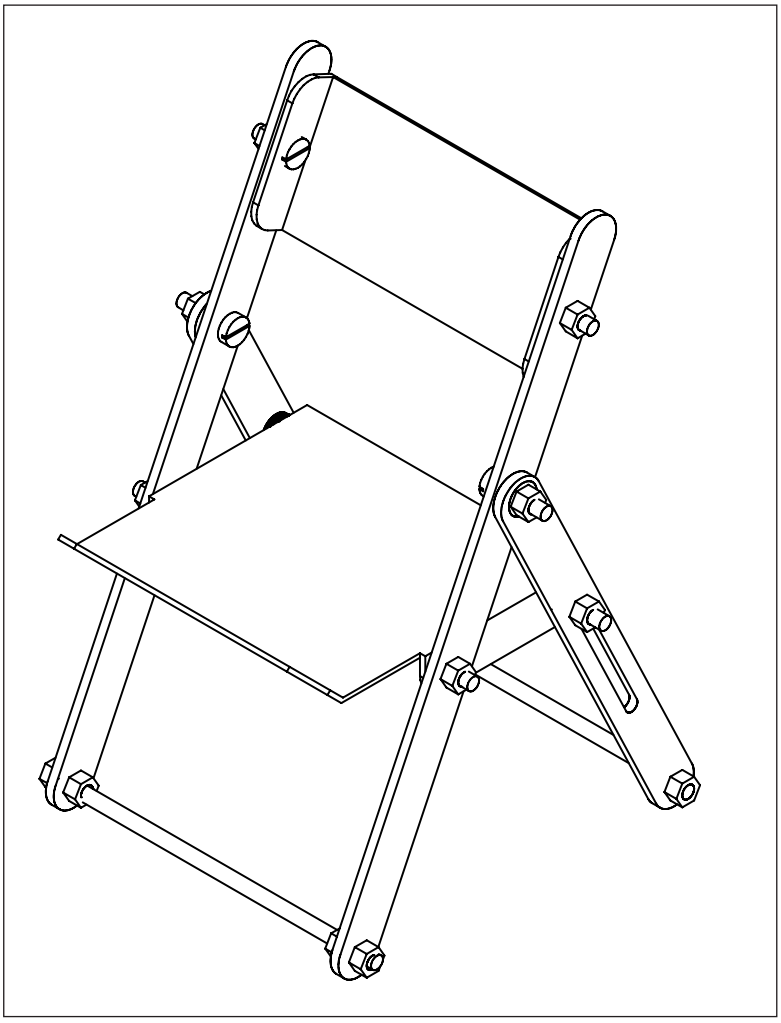
OPITEC

111.518

Metal Chair Mobile Phone Holder



Note: Prepared strips must be aligned straight!

Please Note:
The OPITEC range of projects is not intended as 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 operated 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!

1 Product Information:

Article: metal construction kit

Use: in handicraft lessons, for kids aged 11+

2. Material Information:

Material: aluminium (non ferrous, light metal, non magnetic, light, soft)

Working: sawing, filing, drilling

Connection: screws and nuts

Surface: oiling, varnishing or polishing

3. Tools:

filing: Select the right file according to handling. Use a warding file for recesses;

Note! Only weight the file on pushing movement..

sawing: **Use a junior hacksaw for straight cuts**;

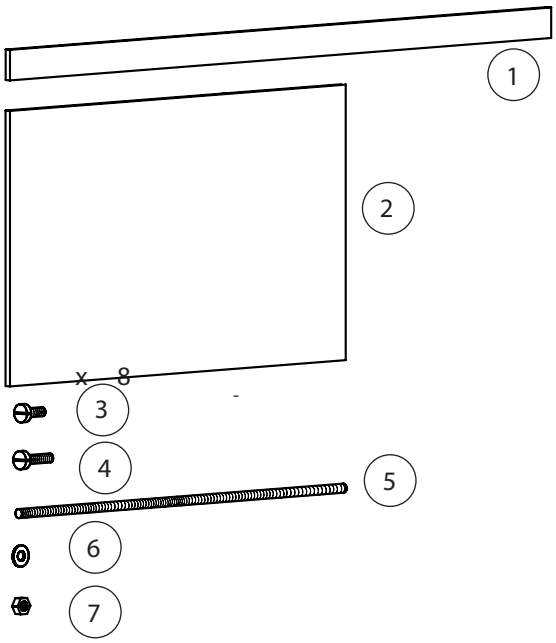
Note: Insert the saw blade teeth front! Only weight the saw on pushing movement.

drilling: Use a pillar drill.

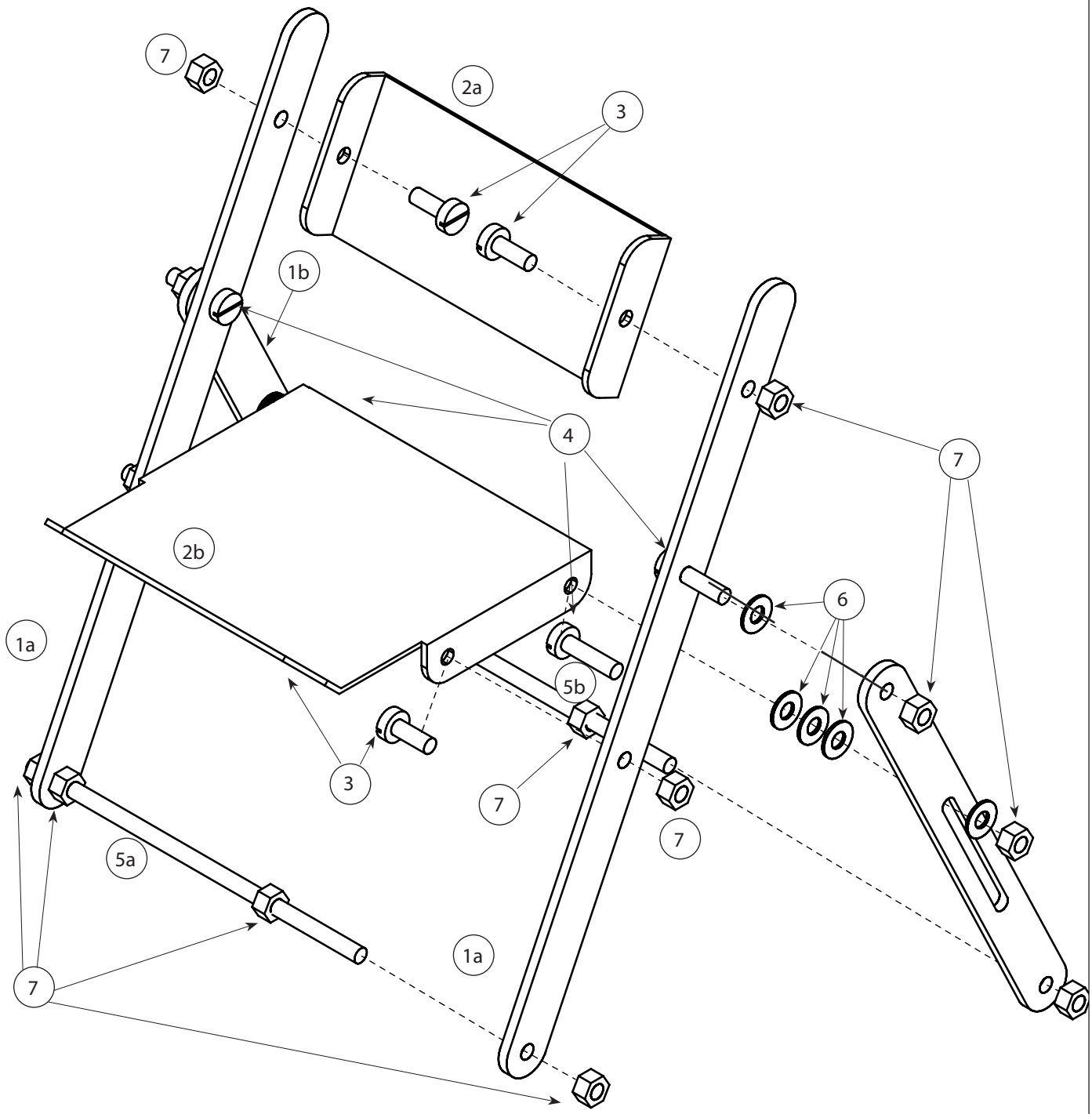
Note: Adhere to the safety rules! (tie long hair back, remove jewellery: rings etc, wear safety glasses and clothes) Clamp the parts in a machine vice! Ensure that the drill speed is correct!!

4. Parts List:

Designation	Quantity	Size (mm)	Part No. °
legs	2	2 x 10 x 250	
seat and back	1	1 x 90 x 110	
screws	4	M 3 x 8	
screws	4	M3 x 12	
threaded rod	1	M3	
washers	10	M3	
lock nuts	16	M3	



5. Exploded Diagram



6. Production and Fitting

6.1 Producing the Legs:

6.2 Producing Back and Seat

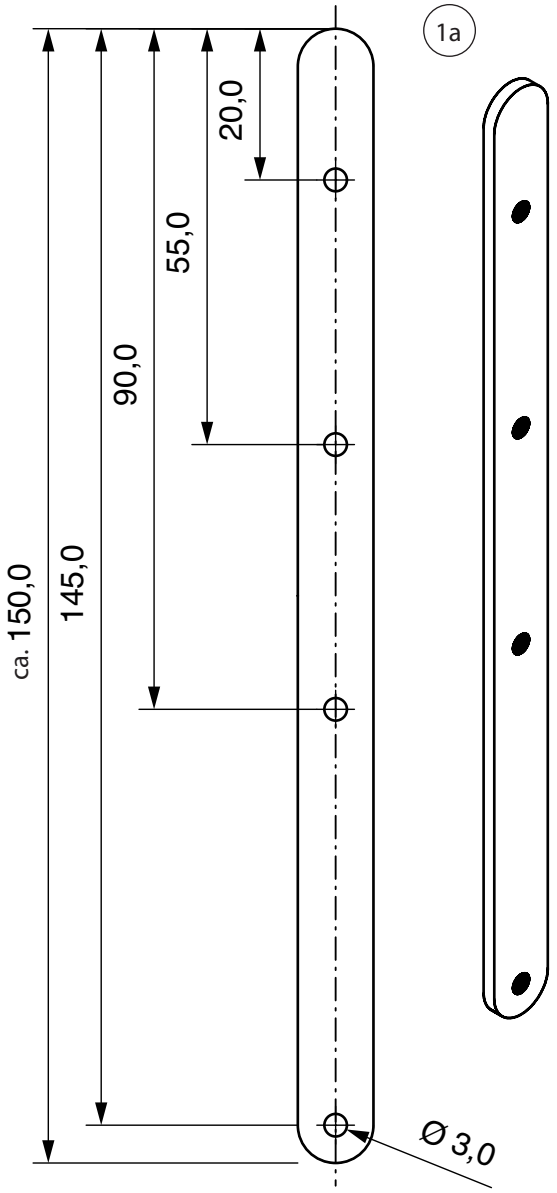
6.3 Assembling the Parts

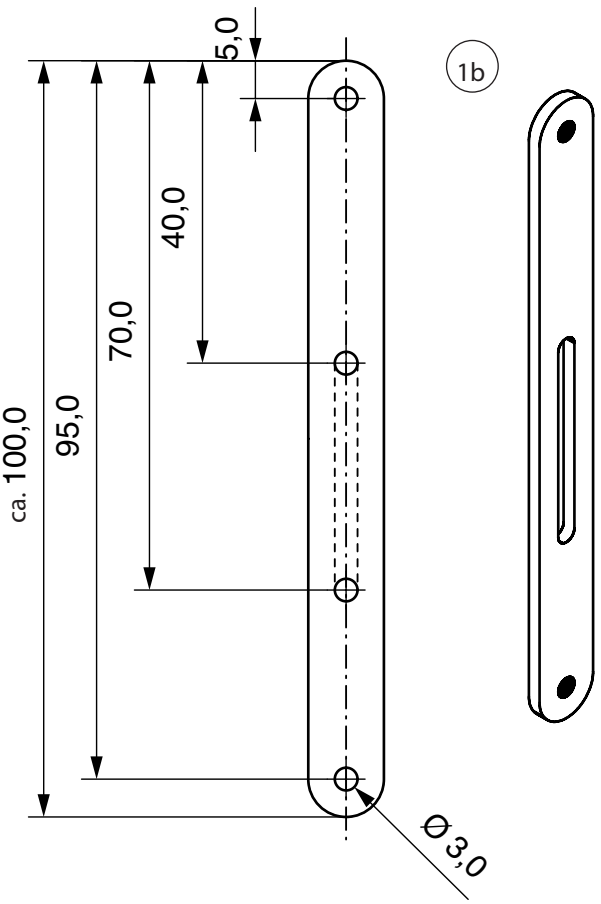
6.1 Producing the Legs:

6.1.1 Saw the aluminium strip (2x10x250mm) into two parts, one 100mm (1b) and the other one 150mm (1a) long.

Note: Adjust the aluminium strip after cutting!

6.1.2 Mark, drill and deburr the four holes of the aluminium strip 1a.





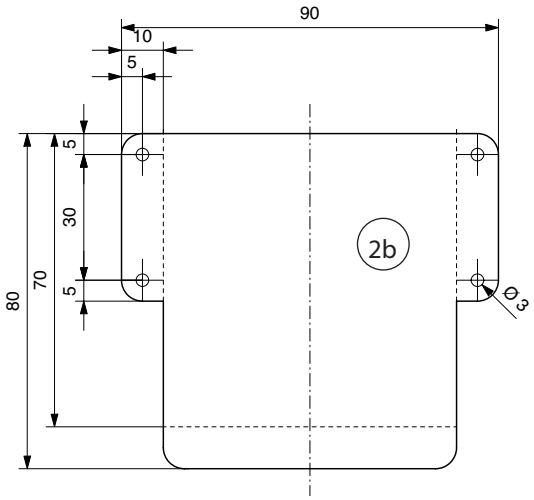
Note: Use a pencil to mark the aluminium strip not a scriber, because this would leave marks and scratches in the metal!

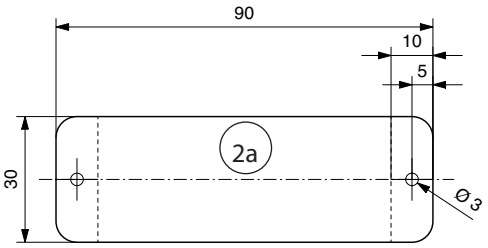
6.1.3 Mark, drill and deburr the four holes of the aluminium strip 1b.
Use a fine saw or use a series of holes to cut out the slot (dashed line). Clean the edges with a warding file.

Note: The slot must be wide enough for an M3 cylinder head screw to slide back and forth. If necessary widen the slot with the warding file.

6.2 Producing Back and Seat

6.2.1 Cut the back (2a) 1x90x30mm out of the cutting 1x90x110mm. Mark, drill and deburr the holes. Cut the seat (2b) out of the leftover piece (1x80x90mm) according to drawing. Mark, drill and deburr the holes and round off the edges.

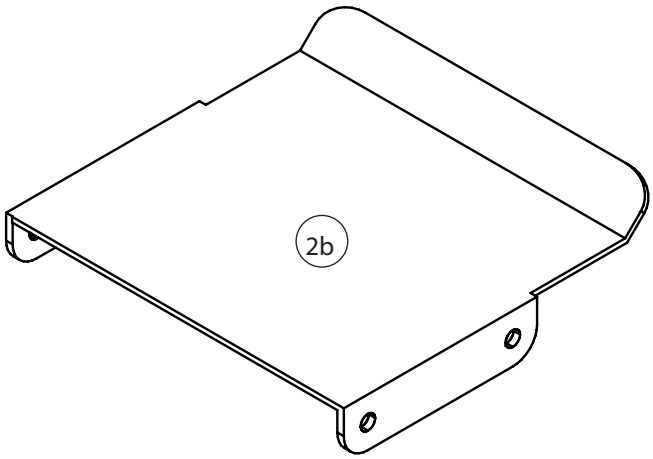


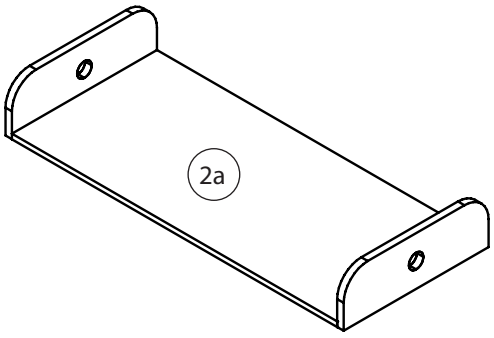


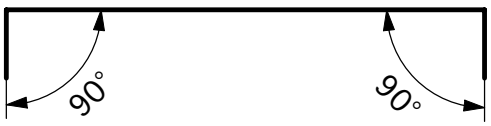
6.2.2 Transfer the bending edges (dashed lines) to the cuttings (2a/2b) according to drawing.

6.2.3 Bend the back (2a) and the seat (2b) as shown. .

Note Use protective jaws!







6.3 Assembling the Parts

6.3.1 Cut of the threaded rod a 80mm (5a) and a 85mm (5b) long piece. File any burr from the ends. .

6.3.2 Connect the parts with screws as shown in the diagram.

Note: The 4 lock nuts, that should be on the inside, must firstly be threaded on the rod in order to break the plastic. Then remove the nuts again and fix them the other way round.