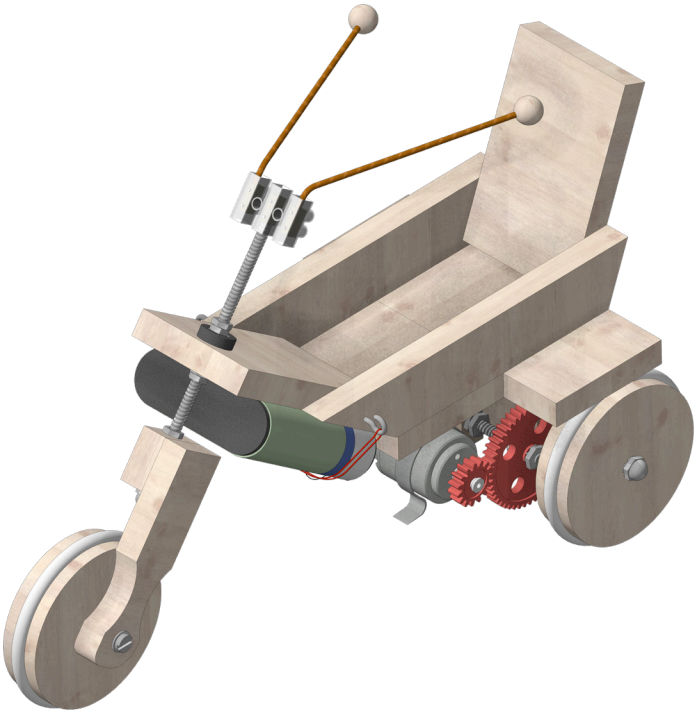
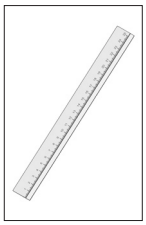
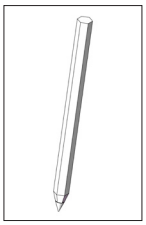
101.196

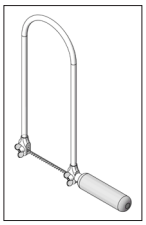
Easy Rider

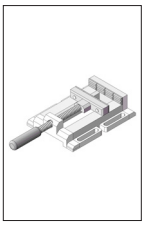


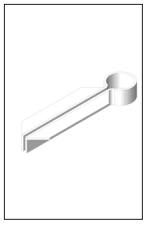
Tools required:

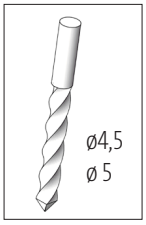

Ruler


Pencil


Jigsaw / scroll saw


Machine vice


Bending aid

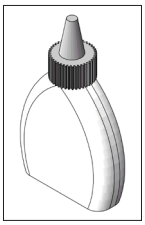


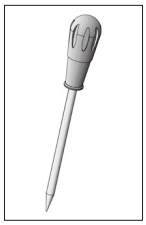
Drill bit

Wrench


Slot screwdriver


Hammer

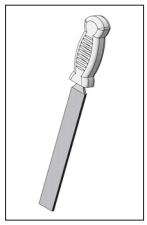

Wood glue

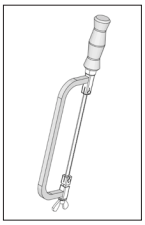

Pricking awl

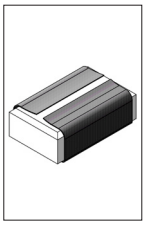

Adhesive tape

Note

The OPITEC handicraft packs are not toys in a typical off-the-shelf sense, but rather additional teaching and learning material for educational purposes. This craft pack may only be constructed by children and adolescents under the guidance and supervision of experienced adults. Not suitable for children under 36 months. Choking hazard!


Engineer's file


PUK Saw

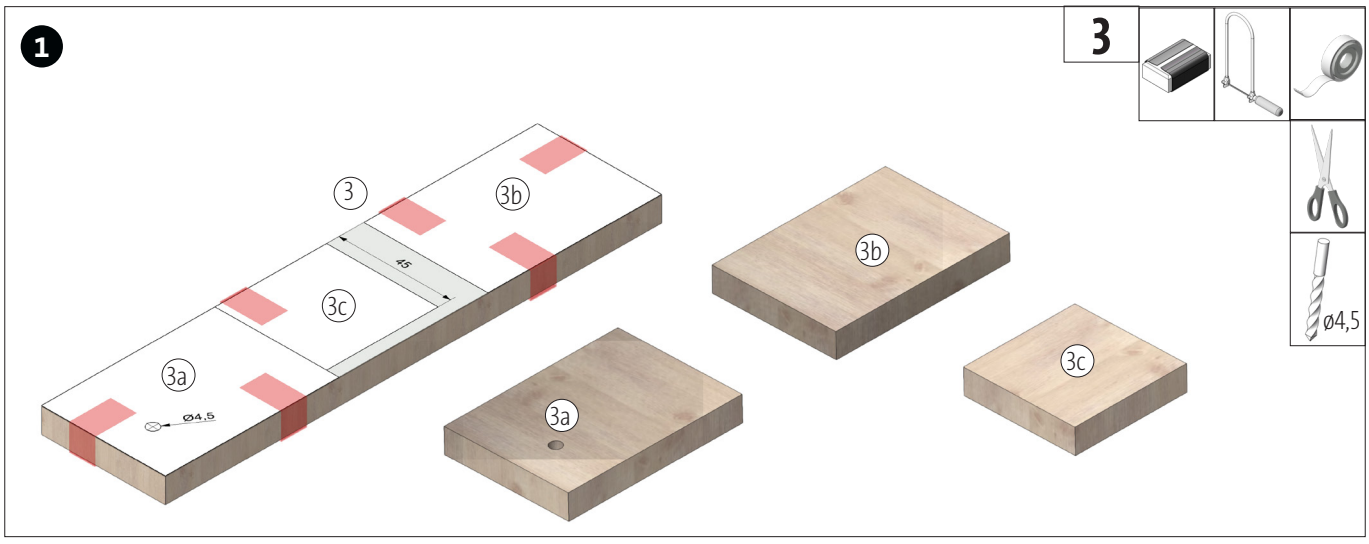

Sandpaper


Soldering iron and solder

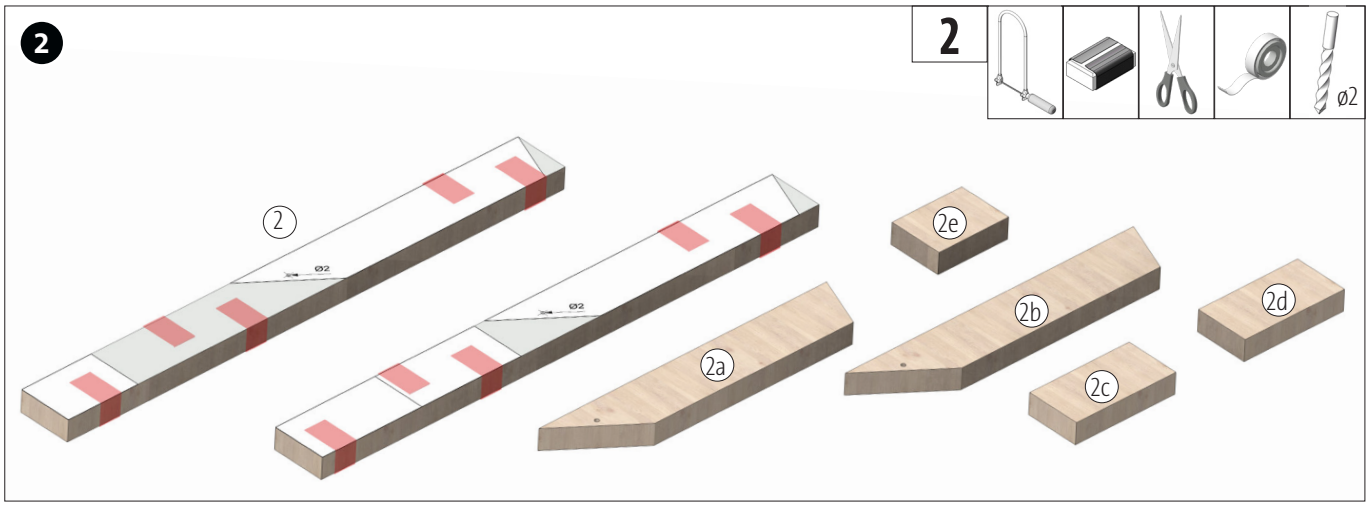
Parts list	Number of pieces	Dimensions (mm)	Description	Part no.
Wooden strip	2	50x5x5	Reinforcement bearing blocks	1
Wooden strip	2	250x25x10	Fender bearing block/side parts	2
Wooden strip	2	200x50x10	Backrest/chassis/storage block	3
Wooden strip	1	125x20x10	Fork	4
Wooden wheel with rubber tires	3	ø60	Wheels	5
Gear 38 teeth	2	ø40	Propulsion	6
Gear 13 teeth	2	ø15	Propulsion	7
Tack bar	3	M4x150	Rear axle/steering	8
Cylinderhead screw	1	M4x35	Wheel mounting front axle	9

OPITEC

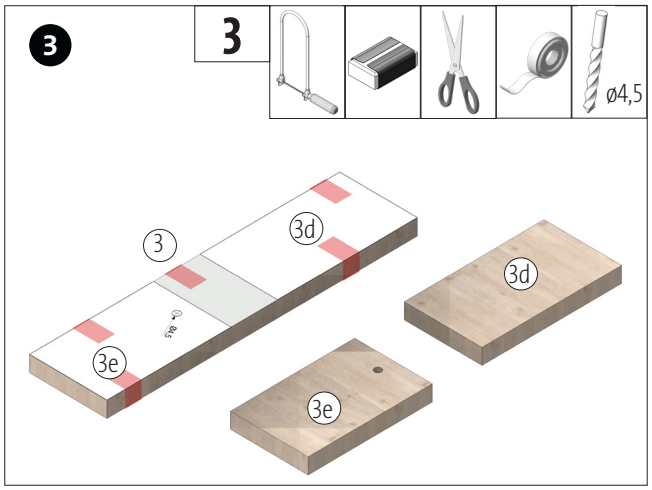
Parts list	Number of pieces	Dimensions (mm)	Description	Part no.
Tear nail	2		Mounting switch	10
Cylinderhead screw	1	M4x20	Motor mounting	11
Nuts	30	M4	Fixing	12
Head nut	3	M4	Fixing	13
Toothed washer	16	M4	Fixing	14
Washer	4	M4	Fixing	15
Brass sleeve	1	ø5x15	Bore front wheel	16
Brass sleeve	1	ø5x25	Bearing block bore	17
Brass sleeve	1	ø5x45	Bearing block bore	18
Welding rod	2	ø2x100	Handlebars	19
Electric motor	1	ø23	Propulsion	20
Spring steel clip	1	23x27	Bracket engine	21
Reducer	1	4/2	Gear to shaft reduction	22
Screw hooks	2	20	Battery holder	23
Pressure switch with lugs	1	29	Switches	24
Rubber rings	2	ø60	Battery holder	25
Hard rubber disc	1	ø13mm/ø4	Steering	26
Luster terminal	1	3-pole		27
Wooden beads	2	ø10		28
Switching wire	2	500	Wiring	29
Flat receptacle	2		Battery connection	30



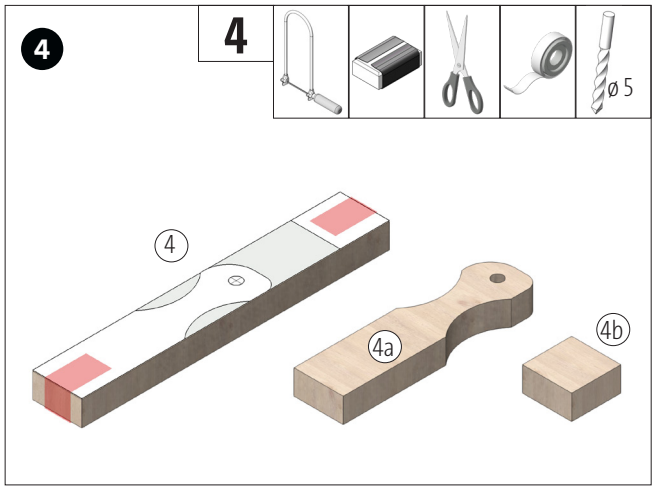
Transfer the template (page 11) for the base plate (1a+1b) and a bearing block to the wooden strip (3). Drill the hole (ø 4.5) and saw everything out. Clean saw cuts with sandpaper.



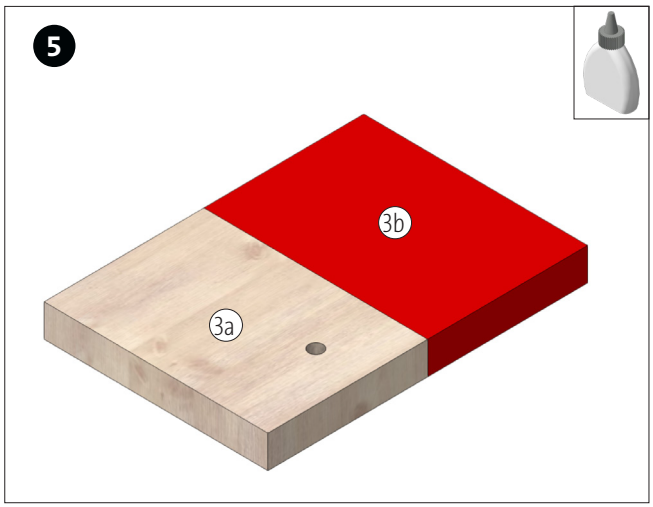
Transfer the template (page 9) for the side parts to the two wooden strips (2). Drill the ø2mm hole on the side parts (2a+2b). Saw out all parts and clean saw cuts.



Transfer the template on page 11 for the backrest (3d) and the handle-bar mount (3e) to the second wooden strip (3).



Transfer the template for the fork (page 9) to the wooden strip (4). Then saw out the two fork parts (4a+4b), drill through and clean the saw cuts.



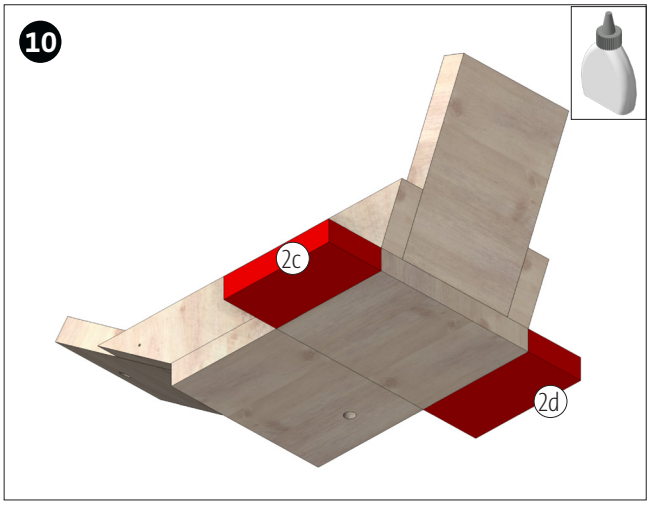
Glue the bottom panel (3b) to the side edge of the bottom panel (3a) as shown. Let the glue dry well.

Glue the side wall (2a) to the base plate as shown.

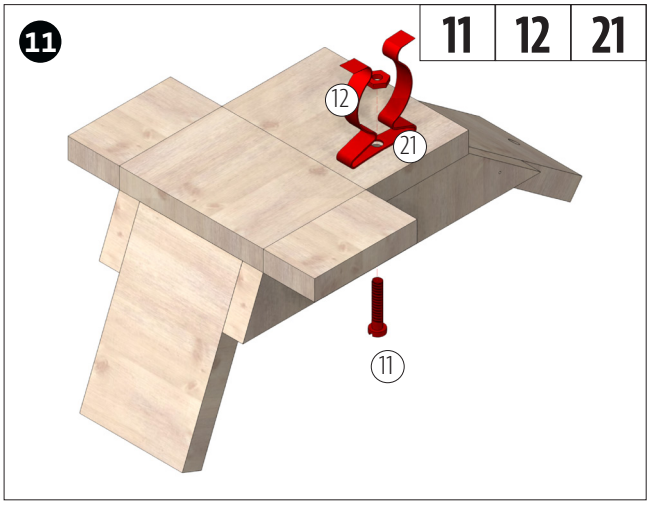
Glue the front of the handlebar mount (3e) to the side panel as shown. (The hole points upwards!)

Glue the backrest (3d) opposite the handlebar mount as shown above.

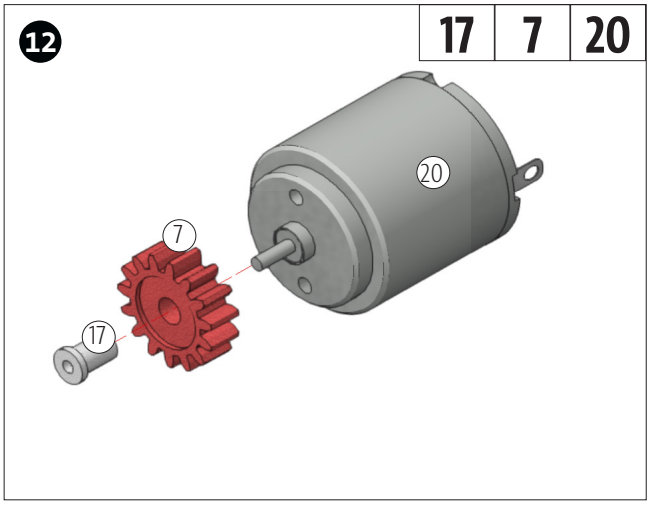
Finally glue on the side part (2b). Let the glue dry well.



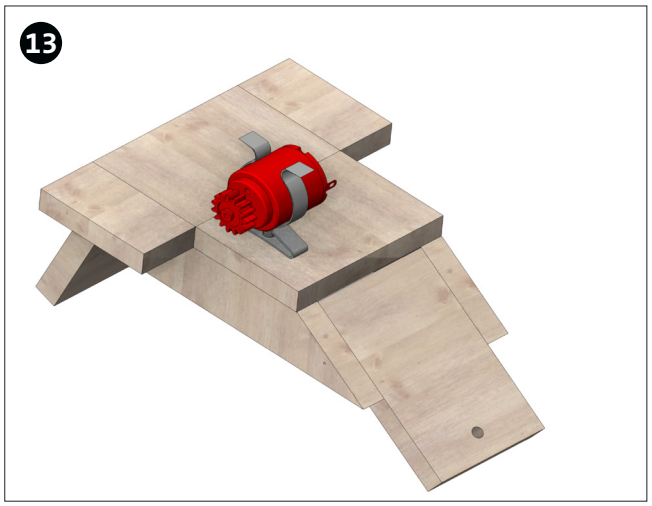
Finally glue on the side part (2b). Let the glue dry well.



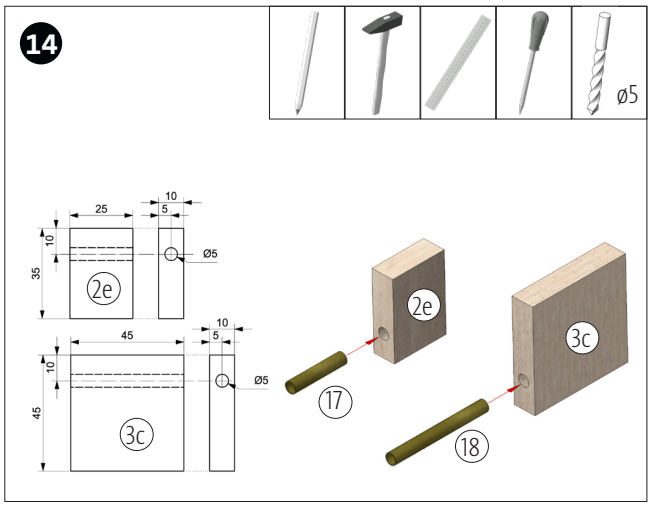
Fasten the spring steel clip (21) with a screw (11) and a nut (12) to the hole provided in the base plate as shown.



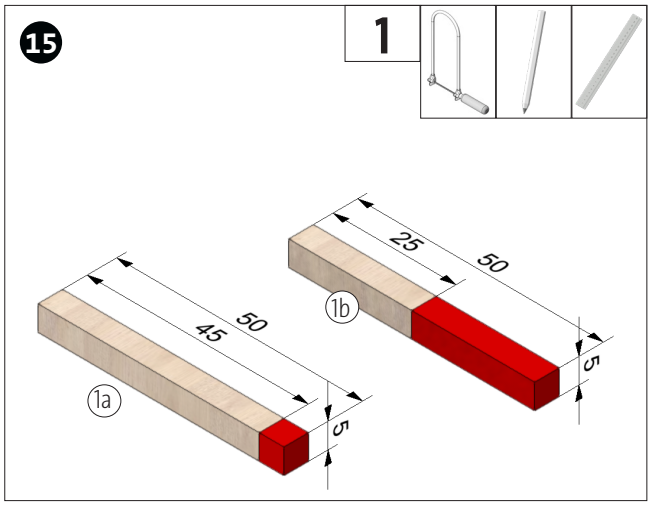
Insert the reducer (17) into the gear hole (7). Then push the gear wheel onto the motor shaft of the motor (20).



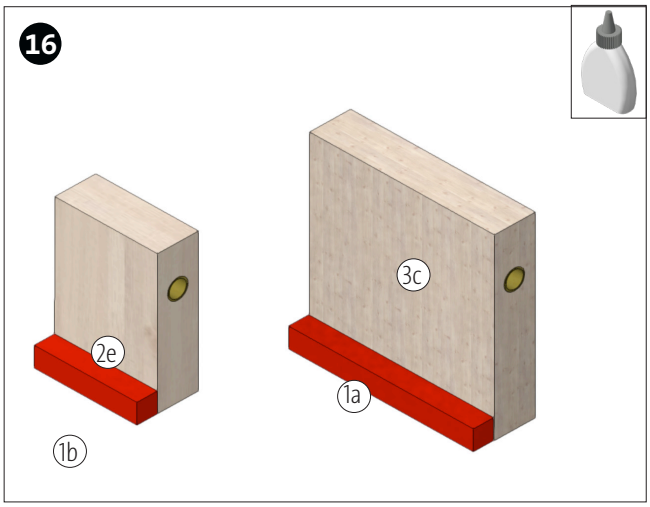
Place the motor with the gear in the spring steel clamp (21) so that the gear is outside the base plate.



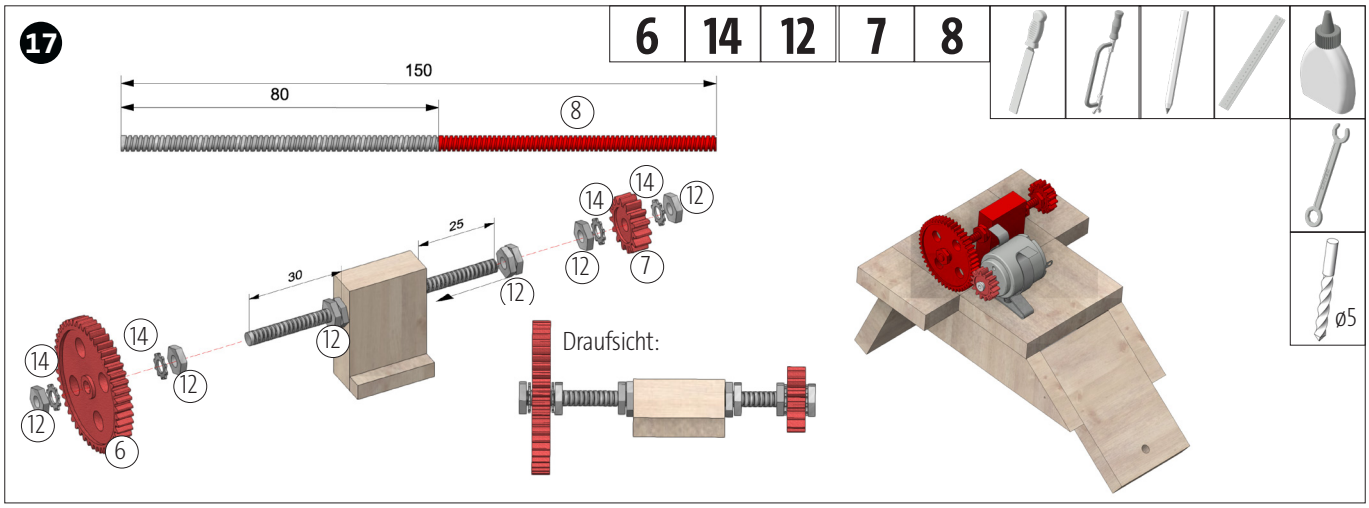
Measure the position of the hole on both parts (2e and 3c) and mark with a prick. Then drill both ø5 holes. Drive the brass sleeve (17) into the hole in part (2e). Drive the brass sleeve (18) into the hole in part (3c).



Cut the two wooden strips (1a+1b) to length as shown and clean the saw cuts.



Glue the wooden strip (1b) to the bearing block (2e) flush with the lower edge as shown. Also glue the wooden strip (1a) to the bearing block (3c) flush with the lower edge as shown.

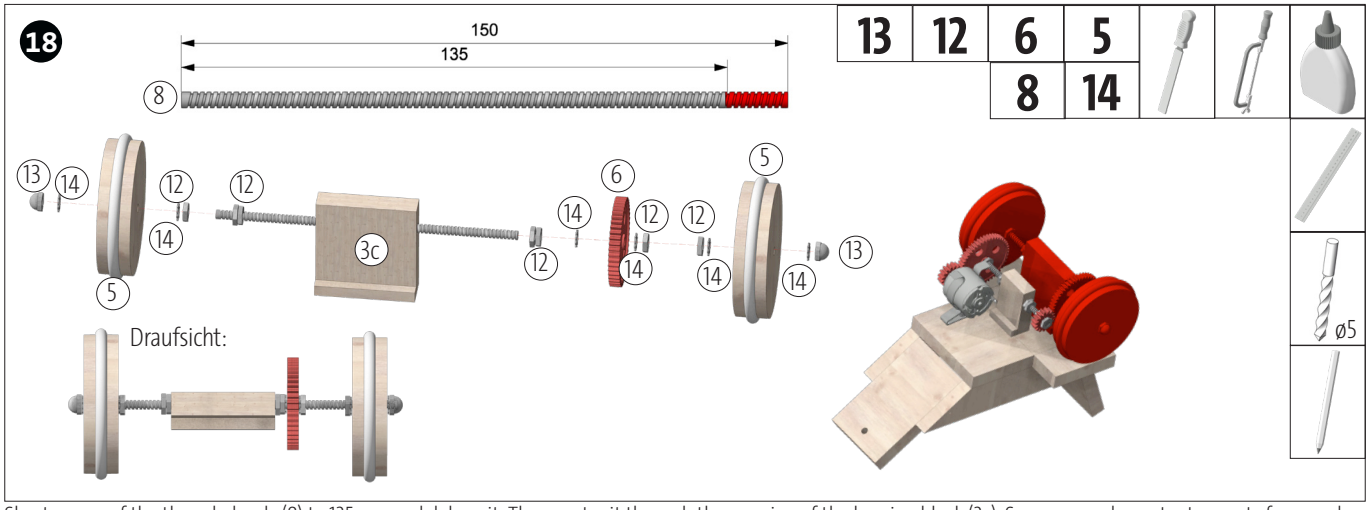


Shorten one of the threaded rods (8) to 80mm and deburr it. Then insert through the opening of the bearing block (2e). Observe overlaps on both sides! Screw on and counter two nuts from each side. Then fasten a gear wheel (6) with two nuts (12) and two lock washers (14) on the left-hand side as shown above. Finally fasten a gear wheel (7) with two nuts (12) and two lock washers (14) on the opposite side. Glue the bearing block with the gears so that the large gear (6) meshes with the small gear (7) of the motor. Fix the bearing block and let the glue dry well.

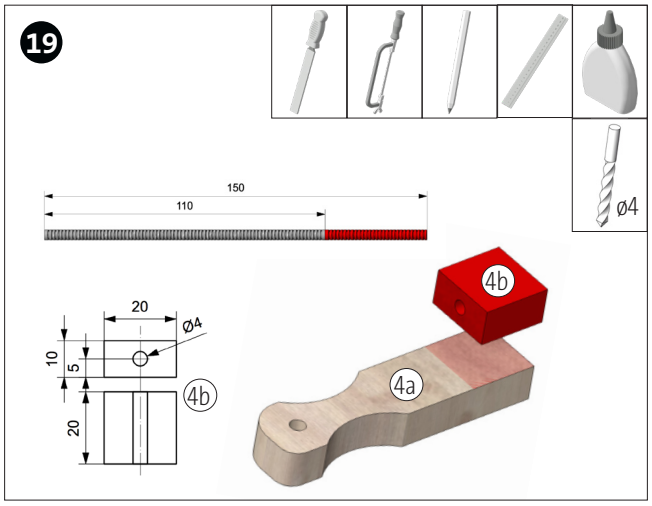
Instruction 101196

Easy Rider

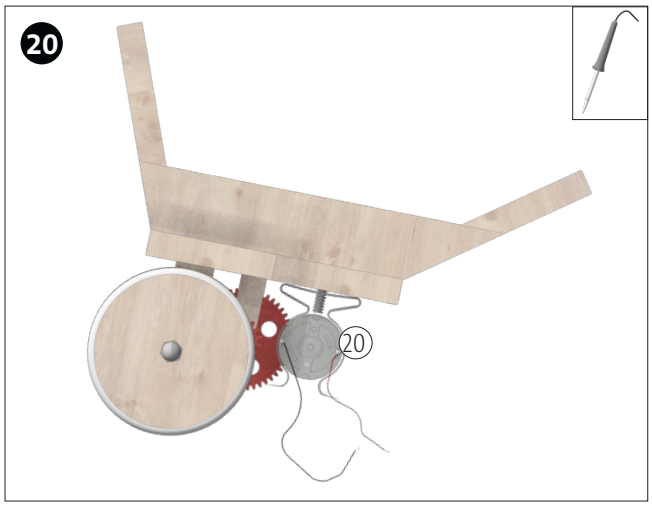
Note: The rubber rolling rings (ø54) must first be fitted to the wooden wheels!



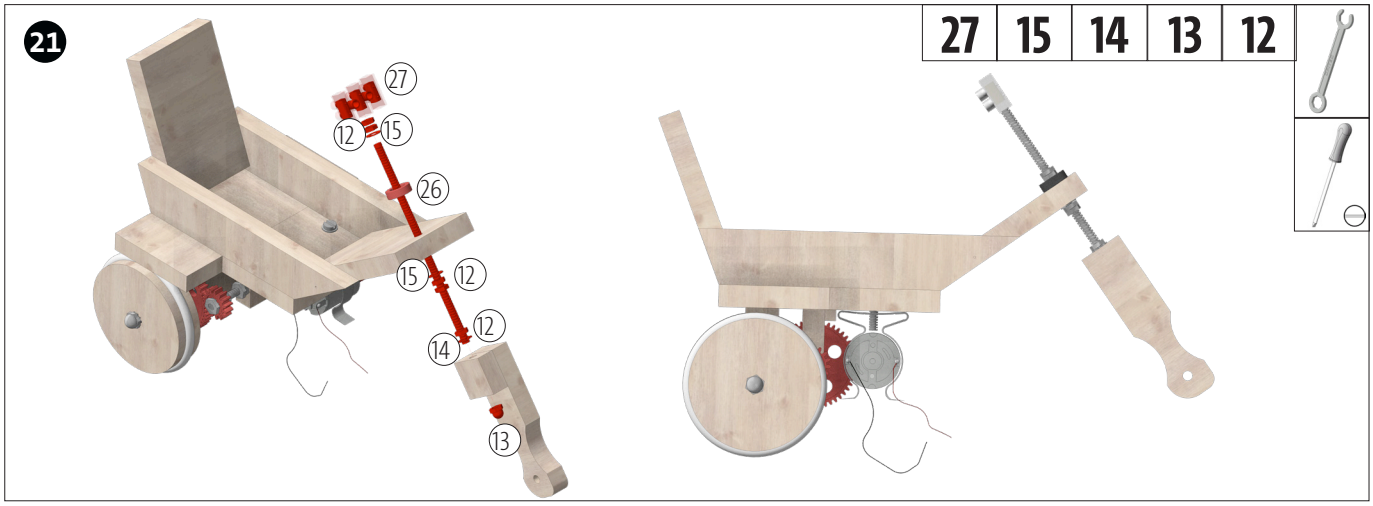
Shorten one of the threaded rods (8) to 135mm and deburr it. Then center it through the opening of the bearing block (3c). Screw on and counter two nuts from each side. Then screw on a toothed washer (14), a gear wheel (6), another toothed washer (14) and a nut (12). Finally, screw on a nut (12), a toothed washer (14), a wooden wheel (5), a toothed washer (14) and the cap nut (13). Screw on a nut (12), a toothed washer (14), a wooden wheel (5), a toothed washer (14) and the cap nut (13) on the opposite side. Glue the rear axle in such a way that the large gear meshes with the small gear of the previous axle! Fix the bearing block and let the glue dry well.



Shorten the remaining threaded rod (8) to 110mm and deburr it. For the fork, glue part (4b) onto part (4a) flush with the upper edge as shown. Make sure that the hole is vertical.



Cut 2 pieces (approx. 100mm) from the wire (29) and strip the insulation on both sides. then solder a cable to each of the motor connections (20).



Center the threaded rod (8) through the hole in the steering rod support. Attach the hard rubber disc (26) from above. Screw on a washer (15) and 2 nuts (12). Then attach the luster terminal (27) and screw tight. Screw on a washer (15) with two nuts (12) from the underside. Then screw on a nut (12) and a lock washer (14) again. Put on the fork and fasten it from below with a cap nut.

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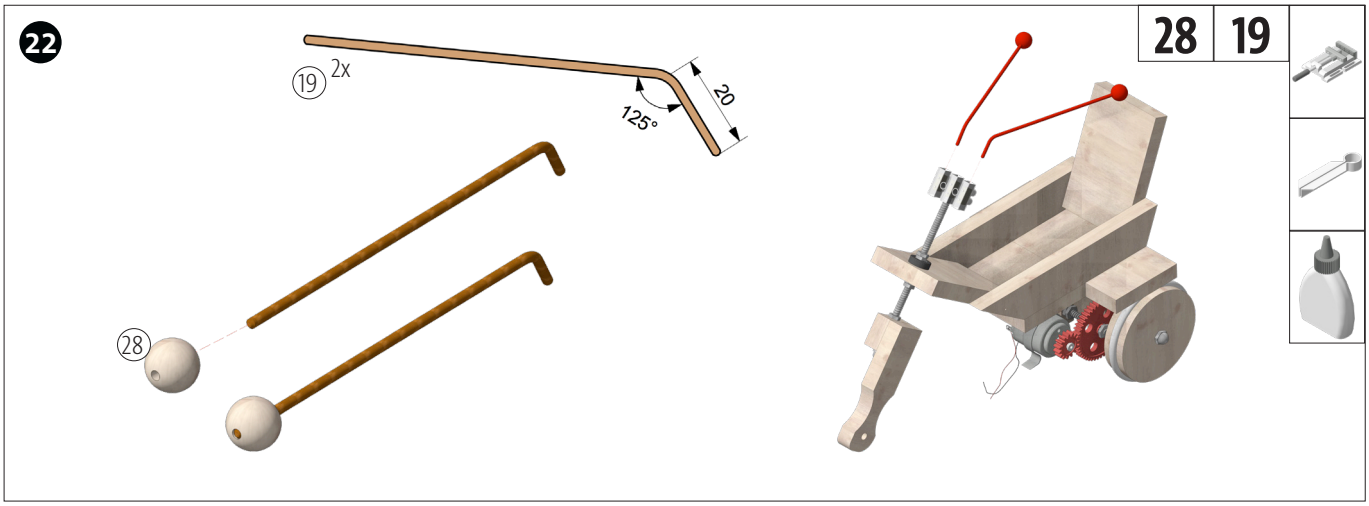
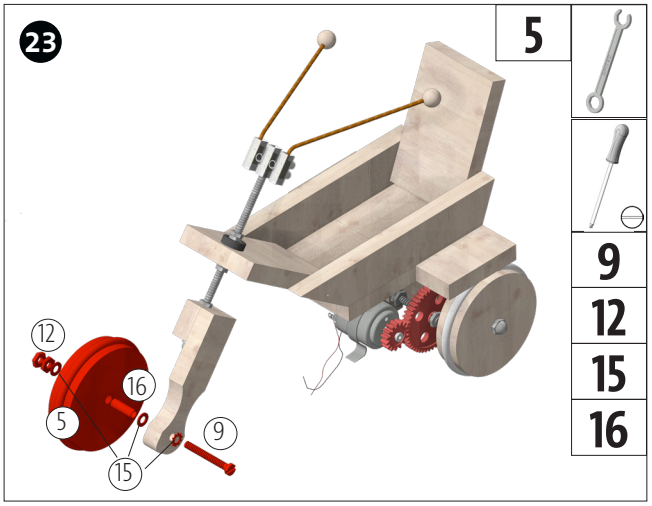
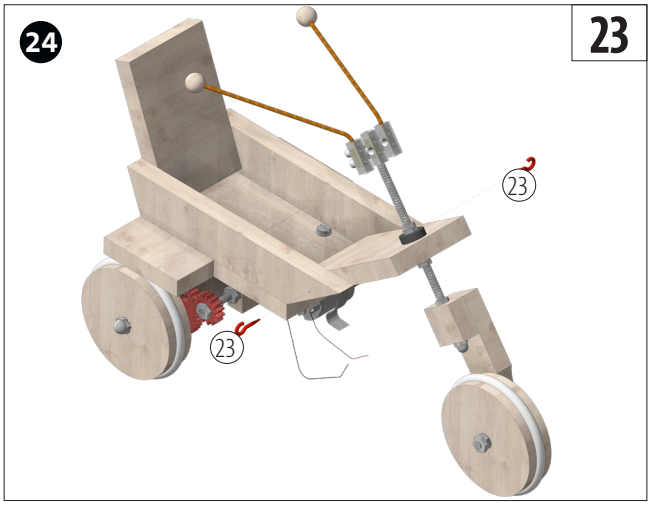


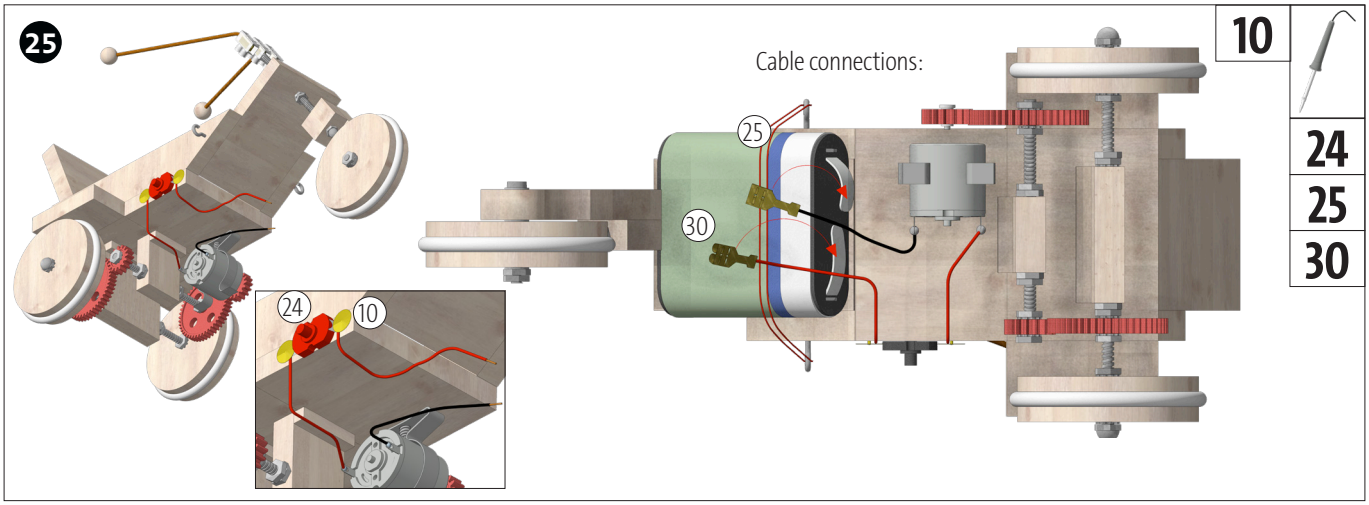
Bend the two welding wires about 20mm indented at one end by 125° as shown. Then attach the two wooden balls to the other end as shown and glue them in place.



Then insert the brass sleeve (16) into the remaining wheel (5) and secure it to the wheel fork using the screw (9), 3 washers (15) and 2 nuts (12).



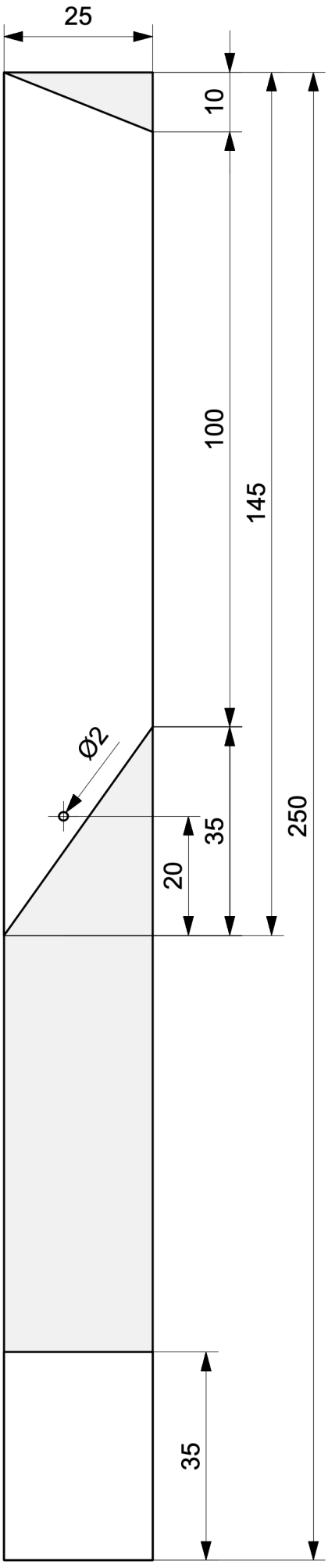
Screw the two screw hooks (23) into the holes in the side panels as shown.

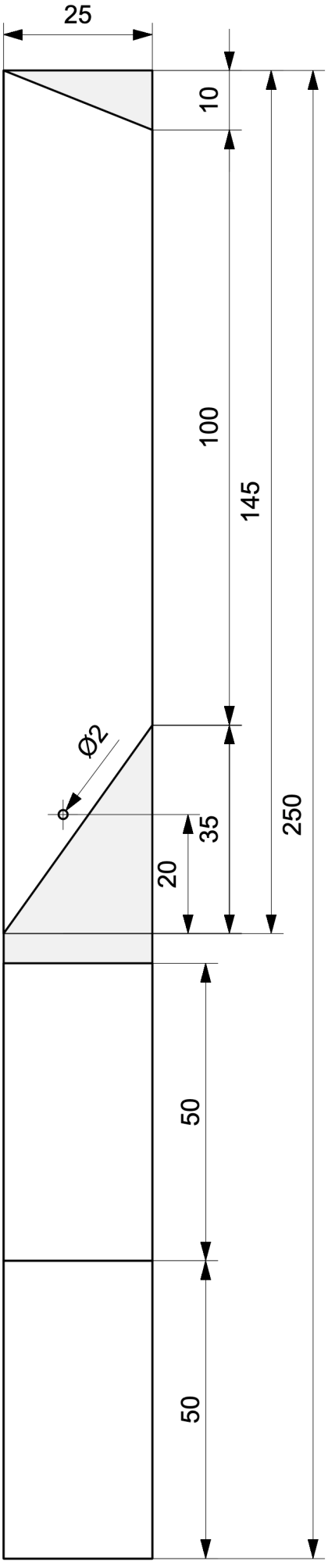


Connect the cable to the positive pole of the motor with a lug of the switch (24). Strip another approx. 50 mm long piece of cable on both sides and attach it to the other switch connection. Then fasten the switch to the side of the vehicle with two pull nails (10). Solder the two blade terminals (30) to the two free cable ends. Attach a 4.5V flat battery with the rubber ring (25) and connect the cables. Finished!

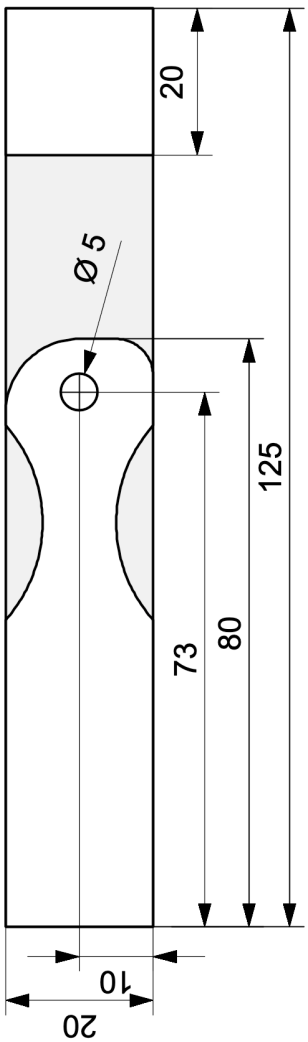
101196

A (1:1)



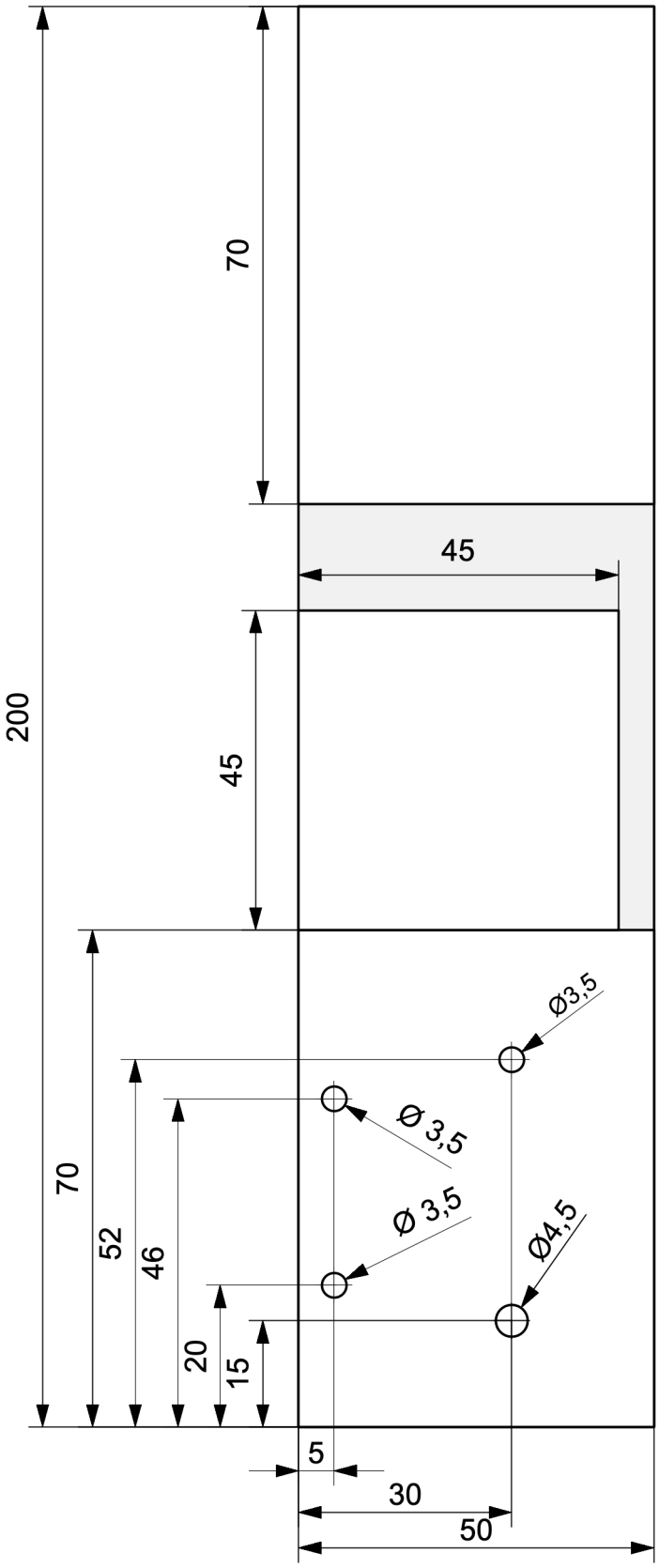


B (1:1)



OPITEC

C (1:1)


70
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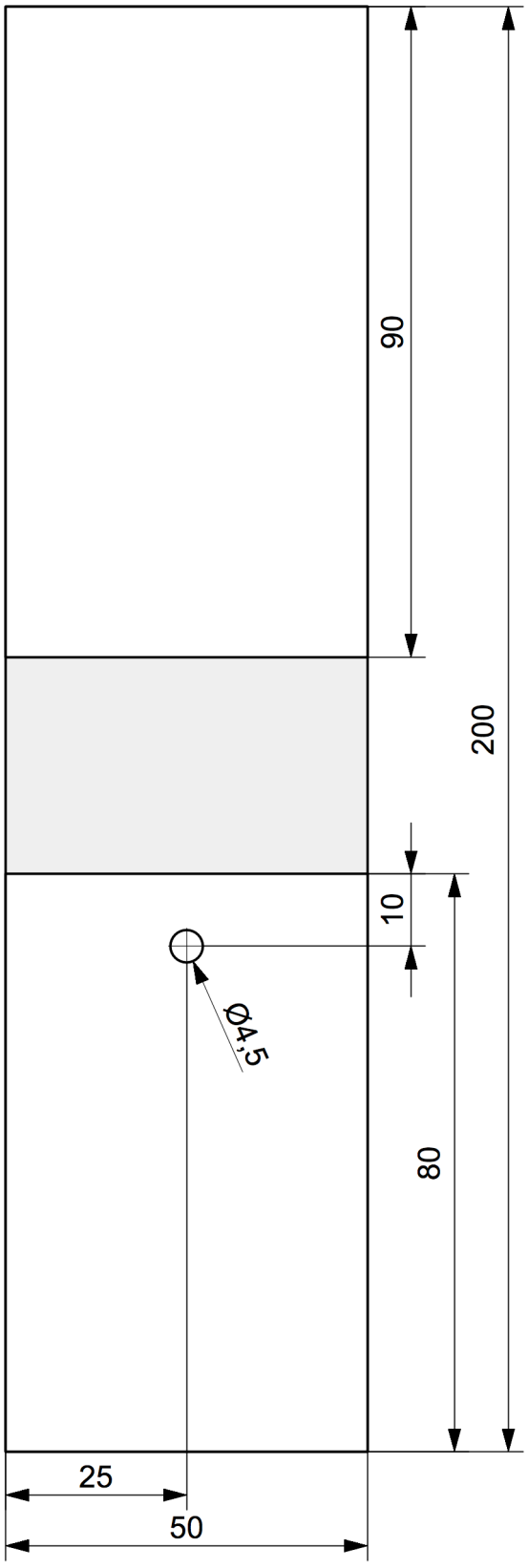
D (1:1)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200
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Ø4,5
80
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50