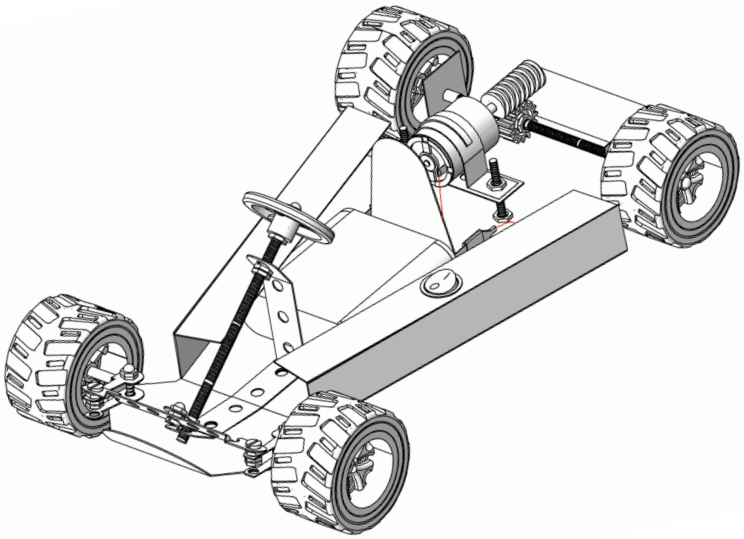
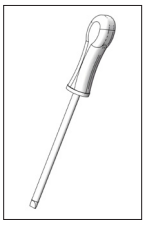
101.658

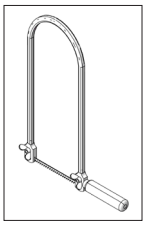
Go-Cart 'F310'



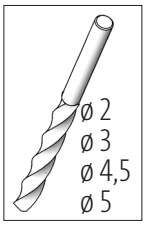
Tools Required:



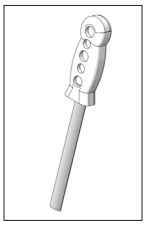
Slot Screw-driver



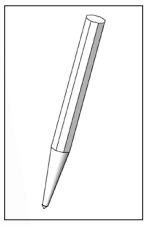
Fretsaw or Scroll Saw (Metal Saw Blade)



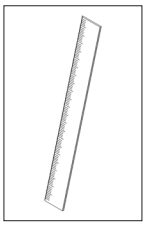
Drill



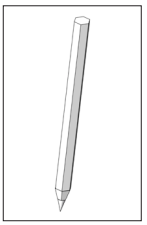
Engineer's File



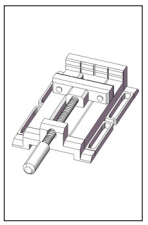
Centre Punch



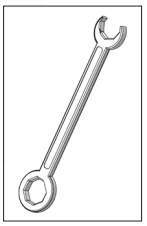
Ruler



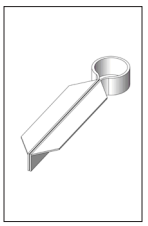
Pencil



Machine Vice

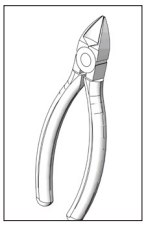


Wrench

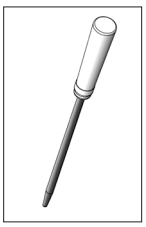


Bending Aid

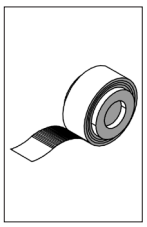
Soldering Iron with Plummet



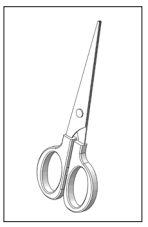
Side Cutter



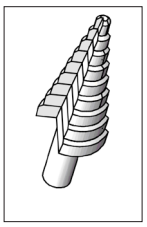
Round File



Adhesive Tape



Scissors



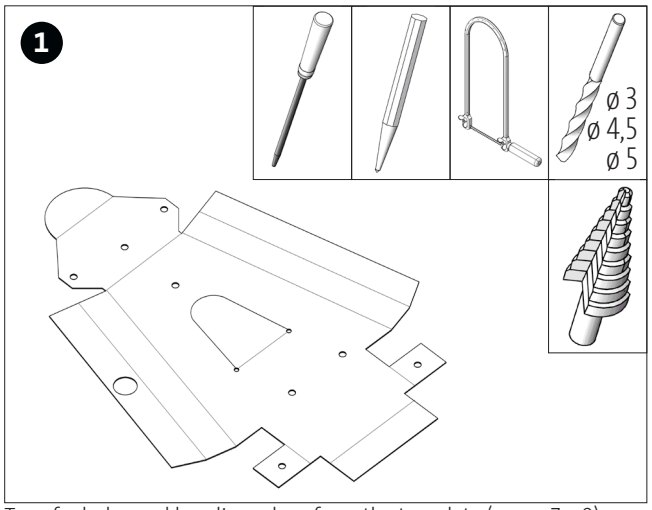
Stepped Drill

Please Note

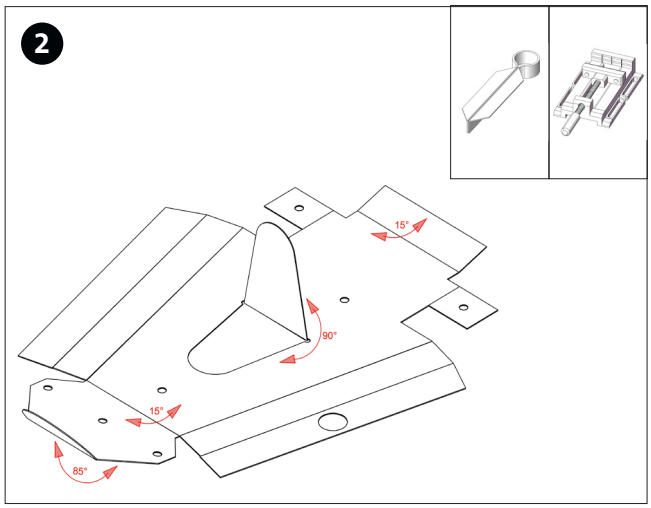
The Opitec Range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of craft, design and technology. These projects should only be undertaken and operated with the guidance of a fully qualified adult. The finished projects are not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

OPITEC

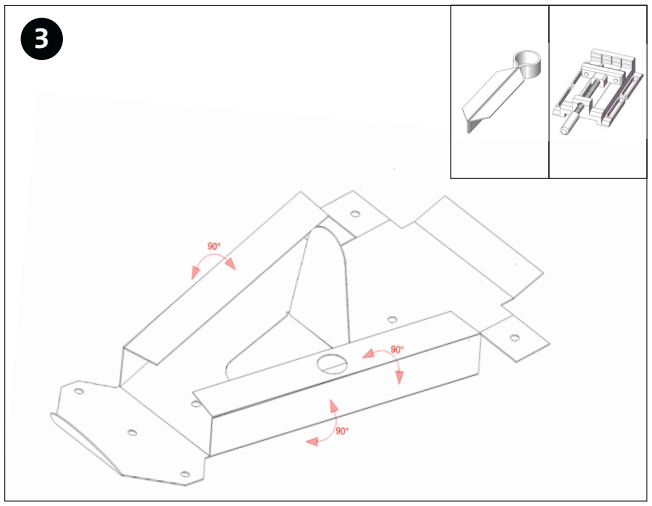
Parts List	Quantity	Size (mm)	Designation	Part-No.
Tinplate	1	320x220x0,5	Vehicle Body	1
Pneumatic Tyres	4	ø 52	Tyres	2
Steering Wheel	1	ø 37	Steering Wheel	3
Flat Bar, 9 Holes	1		Tie Rod	4
Flat Bar, 2 Holes	1		Steering Finger	5
Perforated Plate	1	75x15x1	Engine Support	6
Perforated Plate	1	135x15x1	Steering Column Holder	7
Rocker Switch round	1	ø16,3	Switch	8
Blade Receptacle	2	6,3	Battery Connection	9
Motor	1	ø24	Drive	10
Mounting Bracket	1	ø24	Motor Mounting	11
Brass - Tubular Rivet	2	5x0,5	Wheel Bearings Rear Axle	12
Gearwheel	1	ø15	Drive Rear Axle	13
Worm Module	1		Drive Rear Axle	14
Nut M4	30		Screw Connection	15
Cap Nut M4	6		Screw Connection	16
Threaded Rod	1	M4x100	Steering Column	17
Threaded Rod	1	M4x150	Rear Axis	18
Steering Knuckles	2		Front Axis	19
Cylinder Head Screw	5	10x4	Screw Connection	20
Cylinder Head Screw	2	25x4	Screw Connection	21
Cylinder Head Screw	2	30x4	Screw Connection	22
Jumper Wire, red	1	500	Cabling	23



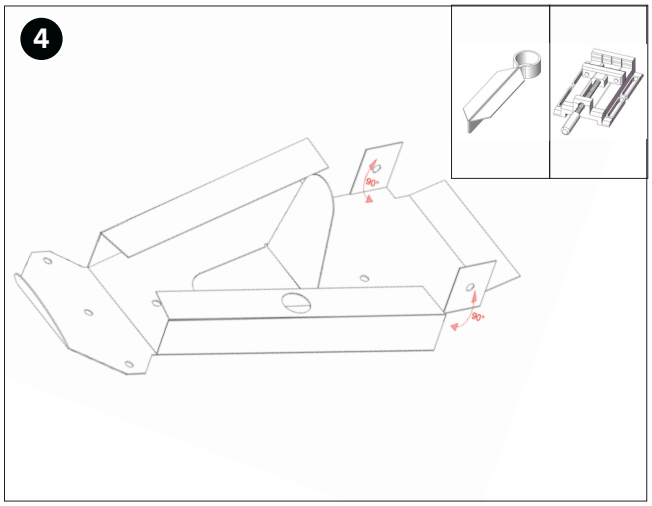
Transfer holes and bending edges from the template (pages 7 + 9) to the pre-cut metal sheet. Center-punch holes at the centre. Drill through the holes. Deburr holes. Saw the seat back with the fretsaw.



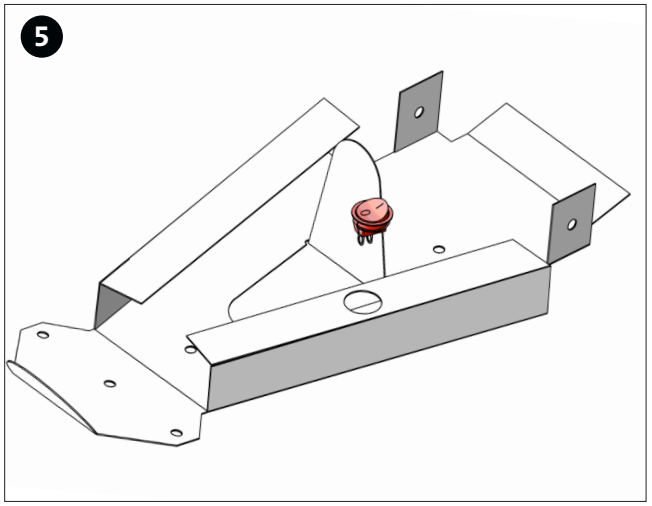
Bend the stern at the bending edge approx. 15° upwards. Bend the front apron 15° upwards. Then bend the rounded front edge approx. 85° upwards.



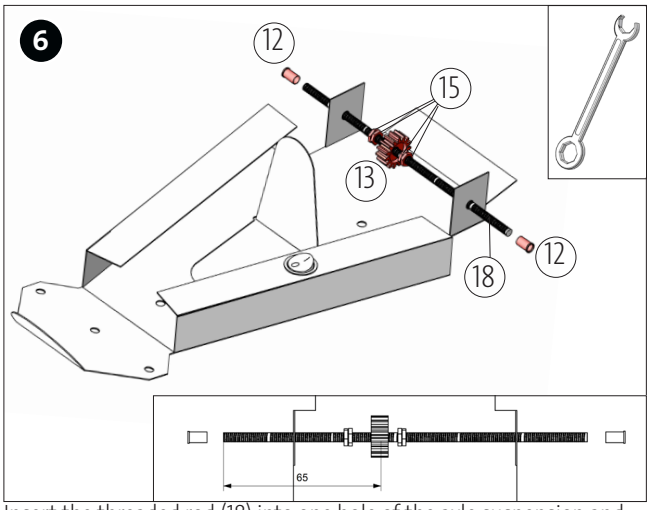
Bend the side parts at the bending edges 90° upwards as shown and then bend them inwards by another 90°.



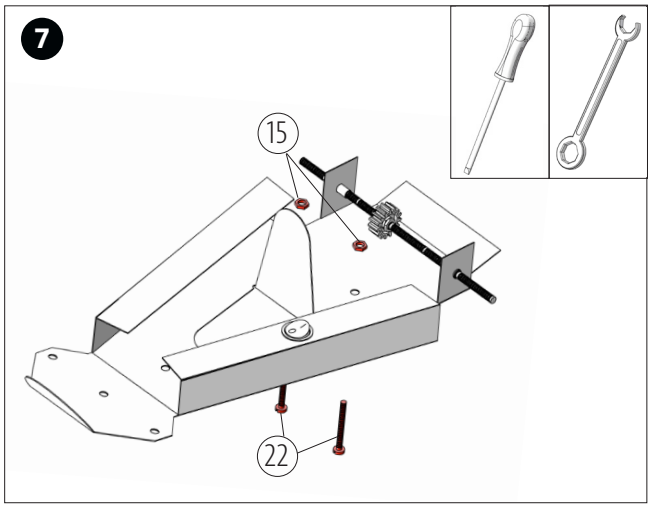
Bend the two mountings for the rear axle 90° upwards.



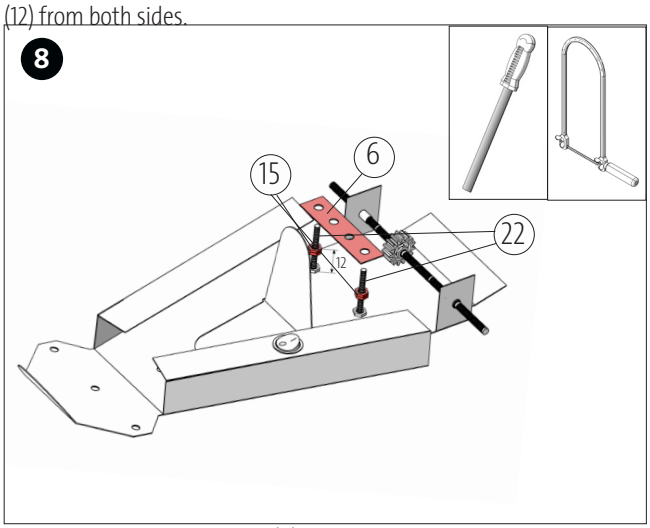
Insert the switch (8) into the provided hole as shown.



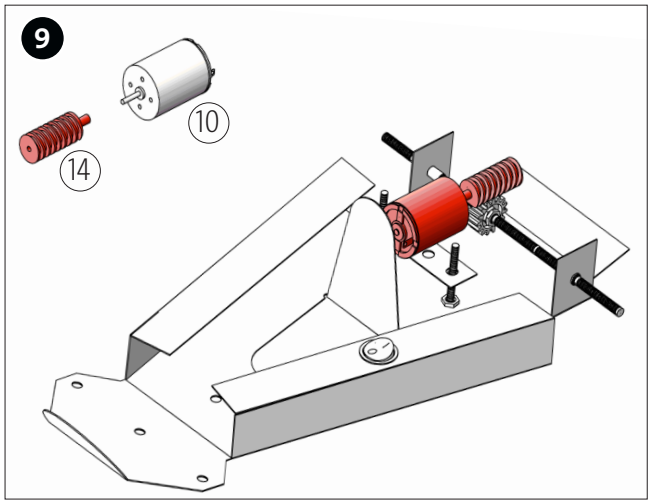
Insert the threaded rod (18) into one hole of the axle suspension and screw on two nuts (15), the gear (13) and again two nuts (15), place them after dimensioning and lock the nuts. Attach a brass pipe rivet (12) from both sides.



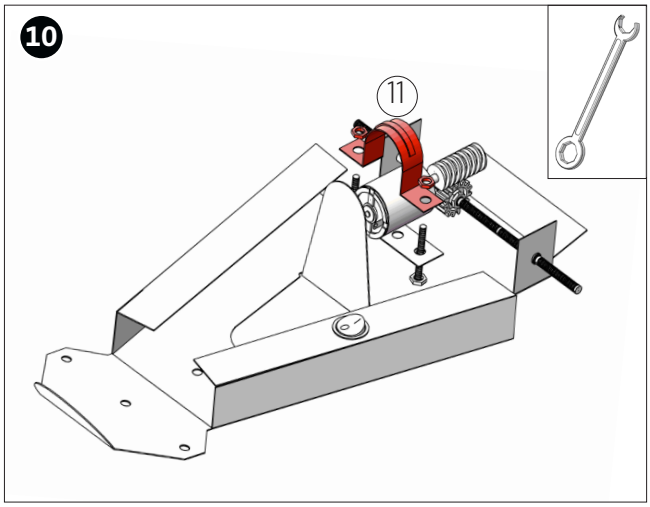
Insert two screws (22) for the motor mounting through the holes from below and secure them from above with two nuts (15)!



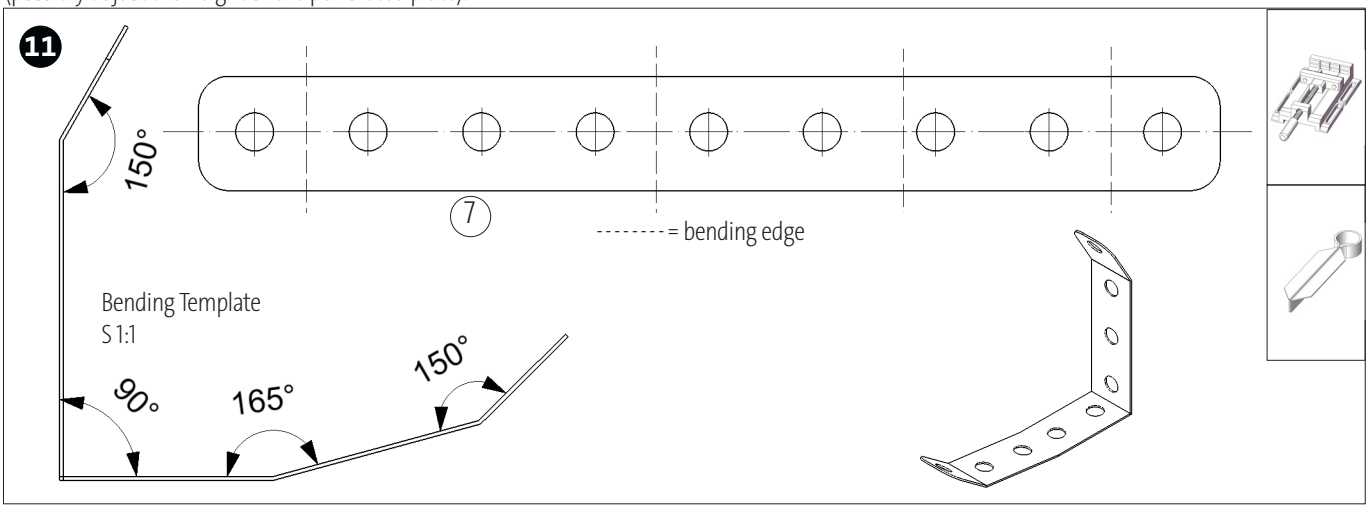
Cut the perforated plate strip (6) to 4 holes length and deburr the saw edge. Then screw on two nuts (15) at 12mm height as shown and place the perforated plate strip on the screws (22).



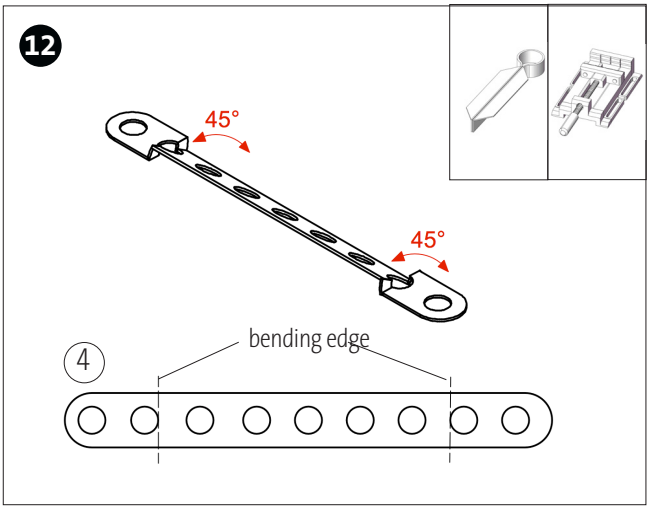
Push the worm gear (14) on the motor axis (10). Then place the motor so that the worm wheel (14) reaches the teeth of the gearwheel (13) (possibly adjust the height of the perforated plate).



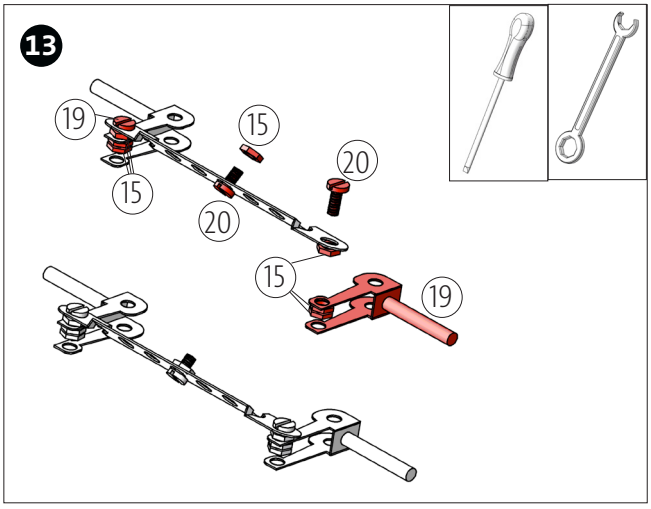
Place the mounting bracket (11) on the screws (22) and fasten from above with two nuts each (15).



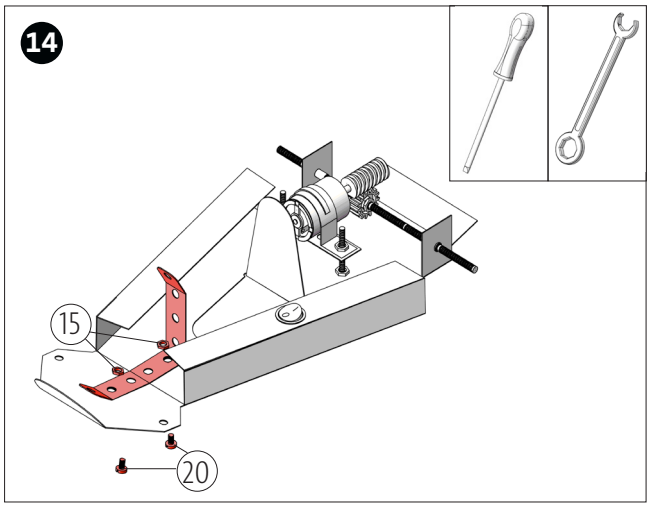
Bend the steering column holder (7) according to bending template.



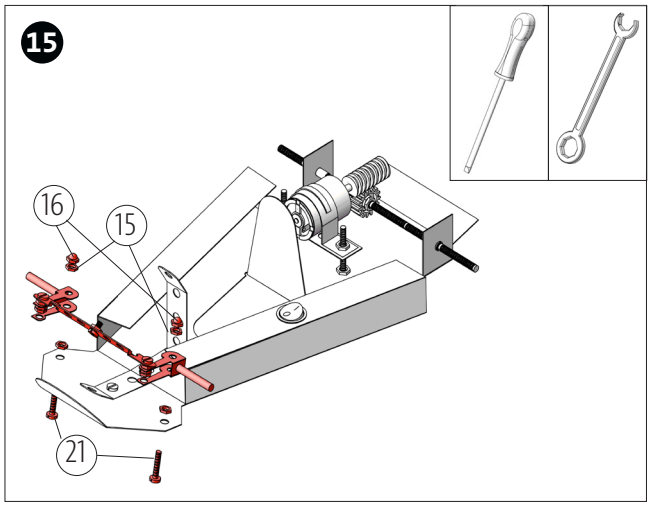
Twist the tie rod (4) at each end about 45° in the same direction as shown.



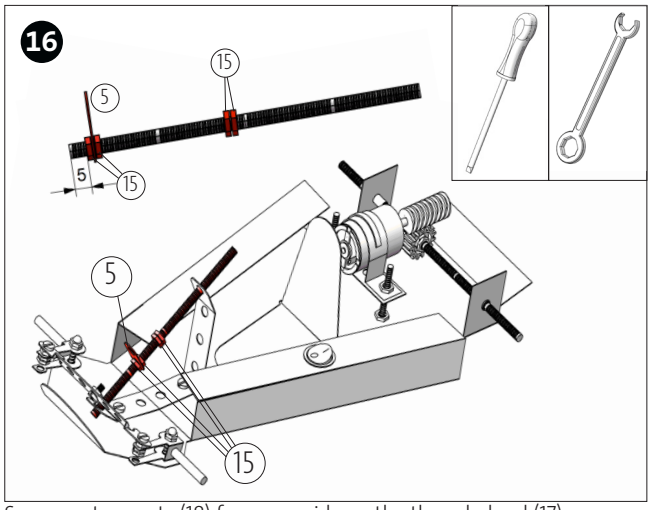
Insert a screw (20) into the middle hole of the tie rod and fasten with a nut (15). Then fasten a steering knuckles on both sides with a screw (20) and 3 nuts (15).



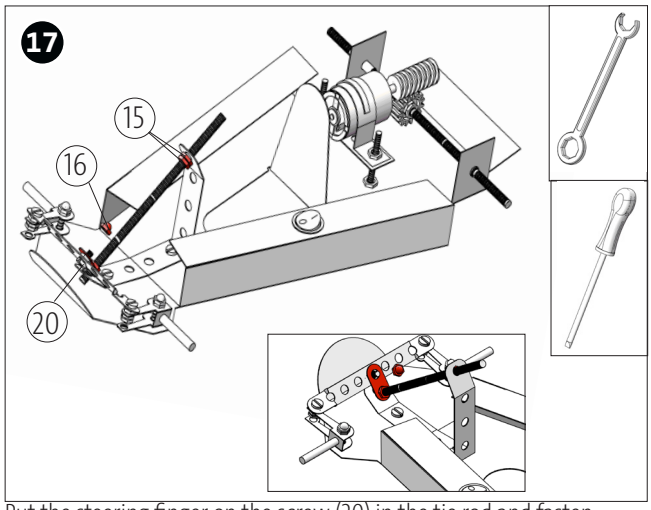
Install the steering column bracket (7) with 2 screws (20) and 2 nuts (15) at the provided holes in the base frame as shown.



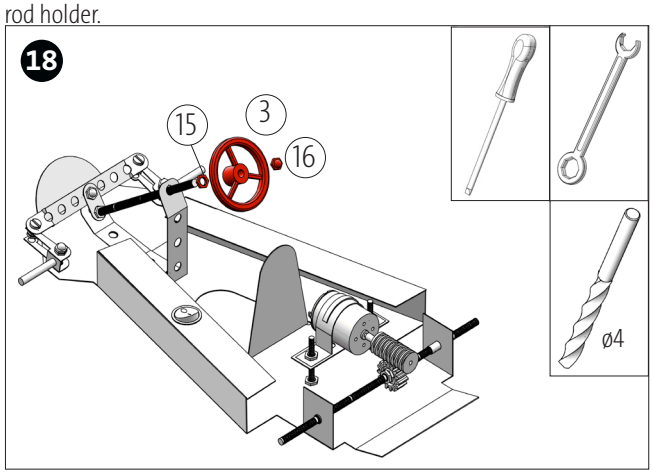
Secure the front axle with two screws (21) from below and one nut (15) and one cap nut (16) each from above as shown.



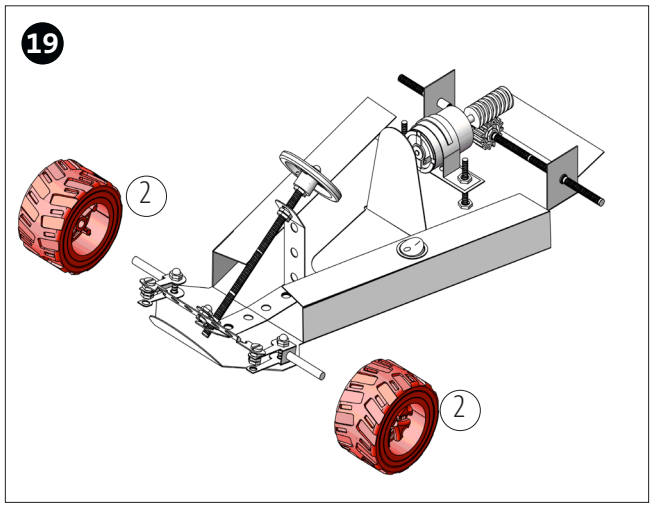
Screw on two nuts (18) from one side on the threaded rod (17) as shown. From the other side screw on a nut (15) then the steering finger (5) and again a nut (15) and lock. Then insert into the steering rod holder.



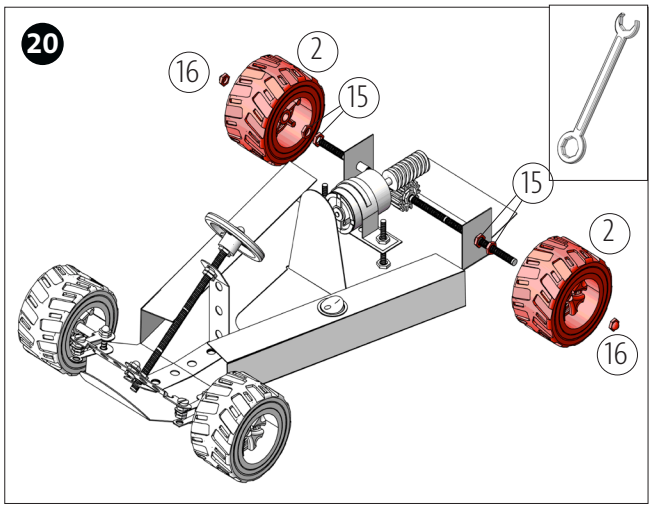
Put the steering finger on the screw (20) in the tie rod and fasten with a cap nut (16). Screw the two nuts (15) upwards until they hit the steering rod holder and lock.



Drill through the hole in the guide wheel with a ø4 mm drill bit. Then screw a nut (15) onto the steering rod. Attach the steering wheel (3) and secure from above with a cap nut (16). Lock nuts (15 + 16) so that the steering wheel can turn the tie rod.

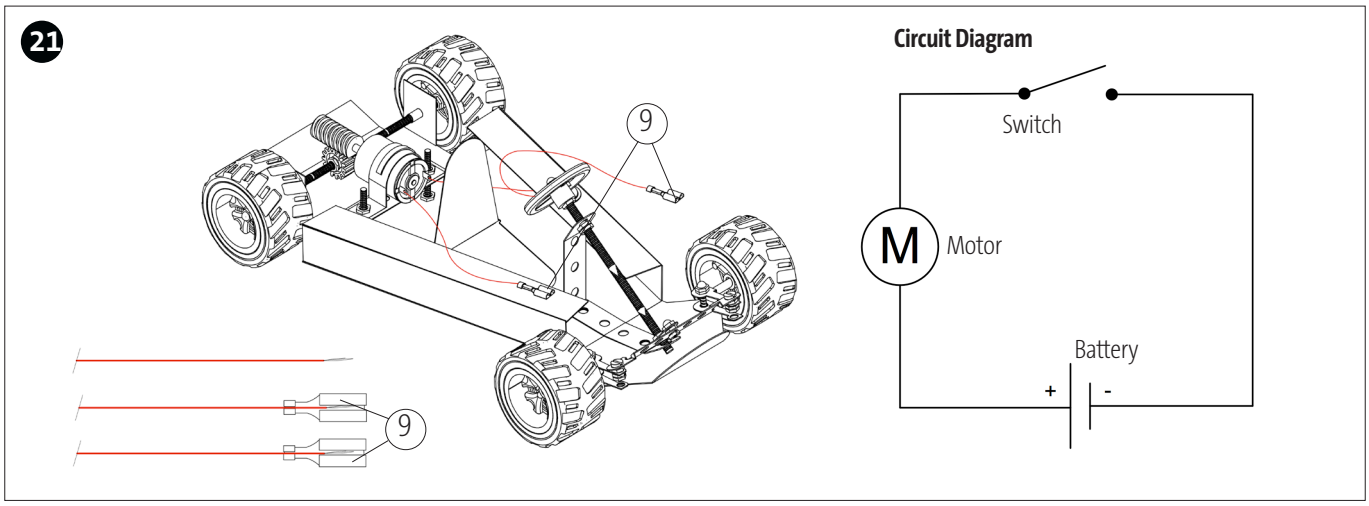


Attach a pneumatic tyre (2) to the front axle from each side.



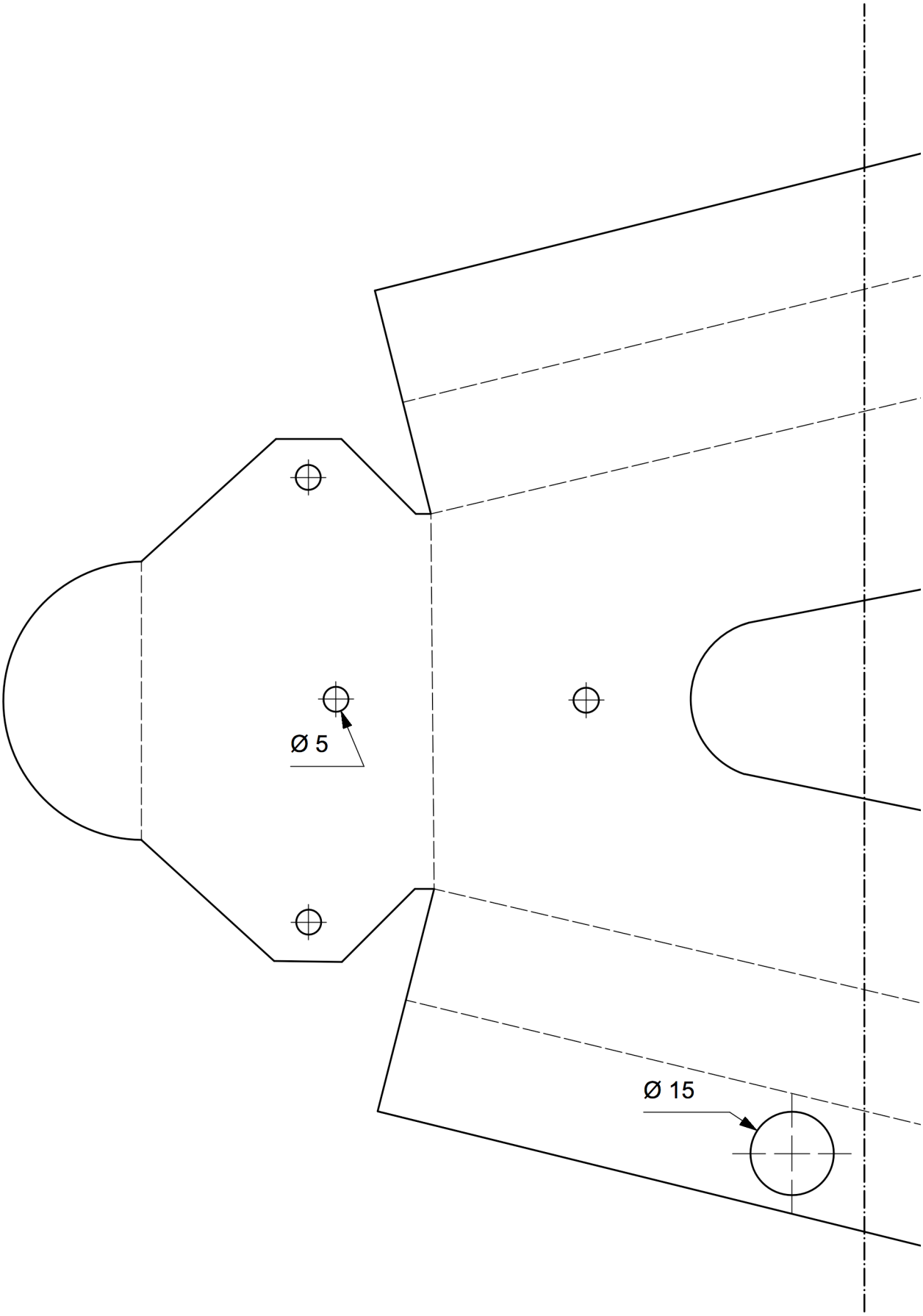
On the rear axle, screw 2 nuts (15) on each side until they touch the brass bush (12). Now lock nuts so that the axle can still rotate easily.

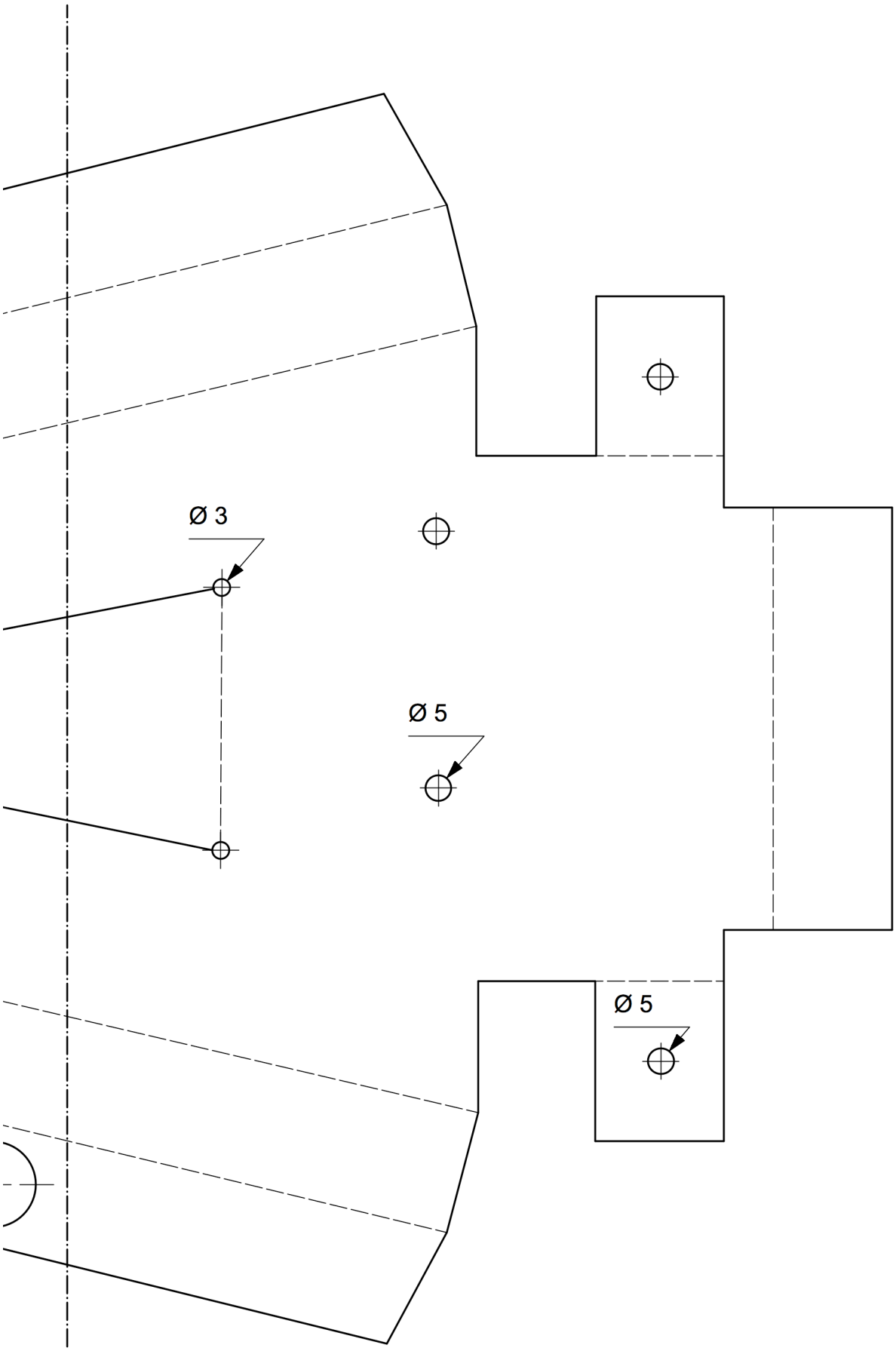
Fit a pneumatic tyre (2) from each side and fasten each from the outside with a cap nut (16).



Cut three pieces with a length of approx. 80-100mm from the jumper wire (23), strip and tin the ends. Connect each blade receptacle (9) with a cable. Connect one cable with a blade receptacle directly to the motor. Attach the 2nd cable with the blade receptacle to the switch. Attach the 3rd cable without blade receptacle to the motor and the switch. Connect the blade receptacles to the battery poles and press the switch. If the vehicle reverses, reverse the polarity of the battery connections.

Instruction 101.658
Go Cart
Template 1:1




Ø 3
Ø 5
Ø 5