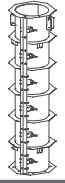


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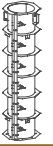
4.1. ROUND COLUMN FORMWORK and accessories



FORMWORK SYSTEMS



ROBUSTA
GAUKEL



Your benefits at a glance:

- For round column formwork for exposed concrete quality
- Easy encasing
- Accurate joining together of the two casing halves with centering pins
- Quick closing with D&W thread \varnothing 15 mm with wing nut
- Continuous rubber sealing at the longitudinal joint prevents leaking
- New longitudinal profile enables the connecting of frame formwork for oval columns without special elements
- Working platform for concreting with side protection fitting to all formwork diameters without inconvenient adjustment
- Diameters to rent beginning with 250 mm, up to 900, 1000 and 1200 mm
- Degrees in length in 50 cm steps, max. standard length 3.50 m
- Floor heights up to 3.50 m to produce without lateral joints
- Concrete pressure max 120 kN/m²
- Special formwork and any intermediate sizes available on request for purchase

Our high quality steel formwork for circular columns offers numerous innovations for even best results:

Each half has **all necessary connecting flanges** to fix 2 props and to **hang the working platform**.

All **halves are identical**, there are no right or left elements which have to be paid attention to when mounting.

Because of great precision during production you can combine the halves of one diameter optional.

The consequent degrees of length and the arrangements of the anchor points in a 50 cm raster also allow an optional combining of the halves in different lengths!

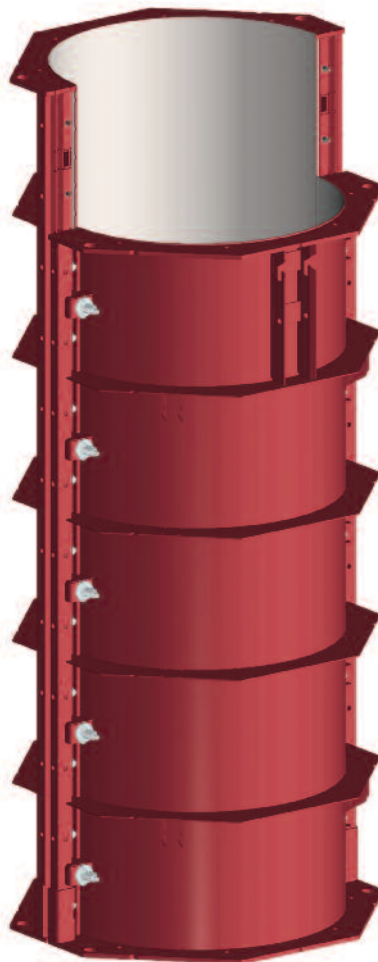
The special advantage is seen when changings of elevation of the floor slab occur or when special formwork for consoles has to be added, when one half has to be disconnected.

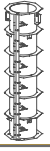
We offer different basic elements (as of 2.50 m) and attachment elements (as of 0.50 m).

Examples:

Very excellent finish of the fair-face concrete without displacement at the vertical joints.

*Variable use:
Half L = 2 m coupled with
Half L = 3 m*





Examples



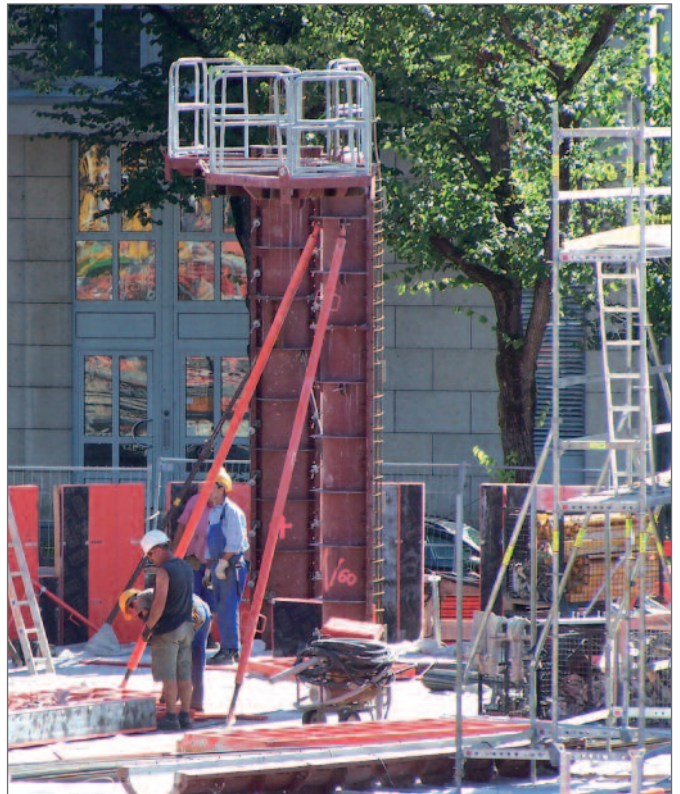
Inclined columns, poured with rental formwork and beveled special base elements

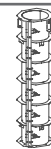


Columns in an underground train construction site. Heights up to 12 m were poured in a single operation.



Formwork with working platform, for high safety while pouring the concrete





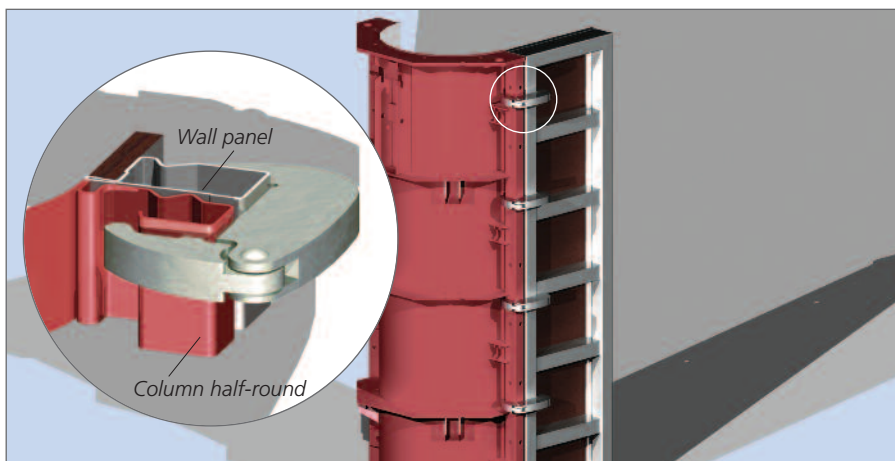
ADVANTAGE 1: formwork profile for precise contours

The newly developed formwork profile offers numerous advantages, which extend the range of application considerably:

The contour of the vertical longitudinal profiles at the joint of the halves has been adjusted to the normal frame formworks with a construction height of 123 mm.

Now it is very easy to connect wall formwork elements with the according formwork clamps. So you can concrete wall sheets with a semicircle shaped end without any special parts.

Special ledges to insert into the joint are **not necessary**.

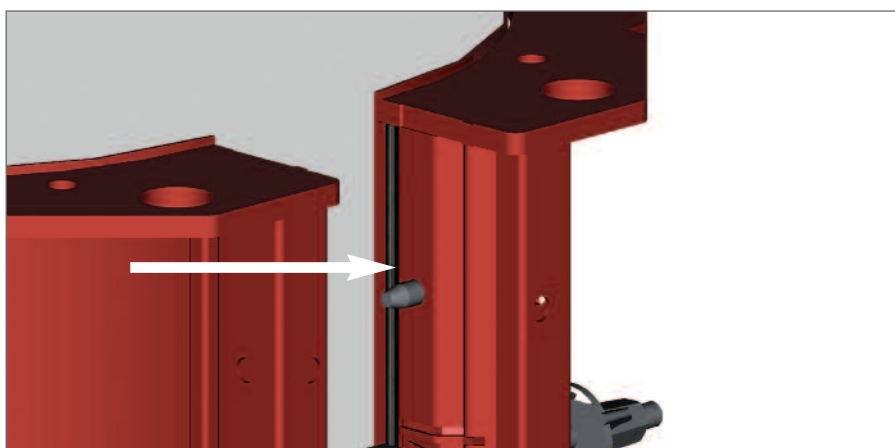


a) Rubber sealing

To prevent leaking of water or grout at the halves joint, the **ROBUSTA-rubber sealing "G13"** is installed directly behind the casing face.

This principle has proved itself best with steel formwork in factories for prefab elements, constant quality of the concrete surface is guaranteed at the joint.

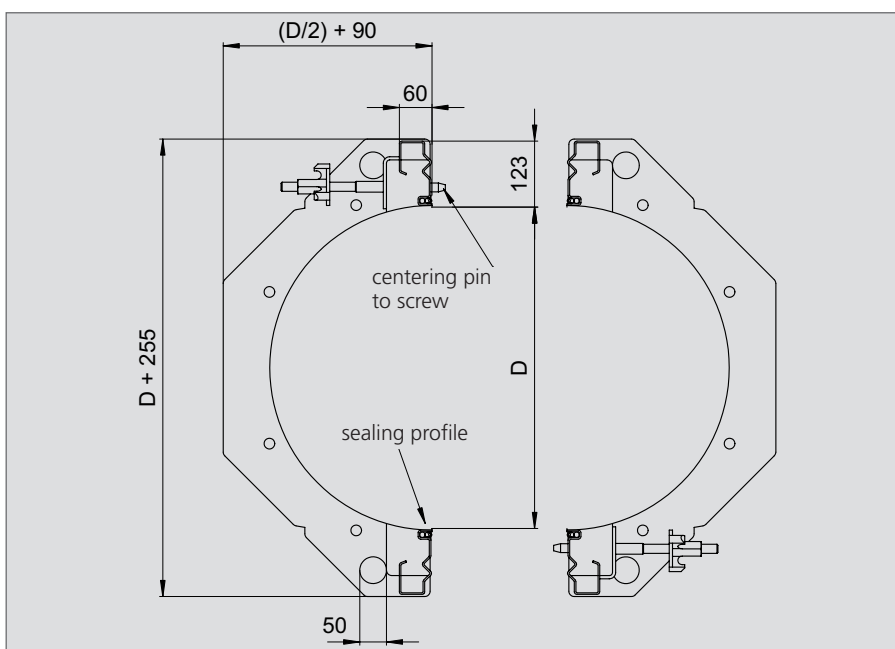
This sealing function will also work when connecting to the frame formwork!



b) Centering pins

The accuracy of assembly when mounting the halves is guaranteed by the centering pins, which fit exactly into the socket ring and prevent displacement of the steel formwork.

These pins are not welded, but screwed into the new longitudinal profile and can be removed and mounted easily when needed (for example connecting straight frame formwork).





ADVANTAGE 2: Working platform – quick and easy mounting

The mounting of the one-part working platform to the formwork is done very quick and easy. It does not matter, which formwork diameter is used, the working platform with a central hanging point will be inserted without any inconvenient adjustments between the fixing flanges and secured with a square bolt preventing removal.

With this very quick fixing technique several formworks can be filled by using only one working platform, also when several different diameters have to be concreted.

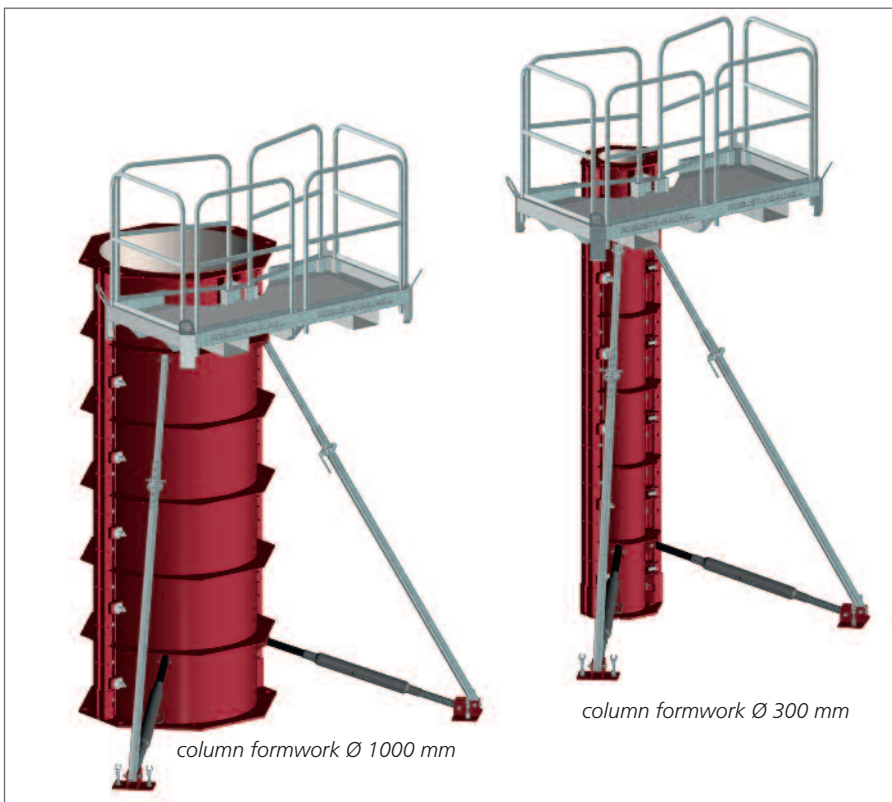
This helps to save costs and time !

If necessary a working platform can be fixed to each half.

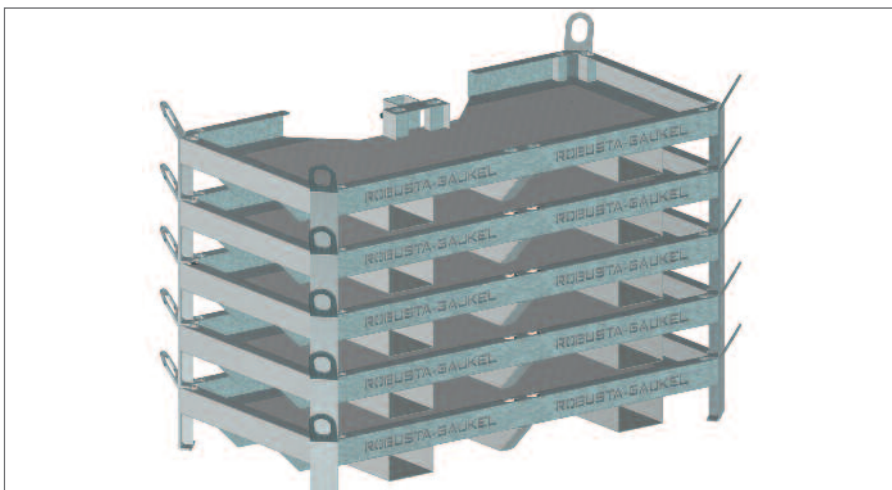
The working platform offers highest working security for 2 men because of the solid checkered metal base plate with insertable security rails all-round.

Wooden elements on site are not necessary any more.

For safe and space saving transport the working platforms can be stacked with the help of guide plates at the corners.



Inclined formwork Ø 800 mm with special base-element



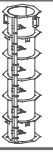
Stacking for safe and space-saving transport with the help of guiding plates at the edges.



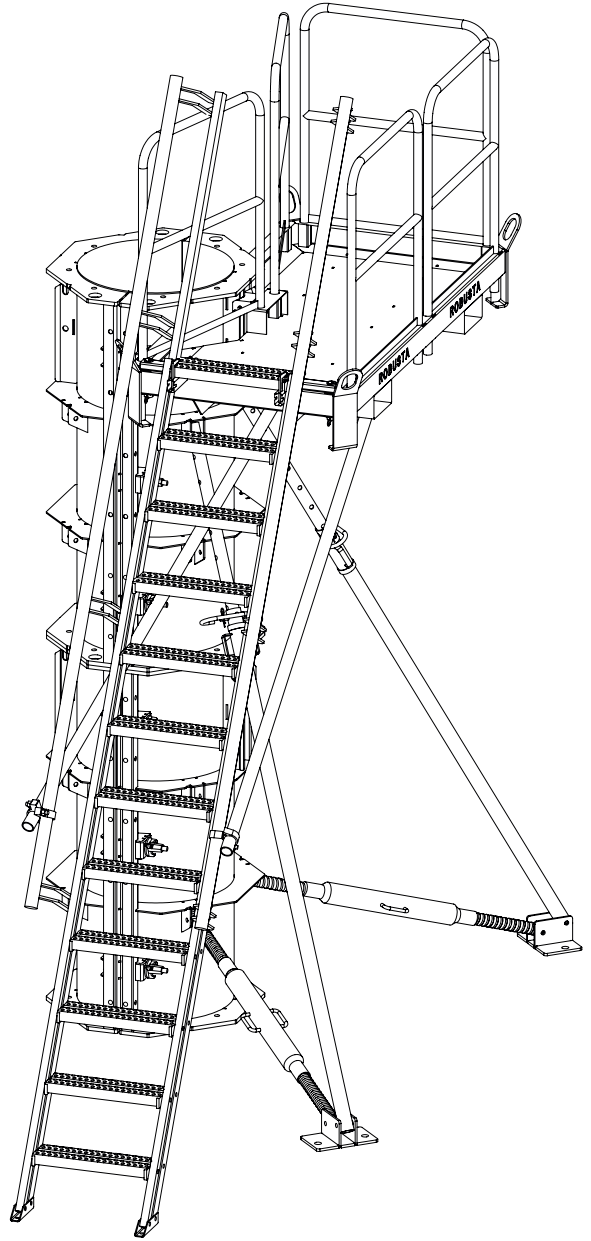
4

ROUND COLUMN FORMWORK AND ACCESSORIES

ADVANTAGES



ADVANTAGE 3: Accessories for ascending to the platform



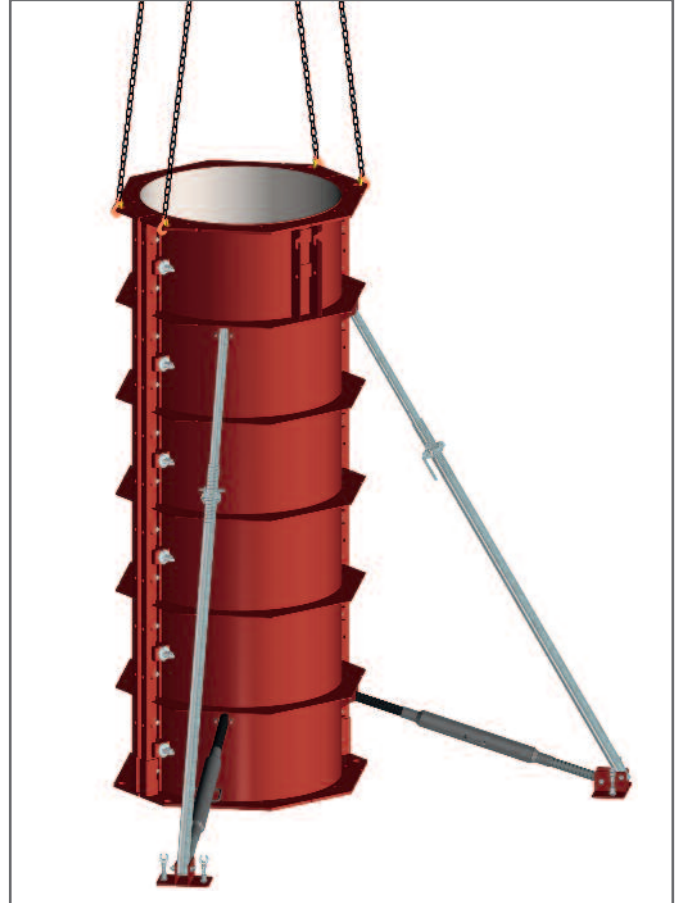
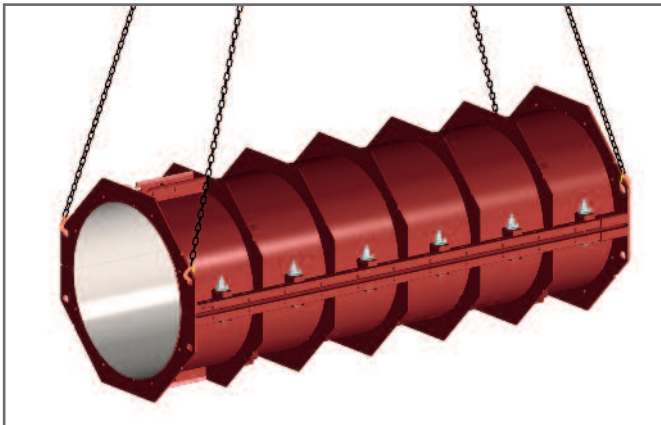
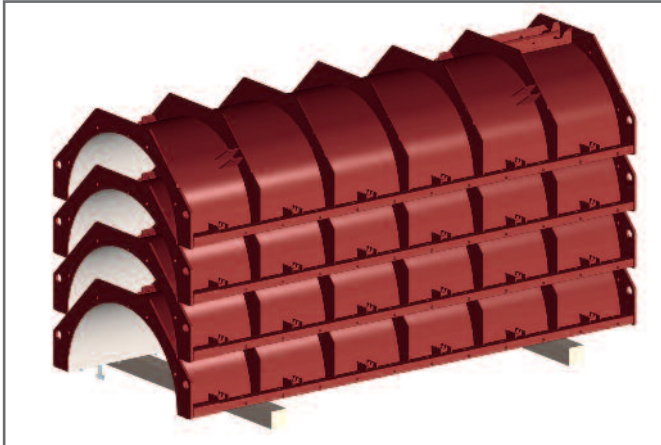
Working platform in combination with the adjustable STAFE steep strairs.
This completely mounted unit can be lifted by crane.



Transport

a) on a truck in halves: The geometry of the formwork ribs allows the stacking of the halves on each other. Especially with larger diameters as of \varnothing 500 mm the transport volume can be reduced.

b) on site: At the end ribs with large borings are available in which the crane hook is directly inserted. Therefore a vertical or horizontal transport of the closed formwork or even of single halves is possible without any further accessories.

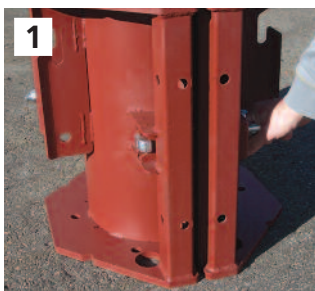


For safe casing works we recommend the following process:

First put up one half with mounted working platform, adjust with 2 props and anchor.

After the reinforcement bring second half, the halves will place themselves automatically in the correct position with the centering pins by tightening the screws, therefore no changings of elevation of steel formwork.

Quick striking:



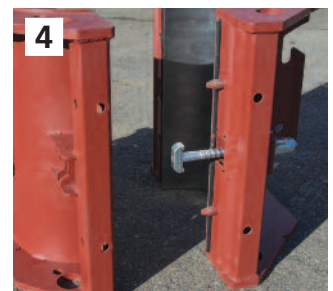
1. Loosen wing nut, do not remove from bar



2. Push bar forward



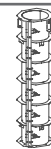
3. Revolve hammerhead of screw at an angle of 90°



4. Pull out of the groove of the other half

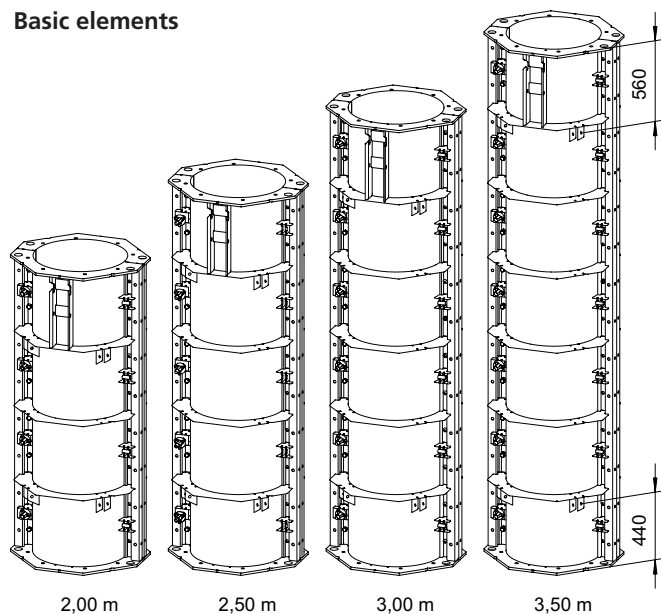
All parts for connecting (hammerhead and wing nut) remain at the formwork – therefore small casualty rate!





TECHNICAL DATA:

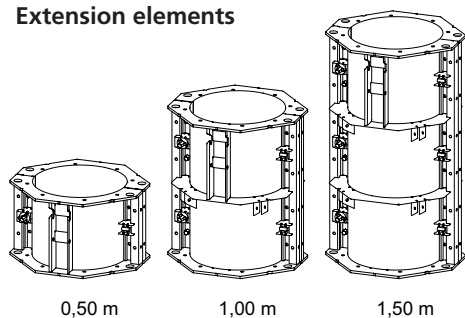
Basic elements



Round column formwork, consisting of 2 halves

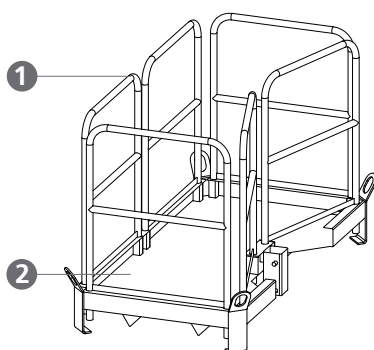
Diameter [mm]	Weight [kg/m]	Item No.*
250	107,00	4125..
300	115,00	4130..
350	123,00	4135..
400	130,00	4140..
450	140,00	4145..
500	150,00	4150..
550	160,00	4155..
600	165,00	4160..
650	173,00	4165..
700	183,00	4170..
750	192,00	4175..
800	200,00	4180..
900	220,00	4190..
1000	238,00	4101..
1200	303,00	4112..

Extension elements



*The last two digits of the article number give the length of the formwork element:
Example:35 for the length of 3.50 m.

Other diameters are available on request!



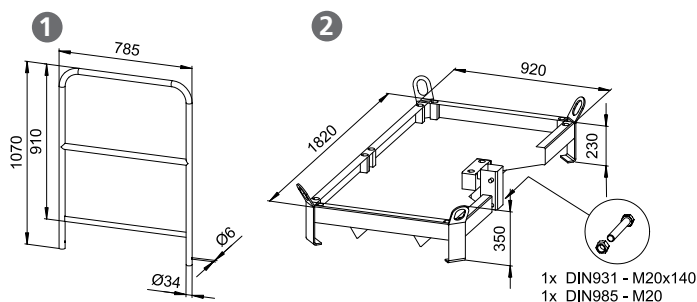
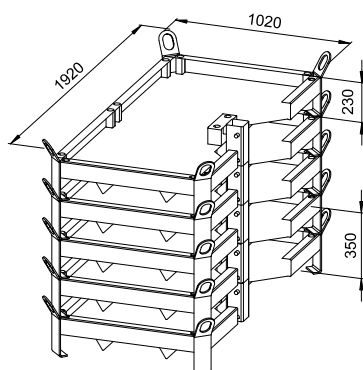
Working platform, complete

Dimensions platform L x W x H [mm]	Weight [kg/unit]	Item No.
1920 x 1020 x 350	172.0	419501

Working platform consisting of

- 1 6 x security rails (Artikel-Nr. 419510)
- 2 platform

All parts of the working platform are also available as single parts.

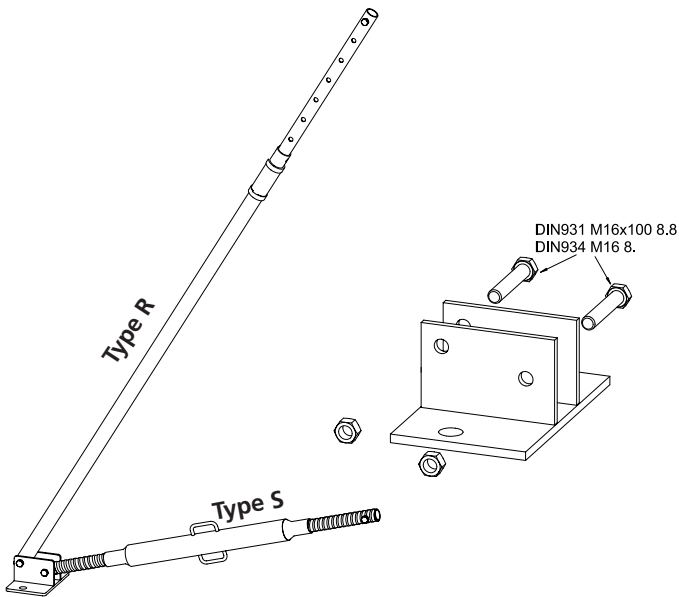


1x DIN931 - M20x140
1x DIN985 - M20





TECHNICAL DATA



Adjustment pair of props for fixing and adjusting the basic elements

Type	fitting to	Weight [kg/set]	Item No.
1-S + I-M	basic element 2,00 m	30.00	614130
1-S + II-M	basic elements 2,50m-3,50m	34.90	614236
both types including double end hinge		3.90	610903

Props Type R

Type	Length of prop [m]	for column lengths from – to [m]	Weight [kg/unit]	Item No.
I-R	1.50 – 2.50	2.00 bis 2.50	17.0	611125
II-R	2.10 – 3.50	2.00 bis 3.50	19.0	611235
III-R	3.00 – 5.00	2.50 bis 4.50	25.0	611350

Standard end hinge for external tube

Weight [kg/unit]	Item No.
1.00	611901

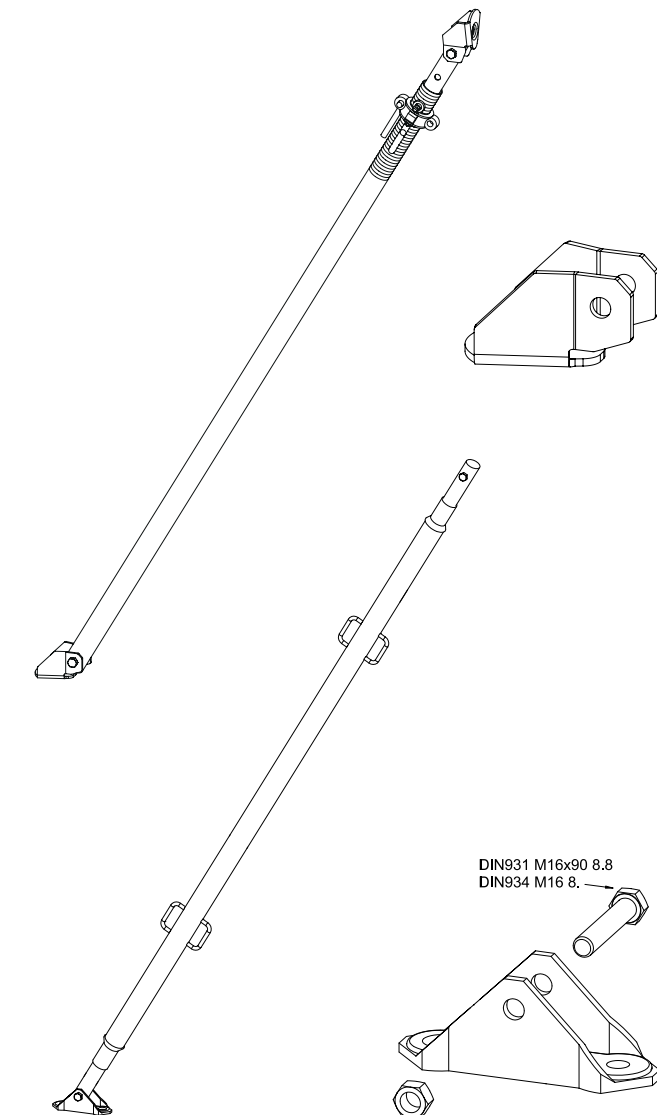
complete with hexagonal bolt and fitting nut

Props type S, varnished

Type	Length of prop [m]	for column lengths from – to [m]	Weight [kg/unit]	Item No.
6-S	4.60 – 6.00	3.00 – 6.00	22.6	612440
8-S	6.20 – 7.60	5.00 – 7.50	37.8	612660

Standard end hinge for spindle

Weight [kg/pce.]	Item No.
1.32	612903



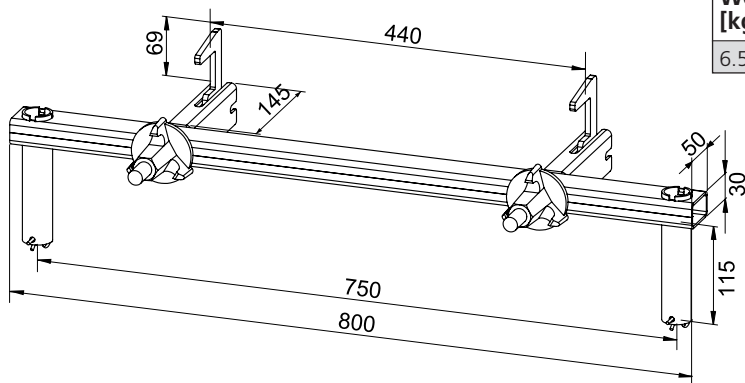
4

ROUND COLUMN FORMWORK AND ACCESSORIES



GENERAL INFORMATION

TECHNICAL DATA:

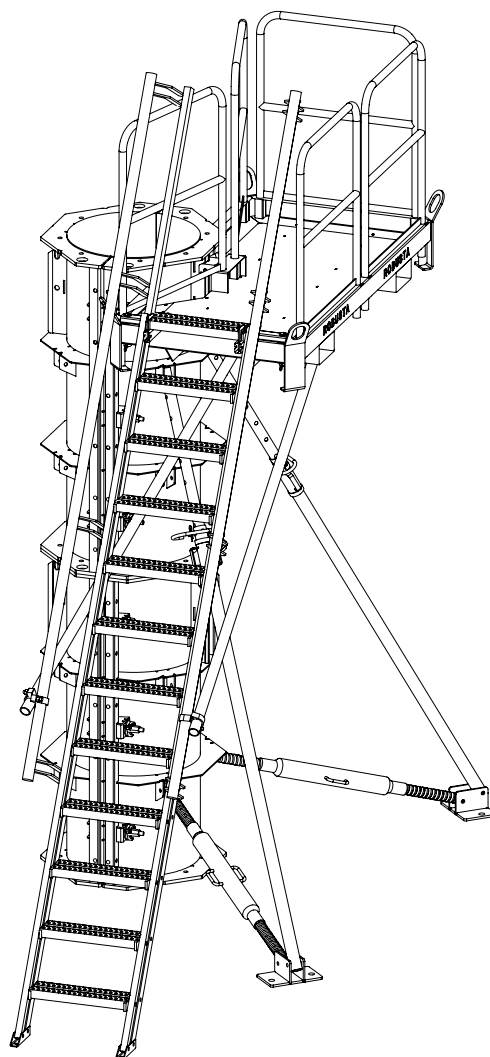
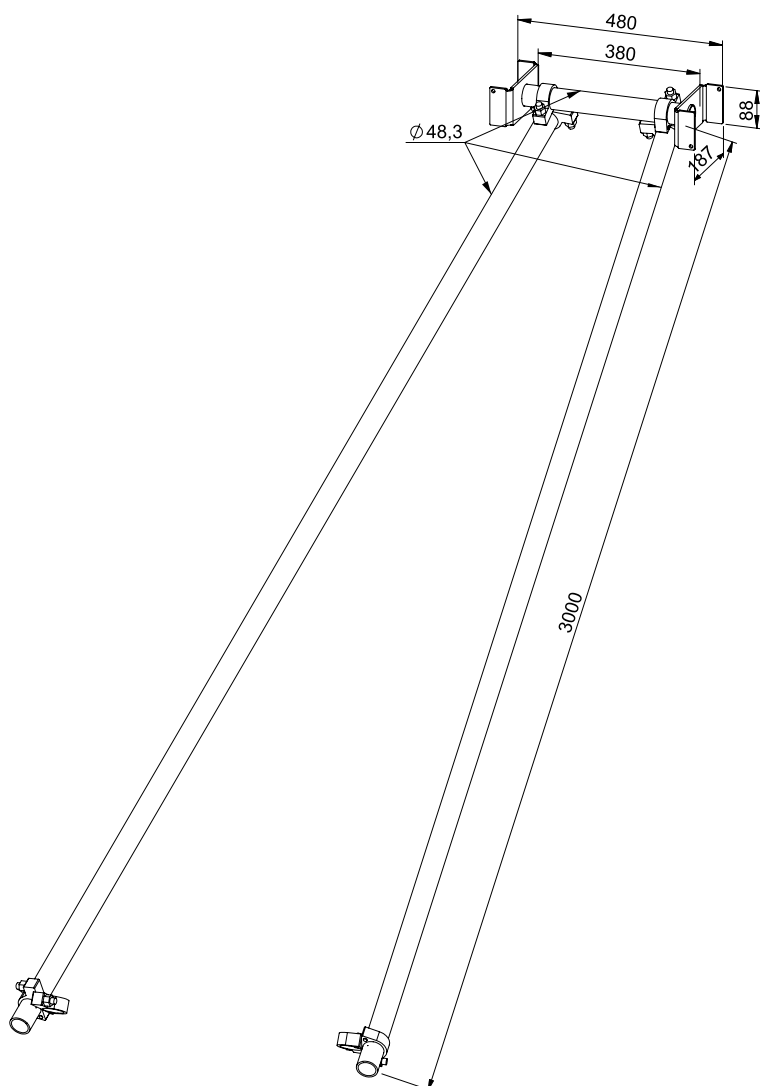


STAFFE console to attach steep stairs to the platform

Weight [kg/unit]	Item No.
6.50	353001

STAFFE set of braces for platforms

Set consisting of	Weight [kg/unit]	Item No.
counter brace, scaffold tubes, rotating couplers	39.00	353100





ROUND COLUMN FORMWORK AND ACCESSORIES

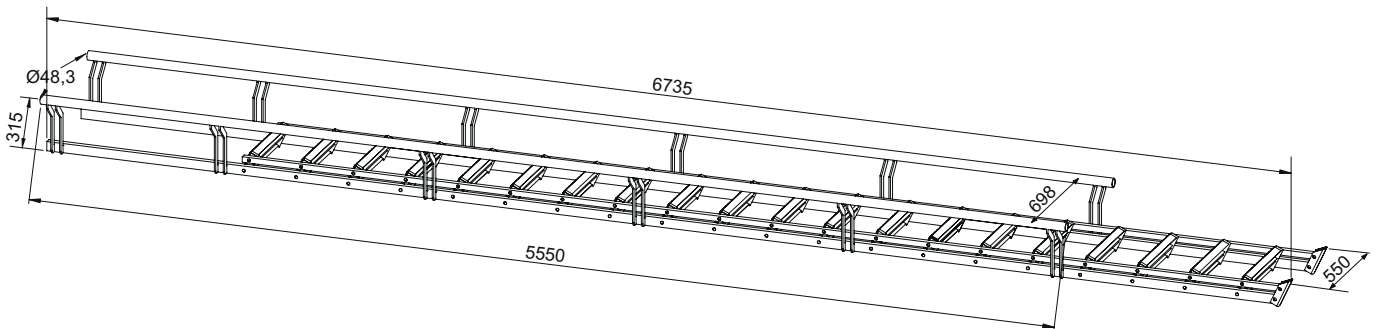
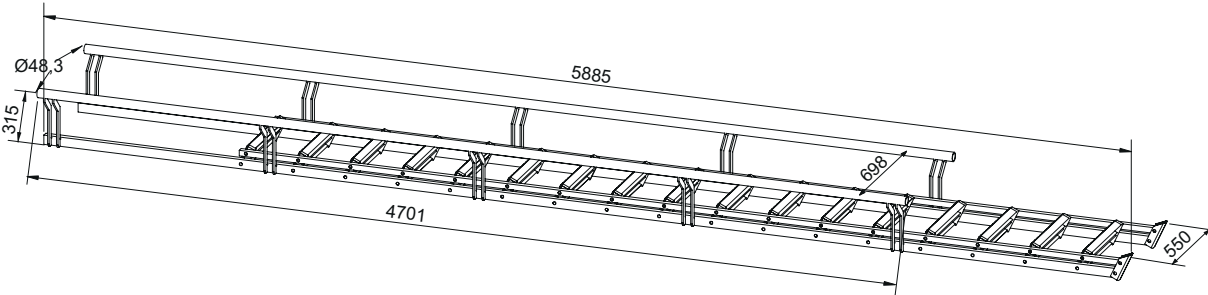
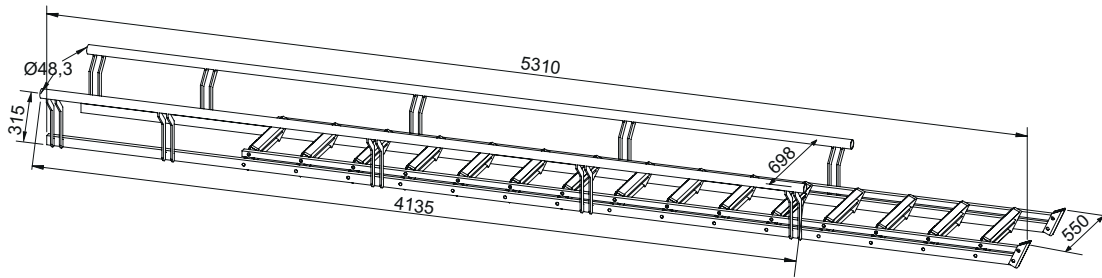
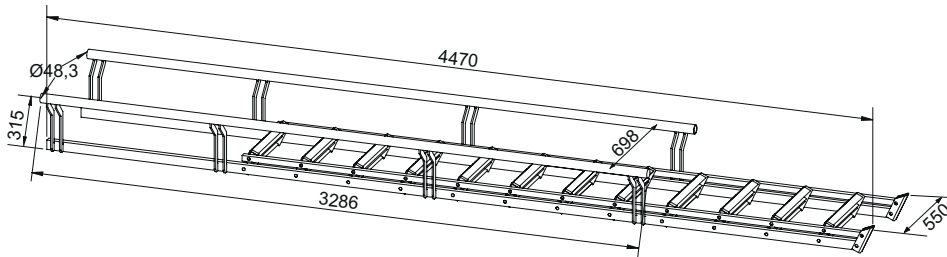
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GENERAL INFORMATION

TECHNICAL DATA:

STAFE steep stairs, height-adjustable

Type	No. of stairs	Sizes L x W x H [m]	Weight [kg/unit]	Item No.
L 12	12	4.40 x 0.75 x 0.35	40.0	353012
L 15	15	5.36 x 0.75 x 0.35	48.5	353015
L 17	17	5.90 x 0.75 x 0.35	56.0	353017
L 20	20	6.80 x 0.75 x 0.35	65.0	353020



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