

OPITEC

Hobbyfix

112.961

Storm light-wood version



Please Note

The OPITEC range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of Craft, Design and Technology. These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation!

Necessary tools:

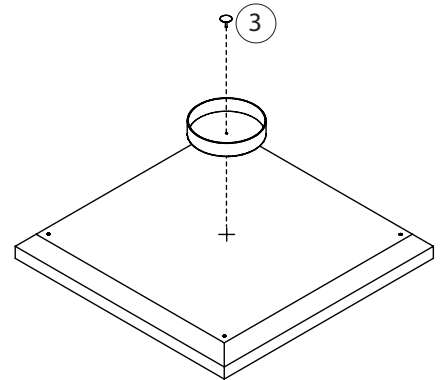
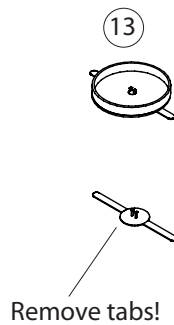
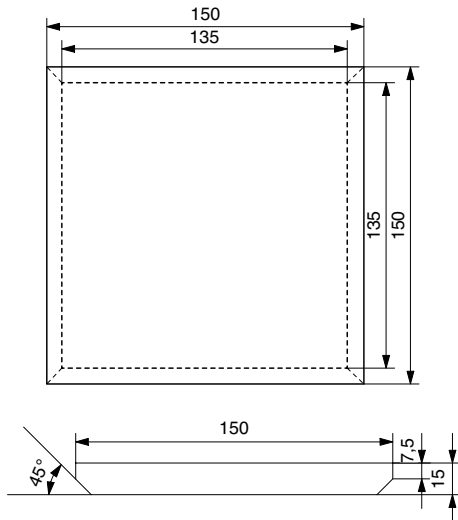
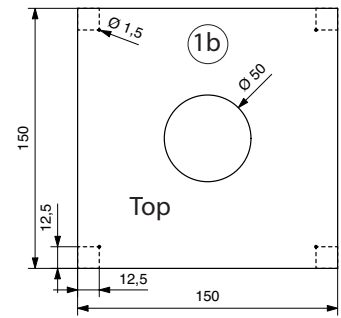
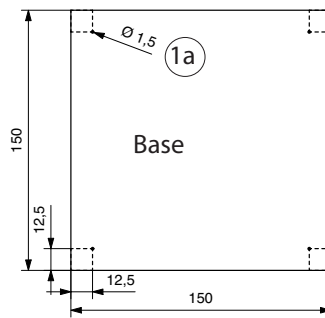
Pencil, Ruler
Fretsaw, fine saw
Drill bit 1/2/3 mm dia
Forstner bit ø 50mm
Sandpaper
File
Pliers
Side cutters
Crosshead screwdriver
Wood glue
Hammer
Bradawl
G Clamps
Some salad oil
Dowel ø50 - 70mm (Bending former)

PARTS LIST				
	Part	Size(mm)	Description	Part-Nr.
wooden board	2	150x150x15	Base-top	1
Wood strip	8	200x20x10	Sides+ door	2
Wood strip	4	200x30x10	Sides	3
Acrylic	4	190x90x2	Sides+ door	4
Aluminium-sheet	1	150x80x1	Cover	5
Dowel	1	100x20	Handle	6
Alu-wire	1	2250x1,6	Sides + Handle	7
Crosshead screws	30	ø3x10	Fixings for acrylic+ top	8
Nails	10	ø1x20	Fixing, base,top,door	9
Ring screws	5	16x5	Fixing handle, door opening	10
Wooden wheels	8	ø15	Base and top	11
Drawing pins	1		Fixing tealight holder	12
Tea light holder	1		Tealight holder	13
Tealight	1		Tealight candle	14

INSTRUCTIONS

Making the individual parts:

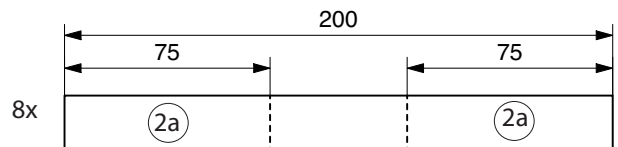
1. Mark out and drill the 1mm holes in the wooden board
On one the the lime wood pieces mark out a pair of diagonal lines. Then drill a 50mm diameter hole with a Forstner bit in the middle, or you can use a fretsaw.



2. Chamfer the edges of parts (1a/1b) at 45 degrees as shown using a file and then sand them to finish, taking care to keep them equal!

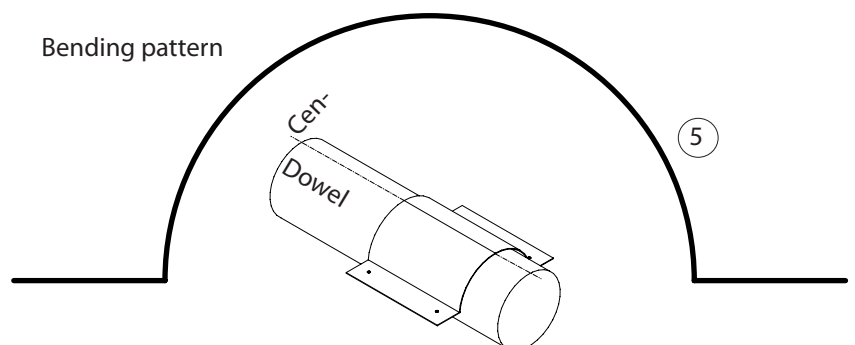
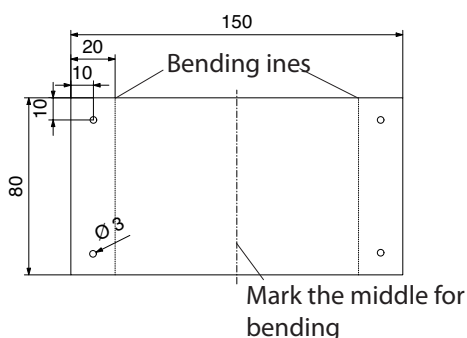
3. Remove the tabs from the tealight holder (13) with a pair of pliers. Fix it in the middle of the base with a drawing pin (2).

4. From the 4 wooden strips (2) saw two pieces each 75mm (2a) and sand the ends.



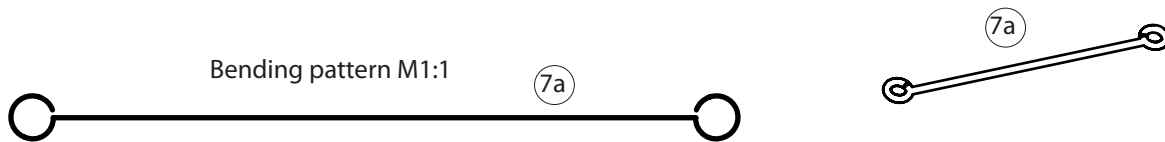
5. Take the aluminium sheet (5) remove any burr from the edges. Use the pattern on page 6 and mark out the 3mm holes. Then bend the aluminium shape as shown. Firstly bend the 20mm tabs at 90 degrees then bend the curve around a (ø 50-70mm) round piece of dowel (Rolling pin)

Note: make sure the tabs are bent in the correct direction!

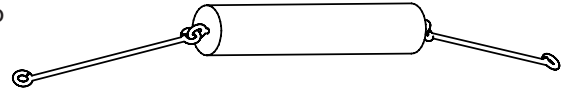


INSTRUCTIONS

6. Take a piece of aluminium wire (7) and cut it half. Bend the ends as shown

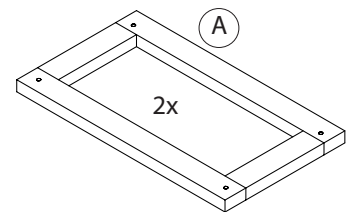
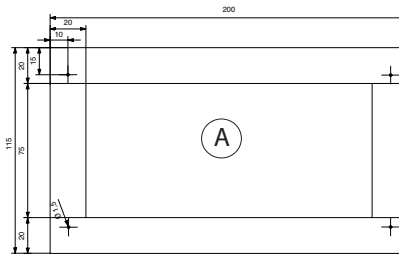


7. Take two screw eyes (10) insert them in the end of the dowel. Hang the two pieces of the aluminium wire and hang one on each end (see. diagram)

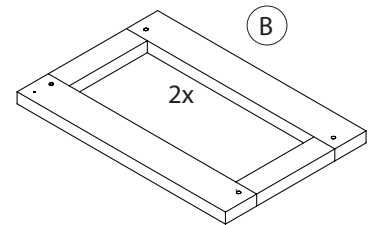
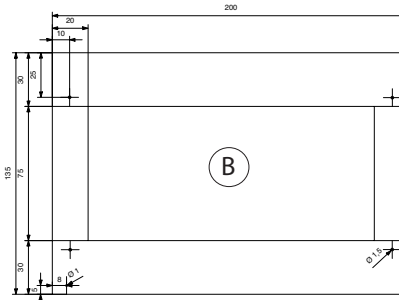


Making the sidewalls

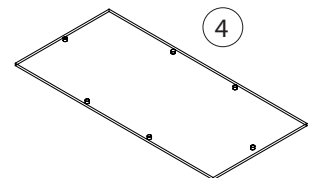
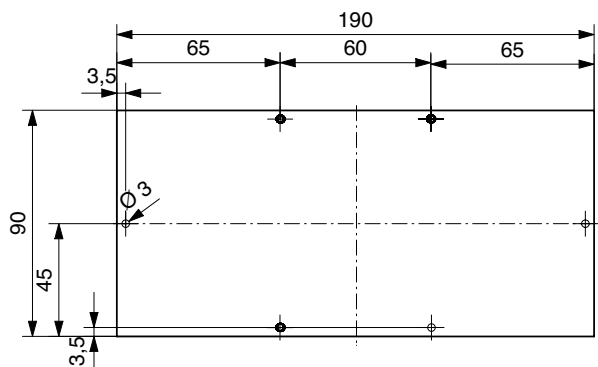
8. Take two wood pieces (2) and two pieces (2a) (75mm) and glue them together as shown-leave to dry. See the pattern on page 7. Then drill the 2mm holes! Repeat this process until the two frames are made. Frame A (Width: 115mm).



Take two wood strips (3) and two wood strips (2b) (75mm) glue these together-leave to dry. Mark out and drill the holes $\varnothing 1,5\text{mm}$ or use the pattern on page 9. You should have 2 same size frames B (Width: 135mm)



9. Take the acrylic sides (4) and drill the 3mm holes. Use a drop of oil on the drill bit!

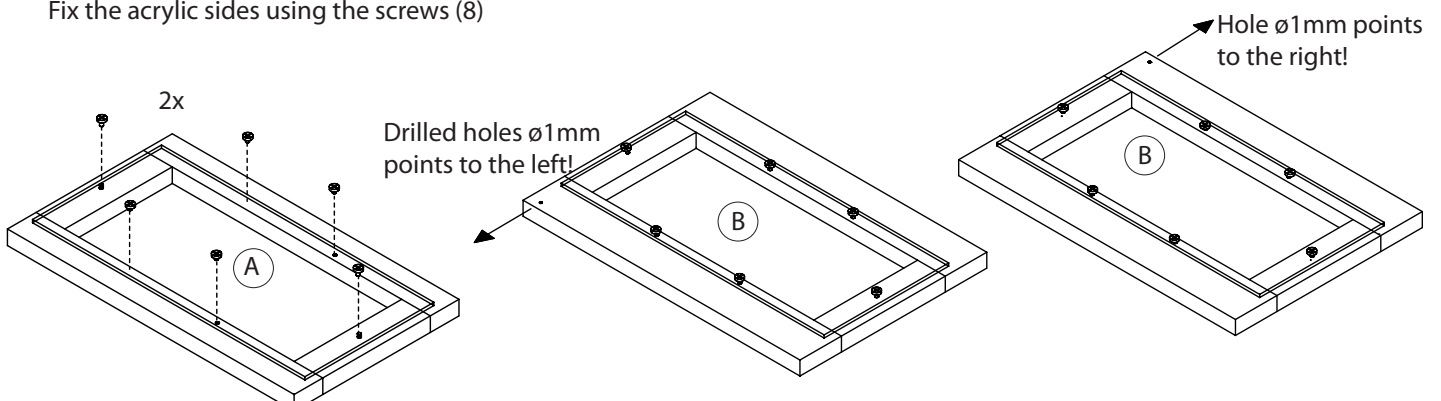


10. Lay the acrylic pieces (4) on the frames. Use a Bradawl through the holes to mark out on the frames. Drill the $\varnothing 2\text{mm}$ ca. 5mm deep in the frame.

Note:

On the side frame (B) that the acrylic sides are drilled properly on the correct side!

Fix the acrylic sides using the screws (8)



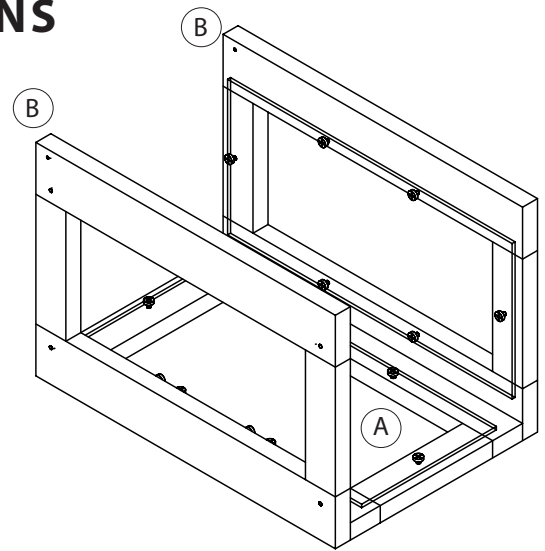
INSTRUCTIONS

Assembling the stormlight

11. Glue Frame A as shown (Acrylic on the inside) with frame B. Clamp them together until they are dry!

Note:

1mm-holes from Frame B should be opposite each other!



12. Fit the door edges with a workshop file.

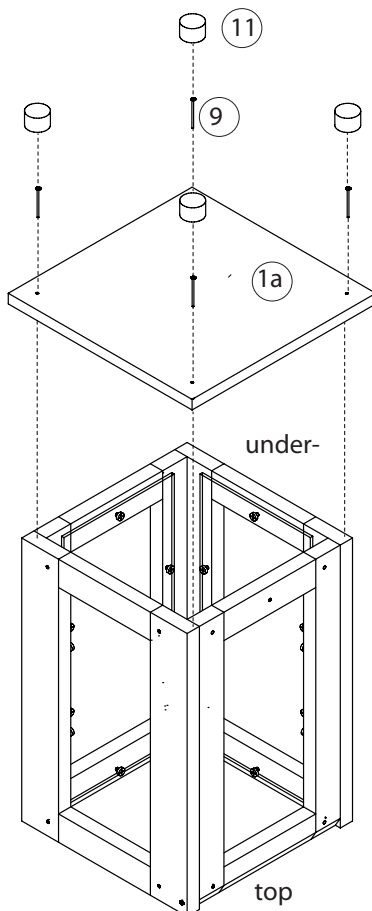
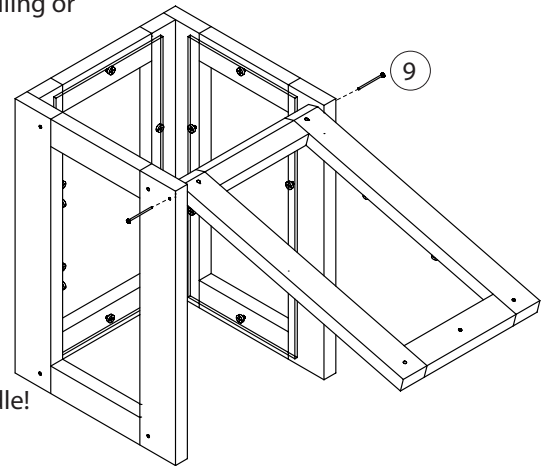
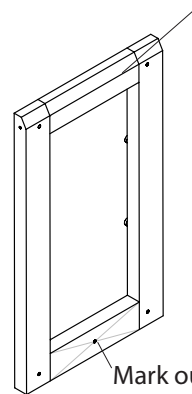
Drill the 2mm hole ca 5mm deep as shown.

Fix the doors with 2 (9) nails as shown in the Frame B

Note:

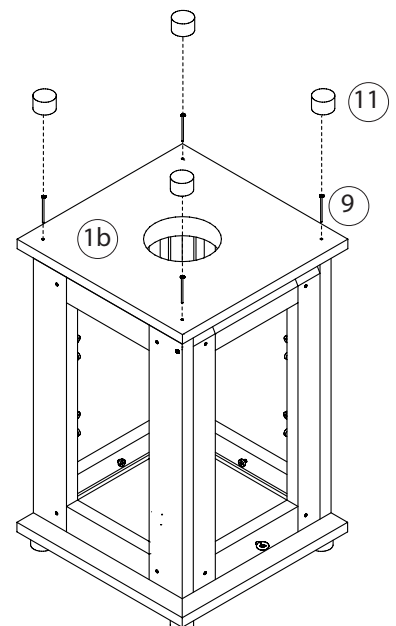
Filed top edge shows on the outside!

Adjust the edges ! by filing or



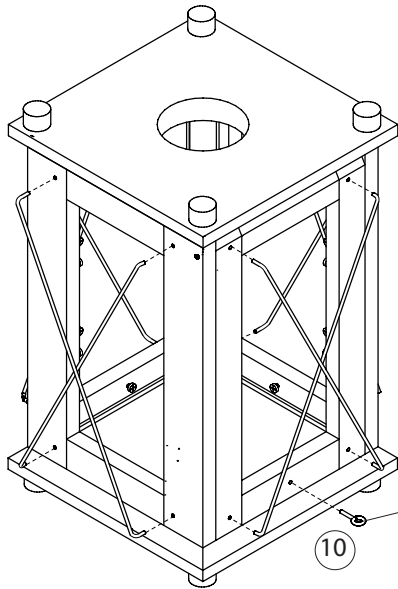
13. Take the base plate (1a) and place it on the upside down frame(Hole in the middle door strip should show upwards) glue the base in place Fix with 4 nails (9) . Use the nails to fix a wheel as each foot (11) glue and assemble. See diagram
Leave to dry ! clamp in place

14. Turn the storm light over!
Glue the top (1b) on the top using 4 nails (9) On each nail glue a wheel disc (11) See diagram right!



INSTRUCTIONS

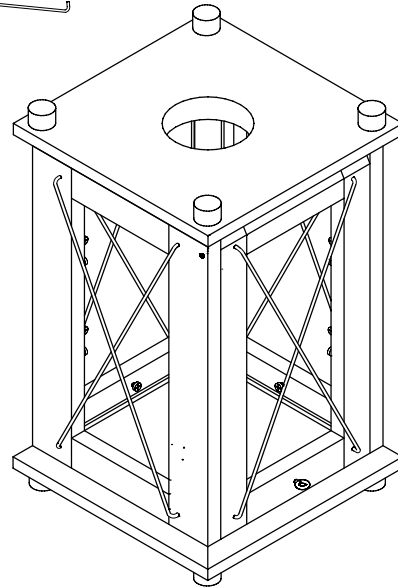
15. Insert a screw eye (10) in the hole as shown!



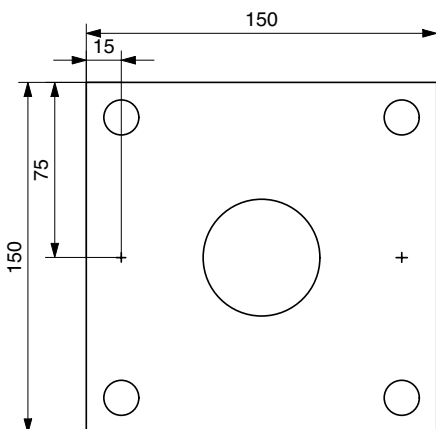
Insert the screw eye (10)

16. Shorten the 8 remaining Aluminium wires (7) to 220mm long using sidecutters. Bend both of the ends 90 degrees for 10mm. Use the bending pattern on page 7

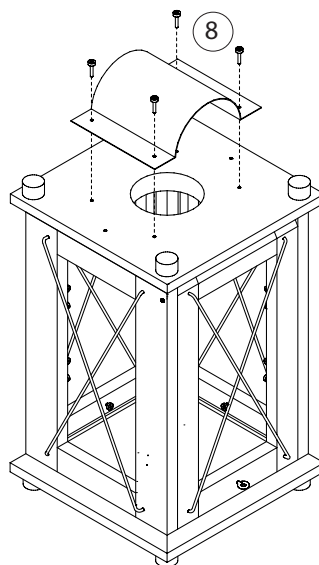
Once ready insert them in the holes as shown in the plan.



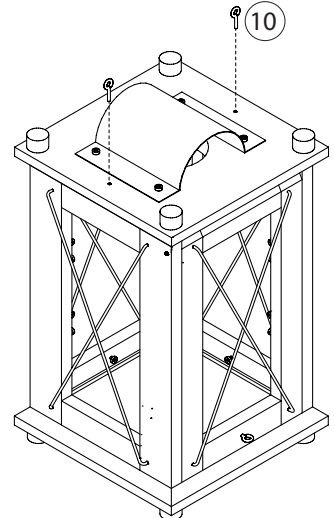
17. Mark out the points for the screw eyes according to the plans. Firstly make a pilot hole with a bradawl then insert the screw eyes (10) as shown.



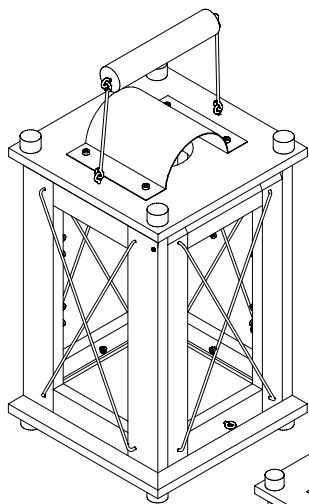
18. Screw the aluminium sheet top in place in the middle over the holes



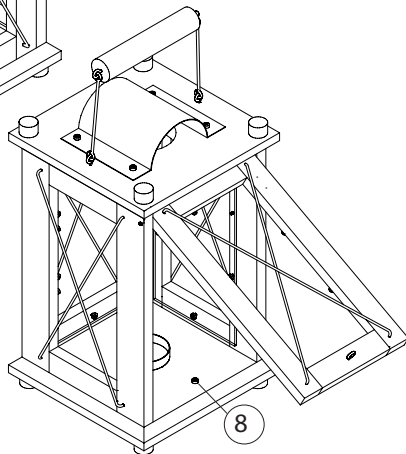
19. Screw the two screw eyes (10) in on the marked points!



INSTRUCTIONS



19. Fix the aluminium wire handle and the screw eyes (10) Prise the screw eyes open to fit

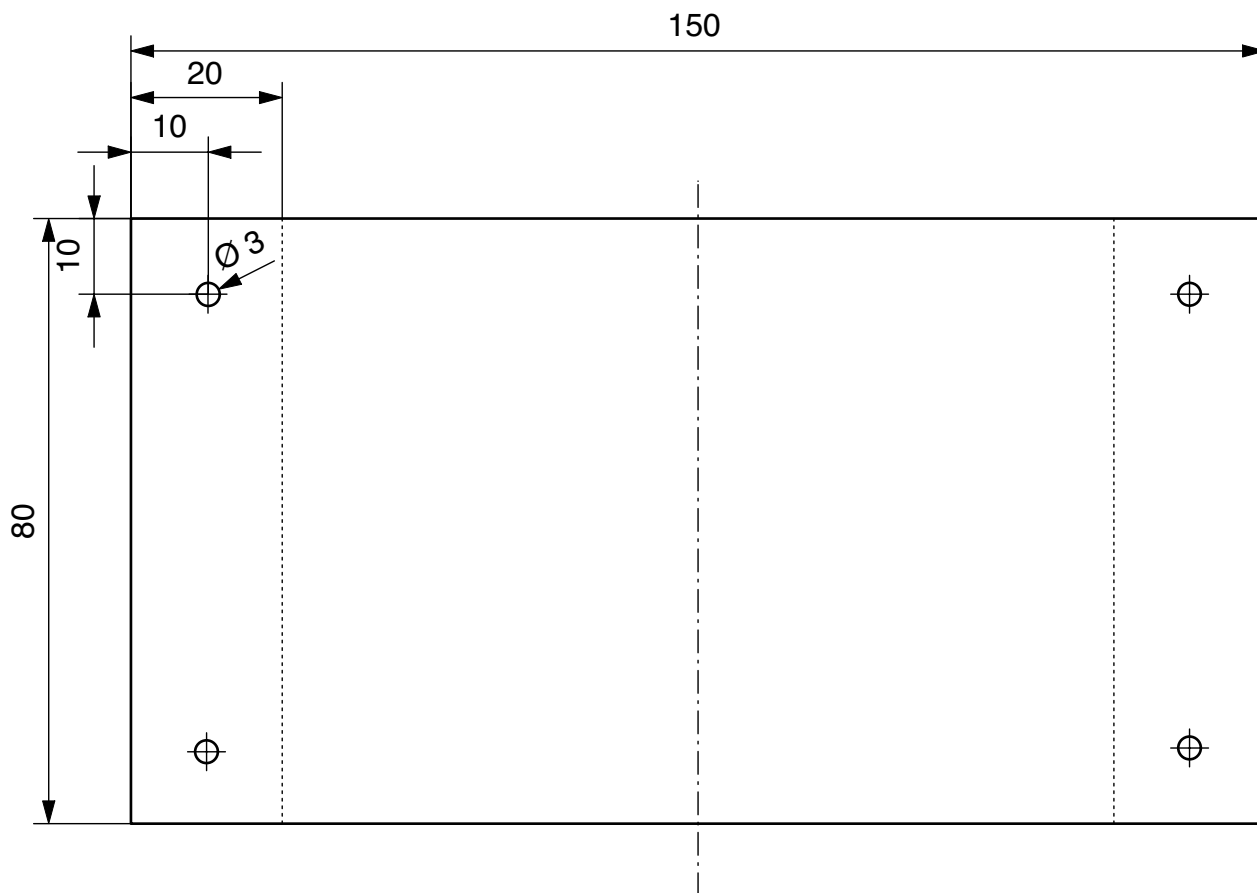


20. Insert the screw eye (8) to act as a door catch

Insert the tealight candle (14) in the holder!

Finished

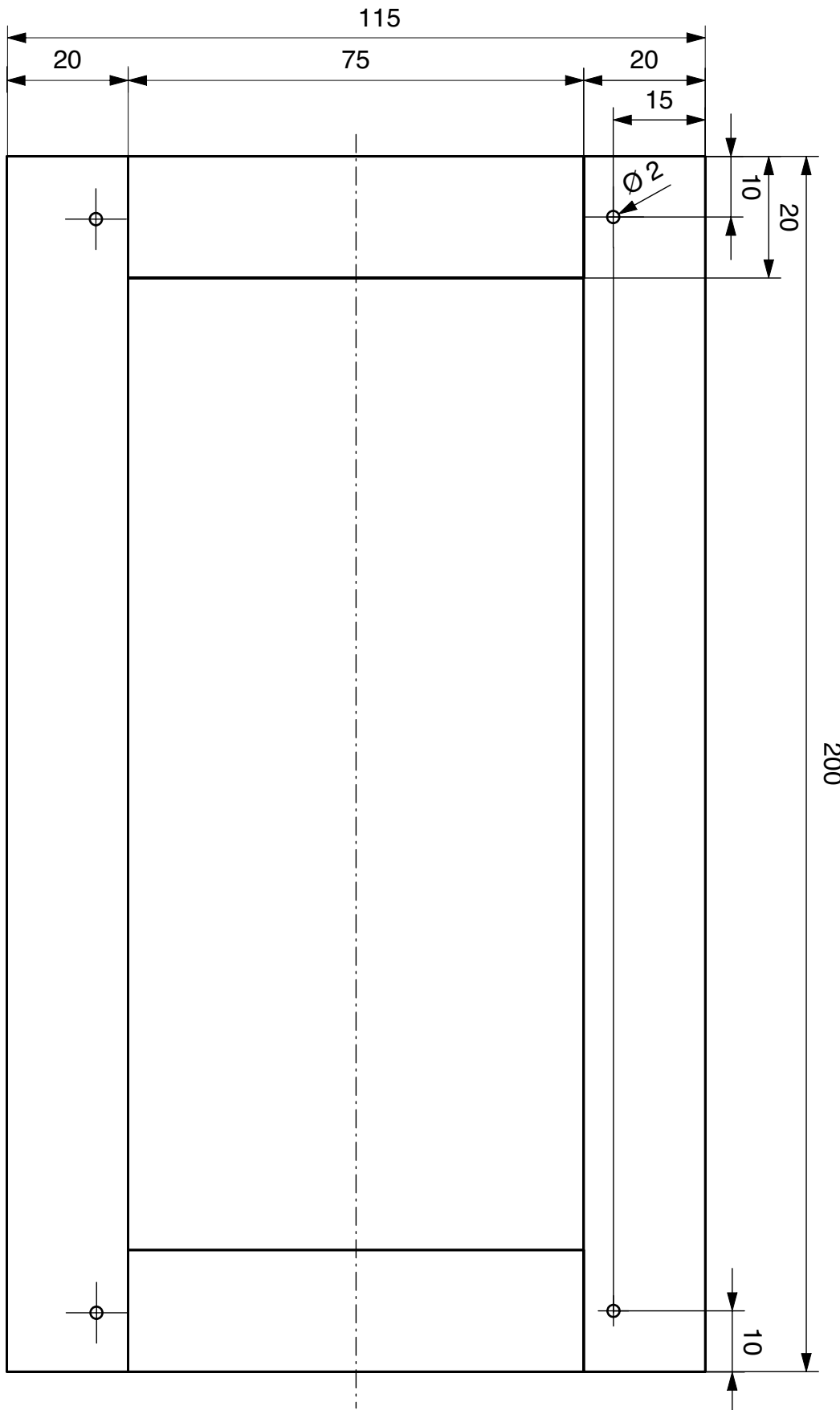
Pattern fo the aluminium E 1:1



INSTRUCTIONS

Pattern side part A

Bending pattern for the
aluminium wire E1:1



INSTRUCTIONS

Instructions for side part B

