VERTICAL FORMWORK

System Catalogue

a Bud Group Company

uni-span
Formwork & Scaffolding

Advanced designs and systems for efficient construction throughout Africa

Uni-Span was established in 1989 and has been offering advanced designs and systems for efficient and accurate formwork and scaffolding solutions for over 30 years.

With a footprint that expands across Africa, we have established a powerful network with multiple branches in South Africa, Botswana and Ghana. Our project experience ranges across a multitude of industries which mainly include Civils (bridges, reservoirs, power & generation plants, water & wastewater treatment works) Commercial (malls, offices and miscellaneous buildings) as well as Access scaffold based projects (commercial, petrochemical and power & generation plants). Uni-Span is also capable of offering bespoke formwork solutions which can be tailormade according to project requirements.

INCLUDED IN OUR SERVICE OFFERING:

- Technical sales engineers equipped with the relevant industry experience who provide an accurate solution according to your project requirements, nationally and internationally.
- A technical design team offering detailed designs, proposals and solutions tailormade to your project specifications.
- A contracting division which provides a supply and fit solution as well as a timber engineering alternative for special formwork to the construction industry.
- A formwork and scaffolding fabrication facility for clients whose project needs require the procurement of equipment.
- Scaffold is manufactured to the SANS 10085-1:2004 standard.

Uni-Span's comprehensive modular systems cater for any concrete finish and application required

Uni-Span's vertical formwork systems include Uni-Lite, Economy Form Panel, NOE and Uni-Flex. The climbing system is also used for walling solutions and can be used in application with some of our listed walling systems.

Uni-Lite and NOE are modular timber-faced panel systems which provide a smooth concrete finish. Uni-Span's Economy Panel system is a traditional steel faced system that can be man-handled or gangformed.

The Uni-Flex walling system comprises of a plywood face, PF20 beams, twin-channel walers and ties and is preferred for any architectural finish.

Bud

Built to Grow

BUD BENEFITS → **BUILT TO GROW**

- Integrated group
- Quality assets
- Scale and relevance
- Strong financial position
- Efficient capital structure
- Common vision
- Empowered

- Revenue synergies
- Operating efficiencies
- Exciting growth prospects
- Acquisition opportunities
- Access to capital

Driven by innovation and agility, **Uni-Span Formwork and Scaffolding** is part of the Bud Group, a diversified business of scale and relevance.

Bud is an enabling platform that creates a permanent home in which our businesses can grow and develop to create long-term value across our chosen platforms:

Chemicals and Minerals, Industrial Services, Building Materials and Financial Services.

A DIVERSIFIED GROUP OF SCALE AND RELEVANCE

Bud has been structured into an operating company, which allows our entrepreneurial management to continue to operate on a decentralised basis in their focused businesses, whilst benefiting from an integrated Bud Group that enables more efficient operations and access to opportunities that were not previously available.

MANUFACTURING

MANUFACTURING

- AFRIT
- Augusta Steel
- AUTOCAST SOUTH AFRICA

ASSET BASED FINANCE

- PHUMA FINANCE

INDUSTRIAL SERVICES

RENTAL & EQUIPMENT

- CONCORD ACCESS SOLUTIONS
- CONCORD CRANES
- uni-span
- GOSCOR GROUP

ASSET BASED FINANCE

- GOSCOR FINANCE

MINERALS BENEFICIATION

SALT

- Cerebos
- WALVIS BAY SALT

LIME & CARBONATES

- IDWALA

CLAY

- COROBRIK

ENERGY SOLUTIONS

POWER STORAGE

- HUBBLE LITHIUM

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Uni-Span Formwork & Scaffolding and companies represented in this brochure reserve the right to make modifications in the interests of technical progress.

IMPORTANT TO NOTE:

- Always observe all relevant safety regulations that are applicable when using any of our products or systems, regardless of country.
- Safety instructions and permissible loads must always be adhered to and observed. Individual structural calculations are required for any deviations from the standard design data.
- Uni-Span's designs adhere to all standards as stipulated in the Construction Regulation Act and conforms to the occupational health & safety requirements.
- Many of the illustrations in this catalogue showcase scenarios in which formwork is being assembled and therefore, may not always be complete from a safety point of view.
- The imagery/photos used in this catalogue were taken at a particular time at various construction sites. Safety or formwork anchor details are therefore not to be taken as a definitive guide to the way in which the equipment has been used in application.
- Combinations of formwork systems with those of other suppliers & manufacturers can entail risk and to this point, extreme caution must be practised, and expert safety advice should be ascertained.

economy form

Panel System

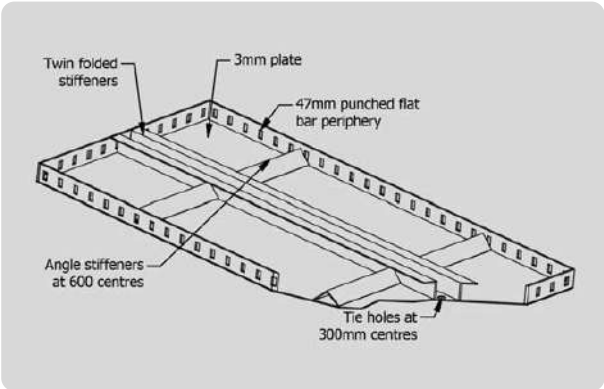
Economy Panel

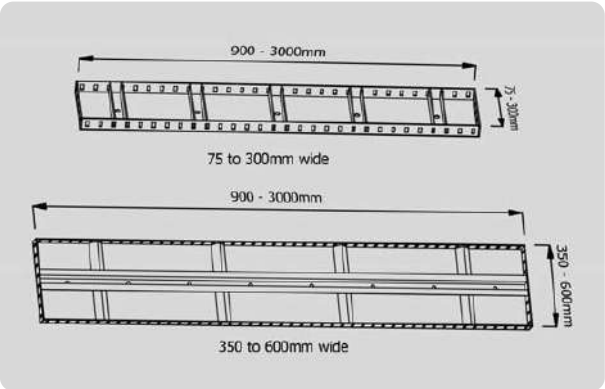
The Economy Form Panel system is a versatile formwork solution that can be used for both vertical and horizontal formwork applications. This system is light in weight and is simple and quick to erect and dismantle.

The system's versatility enables utilisation for a multitude of applications and parameters.

THIS SYSTEM IS AN ADVANCED AND MULTI-PURPOSE SYSTEM DUE TO THE FOLLOWING FEATURES:

- Only two scaffold tubes or channel walers are required for alignment due to the built-in stiffeners, this is dependent on height
- Minimal clamps are required
- Rapid assembly with wedge sets
- Can easily be erected with unskilled labour
- Accommodates any tie system
- Durable 3mm steel face is resistant to vibrators or penetrative reinforced steel
- Automatic precision on assembly results in 100% accuracy on finished concrete
- Multi-purpose: can be used for walls or decking





Length mm		Width mm	Mass kg
3000	x	600	78.9
3000	x	500	70.2
3000	x	450	65.8
3000	x	400	59.6
3000	x	350	55.3
3000	x	300	46.4
3000	x	250	39.9
3000	x	230	38.6
3000	x	225	38
3000	x	200	32.8
3000	x	150	29.1
3000	x	100	18.8
3000	x	75	18.7

Length mm		Width mm	Mass kg
2700	x	600	70.6
2700	x	500	61
2700	x	450	59
2700	x	400	53.4
2700	x	350	49.5
2700	x	300	41.9
2700	x	250	34.8
2700	x	230	32.7
2700	x	225	32.5
2700	x	200	29.7
2700	x	150	26.2
2700	x	100	17
2700	x	75	16.9

Length mm		Width mm	Mass kg
2400	x	600	63.5
2400	x	500	56.5
2400	x	450	53
2400	x	400	43.4
2400	x	350	38.8
2400	x	300	37.4
2400	x	250	33.1
2400	x	230	31.4
2400	x	225	31
2400	x	200	28.2
2400	x	150	23.3
2400	x	100	15.1
2400	x	75	11.7

Length mm		Width mm	Mass kg
2100	x	600	55.2
2100	x	500	48.7
2100	x	450	46.1
2100	x	400	41.7
2100	x	350	38.7
2100	x	300	32.8
2100	x	250	27.4
2100	x	230	26.8
2100	x	225	26.7
2100	x	200	23.4
2100	x	150	20.5
2100	x	100	13.2
2100	x	75	12.3

Length mm		Width mm	Mass kg
1800	x	600	48.2
1800	x	500	42.6
1800	x	450	40.2
1800	x	400	36.3
1800	x	350	33.7
1800	x	300	28.3
1800	x	250	25.2
1800	x	230	23.4
1800	X	225	23
1800	x	200	20.2
1800	x	150	17.7
1800	x	100	11.4
1800	x	75	10.5

Length mm		Width mm	Mass kg
1500	x	600	39.9
1500	x	500	35
1500	x	450	33.3
1500	x	400	30.1
1500	x	350	27.9
1500	x	300	23.7
1500	x	250	20.1
1500	x	230	19.9
1500	x	225	19.3
1500	x	200	17.1
1500	x	150	14.8
1500	x	100	9.5
1500	x	75	9.1

Length mm		Width mm	Mass kg
1200	x	600	32.9
1200	x	500	30.1
1200	x	450	27.4
1200	x	400	24.2
1200	x	350	22
1200	x	300	19.3
1200	x	250	16.2
1200	x	230	15.9
1200	x	225	15.6
1200	x	200	12.2
1200	x	150	12
1200	x	100	7.2
1200	x	75	5.5

Length mm		Width mm	Mass kg
900	x	600	25.9
900	x	500	22.2
900	x	450	21.4
900	x	400	18.4
900	x	350	17.1
900	x	300	14.7
900	x	250	13.5
900	x	230	12.2
900	x	225	11.9
900	x	200	10.8
900	x	150	9.1
900	x	100	5.9
900	x	75	5.0

Panels

INTERNAL CORNER PANEL

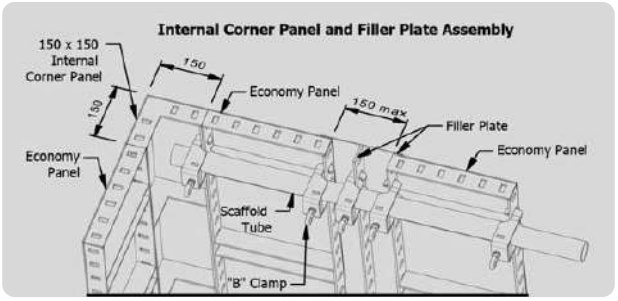
ICPs come in the full range of EF Panel lengths forming 150 x 150mm internal corners. They can be used for the internal corner between a drop beam and slab soffit as well as vertical corners.

Size (mm)	Mass (kg)
3000x150x150	39.1
2700x150x150	35.3
2400x150x150	33.2
2100x150x150	31.5
1800x150x150	25
1500x150x150	23.8
1200x150x150	16.2
900x150x150	12.4

FILLER PLATE

Filler plates fill in gaps when using non-standard modules and facilitate stripping in confined areas.

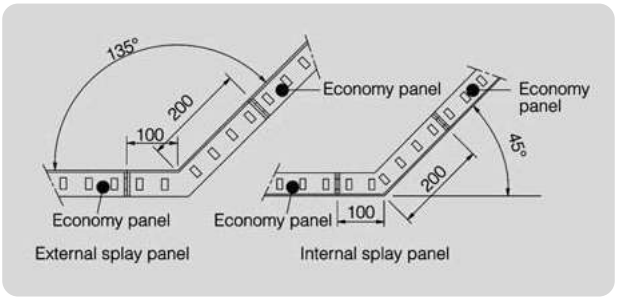
Size (mm)	Mass (kg)
3000x200	15.8
2700x200	14.3
2400x200	12.7
2100x200	11.1
1800x200	9.5
1500x200	8
1200x200	6.4
900x200	4.8



EXTERNAL CORNER ANGLE

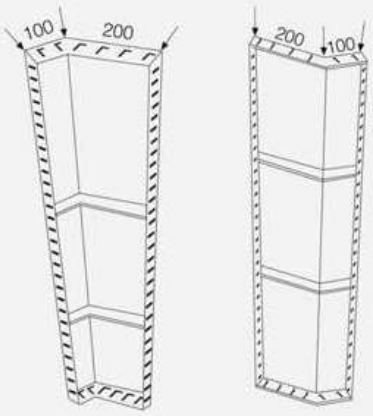
ECAs have a fixed size of 50mm x 50mm and are used to connect the panels at a 90o angle on walls or columns.

Size (mm)	Mass (kg)
3000x50x50	11.3
2700x50x50	10.2
2400x50x50	9.1
2100x50x50	7.9
1800x50x50	6.8
1500x50x50	5.7
1200x50x53	4.5
900x50x50	3.4



SPLAY PANEL

Designed to obtain 135° corners. Two of these panels may be used in conjunction with a small timber strip to obtain different face widths.



INTERNAL SPLAY PANEL

Size (mm)	Mass (kg)
1200 x 200 x 100 x 135° Internal Splay	15.1
900 x 200 x 100 x 135° Internal Splay	11.6

EXTERNAL SPLAY PANEL

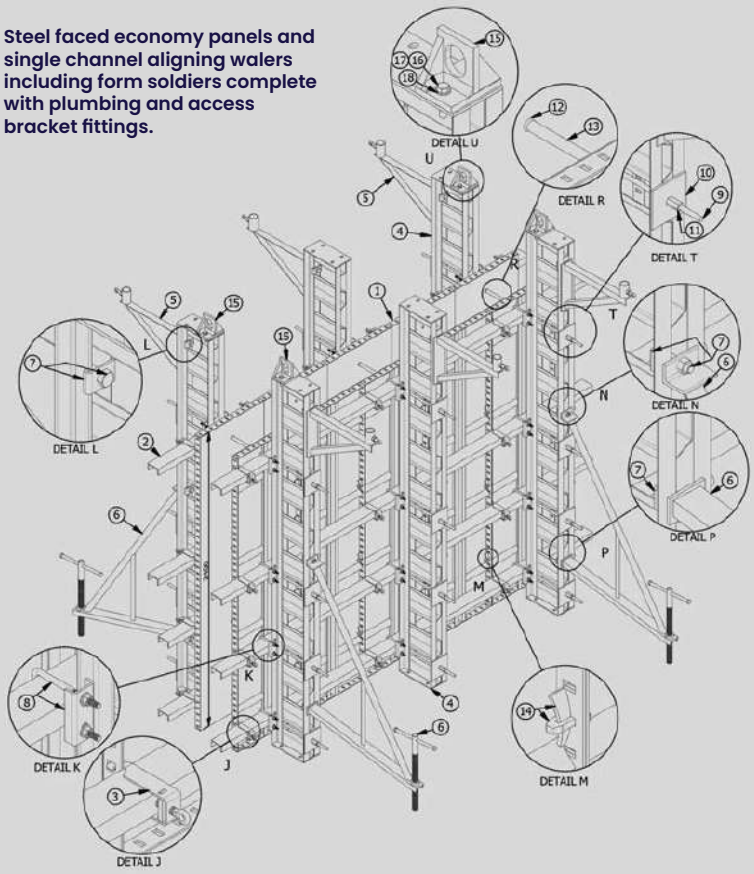
Size (mm)	Mass (kg)
1200 x 200 x 100 x 135° External Splay	15.1
900 x 200 x 100 x 135° External Splay	11.6

Walling System

ERECTION PROCEDURE

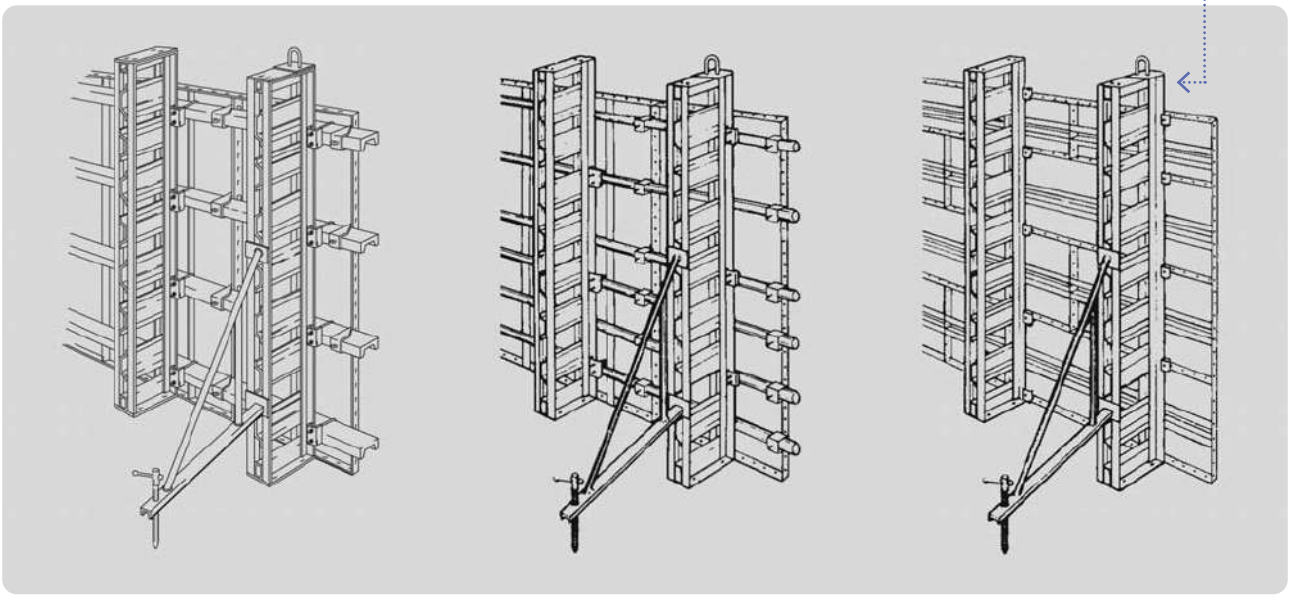
1. The panels are laid out on a flat surface and joined with wedge sets.
2. Tubes and/or channels are attached to the panels with 'B' or 'C' clamps.
3. The assembled wall is lifted into position either manually or with a crane.
4. Ties are inserted through the tie holes, the plastic tube having been cut to the correct length in accordance with the width of the concrete wall to be poured.
5. Push-pull props are secured to the ground and to the gangform and are adjusted to achieve accurate vertical plumbing.

Steel faced economy panels and single channel aligning walers including form soldiers complete with plumbing and access bracket fittings.



GANGFORMS

Note: Alignment channel at back of form soldiers for aligning gangforms

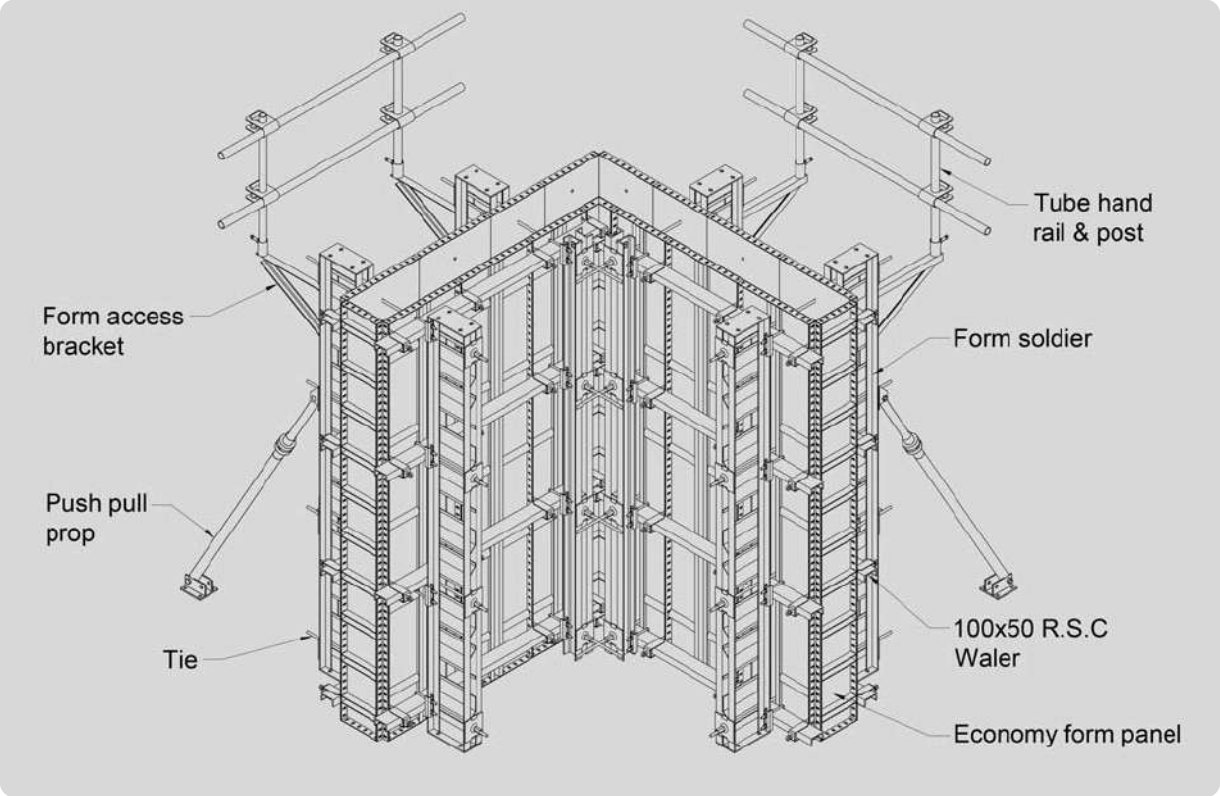


An assembled gangform shutter with economy panels. Vertically assembled. Horizontal 100 x 50 channel walers are "C" clamped to the panels and fastened to the form soldiers with channel waler clamps.

An assembled gangform shutter with economy panels. Vertically assembled. Standard scaffold tube is "B" clamped to the panels and fastened to the form soldiers with tube waler clamps.

Panels are assembled horizontally and fastened to the form soldier with form panel clamps. Top and bottom aligning channels are used on the form soldier to give strength to the form.

FORM SOLDIERS



The form soldier is used for gangform wall shutters where crane handling is available. Form soldiers have plan dimensions of 300m deep x 150mm wide.

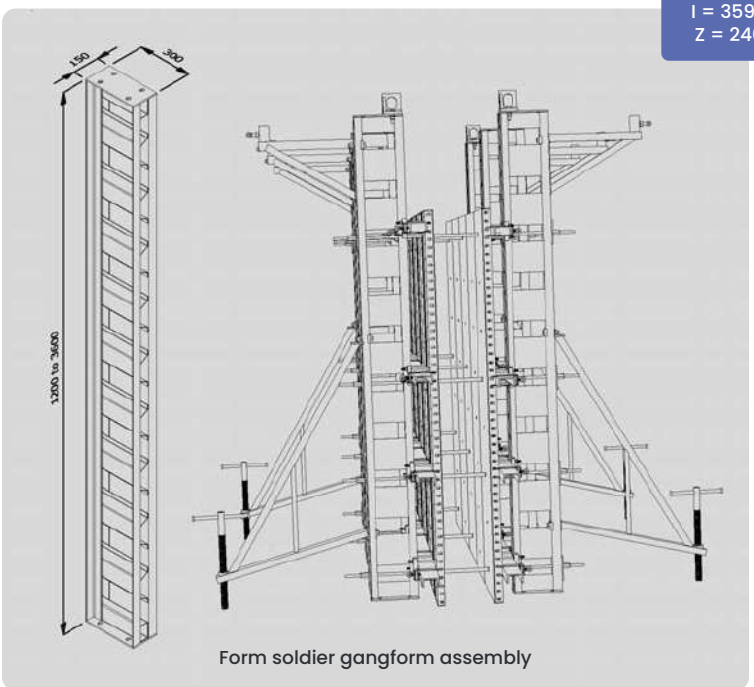
- Structural web system enables ties and anchors to be positioned anywhere in its height.
- Ideally suited for climbing formwork.
- Can be used as bearers for heavy structures.

FORM SOLDIER
I = 3598cm^4
Z = 240cm^3

PROPERTIES OF MAJOR AXIS:

- Moment of inertia 3 598cm^4
- Section modulus 240cm^3
- Allowable tie load 85kN at any point

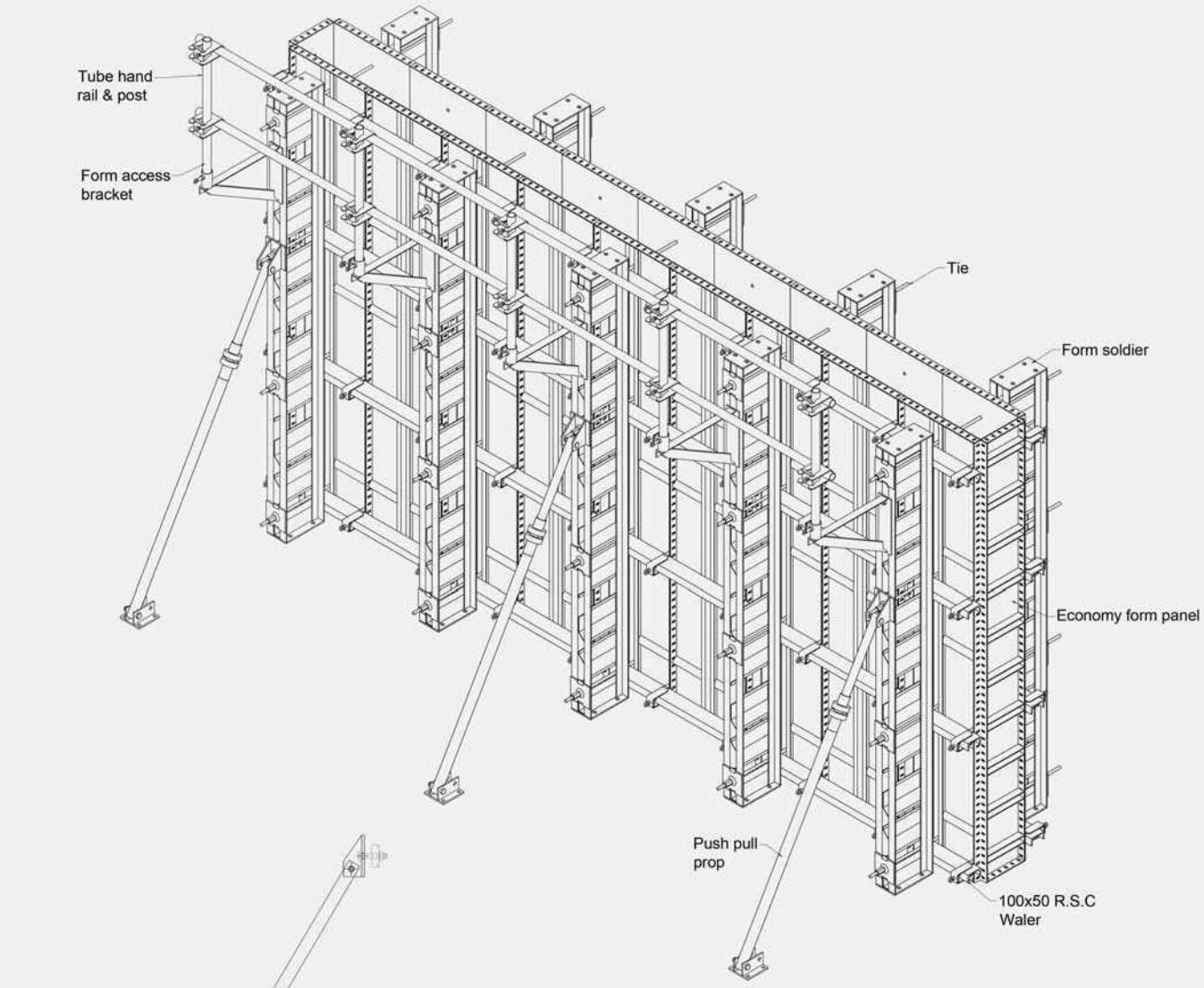
Size (mm)	Mass (kg)
3600	82.5
3300	76.2
300	69.9
2700	63.5
2400	57.3
2100	51 .1
1800	44.8
1500	38.5
1200	32.2

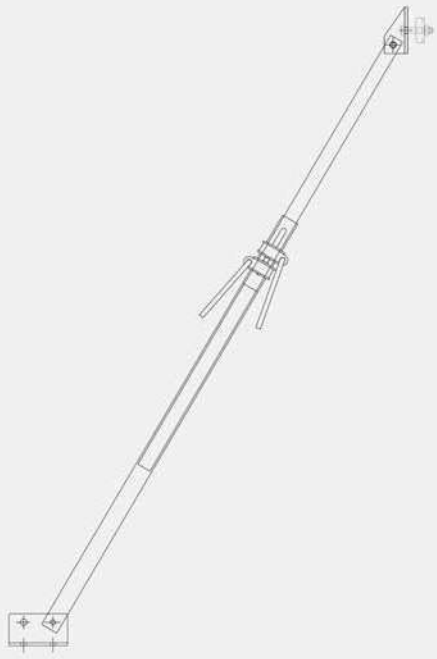


Form soldier gangform assembly

PUSH-PULL PROP

The push-pull prop has a double collar, which enables the walls and columns to be accurately plumbed. Used on walls and column boxes for speedy erection and ease of alignment.





Description	Size (mm)	Mass (kg)
No 1	1676 - 3124	19.6
No 2	1981 - 3352	20.5
No 3	2590 - 3962	22.7
No 4	3200 - 4876	26.9
Prop Foot Assembly		1.5

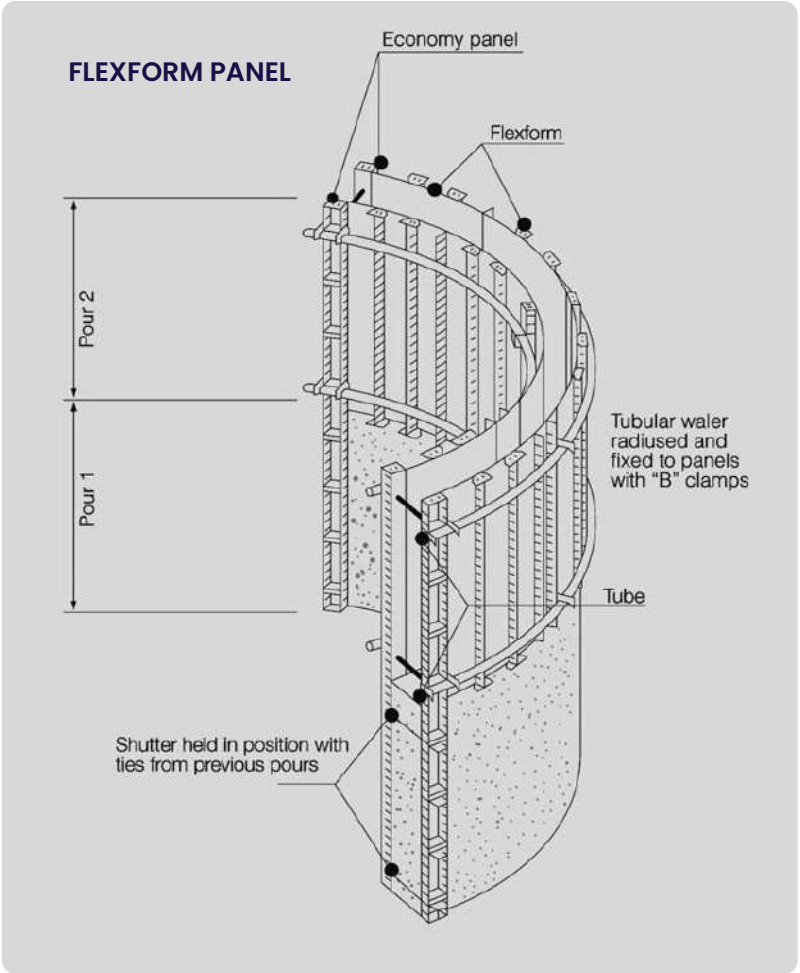
FLEXFORM PANELS

Flexform panels are used for the construction of curved walls with a radius of between 3 and 20 metres.

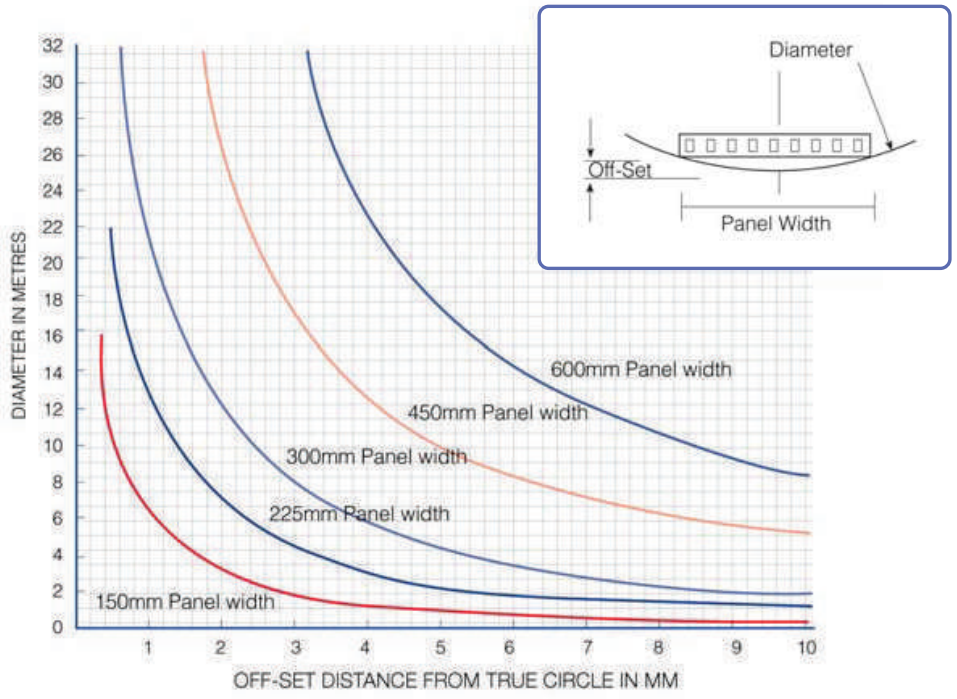
The tube is radiused to the required diameter and then the flexform panel is fastened to the tube to

create the circular shutter required. Filler panels are used on the external shutter to accommodate the difference in the outside circumference.

The panel has a 2mm steel face plate and is attached to the radiused tube with "B" clamps.



Length mm		Width mm	Mass kg
1500	x	600	26.5
1500	x	450	22.7
1200	x	600	21.7
1200	x	450	15.7
900	x	600	16
900	x	450	11.9



Accessories

CLIP & WEDGE SET

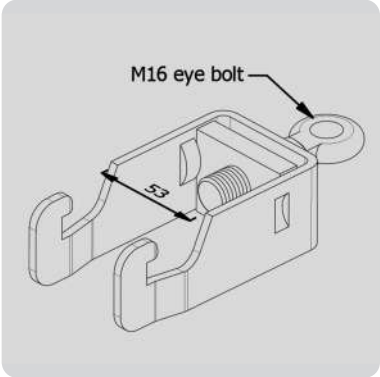
Mass 0.1 kg

Connects panels together

HEAVY DUTY WEDGE SET

Mass 0.2 kg

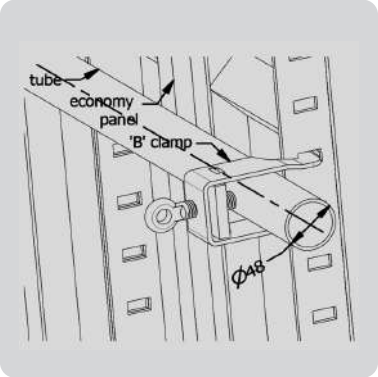
Connects panels together



'B' CLAMP

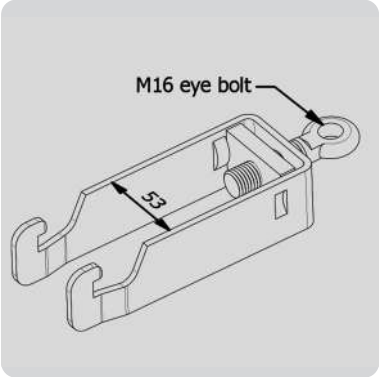
Mass 0.8 kg

For rapid connection of tube to panels for accurate alignment



WORKING 'B' CLAMP

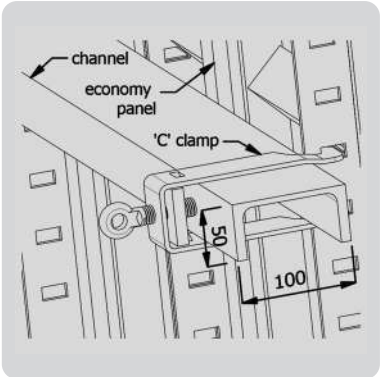
Connects tube waler to economy panel



'C' CLAMP

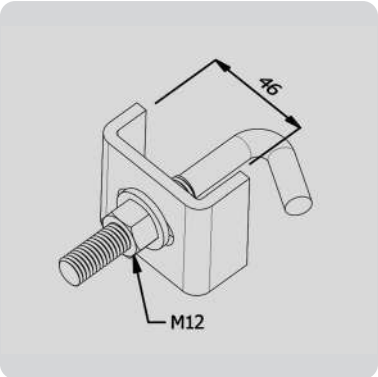
Mass 1.1 kg

For rapid connection of channel to panels for accurate alignment



WORKING 'C' CLAMP

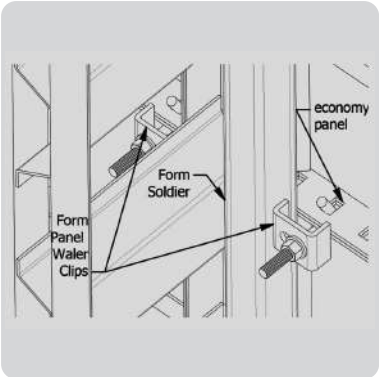
Connects channel waler to economy panel



FORM PANEL WALER CLIP

Mass 0.28 kg

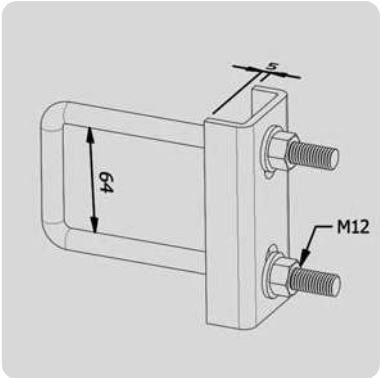
Connects form soldiers directly to panels



WORKING FORM PANEL WALER CLIP

For rapid connection of form soldier to panels (when there are no walers)

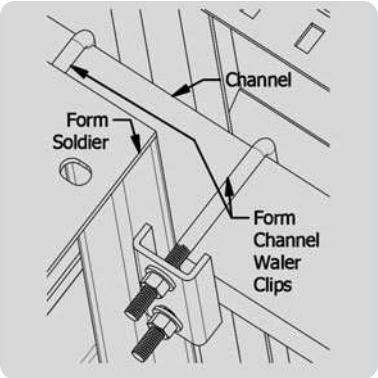
Accessories



FORM CHANNEL WALER CLIP

Mass	0.8 kg

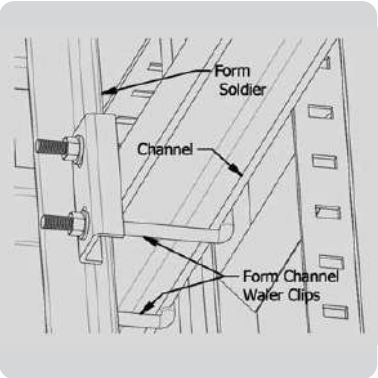
Connects channel to form soldier



WORKING FORM CHANNEL WALER CLIP

Top view shown above

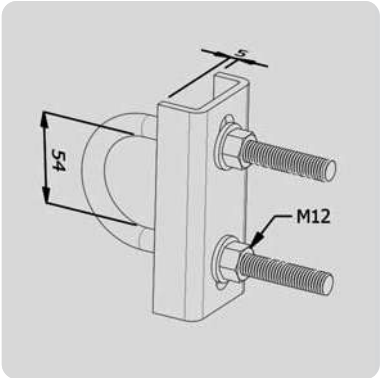
For rapid connection of form soldier to waler channel



WORKING FORM CHANNEL WALER CLIP

Bottom view shown above

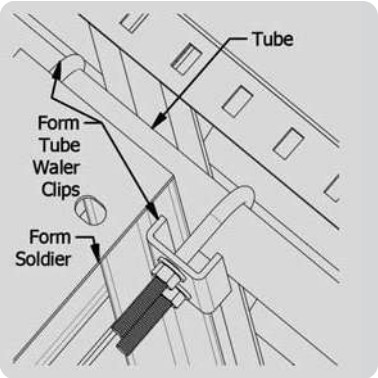
For rapid connection of form soldier to waler channel



FORM TUBE WALER CLIP

Mass	0.6 kg

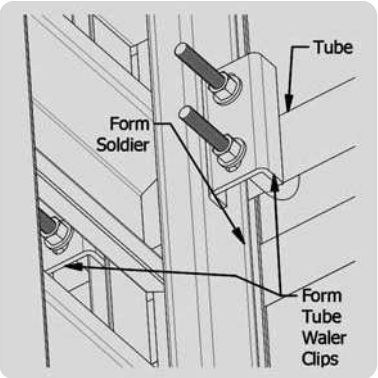
Connects tube to form soldier



WORKING FORM TUBE WALER CLIP

Top view shown above

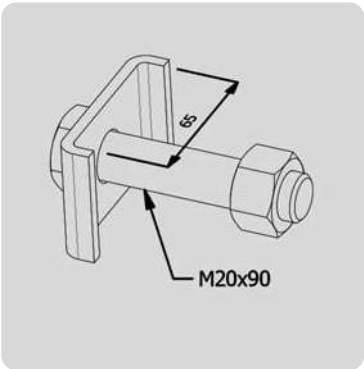
For rapid connection of form soldier to waler tube



WORKING FORM TUBE WALER CLIP

Bottom view shown above

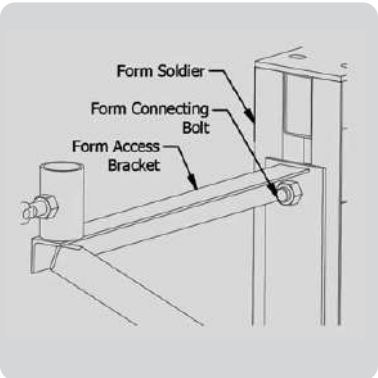
For rapid connection of form soldier to waler tube



FORM CONNECTING BOLT & U PLATE

Mass	0.55 kg

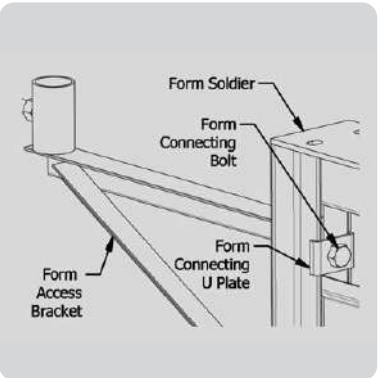
Connects items to non panel side of the form soldier ie. prop top bracket to access bracket



WORKING FORM CONNECTING BOLT & U PLATE

Front of access bracket shown above

For rapid connection of items to non-panel side of form soldier

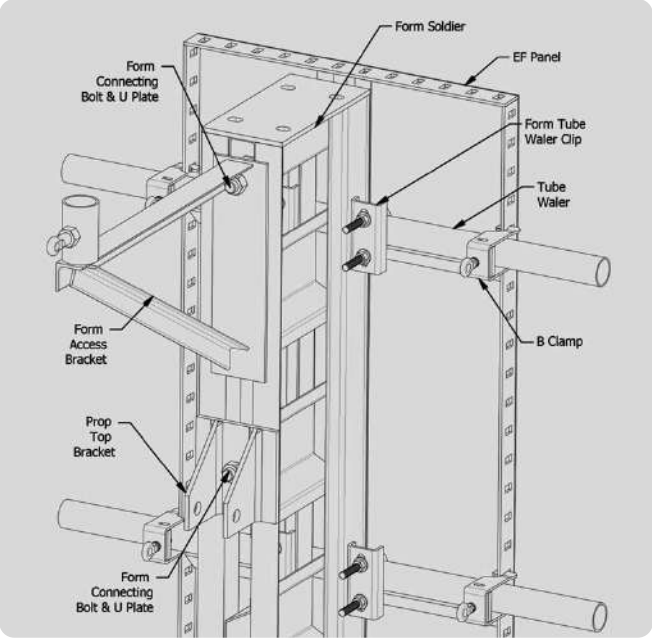


WORKING FORM CONNECTING BOLT & U PLATE

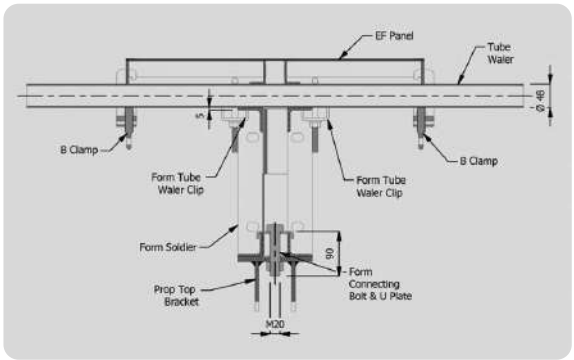
Rear of access bracket shown above

For rapid connection of items to non-panel side of form soldier

TYPICAL CLAMPING ARRANGEMENT FOR GANGFORM UNITS

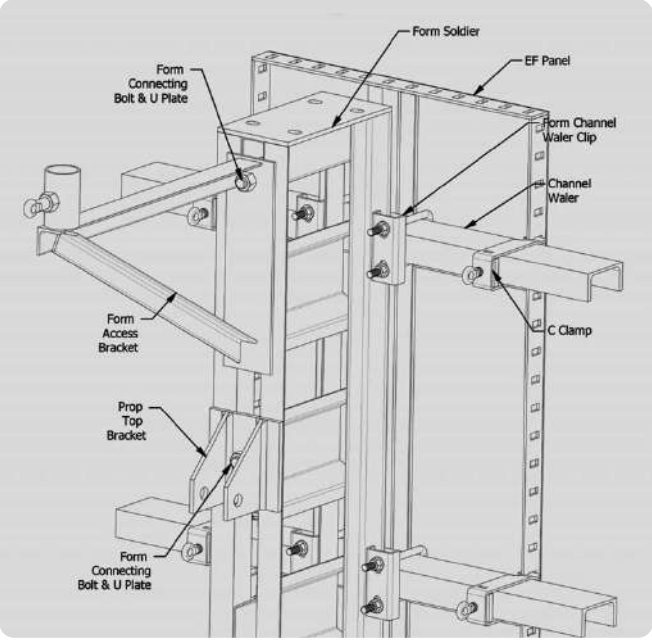


Panels with Form Soldiers and Channel Waler

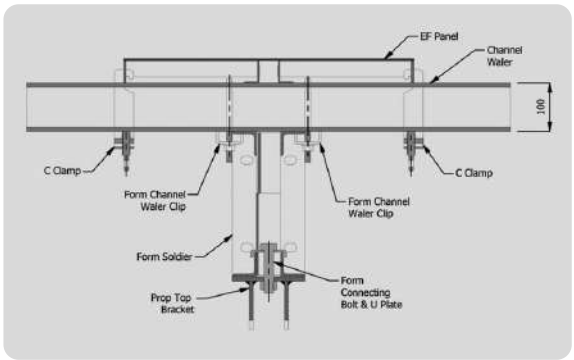


Sectional Plan View through centre of clamps

TYPICAL CLAMPING ARRANGEMENT



Panels with Form Soldiers and Tube Waler



Sectional Plan View through centre of clamps

Column Formwork

Uni-span provides standard or custom-made column forwork

Our Column Boxes and Economy Panels are comprised of a steel framework that can withstand concrete pressure at various heights. Column Boxes offer a thicker plate which increases stiffness and allows for taller columns to be formed.

Steel Column Boxes

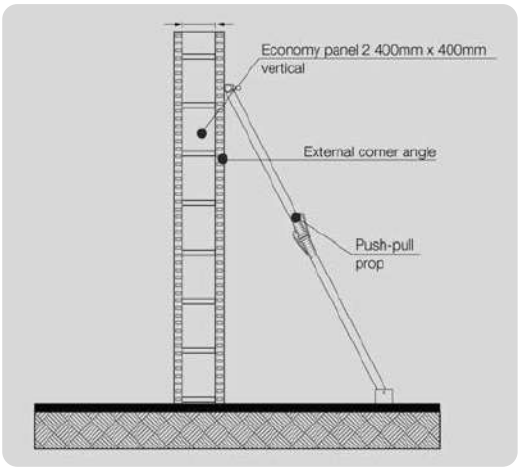
ECONOMY PANEL COLUMN BOX

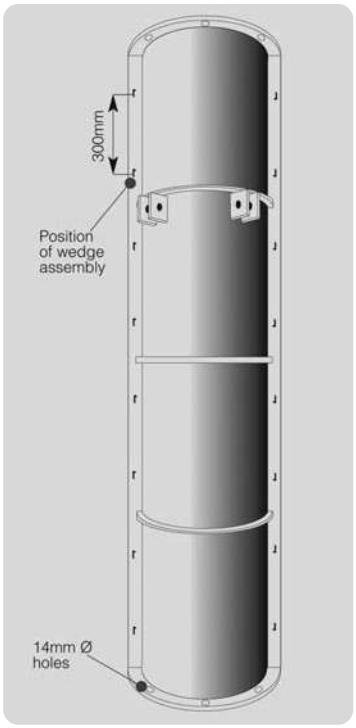
Economy panels can be perfectly adapted for the construction of square or rectangular columns.

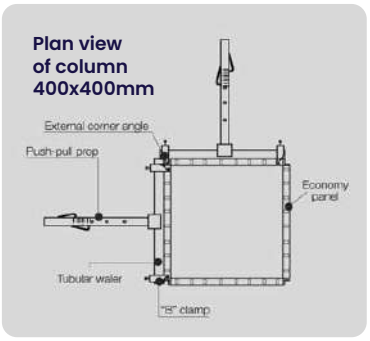
Only 4 different components are required:

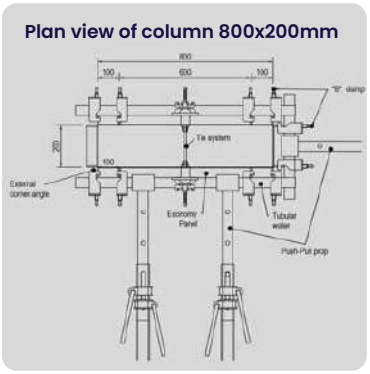
- Economy panels in various sizes
- External corner angles
- Column wedge sets
- Push-pull props

Please refer to pages 16-17 for accessories.









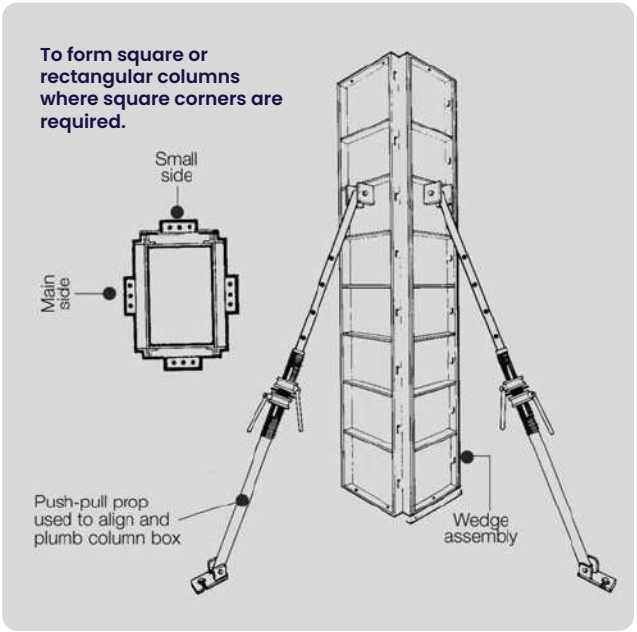
STANDARD CIRCULAR COLUMN

Various sizes can be manufactured to suit column size requirements. Mushroom heads can be attached to the column boxes.

"A" TYPE COLUMN BOX

"A" type column boxes are purpose made with 3mm/4mm steel face plate for maximum durability and client specification. Wedge assemblies used for easy connection, fast erection and accurate assembly. Built-in corners ensure that the boxes are self-squaring. Height: supplied in increments of 300mm.

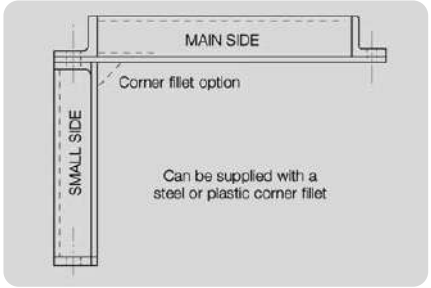
Width: Available in all sizes from 150mm



WEDGE ASSEMBLY
STEEL COLUMN BOXES

Mass	1.5 kg

Connects column boxes and uniform panels together



Uni-Lite

Uni-Lite Framed Formwork

Uni-Lite is a lightweight modular walling system that is perfect for any off-shutter finish. The steel frame has a timber faced board secured to it which completes the panel.

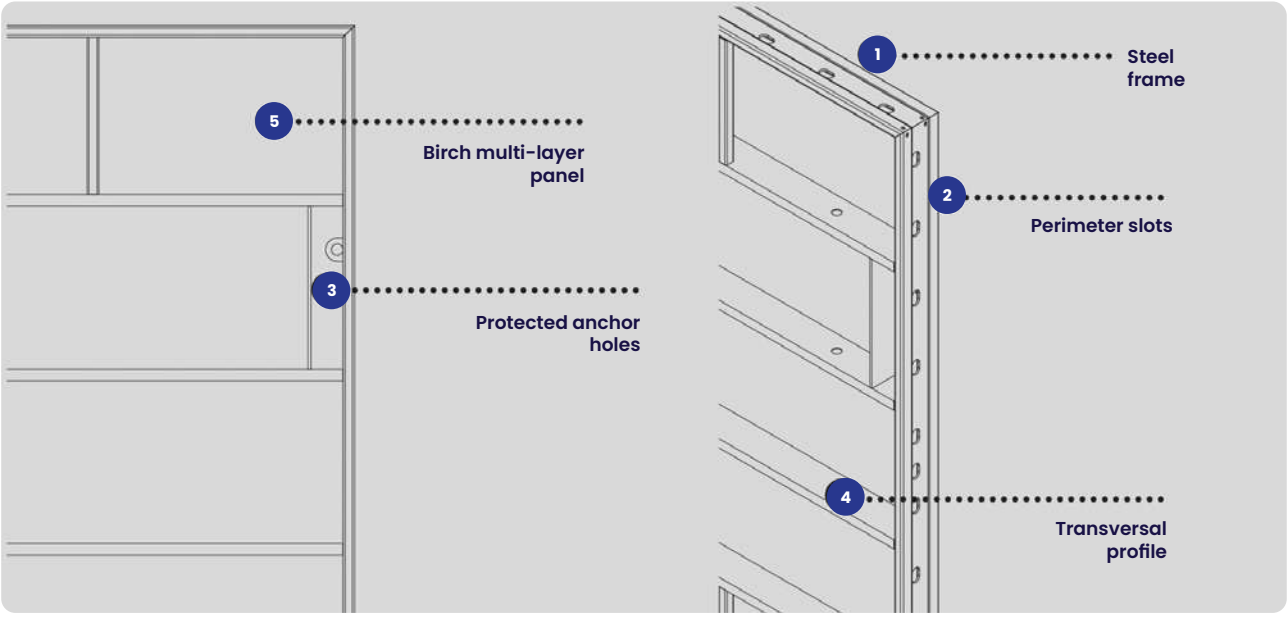
The Uni-Lite system can be used for a multitude of applications from vertical & horizontal works to elevator shafts, dams and tunnel solutions.

UNI-LITE OFFERS AN EFFICIENT SYSTEM THROUGH THE FOLLOWING FEATURES:

- Reduced panel weight - enabling a lightweight system that can be man-handled
- On-site erection, dismantling, and shifting
- Modular system offering various panel heights and widths
- Quick and simple connection of panels to suit any position
- Panels for corners, columns, and circular walls are available
- A full range of accessories on offer
- Ideal for when crane handling is a concern

This system is highly compatible with other formwork systems currently in the market. Uni-Span's team of engineers and industry experts provide technical assistance throughout the project.

TYPICAL CLAMPING ARRANGEMENT

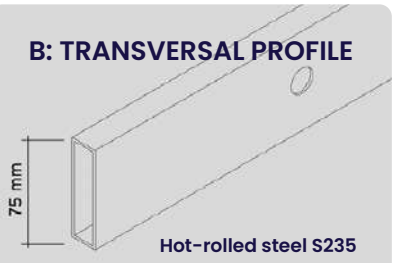


1. Highly resistant steel frame - 92mm high with perimeter concavity adapted for insertion of connection clamps in any position.
2. "Slotted" perimeteral holes for a increased versatility (i.e. modules can be connected with bolts or with universal fixing bolt).
3. Anchor holes - PVC protections for easier operation with tie rods.
4. Continuous slotted holes on perimeteral profiles and circular holes on transversal profiles for simple and geometrically free adjusting and fixing of system accessories.
5. Birch multilayer panel - 15mm thick with 220 g/m2 superficial phenolic treatment protected by a silicon seal process. Makes it easy to clean. Upon request, a plastic-coated plywood that last three times longer can be supplied. A wide modularity range with various sized panels allows for various concrete work applications.

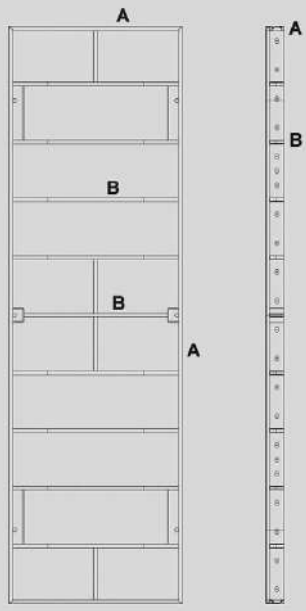
A: BORDER FRAME PROFILE

Hot-rolled steel S355MC
Thickness: 2 mm
Admissible load: 60 kN/m2
Finishing technique: hot zinc-coat

B: TRANSVERSAL PROFILE



Hot-rolled steel S235



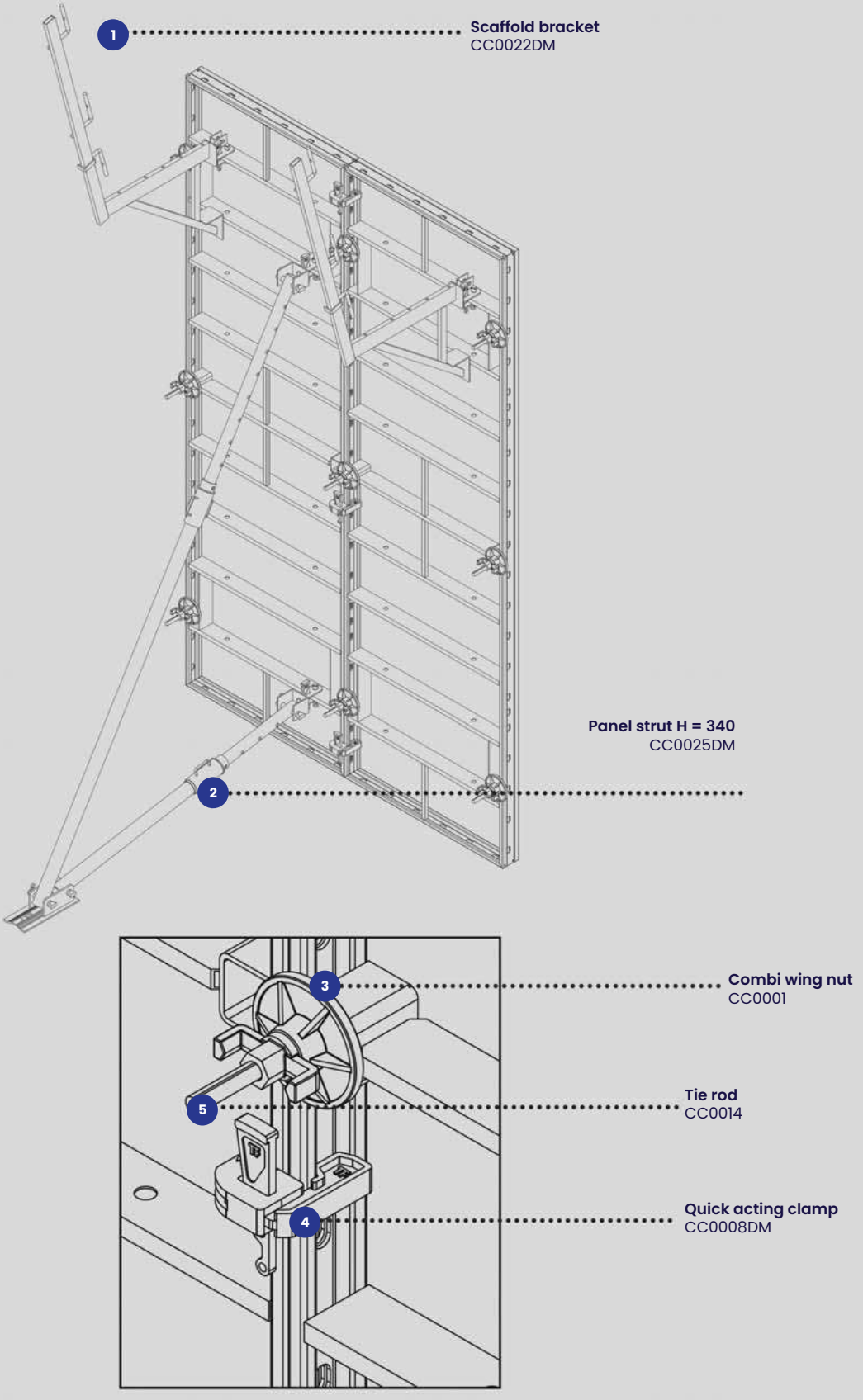
Material:
Hot-rolled highly resistance steel: S355MC.
According to EN: 10149 part 1/ part 2 and DIN EN 10051

Panel:
15 mm thick birch quality-plywood multi-layer

Finishing:
Hot dip galvanization - frames and profiles are galvanized both inside and outside to increase longevity

Admissible load/concrete pressure:
60 kN/m2 up to H 3m (no vertical stacking of panels)
40 kN/m2 over H 3m (with stacking of panels)

UNI-LITE ELEMENT CONNECTION



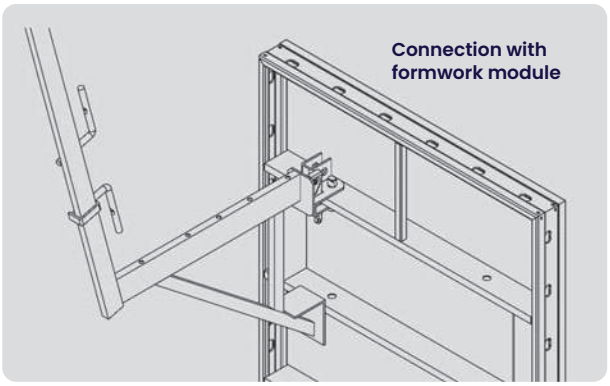
Uni-Lite System Elements

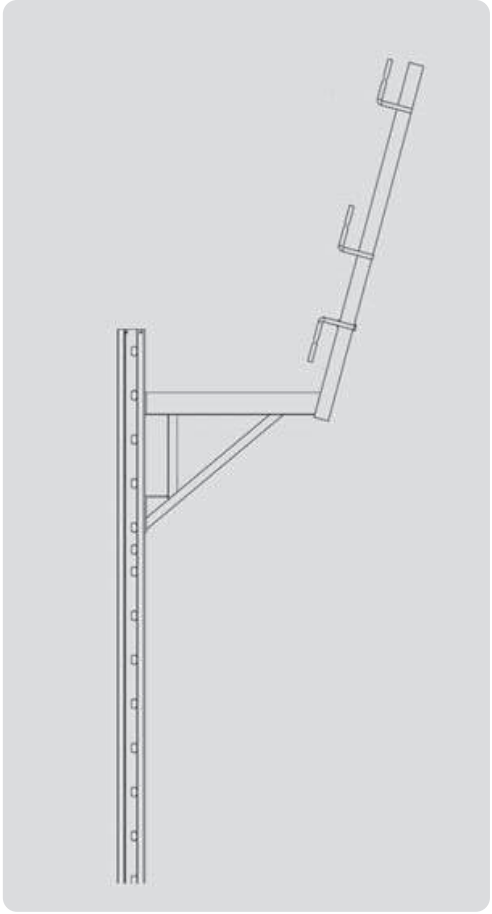
UNI-LITE SCAFFOLD BRACKET

To be used for installation of walking platforms or service platforms in combination with wooden or steel planks. The scaffold bracket is easily joined to the formwork panels through its fixing head. It is recommended to contain the distance between two scaffold brackets by no more than 1.8 m. The walking platforms must have timber board at the bottom, the middle and top of the scaffold bracket post. Access to the walking platforms by suitable ladders.

Once the platforms have been installed on top of the formwork, the opposite side of the scaffold bracket should also be protected by a suitable railing.

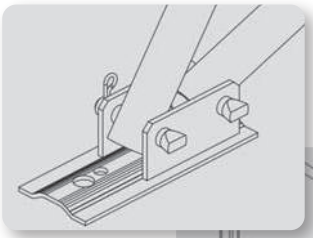
Any other outer entrances should be closed off according to strict safety regulations.

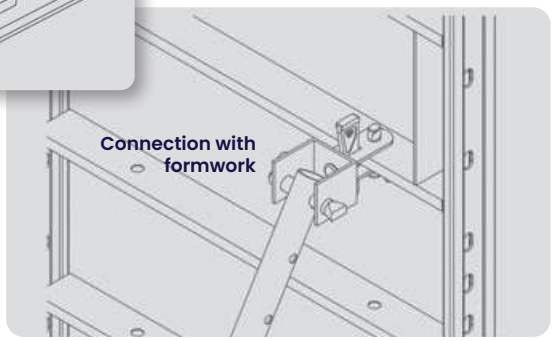


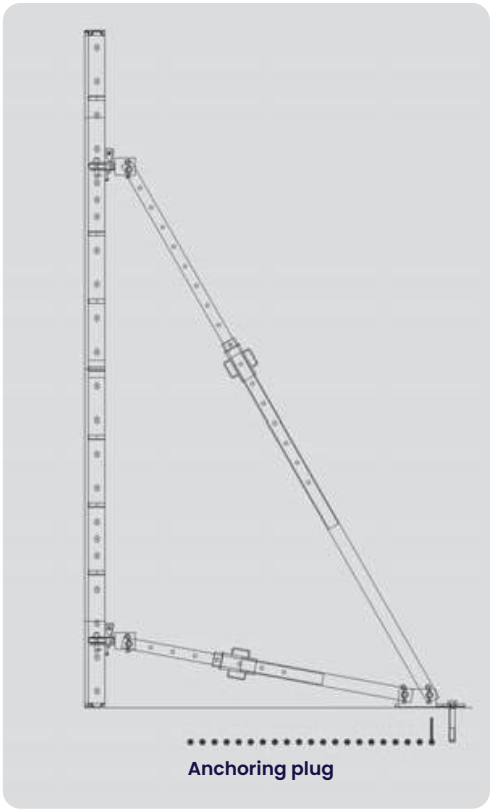


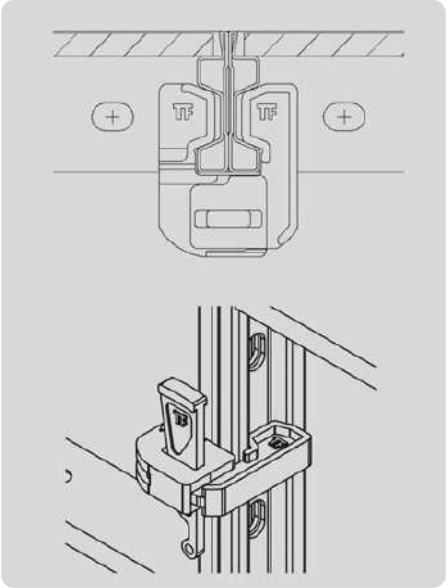
UNI-LITE STABILIZER

Uni-Lite stabilizers are used to align and prop formwork panels, with a foot plate and connecting parts. They are also used for horizontal support of formwork panels and it can reach up to 4.2m in height. A Uni-Lite stabilizer has two telescopic arms; each of which has one prop head which is suitable for anchorage of formwork at any point. The prop shoe must be fixed to the ground for secure placement.









QUICK ACTING CLAMP

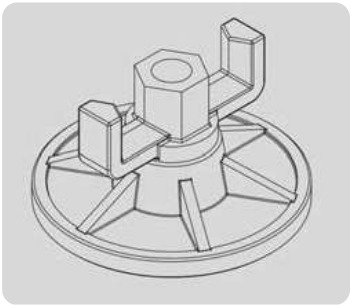
This clamp connects adjacent formwork elements. Due to the notch that runs along the frame's profile, the elements can be placed at any point on the frame's perimeter (preferably close to the stiffeners), allowing the connection to occur at any point. This provides a continuous junction of elements at height in any position.

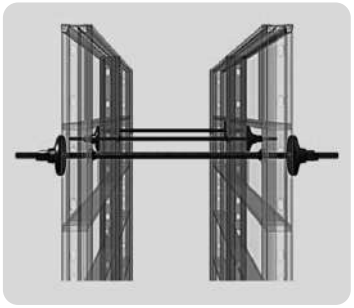
Advantages of a quick acting and multi-function clamp:

- Perfectly align elements; creating strong connections which are traction resistant
- Component dimensions are sizable enough to avoid loss
- The wedge mechanism avoids clogging of concrete.
- Permitted tensile force: 10,0 kN
- Permitted shear force: 5,0 kN
- Moment: 0,2 kNm

HORIZONTAL ELEMENTS	
Height elements (mt)	Fixing number
0,30	1
0,45	1
0,60	2
0,75	2
0,90	2

VERTICAL ELEMENTS	
Height elements (mt)	Fixing number
1,20	2
1,50	2
2,70	3
3,00	3





COMBI WING NUT (Ø120/130)

These are screwed onto the tie rods in order to lock up bindings
- 2 x plates needed for each bar.

Admissible load = 90 kN (according to regulation DIN 18216).

TIE ROD

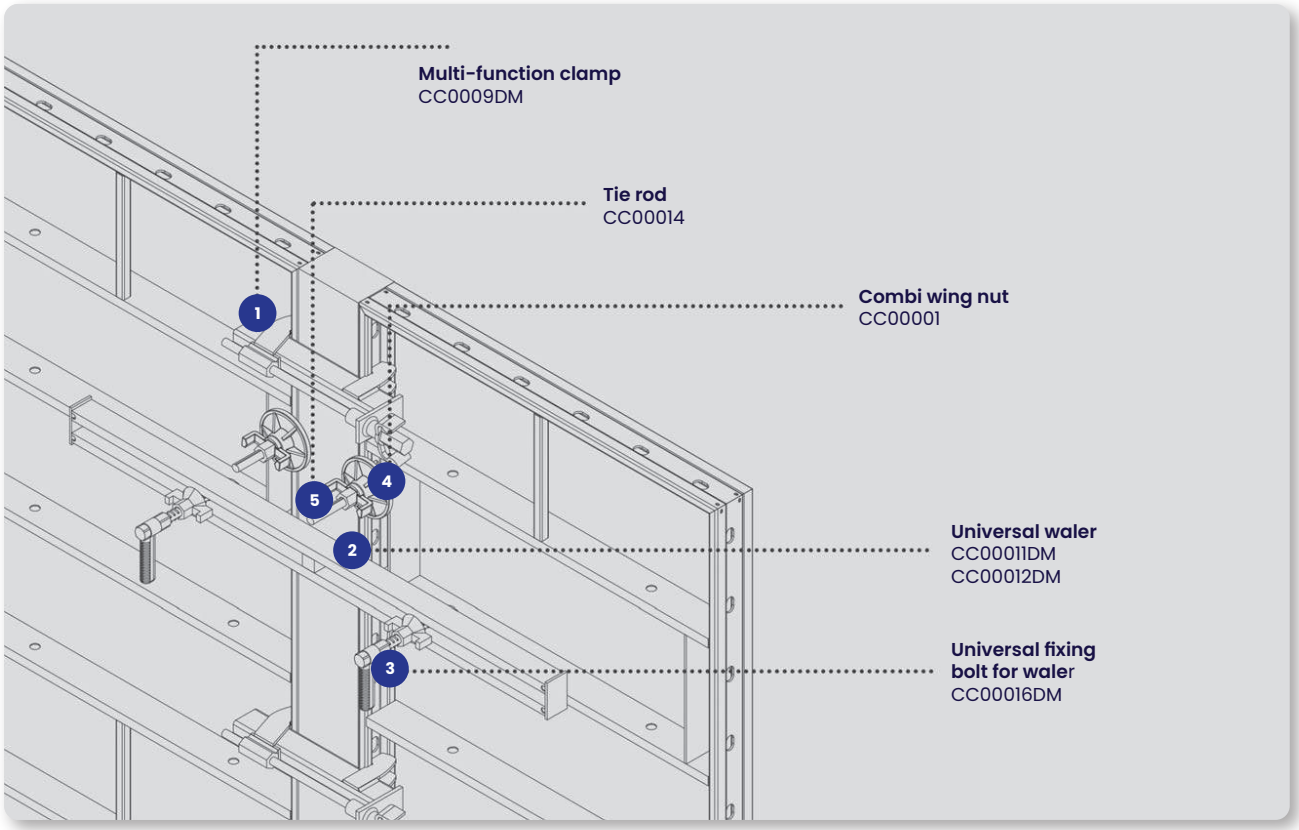
A tie rod is used to 'tie' the formwork together during the casting operations. The rod is produced to a standard length of 6m and cut to the required length on the construction site. The bars can be reused after the works but, prior to casting, it is recommended to insert them in a PVC tube (type 22/26) for an easier extraction.

For correct usage the bar should be equipped with appropriate accessories which include wing nuts and hexagon nuts.

- **Admissible load:** 90 kN (according to regulation DIN 18216)
- **Ultimate load:** 190 kN (according to regulation DIN 18216)
- **Admissible load:** 120 kN (with 1.6 safety factor)

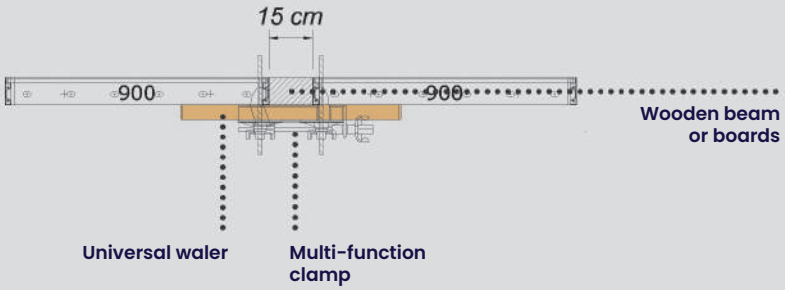
Importantly, in order to avoid ruptures or deformations, the bars should not be heat treated or welded.

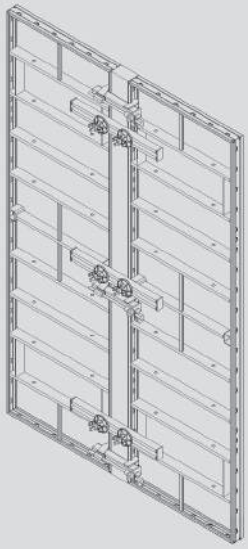
UNI-LITE CLOSURE SOLUTIONS



CLOSURES UP TO 15 cm

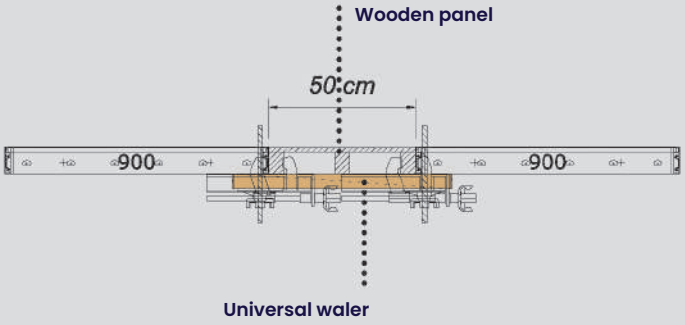
Wall compensation, from 0 to 15 cm, using wooden beam or wooden boards, multi function clamp for the connection of the elements and universal waler for alignment.

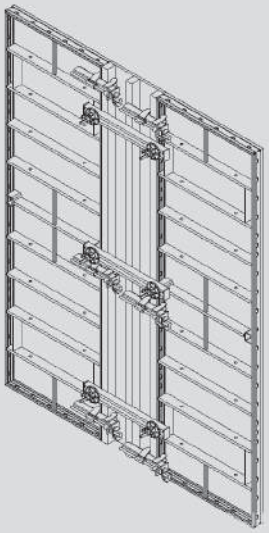




CLOSURES UP TO 50 cm

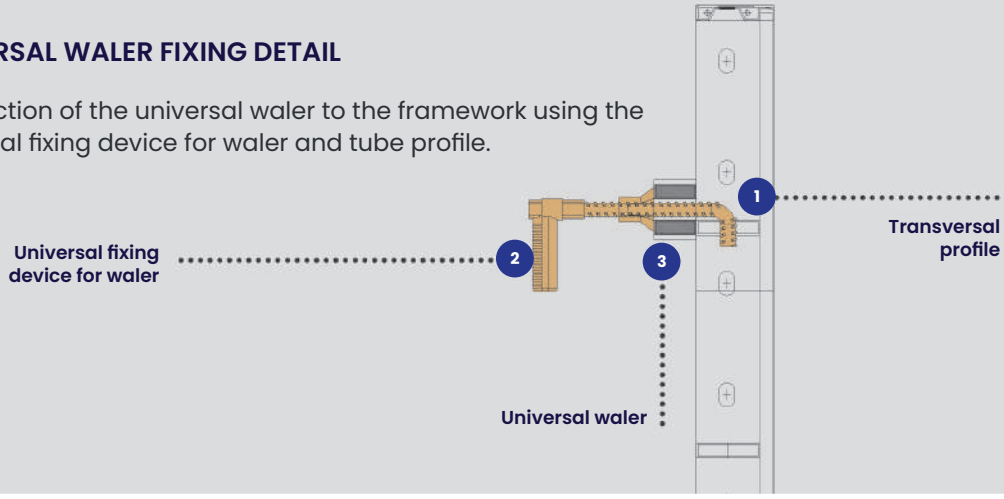
Wall compensation, from 0 to 50 cm, using wooden boards or wooden panels.





UNIVERSAL WALER FIXING DETAIL

Connection of the universal waler to the framework using the universal fixing device for waler and tube profile.

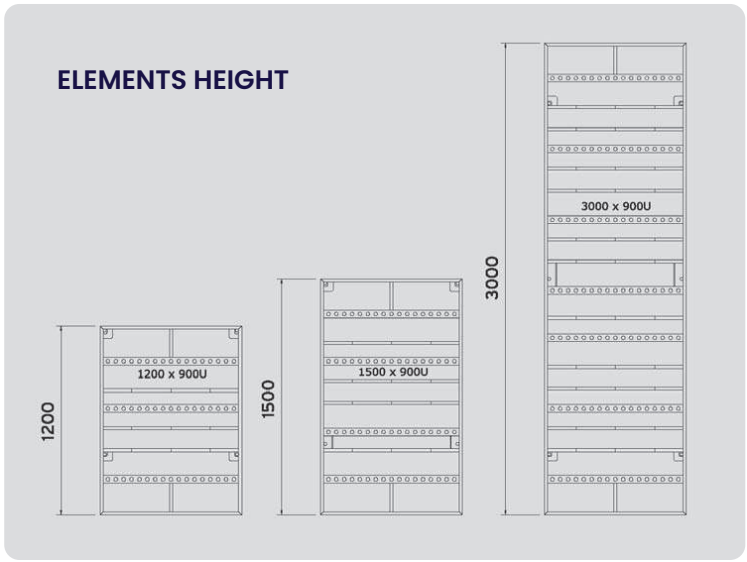


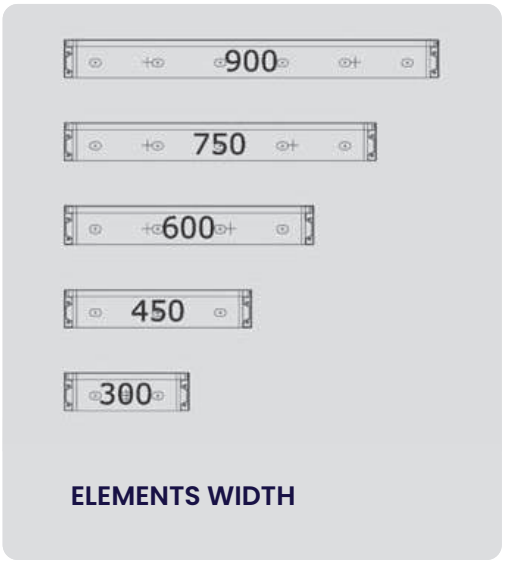
Uni-Lite System Elements Application

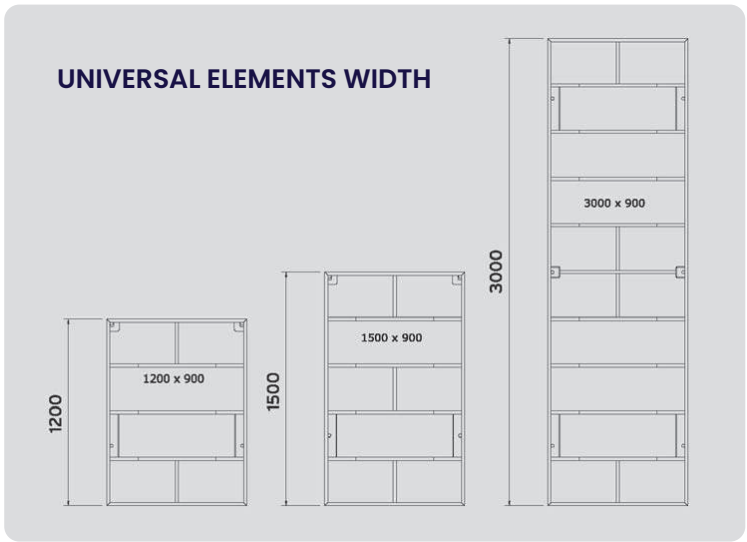
The height and widths of the elements form a logical modular system that offers simplicity and flexibility.

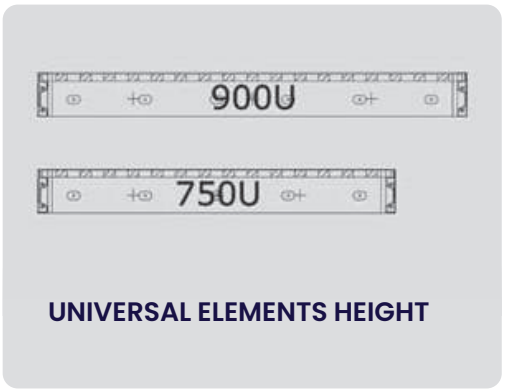
The Uni-Lite systems offers a wide range of element applications that include:

- adjustment of the height and width in steps of 15 cm
- clear positioning of junctions
- 5 element widths
- 3 element heights
- few compensations required

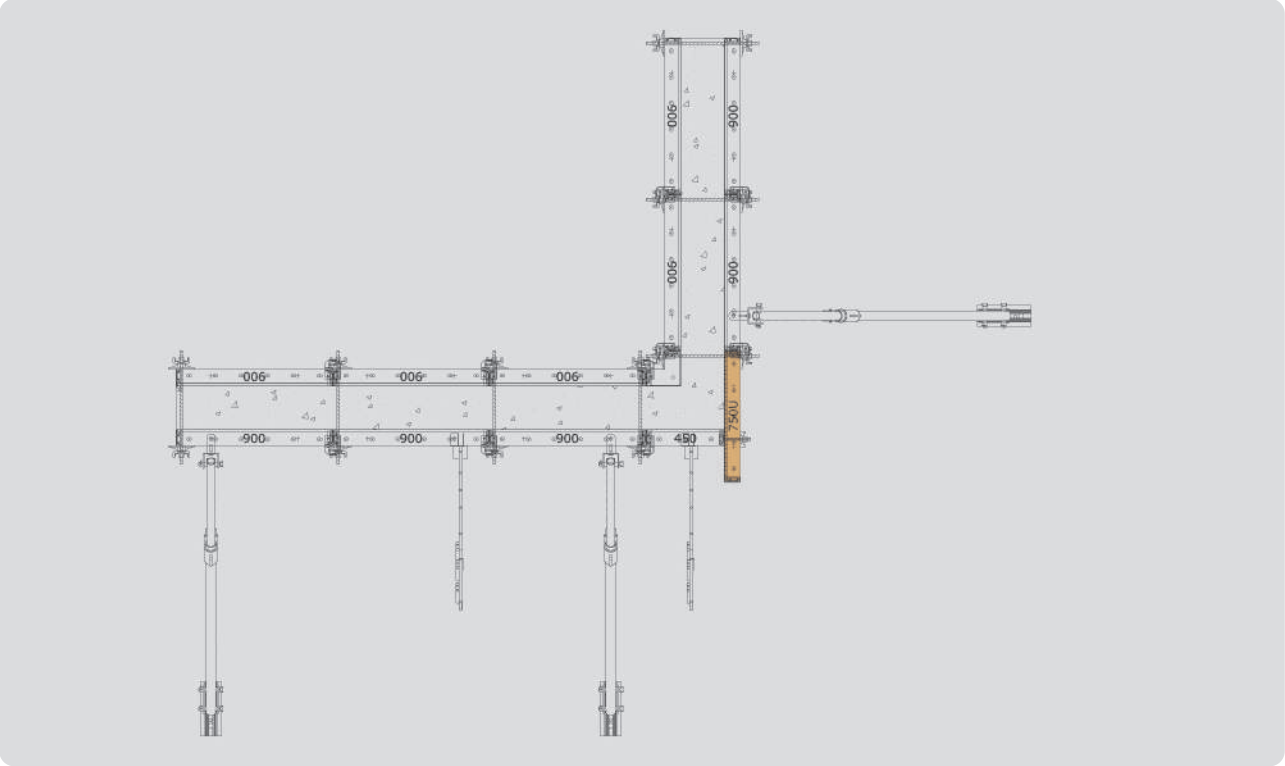




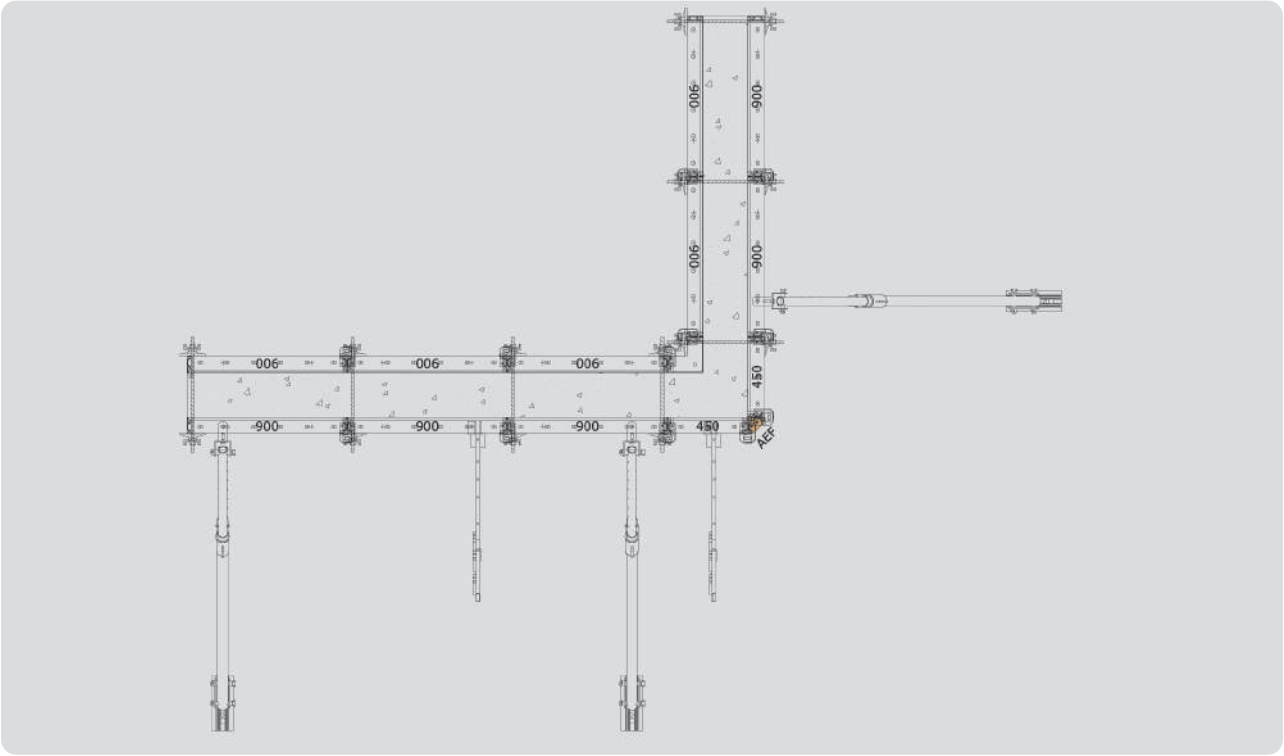




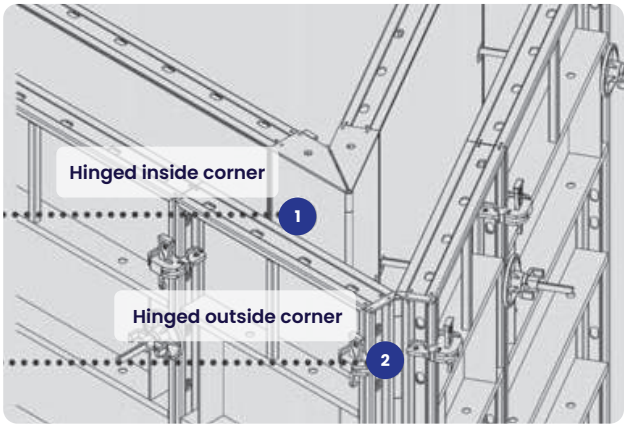
90° ANGLE WITH UNI-LITE UNIVERSAL ELEMENT



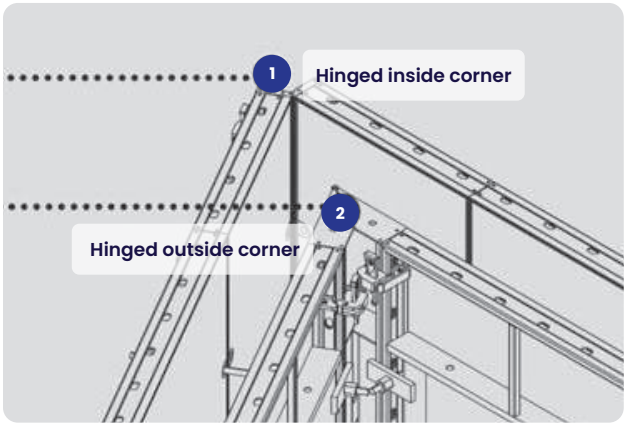
90° ANGLE WITH UNI-LITE INT. & EXT. CORNERS

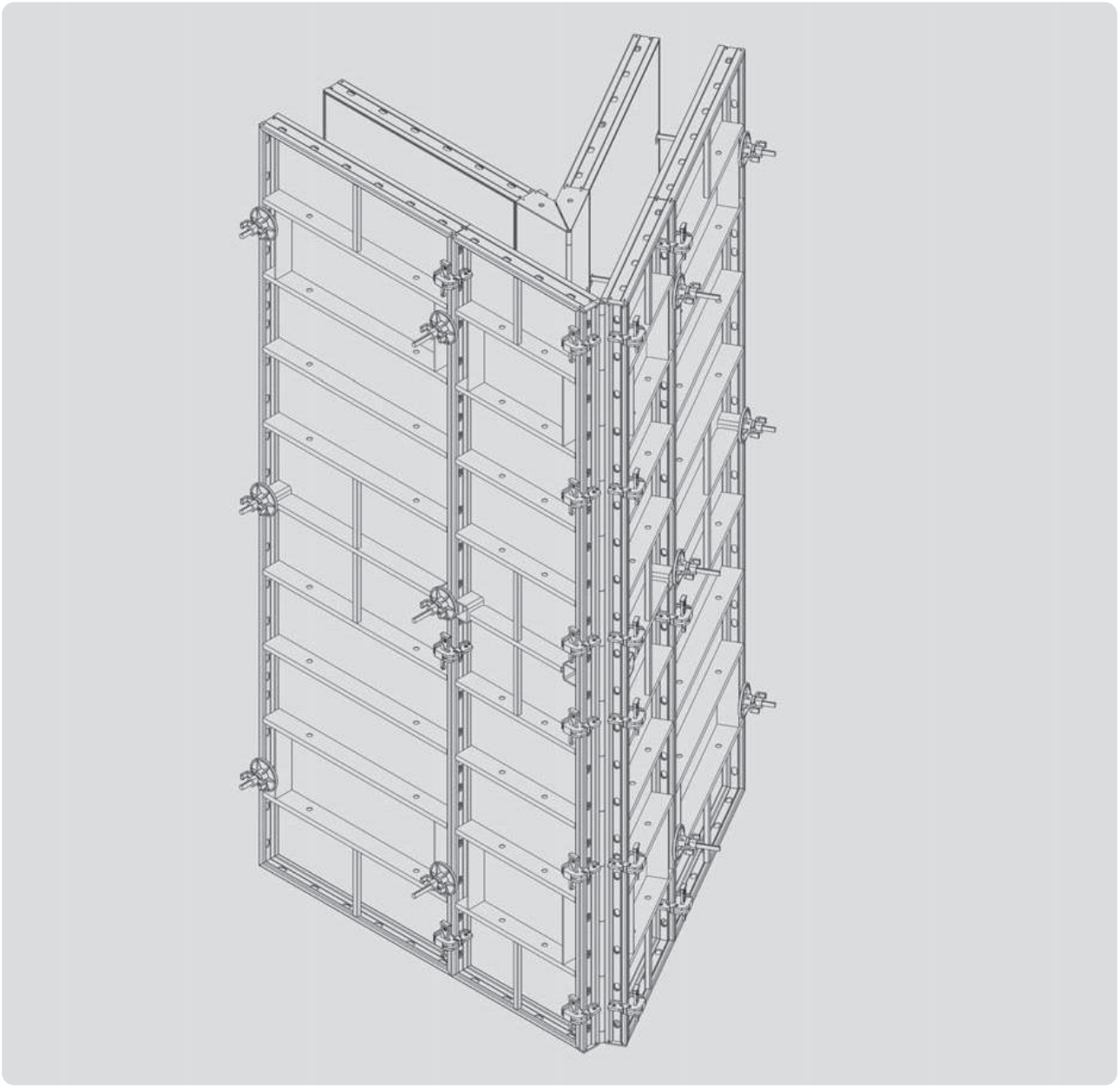


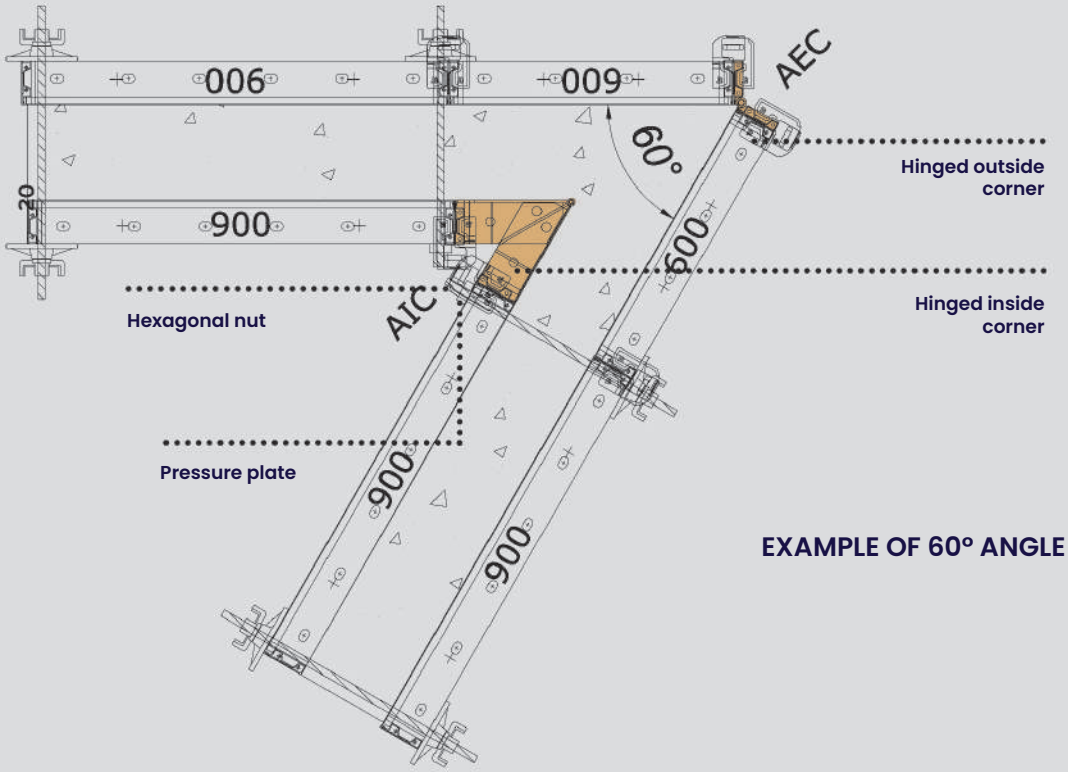
ACUTE ANGLE WITH UNI-LITE HINGED CORNERS

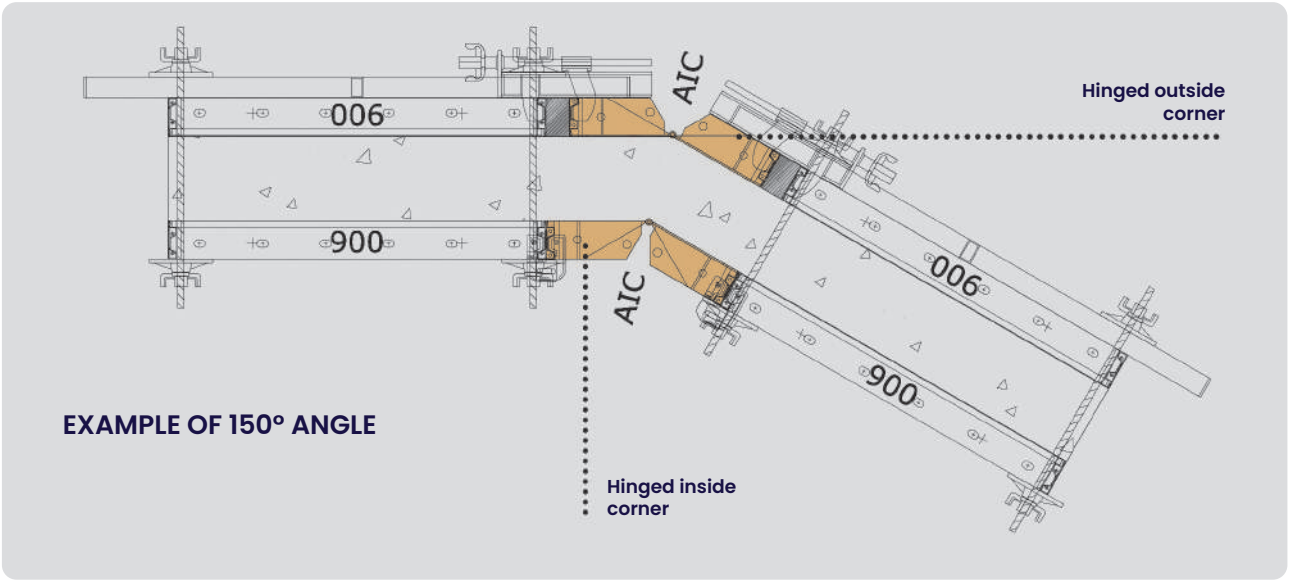


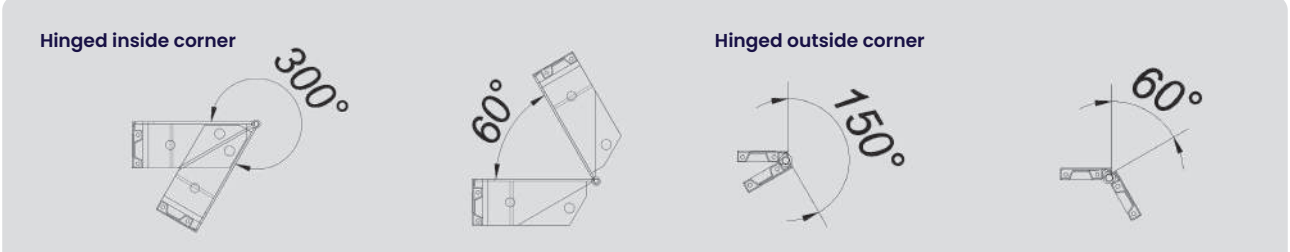
EXAMPLE OF ACUTE ANGLE







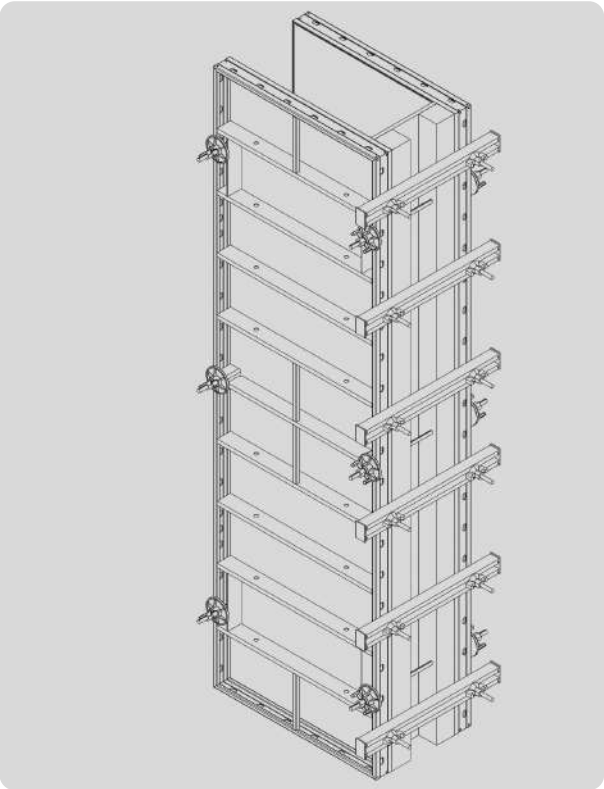




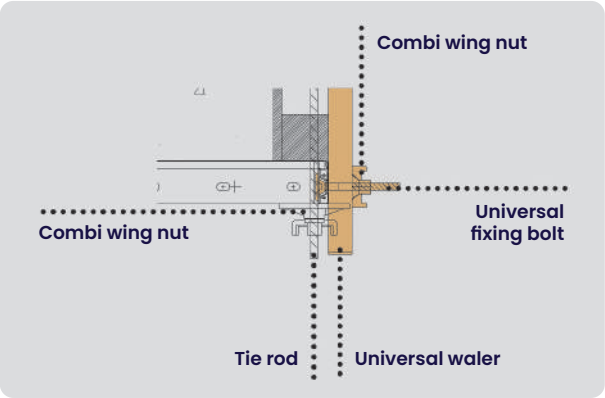
60° angle made using Uni-Lite hinged inside and outside corners.

STOP ENDS BY STANDARD ELEMENTS AND UNIVERSAL WALER

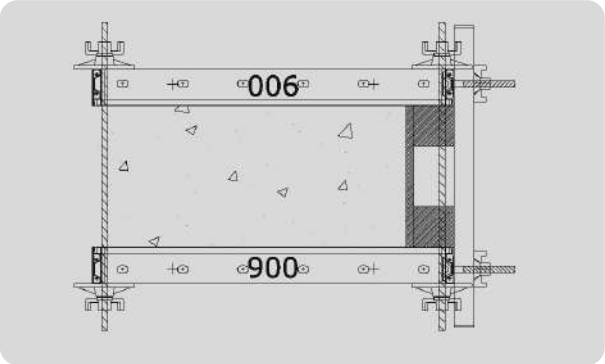
Stop end made using universal waler and universal fixing bolt



CLOSURE

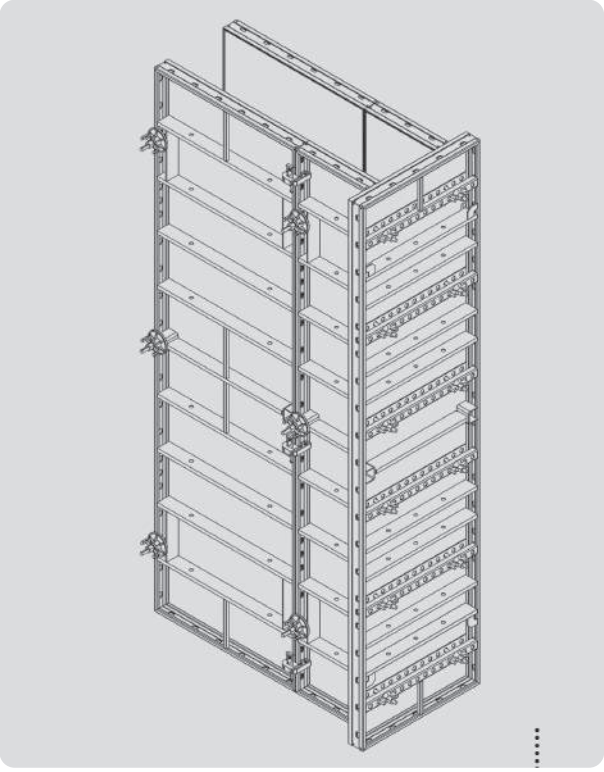


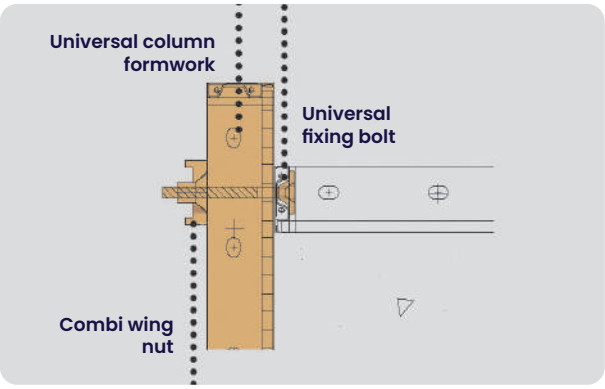
Stop end made, using universal waler and universal fixing bolt

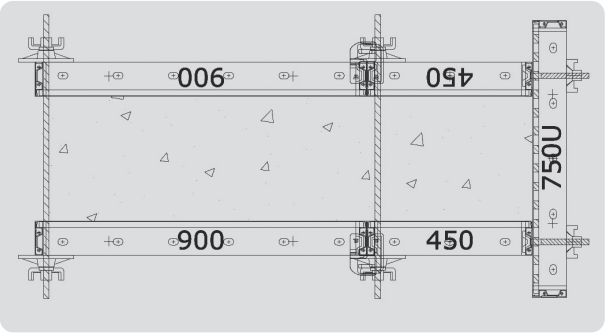


STOPS ENDS BY UNIVERSAL ELEMENT

Stop end made using universal element

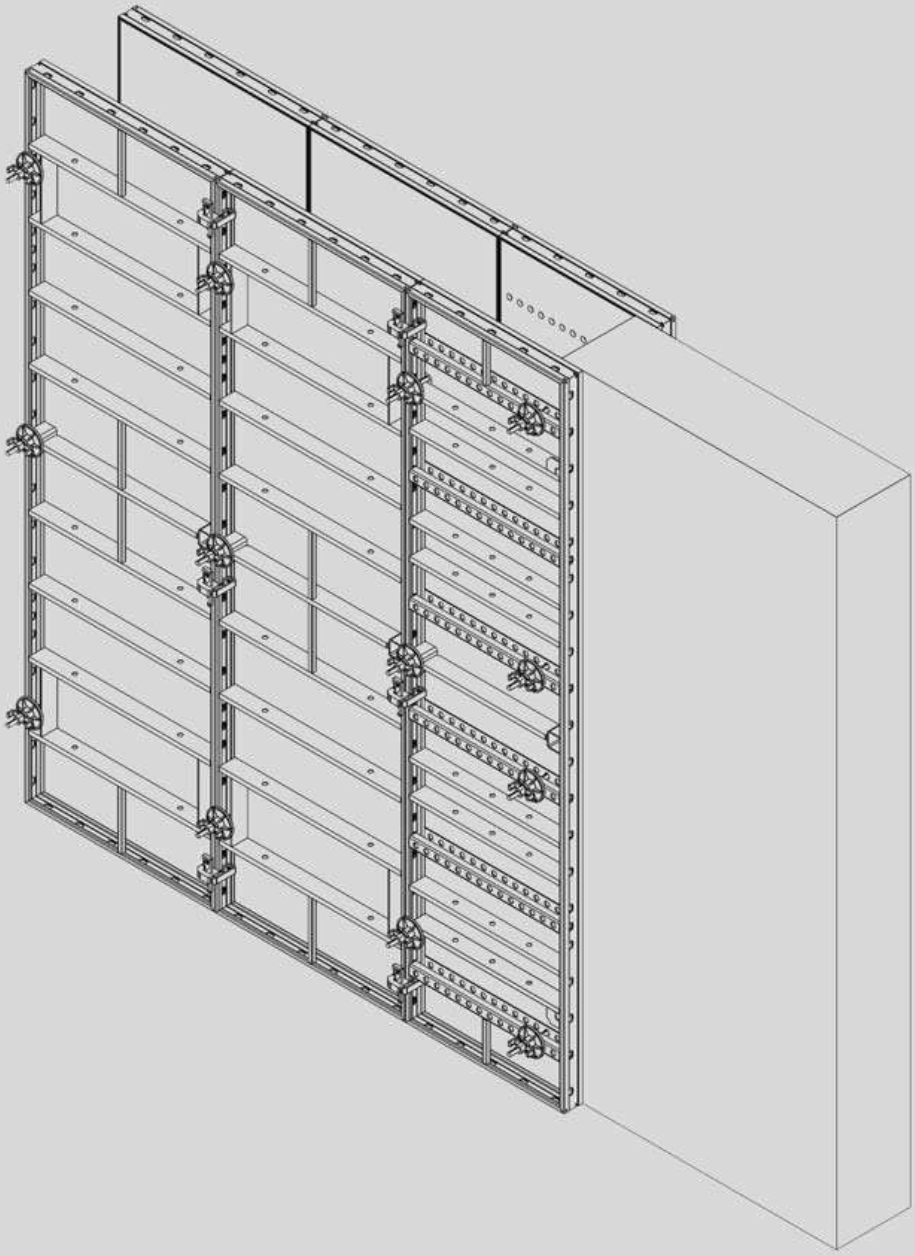




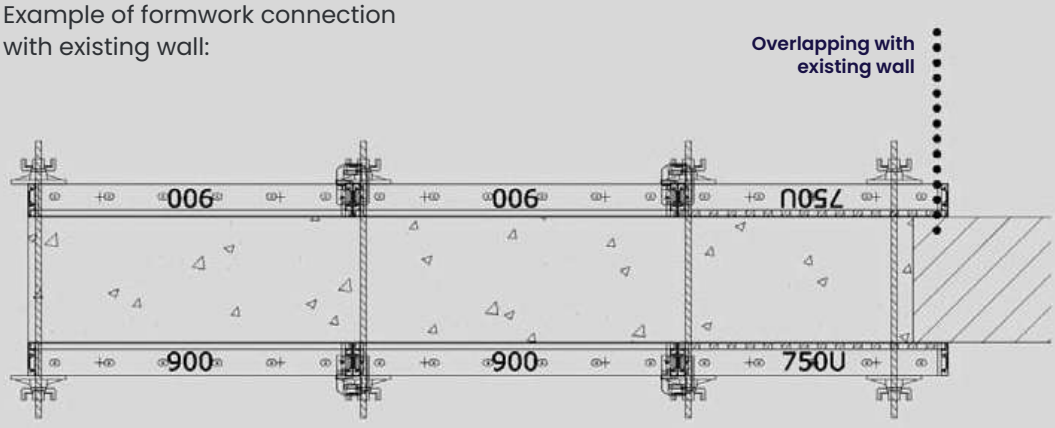


The universal element has to be fixed to the standard elements by two universal fixing bolts for every multiholes profile

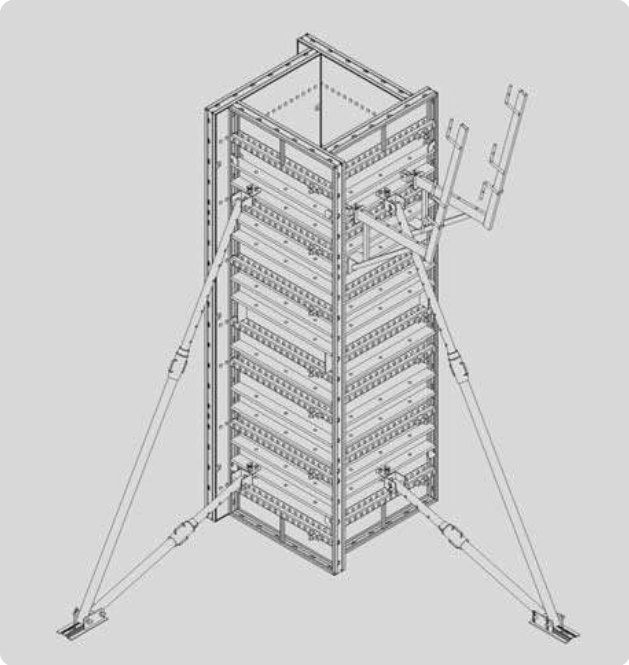
CONNECTION WITH EXISTING WALL

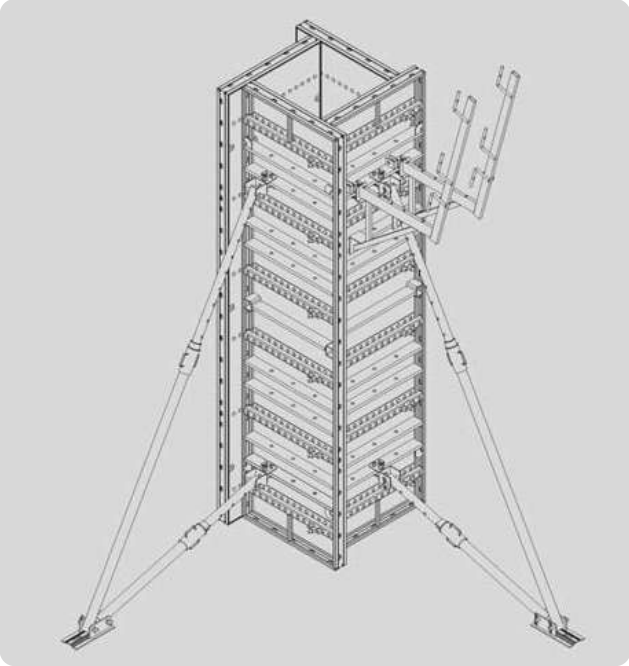


Example of formwork connection with existing wall:

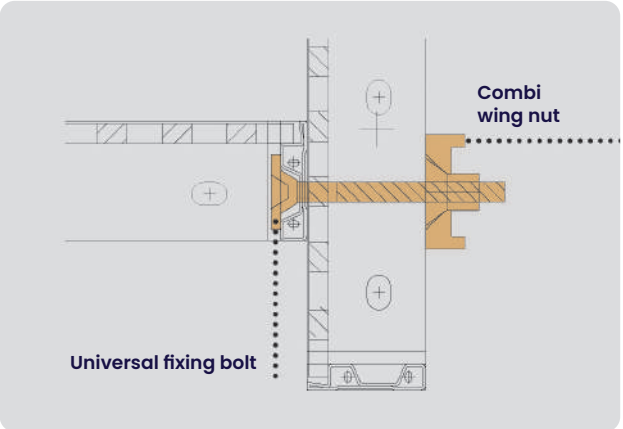


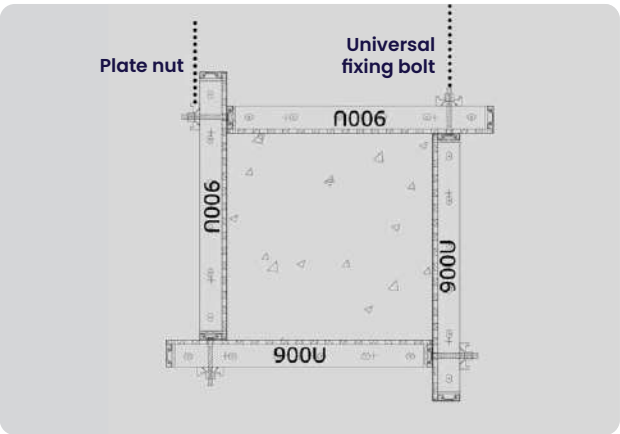
COLUMN FORMWORK

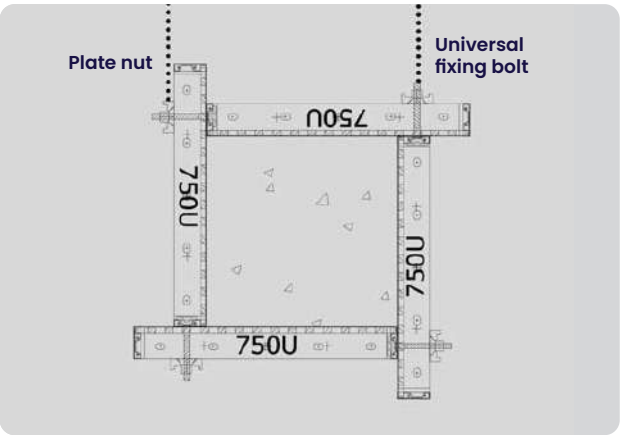




FIXING DETAILS







Universal elements are available in the following sizes:

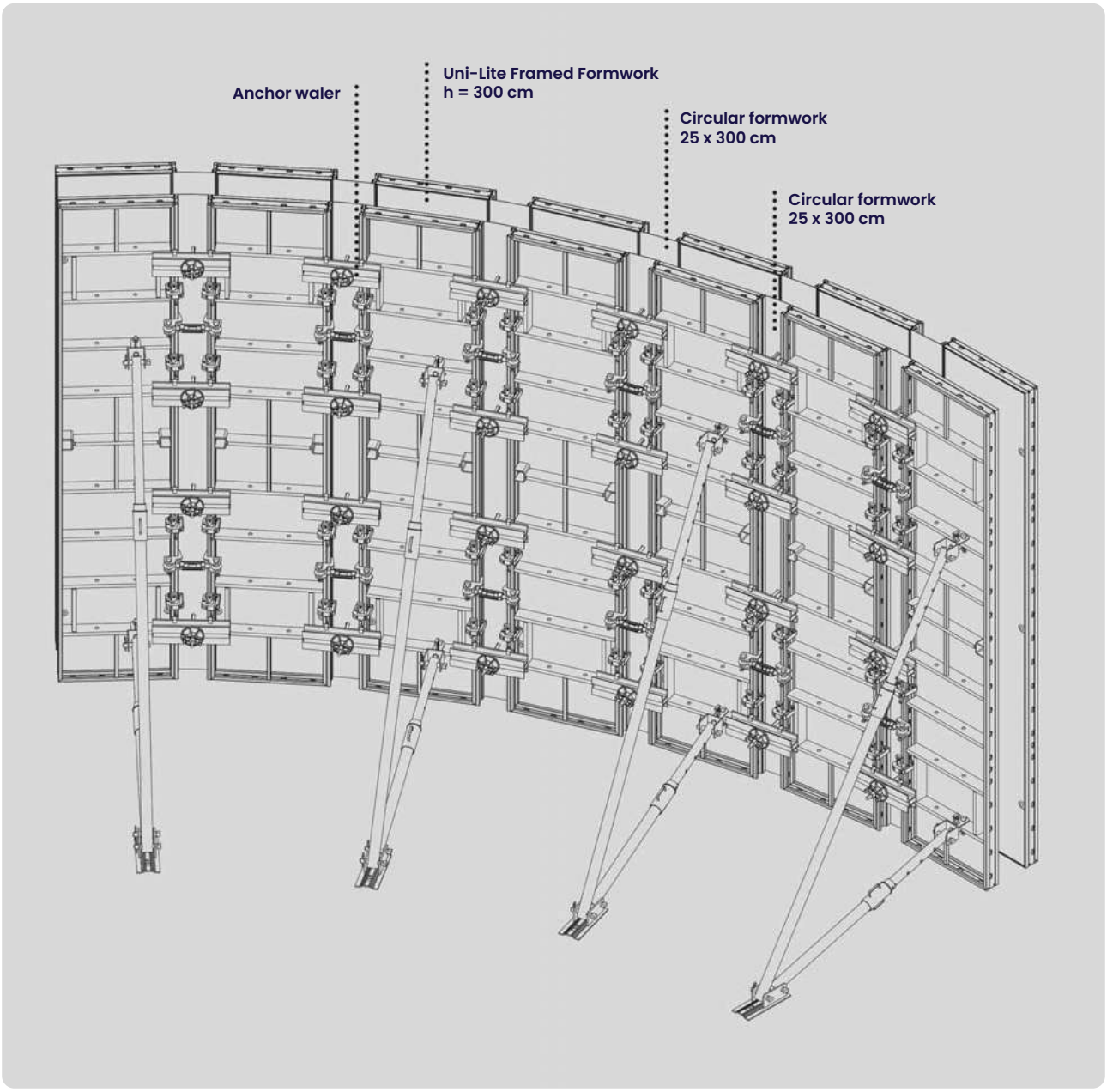
- Height 300/150/120 cm
- Width 90 cm and 75 cm

Universal elements allow for columns of various dimensions to be constructed:

- 15 x 15 cm up to 80 x 80 cm using 90 cm panel, and
- 15 x 15 cm up to 65 x 65 cm using 75 cm panel

When anchoring the formwork elements, a fixing bolt and plate nut can be used.

CIRCULAR FORMWORK



Uni-Lite circular formwork is a universal, economical and fast solution for circular structures construction.

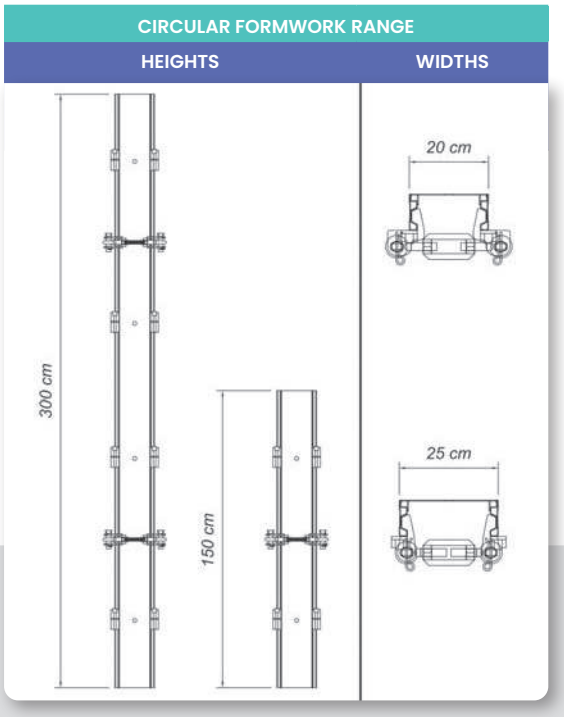
It is available:

- in two heights : H = 300 cm and H = 150 cm
- in two widths : L = 20 cm and L = 25 cm

They are used in combination with Uni-Lite framed formwork to form round structures of any radius (minimum inside radius = 180 cm).

All Uni-Lite accessories such as scaffold brackets or panel struts can therefore be used; only quick acting clamps are necessary to connect circular formworks to Uni-Lite framed formwork.

CIRCULAR FORMWORK



Using the different widths of circular formwork:

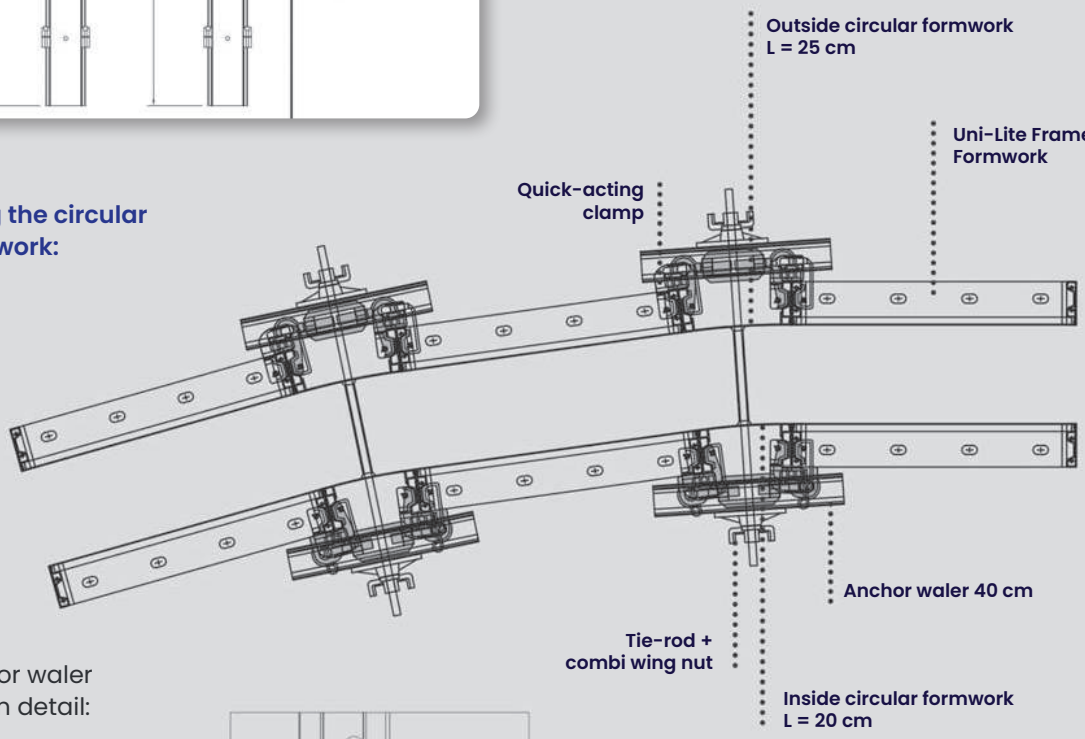
L = 20 cm

- Inside circular forwork
- Outside circular formwork (for length adjustment)

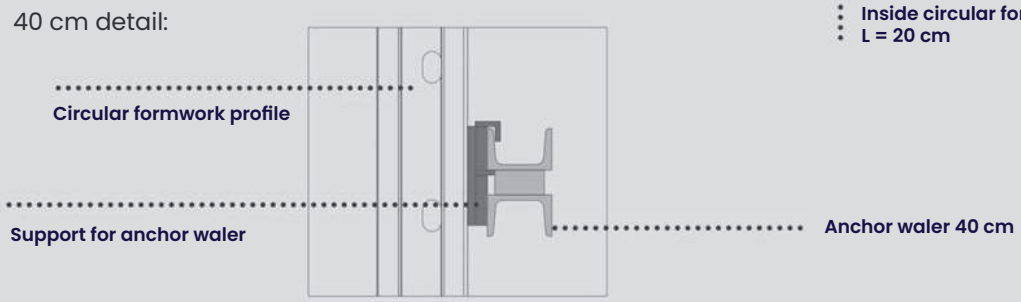
L = 25 cm

- Outside circular formwork

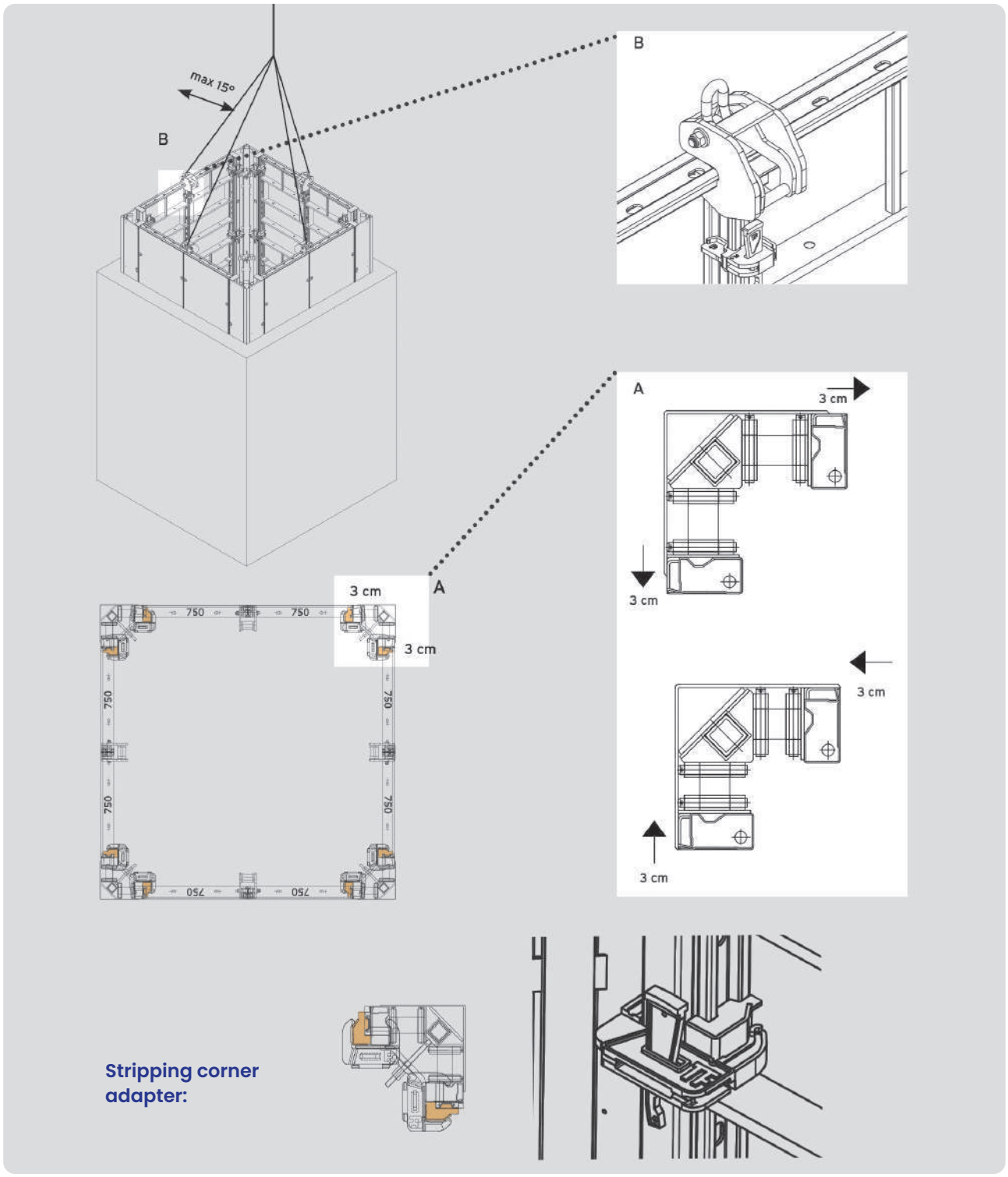
Tying the circular formwork:



Anchor waler
40 cm detail:



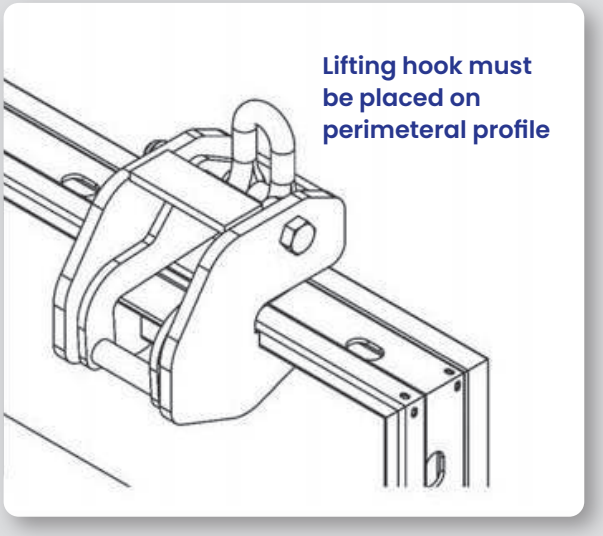
SHAFT STRIPPING CORNER

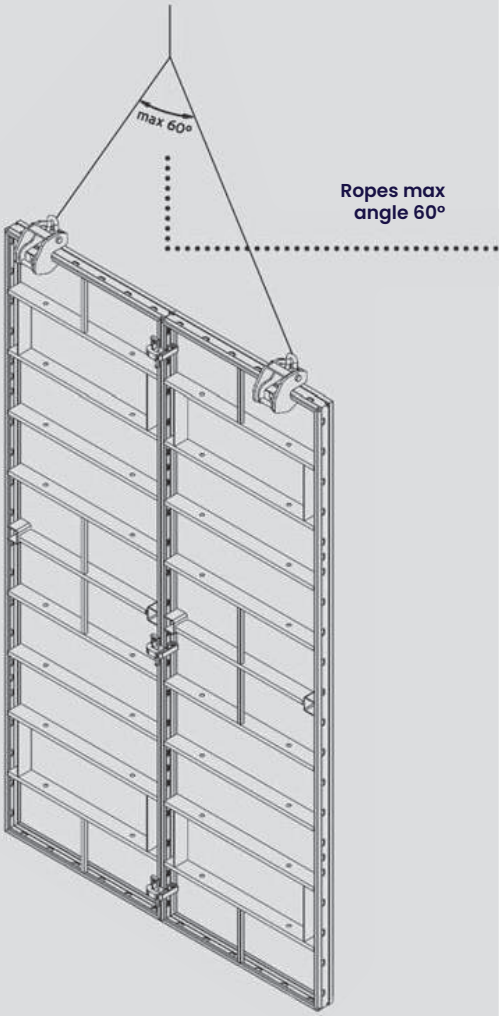


Stripping corner adapter:

The shaft stripping corner strips the shaft formwork and shifts it in one go without dismantling every single element. The inner stripping corner allows for the retraction of adjacent panels using a simple ratchet. The shaft stripping corner can be used in conjunction with Uni-Lite elements using the Uni-Lite Adaptor which will cover the gap between the varied profile thicknesses. Post the retraction of the panels, the translation takes place in a simple, safe and quick manner using Uni-Lite lifting hooks and a four-part lifting chain.

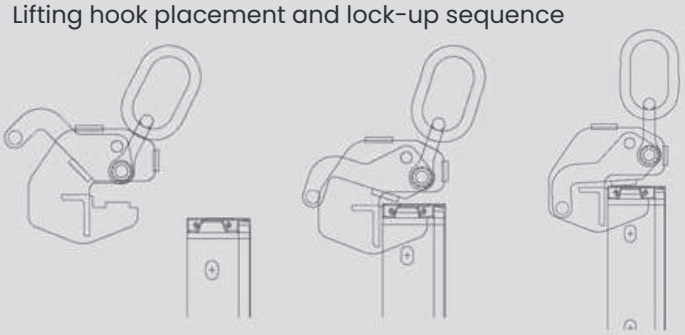
LIFTING HOOK





Lifting hook lock-up system

Lifting hook placement and lock-up sequence



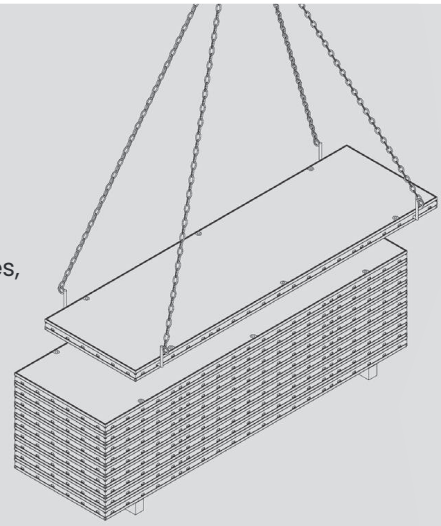
Code: CC0010DM

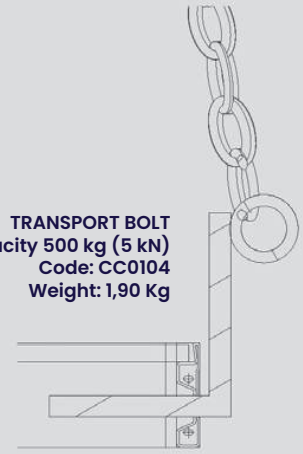
Weight: 12,5 Kg

Used for lifting modules. Must be hooked-up with appropriate chain ropes which must not create an angle greater than 60°. Each lifting hook has an admissible load of 1000 Kg. The lock system to the border profile of the formwork is auto-lock up. The lifting hook should be placed near the frame stiffenings.

TRANSPORT AND STORAGE

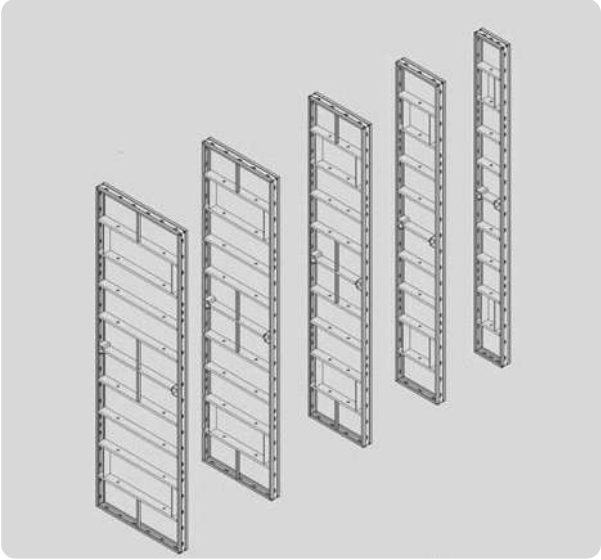
Transport bolt (capacity 5 kN), used together with the four chain ropes, allowing the safe shifting of single items or entire bundles.





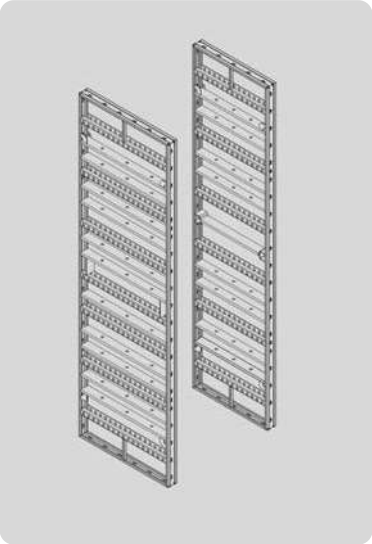
TRANSPORT BOLT
Max capacity 500 kg (5 kN)
Code: CC0104
Weight: 1,90 Kg

UNI-LITE 3000



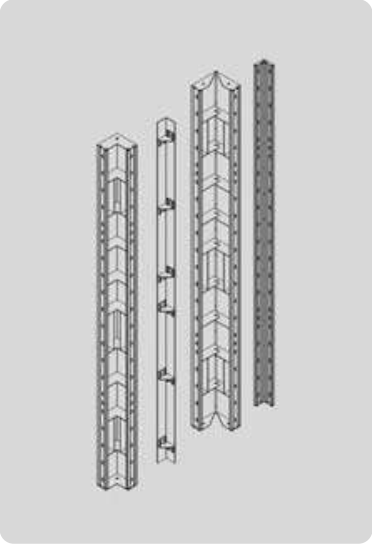
UNI-LITE 3000 PANELS

Code	Description	Weight (kg)
300090DM	3000 x 900	79,00
300075DM	3000 x 750	70,10
300060DM	3000 x 600	60,50
300045DM	3000 x 450	50,90
300030DM	3000 x 300	42,00



UNI-LITE 3000 UNIVERSAL PANELS

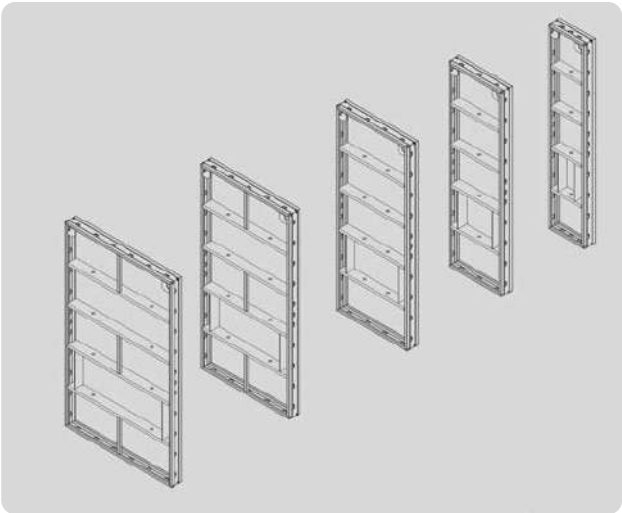
Code	Description	Weight (kg)
30009UDM	3000 x 900 UNIV.	113,60
30075UDM	3000 x 750 UNIV.	89,90



UNI-LITE 3000 CORNERS

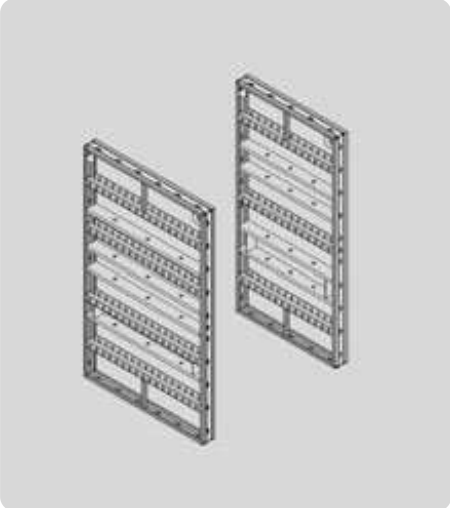
Code	Description	Weight (kg)
AIF300DM	Inside fixed corner H=3000	79,00
AEF300DM	Outside fixed corner H=3000	70,10
AIC300DM	Hinged inside corner H=3000	60,50
AEC300DM	Hinged outside corner H=3000	42,00

UNI-LITE 1500



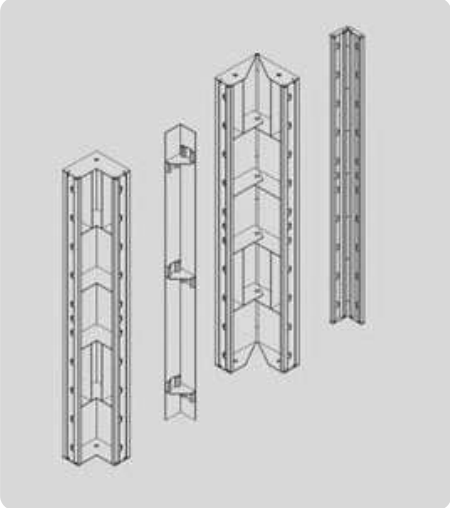
UNI-LITE 1500 PANELS

Code	Description	Weight (kg)
150090DM	1500 x 900	41,70
150075DM	1500 x 750	39,90
150060DM	1500 x 600	31,30
150045DM	1500 x 450	26,40
150030DM	1500 x 300	21,60



UNI-LITE 1500 UNIVERSAL PANELS

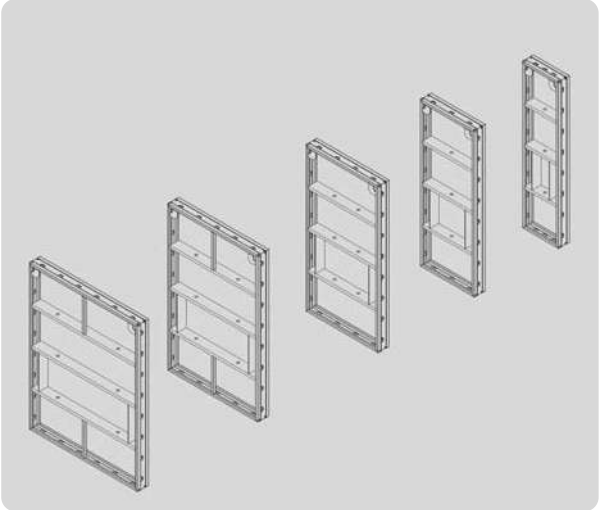
Code	Description	Weight (kg)
15009UDM	1500 x 900 UNIV.	59,60
15075UDM	1500 x 750 UNIV.	47,20



UNI-LITE 1500 CORNERS

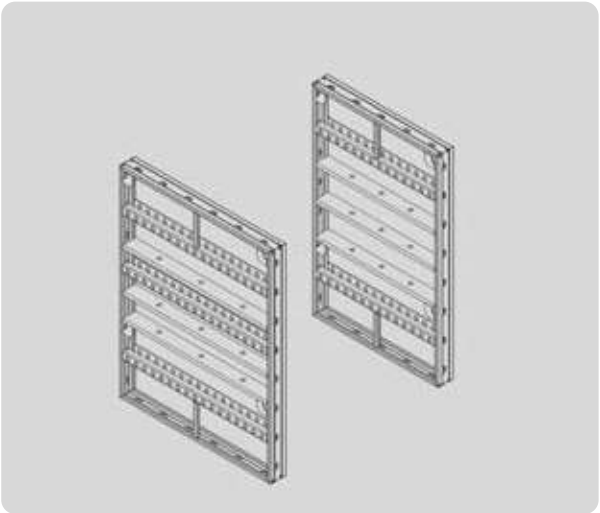
Code	Description	Weight (kg)
AIF150DM	Inside fixed corner H=1500	38,40
AEF150DM	Outside fixed corner H=1500	11,80
AIC150DM	Hinged inside corner H=1500	43,50
AEC150DM	Hinged outside corner H=1500	17,20

UNI-LITE 1200



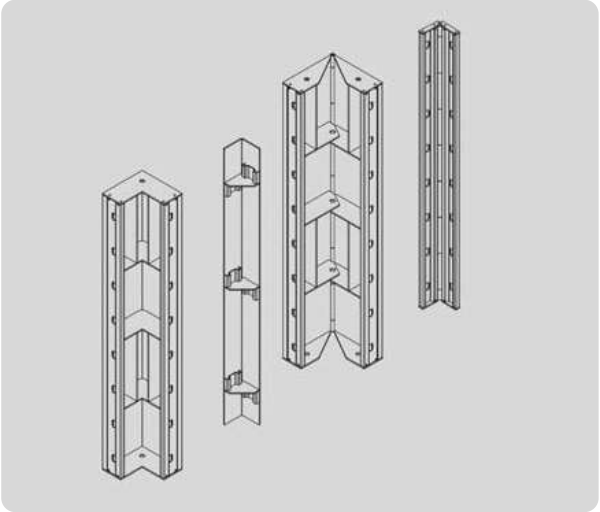
UNI-LITE 1200 PANELS

Code	Description	Weight (kg)
120090DM	1200 x 900	34,30
120075DM	1200 x 750	30,40
120060DM	1200 x 600	26,40
120045DM	1200 x 450	21,90
120030DM	1200 x 300	17,90



UNI-LITE 1200 UNIVERSAL PANELS

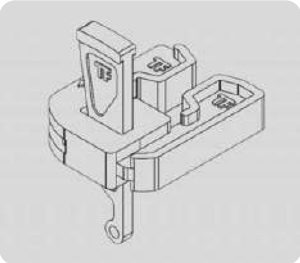
Code	Description	Weight (kg)
12009UDM	1200 x 900 UNIV.	46,90
12075UDM	1200 x 750 UNIV.	36,60



UNI-LITE 1200 CORNERS

Code	Description	Weight (kg)
AIF120DM	Inside fixed corner H=1200	29,80
AEF120DM	Outside fixed corner H=1200	9,70
AIC120DM	Hinged inside corner H=1200	34,80
AEC120DM	Hinged outside corner H=1200	13,70

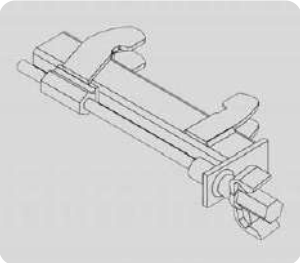
UNI-LITE ACCESSORIES



QUICK ACTING CLAMP

Code	Description	Weight (kg)
CC0008DM	Quick acting clamp	1,25

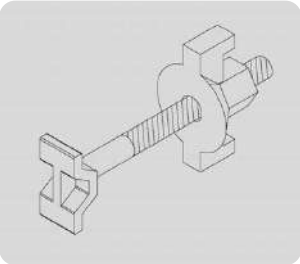
Used to connect adjoining formwork modules and may be placed in any point of border profile, possibly near the stiffeners.



MULTI-FUNCTION CLAMP

Code	Description	Weight (kg)
CC0009DM	Multi-function clamp	4,30

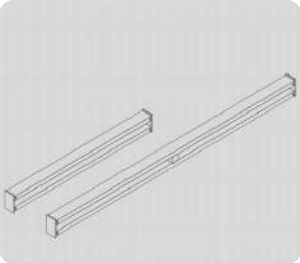
Used to connect formwork modules and to allow compensations up to 15 cm width. May be placed in any point of border frames, possibly near the stiffenings.



UNIVERSAL FIXING BOLT

Code	Description	Weight (kg)
CC0019DM	Universal fixing bolt 160 + Combi wing nut ø60mm	1,10
CC0050DM	Universal fixing bolt 330 + Combi wing nut ø60mm	1,50

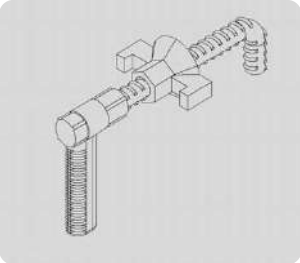
Ties up universal module formwork, 900 and 750 mm, with any other standard module in case of columns and external corners.



UNIVERSAL WALER

Code	Description	Weight (kg)
CC0011DM	Universal waler (L=75 cm)	3,4
CC0012DM	Universal waler (L=130 cm)	5,7

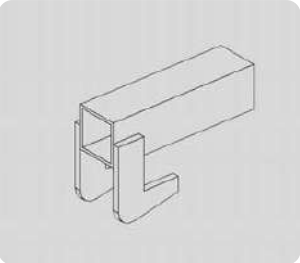
Produced in two sizes and can be used in compensation areas and/or to rigidify the overlapped formwork. Fixed to the formwork with two Universal fixing bolts for waler.



UNIVERSAL FIXING DEVICE FOR WALER

Code	Description	Weight (kg)
CC0016DM	Universal fixing device for waler (L=250 mm)	0,95
CC0017DM	Universal fixing device for waler (L=400 mm)	1,30

Fixes Universal waler and modules of frame formwork; can be joined with trasversal profile.

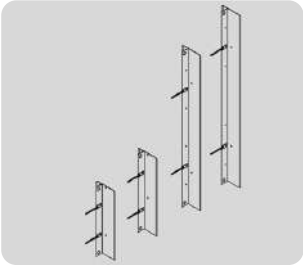


ANCHOR BRACKET

Code	Description	Weight (kg)
CC0024DM	Anchor bracket	0,30

Enables placement of tie rods above the profile edge in any position.

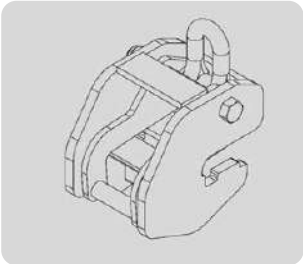
UNI-LITE ACCESSORIES



COMPENSATION SHEETS

Code	Description	Weight (kg)
CC0006DM	Compensation sheet (H=1200)	23,50
CC0039DM	Compensation sheet (H=1500)	25,50
CC0040DM	Compensation sheet (H=2700)	46,50
CC0007DM	Compensation sheet (H=3000)	51,50

Allows compensating the formwork module measures (from 1 to 30 cm) and also enables easier removing operations in closed spaces. Used in conjunction with Universal waler to which it must be fixed. The compensation sheet has appropriate holes planed for the tie rod's passage.

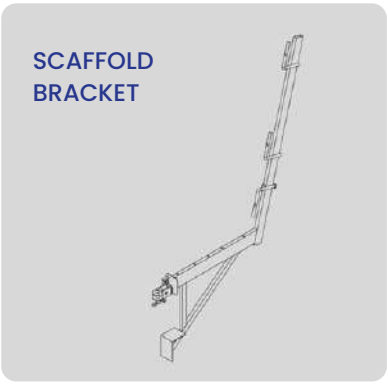


LIFTING HOOK

Code	Description	Weight (kg)
CC0010DM	Lifting hook	7,53

Used for lifting modules. Must be hooked-up with appropriate chain ropes which must not form an angle greater than 60°. Each lifting hook has an admissible load of 1000 kg. The lock system to the border profile of the formwork is auto-lock up. The lifting hook should be placed near the frame stiffenings.

SCAFFOLD BRACKET

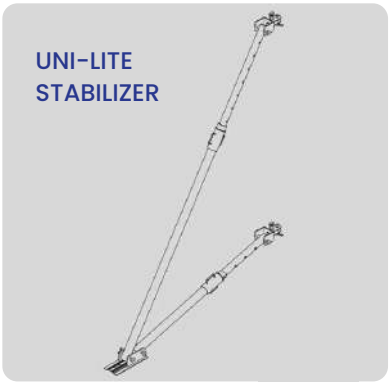


Code	Description	Weight (kg)
CC0022DM	Scaffold Bracket	7,80

Should be used for construction of casting platforms or service platforms. Fixed bracket is joined to the formwork structure with appropriate fixing head. It is recommended to maintain the distance between two brackets not greater than 1,8 meters.

The work platforms should have timber boards in the bottom, in the middle, and on the top of the vertical handrail structure; and the distance shouldn't be larger than 60 cm.

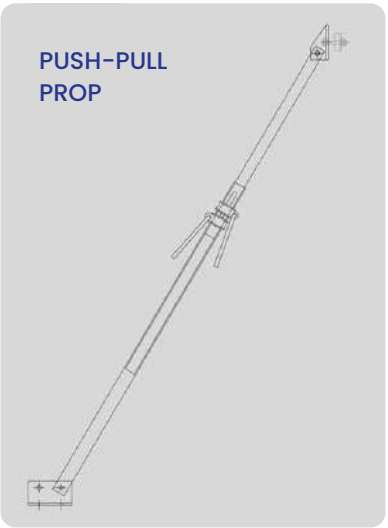
UNI-LITE STABILIZER



Code	Description	Weight (kg)
CC0025DM	Uni-Lite stabilizer (L=340 cm)	36,30

Uni-Lite stabilizers are used for horizontal support of formwork panels and they can reach up to 4.2m in height. A Uni-Lite stabilizer has two telescopic arms; each of which has one prop head which is suitable for anchorage of formwork at any point. The prop shoe must be fixed to the ground for secure placement.

PUSH-PULL PROP



Description	Size (mm)	Mass (kg)
No 1	1 676 - 3 124	23,50
No 2	1 981 - 3 352	20.5
No 3	2 590 - 3 962	22.7
No 4	3 200 - 4 876	26.9
Prop Swivel Foot Assembly		1,5

The push-pull prop has a double collar, which enables the walls and columns to be accurately plumbed. Used on walls and column boxes for speedy erection and ease of alignment.

NOEtop

NOE Panel System

NOE is a versatile, robust and timber-faced panel system which provides a smooth concrete finish.

It is quick and easy to assemble, enabling minimal downtime on site. The basic panels incorporate the strongbacks and walers into one timber faced panel.

THE VERSATILE NOE SYSTEM OFFERS THE FOLLOWING FEATURES:

- Minimal components required in creation of formwork gangform
- Quick and easy to assemble
- 21mm resin faced ply is fastened from the rear of the panel; avoiding concrete face defects
- The panels have cast iron integrated corner blocks; preventing damage to the corners and assisting in positioning of panels
- Easy to fix push-pull stays, clip-on access brackets and multi-claw brackets to facilitate over-the-top tying and fixing of stop-ends
- Toplock H panel connection clamp facilitates up to 150mm of timber strip patching Selection of internal corner panels, external corner angles and flexible corners for < or > 90-degree angles

The NOEtop range comes with a selection of internal corner panels, external corner angles and flexible corners for less or more than 90° angles.

High labour costs on construction sites increasingly require easier and faster formwork systems. The number of components to be assembled and moved determines the shuttering turn around times and therefore the cost of construction. NOEtop uses minimum components to create a formwork gangform, therefore limiting downtime and avoiding the time consuming search for parts.

VERSATILE IN USE

The integrating bracing allows NOEtop to be used as beam formwork.

ROBUST

All panels have corner castings and uniform profile thickness.

NOETOP

Ideal for residential buildings. The greatly reduced number of connectors and accessories results in considerable savings in time and hire costs.

EASE OF HANDLING

Corner castings with integrated lever edge.

FREELY SELECTABLE TIE ROD LAYOUT

Symmetrical or free choice of tie rod layout.

INTERCHANGEABLE

With adjustable internal and external corners.

THREE CONNECTIONS

Toplock V, Toplock H and Multi-Claw.

Secure Self-locking platform brackets attach to side-on and end-on panels.

VERSATILE

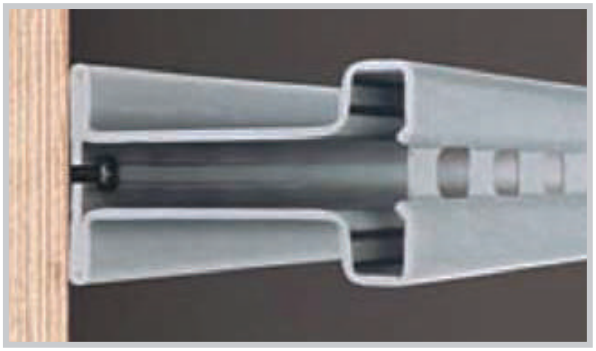
Because of its integrated strongbacks, the NOEtop transforms from a modular large panel system into a large area gangform.

MULTIPLE CHOICE OF TIE POSITIONS

Free choice of symmetrical pre-drilled or free selection of tie holes.

OPTIMAL SIZE MODULE

Symmetrical grid of panel arrangement due to the optimal module of panel sizes (1/4, 1/2, 1/1, 5/4, 2/1), allowing a regular combination of panels either arranged vertically or horizontally.



NO MARKS

Jointless and rivet free plywood facing fastened from the rear.

STANDARDISED

Cross stiffeners provided with grooves and multiholes offering numerous options for the fixing of any accessories and safety equipment.

LONG LIFE

Frames and profiles are hot-dip galvanised both inside and out.

STRONG

Permissible concrete pressure 88kN/m2

EASILY MANOEUVRABLE AND STURDY

Cast iron corners provided with lever grooves. All panels provided with cast iron corner blocks and standardised profile thickness.

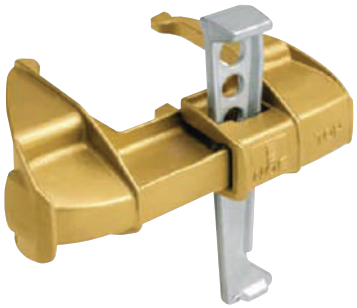
Connections

TOPLOCK V

A unique all-rounder

One single clamp for:

- Standard connections
- Timber infill up to 42mm
- Corners
- Adjustable corners
- Height extensions
- Conventional work

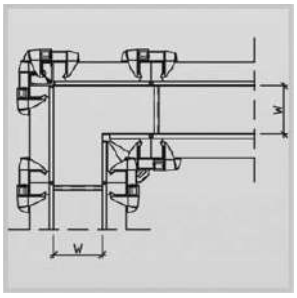


Noe Toplock V

ALTERNATIVE NOE TOPLOCK H

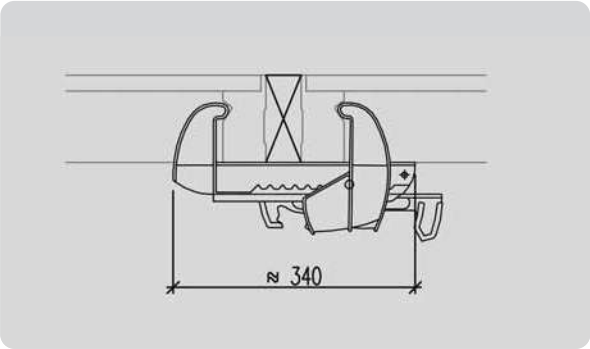
Timber infill up to 150mm timber extensions, panel extensions.

Z=20kN



INDIVIDUAL PARTS OF NOETOP PANELS:

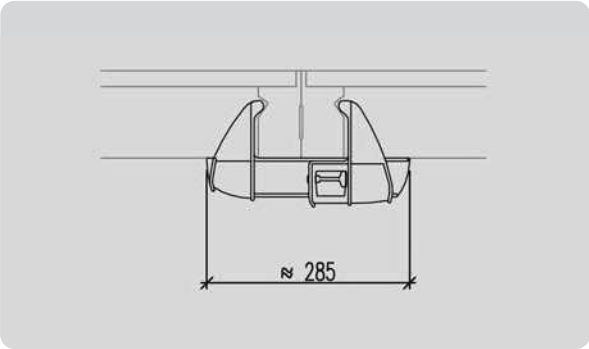
CONNECTIONS



NOE TOPLOCK H

Code	Weight (kg)	Perm. Tension force
137970	4,3	20 kN

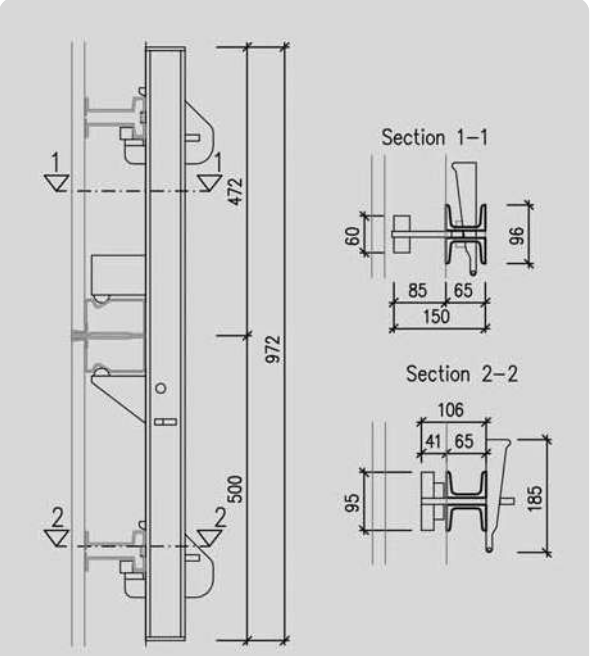
For panel connections and longitudinal compensations up to 100 mm



NOE TOPLOCK V

Code	Weight (kg)	Perm. Tension force
137976	3,7	15 kN

For panel connections and longitudinal compensations up to 42 mm

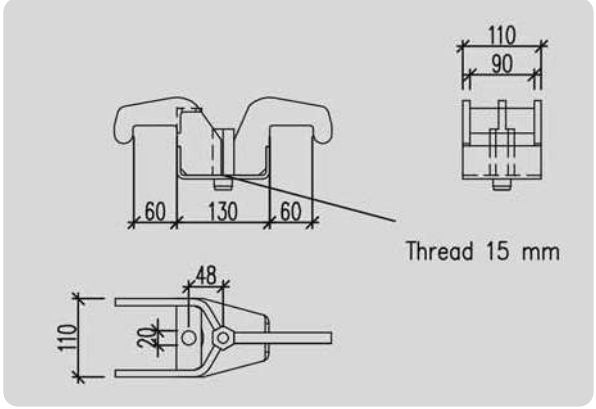


Elevation A: Extensions of end-on panels

ALIGNMENT CLAMP

Code	Weight (kg)
135309	19,9

For extensions of end-on and side-on panels



MULTI-CLAW

Code	Weight (kg)
164030	3,7

For corner connections, stop-ends, tying

Please note: The Uni-Span clamps are aesthetically different to the above.

MULTI-CLAW

Versatile all-purpose claw

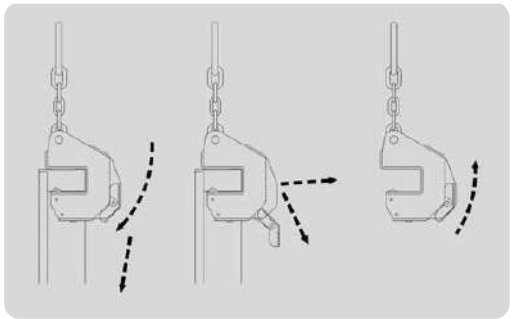
- For external corners
- For rectangular columns
- For tying over panels
- Stop ends

SAFE WORKPLACE

Self-locking walkway brackets can be positioned on either vertically or horizontally placed panel.

SAFE STABILISATION

Easy and safe stabilising of the forms using the NOE push-pull galvanised stabilisers.

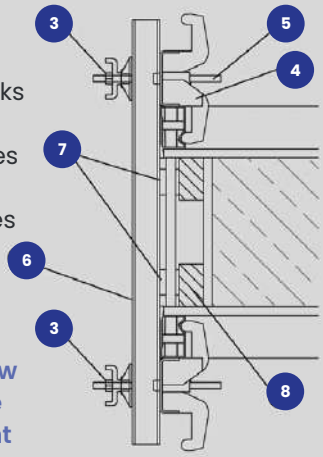


CRANE HOOK

- Certified crane panel lifting hooks for site work.
- Lifting pins for ease of panel stacking.
- On-site or in the yard

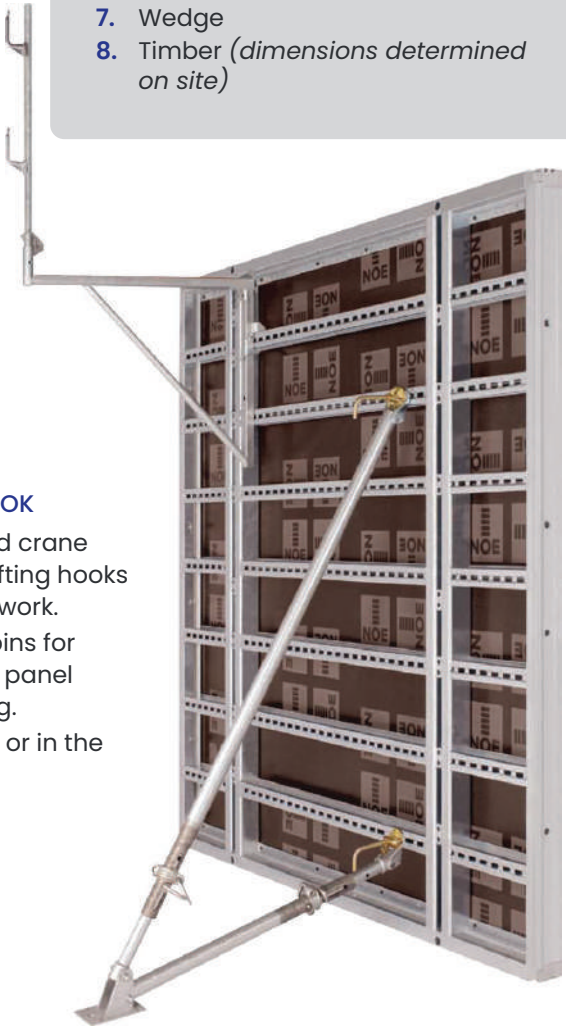
STOP-END FORMWORK

Panels to be clamped with increased numbers of locks as to take the horizontal forces from the stop-end; this applies particularly to smaller sized panels.



With multi-claw on edge profile (not dependent on transverse holes)

1. Connection bolt (Part No. 135019)
2. Wailing plate (Part No. 691500)
3. Swivel plate with wing nut (Part No. 691700)
4. Multi-claw (Part No. 164030)
5. Tie Rod (Part No. 670300)
6. Extension channel (Part No. 135208)
7. Wedge
8. Timber *(dimensions determined on site)*

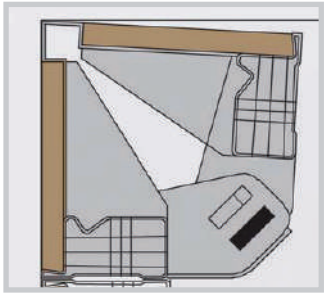


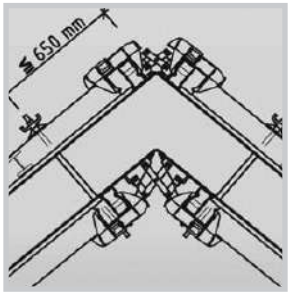
UNIQUE SOLUTIONS FOR CORNERS

Innovative

Smooth running, low maintenance adjusting mechanisms provided to the adjustable internal and external corner angles.

Internal and external adjustable corner panels.





EASY STRIPPING

90° internal corners provided with semi-collapsible flanges for easy stripping.

	Width mm	Height mm	Weight approx. kg	Form surface approx. m²	Part no.
Large panels					
Tie holes drilled and plugged, locations compatible with TOP 2000	5300	2650	932.45	14.05	**168049**
	3310	2650	589.34	8.77	**168033**
	2650	2650	478.63	7.02	**168029**
Tie holes drilled and plugged, locations inside panel	5300	2650	932.45	14.05	**168051**
	3310	2650	589.34	8.77	**168052**
	2650	2650	478.63	7.02	**168053**
Panels					
Panels galva, ply 21 mm **multiholes omega stiffeners**	1325	3310	252.90	4.39	**160065**
	1000	3310	204.90	3.31	**160067**
	750	3310	148.30	2.48	**160068**
	500	3310	112.20	1.66	**160071**
	400	3310	97.90	1.32	**160074**
	250	3310	76.40	0.83	**160075**
Panels galva, ply 21 mm **multiholes omega stiffeners**	1325	2650	205.20	3.51	**168019**
	1000	2650	166.20	2.65	**168209**
	750	2650	119.90	1.99	**168309**
	500	2650	90.60	1.33	**168409**
	400	2650	79.10	1.06	**168909**
	250	2650	61.50	0.66	**168509**
Panels galva, ply 21 mm **multiholes omega stiffeners**	1325	1325	98.60	1.76	**169009**
	1000	1325	79.00	1.33	**169209**
	750	1325	64.00	0.99	**169309**
	500	1325	49.00	0.66	**169409**
	400	1325	43.00	0.53	**169909**
	250	1325	31.50	0.33	**169509**
Panels galva, ply 21 mm **multiholes omega stiffeners**	1325	660	54.00	0.88	**163019**
	1000	660	43.30	0.66	**163209**
	750	660	35.20	0.50	**163309**
	500	660	27.00	0.33	**163409**
	400	600	23.70	0.26	**163909**
	250	660	18.40	0.17	**163509**
Angle solutions					
External corner panel	1000	3310	249.40	3.31	**160076**
	1000	2650	201.40	2.65	**167009**
	1000	1325	95.10	1.33	**167019**
	1000	660	49.90	0.66	**163009**
Internal corner 90°	250/250	3310	103.50	1.66	**160078**
	250/250	2650	86.00	1.33	**167209**
	250/250	1325	52.50	0.66	**167219**
	250/250	660	32.00	0.33	**167249**
External corner bars	110	3310	60.00		**130077**
	110	2650	47.50		**137109**
	110	1325	24.00		**137119**
	110	660	11.00		**137129**
Hinged corner internal	270	3310	140.00	1.79	**164016**
	270	2650	114.00	1.43	**164014**
	270	1325	63.30	0.72	**164012**
	270	660	33.60	0.36	**164010**

	Width mm	Height mm	Weight approx. kg	Form surface approx. m²	Part no.
Hinged corner external		3310	104.00	0.60	**164026**
		2650	79.70	0.48	**164024**
		1325	52.30	0.24	**164022**
		660	28.20	0.12	**164020**
Compensation & fillers					
Filler tubes	50	3310	23.90	0.17	**130095**
	50	2650	18.00	0.13	**137309**
	50	1325	9.00	0.07	**137319**
	50	660	5.40	0.04	**137329**
Compensation steel sheets	300	3310	50.00	1.00	**130096**
	300	2650	42.00	0.80	**137549**
	300	1325	21.00	0.40	**137559**
	300	660	10.00	0.20	**137569**
Stripping panels		3310	111.00	0.83	**130097**
		2650	97.00	0.66	**137751**
		1325	49.00	0.33	**137752**
		660	28.00	0.17	**137753**
Alignment chanel 1400 x 65	1400		20.40		**135210**
Stop-end clamp			10.00		**137830**
Connecting accessories					
Unilock			5.20		**137985**
Hammer-Head Bold with handle			1.09		**319330**
Multikralle			4.00		**164030**
Cross tying plate			2.50		**164040**
Tying chanel 410 x 100	410		10.00		**135109**
Extension chanel 1000 x 65	1000		15.00		**135209**
Safety and shoring equipment					
Self-locking walkway bracket		1000	17.10		**552203**
Stabilisers push pull					
1500 – 3650 mm			25.00		**697021**
3000 – 5000 mm			42.00		**697022**
5950 – 8700 mm			108.00		**697017**
Transport items					
Crane hook			7.40		**135903**
Carrying pin with trap			0.66		**136808**
NOE box			87.00		**697598**
Steel stressing strip			0,40/m		**108029**
Plug for panel tie hole SFL 30	Ø 26		0,50/pack		**693409**
Plug for EC-panel tie hole ST 26	Ø 26		0,75/pack		**693600**

PLEASE NOTE:

NOT ALL ITEMS IN THE ABOVE TABLES ARE AVAILABLE IN SOUTH AFRICA, INCLUDING 3310 PANELS.

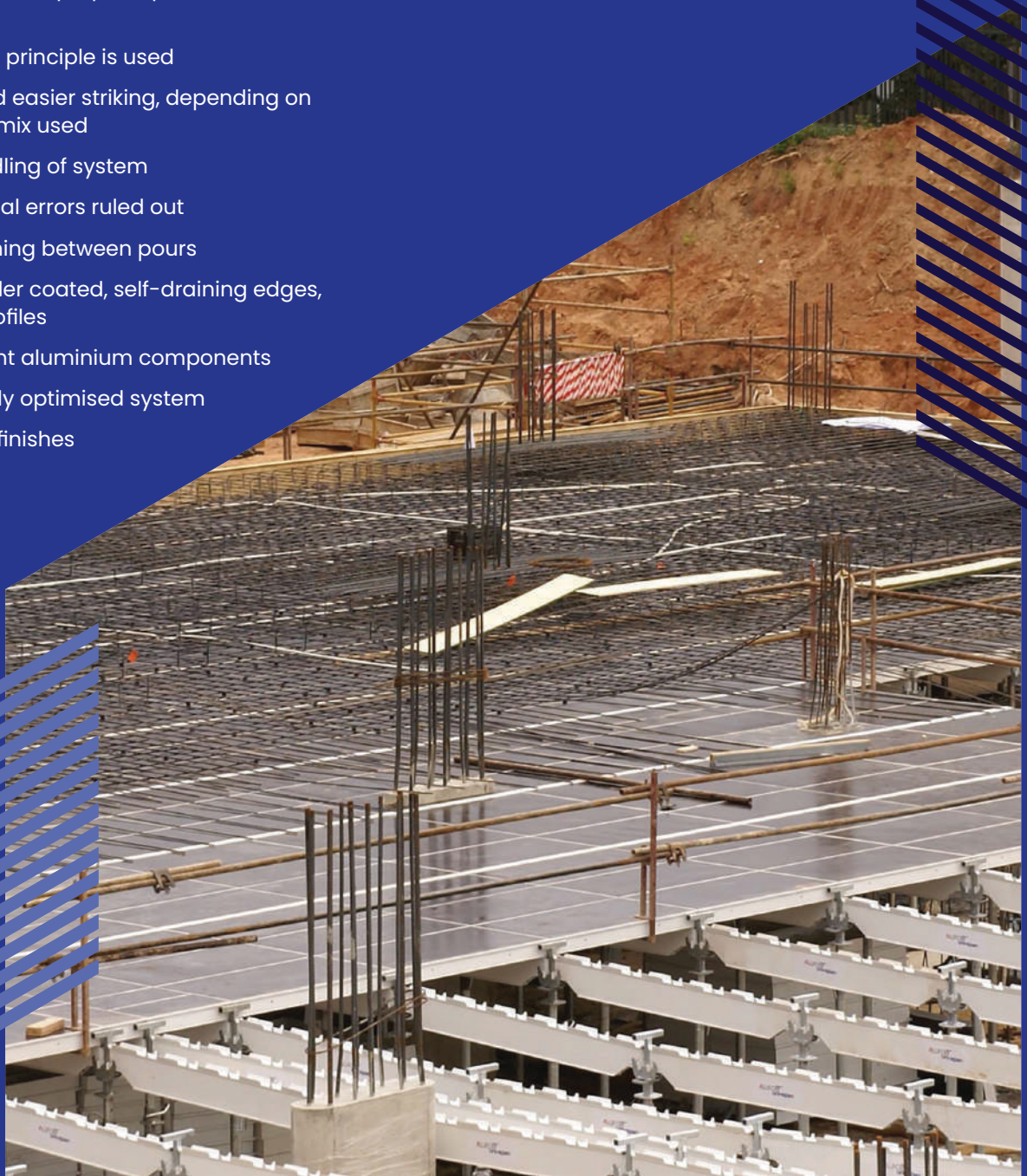
Uni-MF

The Alufort slab support system comprises of a series of props, with a drophead which supports a system of aluminium beams and panels. Alufort is a lightweight system that can easily be manhandled.

Alufort is an adaptable system which is hugely beneficial when changes occur in layouts or canitlever areas, or when any other permutations on site are encountered.

THIS VERSATILE ALUFORT SYSTEM OFFERS THE FOLLOWING FEATURES:

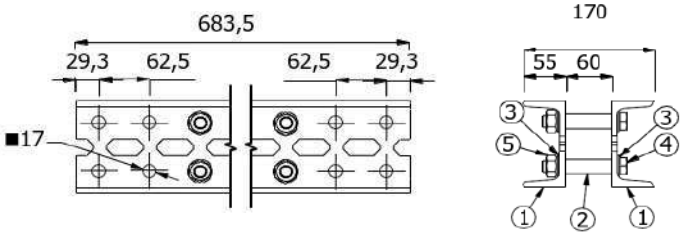
- Reduced no. of props required due to main beams
- Drophead principle is used
- Earlier and easier striking, depending on concrete mix used
- Easy handling of system
- Operational errors ruled out
- Less cleaning between pours
- ECC powder coated, self-draining edges, plastic profiles
- Lightweight aluminium components
- Structurally optimised system
- Accurate finishes

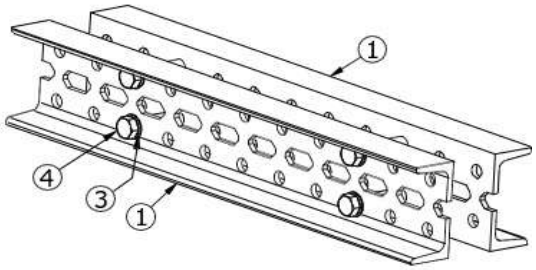


Components

UNI-MF WALERS

Length	Weight
433.5mm	10.4
683.5mm	16.4
933.5mm	22.24
1183.5mm	29.2
1433.5mm	35.22
1683.5mm	41.22
1933.5mm	47.24
2433.5mm	59.5
2933.5mm	71.54
3433.5mm	83.79
3933.5mm	95.81
4433.5mm	108.06
4933.5mm	120.36
5433.5mm	130.6

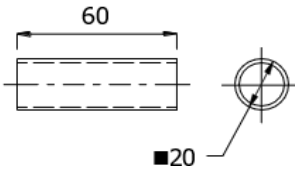




Item	Qty	Description
1	2	Uni-MF Waler 0683 mm
2	4	Uni-MF Spacer Tube
3	8	M16 Washer
4	4	M16 X 100 Hex Head Bolt
5	4	M16 Hex Nut

M Rd = 20 KN.m (SWL)
Q Rd = 132KN (SWL)
Self-weight = 26 kg/m

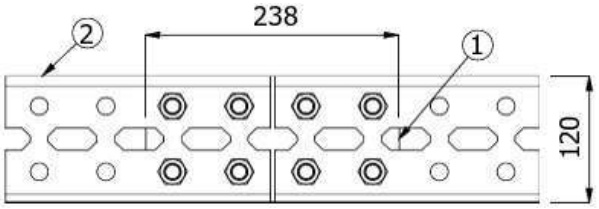
***NOTE**: the above values are maximal and cannot be combined.*

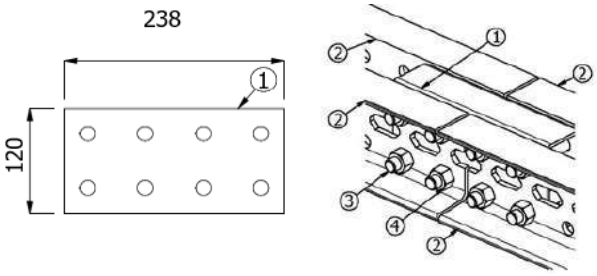


UNI-MF SPACER TUBE
Self-weight = 0.04 kg

UNI-MF MF1 BEAM JUNCTION 4mm LD

4mm THICK PLATE
M Rd = 6,1 kN.m (SWL) with slip 2,5°
V Rd = 69,3 kN (SWL)
Self-weight = 2.09 kg

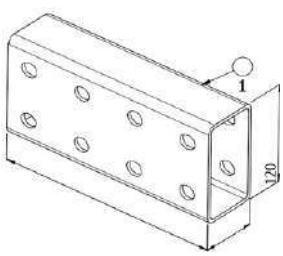


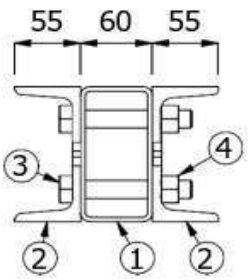


UNI-MF HD BEAM JUNCTION 8mm HD

8mm THICK PLATE
M Rd = 10.5 kN.m (SWL) with slip 2,5°
V Rd = 138.7 kN (SWL)
Self-weight = 4.0 kg

Item	Qty	Description
1	1	Uni-MF MF1 Beam Junction 4mm LD
2	4	Uni-MF Waler 0683 mm
3	8	Bolt_Hex Hd -M16 x 100
4	8	Nut_Hex Hd -M16

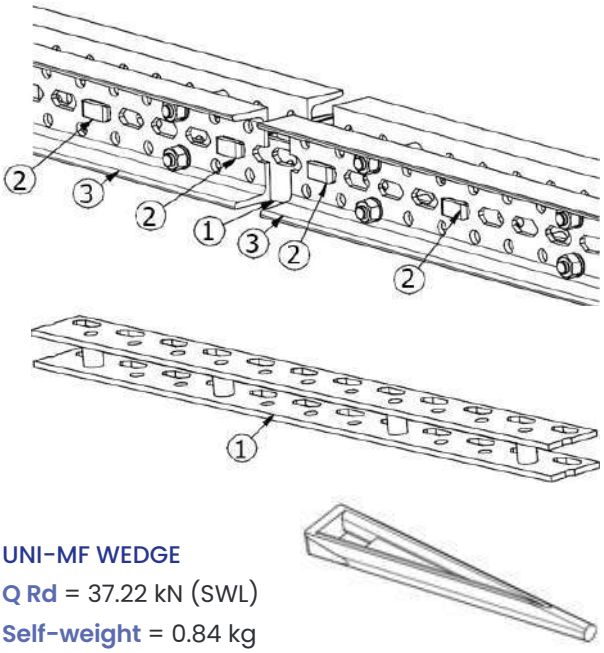




UNI-MF STRAIGHT COUPLER

1000mm

Self-weight = 10.65 kg



UNI-MF WEDGE

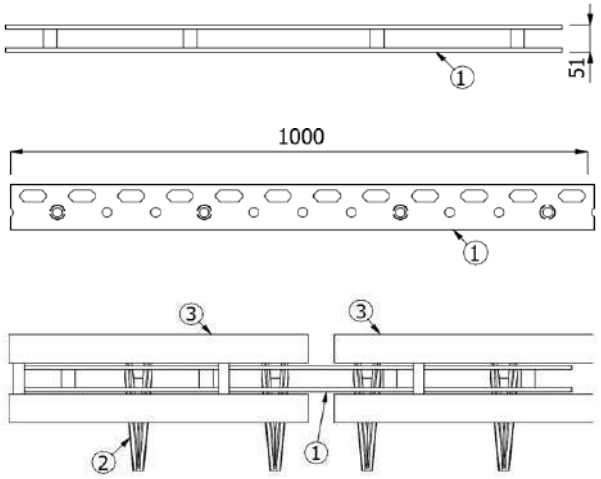
Q Rd = 37.22 kN (SWL)

Self-weight = 0.84 kg

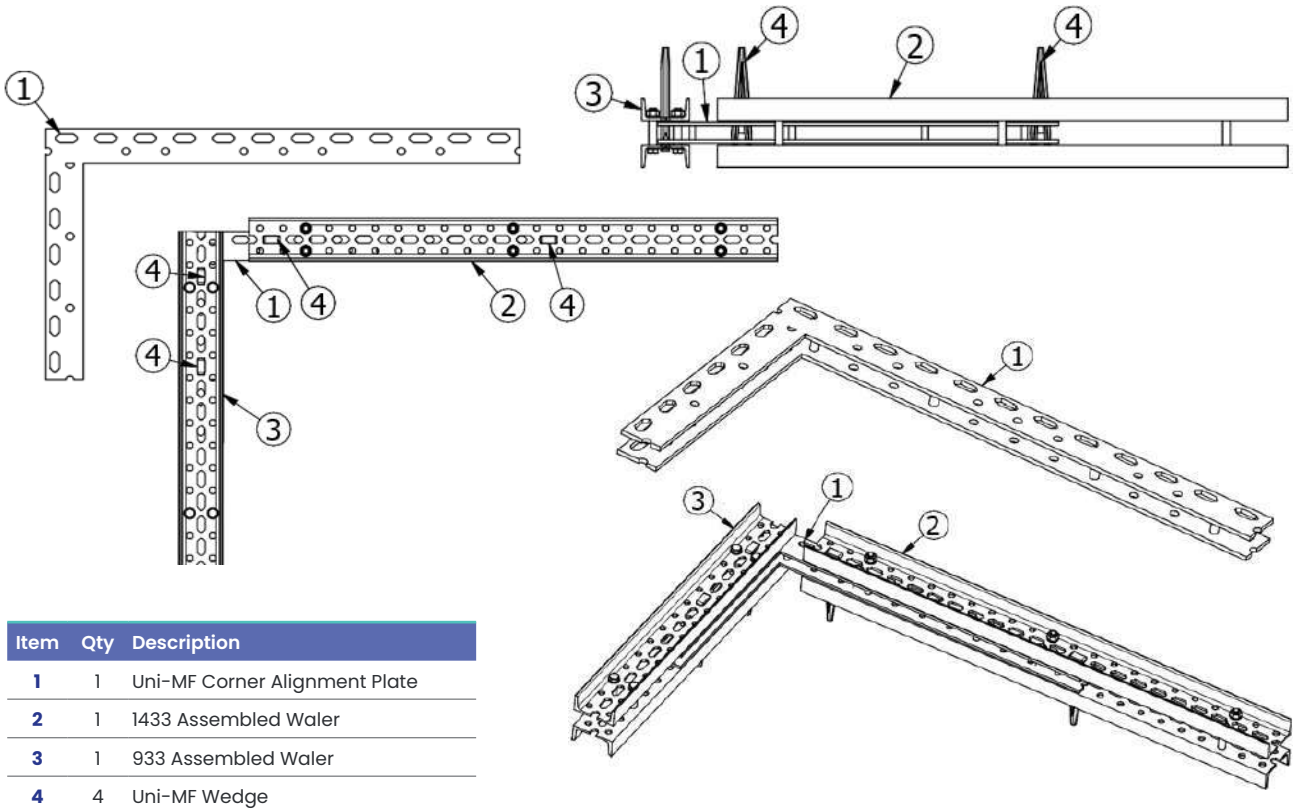
UNI-MF STRAIGHT COUPLER 1500MM

Self-weight = 16.01 kg

Item	Qty	Description
1	1	Uni-M Straight Coupler 1000 mm
2	4	Uni-MF Wedge
3	2	683 Assembled Waler



UNI-MF CORNER ALIGNMENT PLATE



Item	Qty	Description
1	1	Uni-MF Corner Alignment Plate
2	1	1433 Assembled Waler
3	1	933 Assembled Waler
4	4	Uni-MF Wedge

UNI-MF CORNER JUNCTION

RIGIDITY MEMBER COMPRESSED

M Rd = 6.37 kN.m (SWL)

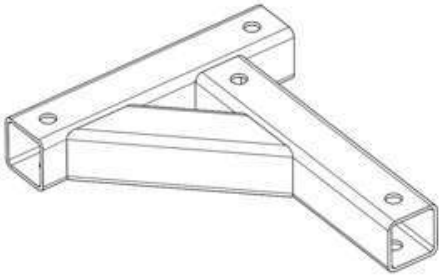
Q Rd = 43 kN (SWL)

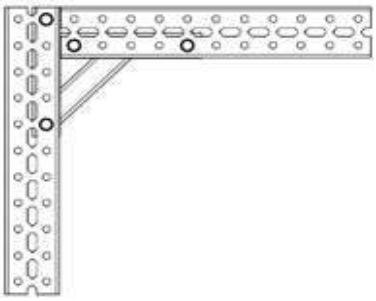
Self-weight = 5.67 kg

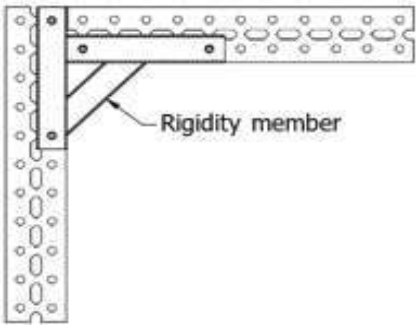
RIGIDITY MEMBER PULLED

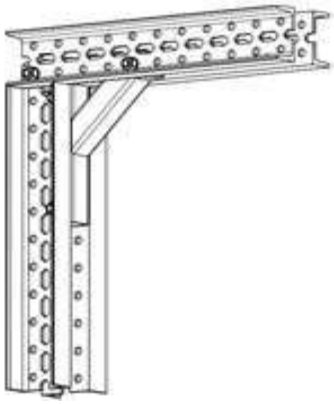
M Rd = 5.89 kN.m (SWL)

Q Rd = 39.73 kN (SWL)





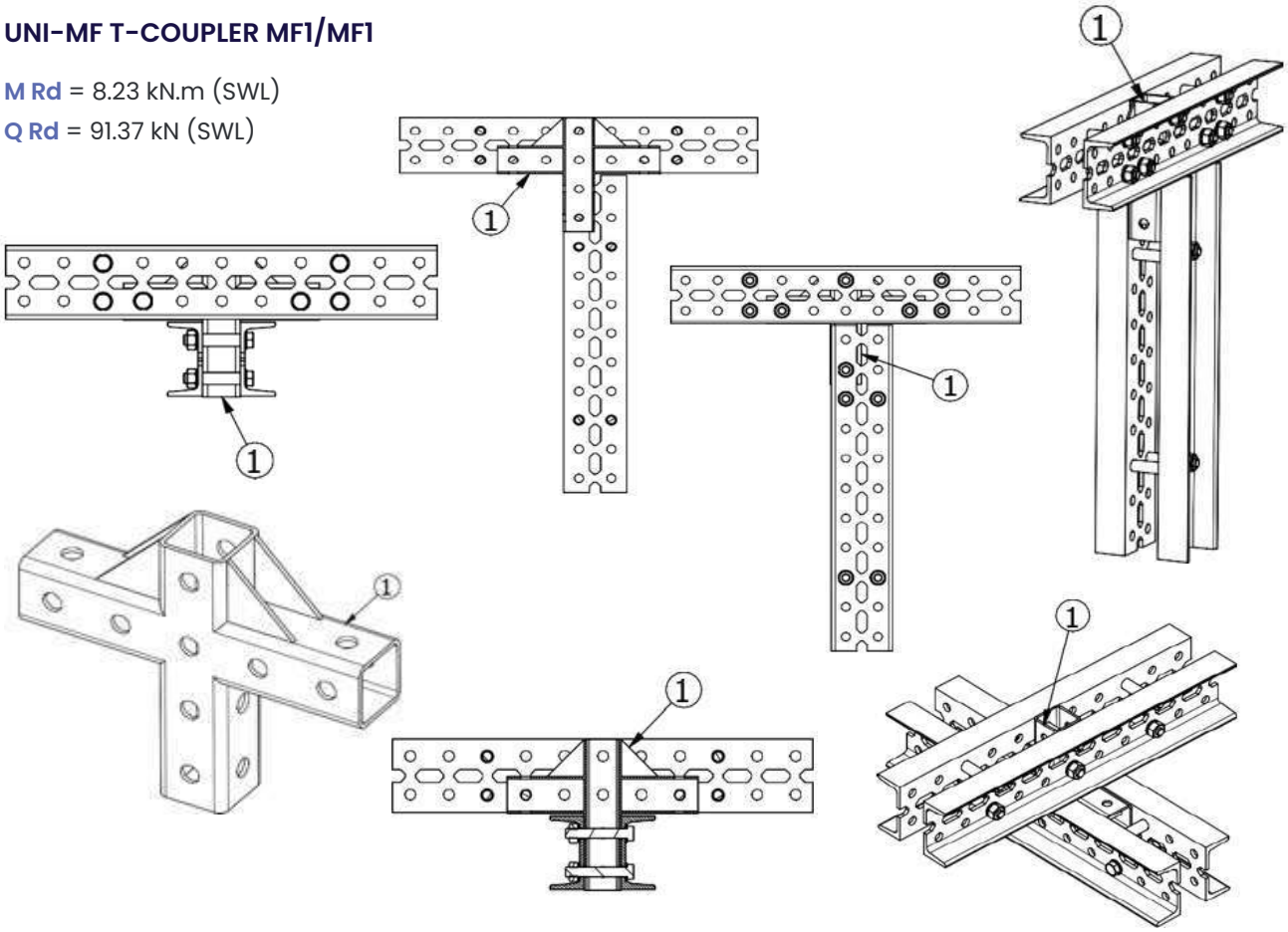




UNI-MF T-COUPLER MF1/MF1

M Rd = 8.23 kN.m (SWL)

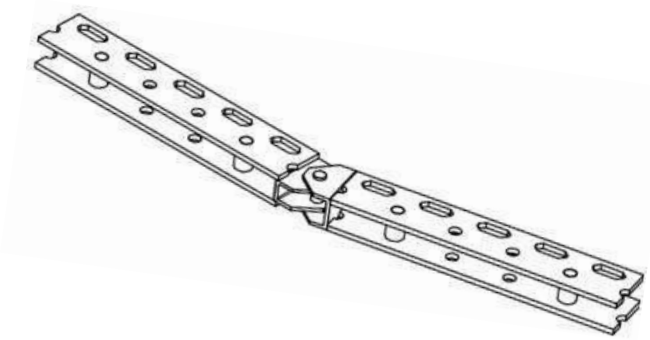
Q Rd = 91.37 kN (SWL)



UNI-MF HINGED COUPLER

UNIVERSAL TYPE

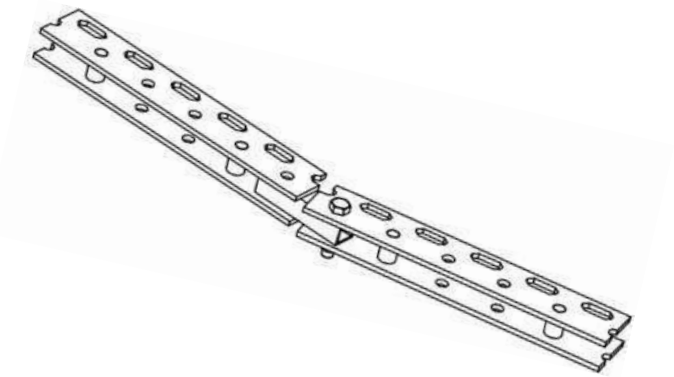
Self-weight = 12.26 kg



UNI-MF STRAIGHT COUPLER

1500mm

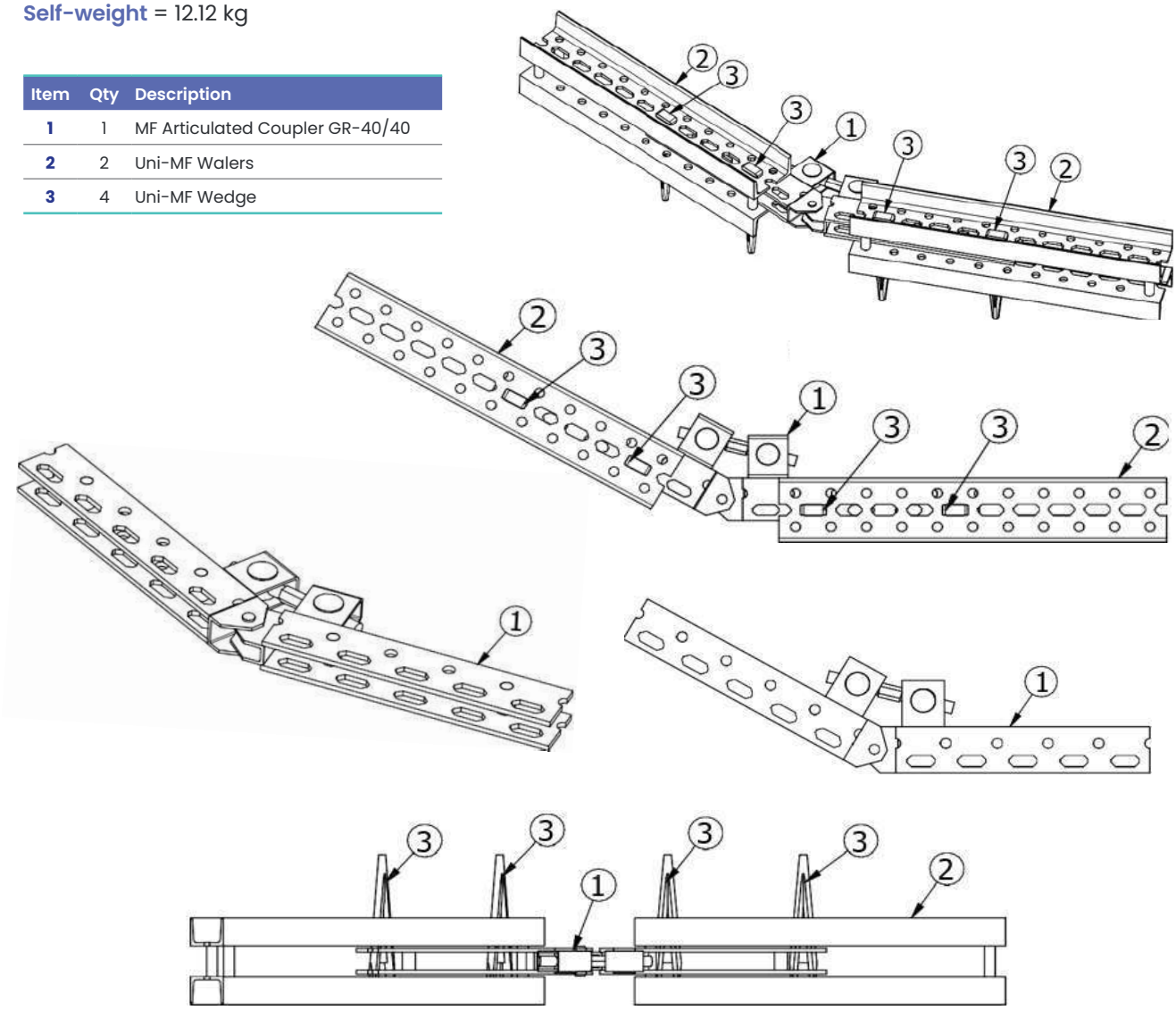
Self-weight = 12.26 kg



UNI-MF ARTICULATED COUPLER GR 40-40

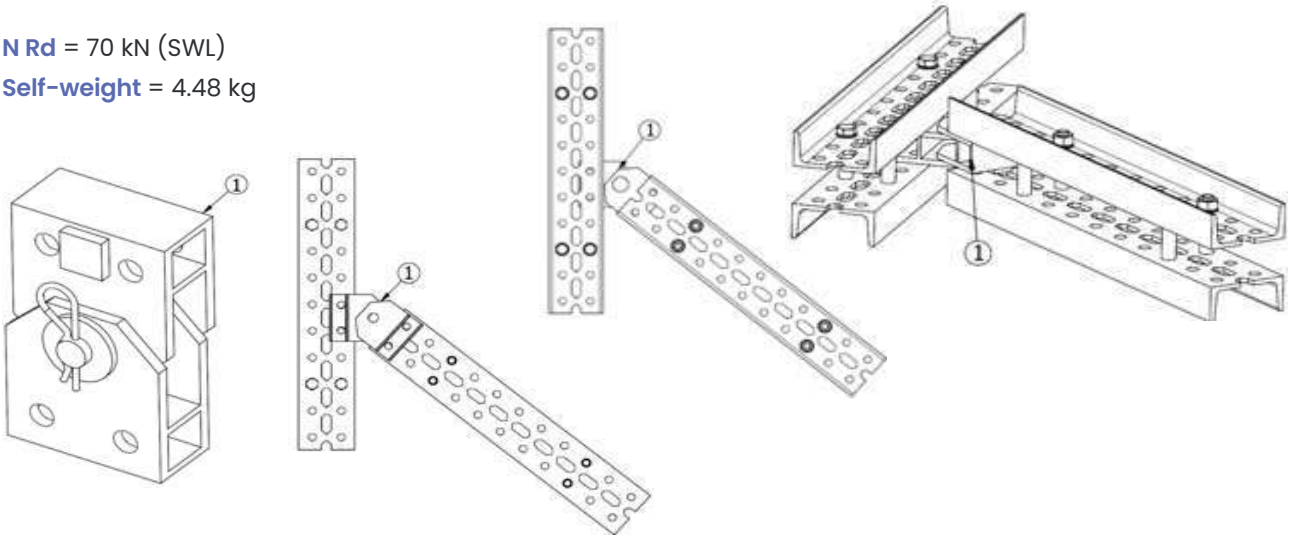
Self-weight = 12.12 kg

Item	Qty	Description
1	1	MF Articulated Coupler GR-40/40
2	2	Uni-MF Walers
3	4	Uni-MF Wedge



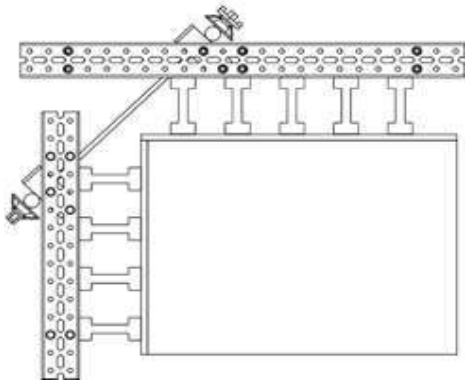
UNI-MF UNIVERSAL HINGE

N Rd = 70 kN (SWL)
Self-weight = 4.48 kg



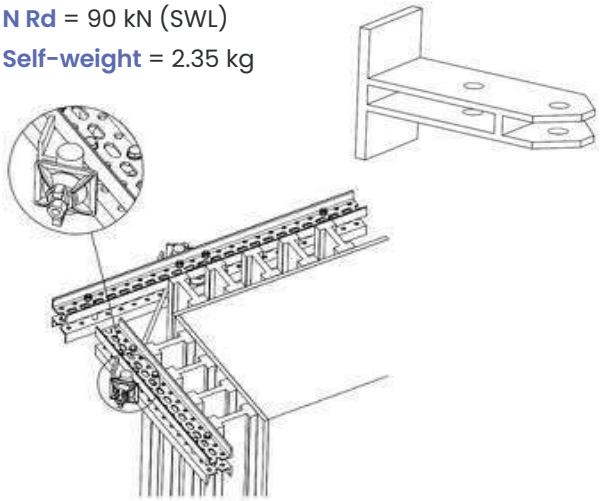
UNI-MF CORNER TIE YOKE

N Rd = 90 kN (SWL)
Self-weight = 2.60 kg



UNI-MF CORNER TIE YOKE NARROW

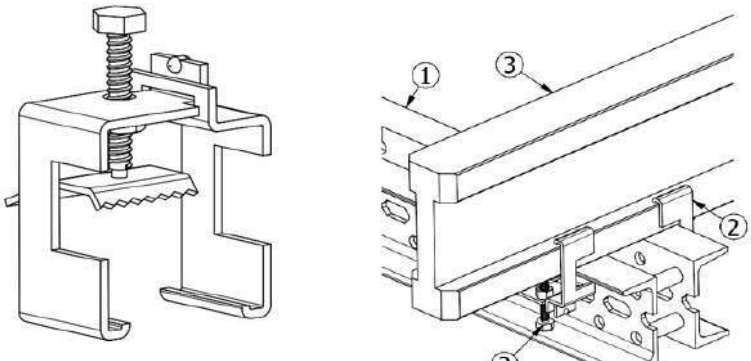
N Rd = 90 kN (SWL)
Self-weight = 2.35 kg

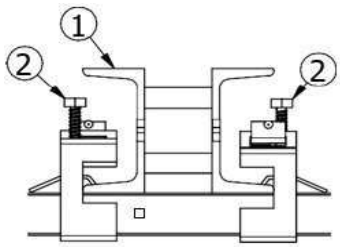


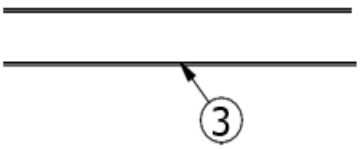
UNI-MF HT20 WALER CLAMP

Self-weight = 0.55 kg

Item	Qty	Description
1	1	MF Articulated Coupler GR-40/40
2	2	Uni-MF Walers
3	4	Uni-MF Wedge

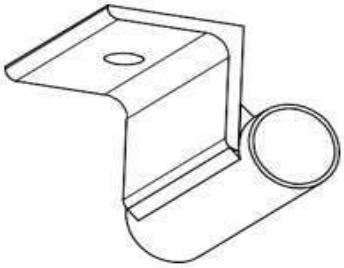


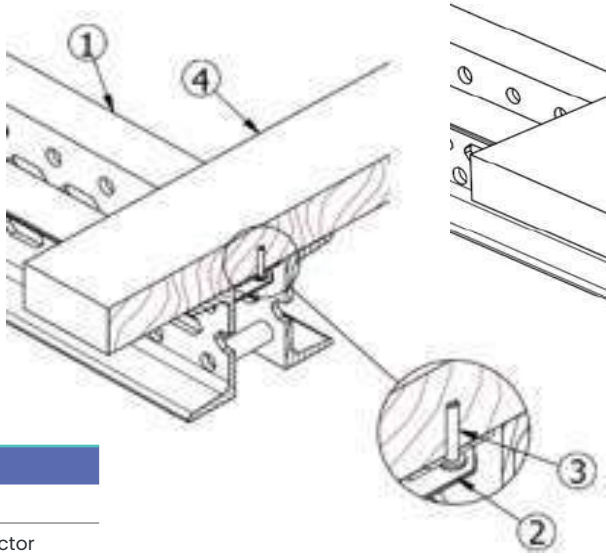


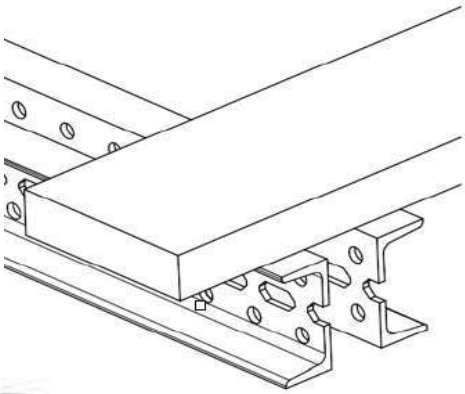


UNI-MF SPACER BOLT CONNECTOR

Self-weight = 0.101 kg



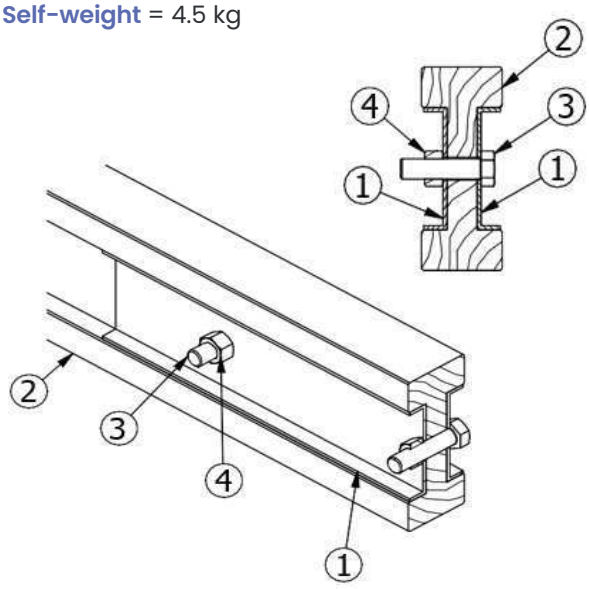




Item	Qty	Description
1	1	Uni-MF Walers
2	1	Uni-MF Spacer Bolt Connector
3	1	M6 x 30 Torque Screw
4	1	Scaffold Plank

UNI-MF HT20 EXTENSION BUTT STRAP

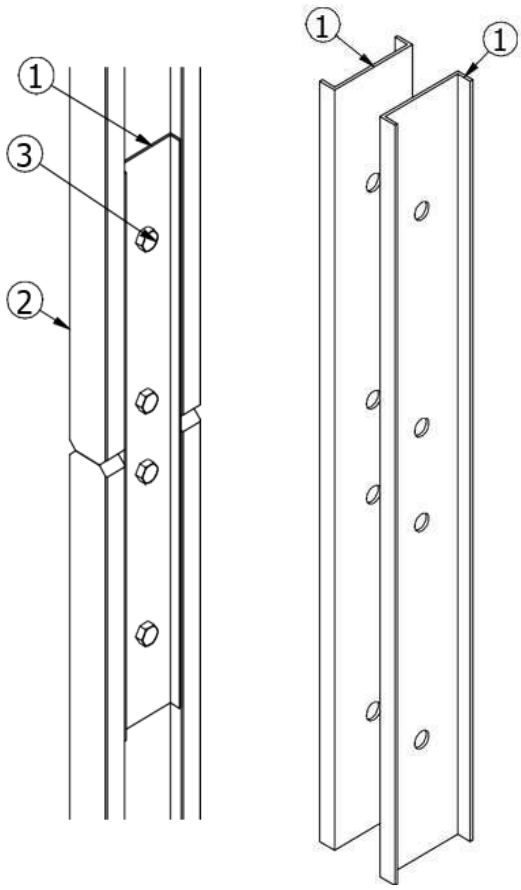
Self-weight = 4.5 kg



Item	Qty	Description
1	2	HT20 Extension Butt Strap
2	2	HT20 Timber Beam
3	4	Bolt M20 x 80
4	4	Nut M20

BOLT M20 X 80 WITH NUT 4.6

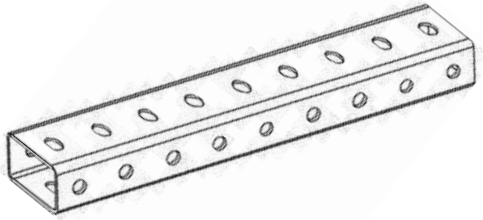
Self-weight = 0.3 kg



MF RHS MODULAR 60X60X3

Self-weight = 4.81 kg

Length	N (SWL)	Weight
558,5 mm	62.82	2.69
871,0 mm	61.55	4.19
1183,5 mm	59.01	5.70
1496,0 mm	55.20	7.20
1808,5 mm	49.49	8.69
2121,0 mm	41.88	10.20



UNI-MF STABILIZER SPINDLE 60 kN

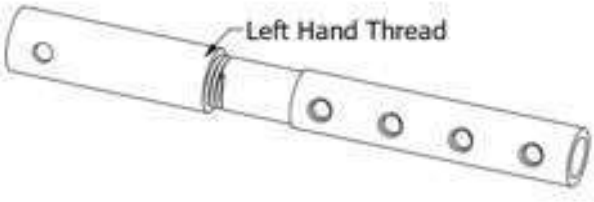
RIGHT & LEFT

Self-weight = 3.40 kg

Q Rd = 60 kN (SWL)

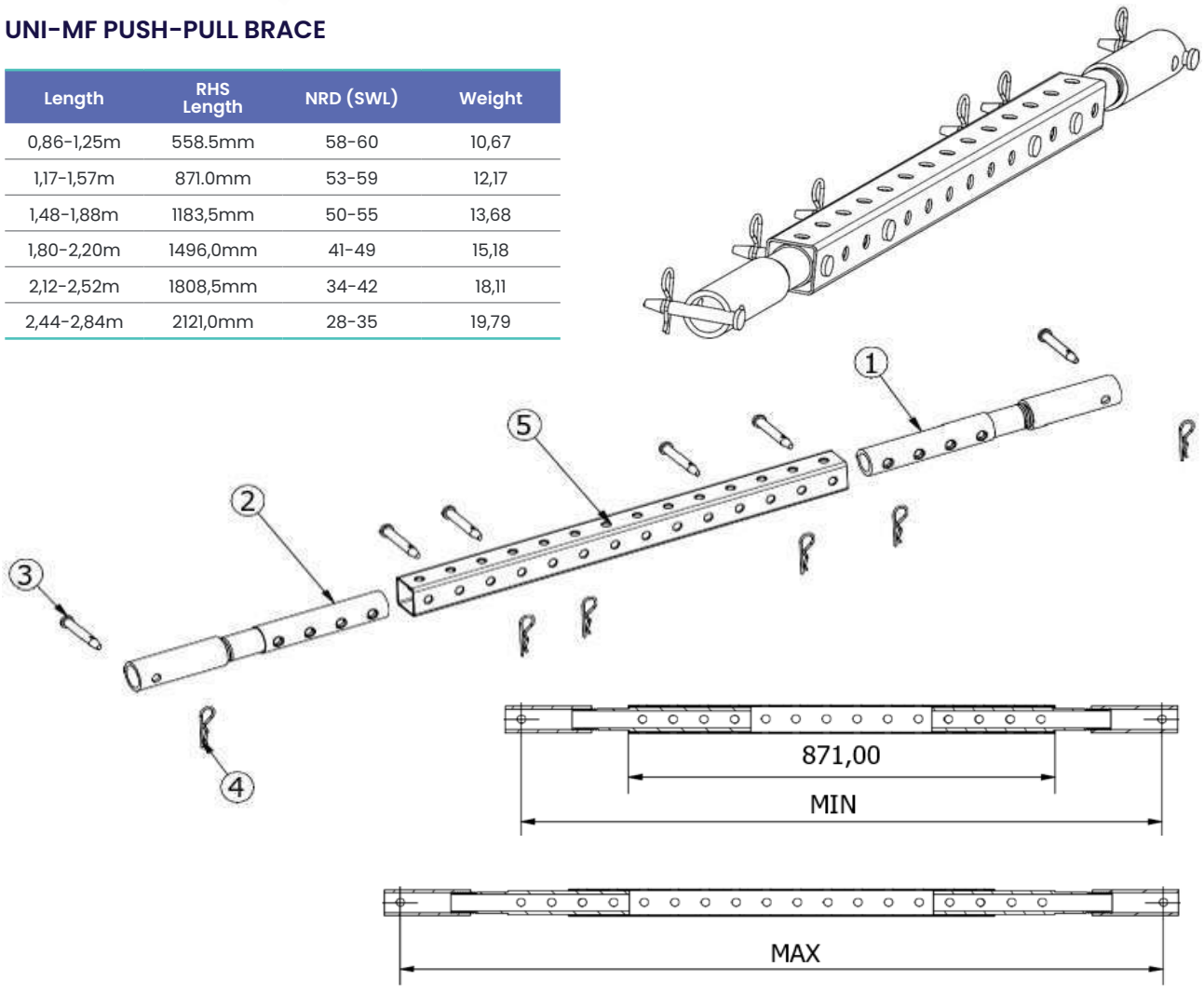
UNI-MF STABILIZER SPINDLE 60 kN

LEFT



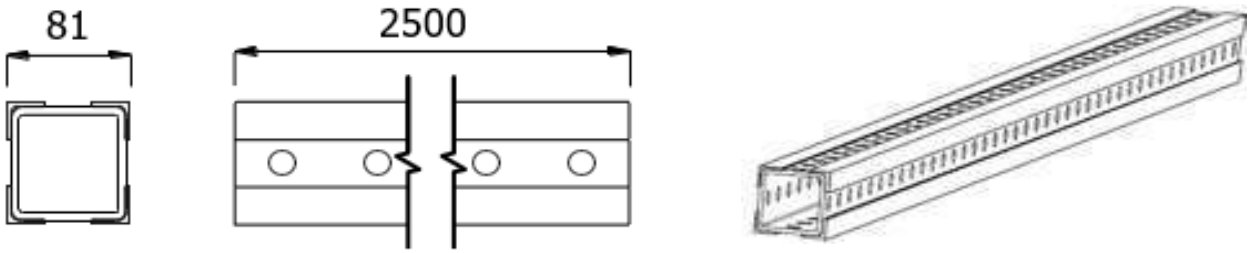
UNI-MF PUSH-PULL BRACE

Length	RHS Length	NRD (SWL)	Weight
0,86-1,25m	558.5mm	58-60	10,67
1,17-1,57m	871.0mm	53-59	12,17
1,48-1,88m	1183,5mm	50-55	13,68
1,80-2,20m	1496,0mm	41-49	15,18
2,12-2,52m	1808,5mm	34-42	18,11
2,44-2,84m	2121,0mm	28-35	19,79



UNI-MF DECK PROP TYPE 2

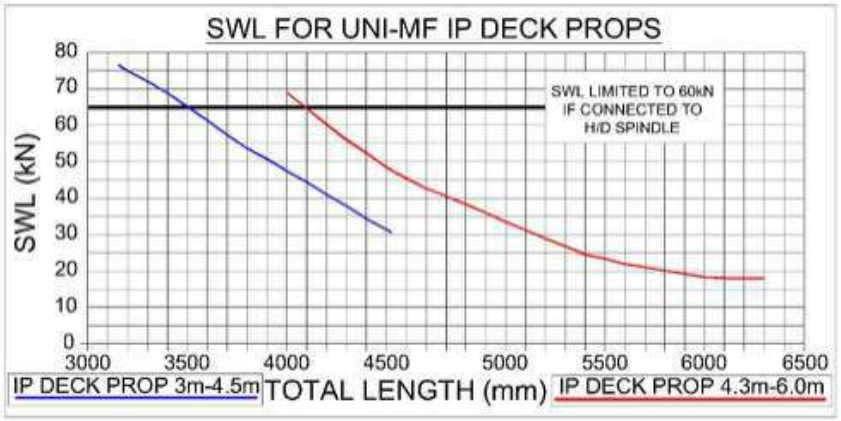
Self-weight = 36.4 kg

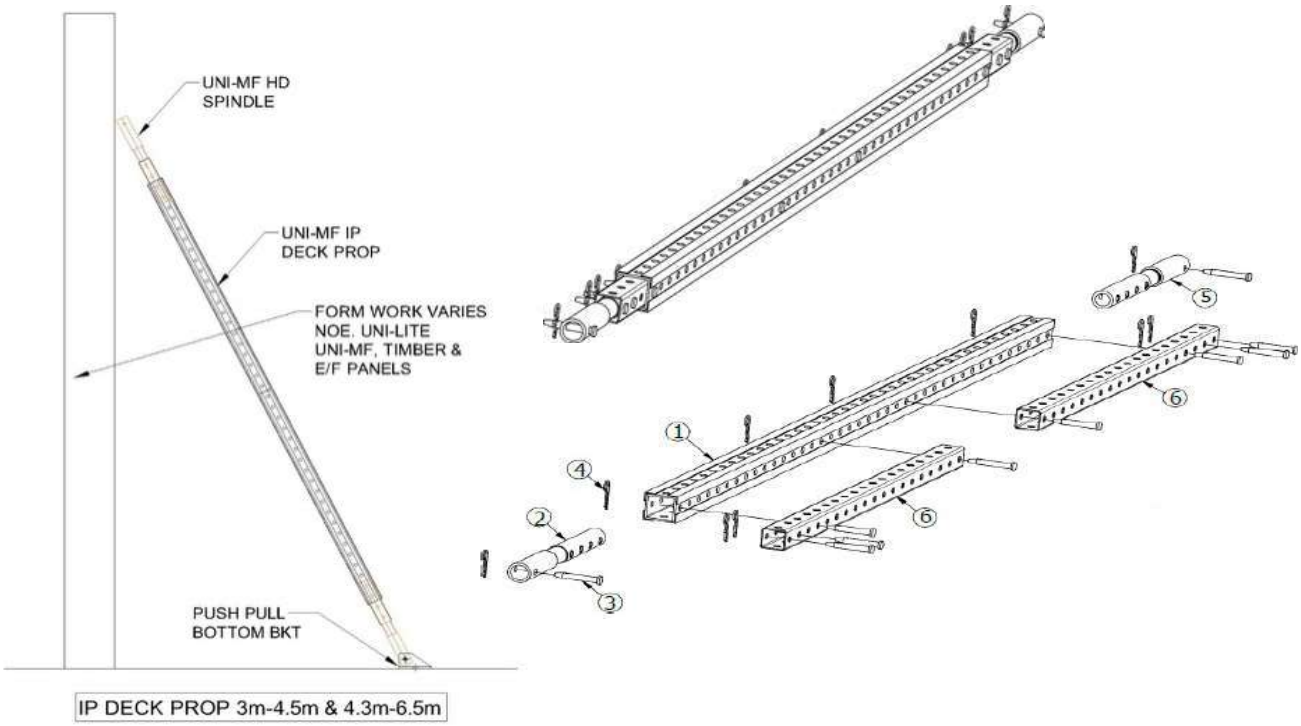


UNI-MF PUSH PULL BRACE

3.1m - 4.5m
4.3m - 6.5m

Item	Qty	Description
1	1	Uni-MF Deck Prop Type 2
2	1	MF Stabilizer Spindle 60 kN - Left
3	10	Pin D=16mm L=100mm
4	10	Safety R-Pin D=16mm DIN 11024
5	1	MF Stabilizer Spindle 60 kN - Right
6	2	Uni-M RHS Modular 60 x 60 x 3

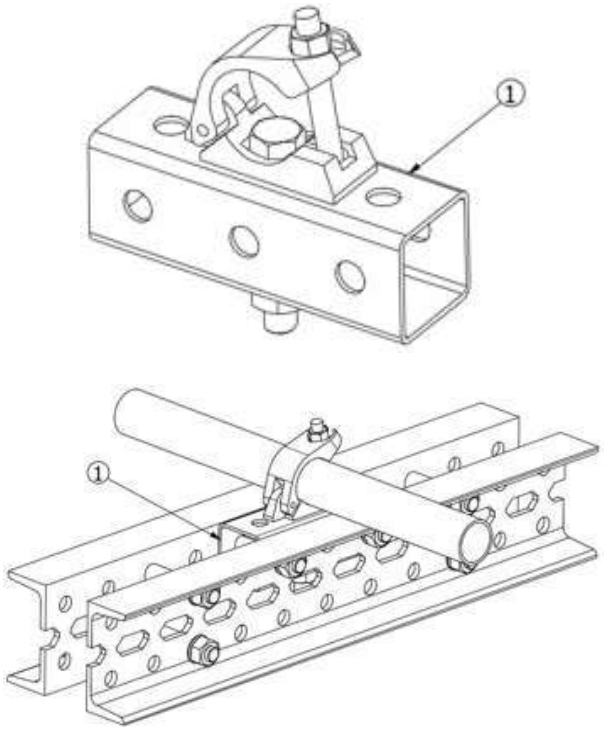




IP DECK PROP 3m-4.5m & 4.3m-6.5m

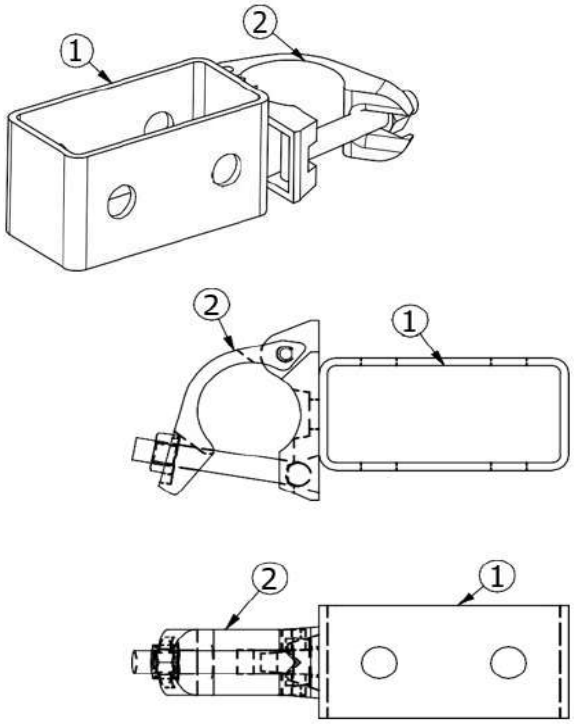
UNI-MF CONNECTOR FOR TUBE

Self-weight = 1.78 kg



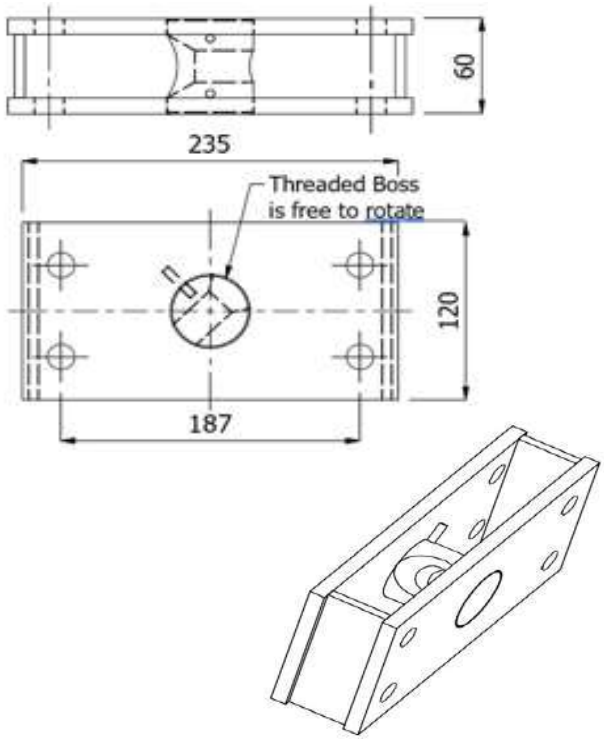
UNI-MF HALF COUPLER BRACKET

Self-weight = 0.7 kg



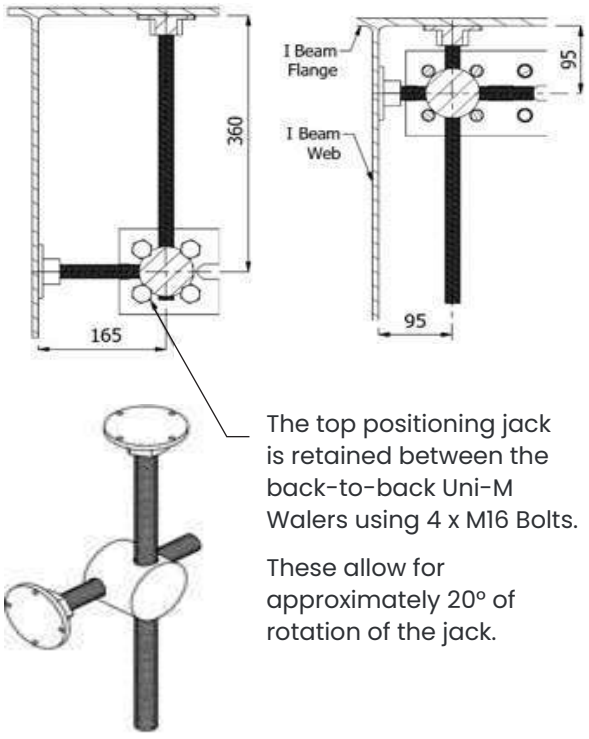
UNI-MF MULTI DIRECTIONAL TIE BRACKET

Self-weight = 5.32 kg



UNI-MF TOP POSITIONING JACK

Self-weight = 3.66 kg

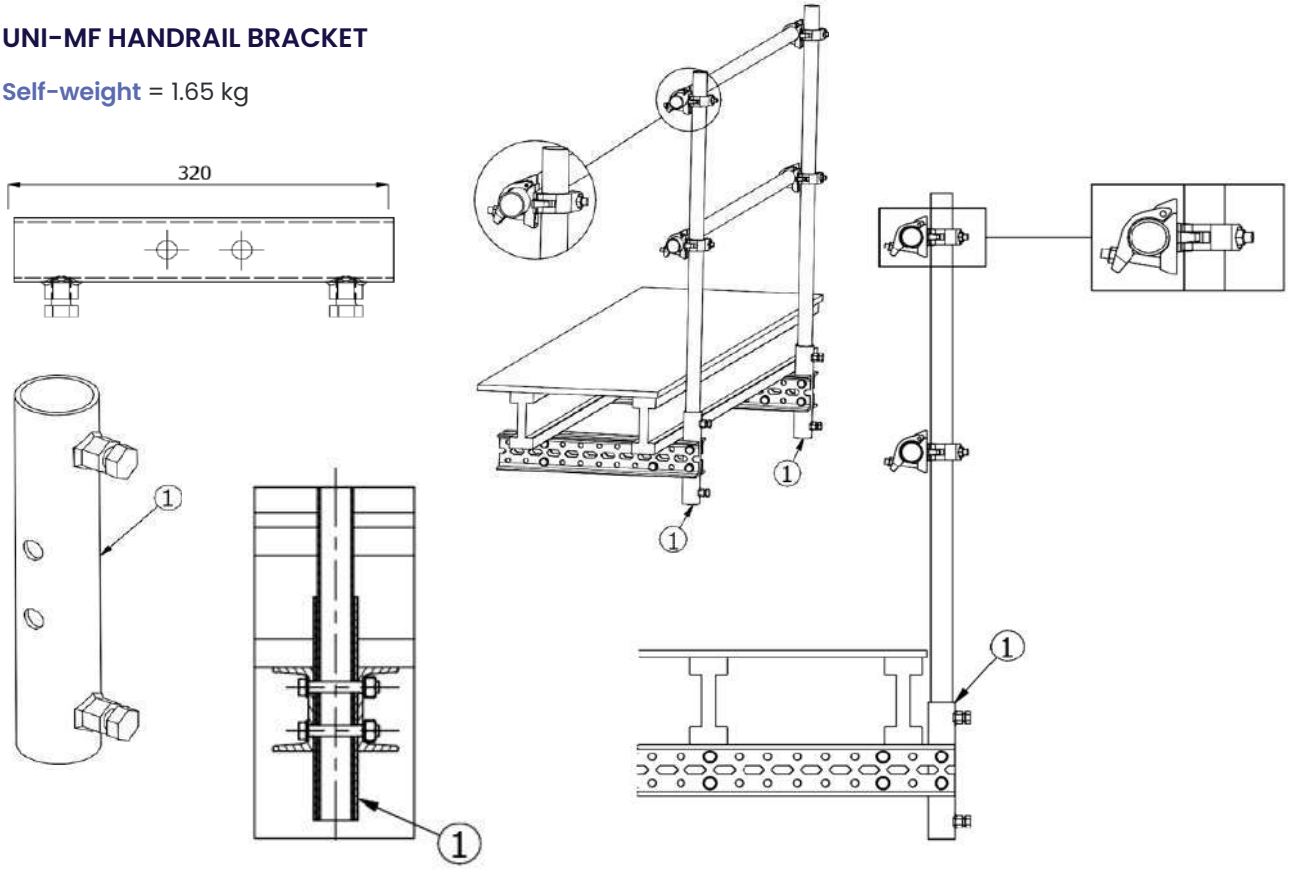


The top positioning jack is retained between the back-to-back Uni-M Walers using 4 x M16 Bolts.

These allow for approximately 20° of rotation of the jack.

UNI-MF HANDRAIL BRACKET

Self-weight = 1.65 kg

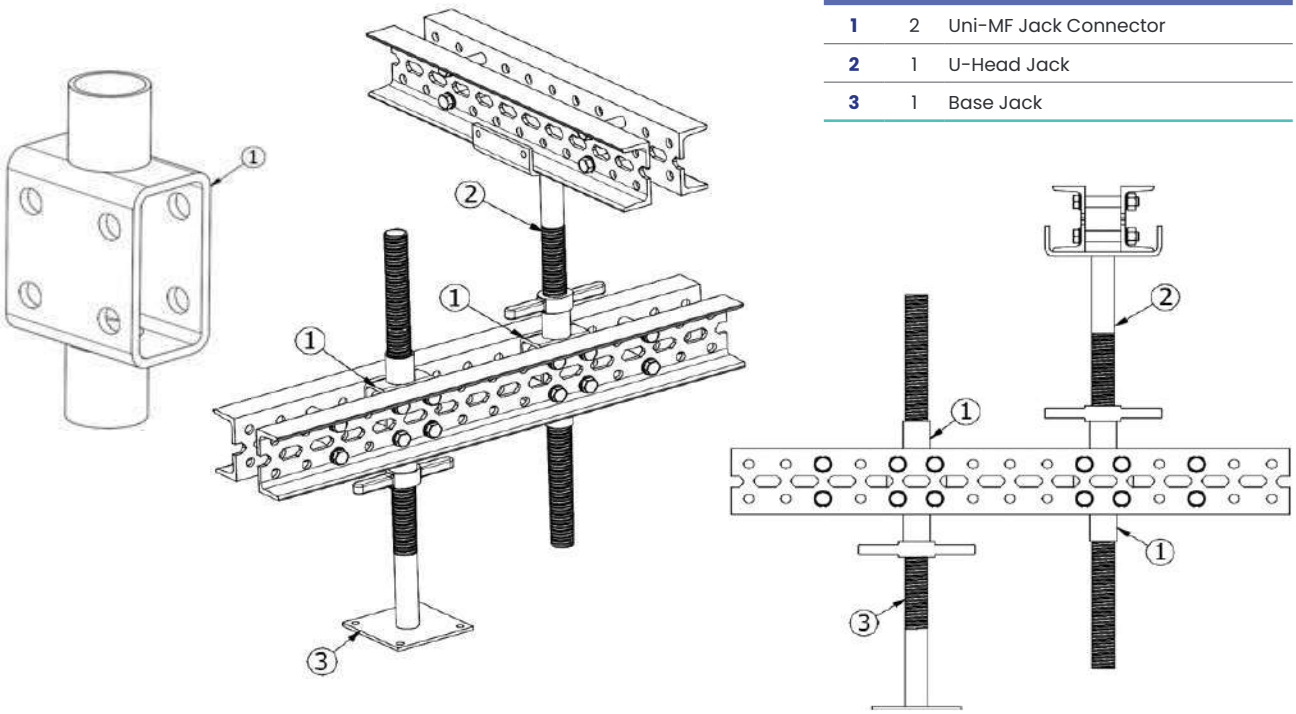


UNI-MF JACK CONNECTOR

N Rd = 70 kN (SWL)

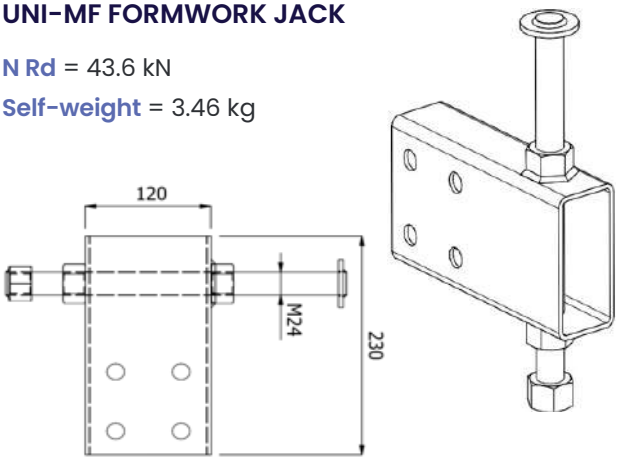
Self-weight = 1.65 kg

Item	Qty	Description
1	2	Uni-MF Jack Connector
2	1	U-Head Jack
3	1	Base Jack



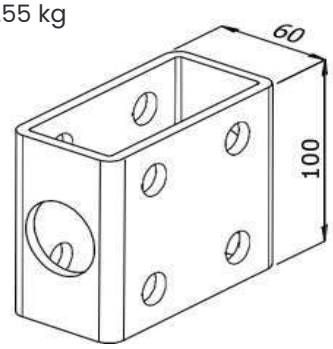
UNI-MF FORMWORK JACK

N Rd = 43.6 kN
Self-weight = 3.46 kg



UNI-MF BOTTOM JACK BRACKET

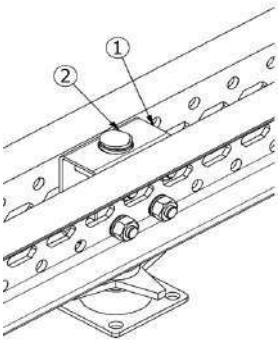
Self-weight = 1.55 kg

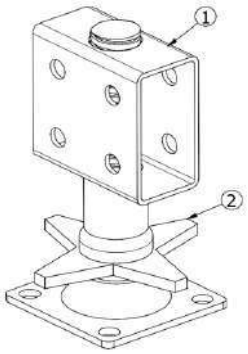


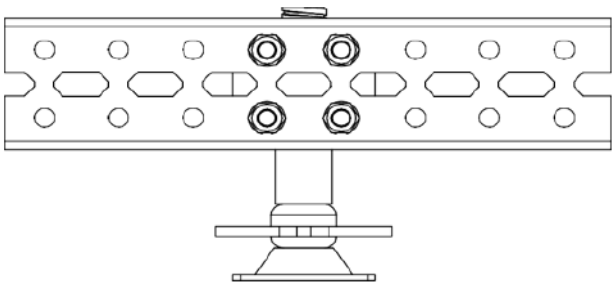
UNI-MF PANEL JACK

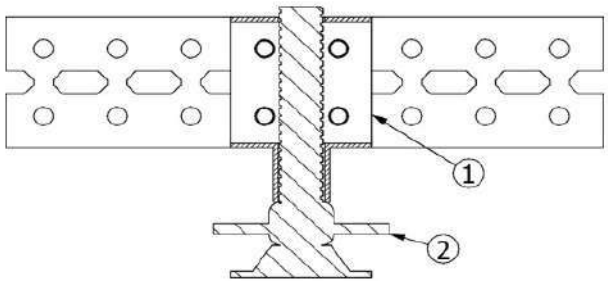
N Rd = 107 kN (SWL)
Self-weight = 4.5 kg

Item	Qty	Description
1	1	Uni-M Adjustable spindle Bracket
3	1	Uni-MF Panel Jack



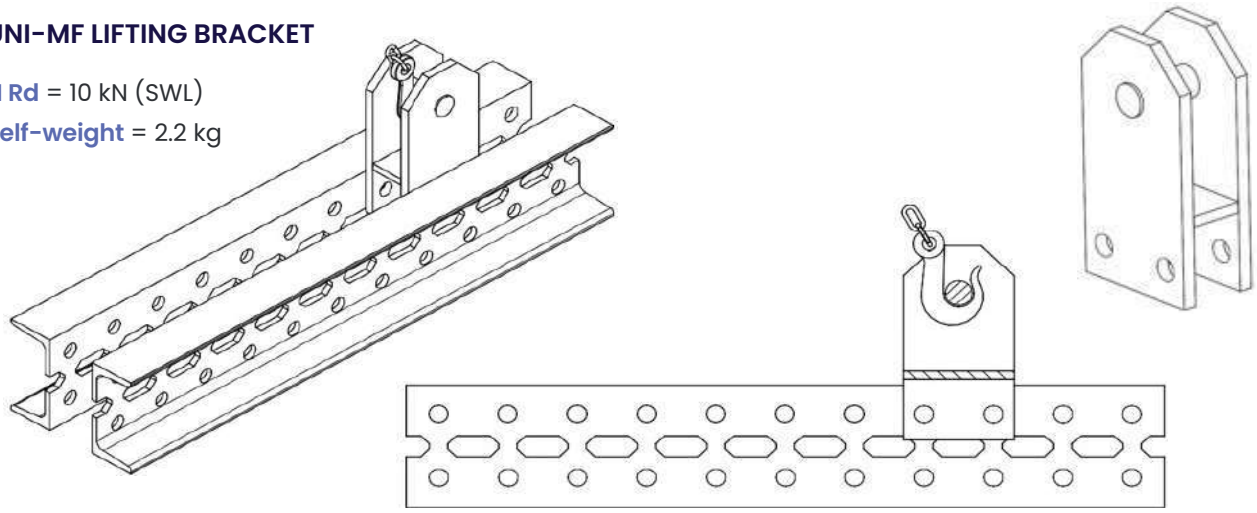






UNI-MF LIFTING BRACKET

N Rd = 10 kN (SWL)
Self-weight = 2.2 kg



UNI-MF PIN 16 X 100

Q Rd = 40.5 kN (SWL)

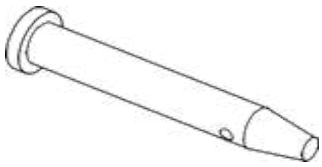
For Uni-MF Pin 16x100 with two openings

Q Rd = 24.7 kN (SWL)

Capacities are for two shear planes

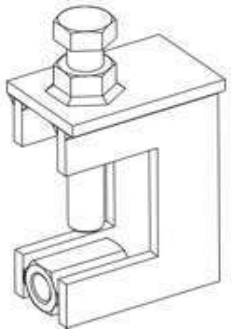
Self-weight = 0.17 kg

For each application, please assess bearing resistance



UNI-MF TIE BRACKET

Self-weight = 1.76 kg



UNI-MF LIFTING BRACKET

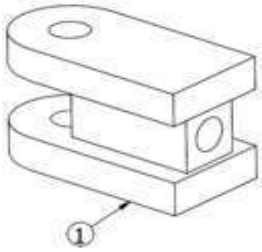
Self-weight = 1.45 kg

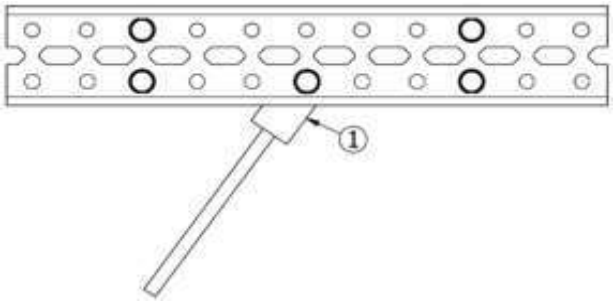
UNI-MF HANGER

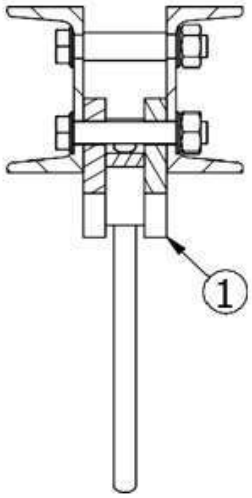
N Rd = 81.1 kN *(SWL secured with Uni-MF Pin 16 x 100)*

N Rd = 90 kN *(SWL secured with bolt 8.8)*

Self-weight = 1.4 kg



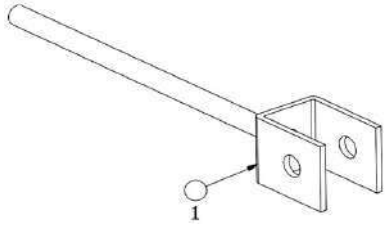


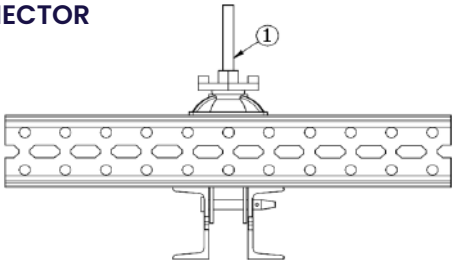


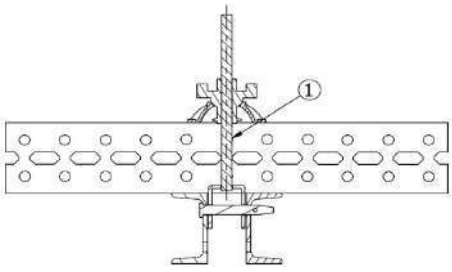
UNI-MF A-FRAME CONNECTOR

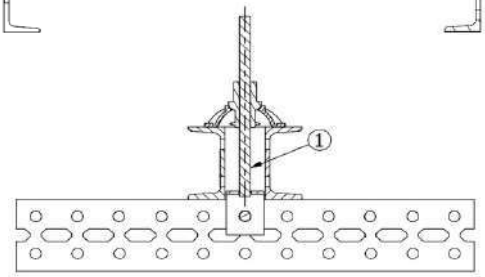
N Rd = 18 kN (SWL)

Self-weight = 0.7 kg



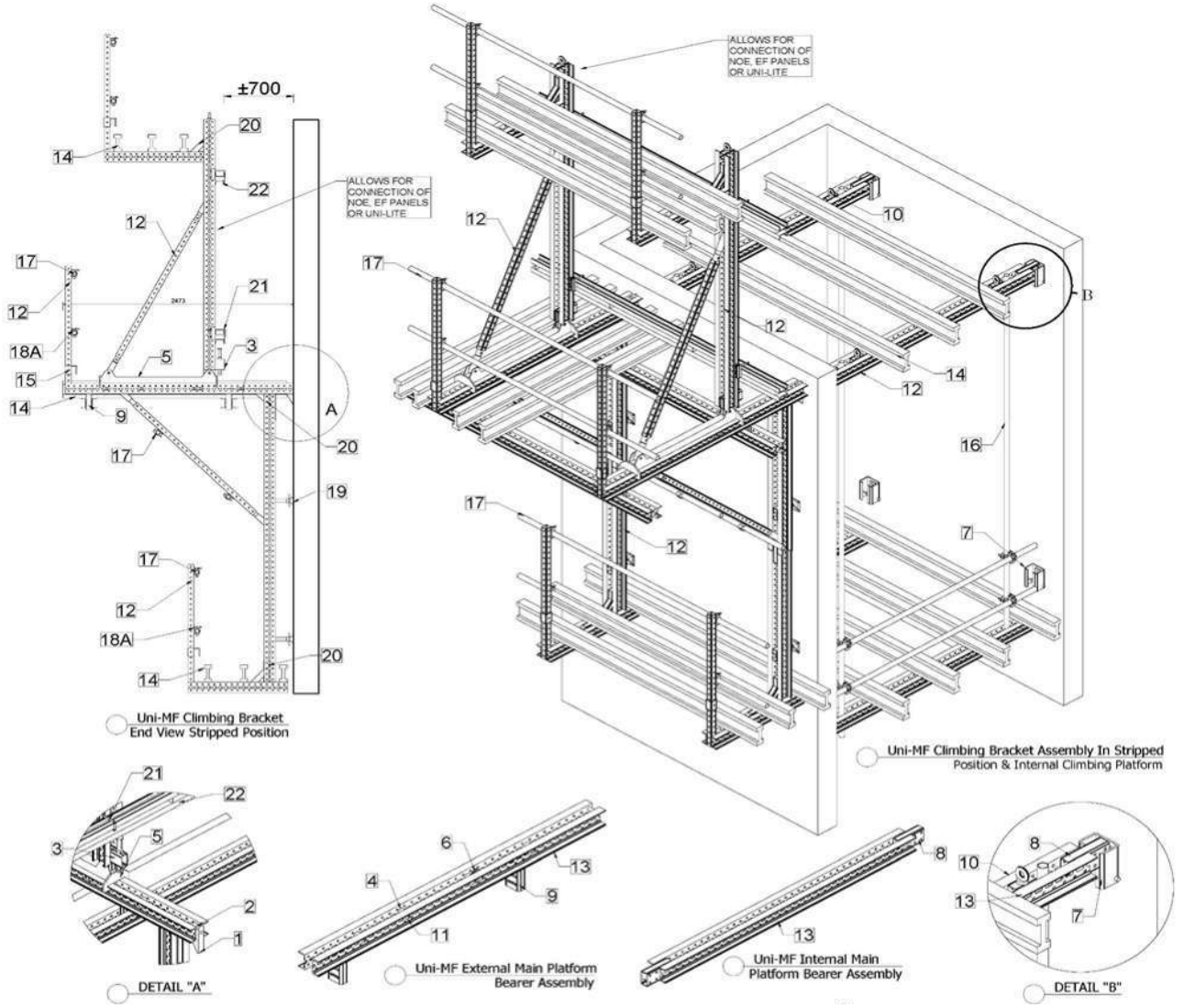






Applications

UNI-MF ROLL BACK CLIMBING SYSTEM



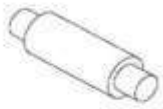
	Item	Mass (kg)
1	Uni-MF External Shoe	5.5kg
2	Uni-MF 24 Dia Support Pin	0.6kg
3	Uni-MF Leveling Jack	3.5kg
4	Uni-MF Roller	0.2kg
5A	Retractible Rail	26kg/m
5B	Hinge Connection	1kg
6	Uni-MF Gear	0.5kg
7	Uni-MF Internal Shoe	41kg
8	Uni-MF Beam Junction	2.09kg
9	Uni-MF Platform Hanger	3.1kg
10	Uni-MF Lifting Bracket	2.1kg
11	Uni-MF Compensation Bush	2kg
12	Uni-MF Mod Tube	5.1 kg/m

	Item	Mass (kg)
12	Uni-MF Spindle	3.4kg
13	Uni-MF Twin Waler	26kg/m
14	Pf20 Bearer	4.5kg/m
15	Toe Board Retainer	26kg/m
16	60 Dia Tube Hanger	3.56kg/m
17	48 Dia Scaffold Tube	3.72kg/m
18A	50 Half Couplers	0.7 kg
18A	50x50 Swivel Couplers	1.4kg
19	Uni-MFAdjustable Spindle	5.7 kg/m
	Uni-MF Panel Jack	4.5kg
20	Uni-MF Corner Junction	5.67 kg
21	Form Channel Waler Clamp	0.8kg
22	100x50 R.S.C Waler	22kg/m

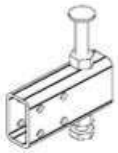
UNI-MF CLIMBING COMPONENTS

1 Uni-MF External Shoe

2 Uni-M 25Ø Support Pin

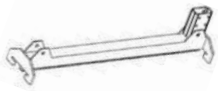


3 Uni-MF Leveling Jack



4 Uni-M Roller

5 Uni-MF Retracitable Rail (5A) & Hinge Connection (5B)



6 Uni-MF Gear

7 Uni-MF Internal Shoe

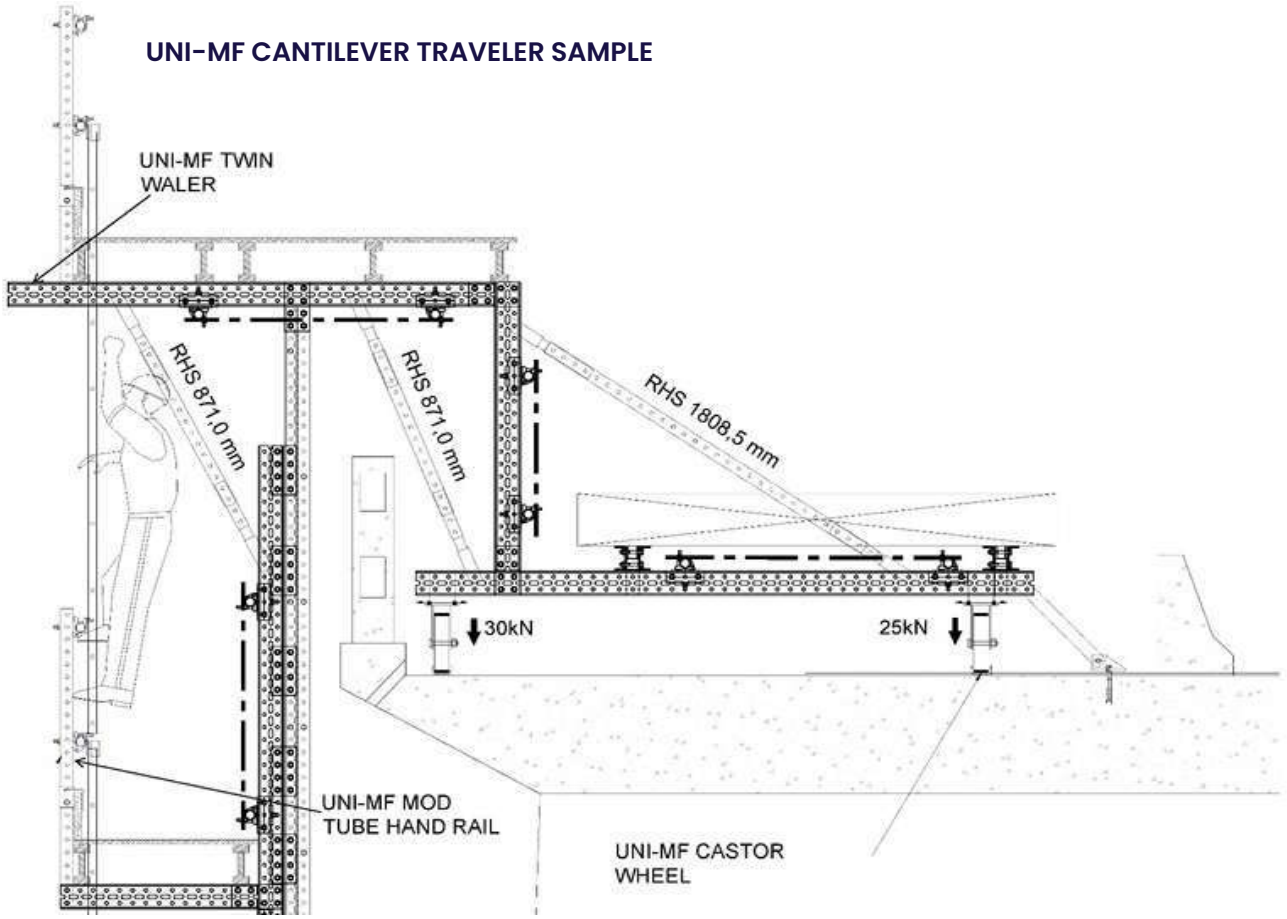
8 Uni-M Beam Junction

9 Uni-M Platform Hanger

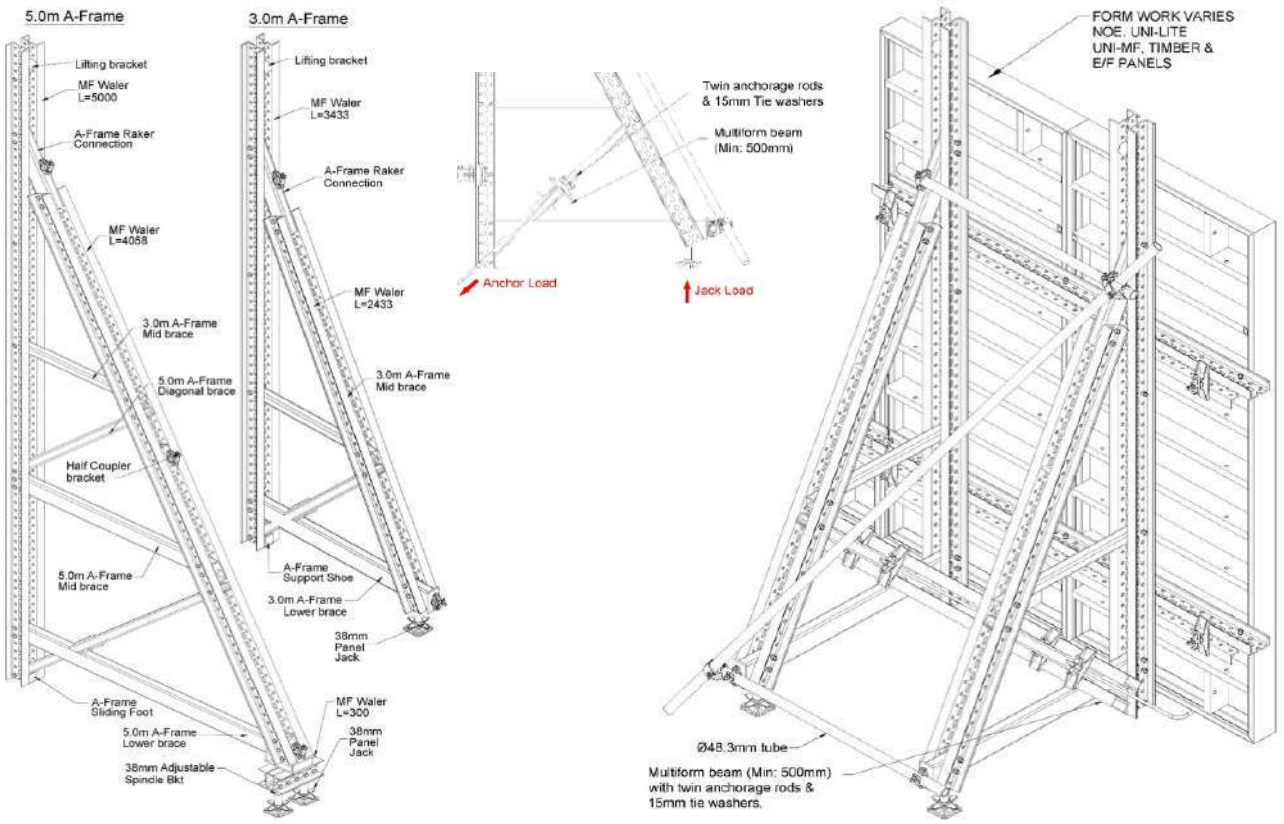
10 Uni-MF Lifting Bracket

11 Uni-MF Compensation Bush

UNI-MF CANTILEVER TRAVELER SAMPLE



UNI-MF SINGLE SIDED COMPONENTS



LOAD APPLICATION 5M POUR HEIGHT

Max Pressure (kN/m²)	Max Frame Spacing (mm)	Max Load To Frame (kN/m)	Anchor Load (kN)	Jack Load	Comments
60	700	60 x 0.70 = 42	224	162	2 x 20 Dia Dywidag Anchor
50	800	50 x 0.80 = 40	229	169	3 x 20 Dia Dywidag Anchor
40	1000	40 x 1.00 = 40	246	184	4 x 20 Dia Dywidag Anchor

LOAD APPLICATION 3M POUR HEIGHT

75	1350	75 × 1.35 = 101.3	197	127	2 x 20 Dia Dywidag Anchor
60	1350	60 × 1.35 = 81	192	127	2 x 20 Dia Dywidag Anchor
50	1500	50 × 1.5 = 75	192	127	2 x 20 Dia Dywidag Anchor
40	1650	40 x 1.65 = 66	184	127	2 x 20 Dia Dywidag Anchor

5m A-FRAME COMPONENTS

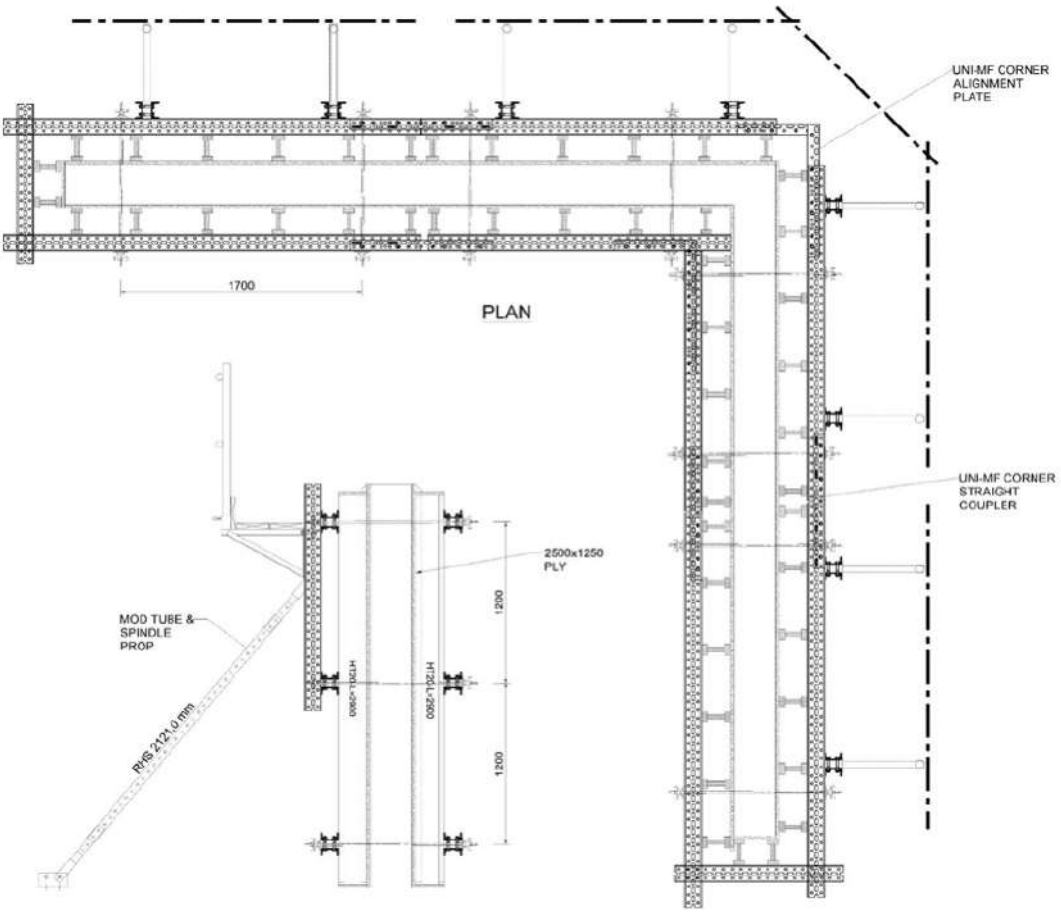
Item	Mass (kg)
MF Twin Waler L=5000	123,50
MF Twin Waler L=4058.5	98,92
MF Twin Waler L=300	7,42
A-Frame Raker Connector	10,00
3.0m A-Frame Mid Brace	38,00
5.0m A-Frame Diagonal Brace	13,05
5.0m A-Frame Mid Brace	16,50

Item	Mass (kg)
5.0m A-Frame Lower Brace	63,00
Half Coupler Bracket	1,00
Uni-Mf Panel Jack	4,50
Uni-MF Adjustable Spindle Bracket	1,30
A-Frame Sliding Foot	2,15
Lifting Bracket	1,45

3m A-FRAME COMPONENTS

Item	Mass (kg)
MF Twin Waler L=2433.5	59,50
MF Twin Waler L=3433.5	83,80
MF Twin Waler L=300	7,42
A-Frame Raker Connector	10,00
3.0m A- Frame Mid Brace	38,00
3.0m A-Frame Lower Brace	8,00
Uni-Mf Panel Jack	4,50
A-Frame Sliding Foot	2,15
Lifting Bracket	1,45

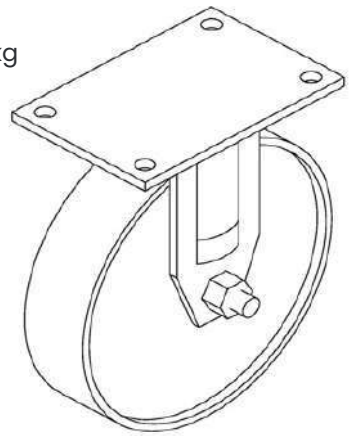
UNI-MF TYPICAL WALL FORMWORK



Traveler Components

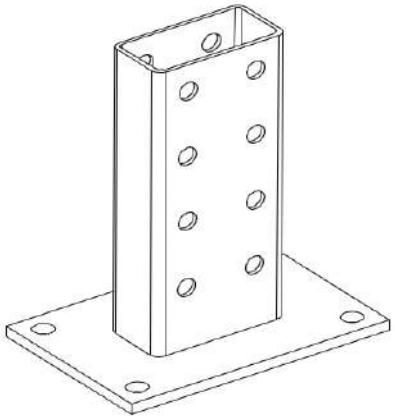
UNI-MF CASTOR WHEEL

Q Rd = 80kN (SWL)
Self-weight = 19.5 kg



UNI-MF CONNECTOR MF1/MK2

Self-weight = 0.84 kg



Component bearing capacities are not decisive. Its application is limited by bearing capacities of Uni-MF1 beam.

Climbing Formwork

An effective system that is economical and adaptable in any project

It is an effective system that is economical and makes for optimum adaptability in any construction project. The Uni-Climbing Roll Back Bracket is ideal for use with both framed formwork and timber systems.

The formwork and climbing bracket are linked as a single unit that can be crane-lifted simultaneously; reducing crane time to a minimum. With its ease of operation and durable components, this climbing formwork system supremely meets the demands of actual practice.

Uni-Span's climbing system is used in applications where formwork is shifted upwards in successive pouring lifts.

Examples of applications include high-rise residential and industrial structures, bridge piers, silos and telecom towers.

EF Panel

CLIMBING FORMWORK

CLIMBING SYSTEM

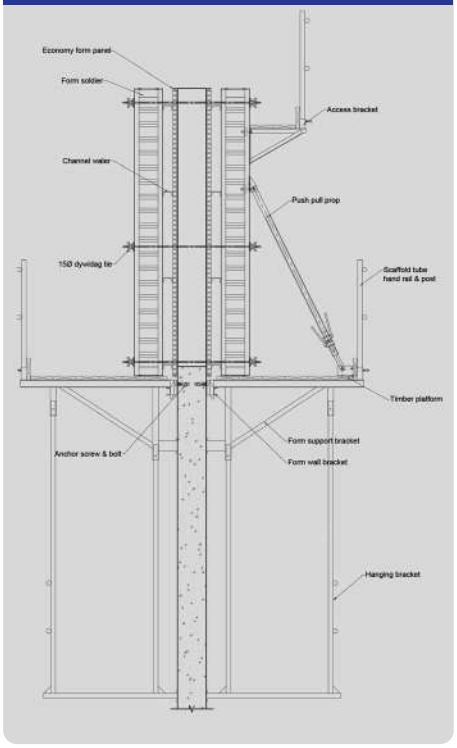
Uni-Span's gangform climbing system is crane handled and fixed to the concrete with anchor screws. Push-pull props are used for alignment of the panel. The hanging bracket provides a safe working platform for grouting and removal of lower anchors.

Access brackets provide for a two board working platform 456mm wide. The access bracket can be attached to the form soldier at the required position.

PLUMBING BRACKET

The plumbing bracket has two attachment points 1200mm apart to bolt the bracket vertically to the form soldier. An adjustment screw which extends 900mm from the form soldier is used for vertical alignment.

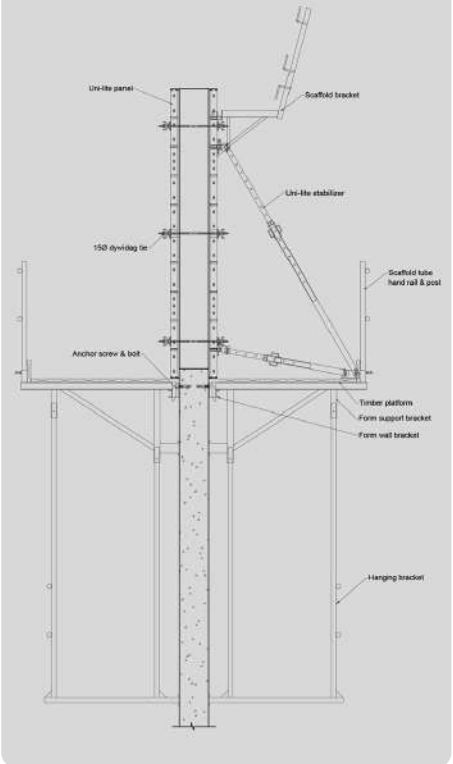
FORM SUPPORT BRACKET



Uni-Lite

CLIMBING FORMWORK

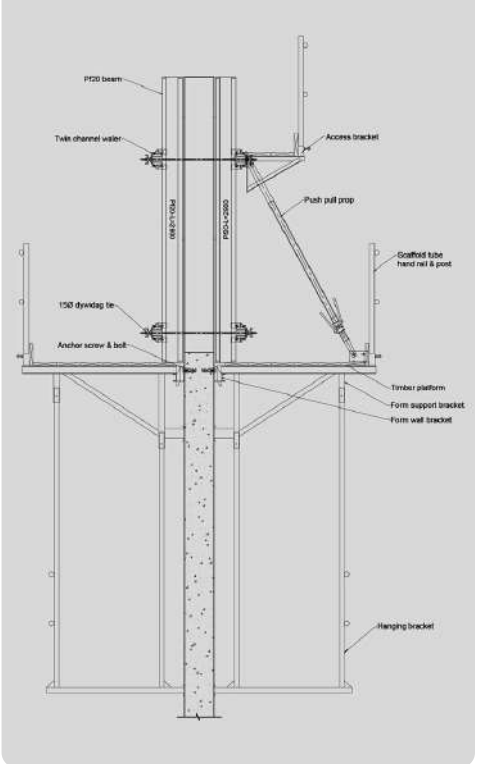
FORM SUPPORT BRACKET



Uni-Flex

CLIMBING FORMWORK

FORM SUPPORT BRACKET

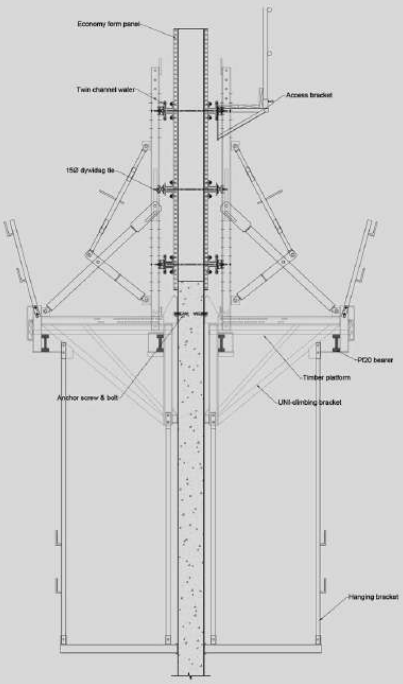


CLIMBING SYSTEM

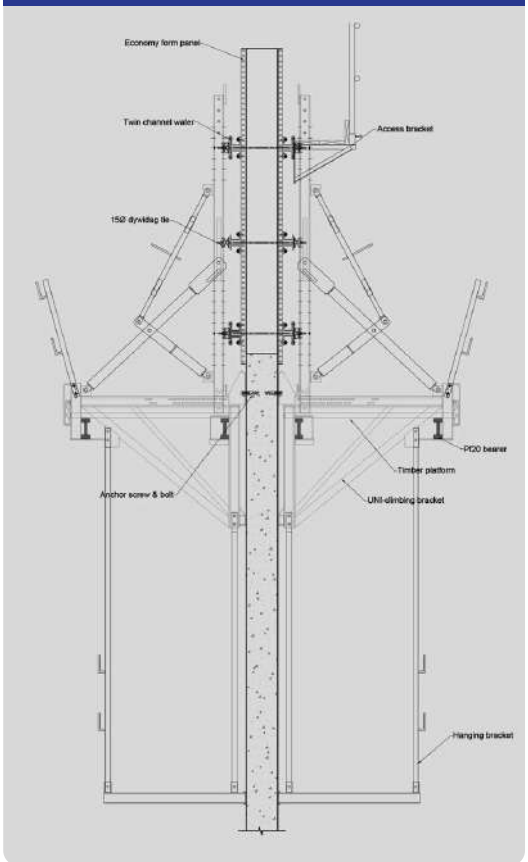
This climbing system is crane handled and is easily plumbed and aligned. A minimum amount of crane time is required to simply lift the shutter and hook it onto the climbing cone which was cast into the concrete on the previous pour.

The scissor action allows the formwork to be rolled back to enable the panels to be cleaned and oiled in position without having to lower the shutter to the ground or the floor below.

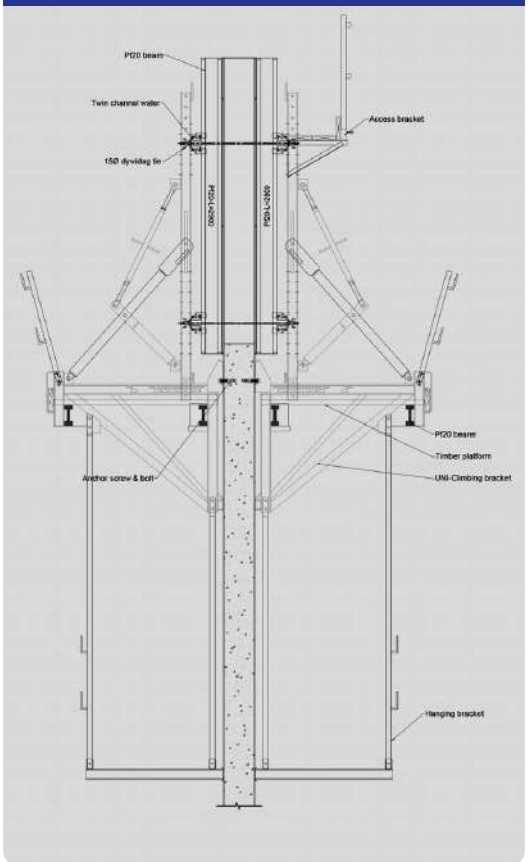
UNI-CLIMBING ROLL BACK BRACKET



UNI-CLIMBING ROLL BACK BRACKET



UNI-CLIMBING ROLL BACK BRACKET SYSTEM



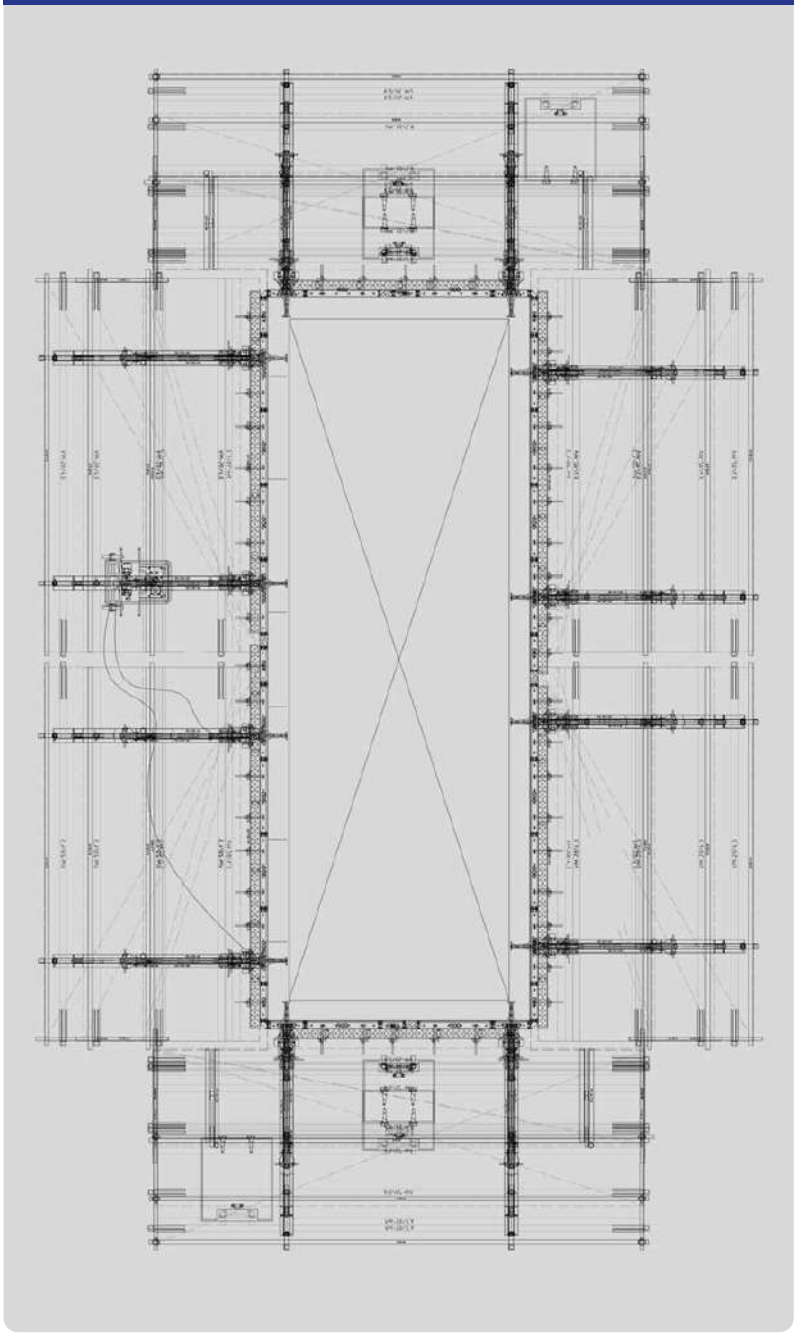
Hydraulic Self-Climbing System

INCREASED EFFICIENCY FOR HIGH-RISE CONSTRUCTION

The hydraulic self-climbing system is a formwork support structure that is used in the construction of walls and other vertical structures. The system is driven by mechanical and hydraulic mechanisms and therefore requires no crane assistance. The climbing process involves the successive elevation of the mast and climbing bracket-formwork-set alongside the wall surface.

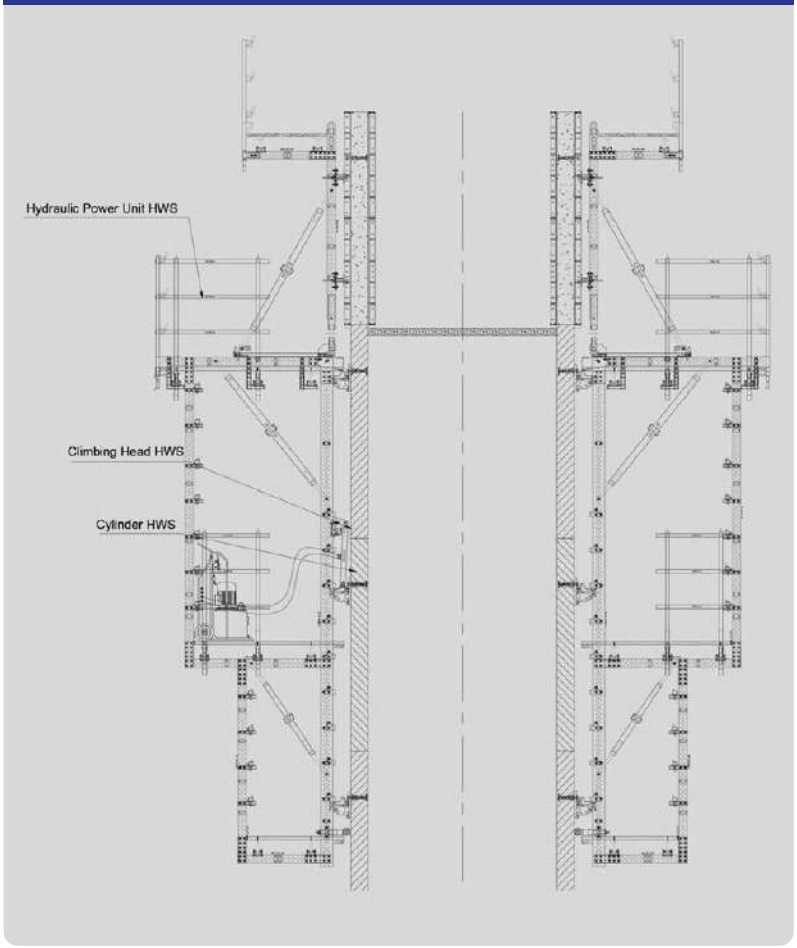
It is a flexible and versatile system that can be modified for various vertical formwork systems. alignment.

HYDRAULIC CLIMBING SYSTEM PLAN VIEW



An example of our Hydraulic Self-Climbing System in application with our Uni-Lite formwork system.

FORM SUPPORT BRACKET



An example of our Hydraulic Self-Climbing System in application with our Uni-Lite formwork system.

BENEFITS:

- No crane assistance required - formwork working platforms and boom concrete pumps can be lifted simultaneously
- Hydraulic climbing saves time - performance is fast paced in comparison to conventional climbing with a crane
- Can be operated even in adverse weather conditions
- Safe lifting and handling at height
- Can be adapted to complex wall geometries
- Large and protected working platforms with safe access
- Hydraulic system is configurable to construction requirements
- High load bearing capacity which allows for large formwork assemblies to be easily lifted
- Roll-back system allows work to continue between formwork panels
- Compatible with most vertical formwork systems

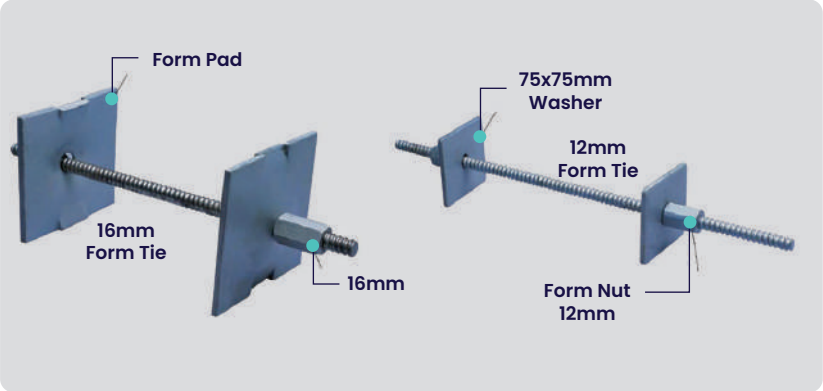
Walling System

STANDARD WALL TIE ASSEMBLY

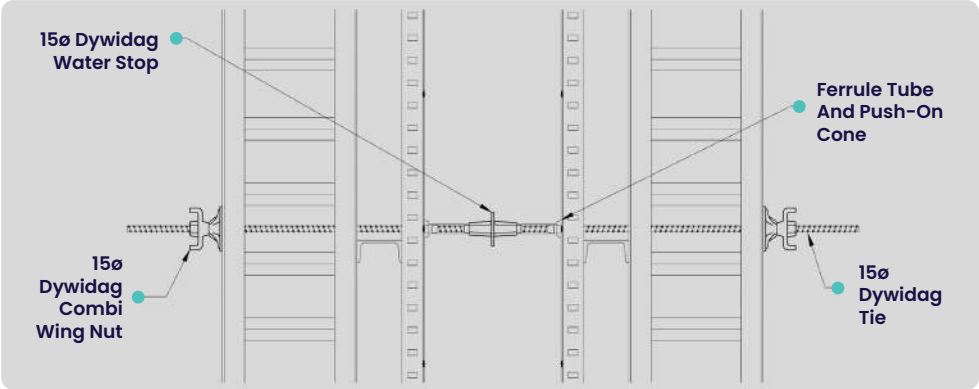
All items are recoverable after casting, except for the plastic tube.

Diameter (mm)	kg/m	Load kN
20	2.5	95
16	1.6	60
12	0.8	32

Factor of safety 1.9



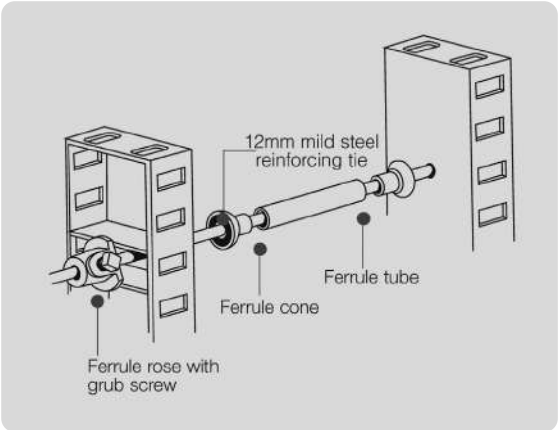
DYWIDAG WATER BAR



WATER STOP

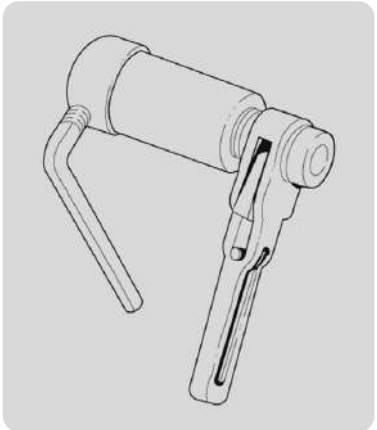
FERRULE TIE SYSTEM

All components fully recoverable except for the ferrule tube

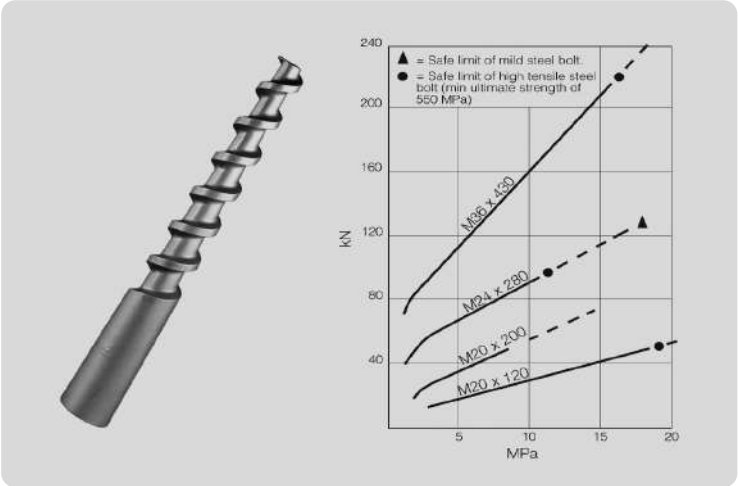


FERRULE TIGHTENER JACK

To tension rods prior to tightening the ferrule grub screw.



WATER BAR TIE



ANCHOR SCREW BOLTED ONTO STANDARD ECONOMY PANEL

Safe loading capacities are based on a load factor of 1.5:1 on ultimate pull-out values.

CAUTION:

Although graph is based on actual tests, it is given as a general guide only. Where warranted a greater safety factor should be used.

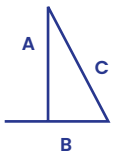
ANCHOR SCREWS

Recoverable anchor screws are used for fixing brackets and formwork to concrete.

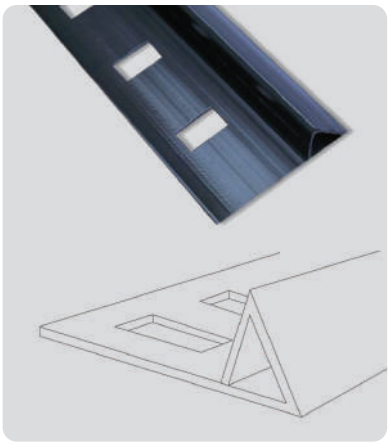
Size (mm)	Load at 5MPa kN	Tie load kN	Concrete MPa	Mass (kg)	Outside diameter (mm)	Maximum depth of thread (mm)
M36 x 430	110	215	16	1.6	58	64
M24 x 280	60	95	12	1.1	39	50
M20 x 200	30	50	10	0.9	39	38
M20 x 120	10	50	19	0.6	39	38

EXTRACTOR TOOL

The anchor screws are cast in and are easily removed using an extractor tool.



A (mm)	B (mm)	C (mm)
10	10	14
15	15	18
18	18	25
20	20	28
25	25	35



PLASTIC FERRULE TUBING

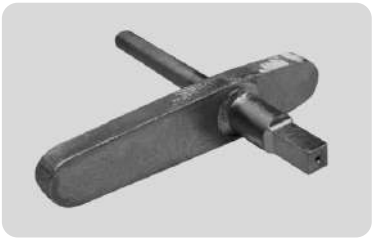
Plastic tubing replaces more expensive materials. Used to facilitate recovery of thru ties. Supplied in up to 3m lengths.

PUSH-ON PLASTIC CONE

To be attached to each end of ferrule tubing. Can easily be extracted from a concrete structure for re-use. The push-on cone forms a chamfered recess in concrete structures for ease of subsequent grouting. This prevents grout penetrating into ferrule tubing during casting of concrete.

EXTRACTOR TOOL

The anchor screws are cast in and are easily removed using an extractor tool.



PLASTIC SHUTTER BUTTON

Used for closing ferrule tie holes in steel or timber shutters. Available for different size holes. Inexpensive and robust.

GROUTEX

A self-adhesive polyurethane foam sealing strip which prevents grout loss through joints in formwork.

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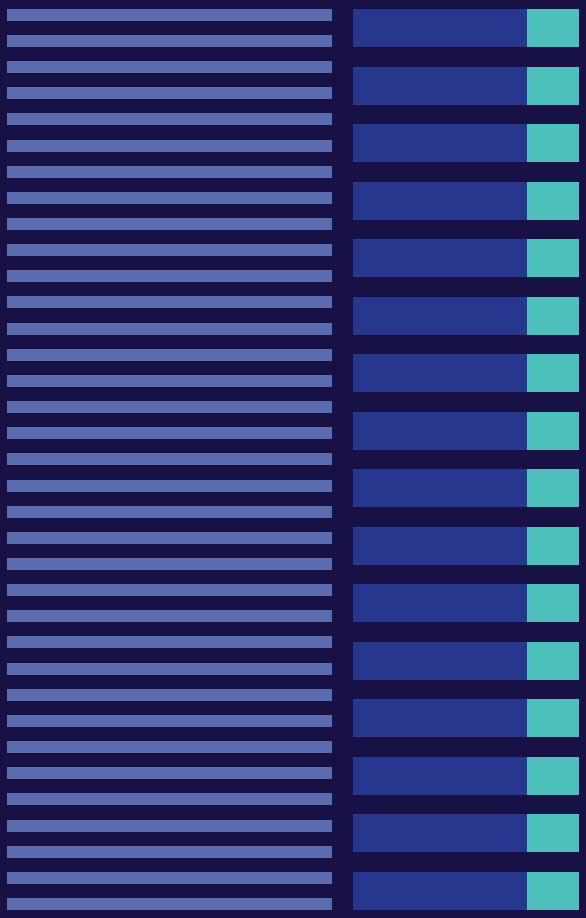

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