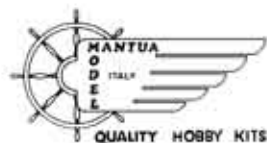


PANART

MANTUA MODEL
GROUP



BRUMA

**ISTRUZIONI PER IL MONTAGGIO
DIRECTIONS FOR THE ASSEMBLING
INSTRUCTIONS DE MONTAGE
BOUWBESCHRIJVING**

ASSEMBLING INSTRUCTIONS

Before you remove the laser cut parts, it is necessary to number each component with a soft pencil, following the plan (sheet N. 1).

Cut the small bridges with a sharp knife, see Fig. N. 1, & remove from the plywood parts you need step by step only.

Clamp the keel into the optional assembling vice (N. 8155) & insert dry all the frames as shown on Fig. 2, sheet N. 2 (hull construction).

Attention: Put the slots of parts N. 13-14 outside the hull & well pressed down. Check & mark with a pencil the tapering of the frame ribs (N. 1-2-10-11) with a 1,5x6 mm strip. Remove the parts & taper with a file or sand-paper, see Fig. 3. Now glue all the parts with white P.V.A. glue & nail the transoms N. 13-14-15. Before glue hardens, check the correct alignment of all parts on the keel. When dry, position the motor mount N. 16-17, after sanding under the base pin N. 16 to maintain a perfect contact with the keel. Glue the axle supports N. 18 onto the frame N. 10. Place the sides N. 19 on stern.

Take the deck N. 20 & make a dry test, clamping with nails & clothes-pegs eventually adapt the deck, sanding where & if necessary & then glue in position.

Start now with the planking starting with the central 1x6 mm strip, see Fig. 4. Place the white 1x3 mm strips, starting from the inside of the ribs on both sides. Glue now a 1x1 mm dark strip & then a new 1x3 mm white when the covering is finished & dry, scrape the surface & sand with care; varnish the deck with sanding sealer, our item 1020, not in the kit.

Start with planking, 1,5x6x800 mm strips, following the Fig. N. 2, that shows the first plank at the level of the deck. Put a strip each side of the hull, to avoid twisting problems. Do not drive home the nails, they are to be removed when the glue is dry. When planking is finished, coat with a hard brush the surface with a diluted glue to fill all slots between strips. Clean excess of glue with a wet cloth. When dry scrape the surface & sand with care now you can place the second planking following the same procedure as the first planking.

Put the buwark strips & clamp until dry with clothes-pegs (see Fig. 5). scrape & sand the entire hull. The slot along frames N. 2 to 10 is the water out let from the deck.

Fig. 6. The sketch shows how to build the axle fairings with 1x3 mm strips, cementing with instant super glue. Fill with putty any small defects on the planking where you must paint. Sand with care & coat two times with a good sanding sealer product. When dry, sand again until the surface is smooth.

Fig. 7. The rudder. Smooth the rudder N. 21 & adapt it to the top of the hull. Drill a \varnothing 6 mm hole to insert & glue the bushing of the axle with epoxy. Assemble the rudder with the horn, place the 2x5 mm strip as a guide on the bottom on the keel, using a nail as a pivot. Paint with spray acrylic white.

Fig. 8. The cradle. Assemble the parts N. 22-23-24 following the plan & varnish. Glue small pieces of foam rubber (not in the kit) to protect the painted hull.

Fig. 9. The sketch shows how to mark the water line, see sizes from Fig. 11, sheet N. 2. Mask with tape & paper the upper part of the hull & spray paint red.

Fig. 10. This is the best way to fix the hand-rail N. 25-26 on the frames: drill a \varnothing 0,7 mm hole on the strip where it touches the ribs, insert a nail with a drop of super glue on the cone, cut off the head & hammer in full. The hand-rail strip protrudes 1 mm from the side; sand & varnish.

Fig. 11. Side view. Mark the port-hole position on the sides & drill \varnothing 6 mm holes. Adapt the holes with a file, without damaging the paint.

Fig. 12. How to fix the glass on the port-holes. Place the 1,5x3 mm external protection moulding (bumper) using the same method as for the hand-rail.

Fig. 13. Hawse hole & rope guides. Drill the holes & glue them with super glue. Cement the anchors with the same glue inside the hawse holes. Bend the anchor rod with fingers, if necessary.

Fig. 14. Stern bannister. Place the brass tenon on one end of the stanchions, after drilling \varnothing 0,7 mm holes & also drilling the hand-rail where, the stanchions are to be fixed. Sand and varnish the hand-rail N. 27 and position it using the same system of protruding nail and glue.

Fig. 15. Bow bannister. Mark on the bow deck moulding the position of the brass stanchions & drill \varnothing 1,5 mm holes clamp one end of the 1,5 mm brass wire in a vice & pull the other end of the wire with a pair of pliers to make the wire straight.

Now mould the wire following the plan.

Insert the wire into the ball stanchions & secure them with a drop of epoxy resin into the moulding holes both ends of wire will be cemented under the stern hand-rail.

Fig. 16. The cabin. Assemble the parts of the cabin with super glue, following the drawings & centre the structure into the relative deck opening.

Fig. 17. Finishing of the cabin. Sand, smooth & paint matt white the parts N. 37-38-40-42. Glue first the floor N; 37, then the sun visor N. 38 insert the windows N; 39 between the sides N. 28 making round the outer face. Place the roof under the deck N. 40, clamping with clothes-pegs until dry. Glue the front window n. 41 & the small roof N. 42.

Fig. 18. Cabin hatchway. Assemble the parts N. 43-44-45 with 0,5x3 mm strips, built the door by gluing the strips 1,5 mm one on the other, placed on a piece of paper. When dry, cut to size & glue them on the furniture.

Fig. 19. Side small furniture. Glue the parts N. 46-47-48, cover the corners with 0,5x3 mm strips & varnish.

Fig. 20. Steering wheel. Place the wheel on the 3x6x15 mm block with a nail & glue the set inside the cabin.

Fig. 21. Cut some sheets from the clear plastic & glue them inside with clear epoxy.

Fig. 22. Finish the cabin with the parts glued on the base N. 49 & the handlings N. 50. Paint the life-belts the extinguishers & put them in position also the horn & light. Cut the sun canopy & glue it on the roof with epoxy.

Fig. 23. Build the position light supports with 1,5x6 mm strip, taking sizes from the plan. Make the lamps from 4 mm dowel & paint one red & one green.

Fig. 24. Make the four air-intakes with \varnothing 6 mm dowel, sizes are on sketch N. 11 & paint silver.

Fig. 25. Glue the stern seats N. 51, placed 1,5 mm on the mouldings. When dry, glue in position the four 8 mm stanchions.

Fig. 26. Stern waist. Assemble the parts N. 52-53 & draw the dummy planking & the ports with a soft pencil & varnish.

Fig. 27. Bow capstan. Glue the parts N. 54-55-56-57-58 & paint matt white. Insert the metal body, inside the holes, drill a \varnothing 3 mm hole & glue the set. Drill the four holes to insert the brass collars where the chain will pass.

Fig. 28. Assemble the two deck small furnishings with the parts N. 59-60-61-62. Plank and cover the edges with 1,5x1,5 mm strips & the corners with 0,5x3 mm wood. Sand, varnish glue in place.

Fig. 29. Modern life savers. Glue the transoms cut from 0,5 mm strips to the supports N. 63. Varnish the parts & cement the metal parts with super glue.

Fig. 30. The hatch-ways. Assemble the parts N. 64-65 & N. 66-67. Paint the top white & the edges matt black. Place the port-hole with the 10 mm glass & fix it in position.

Fig. 31. Mast belaying point rack. Glue the 4 stanchions (15 mm) on the corners of the part N. 68 & fix it on the deck.

Fig. 32. Bulwark ladders. Cut the 28 pins from the 1,5 mm brass wire & insert them into the sides n. 69 cementing with super glue. Connect the ladders with the blocks N. 70 & tie the sets to the brass hand-rail.

Fig. 33. Boarding entry. Build the entry with two 2x2 mm strips & the small 0,5x3 mm sheets, 1 mm one from the other. Place the three stanchions with the rope hand-rail (0,5 mm rope).

Fig. 34. Photo-etched brass sheet. Paint black the entire surface; when dry sand the upper surface with 600 grain sand paper to make shining the brass upper surface. Cut each part with a pair of scissors & smooth with a file. Glue the name plate "BRUMA" on the bow, the rope guides on the mouldings & the double parts on the deck.

Fig. 35. Optional parts. Motor set & radio control equipment. The kit ident 600 contains the motor & the mechanical parts for sailing. The plan shows how to put in the radio (not included). Check the centre of balance of the ship by moving the power pack to the correct position, & fix it with rubber bands & hooks.

MASTING

Cut the masts & spars N. 71 as indicated on the plan N. 36. Taper with a hand plane & sand paper or better use an electric lathe as we produce under the Art. number 8160. Insert the mast feet N. 72 & fix the masts.

Fig. 38. It shows the assembly of the winches, the lamps & the boom stiffenings.

Fig. 39. Turn buckles. Open the ring with a pair of plyers, insert the turn-buckle & close the ring. Drill \varnothing 0,8 mm holes on the deck & glue the eye-lets with epoxy.

Make the standing rigging with \varnothing 1 mm rope & the running rigging with \varnothing 0,75 mm rope checking the assembly on the sketch N. 36.

List of the material of the kit

Board N. 1 - 5x240x730 mm	N. 2-4-5-6-7-9-10-11-12-16-18-19
Board N. 2 - 5x240x620 mm	N. 1-3-8-13-14-15-17-21-22-23-24
Board N. 3 - 1,5x190x770 mm	N. 20-43-44-45-46-47-48-49-51-52-54-55-56-57-58-59-60-61-62-63-68-69-70
Board N. 4 - 2x160x425 mm	N. 25-26-27-50-53-64-65-67-72
Board N. 5 - 3x175x660 mm	N. 28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-66-71

Walnut strips

10	0,5x3x330 mm
50	1x1x400 mm
1	1x6x800 mm
2	2x2x400 mm
2	2x4x600 mm
1	2x5x50 mm
1	4,5x8x70 mm

Lime wood strips

50	1x3x400 mm
110	1,5x6x800 mm

Walnut dowel

1	ø 4x30 mm
1	ø 6x300 mm
1	ø 6x400 mm
2	ø 8x600 mm

FITTINGS

Axle pck.

2	Assembled axles
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Rudder pck.

1	Rudder axle ø 4x65 mm
1	Axle bushing ø 6x35 mm
1	Horn art. 2030
2	Nuts 4 MA
2	Washers ø 4 mm
1	Brass washer ø 0,5x4x9 mm
1	O-Ring 102

Nail pck.

100	Brass nails 10 mm
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Port-hole pck.

10	Port-hole ø 6,8x3,3 mm
1	Port-hole ø 12 mm
10	Glasses ø 5 mm
1	Glass ø 9 mm

Chain pck.

4	Rivets ø 3 mm
8	Rivets ø 2,5 mm
1	Chain art. 32210 - 300 mm
2	Brass bits ø 3x5,5 mm
2	Hawse holes ø 10 mm
4	Brass bits 6x5,3 mm

Stanchion pck.

18	Walnut stanchion 15 mm
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Belaying pin pck.

12	Walnut belaying pin 10 mm
4	Walnut stanchions 8 mm

Block pck.

20	Walnut single block 3 mm
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Eye-let pck.

40	Brass eye-lets art. 33040
3	Brass eye-lets 30 mm

Rope pck.

15 m	Natural rope ø 1 mm
15 m	Natural rope ø 0,75 mm
1	Cast tray
1	Clear plastic 0,5x150x150 mm
2	40 mm propellers
1	Photo-etched sheet
2	Brass tube ø 1,8x120 mm
2	Brass tube ø 1,8x75 mm
1	Brass wire ø 1x1500 mm
1	Brass wire ø 1,5x2000 mm
5	Plans
1	Instruction book