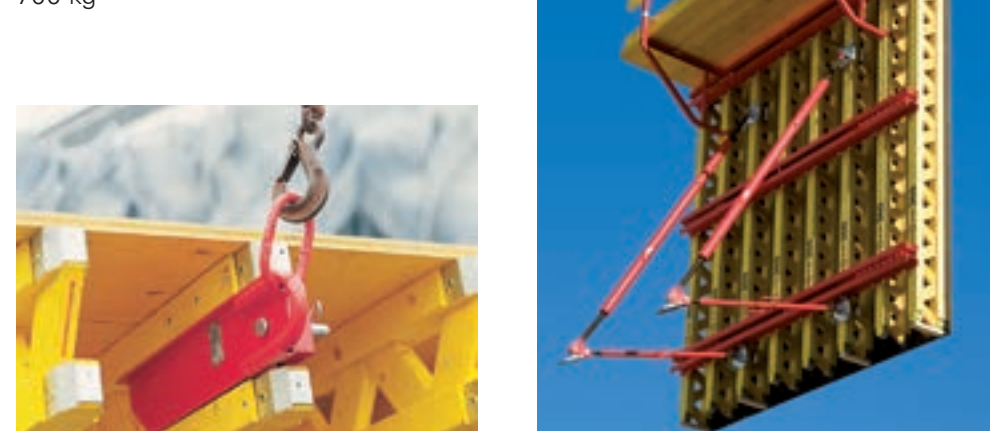
- Spray formwork on all sides with PERI Bio Clean before every use.
- Hose down the back of formwork immediately after concreting to reduce the cleaning work.
- Always start erection at a corner or difficult area. Pay attention to the wall thickness.
- Only use the required number of ties. Unused tie holes can be sealed with plugs Ø 20/24, Item no. 030300.
- More information can be found in the VARIO GT 24 Assembly Instructions and VARIO GT 24 brochure.

Without exception, current safety regulations must be observed in those countries where our products are used.

Crane Lifting

With the VARIO Crane Splice 24 the panels can be lifted by crane.

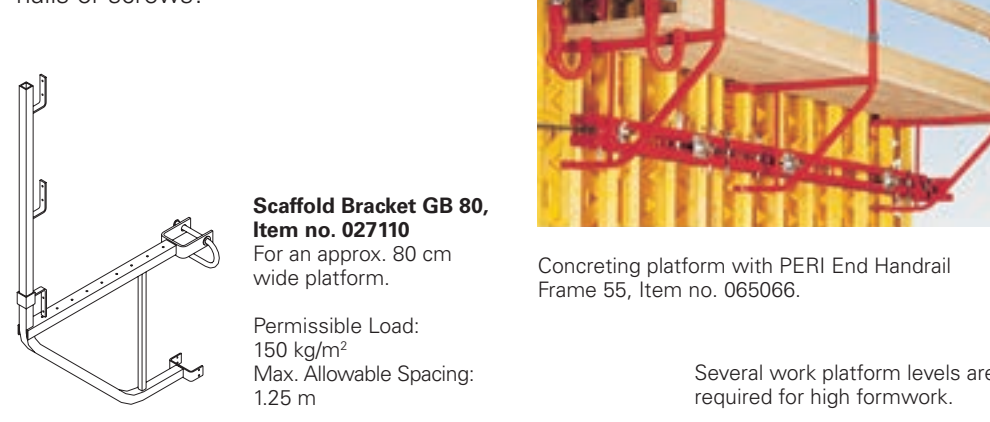
Important!
Always use two Crane Splice 24 for each element or unit to be lifted.
Maximum lifting capacity:
700 kg



Concreting Platforms

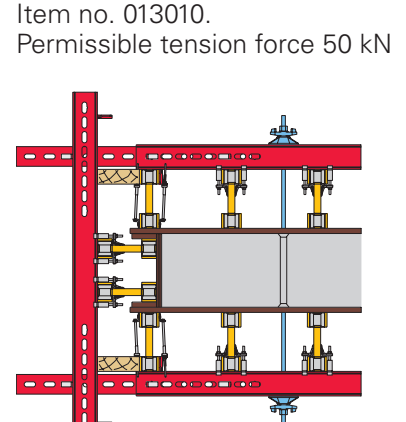
Concreting scaffolds to be built with the Scaffold Bracket GB 80.

Scaffold components supplied by the contractors must correspond to valid safety regulations!
Secure planking and guardrails with nails or screws!

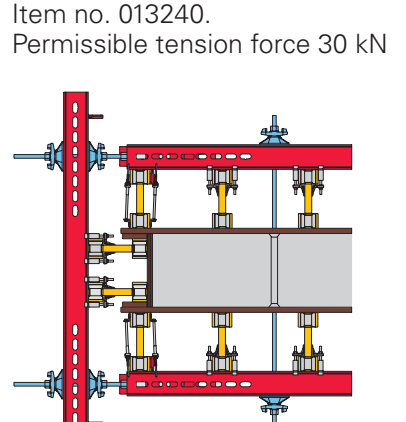


6. Stopends

Option 1
With VARIO Coupling VKZ 99, Item no. 013010.
Permissible tension force 50 kN



Option 2
With Stopend Tie VARIO, Item no. 013240.
Permissible tension force 30 kN



Push-Pull Props

Arrange push-pull props and kickers as shown in the diagram and in the table below.

Connect to the slab with the matching base plate and PERI Anchor Bolt MMS 20 x 130, Item no. 103060.

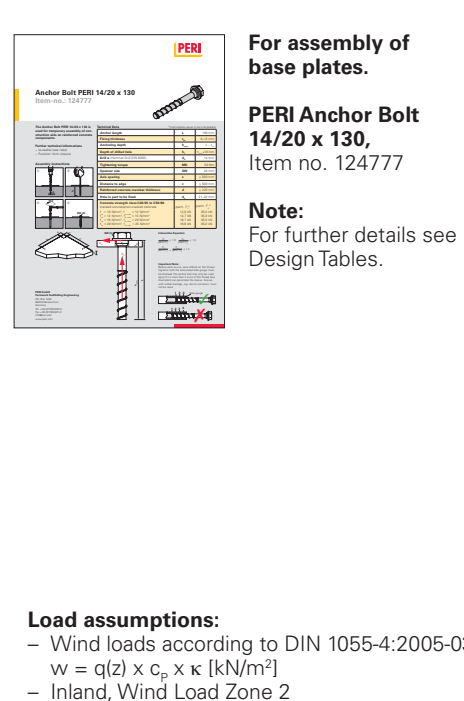
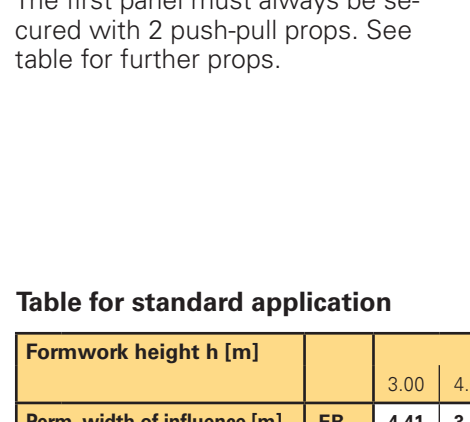
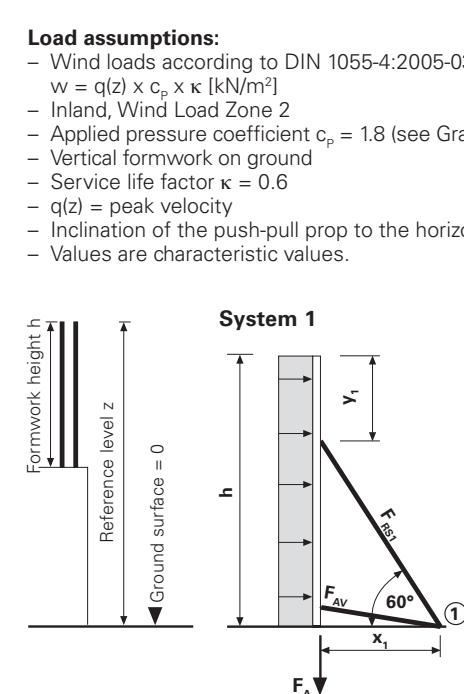


Table for standard application

Formwork height h [m]	System 1					System 2					
	EB	4.41	3.42	2.69	2.22	2.02	1.74	2.45	2.87	1.80	1.52
Perm. width of influence [m]	11.0	11.5	11.5	11.5	11.5	11.5	11.0	11.0	11.0	11.0	11.0
actual push-pull prop load [kN]	F ₁	2.7	2.9	2.7	3.2	3.5	4.2	3.6	3.4	3.1	3.1
actual kicker load [kN]	F ₂	13.7	13.7	13.5	13.4	13.7	13.9	11.0	11.0	11.5	11.5
resulting force [kN]	F ₃	12.4	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
angle of resulting vector [°]	α	2.5	3.1	3.9	4.7	5.1	5.9	8.4	9.9	11.4	13.0
lifting force V _{max} [kN/m]	V ₁	1.2	1.6	2.0	2.4	3.0	3.6	4.2	4.7	5.1	5.5
Distance of base plate from heel edge of formwork [m]	X ₁	1.0	1.3	1.6	1.8	1.8	1.8	1.5	1.8	2.1	2.4
Top connection point [m] from top of formwork	Y ₁	0.50	0.59	0.59	0.59	0.59	0.61	0.64	0.66	0.69	0.71
α [°] = arctan(Y ₁ /X ₁)											

Note: Fixing against uplift shall be provided if the lifting force $F_1 = 1.5 \times V_{max} > 0.9 \times G_1 \times h > 0$
G = surface area weight of the formwork including platform

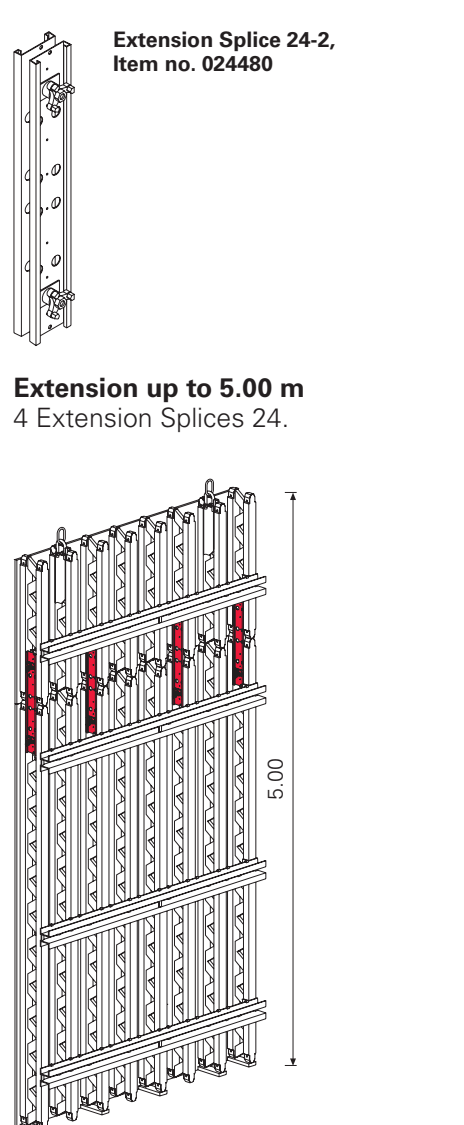


Element Extensions

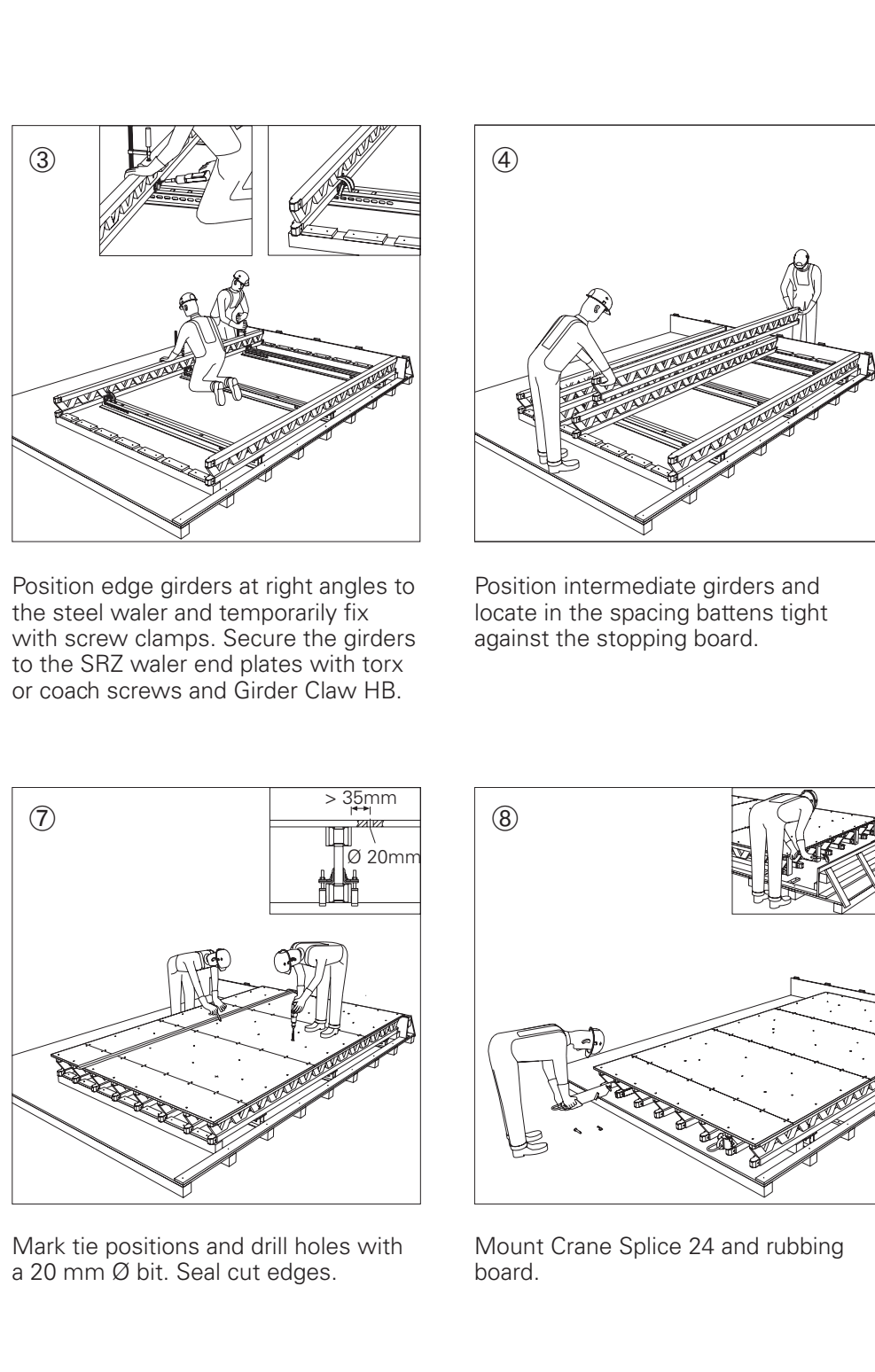
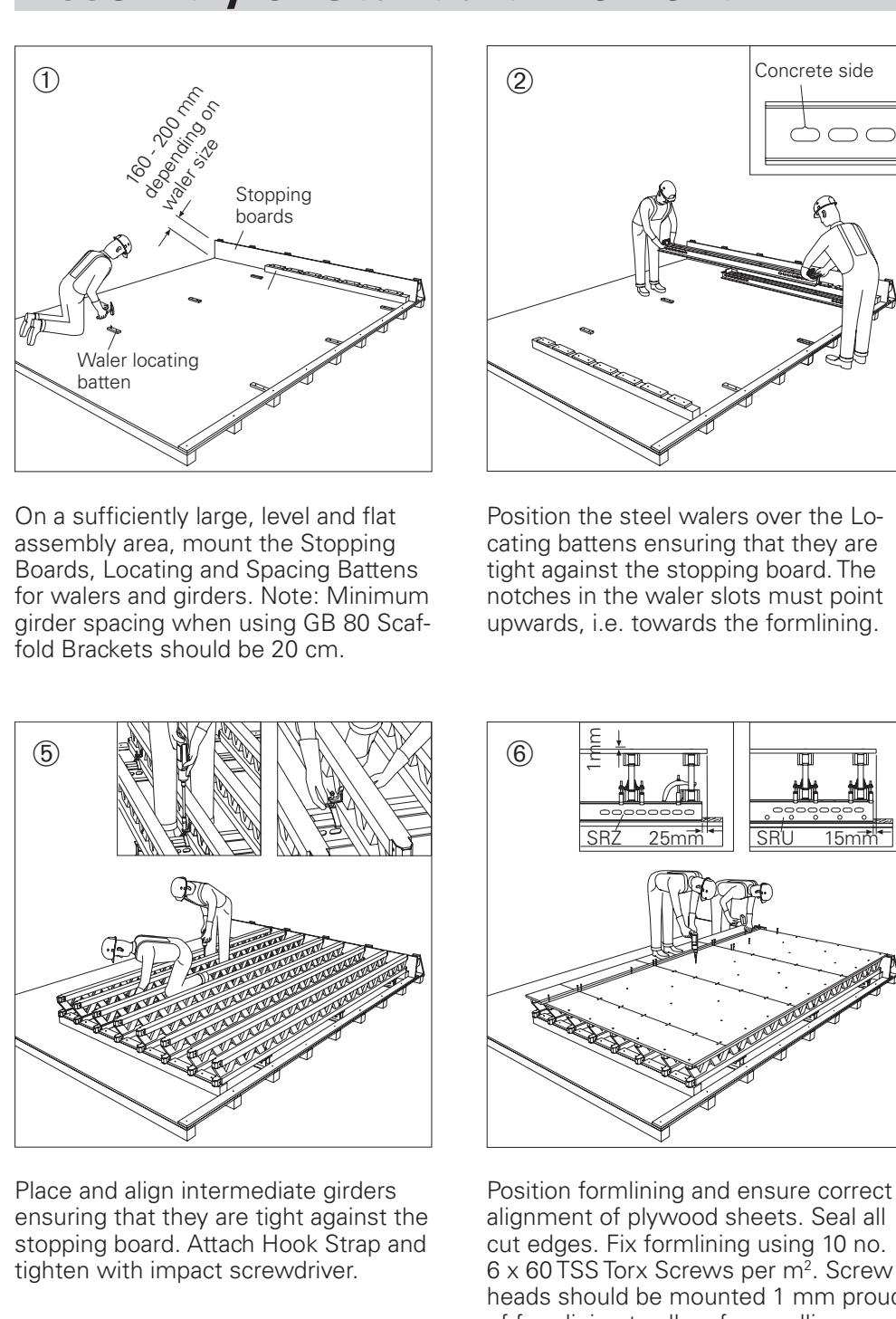
Elements are extended with the Extension Splice 24-2 for heights up to 8.00 m.

The flexurally stiff connection aligns the elements. The Extension Splice 24-2, which consists of just two components, is connected in no time with two quick action wing nuts.

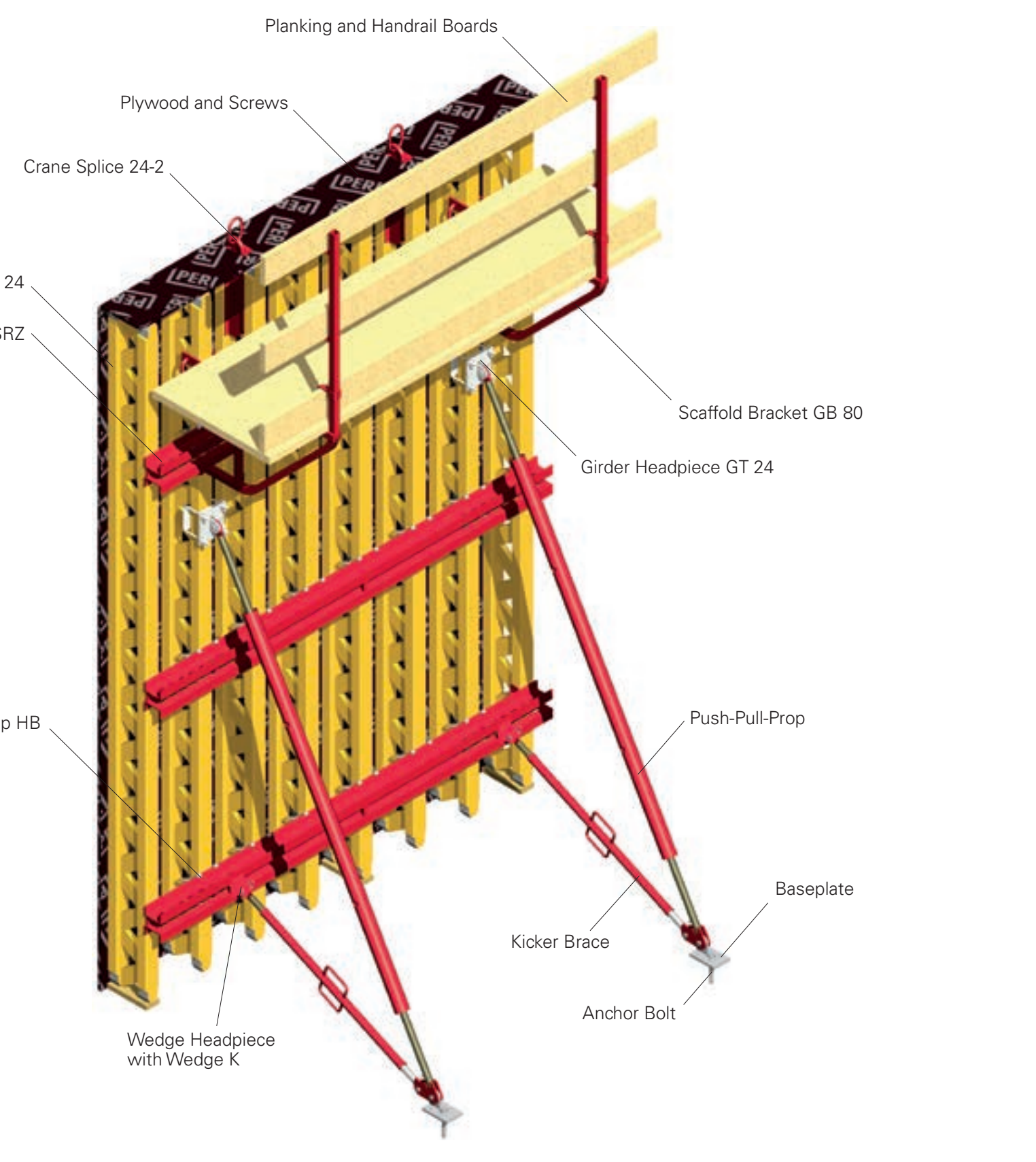
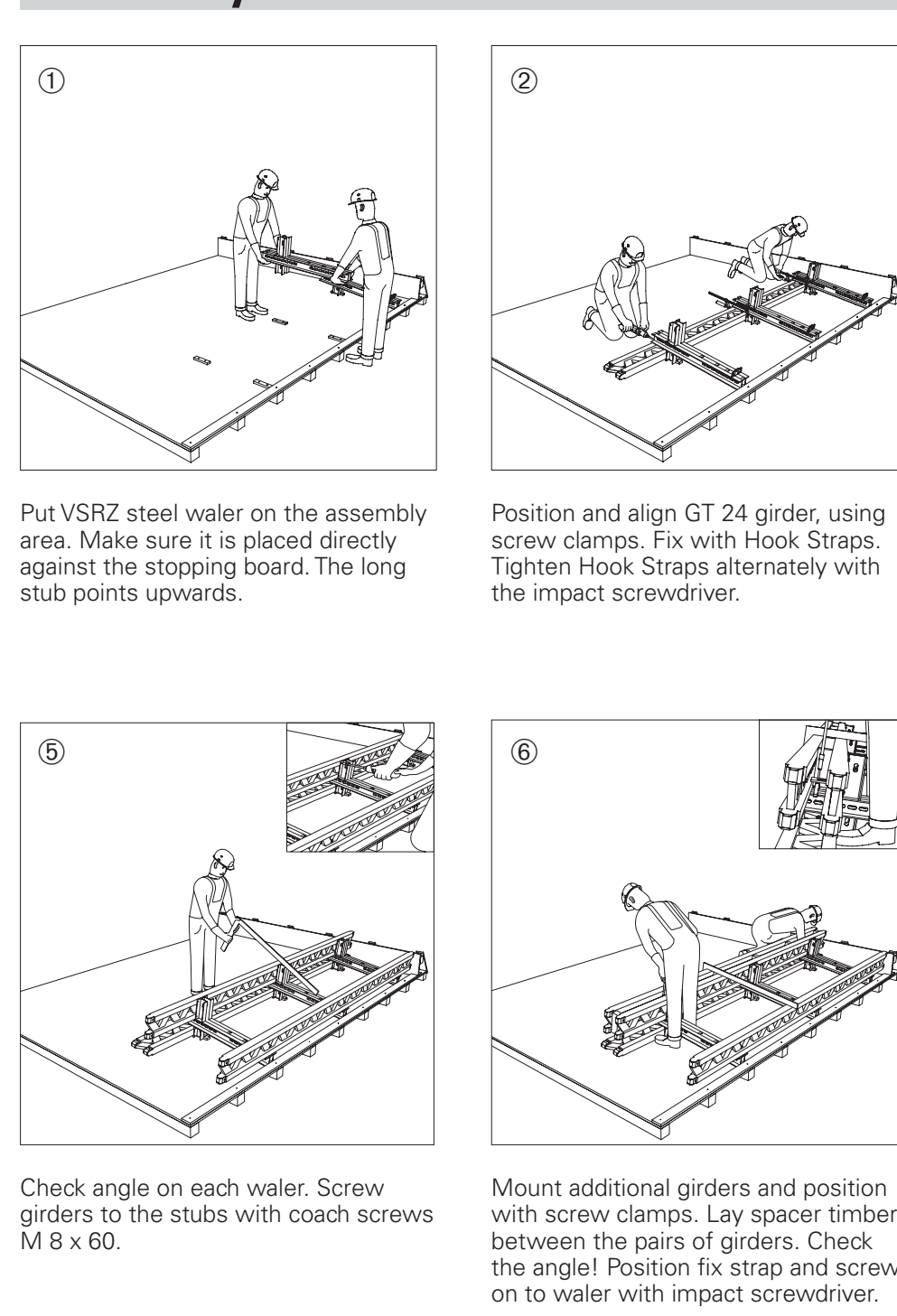
Moment and shear capacities of the Extension Splice 24-2:
Perm. bending moment M = 1.73 kNm
Perm. shear force Q = 0 kN or
Perm. bending moment M = 0 kNm
Perm. shear force Q = 5 kN



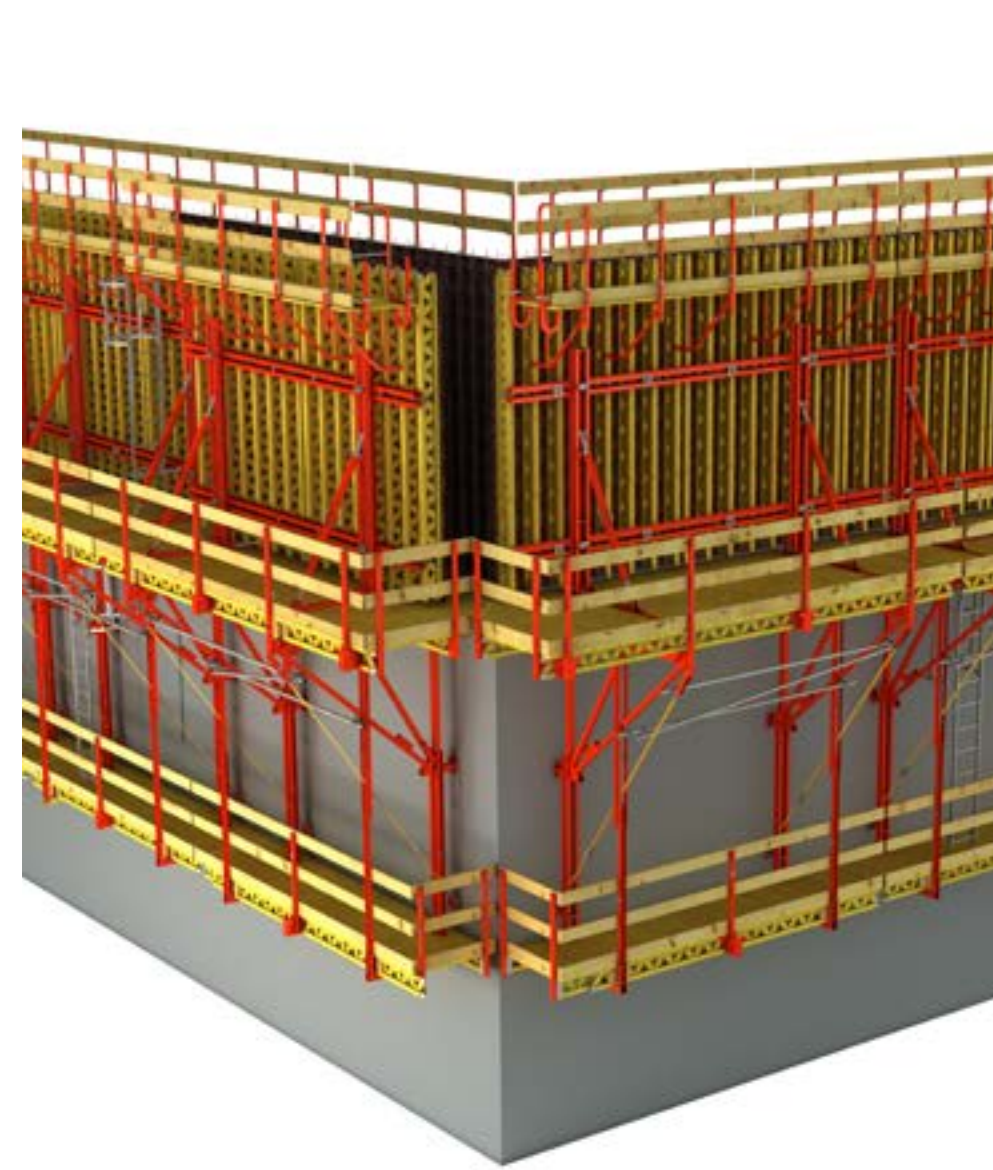
Assembly of Standard Element



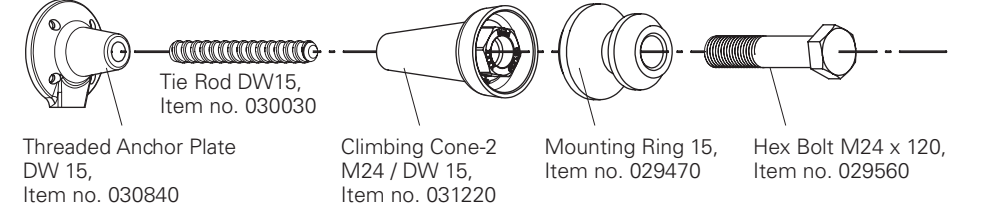
Assembly of Corner Element



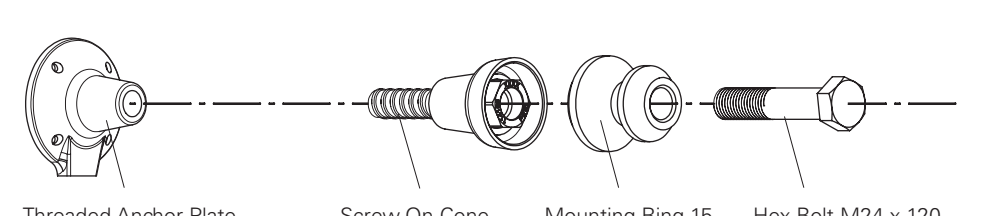
VARIO GT 24 on CB 240



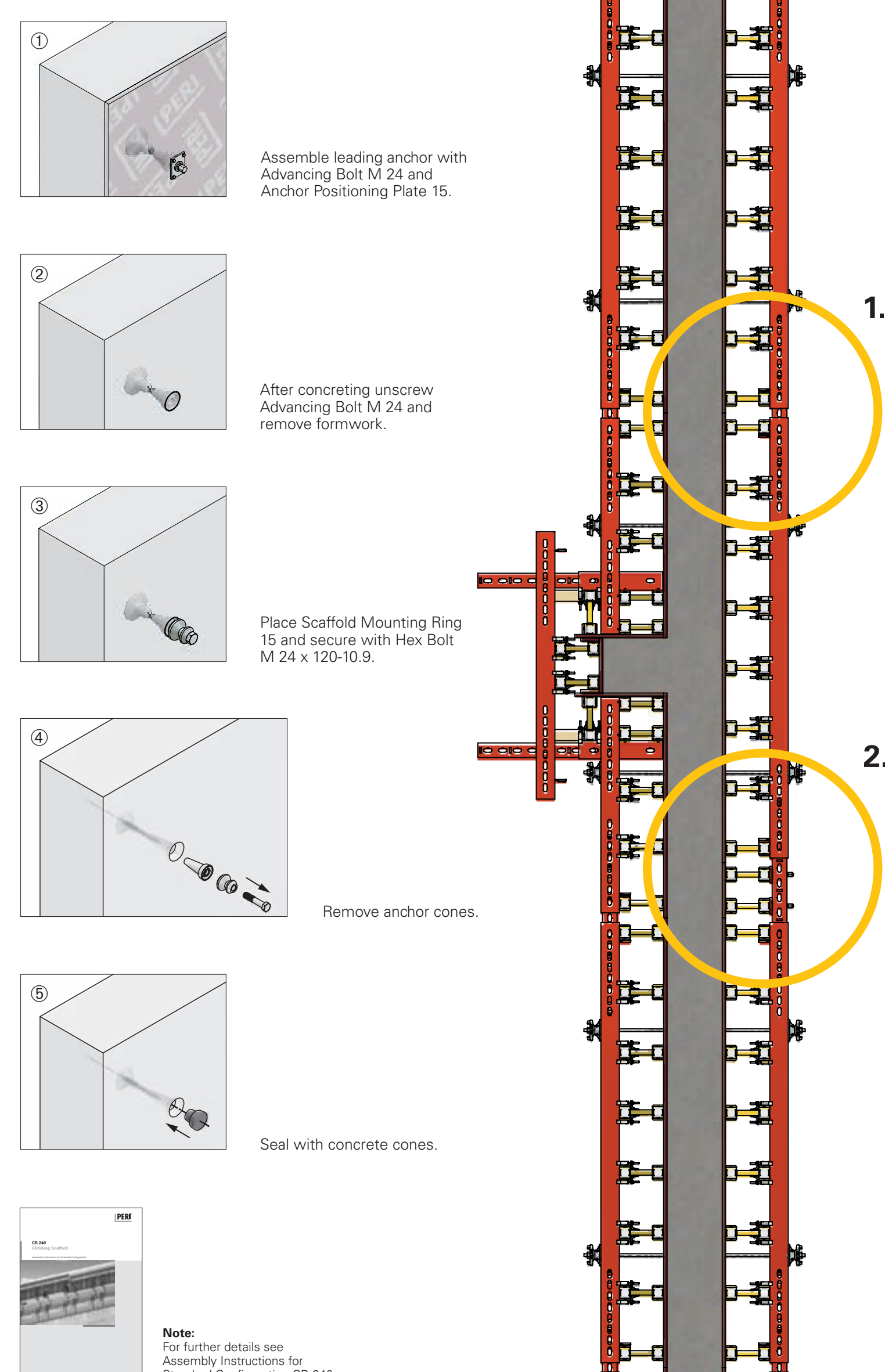
Option 1 with Climbing Cone-2 M24 / DW 15



Option 2 with Screw-On Cone M24/DW20



Anchoring CB Brackets Work procedure



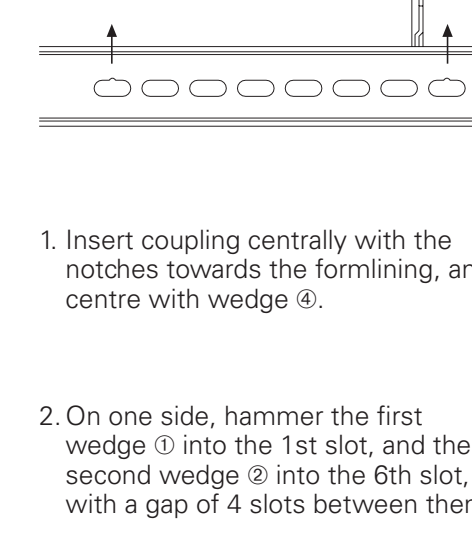
1. Standard Element Joint

The rows of slots in the PERI Steel Walers and Couplings allow continuous tightening of panel joints. The VARIO Coupling VKZ 99, Item no. 013010, also aligns the elements.

IMPORTANT!

To eliminate the effect of tolerances and optimize element joint alignment, the notches in the slots of PERI Steel Walers and Couplings must always point towards the concrete side.

Steel Waler SRZ



1.

Insert coupling centrally with the notches towards the forming, and centre with wedge II.

2. On one side, hammer the first wedge II into the 1st slot, and the second wedge II into the 6th slot with a gap of 4 slots between them.

3. To achieve a spacing of 50 mm between the two Steel Walers, the centering wedge II remains inserted until you have pulled the forming joint grout-tight with wedge II.

4. Remove the centering wedge II and insert it in the locking position in the 6th slot. This ensures that the joint can resist tension and compression, and brings the panels into tight, flush alignment.

The panel connection is finished.

Practical tip

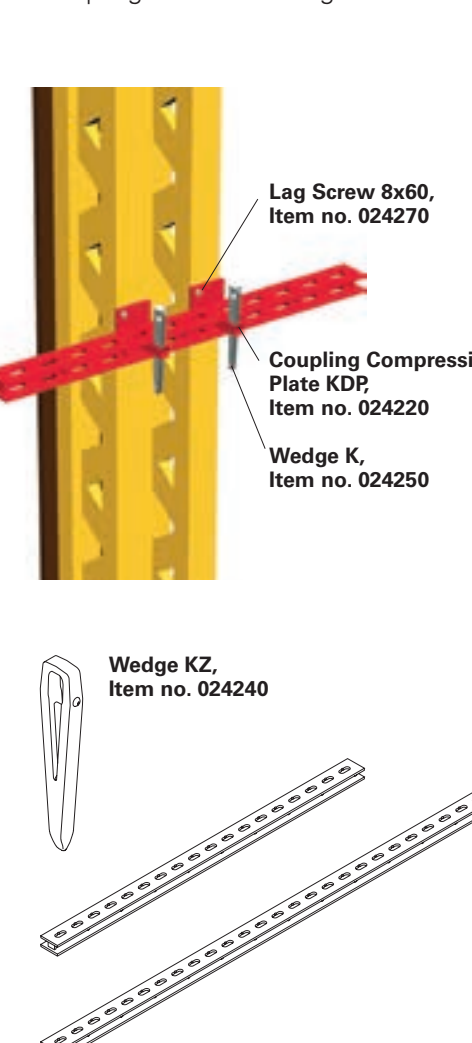
Whether a wedge is locking or pulling is evident through its inclination:

Tip of wedge towards the panel joint = wedge pulling

Tip of wedge away from panel joint = wedge locking

2. Fillers

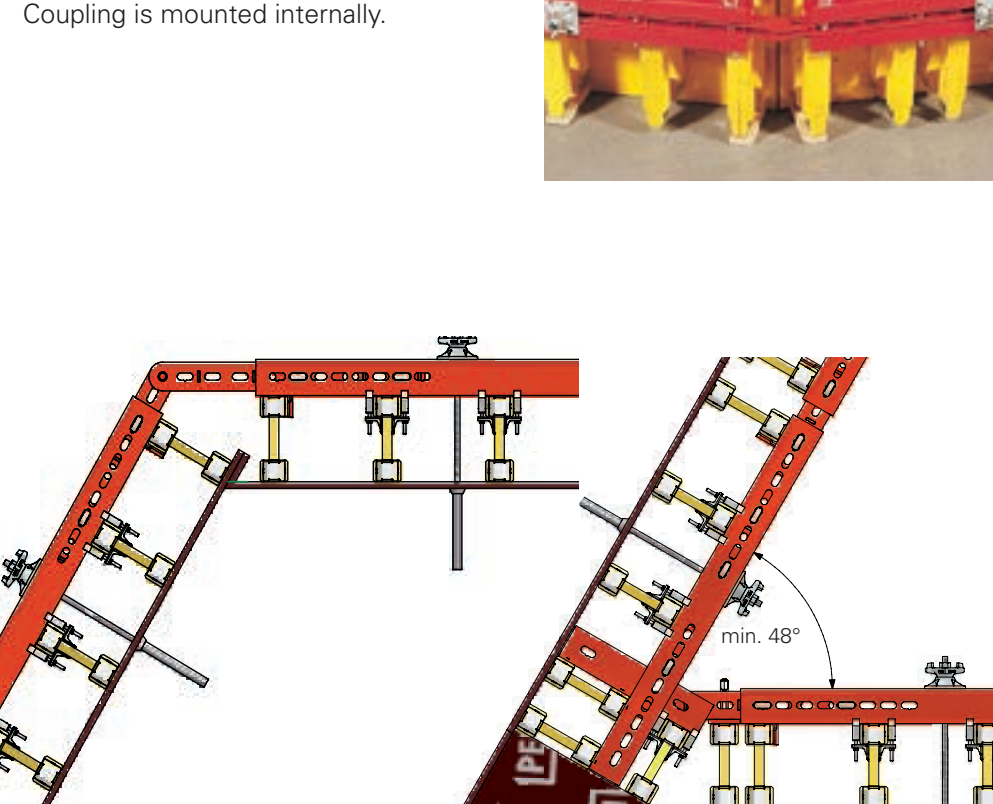
Fillers are formed with the VARIO Couplings VKZ and Wedges KZ.



5. Oblique Joints

Any angle larger than 48° can be continuously shuttered with the Articulated Coupling GKZ.

The GKZ Wedge ensures firm and correct mounting. The larger GKZ 76/76 Articulated Coupling is normally externally mounted, the smaller GKZ 60/60 Articulated Coupling is mounted internally.



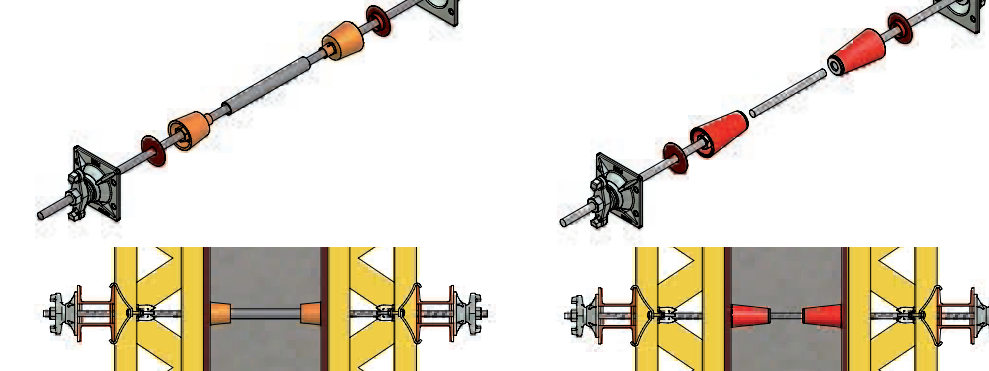
4. Anchoring

The right choice of tie system is crucial particularly for structures with special requirements such as sewage plants where waterproof concrete is necessary.

Standard solution
Tie rods reusable. Plastic spacer and cones are lost.

Watertight solution
Option 1 with PERI DK system
Tie rods and DK cones are reusable. Plastic spacers are lost. DK Concrete Cone to seal the hole.

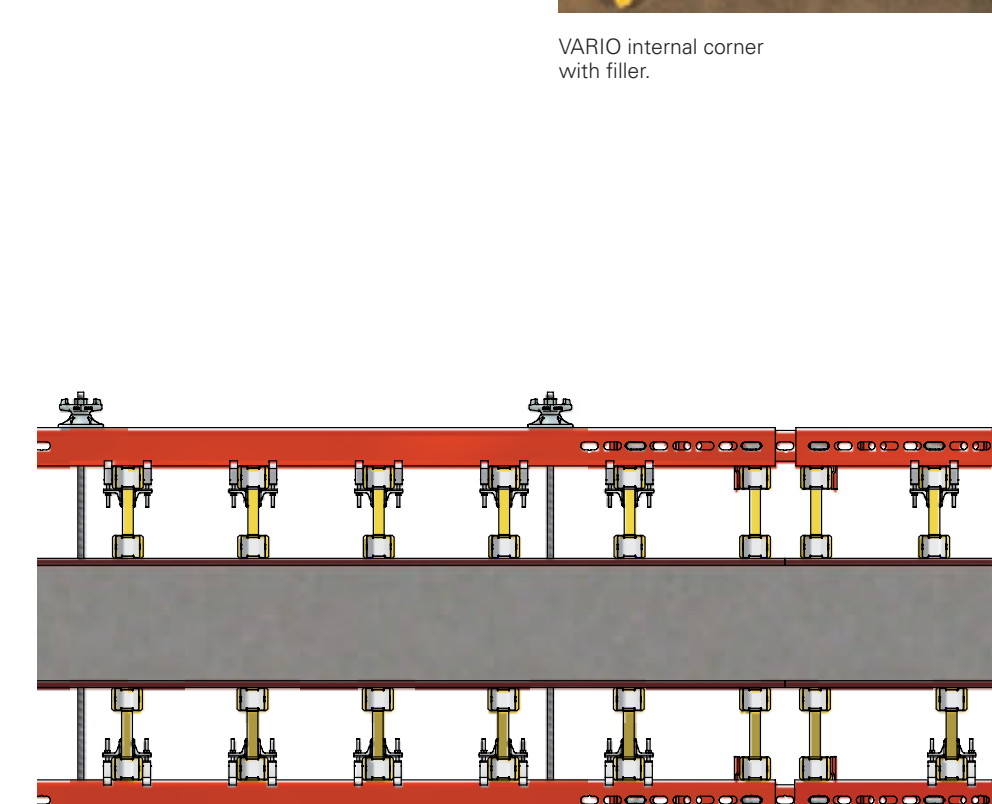
Option 2 with PERI SK system
Outer tie rods and SK cones reusable. Concrete tie rod is lost. SK Concrete Cone to seal the hole.



3. Corners 90°

Option 1
With the VARIO Corner Element at the inside and a custom made filler on the outside.

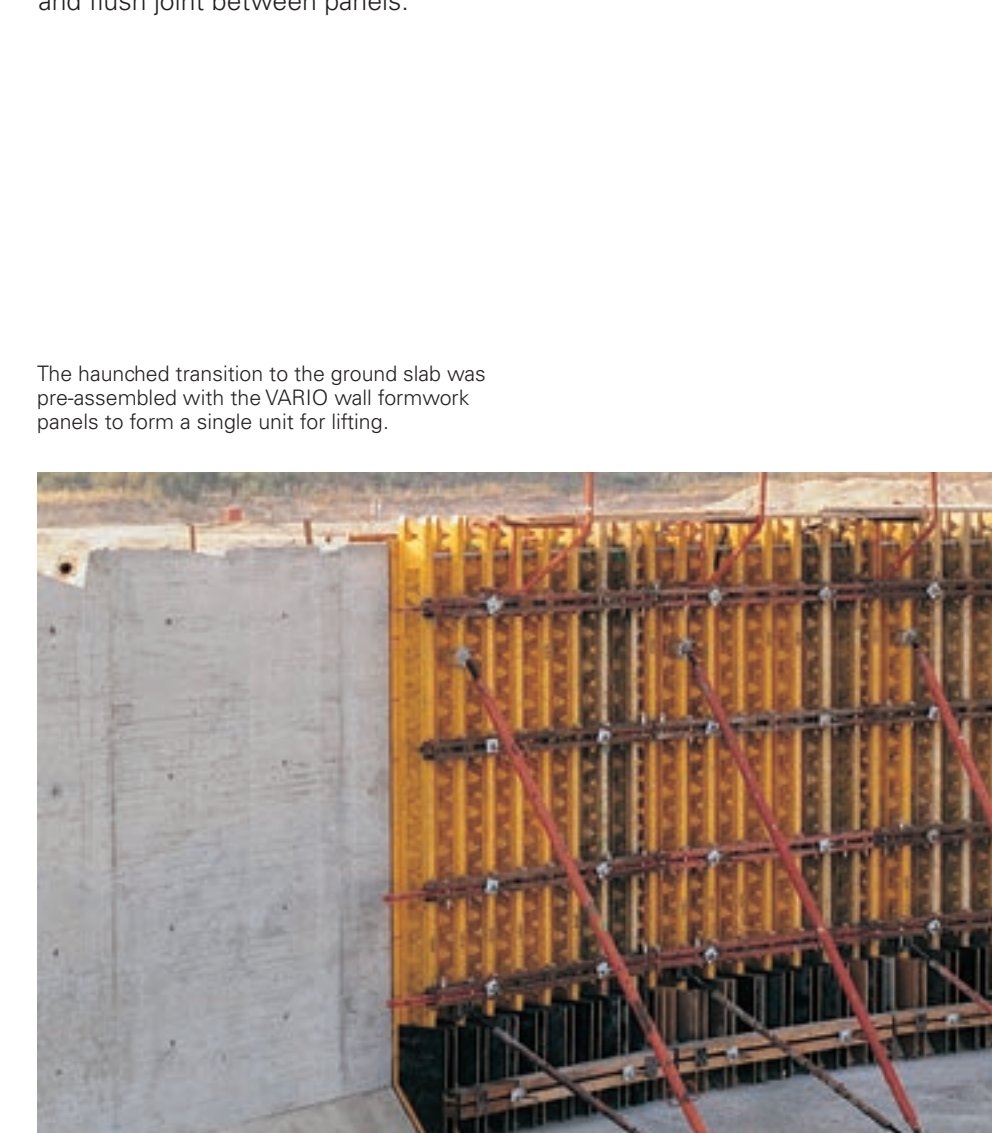
Option 2
With Internal Corner RHZ 75/75. The consistent leg length of 0.75 m allows this design to be used as a left-hand or right-hand corner.



Curved Structures

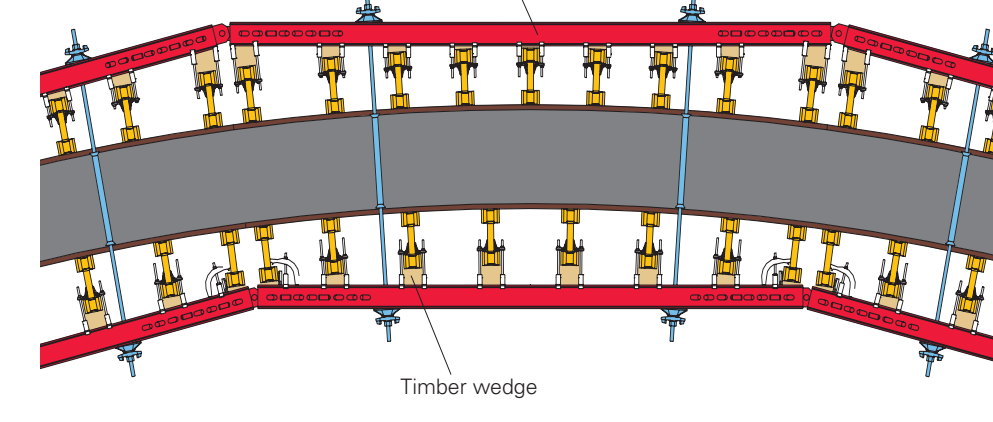
There are two alternative methods of shuttering circular structures with VARIO GT 24.

The VARIO Articulated Coupling connects the straight steel walers in a polygonal arrangement. Its wedges allow it to be continuously adjusted in either direction to produce a clean and flush joint between panels.



Option 1

With timber wedges inserted between Girders GT 24 and Steel Walers SRZ.



Option 2

With templates cut to the required radius in front of the Girders GT 24.



VARIO GT 24 Girder Wall Formwork

Poster



The optimal System for every Project and every Requirement



Wall Formwork



Column Formwork



Slab Formwork



Climbing Systems



Tunnel Formwork



Bridge Formwork



Shoring Systems



Construction Scaffold



Facade Scaffold



Industrial Scaffold



Access



Protection Scaffold



System-Independent Accessories



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