

# Construction manual

## OLOF TRÄTÄLJA (1879)



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### First of all a few general notes:

The order of the assembly instructions is done in such a way that you can finish the model without not being able to install some parts later. Of course, individual assemblies can also be started earlier. The text points out if parts must be glued on beforehand, e.g. before mounting the next higher deck.

The pictures were taken during the assembly of the prototype – the recommended order can therefore sometimes differ.

Notes on the colors can be found at the end of the assembly instructions. The colours from Revell cover very well, as do the colours from Elita – with dark shades, one coat of paint is usually enough. The model shown has been painted with a brush in the dab technique, which creates a slightly uneven surface.

The kit also includes a small description of the history of the ship with some historical photos, so that with slight modifications you can also show an earlier state of construction. The model is based on the appearance of the ship in autumn 2023 as well as some projected reconstructions by the owners.

### Hull machining

First of all, the hull must be supplemented and the upper edge must be trimmed / sanded a bit.



The hull will first receive the semicircular profiles (2mm semicircular polystyrene). The top one is glued to the upper edge of the laminated hull (this is also the upper edge of the side wall amidships). With a distance of 15mm, the second profile follows (the 15mm between the lower edge of the upper and upper edge of the lower profile). These two profiles run from the bow stem completely around the ship. In the

second semicircular profile, there is a gap aft, which is filled with filler.

There is again a distance of 15mm to the third profile. This starts at the bow but 32mm behind the leading edge of the hull and ends 20mm in front of the line of the cutout in front of the propeller.

There is a shorter distance of 13mm to the fourth profile. This starts at the bow 40mm behind the leading edge of the hull and ends 25mm in front of the line of the cutout in front of the propeller.

The bow made of 2x2mm polystyrene profile is glued to the bow with plenty of protrusion upwards (the curved bulwark part still has to be attached there). Aft, the profile ends 30mm in front of the propeller cutout.



The hole (6mm) for the stern tube is now drilled into the hull (center 20mm above the lower edge of the laminated hull). When drilling, be careful that the hole is not made off-center, as the hull is narrow here!

The stern tube is stored inside the stern tube support (2mm milled part). Make sure that the shaft runs parallel to the central axis of the ship and to the bottom of the hull.

The fact that the stern tube is so short is

due to the fact that the motor then still remains in the area of the engine room right under the superstructure. This also makes it possible to show the cargo space openly without having the motor in the middle.

The two parts milled from 2mm polystyrol are attached to the stern above and below the stern tube.

The hole for the rudder coker (4mm brasstube, 40mm long) is 23mm aft of the horizontal line for the propeller.

Now the 5mm wide polystyrene part (1mm thick) is glued on, in which the rudder axle is / can be stored. Make sure that it stays in the ship's central axis.

To glue the rudder coker, the rudder axle is used (3mm brass tube, 95mm long) and fixed at the bottom of the plate with tape. You can also insert the bearing into the hole (2mm brass rod).

Then the two trapezoidal supports (2mm polystyrene) of the rudder coker are glued in.



The hull plating can be sprayed onto the hull with spray filler / filler. To do this the rows of plates that are deeper in the original are taped off (after removing the masking tape later, they are a little deeper). I recommend using the photos of the original as a guide. Attention! On

the side, an overhead slab passage alternates with a low-lying slab passage. However, the first three plate passages from the ships central axis are such that the interior overlaps allways the following one.

The support strips for the main deck are now mounted in the hull (4x4mm polystyrene square tube). These are each 40 cm long. First, a guide line is drawn 20mm below the top of the fuselage for the correct position. This is the upper edge of the profile to be glued in. Then the support strips can be glued in below the marking line.

Tip A: Instead of a guide line, you can also cut tape to a width of 20mm and stick it flush from the inside as a mark on the side of the ship.

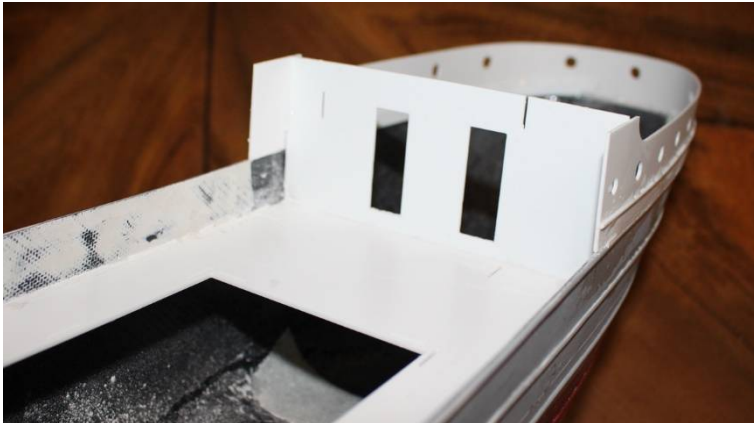
Tip B: if you want to pull in a bulkhead between the aft ship and the cargo hold, or also in the bow area, you should remember not to glue it in tightly. Otherwise, a later disassembly of the motor and pulling the corrugation inwards is no longer possible, or very complicated.

The hull sides push apart a bit amidships – when inserting / gluing the main deck, it is recommended to pull the sides together slightly with tape so that the deck part connects flush to the laminated hull everywhere.

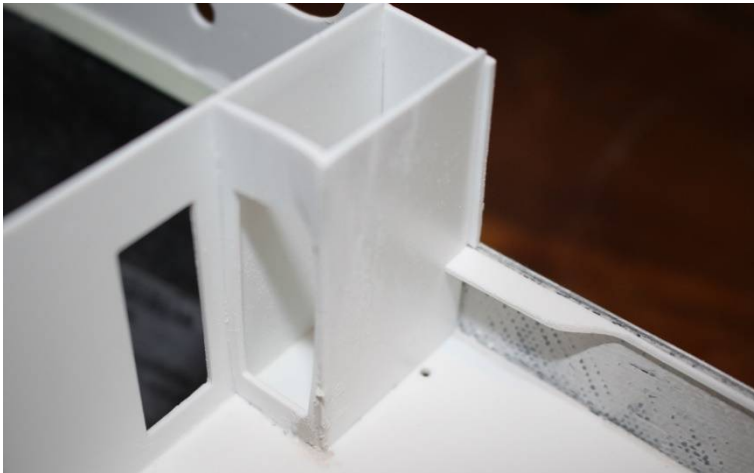
Then the transverse wall to the aft superstructure will be mounted.



Next are the aft side wall with the portholes. This tilts slightly inwards and is therefore milled out in such a curved way. It is advisable to first mark the middle of this wall at the lower edge. Likewise, a mark is attached to the semicircular bar on the upper edge of the fuselage. Then the wall is easier to align and is the same length on both sides. The easiest way is to bend the wall a little round before fixing it to the fuselage first at the middle of the back with a clamp and then again at the side and at the front end if necessary. If necessary, you can also use tape and there should be no gap. Then a strip of 1x5mm polystyrene is glued over the material jump on the inside in such a



way that any existing joint is sealed. Finally use putty from the outside.



The walls in front of this transverse wall are glued and then the roof (0.5mm polystyrene) is glued to the starboard side cabinet. The walls in front of this transverse wall are glued and then the roof (0.5mm polystyrene) is glued to the starboard side cabinet.

At the front end of the main deck, the transverse walls with the portholes and those of the recess in front of the companionway are now inserted into the slots in the main deck. Attention!

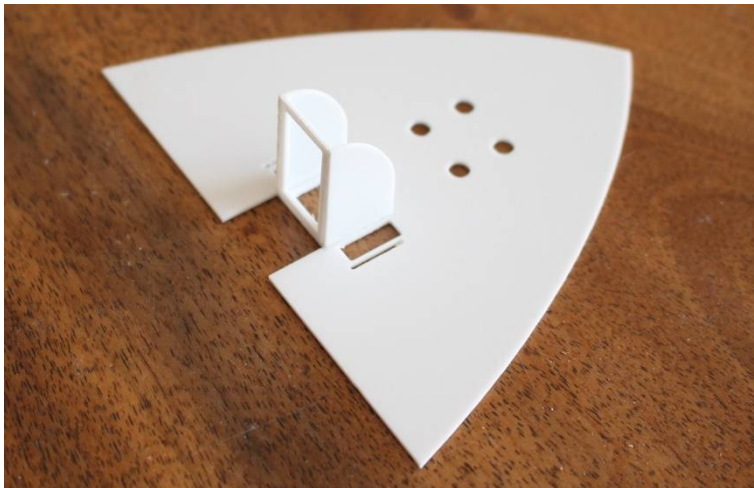
Compared to the pre-production model (photos), the portholes have been moved a little further to the middle of the ship, true to the prototype. The walls are glued to the deck and to each other.

Subsequently, at the height of the upper edge of these walls, a 2x2 polystyrene profile strip running parallel to the upper edge of the hull is glued as a support strip for the foredeck.



On the upper edge of the hull, the two curved side parts are glued on each side. The rear end of the small part must end 1mm in front of the cross wall with the portholes!

The handling of the foredeck is a bit easier if you mount the companionway once. The side walls are inserted into the slots and the wall with the door opening is inserted in between.



You can now also add the side skylights. Then sanding the edges is a little easier. Attention! In order to be able to insert the lenses after painting, glue in the small 1mm polystyrene rings from below/inside so that the lenses have a hold when inserted.



The foredeck is glued in. Adjust any excess dimensions, gaps must be filled with putty accordingly.

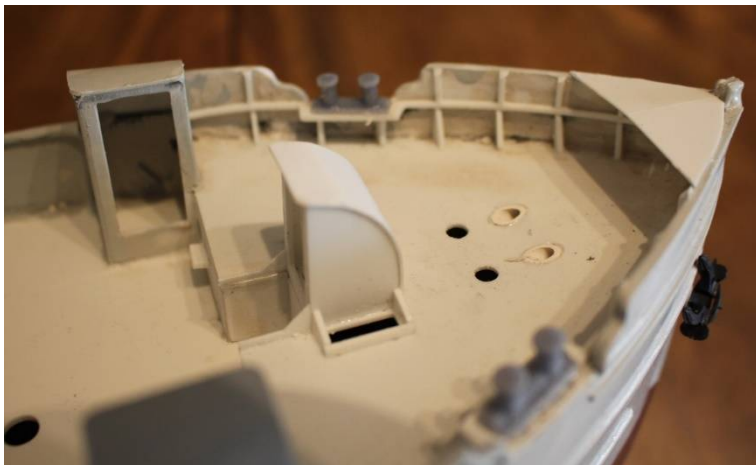
The holes for the chain cleats (4mm) are inserted into the hull and the 4mm polystyrene tube is inserted (it can be helpful to use a 2mm brass rod or similar as a guide through the opening in the hull and foredeck). On the outside, the tube has a small round bulge, which at the same time covers the last gaps.

On the foredeck, the tubes are cut off bluntly.

On the inside of the main deck bulwark, the narrow strips with the plate for the bollards (rear) and the gusset plate at the front end are now glued in. These parts are a bit oversized in length – just cut once in the middle and then glue the rear part flush to the upper edge of the fuselage. Then take the front end, shorten it to fit and then glue it to the inner wall of the fuselage as well.

The bulwark supports are glued on so that the triangular recess is at the bottom of the ship's side. Attention! The bulwark support under the bollard plate is wider!

You can also add a small notch on the deck side (about 2/3 of the height) and glue a 6mm section of 0.8mm brass at a time. These metal rods are originally used to attach the wooden trunk fenders, among other things. Finally, the outriggers are then given a strip of 1x2mm PS, so that a T-profile is obtained when viewed from above. The bollards can then also be mounted on the bollard plate.



For the back deck, the lower halves of the bulwark supports are first mounted. These are to be placed at a distance of 1cm and run at right angles to the ship's central axis - so they are at a slight angle to the bulwark. The narrow parts with the plates for the bollards are then glued to these supports. These plates should be at the same height as the top edge of the fuselage between the curved side panels. If necessary, add fillers. The bollards can then also be installed here.

The upper half of the bulwark supports consists of 1x1mm PS. Simply glue a slightly longer piece to the wall with the lower supports, after the glue has hardened, cut off on the upper edge of the curved part and sand a little round.

Between the two front parts the triangle made of 0.5mm PS is glued, which gets a slight crease in the middle beforehand (score lightly with a cutter). Immediately behind the stem, a cover eye is attached to the hinged edge (either one of the resin pressure parts or one of the polystyrene milled parts 1mm). A ring is made of 0.5mm brass wire, which holds two tension screws (brass).

### Scupper:



The position of the scuppers is transferred from the plan to the hull. The foremost is located just before the second bulwark support, scupper 2 follows immediately after the fourth support, scupper 3 immediately in front of the seventh support and scupper 4 below the bollard

plate in front of the superstructure. To indicate the size and shape of the scupper flaps, an auxiliary part is included in the kit, the recess of which is slightly larger than the flap to be mounted. Mark and carefully open the side of the ship. Always use one of the flaps to check dimensions. The flaps get a 0.8mm brass rod on the inside at 2/3 of their height as an axle – if you want, you can then add a bearing to make the flaps swivel (but because of the low weight, they won't open on their own in the model).

## Cargo hatch:



First, the slightly curved side parts are inserted into the slots with the lugs and glued, as are the two cross parts. The frame is now glued to these vertical walls. Then the second, flatter side and cross parts are added. Between this and the inner edge of the frame there is a small edge, which later accommodates the shaving sticks / trusses.



On the outside, 1x2mm polystyrene profile is now glued around the upper side parts (hatch coaming). Between these and the side panels, the tarpaulin is originally fixed with a wooden strip and wooden wedges. These parts are at a slight angle to the hatch coaming.

The lower part will still have the outriggers similar to the bulwark supports..





Shear stick / trusses: The length of the loading hatch is 22.8 cm – this is to be divided by 4, so that the length of the boards of the hatch cover is 5.7 cm. However, the cover is supported in the middle by a clipper stick, so that the brackets for the clippers have to be placed every 2.85 cm. It is advisable to transfer the measurement to a polystyrene remnant and mark the position with a pencil.



The shear sticks themselves consist of 3 elongated profiles: 1x3mm with a notch on each side and a longer 1x3mm milled part for the top and a shorter one for the bottom. Overall, this results in an H-profile. Exception: the foremost and the rearmost – there are only two parts! I also mounted these two. If necessary, the shaving sticks / brackets must be

resharpened so that the shaving sticks fit into the recesses under light pressure.



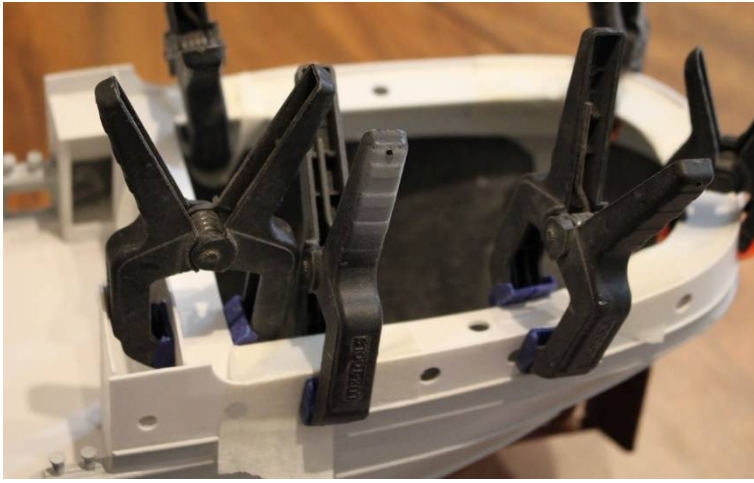
The hatch cover is made of 1x3mm thick oak wood strips. The length is a quarter of the hatch length and two strips are always glued together after the longitudinal edges have been rounded a bit. A total of 13 "double strips" are needed for the width of the hatch. The wood is quite light and can get a somewhat weathered impression with pastel chalk and a top coat (matt or

semi-gloss). In the prototype, recesses were made with a 4mm ball head at the ends, over which a 1mm polystyrene profile was glued (alternatively you can also use 0.5mm brass wire).

Instead of the polystyrene strips, I later reinforced the boards with wood profiles, as sunlight / heat causes the boards to bulge.

The original currently has a medium blue tarpaulin cover, but is to get an anthracite-coloured one. Personally I prefer the wood.

The hatch covers must not be glued tightly, otherwise you will no longer be able to reach the cargo space.

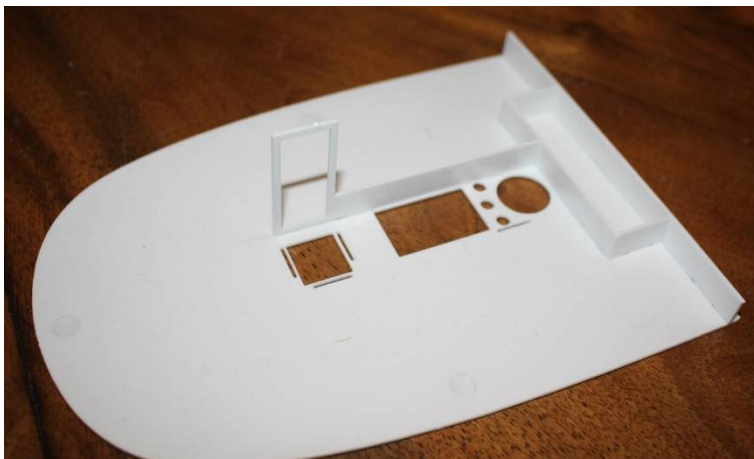


The frame support (1.5mm polystyrene) for the deck is now inserted into the aft superstructure. This frame must be mounted in such a way that it is glued 2mm below the side walls. These two mm are needed for the deck (made of 1mm polystyrene) as well as a light rim, which in the original prevents the water on the deck from running off over the side wall in a completely disorderly manner. Otherwise, this is also quite practical if the model is to be illuminated inside.



There are already 3 holes with a diameter of 6mm in the frame for holding correspondingly large neodymium magnets. To glue, a small remnant of 0.5mm polystyrene is glued on from below. Then you sink a magnet into the recess with a little superglue.

The aft deck is used and may be slightly adjusted.

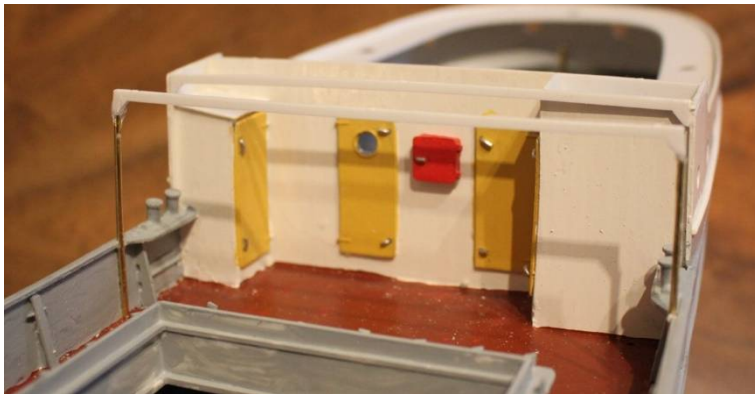


Before gluing the corresponding magnets into the holes of the deck, it is essential to secure the support frame with tape so that the deck and frame do not stick together. Then 3 neodymium magnets are inserted into the openings again (this is how they align themselves appropriately (polarity of the magnets!)). Then one of the 0.5mm polystyrene discs is glued to the top. This can be sanded better with the deck to a smooth surface than the transition deck / magnet.

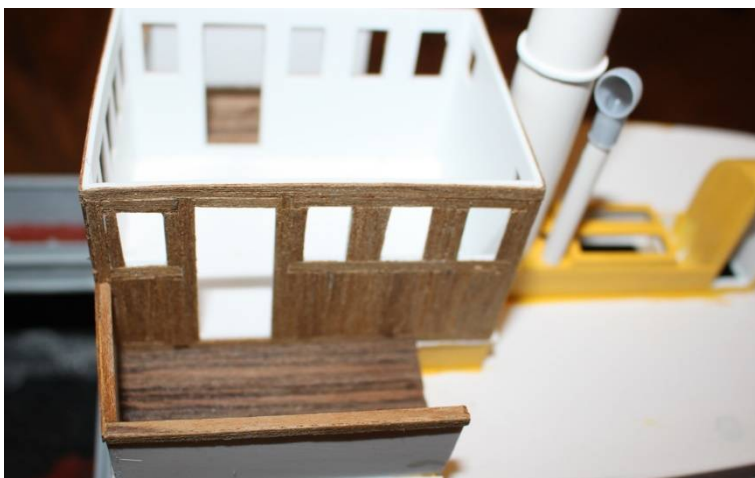


Now the construction of the upper superstructure can begin. First, the flat walls are assembled, which form the base for the fans, the chimney and the engine room skylight. When the glue has hardened, you can then continue with the slightly raised bridge deck. Make sure that the holes for the fan and chimney are aligned!

At the companionway, the transverse walls are installed first and then the side with the door opening. The other side with the roof of the companionway will initially only be glued to the deck. The roof is only shaped and glued when the connection of the wall to the deck is sufficiently firm.



The bridge deck extends laterally over the side walls of the main deck and protrudes significantly to the front. For this purpose, the cross beams are glued directly in front of the wall of the small room on the main deck and shortly before the extension for the bollards (the front ones are given a foot made of 1.5mm brass).



The side walls and the rear wall of the bridge house were installed. Once these are firmly glued, the front is mounted. The side bulwark is glued bluntly to the outer edge of the deck.

Sections of 2mm semicircular profile are glued to the bridge deck from the outside in such a way that they protrude 1mm downwards. In this way, this profile also conceals any gap.

The bridge house will be clad with teak veneer from the outside. Likewise, the deck next to the bridge house can be covered with planks (this is darker in the original than the walls of the bridge house).

The doors (0.5mm polystyrene) are also covered with teak veneer.



The funnel is given one of the rings (milled part) at the upper end with a distance of 1mm. A second ring is mounted 9 mm below, followed by the ring with the small eyelets for the guying of the chimney with a further 26mm distance. The last ring is then mounted so that it is just above the roof of the bridge house.

When gluing in the funnel, make sure that the eyelets of the guying are evenly aligned with the sides and point at a 45 angle to the bow and aft. The guying is done later again with rigging twine. The guying is attached to the deck with deck eyelets.

**Fan:** the long tube is made of 5mm PS tube (38mm). Short sections of 4mm polystyrene pipe are inserted into this at the top and bottom. At the bottom it is used for mounting in the flat base, at the top it is fixed in the resin pressure parts of the fan head (RX021). After gluing, the transition between fan head and tube is sanded a little smoother.

For the **main mast** you need: 6mm tube (65mm) / 5mm tube (60mm) / 4mm tube (60mm) / 3mm tube (40mm) / 2mm tube (25mm). The tubes are inserted into each other and must therefore be made with a little extra length, with the exception of the 6mm tube. The above lengths are the visible measurements.

On the 6mm tube, the ring with the lumber bearing (loading boom bearing RX67a (resin)) for the loading boom is mounted.

The charging boom is made of 3mm brass tube with 245mm length. On one rear side, a ring with 4 eyelets (RX062) is put over the tube. A double block with an eyelet is attached to the upper eyelet with 0.5mm brass wire.

A single block with an eyelet is attached to the lower eyelet. The same one is also attached with a wire ring (0.7mm) below the lounging bearing. The ring around the mast should remain rotatable. The rope runs over these blocks to haul the load.

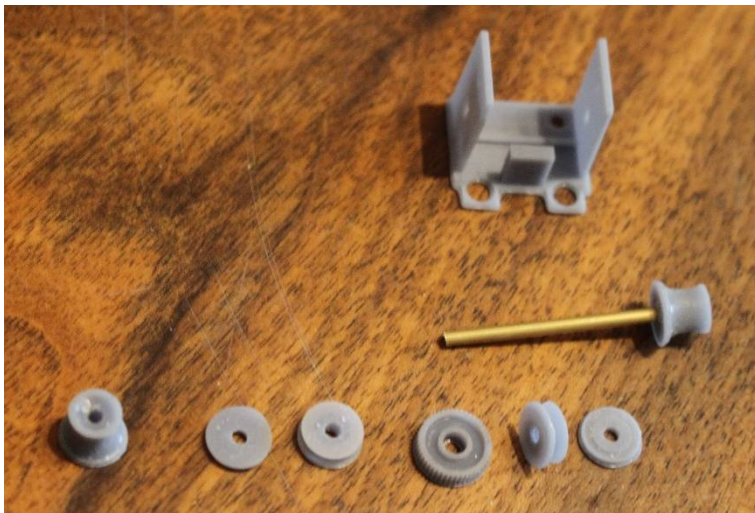
On each of the two sides, 1 single block with 2 eyelets is attached, the rope for swivelling the loading boom sideways is later attached to the remaining eyelet.

At the upper end of the 4mm polystyrene tube, a ring with 4 eyelets (RX065) is mounted. At the front eyelet, the lower guying of the mast to the bow is mounted. A ring made of 0.5mm brass wire is attached to the side, to which the two front shrouds are attached. Shrouds and bow guying are each equipped with a clamping screw (brass) at the bottom. The milled eyelets are used to attach the clamping screws to the handrail of the bulwark.

On the eyelet pointing backwards, a double block with 2 eyelets is attached with a ring to be made of 0.5mm brass profile. The rope is then attached to the free eyelet to furn the boom (I recommend rigging twine with 0.5mm thickness – not included in the kit).

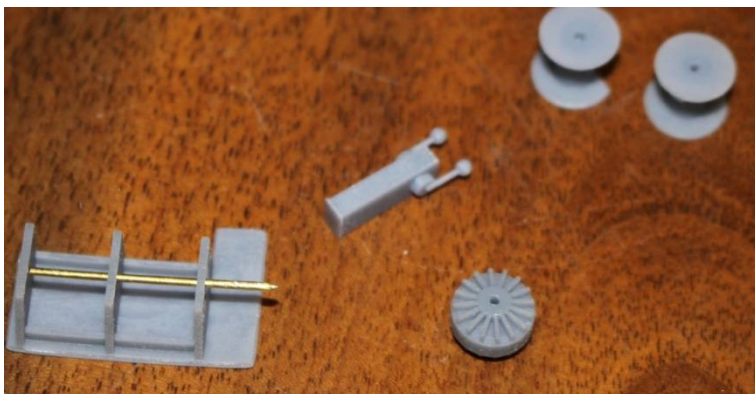
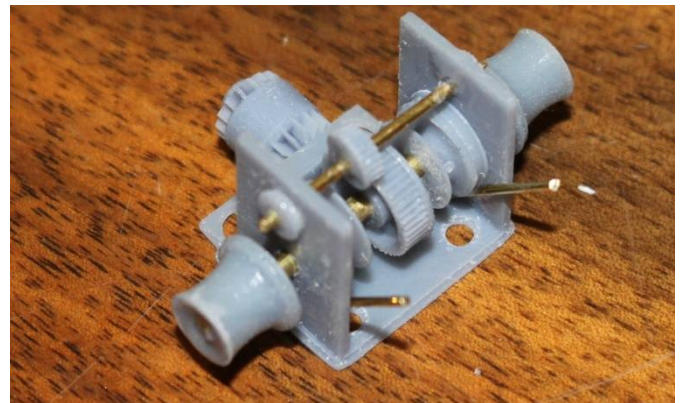
At the upper end of the 3mm polystyrene tube, a ring with 4 eyelets (RX062) is mounted. At the front eyelet, the upper guying of the mast to the bow is mounted. On the side, the rear shroud is attached.

The **aft mast** consists of a 4mm tube (55mm visible), a 3mm tube (65mm visible) and a 2mm tube (35mm visible). The 3 and 2mm tubes are made with a little extra length and then inserted into each other. At the upper end of the 3mm tube a mast ring with 4 eyelets is mounted (RX062).

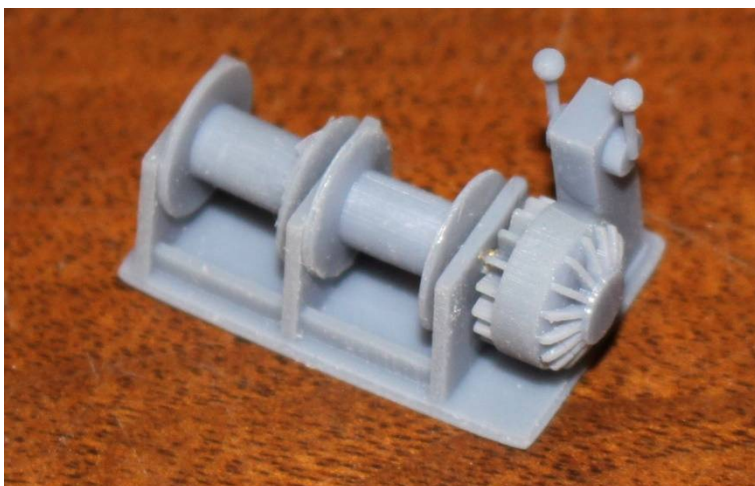


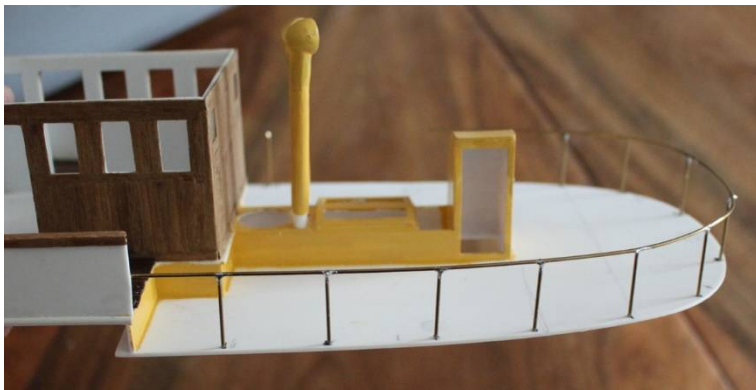
For the **windlass** you need the resin parts and a 2mm brass shaft (35mm long) as well as a 1mm brass shaft, which is slightly longer than the distance between the sidewalls.

Installation as shown in the photos



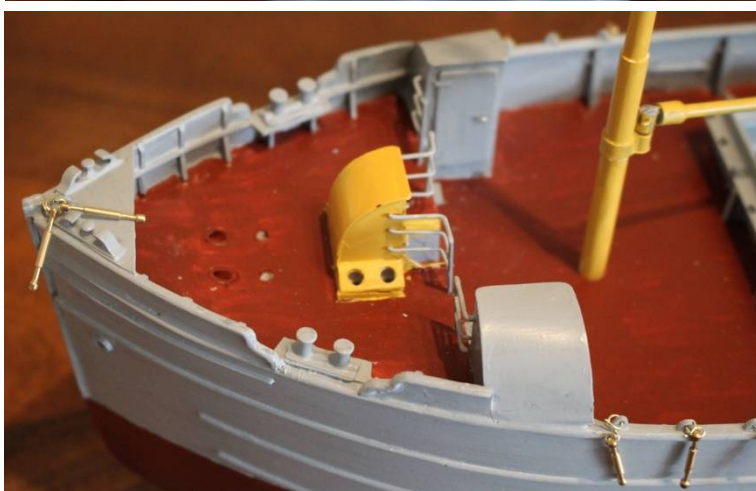
For the **loading winch** you need the resin pressure parts and a 1mm brass shaft (29mm long) – assembly as shown in the photos





The railing is soldered from 1mm brass wire (supports and handrail) and 0.8mm brass wire (threads).

Height of the supports 18mm above deck – with the handrail this results in a height of 19mm. I first drew parallel lines on a piece of plywood and then the position of the supports at right angles. The required lengths of 1mm wire fixed to the board with tesa crepe and then soldered. The pull-throughs were then soldered in between the slightly curved railing sections – I soldered on the more rounded ones at the stern after the railing was mounted on the deck. For the short railing sections on the foredeck, I only bent them into the required shape after soldering.



In the small box at the stern there is now the hydraulic rowing machine. This is controlled by pipes laid on the deck (1.5mm brass rod and the small supports made of 1mm polystyrene)

#### Lifeboat and life rafts

The lifeboat is located on the starboard side. For the davits, there are brass bases where it is convenient to either remove the mounting pin completely or shorten it to 1mm so that it does not protrude downwards.

## Radar and antennas

The radar is mounted on the roof. A 5mm long 4mm polystyrene tube is used for the base, which is glued to the roof at the level of the penultimate side window and when viewed from the front, for example at the second window from the right. On top of that comes the engine dummy and the radar bar, in which a section of 0.8mm brass is glued as an axle. You can also drill out the engine dummy and the roof accordingly with a 1mm drill and guide the axle to the bridge house to drive the radar beam if necessary.

Two short sections of 0.5mm brass profile are glued to the back of the bridge house together with a 4mm long 1x1mm polystyrene profile as antennas.



## Colours

I highly recommend Revell Enamel Color or paint from Elita.

Underwater hull: oxide red / RAL 3009

Hull, bulwark, bollard: light grey / RAL 7035 mix with some black

Superstructures: pure white / RAL 9010

Main deck and foredeck slightly redder than copper brown / RAL 8004

(Elita has the color CSD 8440 No.50374)

Aft deck and roof: blue-grey / RAL 7031

Walls, doors, skylight: slightly lighter than broom yellow / RAL 1032

(Elita has the color MB Inca Yellow No.50302)

Funnel: signal red / RAL 3001