



Midi-Box

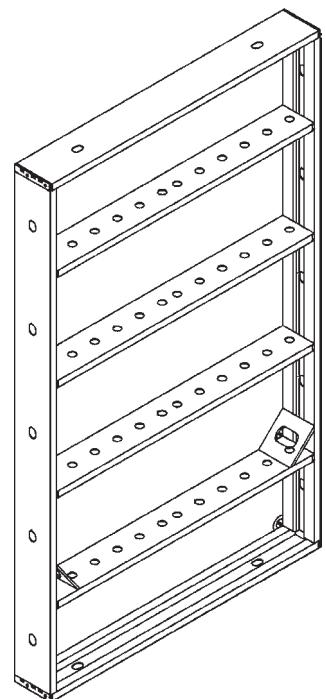
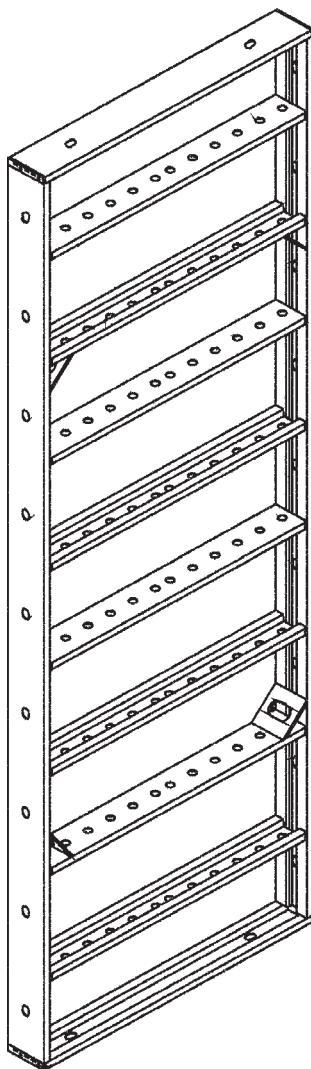




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Introduction





Wall Formwork - Introduction

ALTRAD Baumann offers compatible wall formwork systems that include:

- MIDI BOX 3S light system (60 kN);
- MIDI BOX heavy system (80 kN);
- square and rectangular section pole forming system;
- lift shaft formwork;
- one-sided formwork with the supporting trestle system.



ALTRAD Baumann formwork features a frame structure made of steel sections 12 cm thick which are hot dip galvanised and filled with a special 15 mm thick plywood planking. Full range of the wall formwork system elements that are compatible, self-complementary and exchangeable makes it possible to design a perfect formwork for any wall. By using the full set of the system elements you will be able to seamlessly construct virtually each facility in a simple, fast and economic, and above all safe manner.

Wall formwork is:

- spatial multi-use system;
- system for average and heavy loads, depending on the board version used it withstands pressure of fresh concrete ranging from 60 up to 80 kN/m²;
- high-end product made of the materials of the appropriately high quality - hot dip galvanised steel; planking made of multilayered plywood covered on both sides with the phenol foil of the proper density;
- smoothness of the concrete surface which does not have to be plastered when the formwork is removed but must be covered with thin plaster or luted.





MIDI Box 3S and MIDI BOX formwork systems are used to make reinforced concrete structures such as:

- combined footing,
- mid-sized and heavy walls,
- square and rectangular section poles,
- binders,
- lift shafts,
- and many other typical and atypical structures used nowadays in construction, industry etc.

Versatility of the formwork systems ensures the complete usage of the same and multi-purpose connecting and joining elements such as locks, transoms, bolts etc. as well as the auxiliary accessories such as working (inspecting) platforms, adjustable (tilting and raking shore) supports to perform fast and accurate adjustment adapted to each board type. Crosspiece and hole distribution ensures the complete system compatibility. The boards are connected with locks (L260, L710) which alone serve as an element that levels and stiffens the formwork and provides strong and tight connections. It applies both to the vertical and horizontal joints at the same time.

Fully compatible ALTRAD-Baumann formwork systems are used as the wall formwork installed without any need to use the crane (manually) or with the crane when the elements are large. The system also ensures fast repositioning of the complete formwork sets without any need to disassemble the components each time (max. 30 m²). To do this there must a crane on the construction site and the special transport hooks certified by UDT must be used.

MIDI BOX 3S wall formwork:

An economic small-sized system to be installed manually consisting of the boards 90 cm and 120 cm high and 25 cm to 90 cm wide. This system both supplements and replaces the boards of standard heights. The formwork is mainly dedicated for the construction of foundations, binders and walls (cellars). The boards withhold pressure of the fresh concrete of up to 60 kN/m².





Midi Box wall formwork

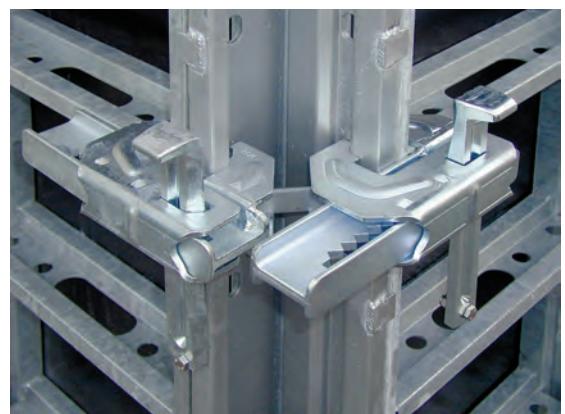
It is a wall formwork so that it can be installed on the construction site in two manners depending on the width of the working boards, i.e.:

- without the crane - boards within 25 to 90 cm,
- and with the crane - boards within 90 to 240 cm.

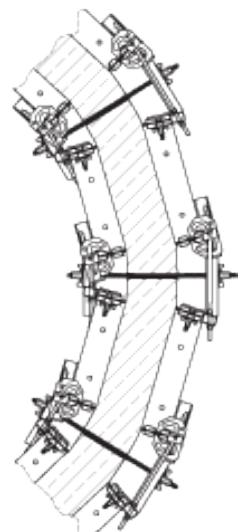
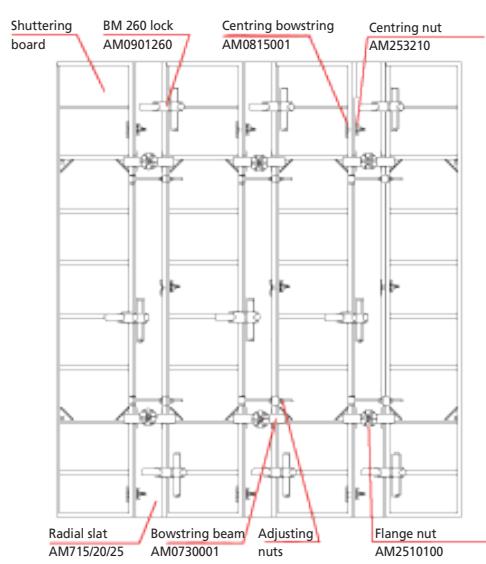
MIDI BOX formwork is available with a full range of shuttering boards 150 cm, 270 cm, 300 cm and 330 cm high. The permissible fresh concrete pressure is set for the MIDI BOX formwork at:

- 80 kN/m²
- assembly without superstructures
- 55 kN/m²
- assembly with superstructures.

The multi-purpose MB260 and BM710 formwork lock reliably connects the shuttering boards, joints the corners and poles and at the same time it allows for straightening the formwork plane. The shuttering transoms and stiffening beams which replace the BM710 lock provide additional stiffness (horizontal and vertical) of the walls of higher surface area. Walls 270 cm, 300 cm and 330 cm high are connected with three BM260 locks for one board contact point. The shuttering boards in the level raisers are connected with the BM710 locks with a longer pressing foot (710 mm) so that the plane straightening the formwork is larger.



By using the radial slats it is possible to board multiple-sided structures with a radius of over 2.5 m. Having the possibility to choose from three widths of the radial slats of 15, 20 and 25 cm and all MIDI BOX3S and MIDI BOX boards it is possible to precisely set up the formwork. Radial slats are connected with the boards with the centring bowstrings installed alternately

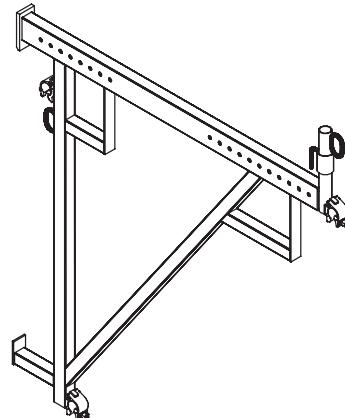




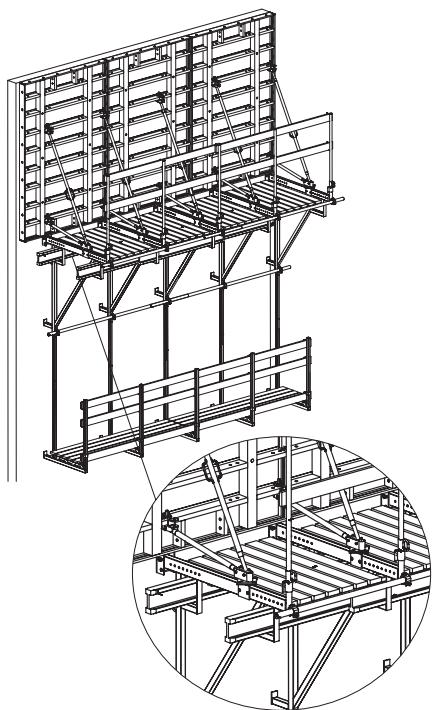
To supplement the wall length you should use the filling inserts. It is a perfect solution when there is no possibility to obtain the desired length of the formwork on the basis of the shuttering board system. In such case insert wooden or steel inserts between the boards. ALTRAD Baumann offers typical 5 cm wide steel inserts and supplementary adjustable inserts which allow for compensating the formwork length within 7 ± 30 cm. In the case of steel inserts boards should be connected with the BM260 and BM710 locks which can connect the inserts up to 14 cm long or boarding transoms that stiffen the formwork and clasp the inserts.

Wall formwork element for the exterior wall formwork is the climbing formwork bracket. The brackets are used on buildings up to $H = 100$ m high. Maximum formwork height: 4.2 m- without additional anchoring of the shuttering boards. Maximum bracket spacing: 1.35 m. The brackets should be anchored with the SKK cones and waved or loop B 15 anchors. Cone is a recoverable element.

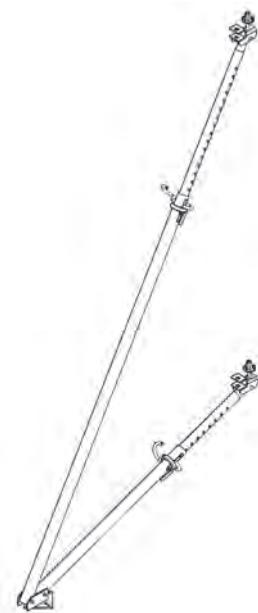
Diversity of the boards allows for an optimal set-up of any formwork. The formwork system ensures smooth surfaces which when the formwork is removed do not have to be plastered. Thin plaster or luting is all that is required.



Climbing formwork Bracket



Climbing Formwork - scheme



Tilting Support

The following elements allow the shuttering boards to be plumbed:

- tilting support- used to plumb the shuttering boards up to 3m high,
- raking shore- used to plumb the formwork of the walls more than 3m high.

The ribbed structure and protections of the MIDI BOX 3S and MIDI BOX formwork sets protect the persons working on the construction sites during:

- installation
- concreting
- disassembly
- repositioning.

ALTRAD Baumann formwork allows the selection of boards with modules placed every 5 cm vertically and horizontally. The shuttering boards may be connected in any configuration. Please remember that a basic board set-up is vertical. Horizontal set-up should be considered as a supplementary set-up.

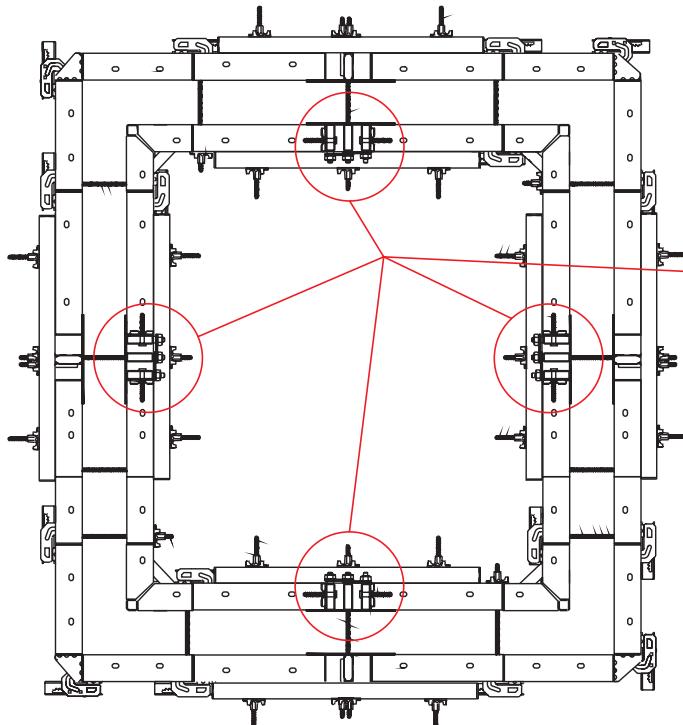


Lift Shaft Formwork

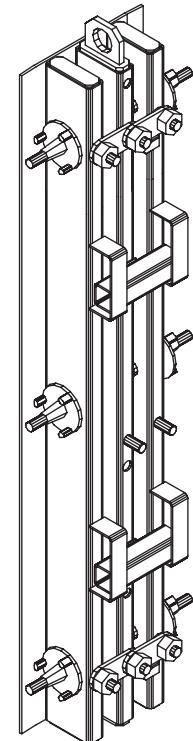
Lift shaft formwork is used for fast assembly and disassembly of internal formwork in the lift shafts without the need to disassemble the individual elements. It is possible to do this with the formwork removing element that reduces the external size of the given formwork segment by 5 cm.

This allows for free removal of the formwork set from the lift shaft and its repositioning with the crane to any construction site area.

The formwork removing element is a system element of the MIDI BOX wall formwork. It is made of steel sections and steel sheet. It is fastened to the standard shuttering boards.



Lift shaft's Formwork



Formwork removing element

Assembly:

The lift shaft assembly starts with the set-up of the internal segment.

One formwork wall is fitted with one formwork removing element. The widths of the boards and wooden inserts should be selected so that the formwork removing element is in the set symmetry axes.

The steel sheet of the formwork removing element fits tight to the plywood of the adjacent boards due to the stiffening beams which additionally straighten the formwork.

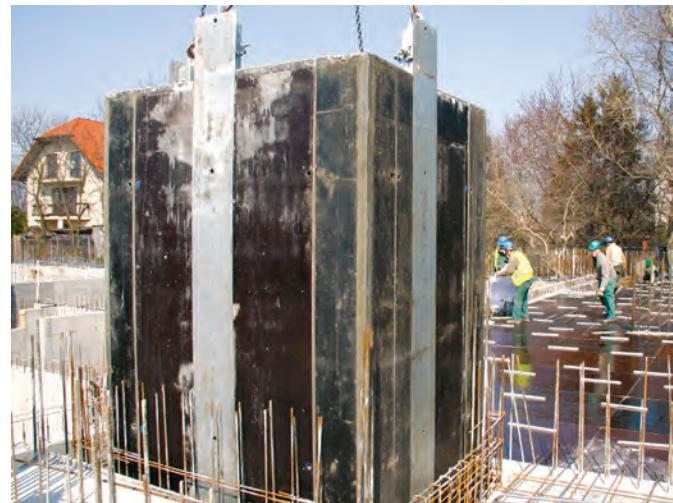
To make the assembly easier it is recommended to install the boards up to 50 cm wide directly to the formwork removing element.

The maximum diameter of the nut that freely connects the formwork removing element with the base board is 10cm.

The minimum dimensions of the internal shaft walls (length) for which a shaft set may be used are: 1.4 x 1.4 m. In this case 30 cm wide boards are used.

Then an external formwork part is installed and the wall thickness or the distance between the external and internal formwork is determined. The external formwork segment should be fitted exactly opposite the formwork removing element with the adjustable filling insert. The set components are connected with the formwork locks.

The assembled segment is delivered to the workplace and expanded to obtain the required dimension.



DISASSEMBLY:

The lift shaft formwork is disassembled with the crane and standard transport slings. The formwork removing element is fitted with the transport eye where the slings are attached. After removing the bowstrings, stiffening beams, brackets and other wall mounting equipment the internal segment is attached to the slings and transported vertically. Moving upwards triggers the mechanism that reduces the size of the segment and loosens it so that it can be easily removed from the working zone. The clearance between the lift internal dimension and the internal segment dimension is about 5 cm and is high enough to freely remove the segment. Once the lift shaft formwork is assembled it is used on each level of the facility constructed.



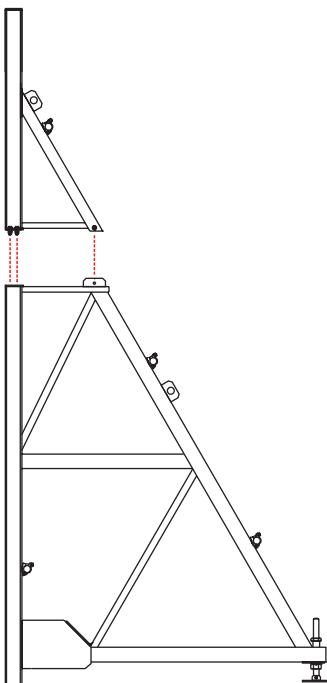
20 cm



15 cm



Supporting trestles (for one-sided formwork)



Supporting trestles are especially useful during:

- escarp strengthening
- gravity wall construction
- concrete filling of the walls near the existing facilities
- securing rocky mountainsides.
-

The supporting trestle system consists of such elements as:

1 . Trestle brackets

Elements used for the assembly of one-sided formwork during concrete filling of the vertical walls located near the existing buildings. The brackets allow for the construction of walls up to 4.5 m high with the fresh concrete pressure of up to 100 kN/m². The channels (2 pcs.) used as vertical beams ensure an easy installation of the shuttering boards with the bracket. The location of the one-sided formwork may be precisely adapted with the screw-threaded feet. The structure is anchored to the existing wall, ceiling or foundation by welding the bar to the reinforcement. Another solution includes using the loop anchors and V holders fixed to the reinforcement. The diameter and length of the bar are selected depending on the forces generated by the concrete pressure.

A and B type supporting trestles-
installation diagram

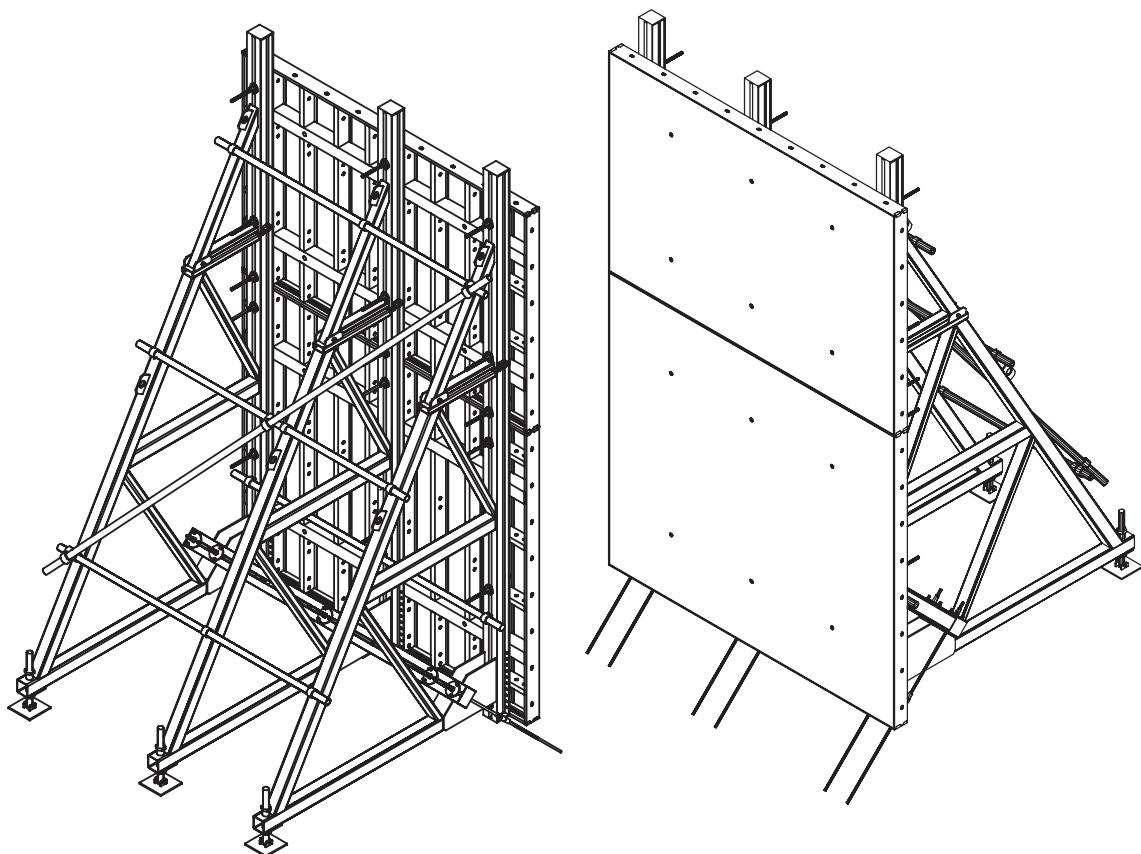


Diagram presenting the one-sided formwork that uses the A and B type supporting trestles



Supporting trestles (for one-sided formwork)



2. Angle bracket

An element that is used to set the location of the shuttering board in relation to the supporting trestle and which prevents the board from moving because of its own weight.

3. Wide angle bracket

An element that is used to set the location of the shuttering board in relation to the supporting trestle with the use of the stiffening beam and which prevents the board from moving because of its own weight.

4. Clamping beam -1.2 m and 2.6 m

An element that is used to clamp the trestle brackets. It transfers the horizontal concrete pressure force to the anchors.

5. A and B type trestle bracket

These brackets have different heights. The B type trestle bracket is used for concrete filling of the walls up to 2.9 m high. The A type trestle bracket is used for concrete filling of the walls more than 2.9 m high. In such case it is placed onto the B type trestle bracket. The A type trestle bracket cannot be used alone and it is only used together with the B type trestle bracket. However, the B type trestle bracket can be used alone.

Other wall formwork elements

Other wall formwork elements that work together with the supporting trestles are as follows:

- rotary coupling,
- tightener,
- flange nut,
- stiffening beam,
- bowstring,
- universal pipe,
- shuttering boards.
- and the Betamax elements:
- hexagonal nuts,
- V handles,
- loop, waved and hook anchors.

Please remember that the structure of the supporting trestles requires proper anchoring to the base.



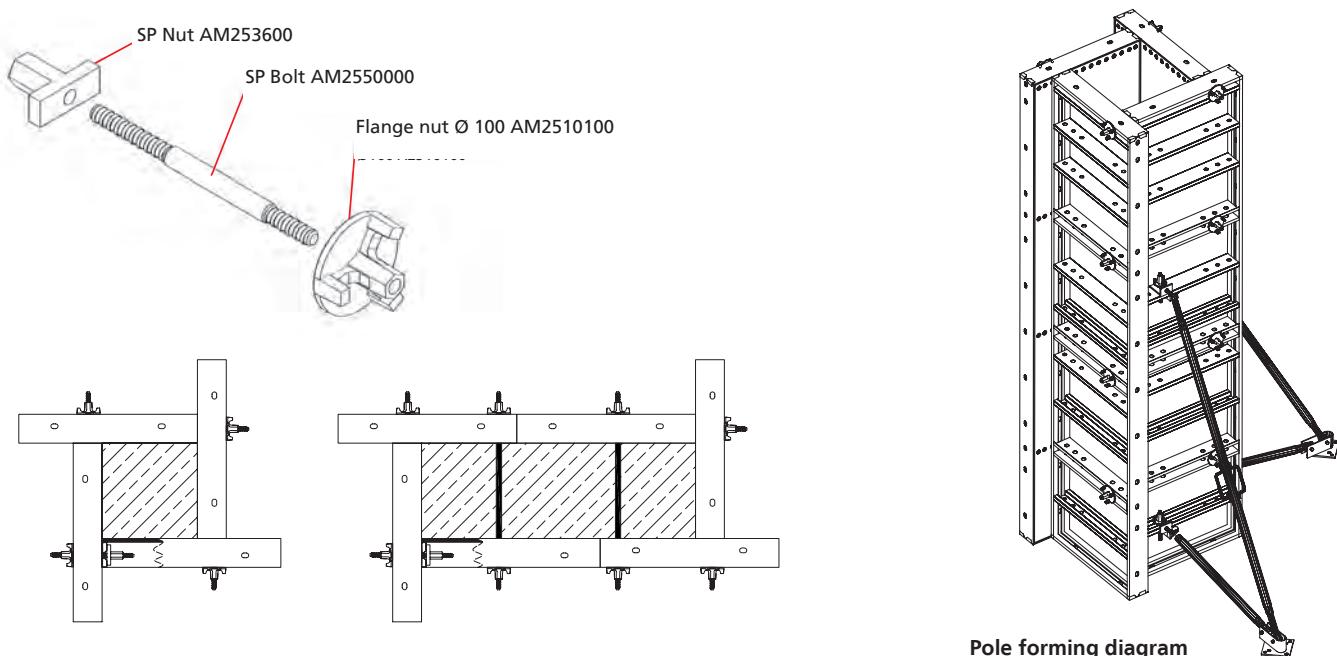


Pole Formwork (standard for poles and walls)

POLE FORMING

1. Pole forming with SP boards.

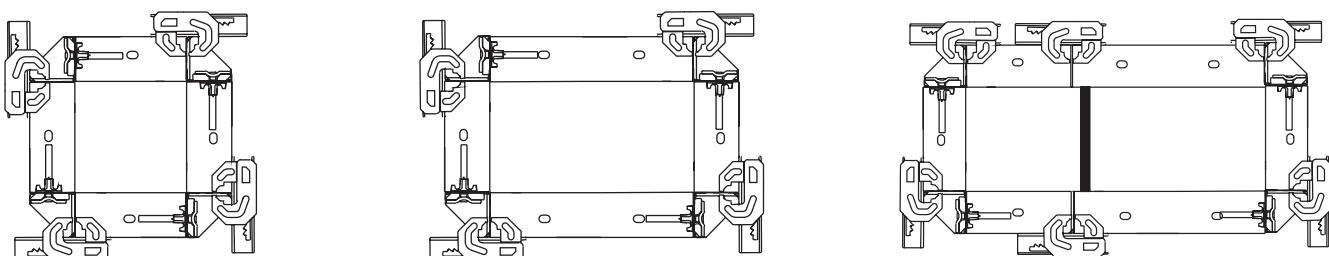
A SP shuttering board is used for boarding of the square and rectangular poles in the module every 5 cm with the height of up to 5.4 m and section ranging from 55 x 55 cm for the SP70 boards to 75 x 75 cm for the SP90 boards. The permissible concrete pressure during pole forming with the SP boards is 80 kN/m².



Pole forming diagram

2. Pole forming with the base shuttering boards.

The poles higher than the board may be formed by placing the boards on top of each other and connecting them with a formwork lock on each side.



Pole forming - Midi Box boards and formwork locks





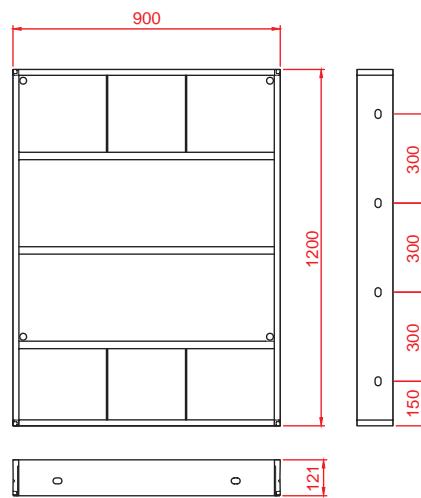
1. Midi Box Formwork



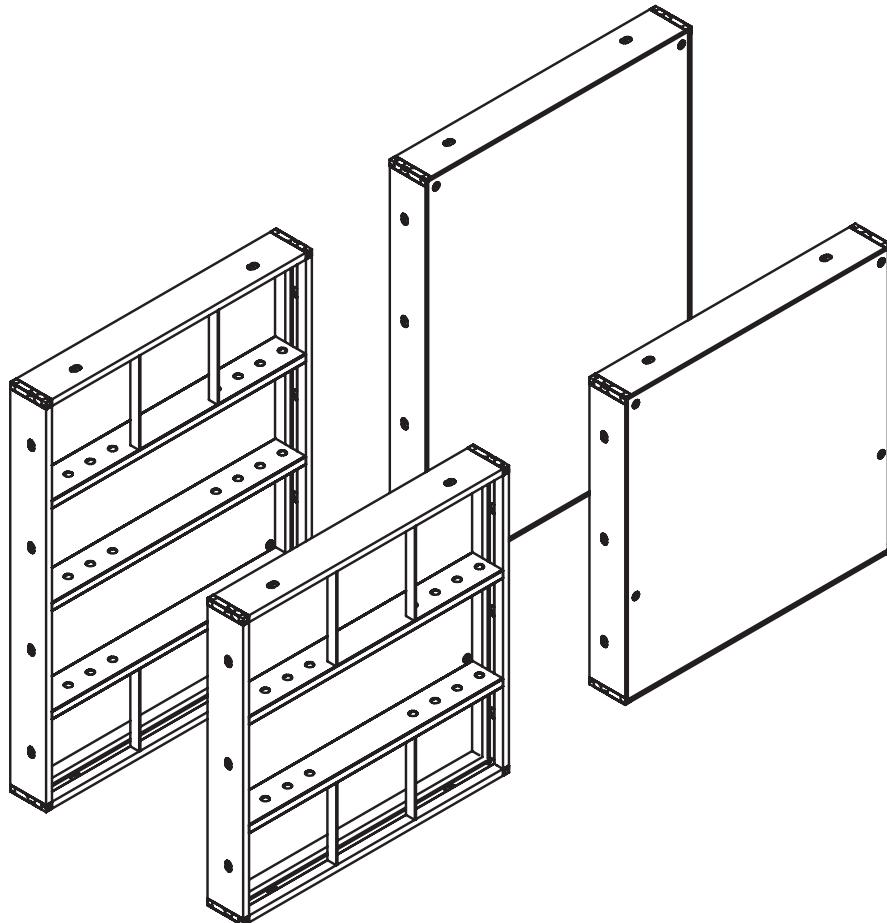
1. MIDI BOX shuttering board (60 kN)]

MIDI BOX 3S [60 kN] - small-sized board system used for forming the small foundation walls. The system is compatible with the MIDI BOX system so that the MIDI BOX 3S boards are used as top bards when forming higher walls.

Index	Dimensions (cm)	Weight (kg)
AM0209025*	90x25	13.66
AM0209030	90x30	14.70
AM0209045	90x45	18.09
AM0209050*	90x50	19.81
AM0209055*	90x55	20.88
AM0209060	90x60	21.90
AM0209075	90x75	25.20
AM0209090	90x90	29.24
AM0212025*	120x25	16.93
AM0212030	120x30	18.84
AM0212045	120x45	22.90
AM0212050*	120x50	25.00
AM0212055*	120x55	26.42
AM0212060	120x60	27.65
AM0212075	120x75	31.79
AM0212090	120x90	36.60



*Board made to order.



Note! Bowstring hole spacing is determined in the assembly manual



1. Midi Box Formwork

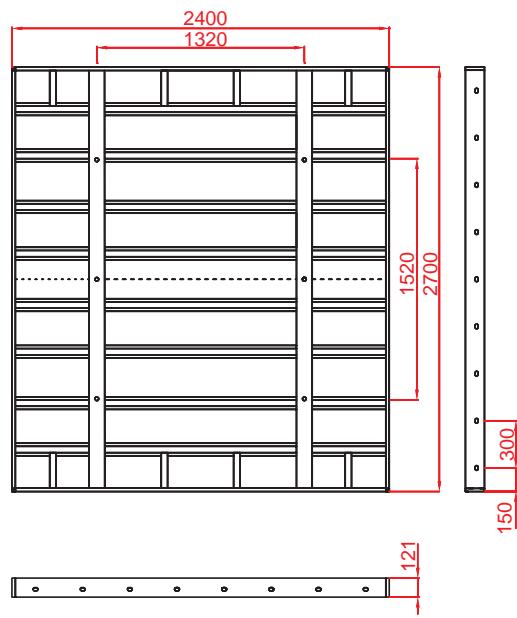
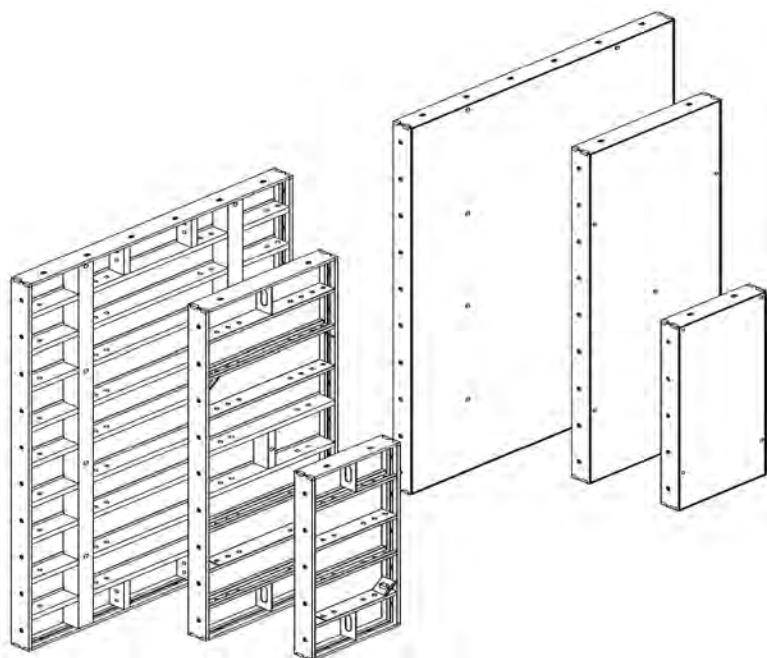
2. MIDI BOX shuttering board [80 kN]

MIDI BOX - mid-size shuttering board system. Frames and ribbed shuttering boards are made of steel of high strength and are hot dip galvanised.

Index	Dimensions (cm)	Weight (kg)
AM0415025*	150x25	27.54
AM0415030	150x30	29.29
AM0415045	150x45	34.66
AM0415050*	150x50	37.71
AM0415055*	150x55	39.56
AM0415060	150x60	41.17
AM0415065*	150x65	43.19
AM0415075	150x75	47.08
AM0415080*	150x80	49.19
AM0415090	150x90	52.66
AM0415100*	150x100	86.91
AM0427025*	270x25	47.49
AM0427030	270x30	50.23
AM0427045	270x45	59.05
AM0427050*	270x50	63.08
AM0427055*	270x55	66.06
AM0427060	270x60	68.56
AM0427065*	270x65	71.87
AM0427075	270x75	84.18
AM0427080*	270x80	87.83
AM0427090	270x90	93.97
AM0427120	270x120	167.90
AM0427180	270x180	260.06
AM0427240	270x240	314.74

Index	Dimensions (cm)	Weight (kg)
AM0430025*	300x25	52.90
AM0430030	300x30	55.87
AM0430040*	300x40	62.34
AM0430045	300x45	65.51
AM0430050*	300x50	69.94
AM0430055*	300x55	73.20
AM0430060	300x60	76.28
AM0430065*	300x65	79.55
AM0430075	300x75	92.39
AM0430080*	300x80	96.36
AM0430090	300x90	103.02
AM0430100*	300x100	166.79
AM0430120	300x120	186.27
AM0430180	300x180	288.32
AM0430240	300x240	347.91
AM0433030*	330x30	60.96
AM0433045*	330x45	71.41
AM0433050	330x50	76.19
AM0433060*	330x60	83.10
AM0433075*	330x75	117.48
AM0433090*	330x90	132.43

*Board made to order.



Note! Bowstring hole spacing is determined in the assembly manual

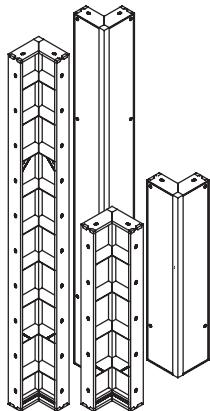


1. Midi Box Formwork

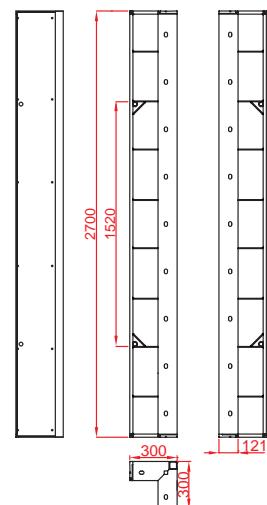


3. Internal corner

Used for boarding of the internal corners at a 90° angle.

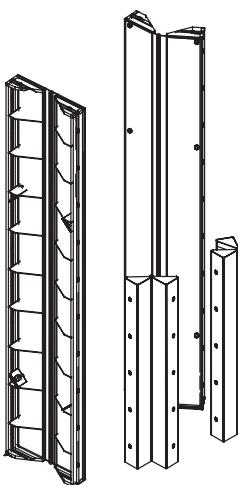


Index	Dimensions (cm)	Weight (kg)
AM0516090	90x30	22.76
AM0516120	120x30	29.41
AM0516150	150x30	36.52
AM0516270	270x30	63.49
AM0516300	300x30	85.08
AM0516330	330x30	92.01

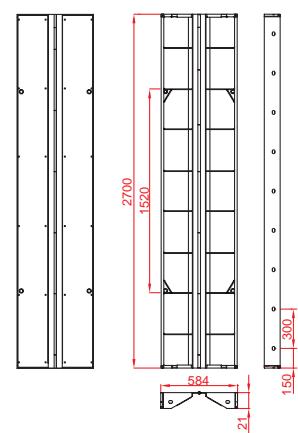


4. Hinged corner

Used for boarding of the internal and external corners at an angle of 60° up to 270°.

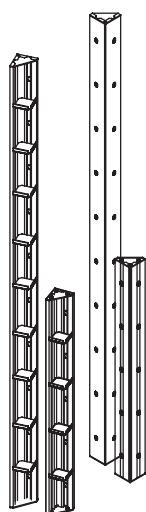


Index	Dimensions (cm)	Weight (kg)
AM0517090	90x15	17.00
AM0517120	120x15	22.24
AM0517150	120x15	27.49
AM0517270	270x15	48.19
AM0517300	300x15	53.68
AM0517330	330x15	58.08
AM0518090	90x30	26.38
AM0518120	120x30	33.97
AM0518150	150x30	42.05
AM0518270	270x30	73.39
AM0518300	300x30	95.96
AM0518330	330x30	103.91

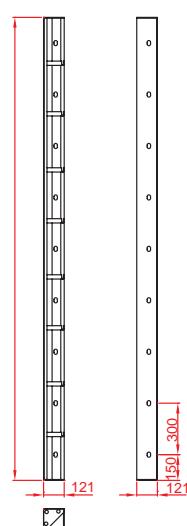


5. External corner

Used for fast shuttering board connecting in the rectangular external corners.



Index	Dimensions (cm)	Weight (kg)
AM0515090	90x0	7.96
AM0515120	120x0	10.70
AM0515150	150x12	13.41
AM0515270	270x12	23.91
AM0515300	300x12	26.59
AM0515330	330x12	30.31

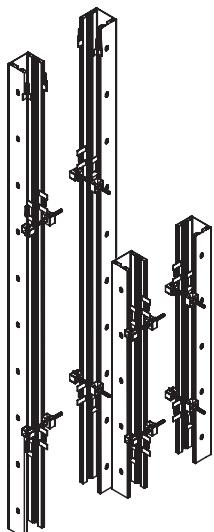




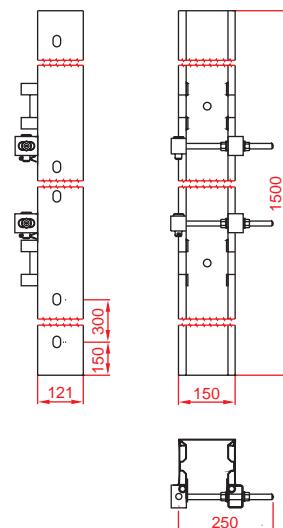
1. Midi Box Formwork

3. Radical slats

Used for boarding of the arched structures with a radius exceeding 2.5 m. We offer three radial slat widths: 15, 20 and 25 cm. The radial slats and the MIDI BOX boards allow for a precise formwork set-up without the need to use the filling inserts.

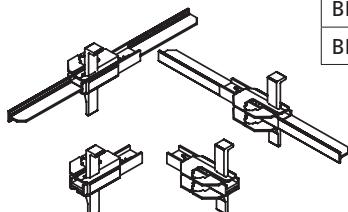


Index	Dimensions (cm)	Weight (kg)
AM0715150	15x150	18.8
AM0715270	15x270	31.8
AM0715300	15x300	37.3
AM0720150	20x150	20.2
AM0720270	20x270	34.1
AM0720300	20x300	40.7
AM0725150	25x150	21.6
AM0725270	25x270	36.4
AM0725300	25x300	43.9

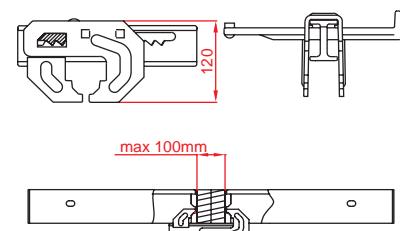


7. Formwork lock

BM multi-purpose formwork lock. It acts also as a straightening and stiffening element for the formwork.

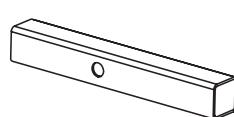


Name	Index	Dimensions (cm)	Weight (kg)
BM260	AM0901260	L=26; B=5.7	4.55
BM710	AM0902710	L=71; B=5.7	4.47

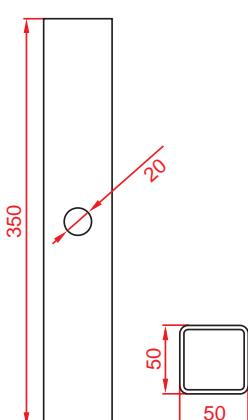
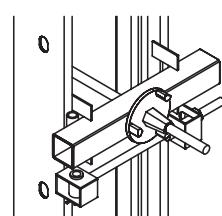


8. Bowstring beam

Transfers the load from the bowstring to the radial slats.



Index	Dimensions (cm)	Weight (kg)
AM0730001	350x50	1.56





1. Midi Box Formwork

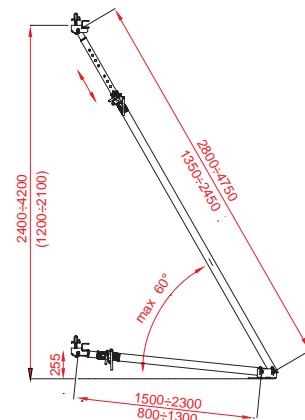
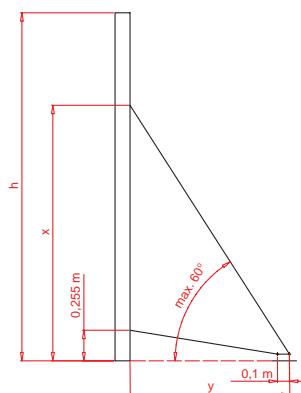


9. Tilting support

Used for plumbing the shuttering boards 1.5 m, 2.5 m and 3.0 m (this support does not transfer the forces generated by the concrete pressure).

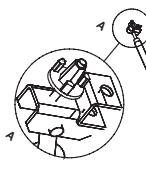


Index	Formwork height- h(m)	Max. distance between the supports (m)	Load for the max. support spacing (kN)	Support height-x(m)	Distance of the foot from the formwork edge-y (m)	Weight (kg)
AM0904001	3.0	2.5	15.0	2.1	max. 1.20	28.88
AM0904002	6.0	2.5	14.0	4.2	max. 2.32	40.20

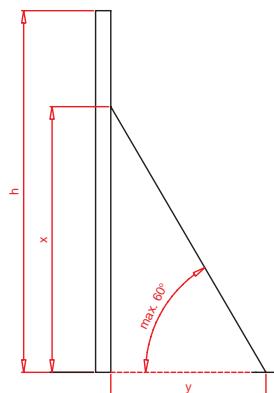
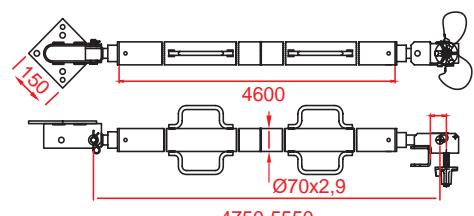
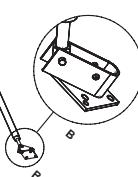


10. Raking shore

Used for plumbing the high wall formwork -i.e. higher than 3.0 m.

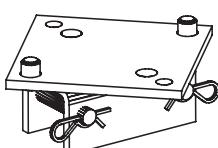


Index	Formwork height- h(m)	Max. distance between the supports (m)	Load for the max. support spacing (kN)	Support height-x(m)	Distance of the foot from the formwork edge-y (m)	Weight (kg)
AM0904005	6.0	2.2	12.0	4.2	max. 2.5	34.9

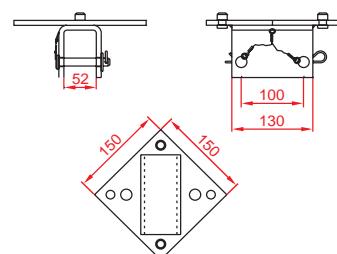


11. Tilting support handle

Used together with the climbing formwork bracket. Intended for fastening the tilting support and raking shore on the bracket.



Index	Weight (kg)
AM0915005	3.78

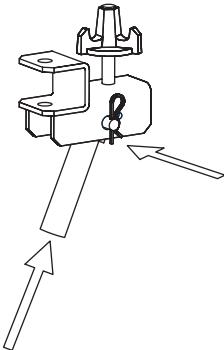




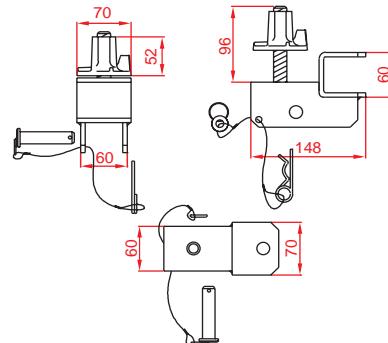
1. Midi Box Formwork

12. Prop head

An element that connects the formwork supports with the shuttering boards among other things. The prop head is the integral part of: tilting support, raking shore and it is also available as the service part.

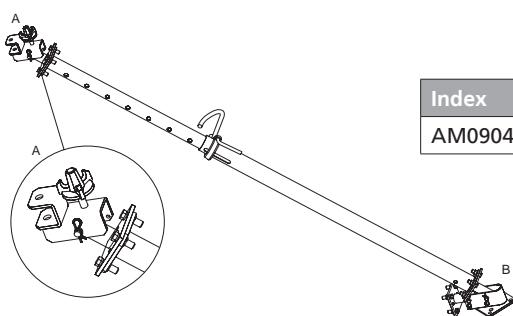


Index	Weight (kg)
AM0904010	2.16

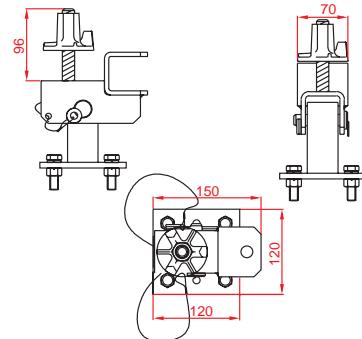


13. Prop link

Used for connecting the ceiling support with the formwork. A connector together with the support may be used as the tilting support. The set includes the prop head.

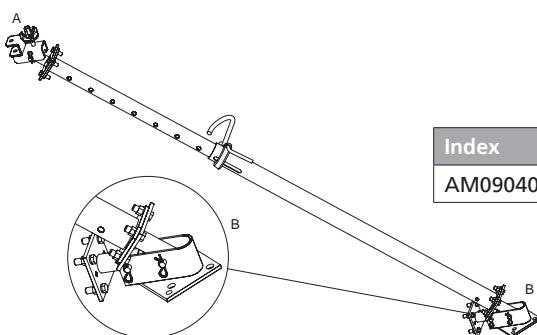


Index	Weight (kg)
AM0904011	3.60

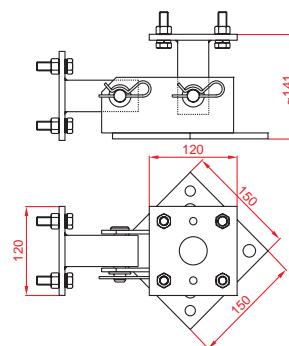


14. Support foot

Used for placing the support on the ground. The support foot together with the support is used as the tilting support.

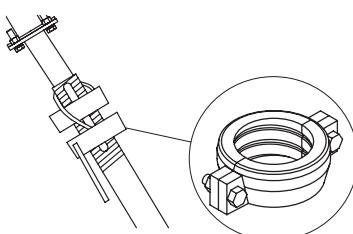


Index	Dimensions (cm)	Weight (kg)
AM0904012	9.90	5.54

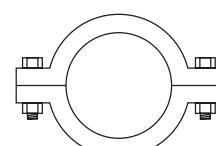


15. Locknut for support

Used for locking the ceiling support which together with the foot and prop link acts as the tilting support when the shuttering boards are plumbed. An element to be used with the AM0004300-AM0004550 supports



Index	Dimensions (cm)	Weight (kg)
AM0009064	Ø64	0.66
AM0009076	Ø75	0.85





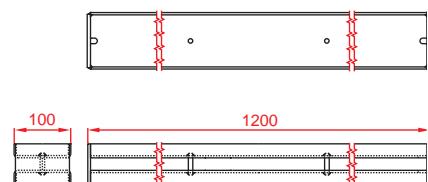
1. Midi Box Formwork



16. Stiffening beam

Intended for stiffening the connections of the shuttering boards and the filling inserts while keeping the formwork straight. An element to be used with the tightener and flange nuts.

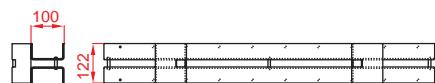
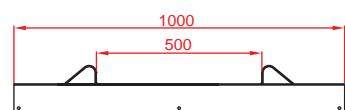
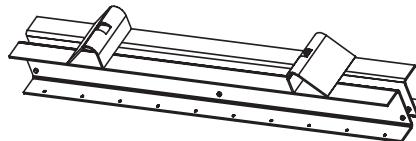
Index	Dimensions (cm)	Weight (kg)
AM0960001	L=120	11.4
AM0960003	L=260	24.3



17. Boarding transom

Ensures the connection of the shuttering boards with the filling inserts more than 15 cm wide while keeping the connection straight and stiffened.

Index	Dimensions (cm)	Weight (kg)
AM0970001	L=100	13.6

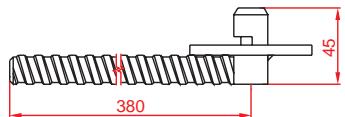
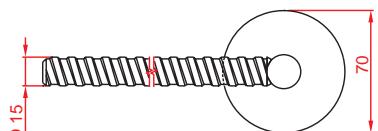


18. Tightener

A set includes two tighteners and a stiffening beam or tightening transom.

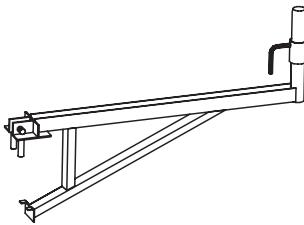


Index	Dimensions (cm)	Weight (kg)
AM0920001	L=30	0.80

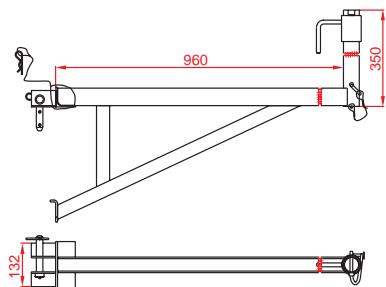


19. Working platform bracket

Attached to the shuttering board holes, acts as a convenient base for laying the working platforms.



Index	Dimensions (cm)	Weight (kg)
AM0951000*	L=96	10.7

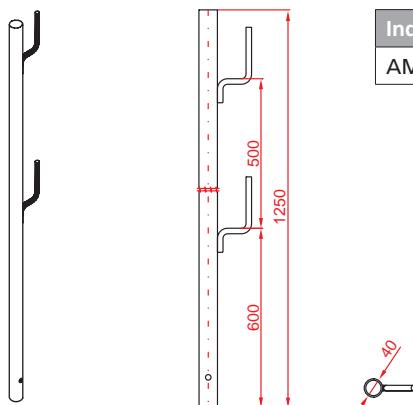




1. Midi Box Formwork

20. Working platform post

Inserted into the working platform bracket holes. Used for fastening the wooden railings to protect workers on the working platforms. It also allows for connecting the shuttering boards on the formwork outside edges.



Index	Dimensions (cm)	Weight (kg)
AM0970002	L=108,50	2.89

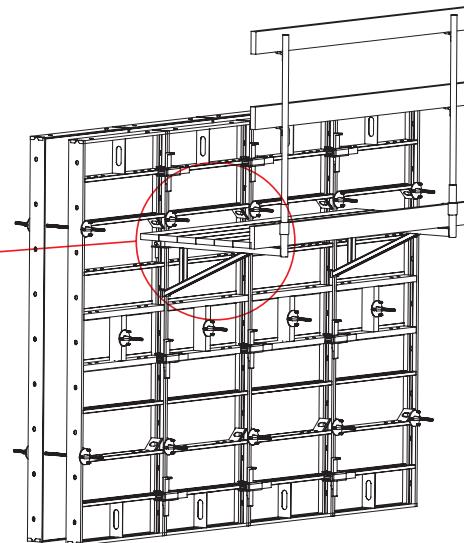
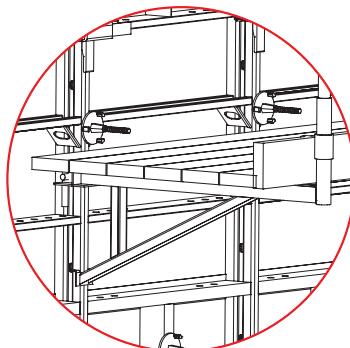
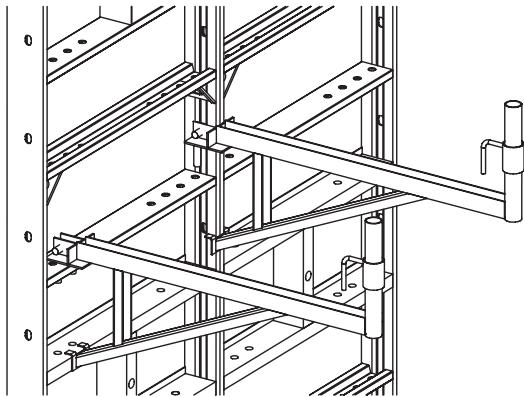
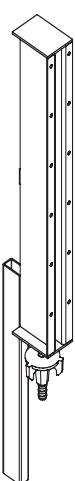


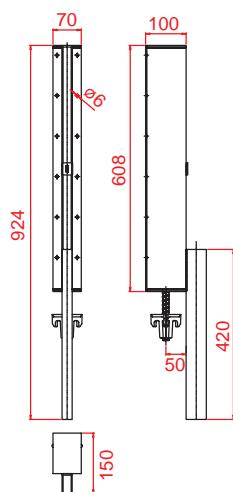
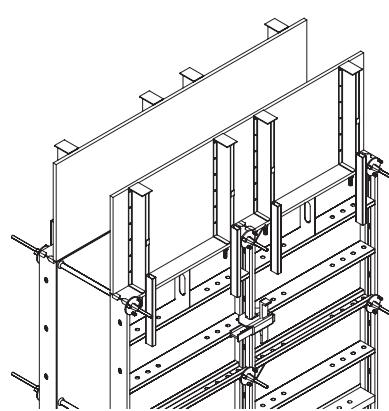
Diagram- working platform assembly

21. Superstructure bracket

The superstructure bracket 0.6 m is an element that works with all shuttering system of the MIDI BOX system. Together with the appropriately cut format of e.g. plywood it allows to concrete fill the walls max. 0.6 m higher.



Index	Dimensions (cm)	Weight (kg)
AM0603600	L=60	5.90



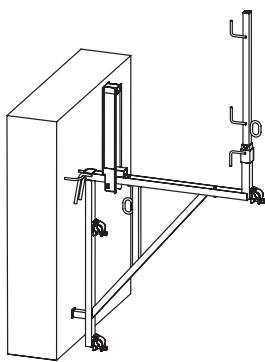


1. Midi Box Formwork

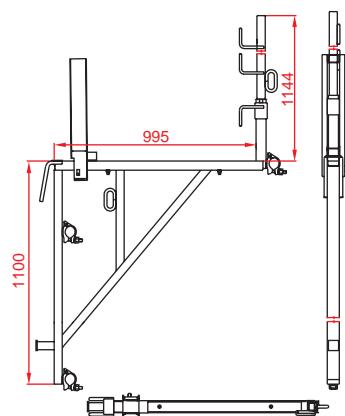


22. Wall bracket

Fastened to the board structure, used for fastening the working platforms on the existing walls and supporting the climbing formwork. The bracket is installed on the anchoring elements concreted in the wall.

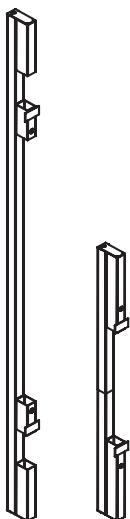


Index	Dimensions (cm)	Weight (kg)
AM0950000	L=100; H=220	29.2

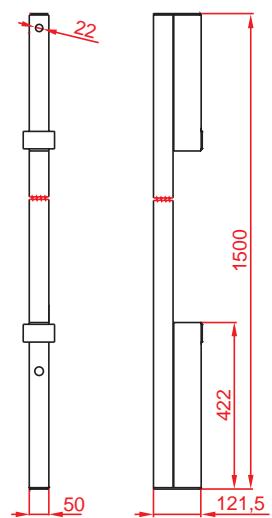


23. Steel filling inserts

As well as the wooden inserts the steel inserts are used for compensating the formwork dimensions by the multiple of 5 cm.

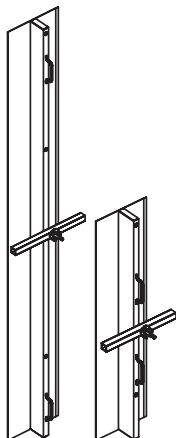


Index	Dimensions (cm)	Weight (kg)
AM0605150	150x12x5	10.5
AM0605270	270x12x5	15.9

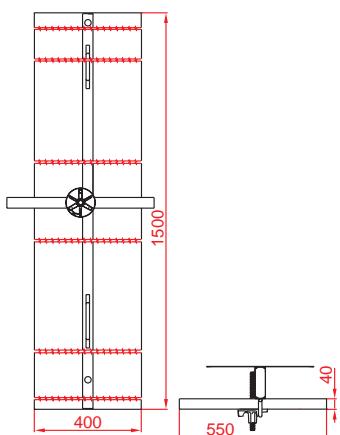


24. Adjustable filling inserts

Used for smooth compensation of the formwork length within 7 cm up to 30 cm.



Index	Dimensions (cm)	Weight (kg)
AM0636150	36x150	29.0
AM0636270	36x270	49.3
AM0636300	36x300	54.4

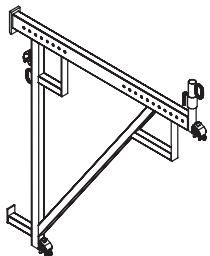




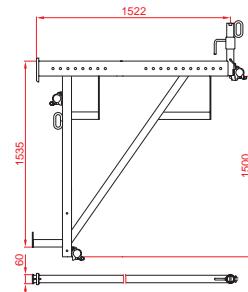
2. Climbing Formwork

25. Climbing formwork bracket*

Intended for supporting the climbing formwork. Next brackets are fixed to the wall with the bracket grip and anchoring elements. Maximum spacing 1.35 m.

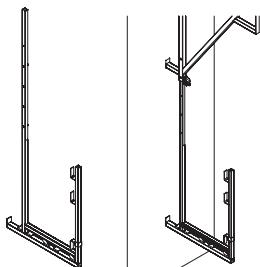


Index	Dimensions (cm)	Weight (kg)
AM0915003	L=160; H=180	40.9

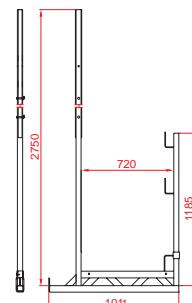


26. Additional platform bracket

An element used together with the climbing formwork bracket. It is used for the removal of the bracket grip and the SKK cone which fasten the climbing formwork bracket on the lowest level.

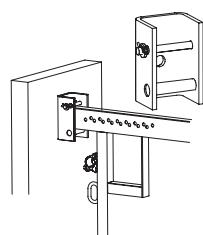


Index	Dimensions (cm)	Weight (kg)
AM0952000	L=101; H=280	27.9

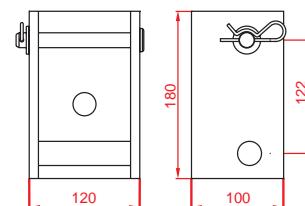


27. Bracket grip

Used together with the climbing formwork bracket. Allows installation of the bracket on the wall.

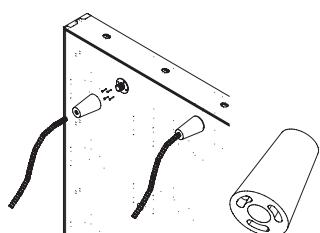


Index	Weight (kg)
AM0915004	4.86

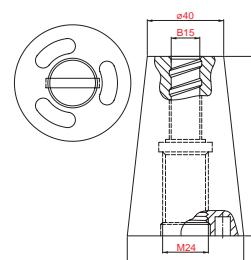


28. SKK cone

Used for connecting the BETOMAX 815 bowstring on one side and the threaded rod on the other side or the screw with the M24 metric thread.

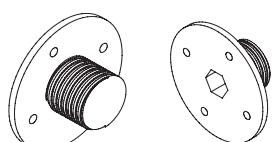


Index	Dimensions (cm)	Weight (kg)
AM2545030	B15/M24	1.27

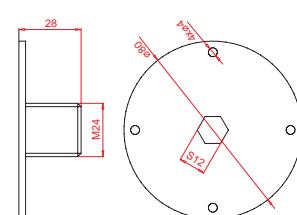


29. SKK cone grip

Used for fixing the SKK BETOMAX cone. The grip is nailed to the formwork in any manner.



Index	Weight (kg)
AM2545040	0.1

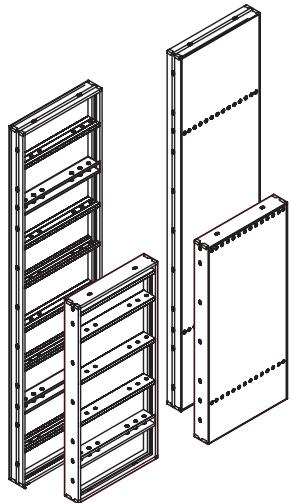




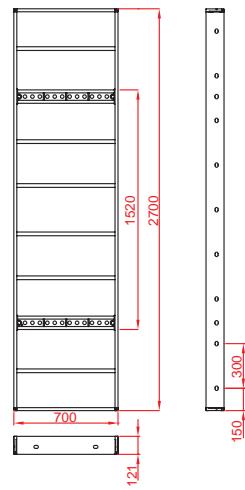
2. POLE FORMWORK (standard for poles and walls)

30. SP shuttering board

Apart from the basic shuttering board function it also allows for the boarding of the square and rectangular poles up to 5.4 m high in the module every 5 cm with the 55x55 cm section for the SP70 boards and 75x75 cm for the SP90 boards.



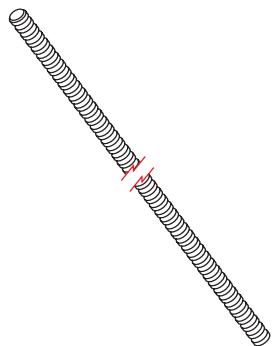
Index	Dimensions (cm)	Weight (kg)
AM0306070	60x70	24.94
AM0309070	90x70	33.87
AM0312070	120x70	41.21
AM0315070	150x70	54.35
AM0315090	150x90	64.77
AM0327070	270x70	82.76
AM0327090	270x90	111.76
AM0330070	300x70	92.28
AM0330090	300x90	125.62
AM0333070	330x70	99.70
AM0333075	330x75	103.43
AM0333090	330x90	134.80



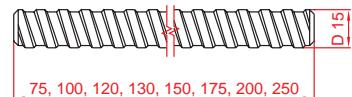
Note! Bowstring hole spacing is determined in the assembly manual

31 . Formwork bowstring

With the DYWIDAG hot rolled thread, black or galvanised. The bowstring length may be specified by the client but they cannot be longer than 600 cm. Permissible load: 90 kN.



Index	Dimensions (cm)	Weight (kg)
AM0815075	15x75	1.08
AM0815100	15x100	1.43
AM0815120	15x120	1.72
AM0815130	15x130	1.87
AM0815150	15x150	2.10
AM0815175	15x175	2.50
AM0815200	15x200	2.86
AM0815250	15x250	3.58
AM0815300	12x300	4.20

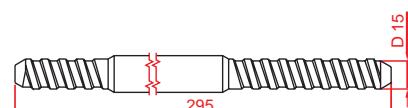


32. SP bolt

Used together with the SP nut to connect the SP shuttering boards.

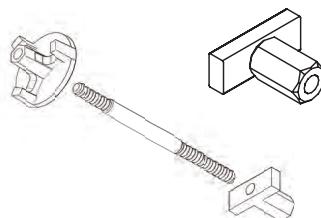


Index	Dimensions (cm)	Weight (kg)
AM2550000	Ø15x295	0.70

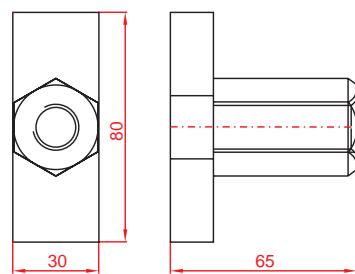


33. SP special nut

Used together with the SP bolt to connect the SP shuttering boards.



Index	Dimensions (cm)	Weight (kg)
AM2535000	30x80x65	0.50

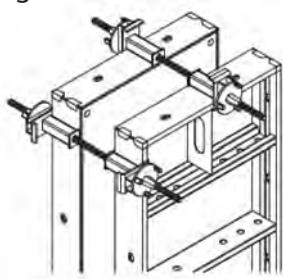




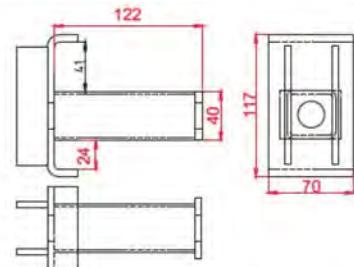
2. POLE FORMWORK (standard for poles and walls)

34. Edge catch

Allows for connecting the shuttering boards by their outside edges. Used with the formwork bowstring and the flange nuts.

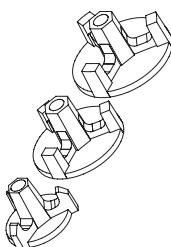


Index	Dimensions (cm)	Weight (kg)
AM0910001	L=12	1.23

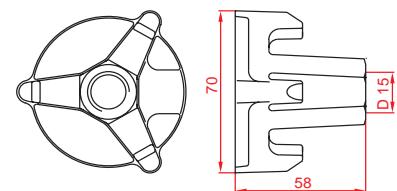


35. Flange nut

A basic element that works together with the DYWIDAG formwork bowstring and is used for connecting the MIDI BOX elements. Permissible load is 90 kN.

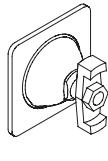


Index	Dimensions (cm)	Weight (kg)
AM2510070	Ø70	0.40
AM2510100	Ø100	0.60
AM2510110	Ø110	0.80

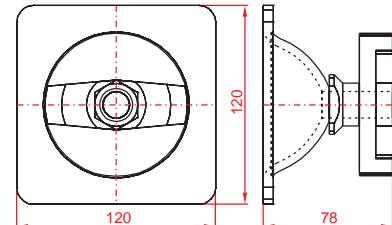
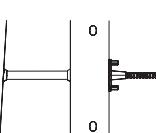


36. Square nut with ball socket

Self-adjustable within 15°. Permissible load- 90 kN. Works together with the formwork bowstring.

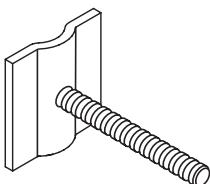


Index	Dimensions (cm)	Weight (kg)
AM2530120	12x12	1.40

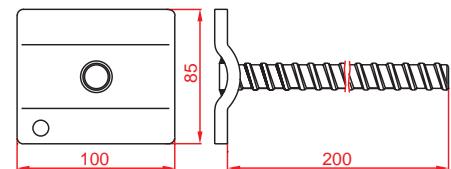


37. Centring bowstring

A bowstring with the DYWIDAG hot rolled and galvanised thread. Used for connecting the hinge corner 15 cm wide with the shuttering board. It can be used for connecting the shuttering boards through the oval holes in their side edges.

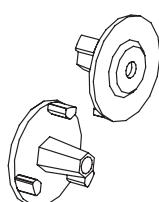


Index	Dimensions (cm)	Weight (kg)
AM0815000	L=200	0.83
AM0815001	L=120	0.77

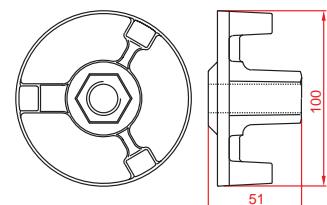


38. Centring nut

Included in the set with the centring bowstring.



Index	Dimensions (cm)	Weight (kg)
AM2532100	Ø100	0.60

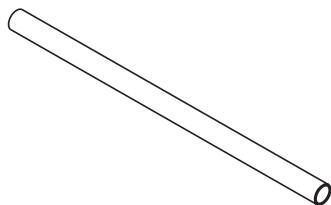




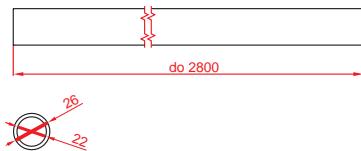
2. POLE FORMWORK (standard for poles and walls)

39. PVC distance pipe Ø26 mm

A pipe with the outer diameter of Ø26 mm and inner diameter of Ø22 mm; offered in sections 2.8 m long; can be cut between the formwork sides to the desired length on the construction site. Acts as a „spacer” and allows for removing the bowstring after concreting of the wall (lost element)

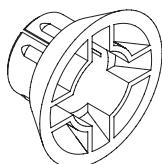


Index	Dimensions (cm)	Weight (kg)
AM2540015	Ø26	0.20kg/m.b.

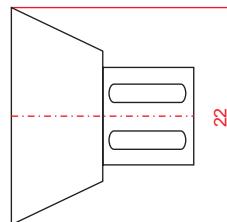


40. D15 PVC sealing cone

Protects the bowstring against concreting at the shuttering board plane.



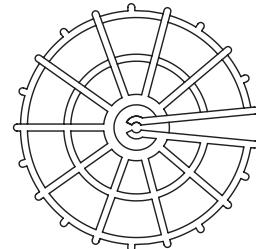
Index	Dimensions (cm)	Weight (kg)
AM2545015	Ø22	0.01



41. Clinch spacer

Allows the rods to be appropriately located in the concrete structure.

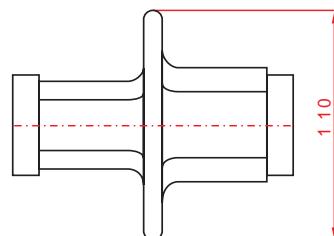
Index	Dimensions (cm)	Weight (kg)
AM2550020	10x12	0.01
AM2550030	30x12	0.01
AM2550035	35x12	0.01



42. Waterproof coupling

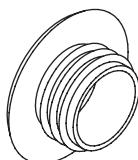
Used for concreting the tight tanks, pools etc.; unrecoverable element (remains in the concreted wall).

Index	Dimensions (cm)	Weight (kg)
AM2555065	Ø110	0.80

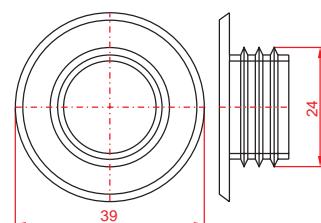


43. Hole plug

Used for closing the free (not used) holes in the shuttering boards. The hole plugs differ due to their application with the appropriate holes.



Application	Index	Dimensions (cm)	Weight (kg)
Midi Box and Midi Box S3 boards	AM2565001	Ø24x39-14	0.01
SP boards	AM2565003	Ø25x28-15	0.01
oval holes	AM2565004	Ø20x27-32	0.01



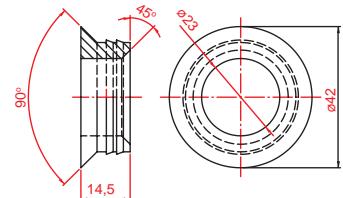


2. POLE FORMWORK (standard for poles and walls)

44. Ring

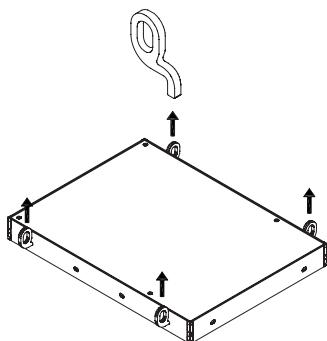
Used for filling the process holes made in the plywood and used for threading the threaded Dywidag D15 rods (bowstrings) that connect the opposite formwork walls. When the tightening element is not used in the given board area the space of the given process hole is closed with the special hole plug. The type of the hole plug depends on the type of the board.

Index	Dimensions (cm)	Weight (kg)
AM2565000	42x13	0.01

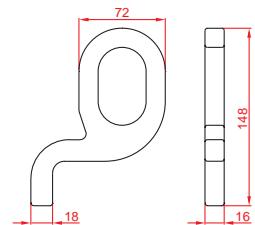


45. Catch for horizontal transport

Used for transporting the shuttering boards horizontally on the construction site. It is made of solid metal piece.

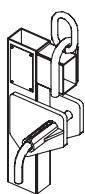


Index	Dimensions (cm)	Weight (kg)
AM0910000	148X16	0.76

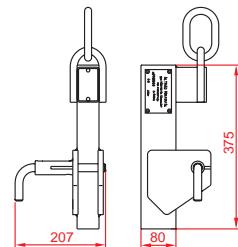


46. Hoisting hook

Certified by UDT; used for crane transportation of the shuttering boards connected in sets up to 30 m². Maximum permissible lifting capacity- 1000 kg.



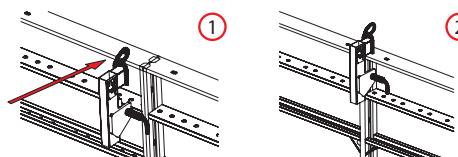
Index	Dimensions (cm)	Weight (kg)
AM0908000	L=43	9.35



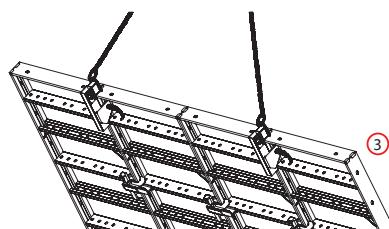
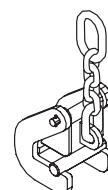
47. Lifting sling

Used for transporting the individual boards or boards connected in the formwork sets. Maximum lifting capacity- 800 kg.

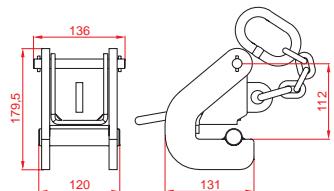
Index	Dimensions (cm)	Weight (kg)
AM0909000	L=15	6.00



Lifting sling - application



Lifting sling - sample assembly



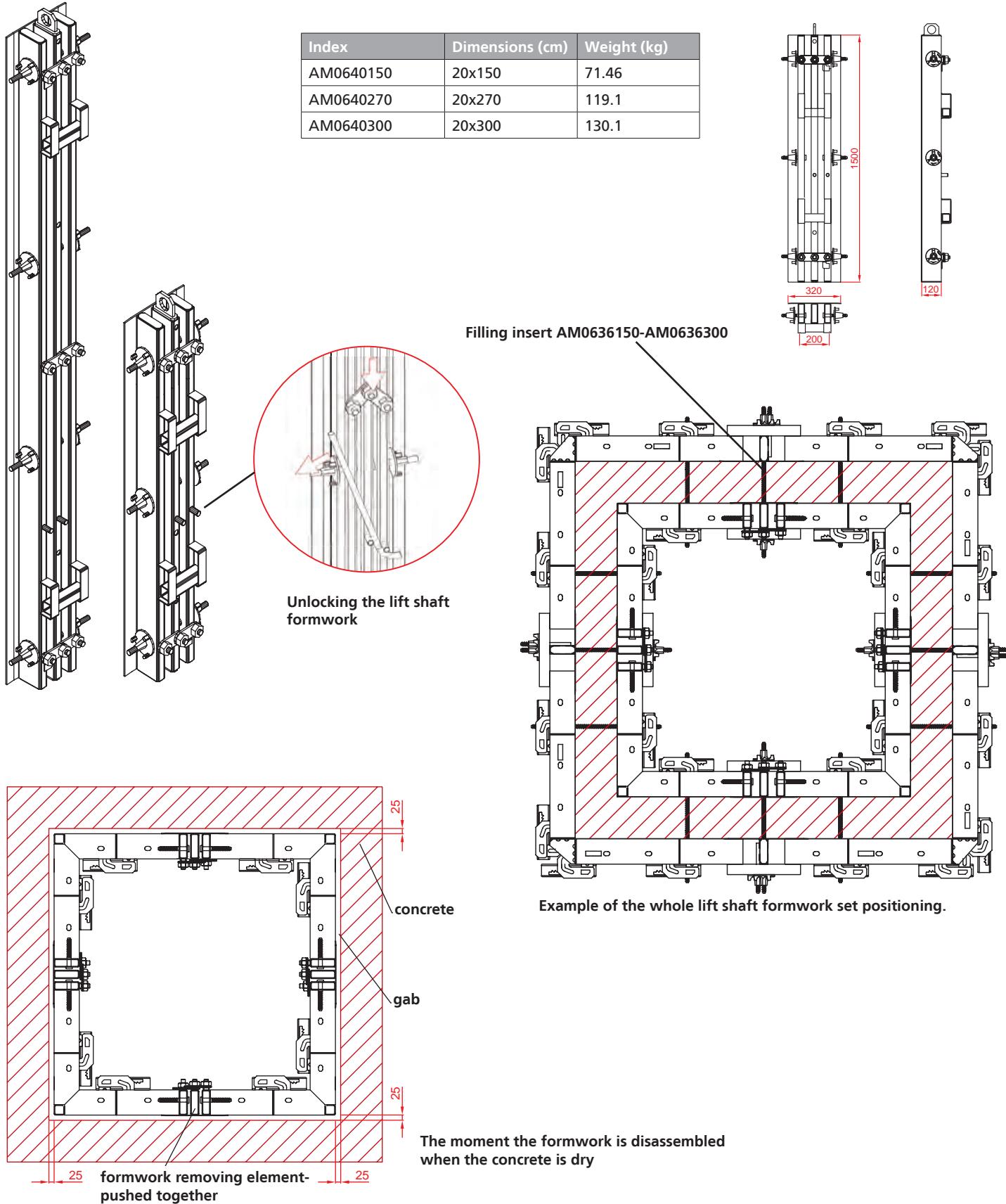


3. LIFT SHAFT FORMWORK



48. Formwork removing element

A formwork removing element works together with the MIDI BOX wall formwork system. It allows for the disassembly of the whole formwork internal section without the need to completely disassemble the set. The formwerk removing mechanism reduces the formwork size by 5 cm. The clearance obtained allows for the free removal of the segment.

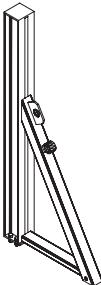




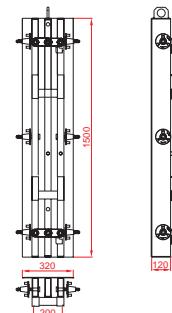
4. SUPPORTING TRESTLES (for one-sided formwork)

49. A type trestle bracket

An element 1.6 m high that works with the B type trestle bracket (a0995002) and allows to support the one-sided formwork up to the height of 4.5 m with the fresh concrete pressure of 100 kN/m².

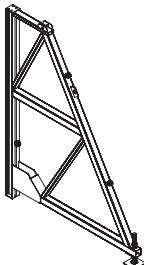


Index	Dimensions (cm)	Weight (kg)
AM0995001	L=56; H=160	48.7

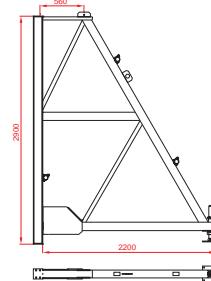


50. B type trestle bracket

An element 2.9 m high used for supporting the one-sided formwork used for concreting the walls located at the existing buildings, rocks etc. The structure must be appropriately anchored in the ground. When the formwork is more than 2.9 m high it works together with the A type trestle bracket (AM0995001).

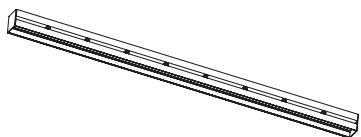


Index	Dimensions (cm)	Weight (kg)
AM0995002	L=220; H=290	227.2

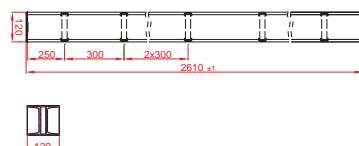


51 . Clamping beam

An element used for clamping the trestle brackets. It transfers the vertical force generated by the concrete pressing on the anchors.

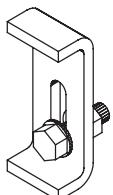


Index	Dimensions (cm)	Weight (kg)
AM0996260	L=260	57.2

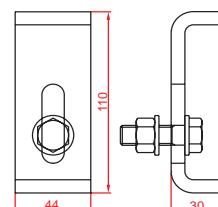


52. Angle bracket

An element used for locating the shuttering board in relation to the trestle bracket. It protects the board from moving under its own weight.

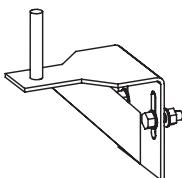


Index	Weight (kg)
AM0997001	0.45

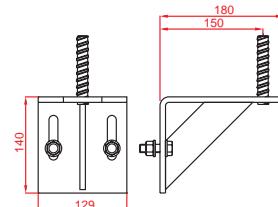


53. Wide angle bracket

An element used for locating the shuttering board in relation to the trestle bracket while working together with the stiffening beam. It protects the board from moving under its own weight.



Index	Weight (kg)
AM0997002	2.70





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