

14 in 1_{KIT} EDUCATIONAL SOLAR ROBOT

⚙️ Build your own solar robot kit ⚙️

Assembly & Instruction **Manual** CONTENTS

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Montagehandleiding

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14 in 1 EDUCATIONAL SOLAR ROBOT KIT

Product Introduction

Alternative energy is the future, so now is the perfect time to start children on the path of learning basic concepts behind these technologies. Fortunately, this product is powered by the sun, there are no batteries required. The robot moves in direct sunlight and allows children to create while using their infinite imagination.






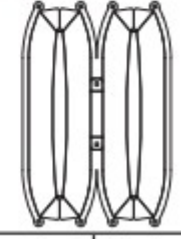



There are two levels in building the robot kit. Level one includes: Turtle-bot, Beetle-bot, Quadru-bot, Boat-bot, Walker-bot, Dog-bot, and Wheel-bot. Then they can challenge their manipulative skills with the second level: Roly Poly-bot, Auto-bot, Slither-bot, Surf-bot, Boxer-bot, Crab-bot and Row-bot.

Tool You May Need

Diagonal Cutter



Mechanical Parts List

P1 Motor With Connectors  QTY 1 <small>Don't connect the wires to the mains.</small>		P2 Solar Panel With Springs  QTY 1	
P3 Pinion Gear(yellow)  QTY 1	P4 Gear With Shaft  QTY 1	P5 Gear(Red)  QTY 1	P9 boat  QTY 1
P6 Gear(Green)  QTY 1	P7 Sponge  QTY 2	P8 Round Shaft  QTY 1	

Inleiding

Alternatieve energie is de toekomst, daarom is dit het perfecte tijdstip om de kinderen de basisprincipes achter deze technologieën te leren. Gelukkig werkt dit product op zonne-energie, waardoor geen batterijen nodig zijn. De robot beweegt in direct zonlicht en laat kinderen hun fantasie de vrije loop gaan. De kit kan op twee niveaus worden gemonteerd. Niveau 1 omvat Turtle-bot, Beetle-bot, Quadru-bot, Boat-bot, Walker-bot, Dog-bot en Wheel-bot. Daarna kunnen ze hun vaardigheden uitproberen met het tweede niveau: Roly Poly-bot, Auto-bot, Slither-bot, Surf-bot, Boxer-bot, Crab-bot en Row-bot.

Benodigheden

Zijkniptang

Mechanische onderdelen

Motor met connectoren

Zonnepaneel met veren

Rondsel (geel)

Tandwiel met as

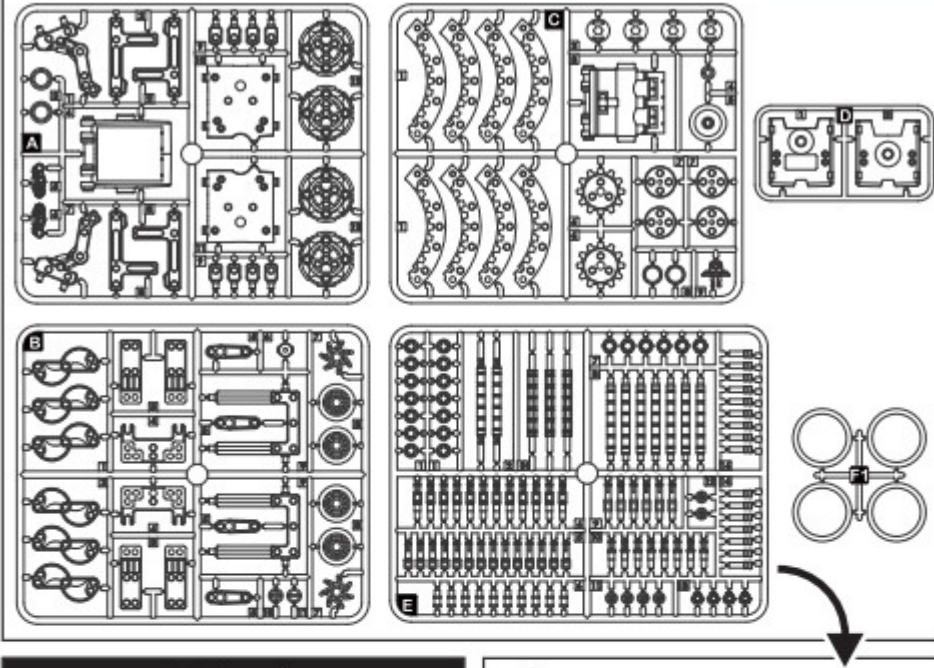
Tandwiel (rood)

Tandwiel (groen)

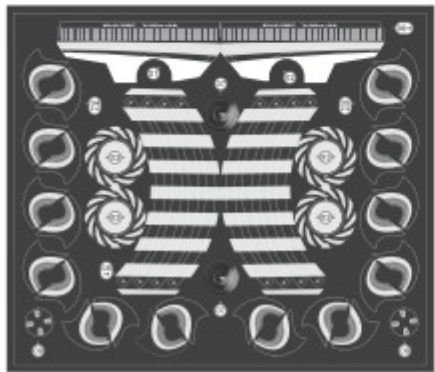
Spons

Ronde as

Plastic Parts

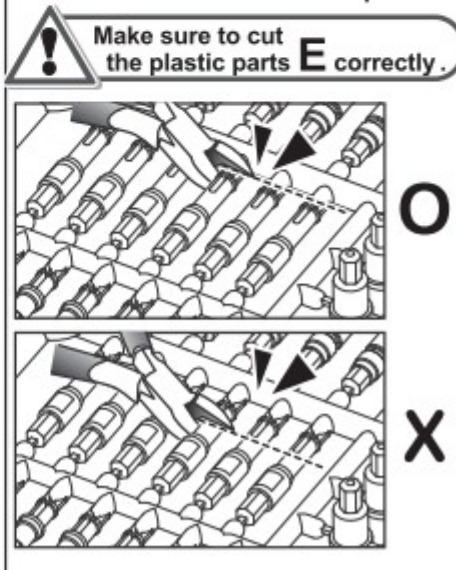


Sticker A



QTY

1



Plastic onderdelen

Sticker A

Snij de plastic onderdelen E correct af.

Sticker B			Zipper bag	
	QTY			QTY
	1			9

Sticker B

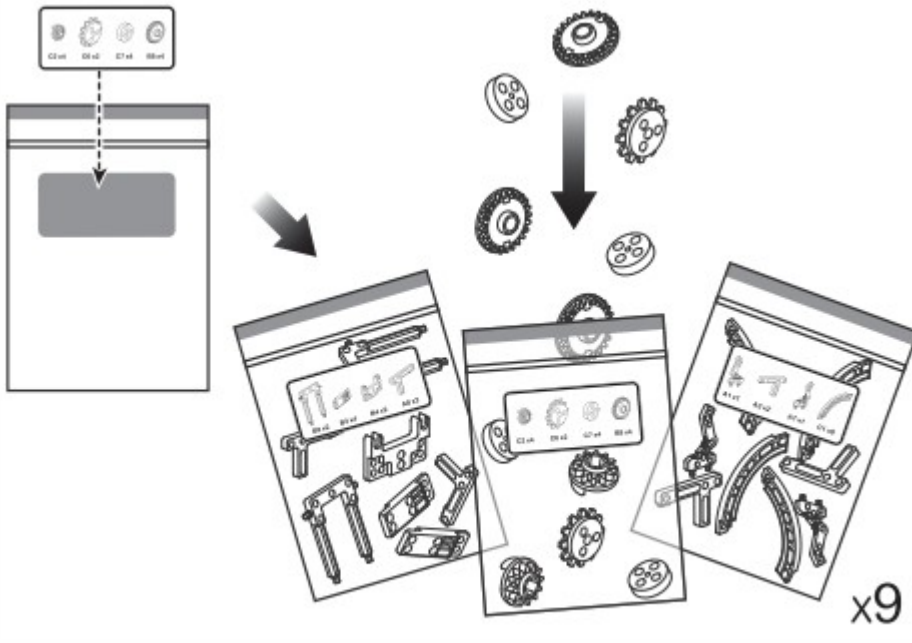
Zak met rits

Tip



For easy identification of each plastic part, suggest to sort out plastic parts and put them into zipper bags as per instruction.

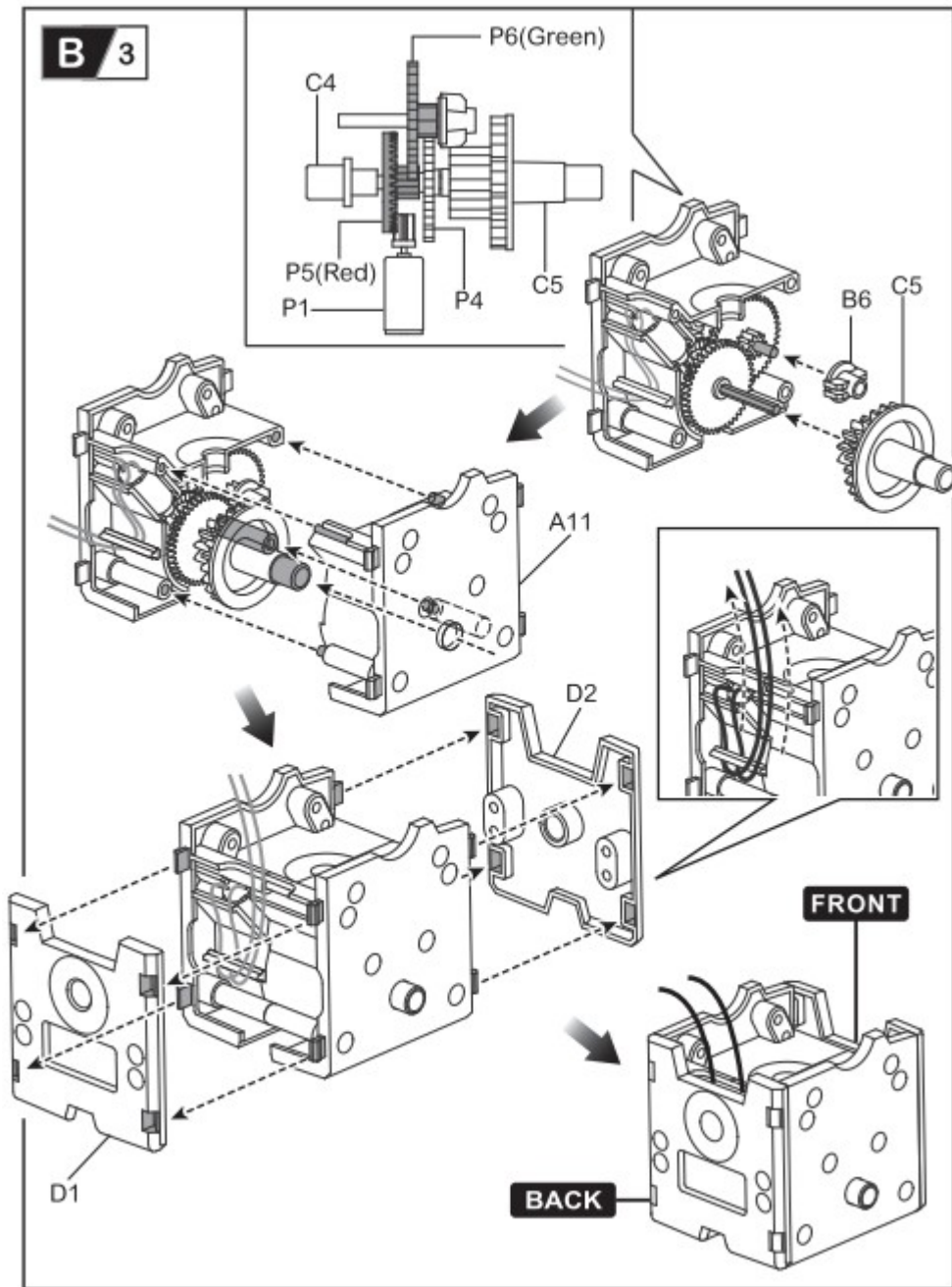
(P.S. Each zipper bag to be placed an illustrated sticker B (as below) first.)



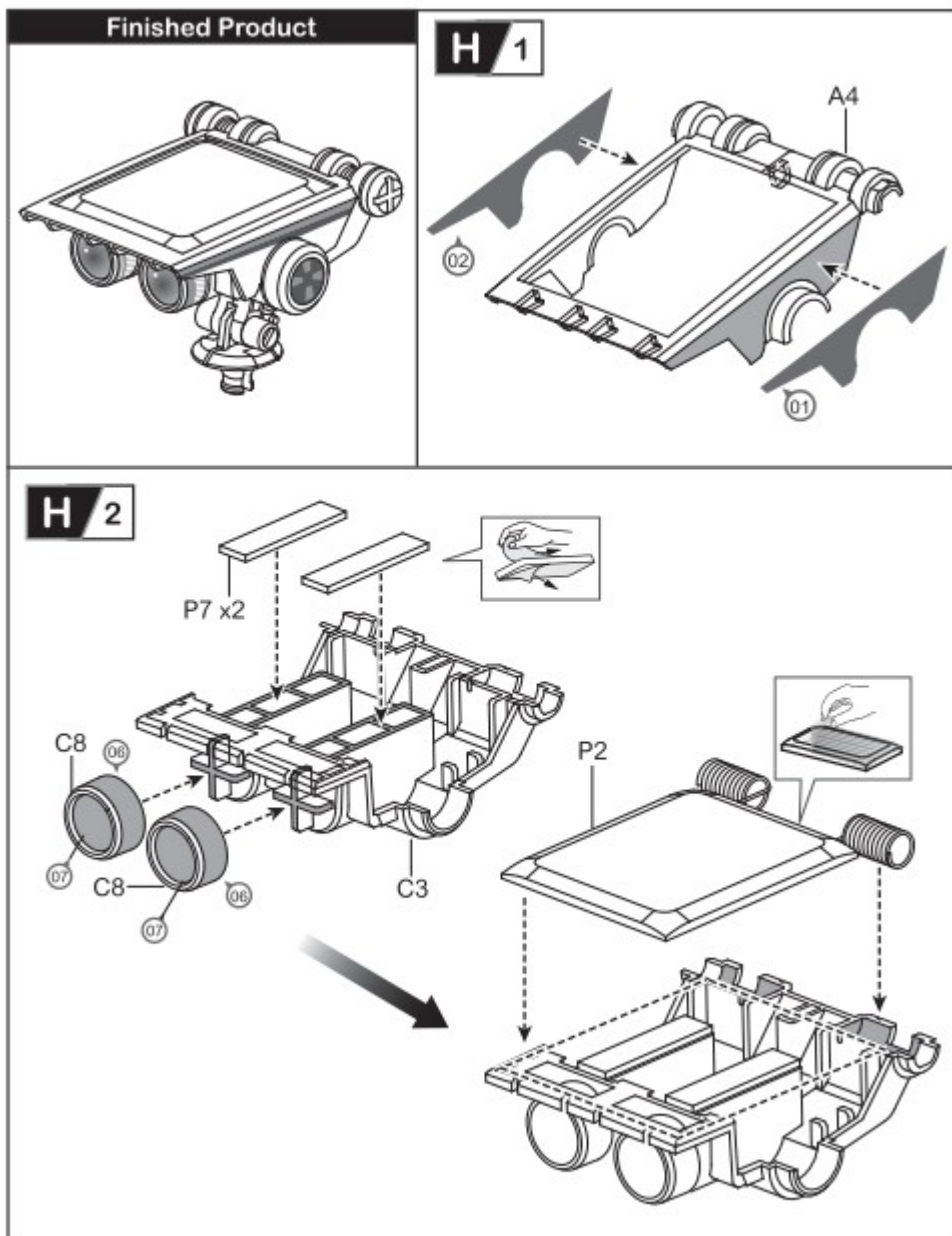
Voor een eenvoudige identificatie van elk plastic onderdeel, raden wij u aan om de plastic onderdelen te sorteren en in de plastic zakken met rits te steken.

Elk ritszakje moet eerst voorzien zijn van een sticker B (zie hierna)

B 3

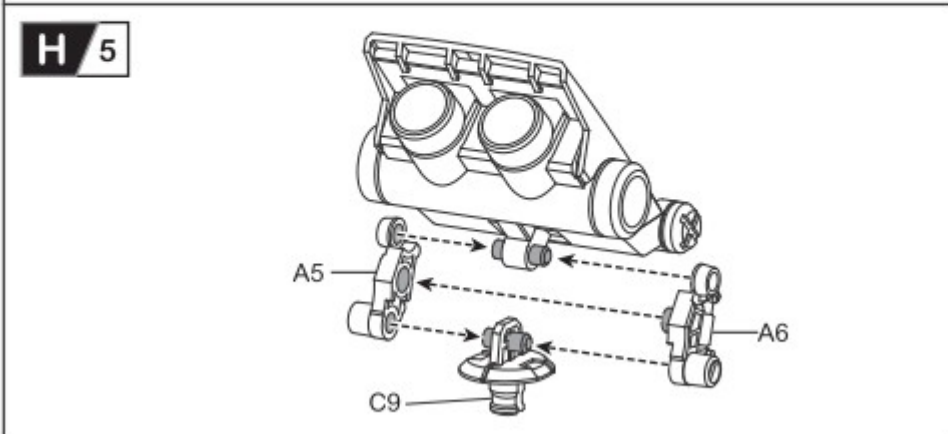
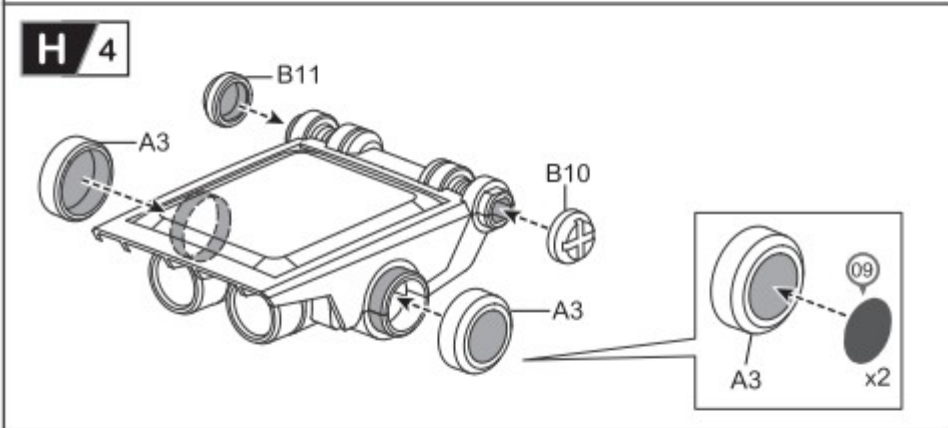
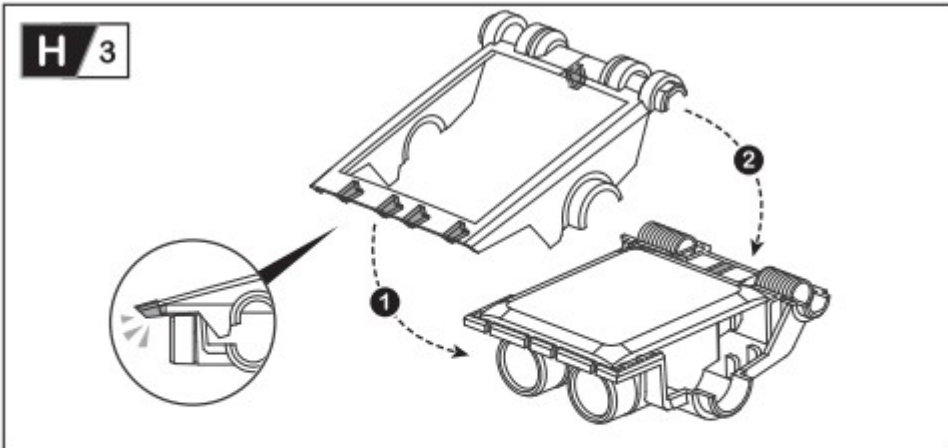


Head Module Assembly

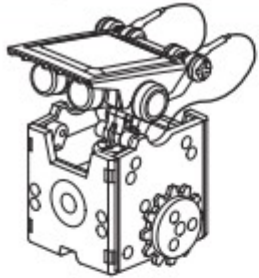


Montage van de kop

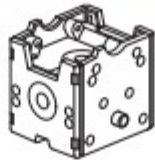
Afgewerkt product



Testing : You need to test the gear box first.



Prepare the below parts first before you test the "Gear box" and "Solar panel".



Body
(Gear Box)

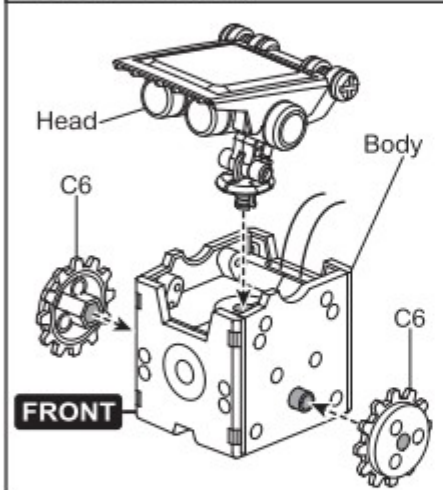


Head
(Solar Panel)

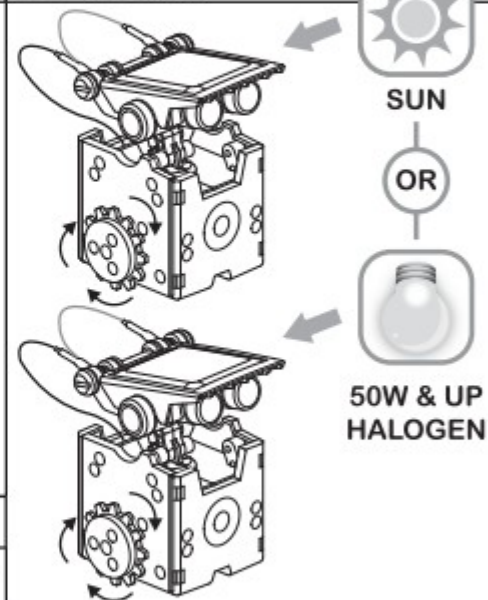


C6 x2

01 Assembly

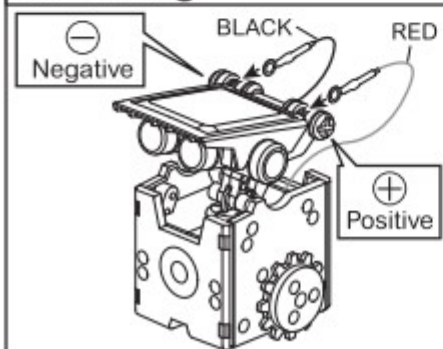


03 Testing



Make sure C6 is turning !

02 Wiring



04 Trouble shooting

If C6 does not work,
Please disassemble the gear box,
and back to the page 4.

Testen : Test eerst de versnellingsbak.

Bereid eerst de onderstaande onderdelen voor alvorens de "versnellingsbak" en het "zonnepaneel" te testen.

Montage

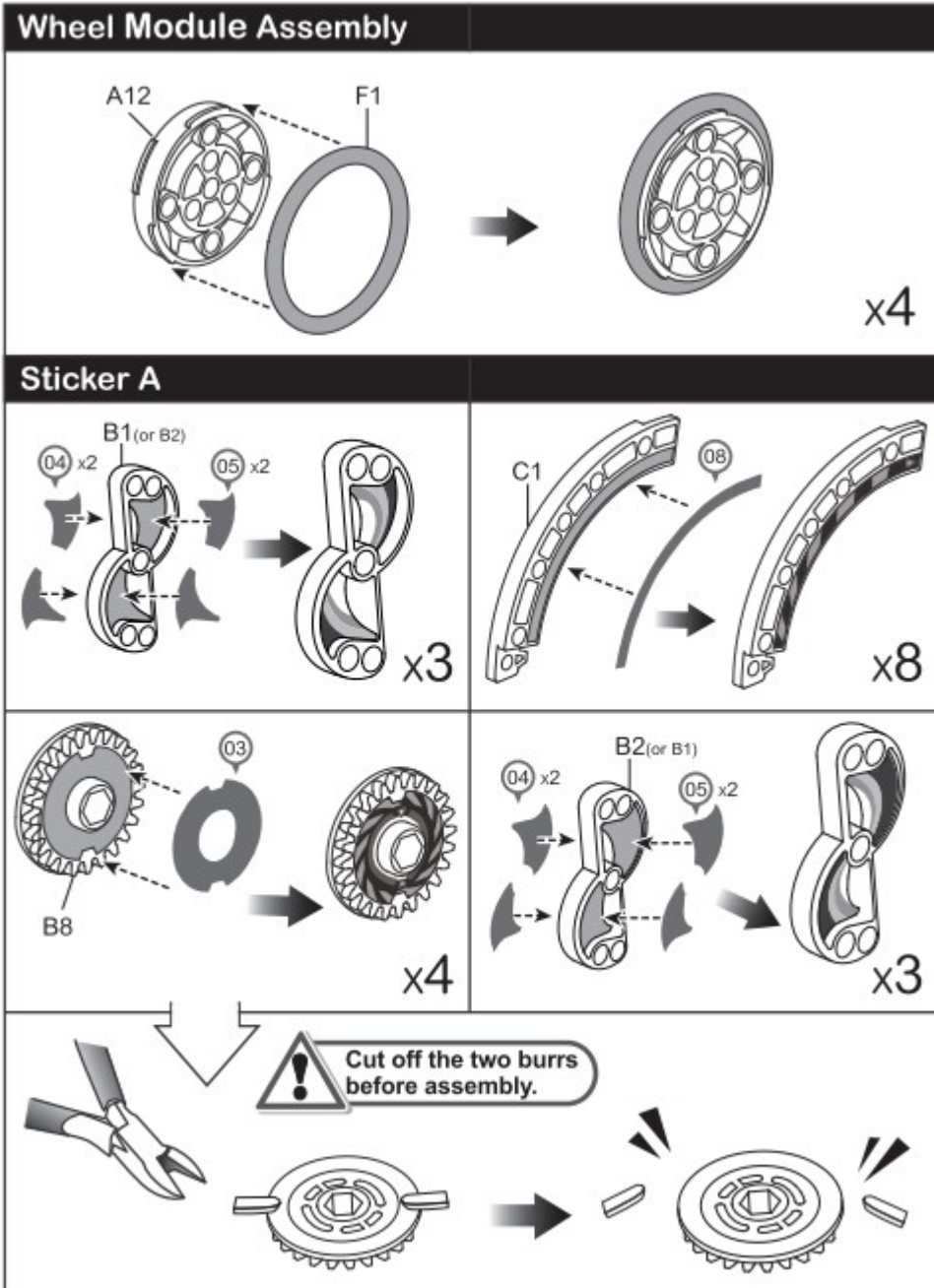
Testen

Aansluiting

Zorg ervoor dat C6 draait.

Problemen en oplossingen

Als C6 niet werkt, haal de versnellingsbak uit elkaar en keer terug naar p. 4



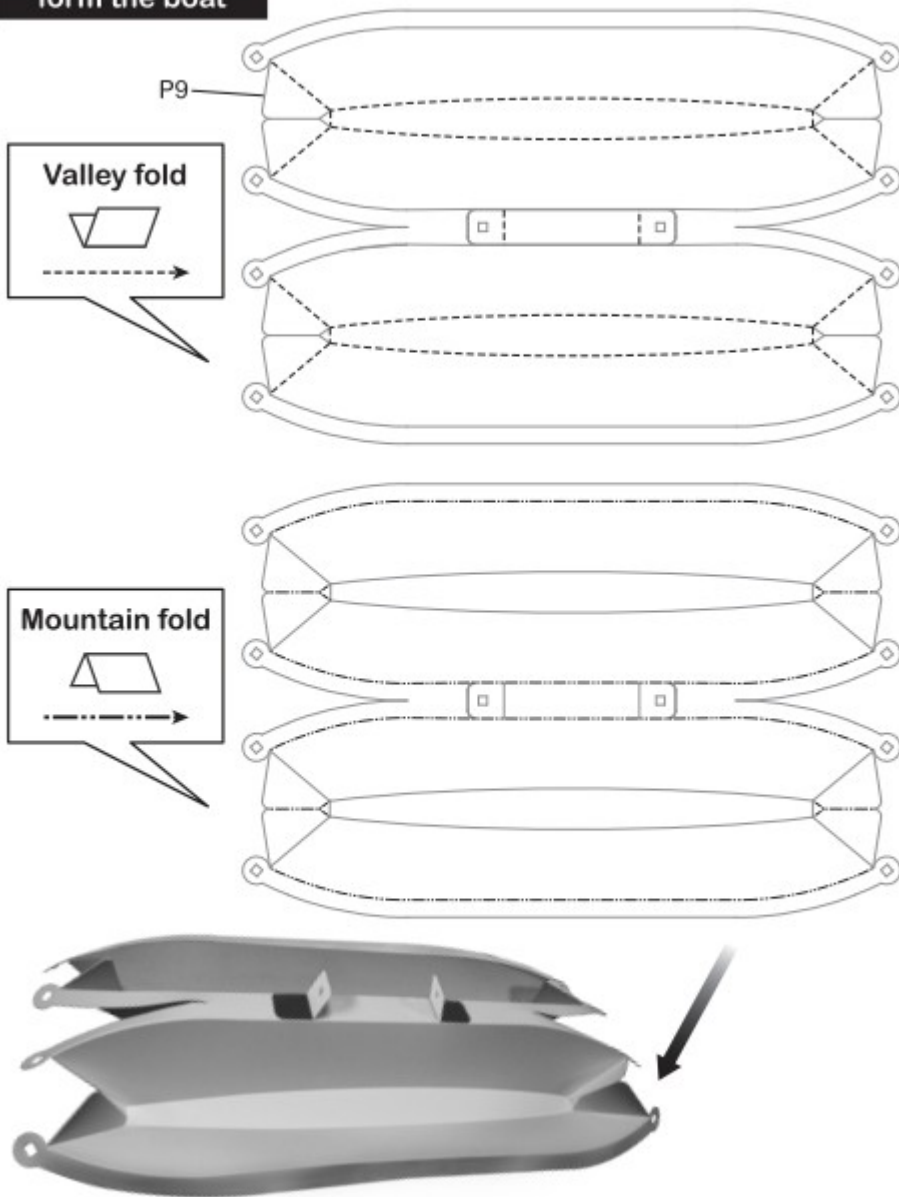
Montage van het wiel

Sticker A

Knip beide bramen af voor de montage.

Boat Module Assembly

form the boat

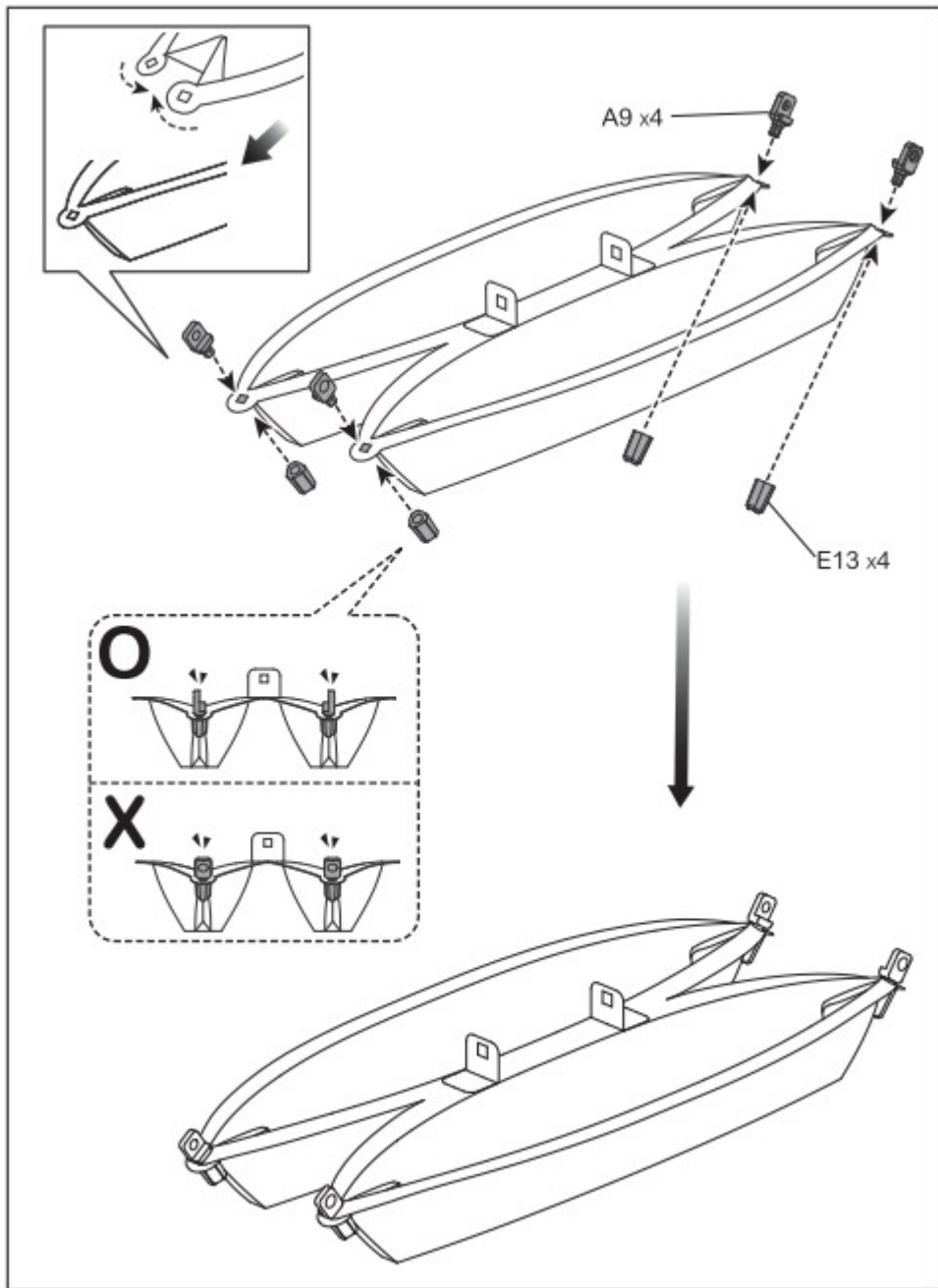


Montage van de boot

Vorm de boot

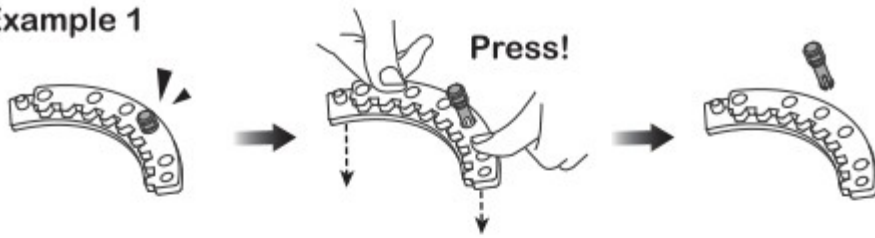
Dalvouw

Bergvouw

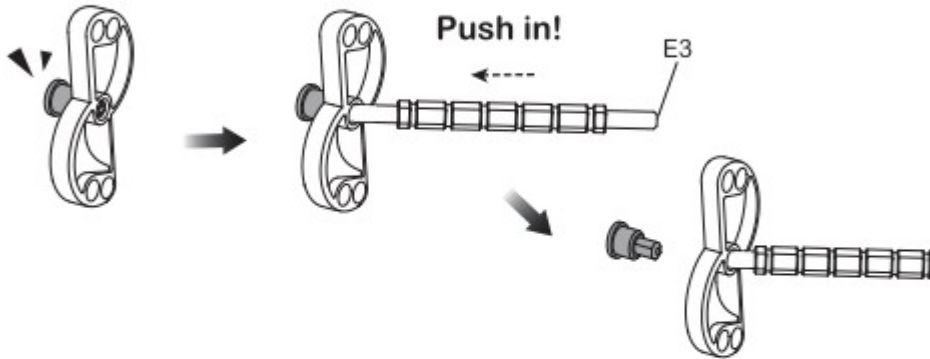


Tips (When your part's stuck.)

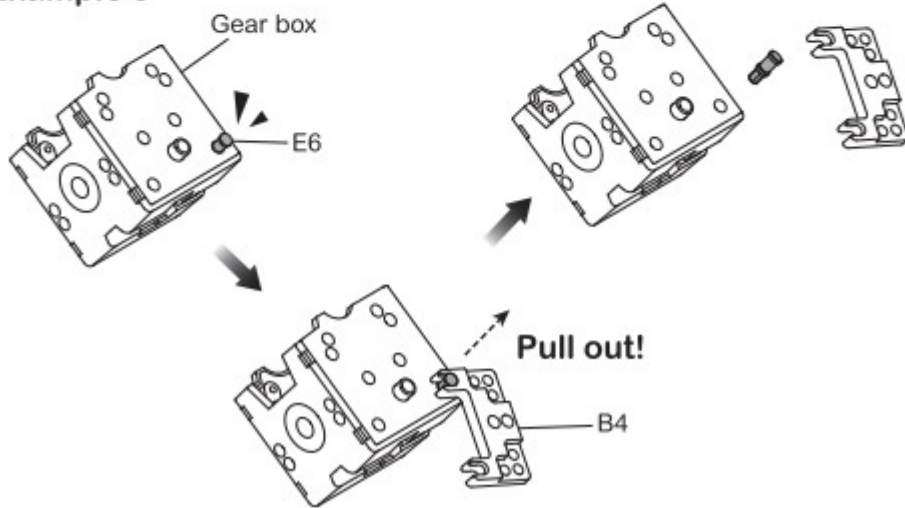
Example 1



Example 2



Example 3



Tips (als een onderdeel vast zit.)

Voorbeeld 1

Duwen

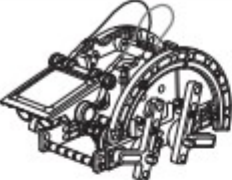


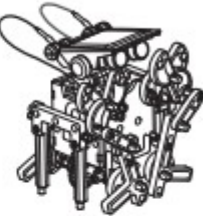
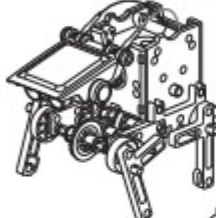
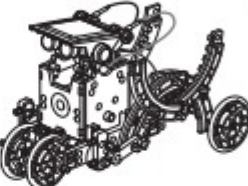


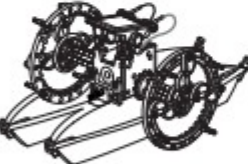
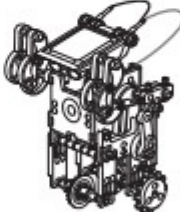

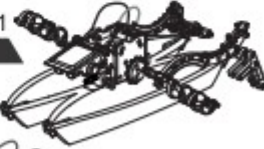
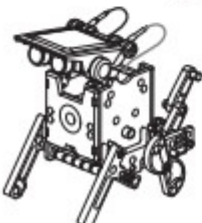

Voorbeeld 2

Indrukken

Voorbeeld 3

Trekken

14 Robot Modes

LEVEL 1		LEVEL 2	
	P.14 01 Turtle-bot		P.46 08 Auto-bot
	02 P.19 Walker-bot		09 P.50 Crab-bot
	P.22 03 Quadru-bot		P.55 10 Slither-bot
	04 P.27 Wheel-bot		11 P.60 Roly poly-bot
	P.32 05 Boat-bot		P.66 12 Boxer-bot
	06 P.37 Beetle-bot		13 P.71 Surf-bot
	P.42 07 Dog-bot		P.76 14 Row-bot

14 Robots

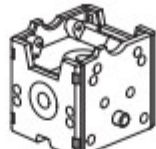
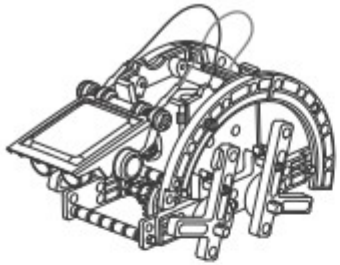
Niveau 1

niveau 2

01 Turtle-bot Assembly

Level 1

Prepare the below parts first before you assemble the "Turtle-bot".



Body



Head



A2 x2



A8 x2



B3 x4



B4 x2



B8 x3



C1 x4



C2 x1



C7 x4



E8 x5



E3 x2



E6 x4



E14 x2



E5 x4



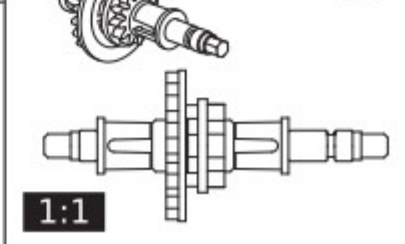
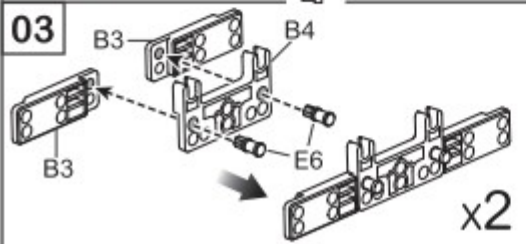
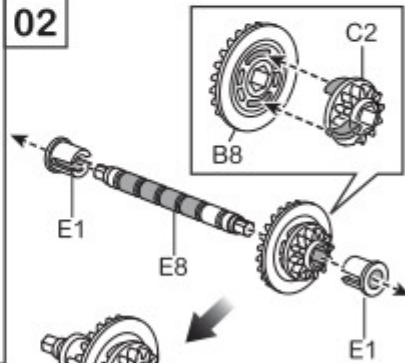
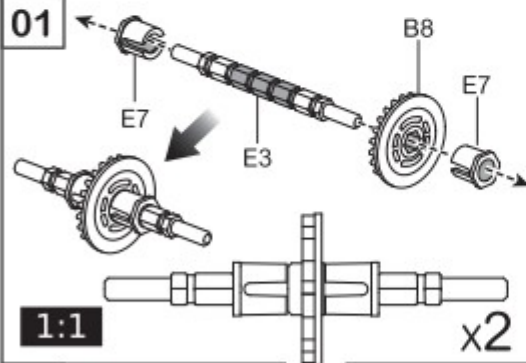
E4 x4



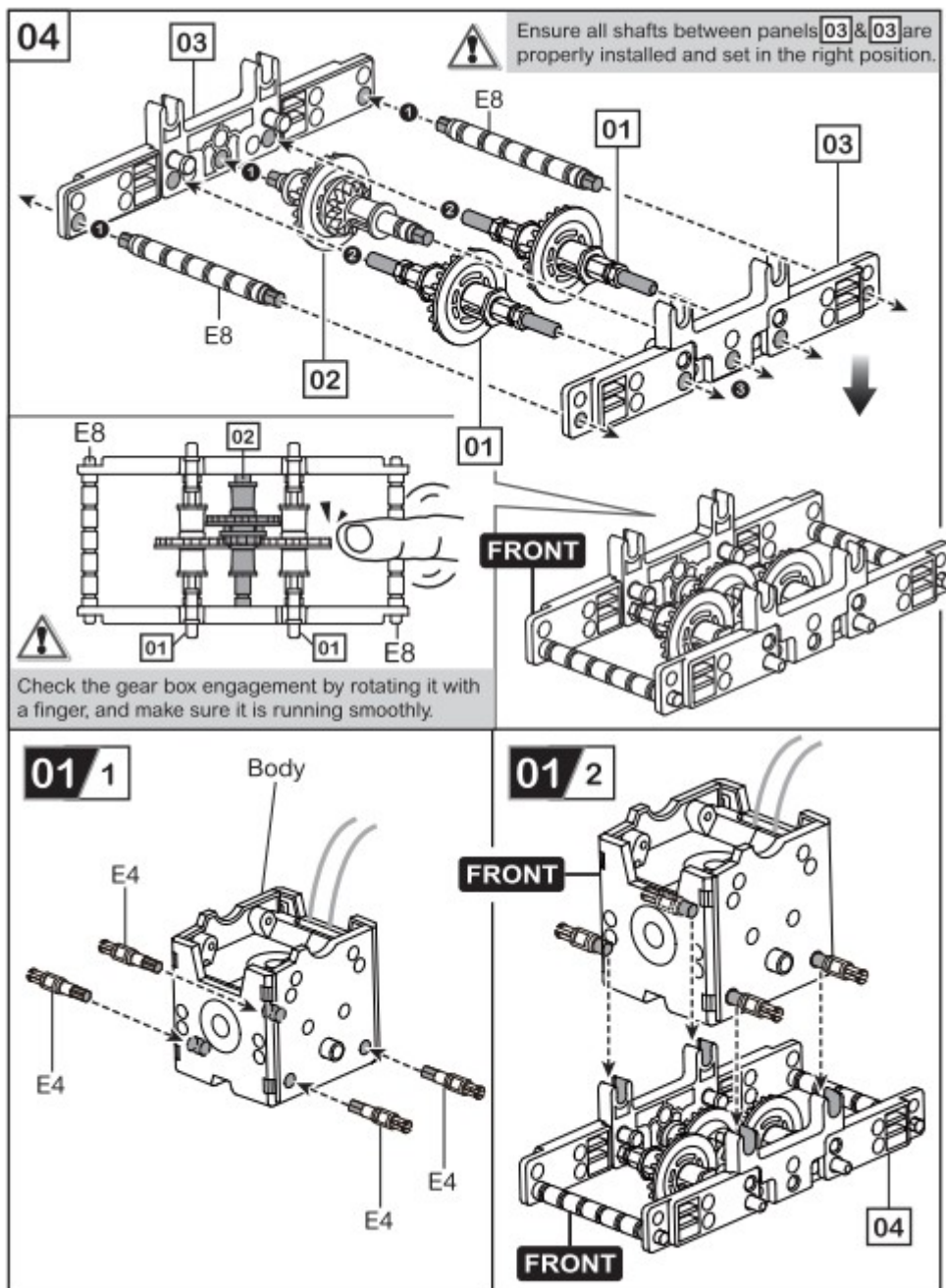
E7 x4



E1 x2



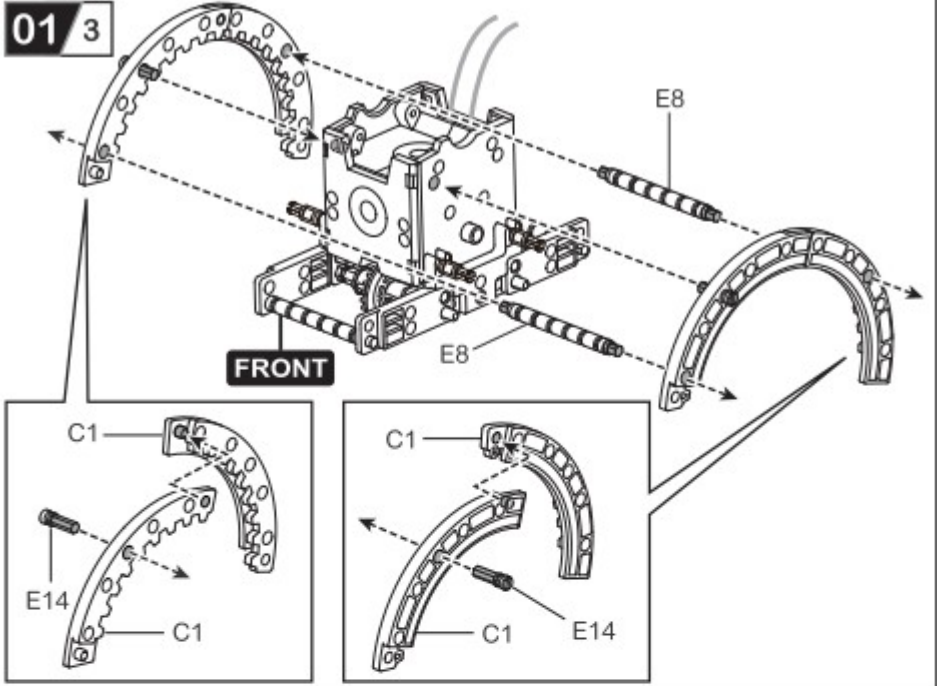
Bereid eerst de onderstaande onderdelen voor alvorens de "Turtle-bot" te monteren.



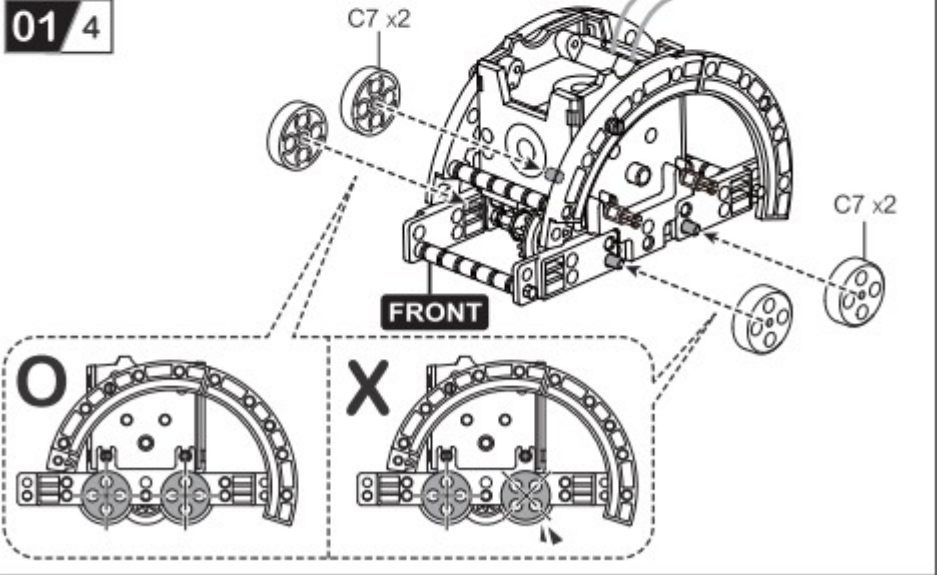
Zorg ervoor dat alle assen tussen de panelen 03 & 03 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.

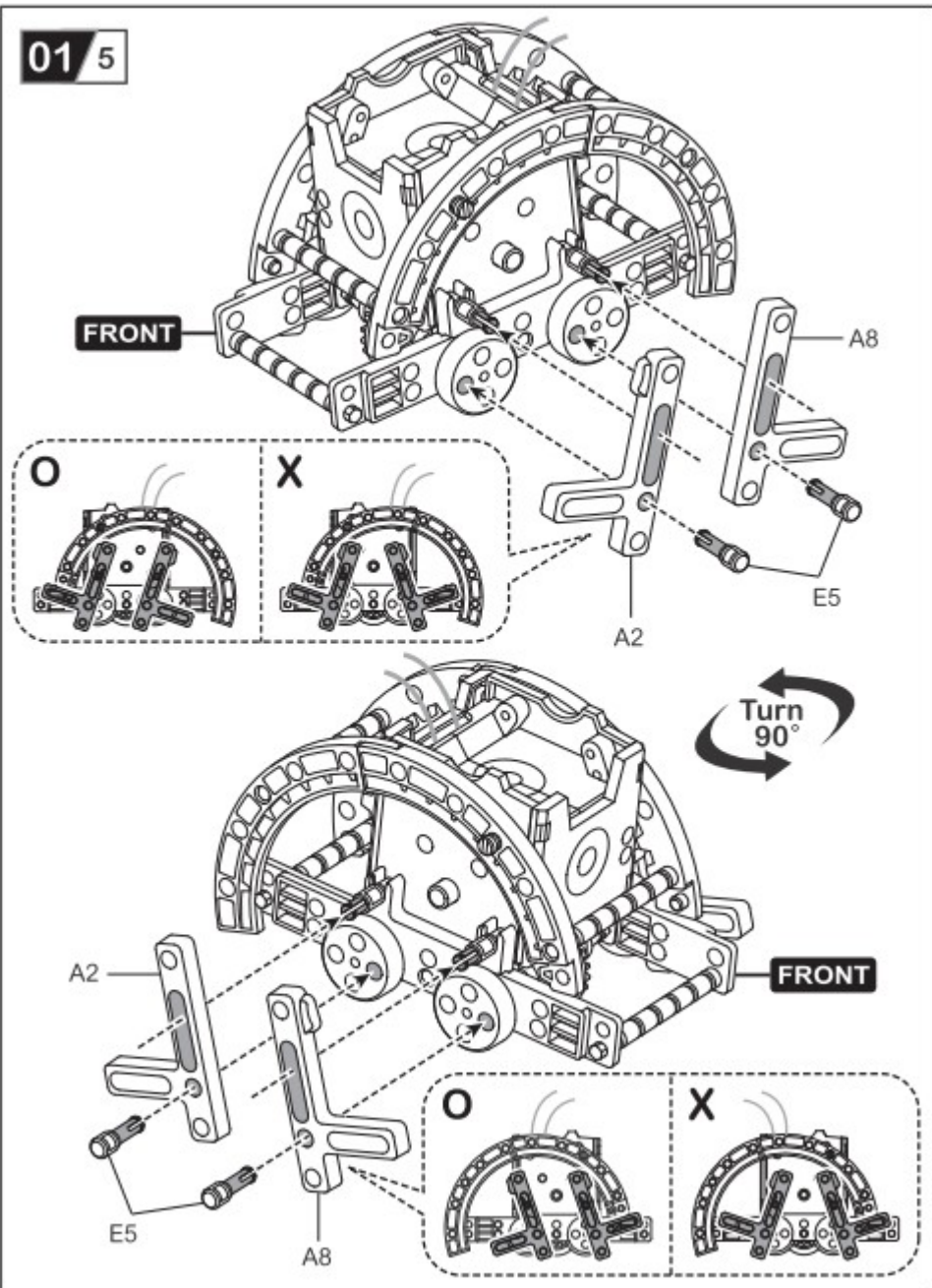
01/3



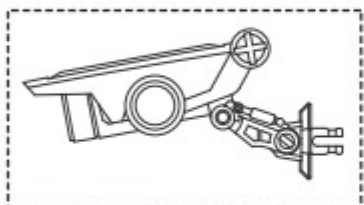
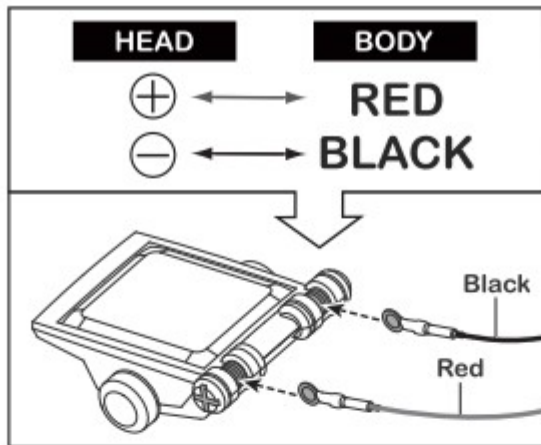
01/4



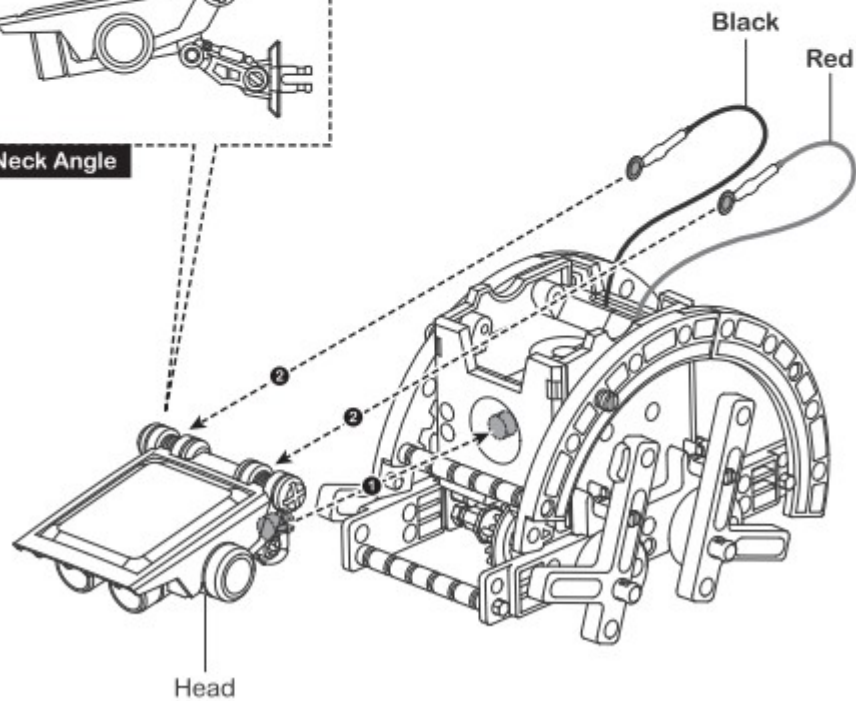
01 / 5



01/6

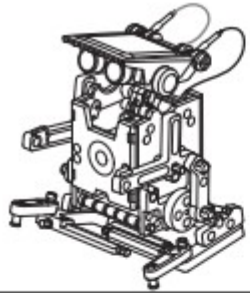


Neck Angle

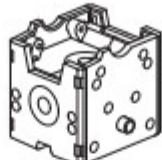


02 Walker - bot Assembly

Level 1



Prepare the below parts first before you assemble the "Walker-bot".



Body



Head



A1 x1



A2 x1



A8 x1



A7 x1



B4 x2



B5 x2



B8 x1



B9 x2



C7 x2



E6 x6



E14 x2



E5 x4



E4 x2



E7 x2

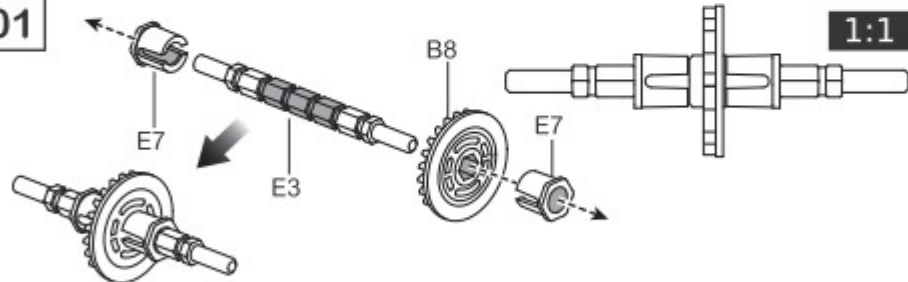


E8 x2

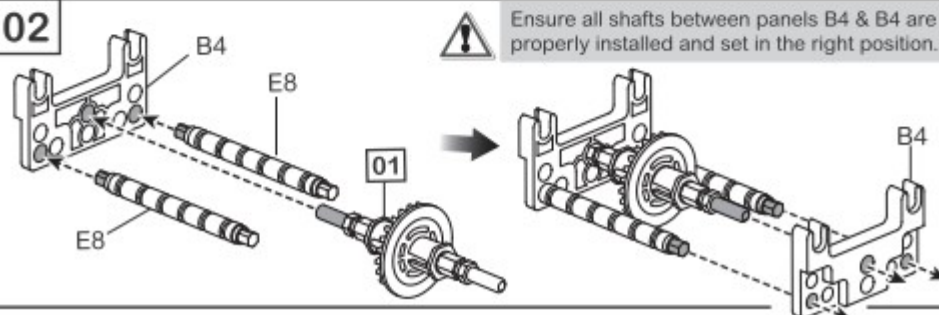


E3 x1

01

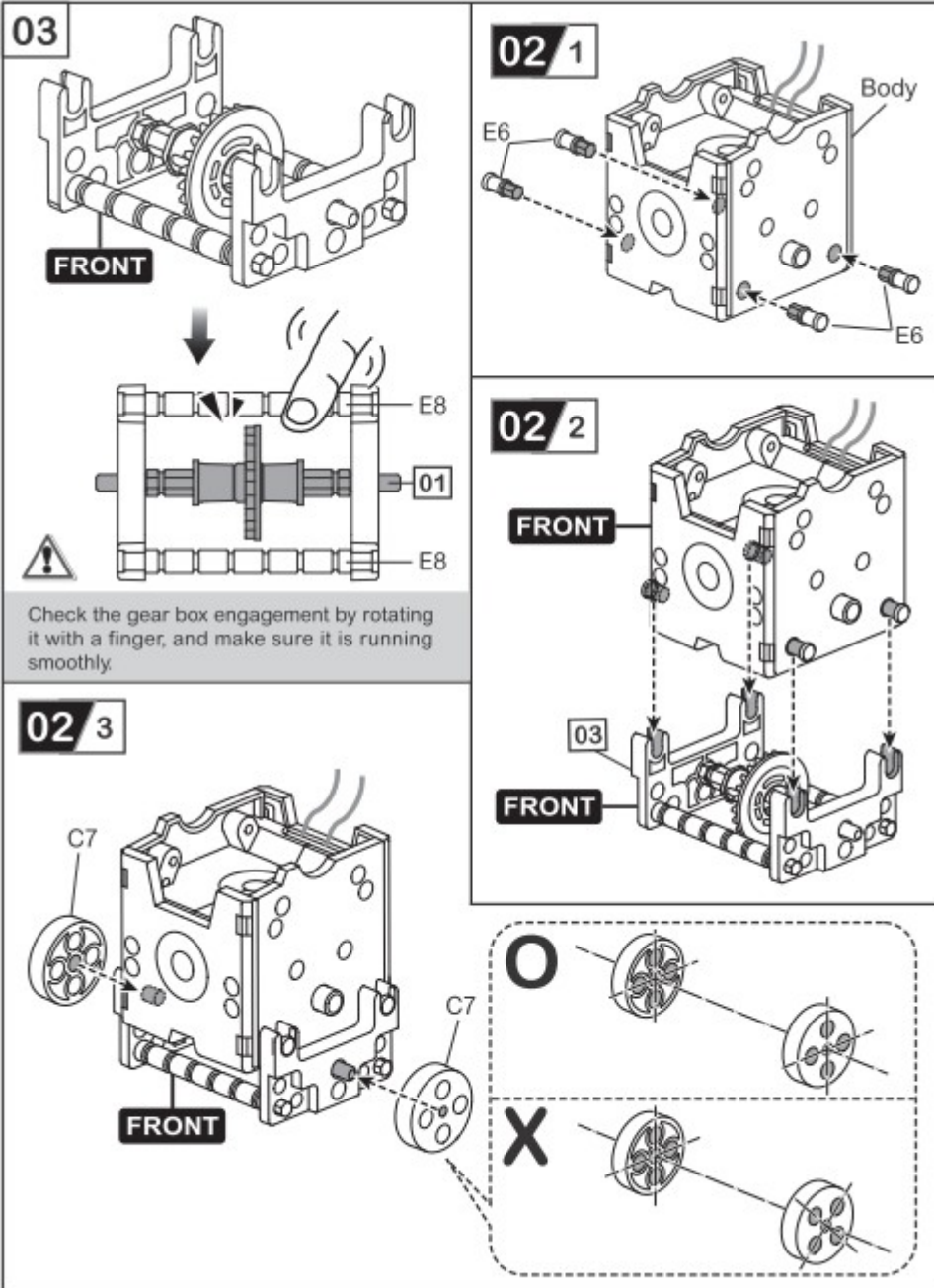


02



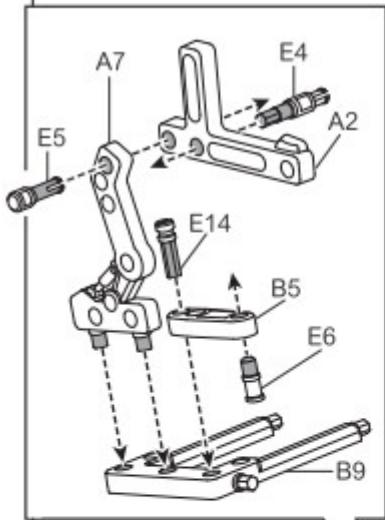
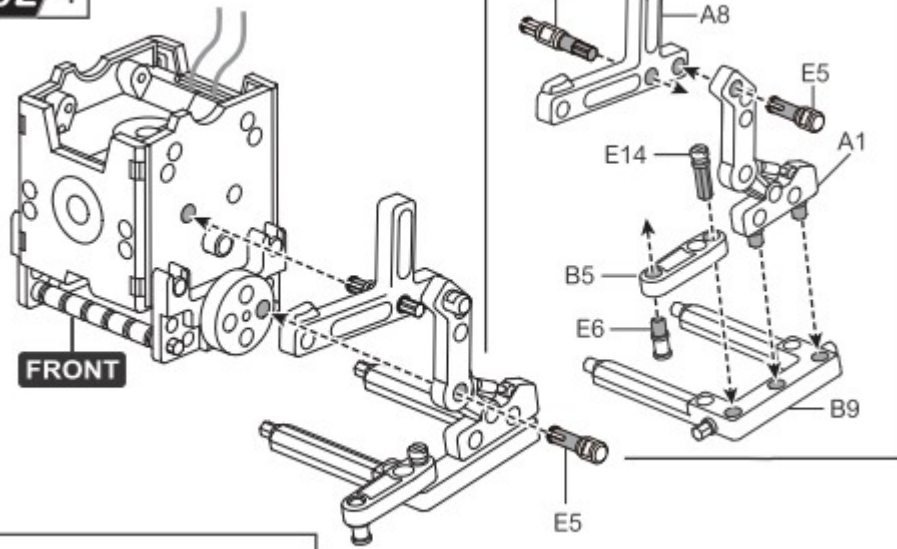
Bereid eerst de onderstaande onderdelen voor alvorens de "Walker-bot" te monteren.

Zorg ervoor dat alle assen tussen de panelen 4 & 4 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

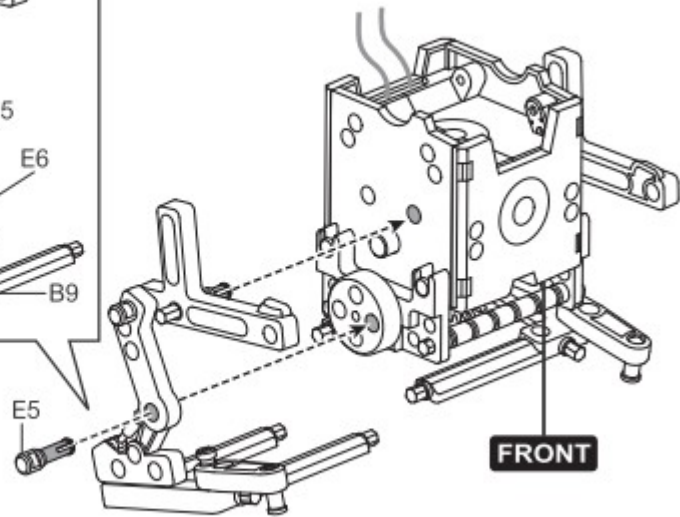


Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.

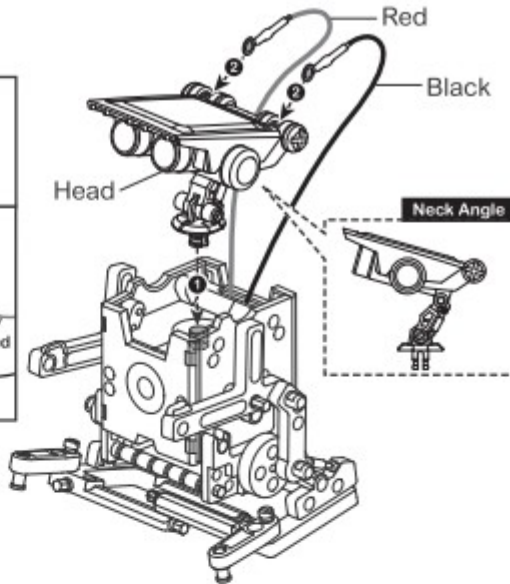
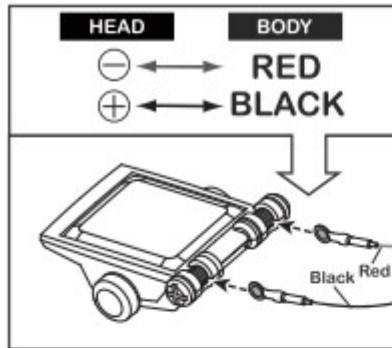
02 4



Turn
90°

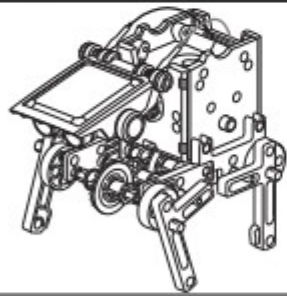


02 / 5

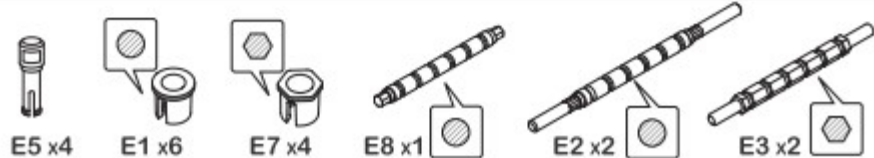
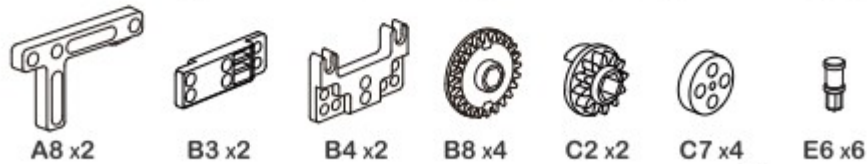
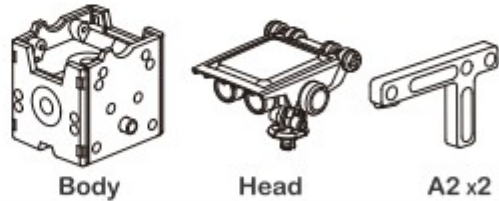


03 Quadru-bot Assembly

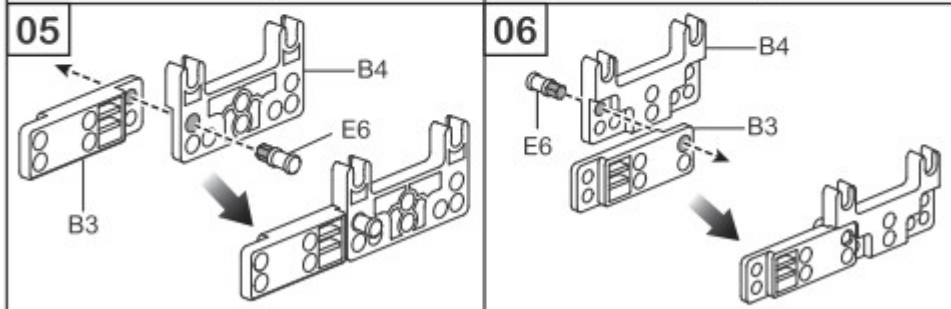
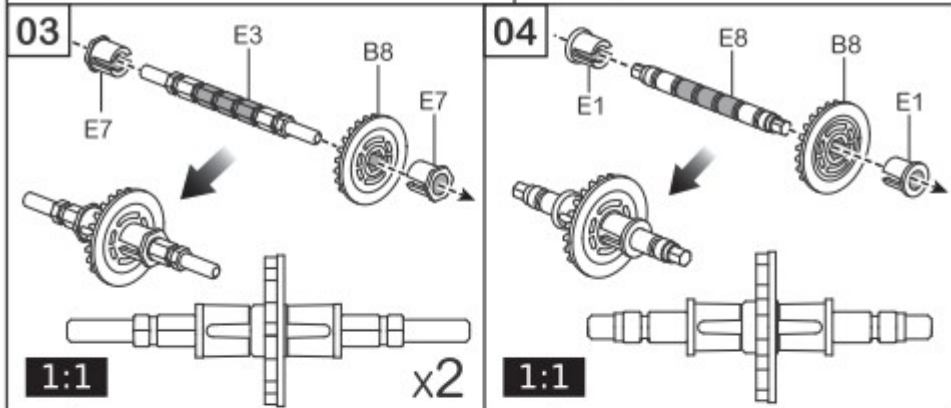
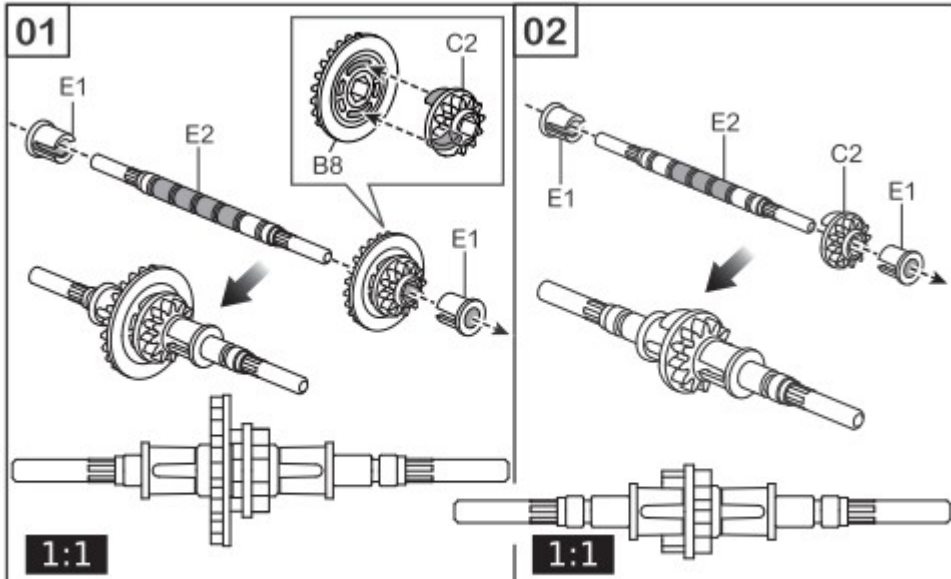
Level 1

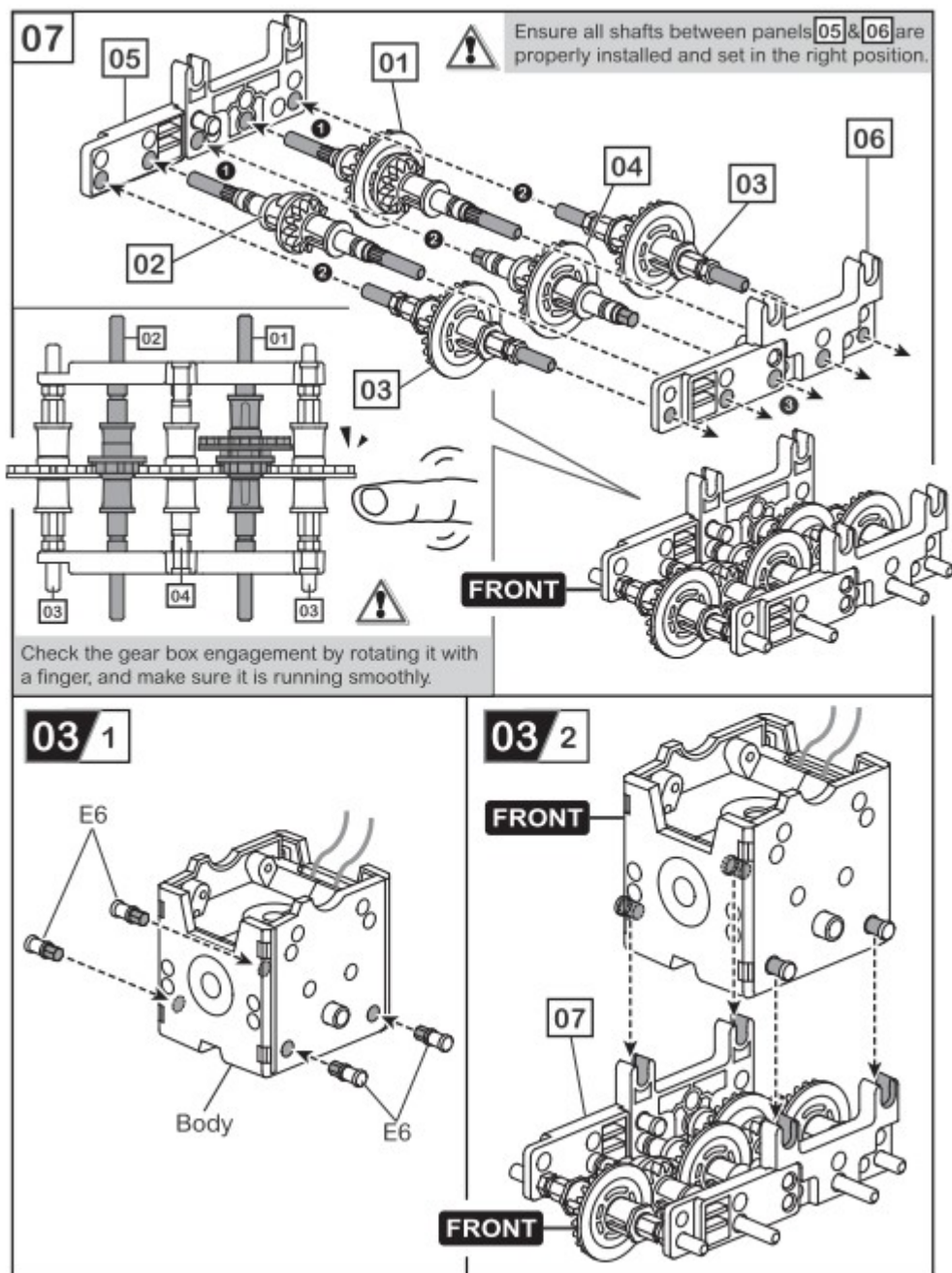


Prepare the below parts first before you assemble the "Quadru-bot".



Bereid eerst de onderstaande onderdelen voor alvorens de "Quadru-bot" te monteren.

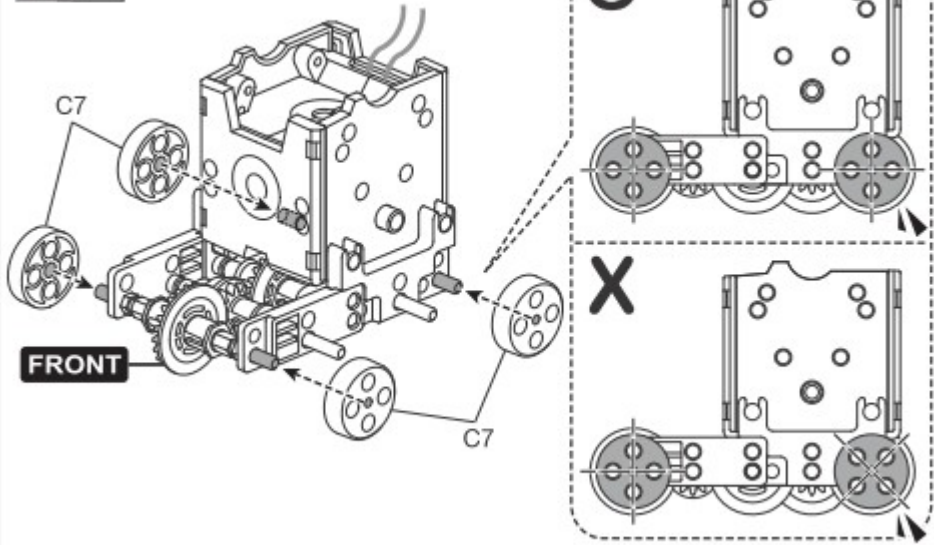




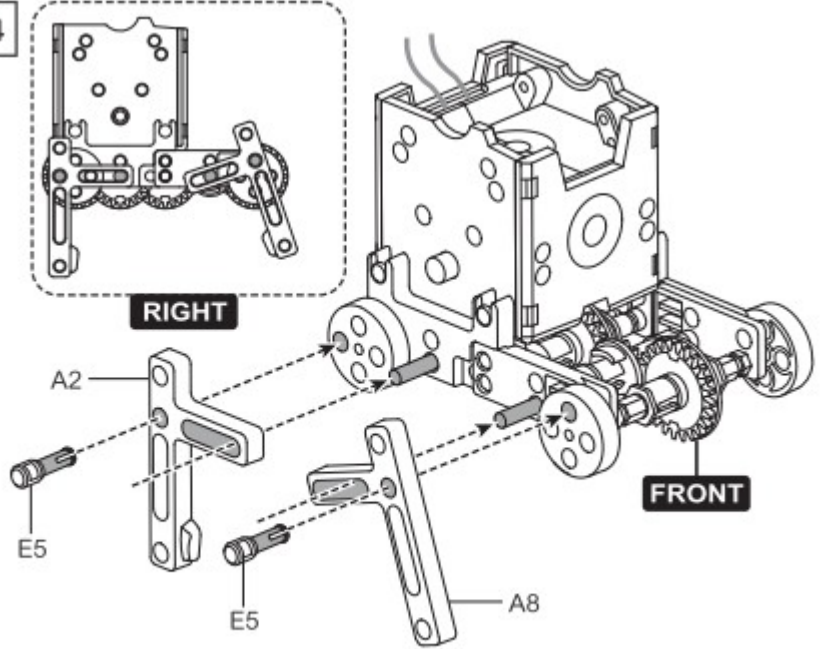
Zorg ervoor dat alle assen tussen de panelen 05 & 06 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

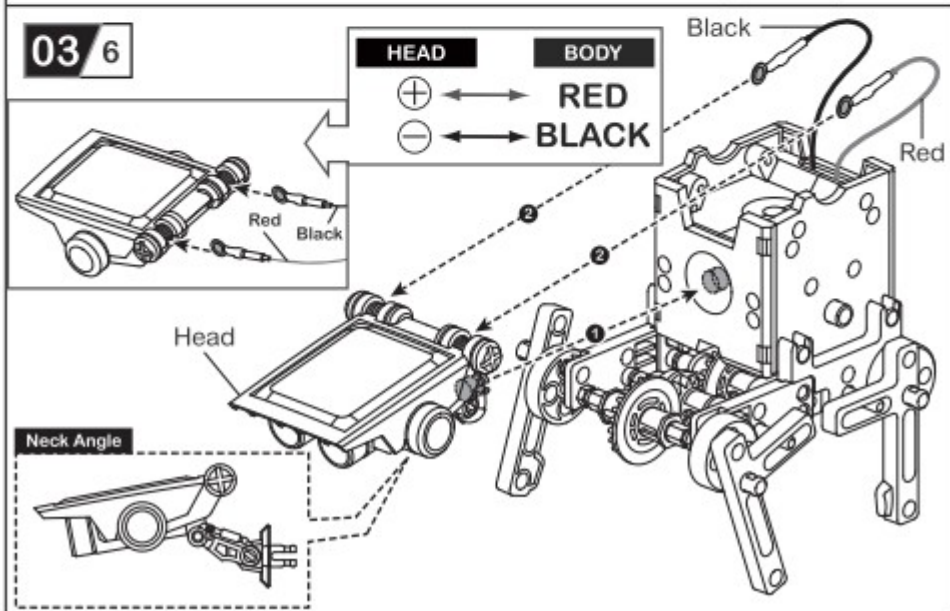
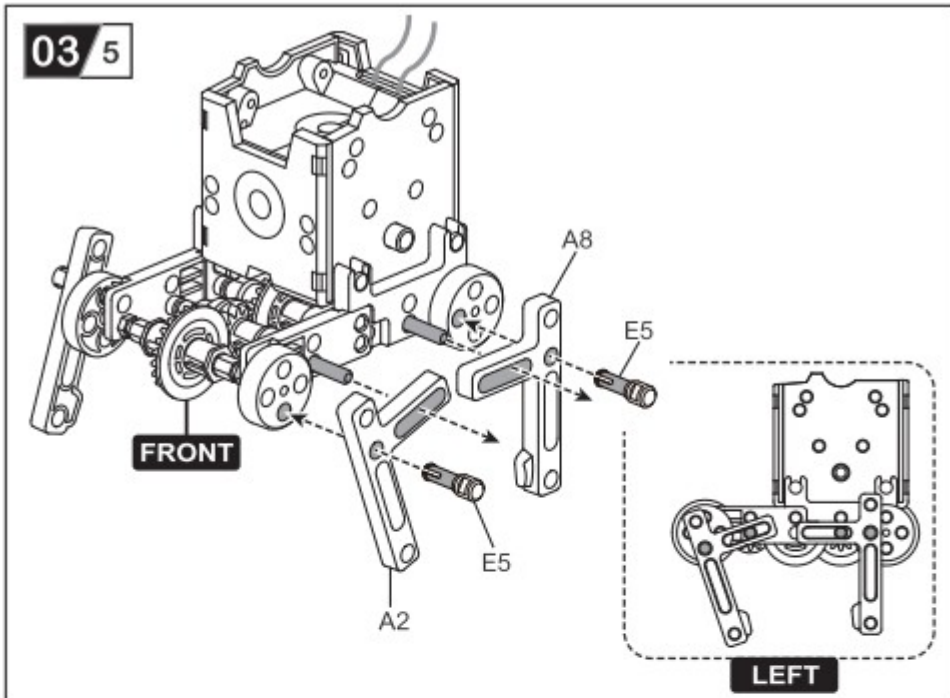
Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.

03/3



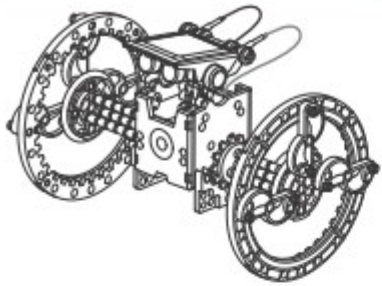
03/4





04 Wheel-bot Assembly

Level 1



Prepare the below parts first before you assemble the "Wheel-bot".



Body



Head



Wheel x4



A1 x1



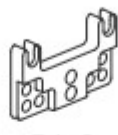
A7 x1



B1 x3



B2 x3



B4 x2



C6 x2



C1 x8



E6 x4



E14 x14

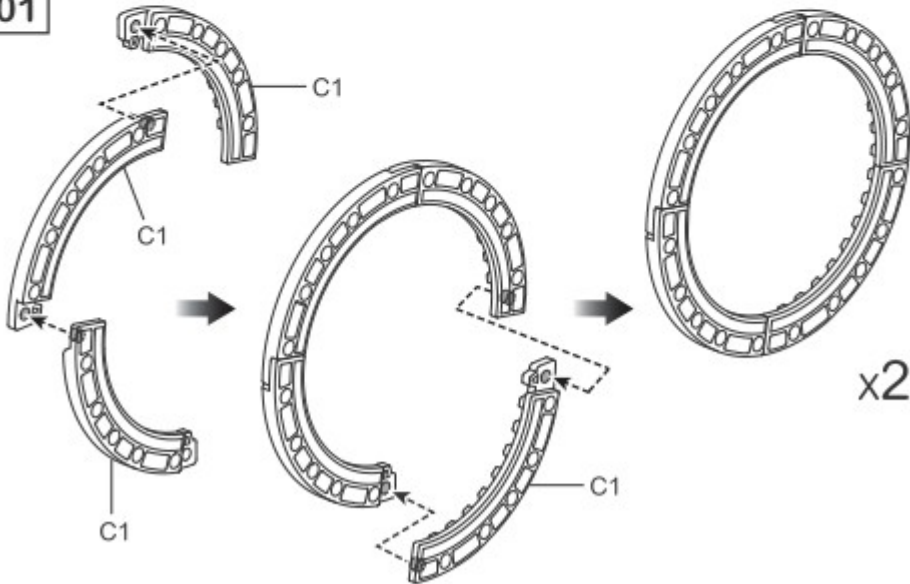


E10 x2



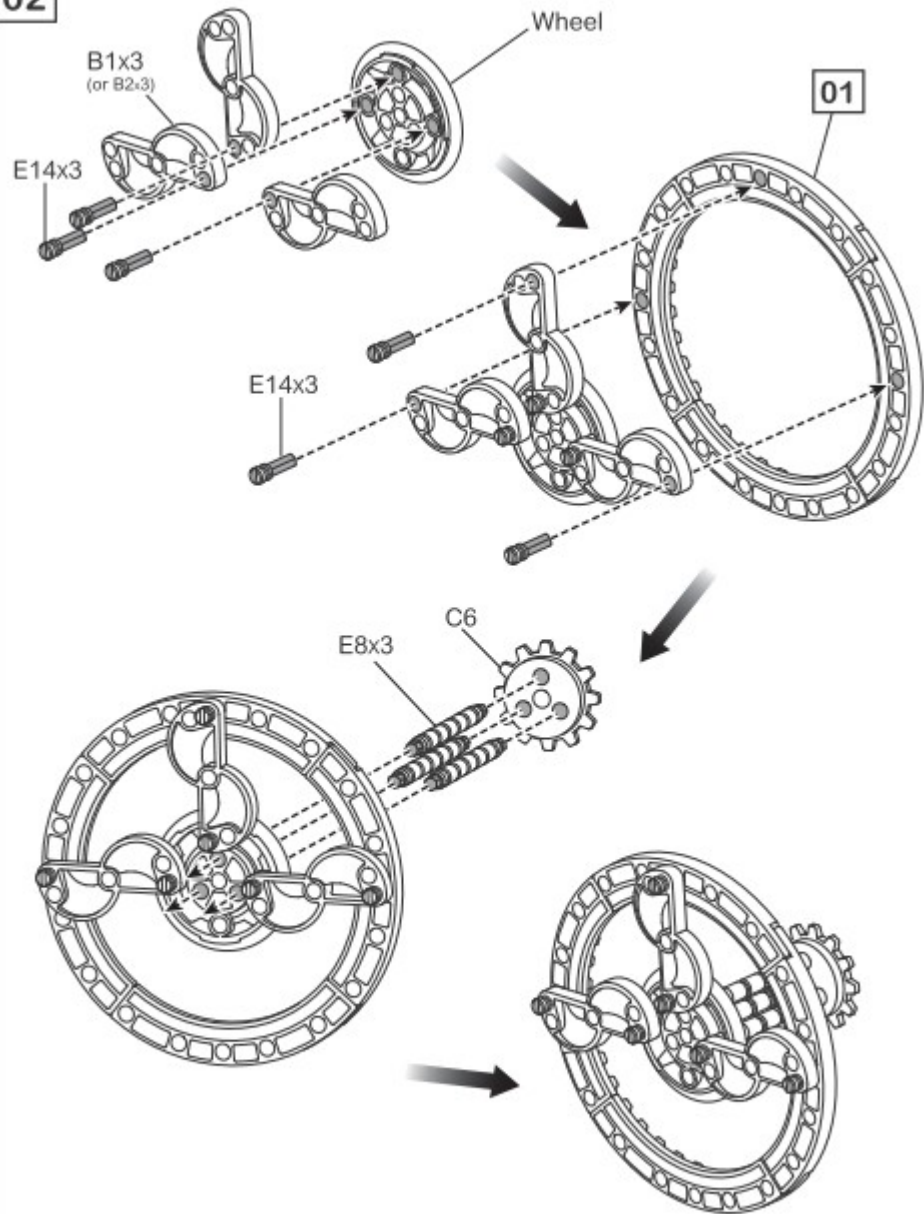
E8 x6

01

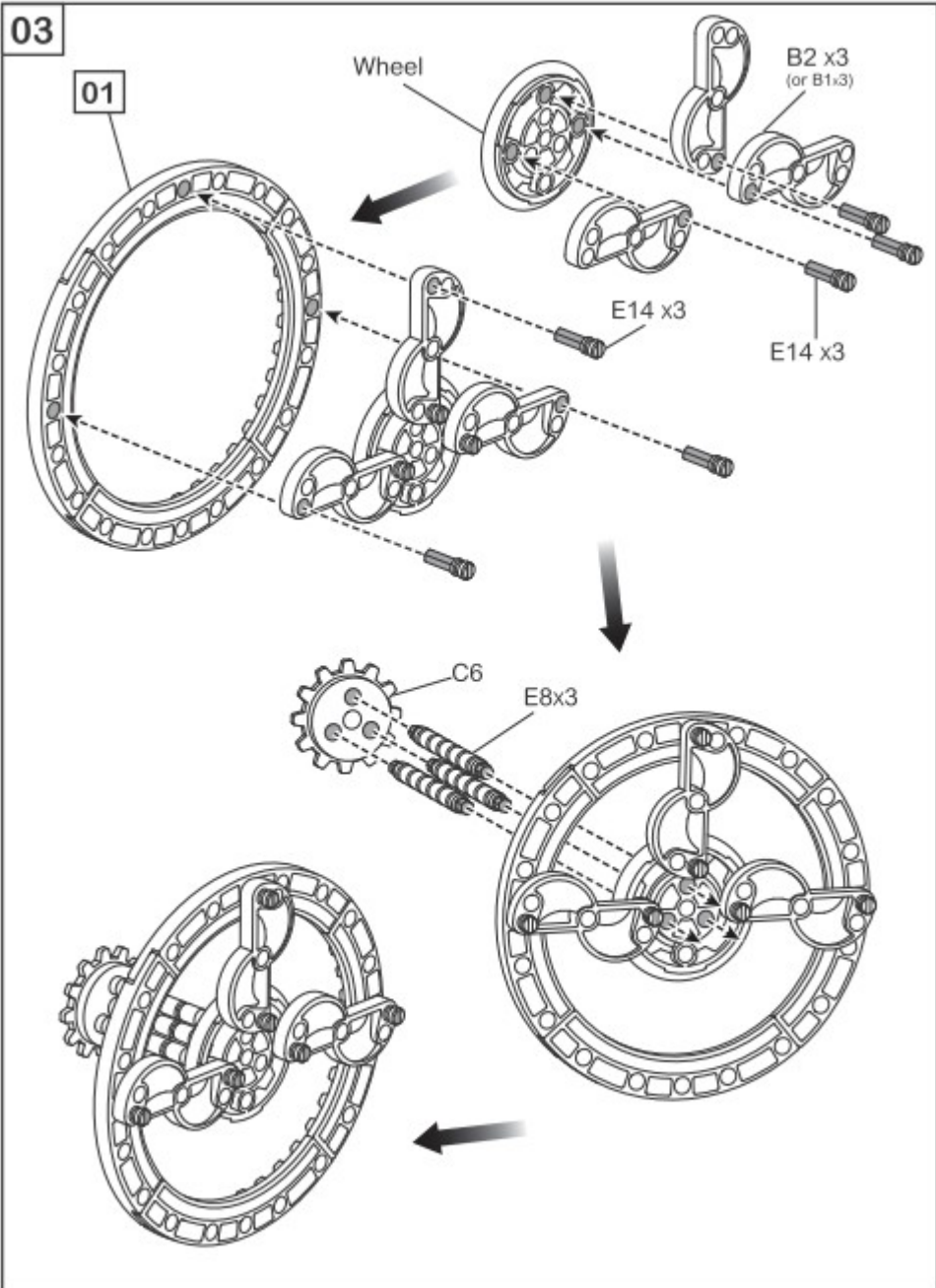


Bereid eerst de onderstaande onderdelen voor alvorens de "Wiel-bot" te monteren.

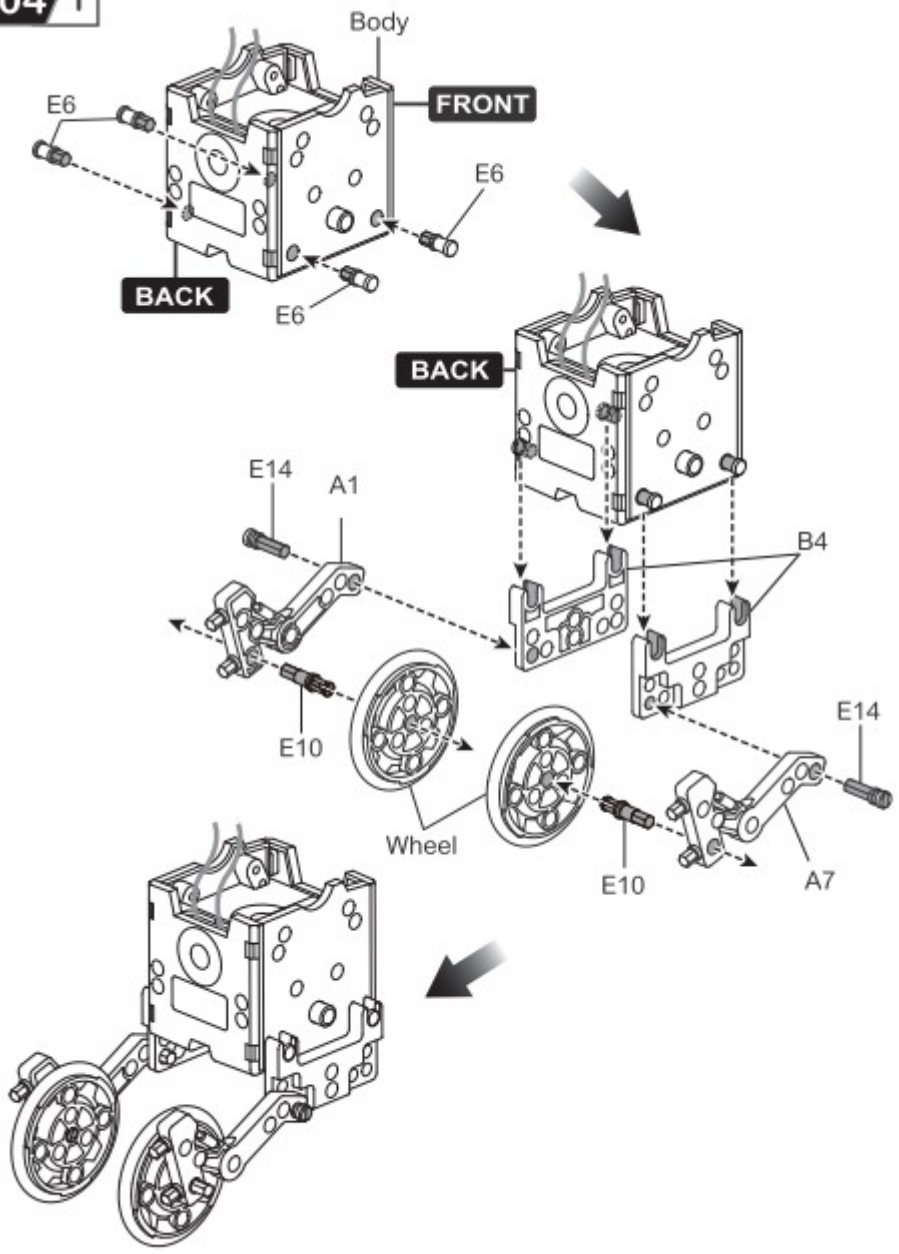
02

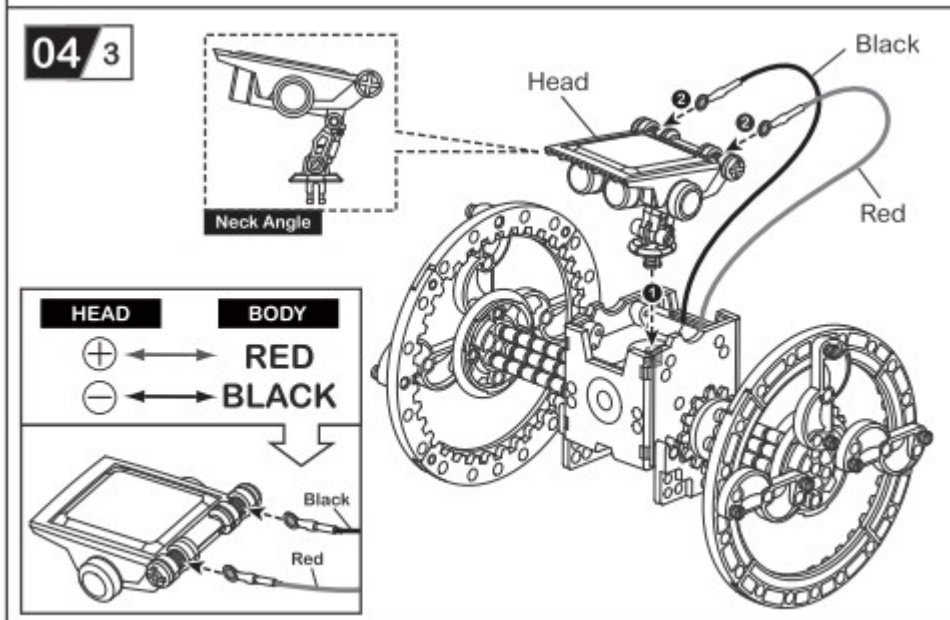
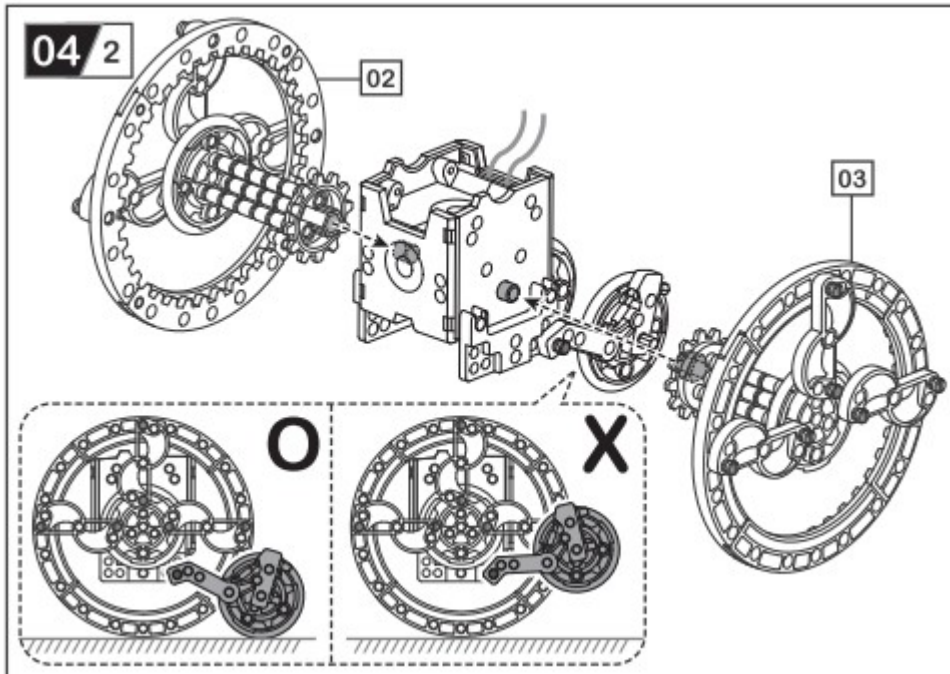


03



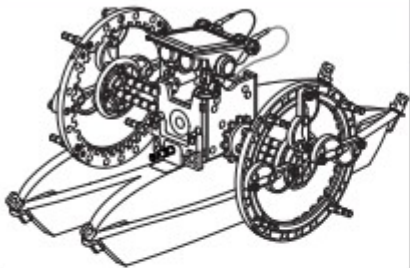
04/1





05 Boat-bot Assembly

Level 1



Prepare the below parts first before you assemble the "Boat-bot".



Body



Head



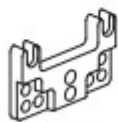
Wheel x2



B1 x3



B2 x3



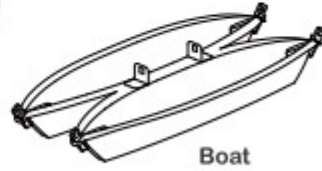
B4 x2



C6 x2



C1 x8



Boat



E6 x4



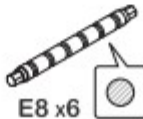
E14 x12



E4 x8

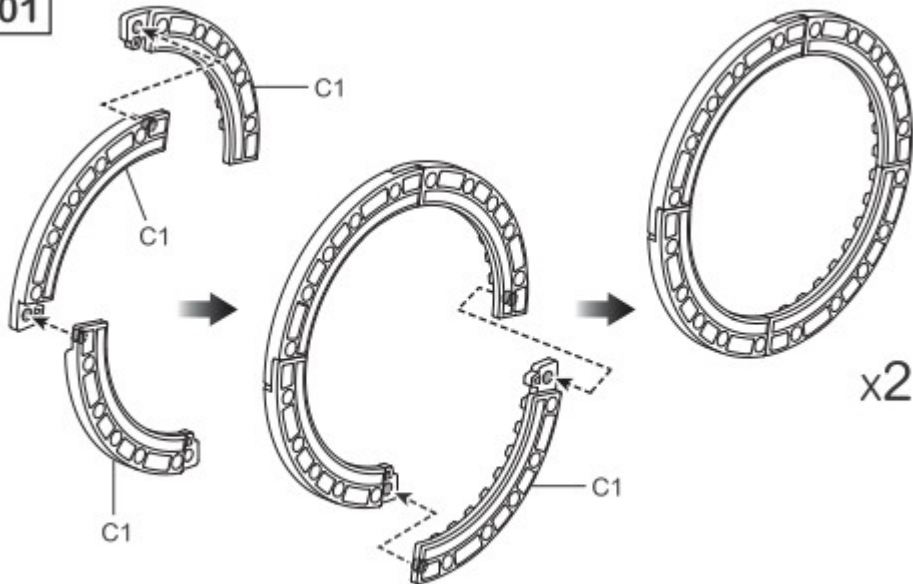


E9 x2



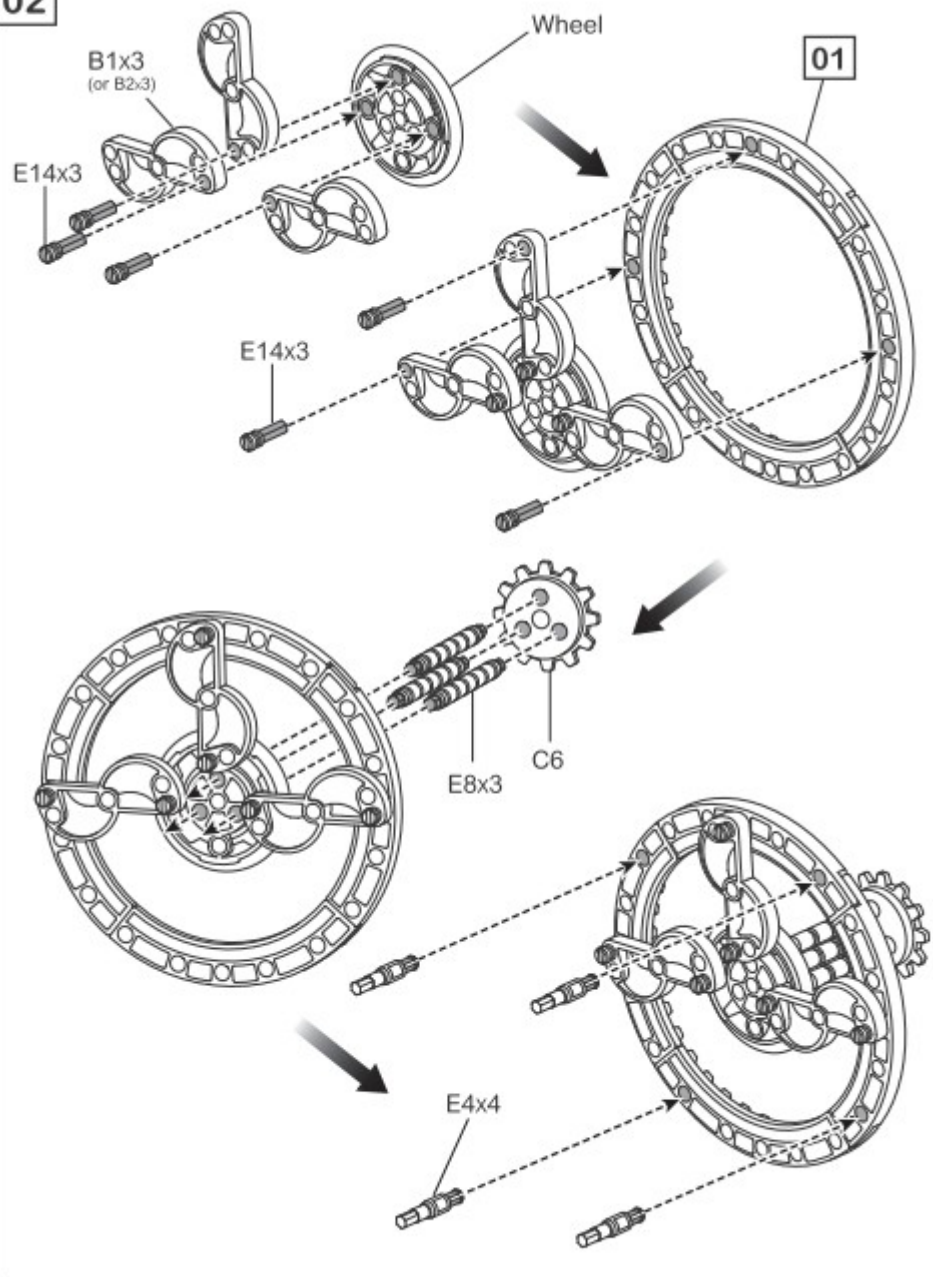
E8 x6

01

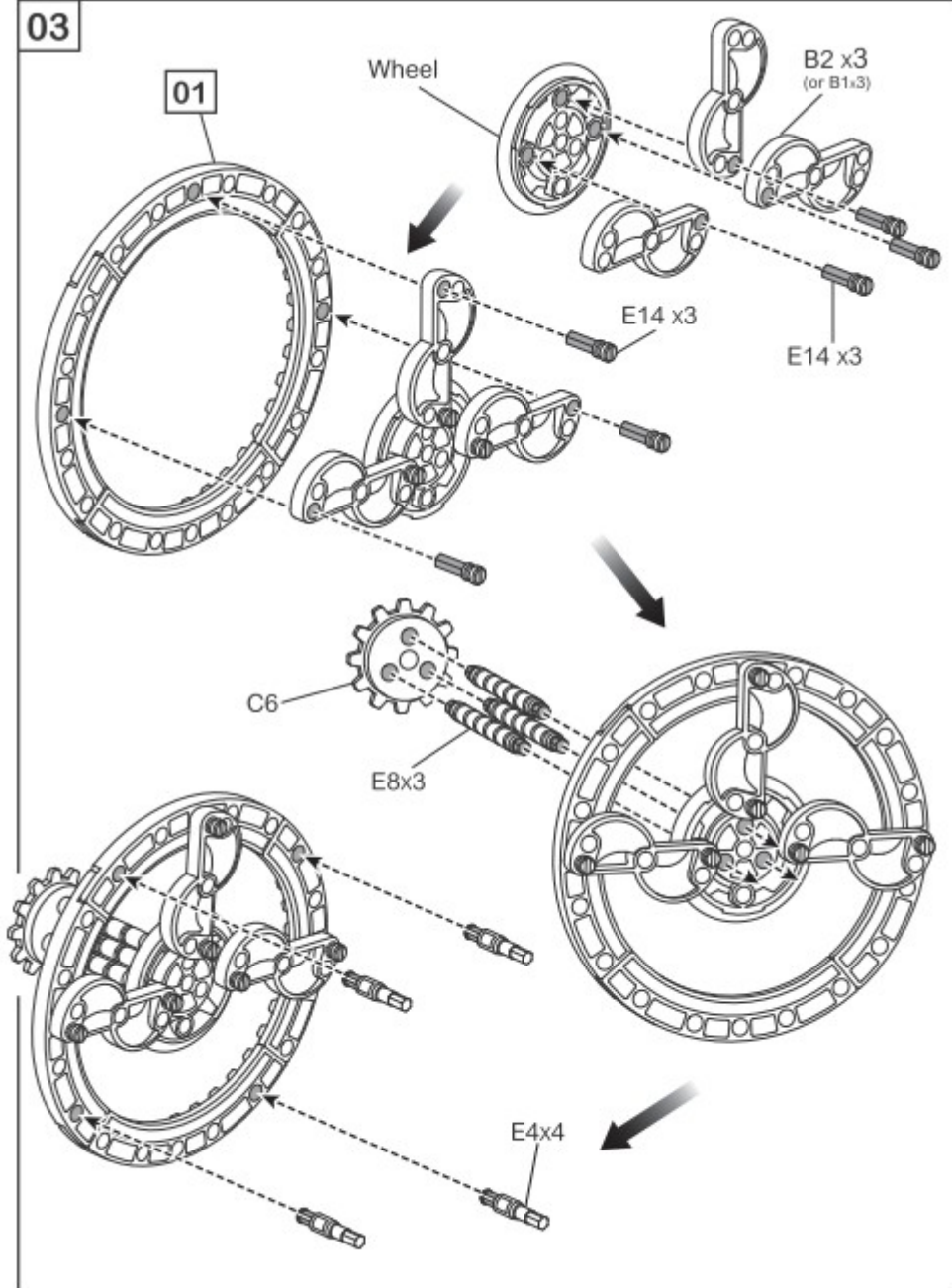


Bereid eerst de onderstaande onderdelen voor alvorens de "Boat-bot" te monteren.

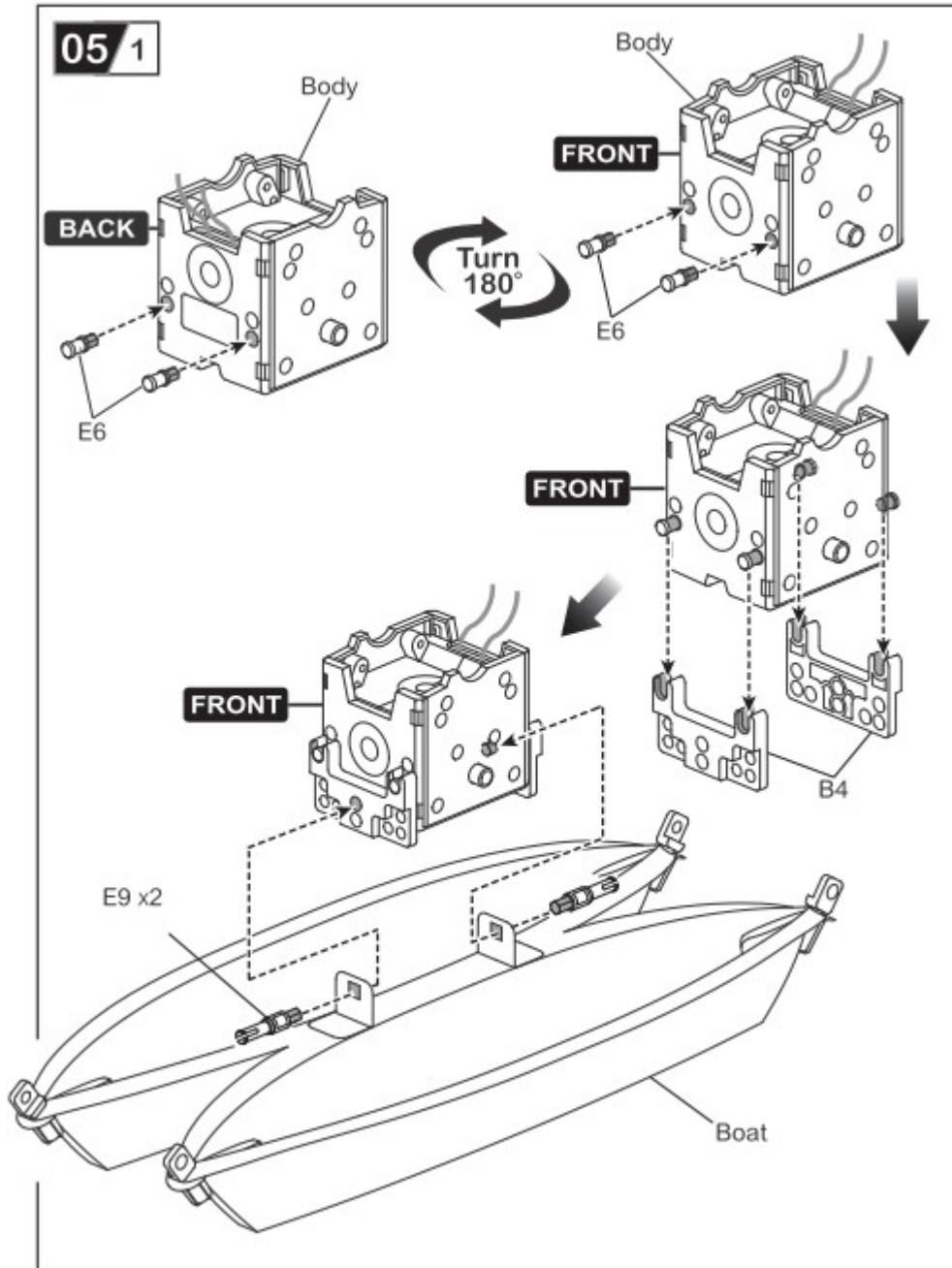
02



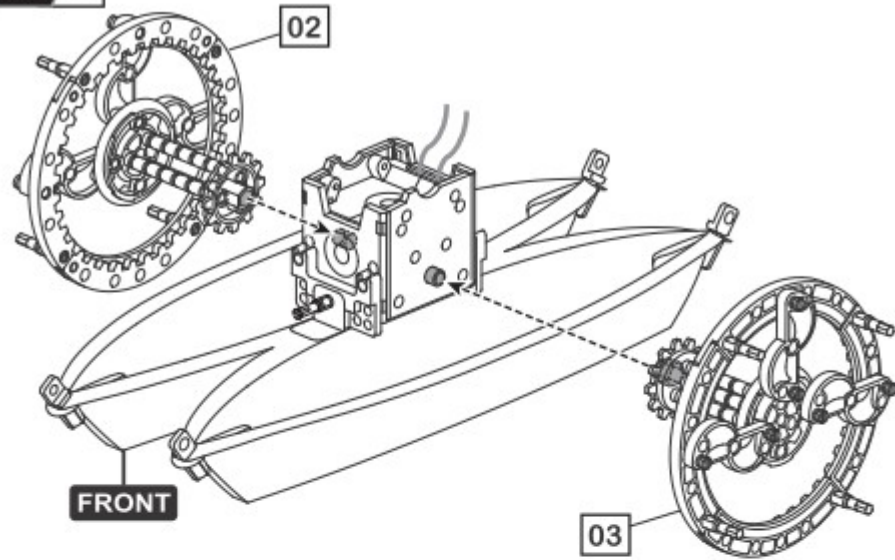
03



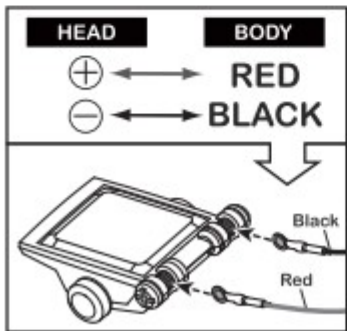
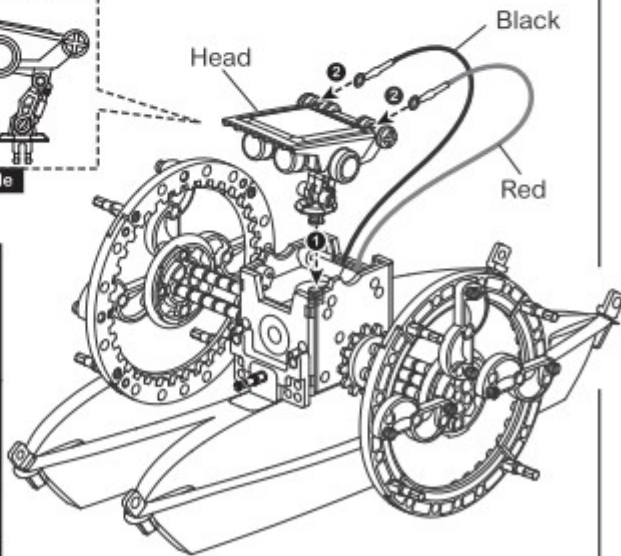
05 1



05/2

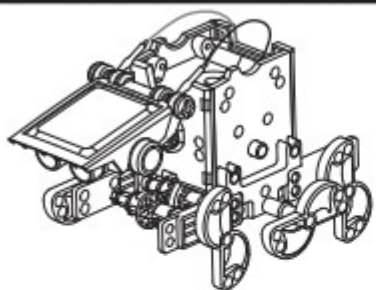


05/3

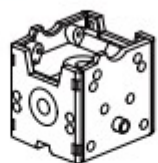


06 Beetle-bot Assembly

Level 1



Prepare the below parts first before you assemble the "Beetle-bot".



Body



Head



B1 x3



B2 x3



B3 x4



B4 x2



B8 x3



C2 x3



E6 x8



E11 x4



E12 x2



E7 x6



E1 x4

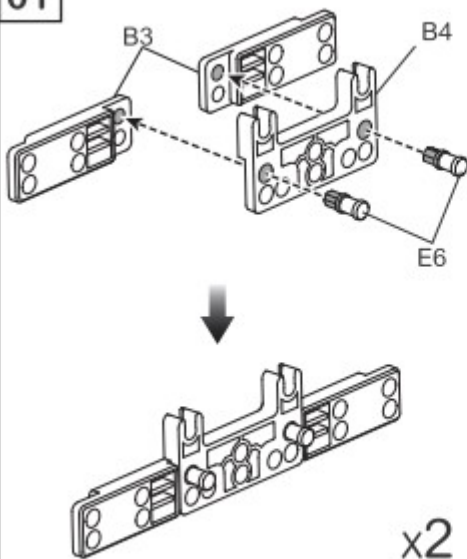


E8 x2



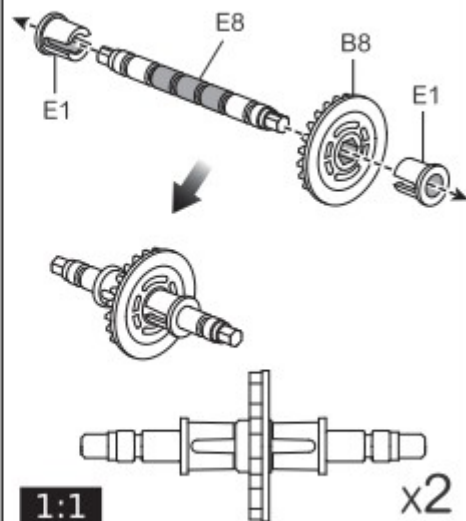
E3 x3

01



x2

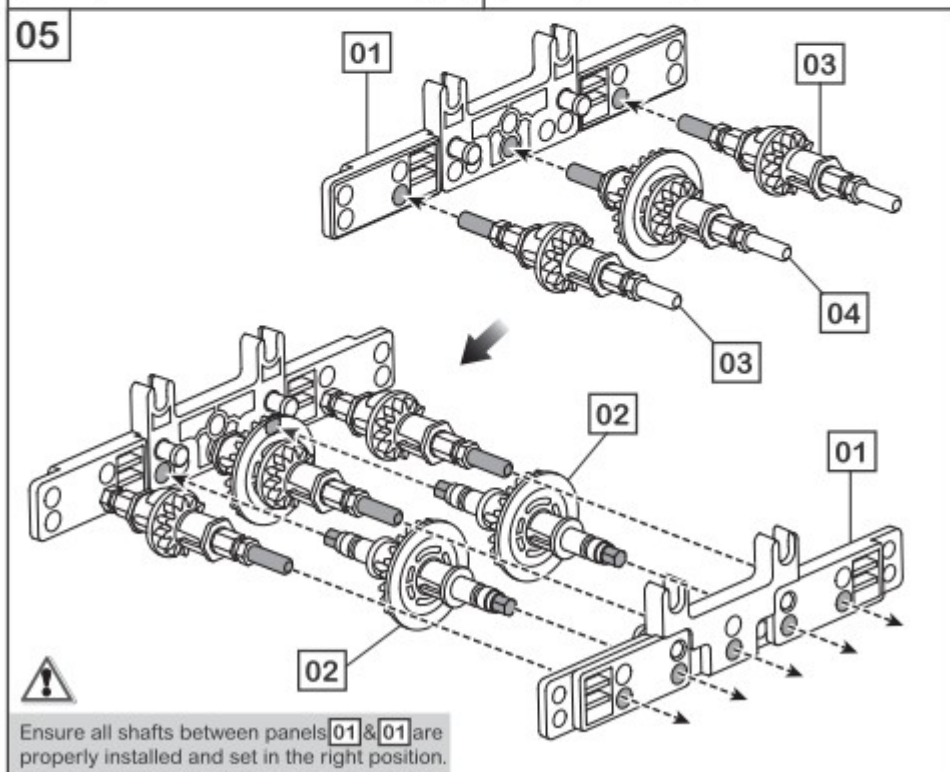
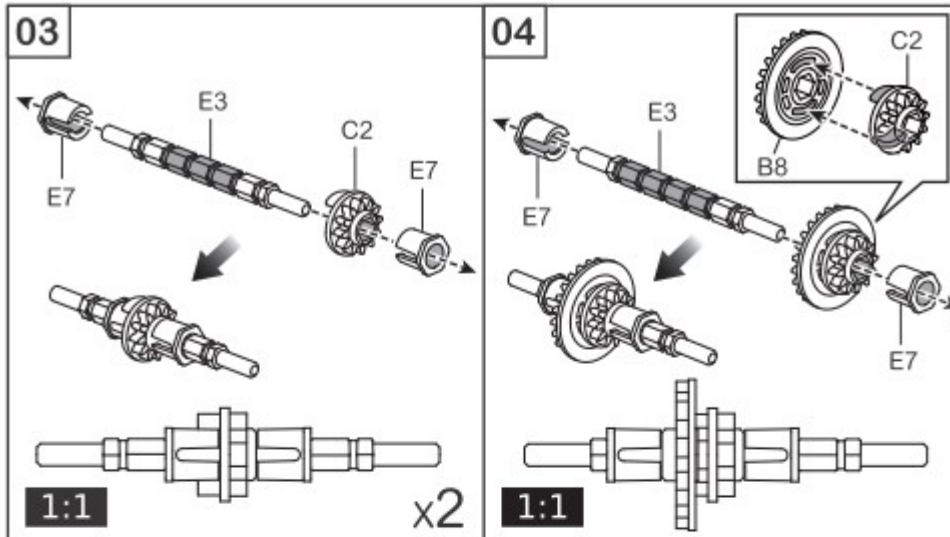
02



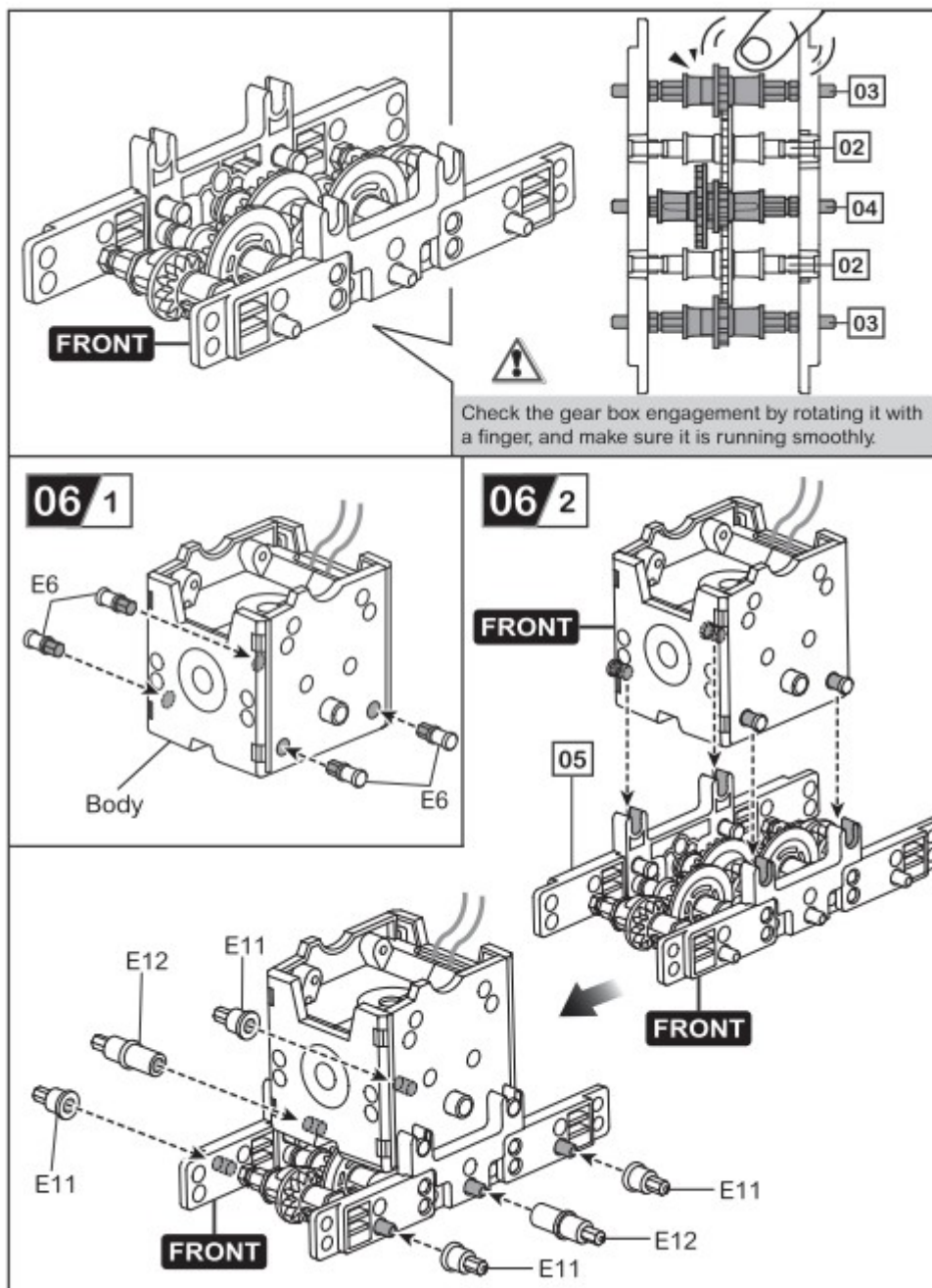
x2

1:1

Bereid eerst de onderstaande onderdelen voor alvorens de "Beetle-bot" te monteren.

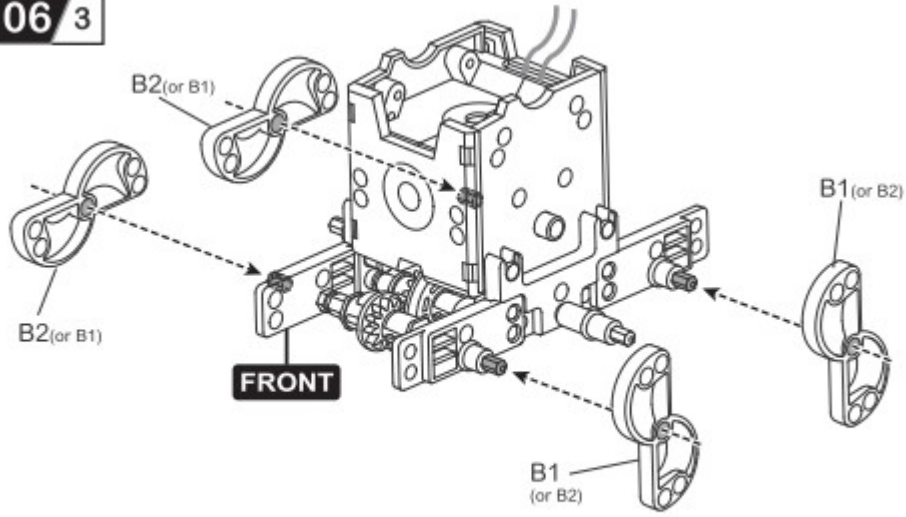


Zorg ervoor dat alle assen tussen de panelen 01 & 01 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

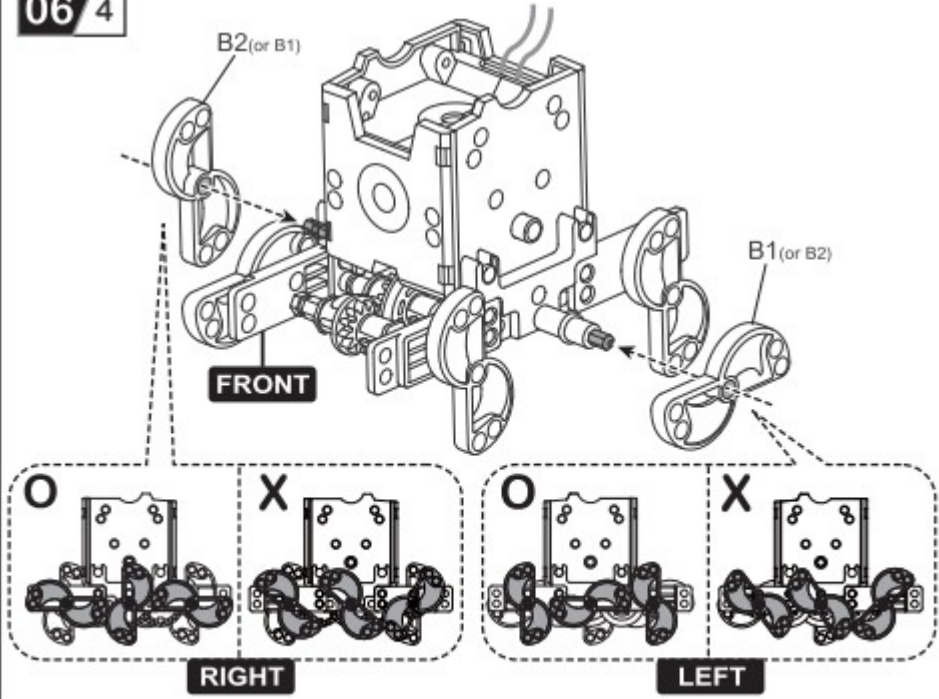


Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.

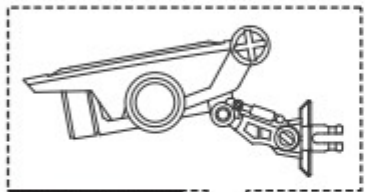
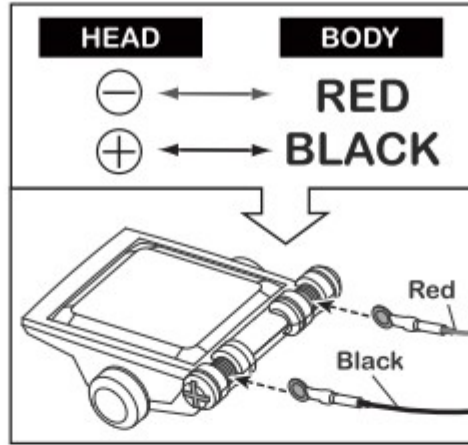
06 3



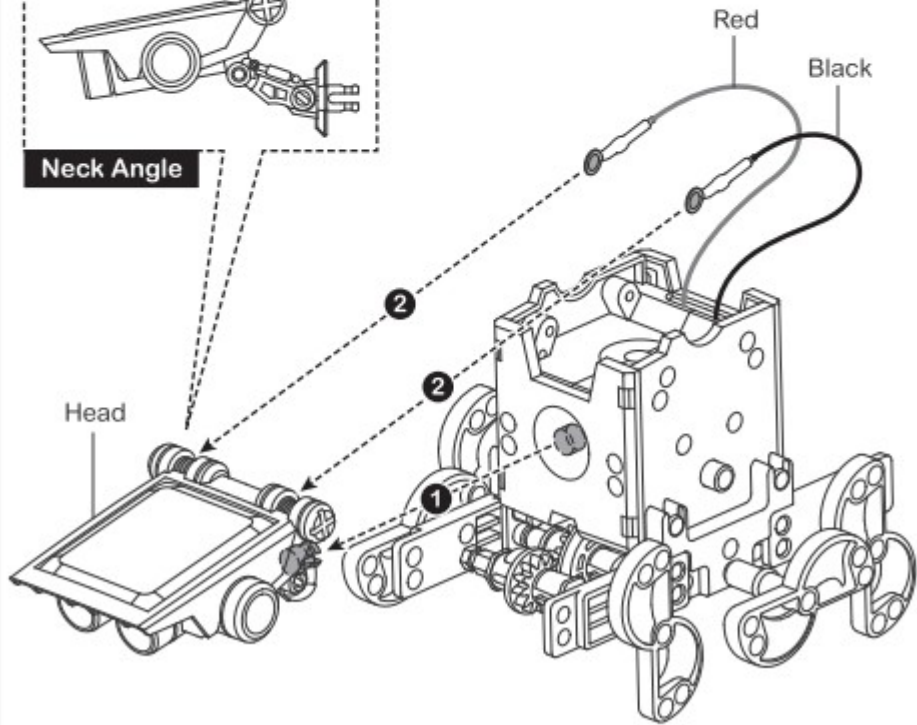
06 4



06/5



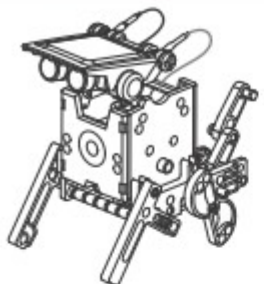
Neck Angle



Nekhoek

07 Dog-bot Assembly

Level 1



Prepare the below parts first before you assemble the "Dog-bot".



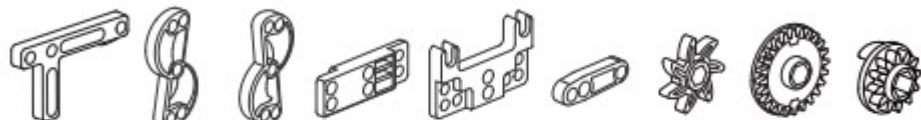
Body



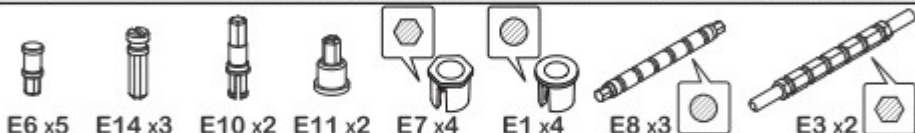
Head



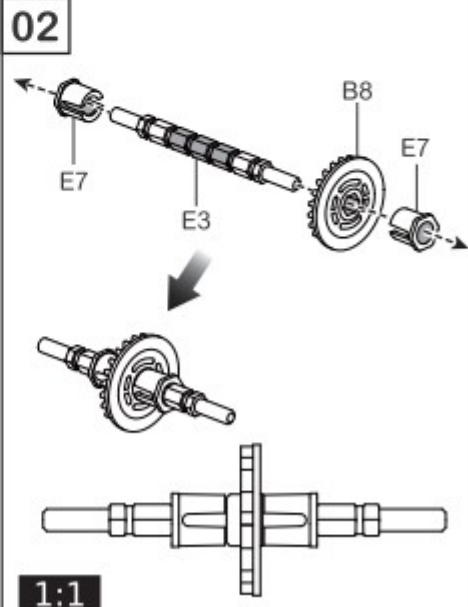
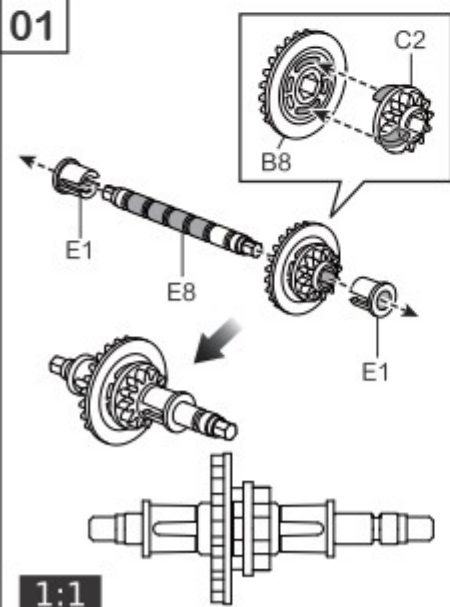
A2 x1



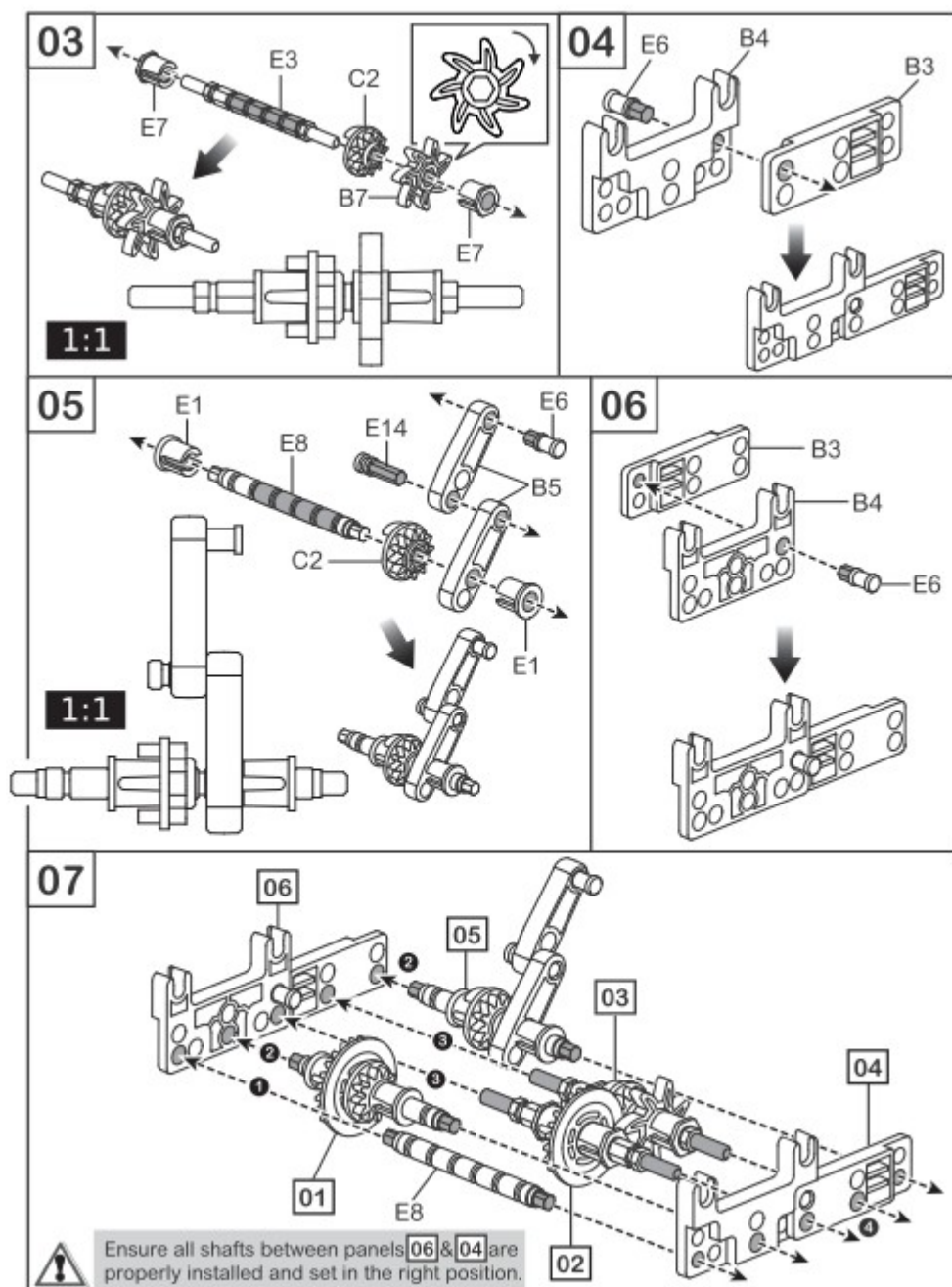
A8 x1 B1 x1 B2 x1 B3 x2 B4 x2 B5 x2 B7 x1 B8 x2 C2 x3



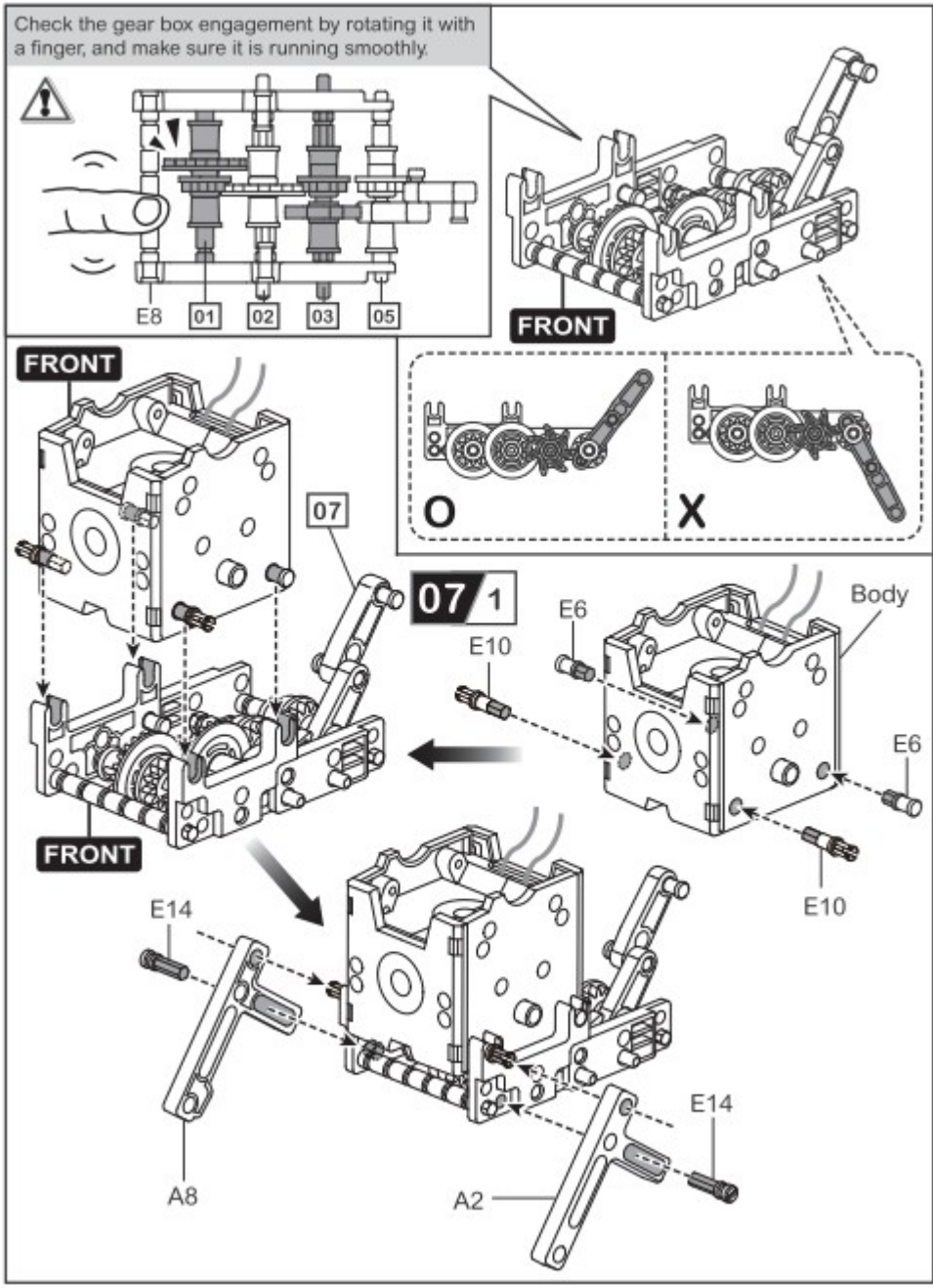
E6 x5 E14 x3 E10 x2 E11 x2 E7 x4 E1 x4 E8 x3 E3 x2



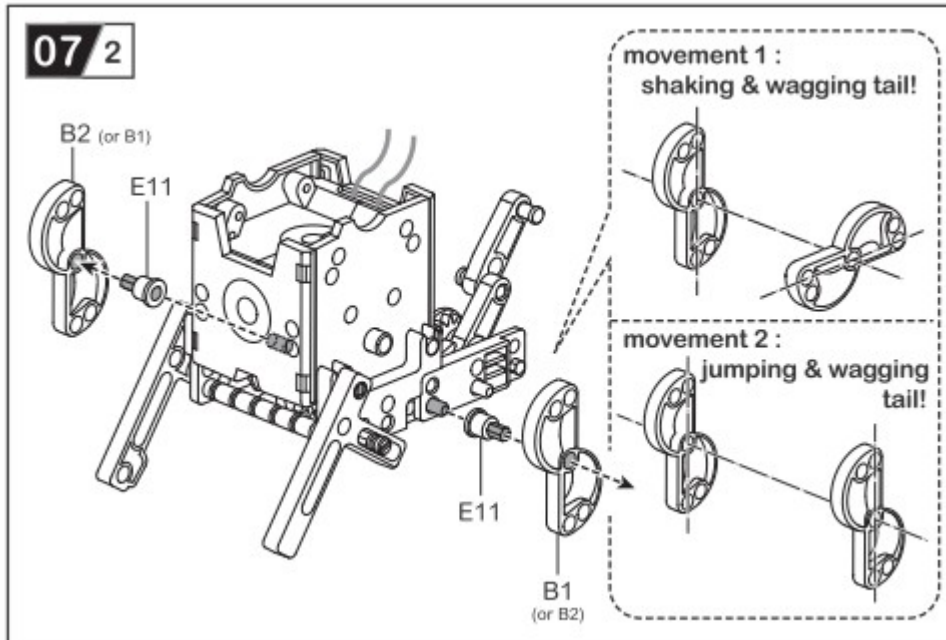
Bereid eerst de onderstaande onderdelen voor alvorens de "Dog-bot" te monteren.



Zorg ervoor dat alle assen tussen de panelen 06 & 04 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

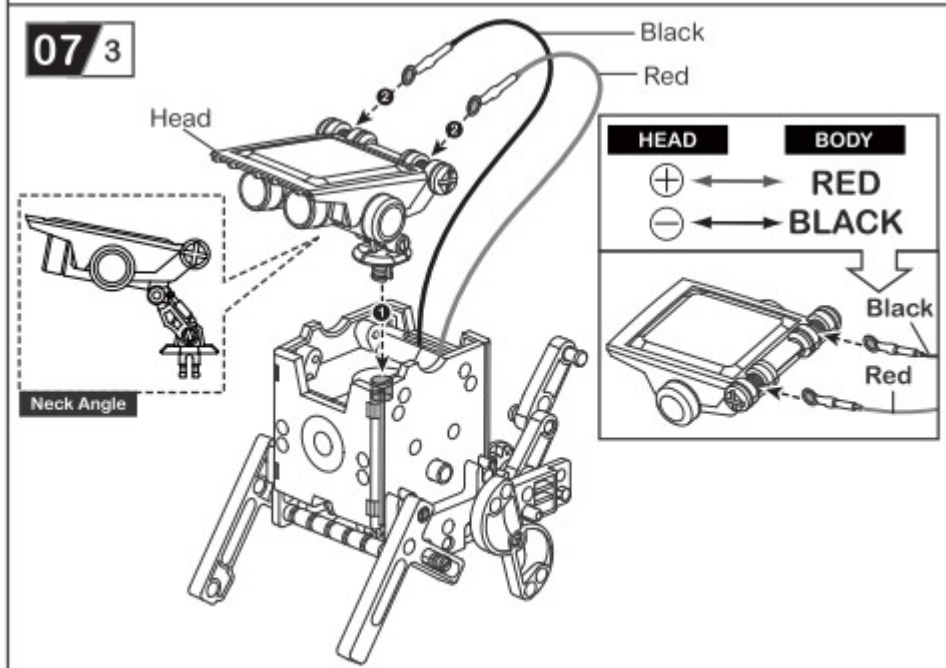


Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.



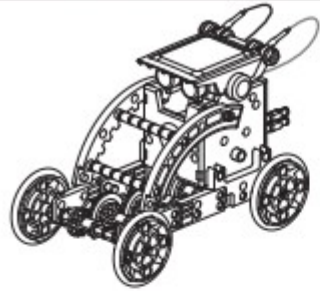
beweging 1: schudden & kwispelende staart

beweging 2: springen & kwispelende staart

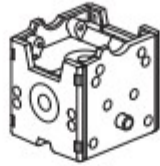


08 Auto-bot Assembly

Level 2



Prepare the below parts first before you assemble the "Auto-bot".



Body



Head



Wheel x4



B3 x4



B4 x2



B8 x4



C1 x2



C2 x4



E6 x8



E14 x2



E4 x4



E11 x4



E7 x2



E1 x10

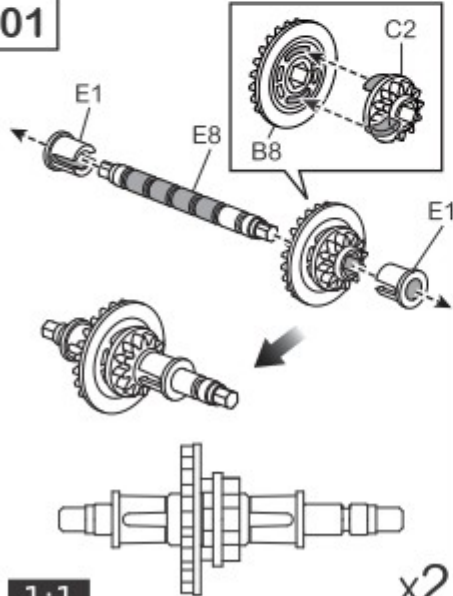


E8 x7



E3 x2

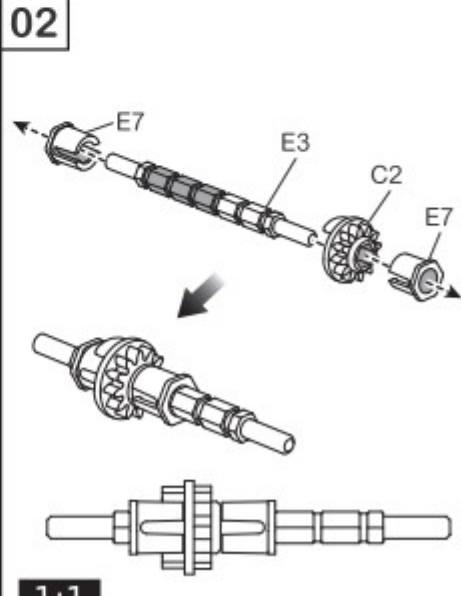
01



1:1

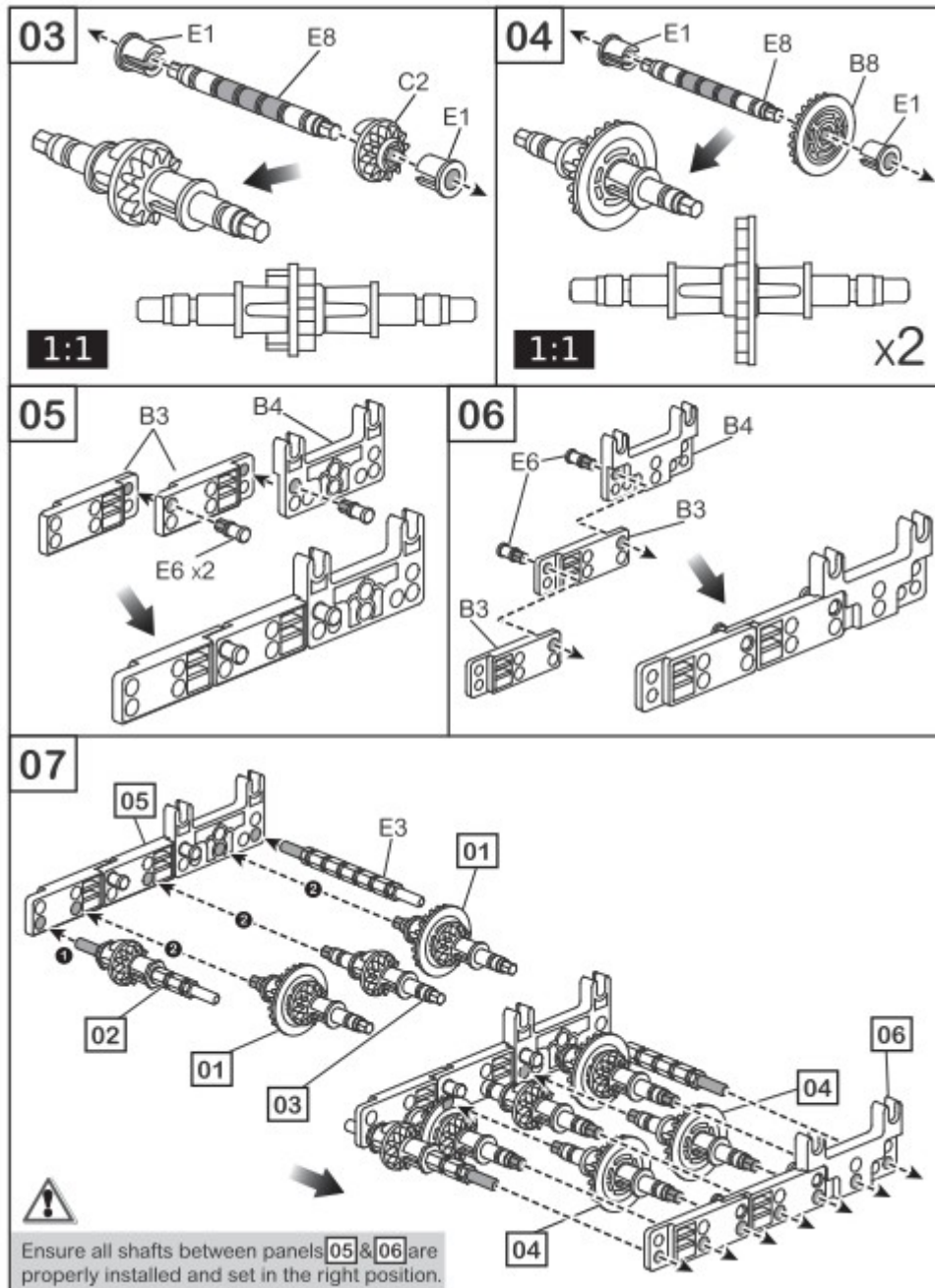
x2

02

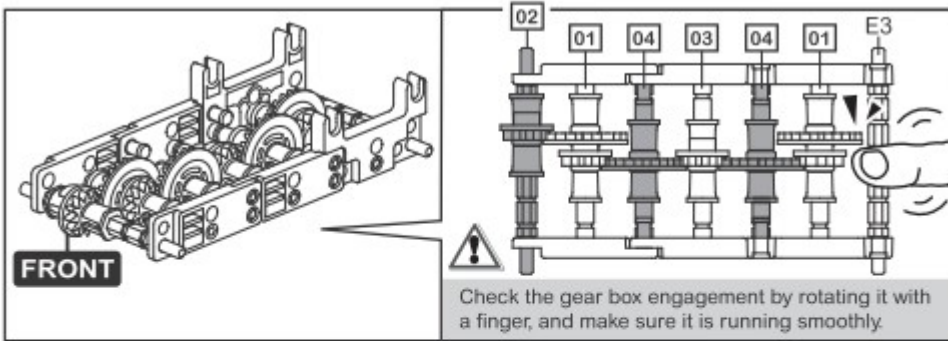


1:1

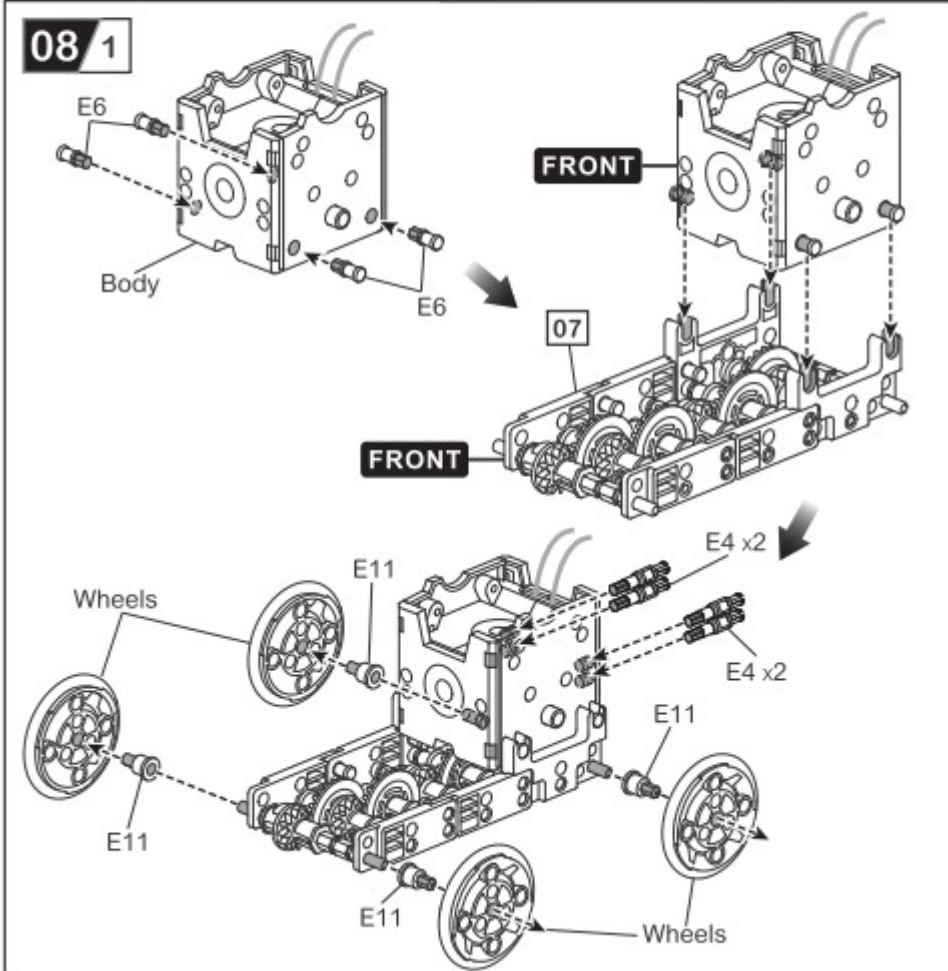
Bereid eerst de onderstaande onderdelen voor alvorens de "Auto-bot" te monteren.



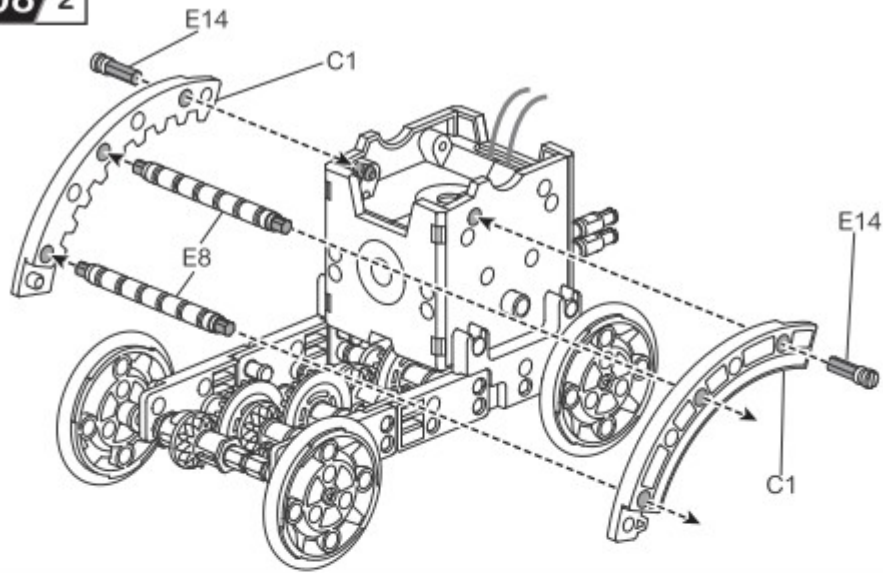
Zorg ervoor dat alle assen tussen de panelen 05 & 06 correct geïnstalleerd zijn en zich in de juiste positie bevinden.



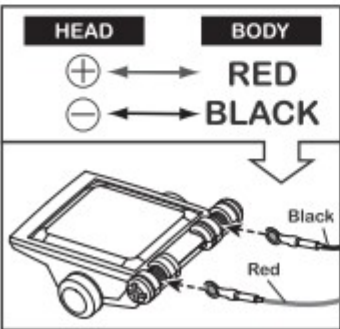
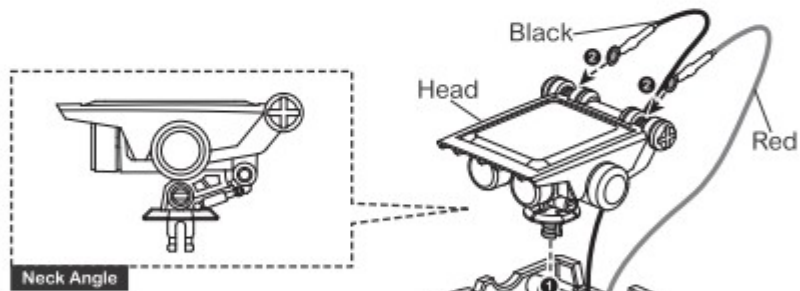
Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.



08 / 2

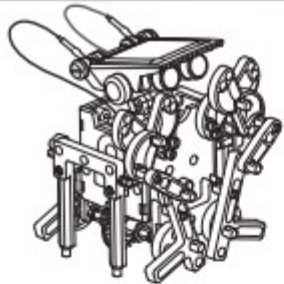


08 / 3

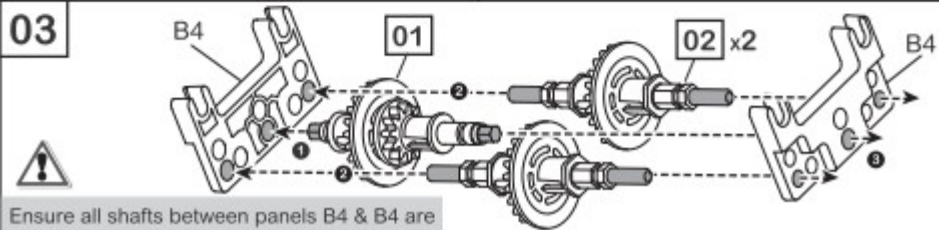
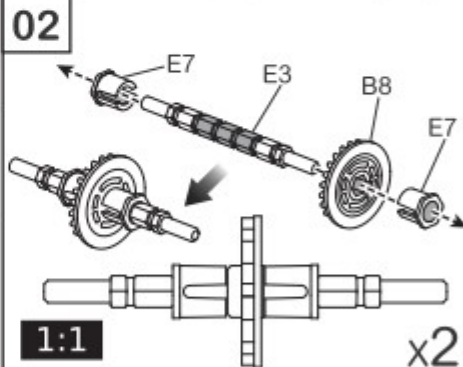
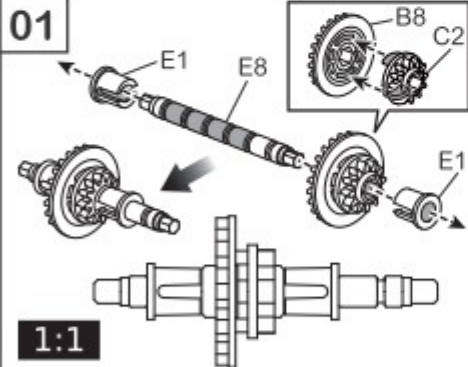
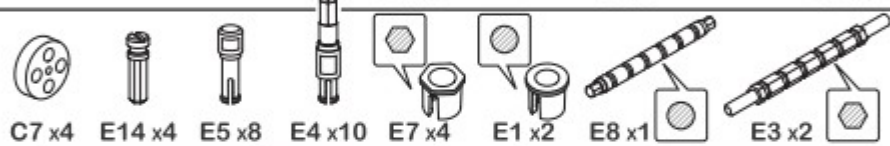
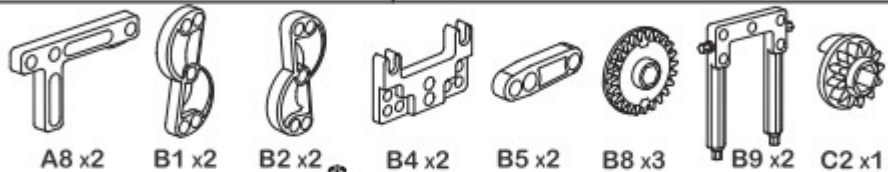
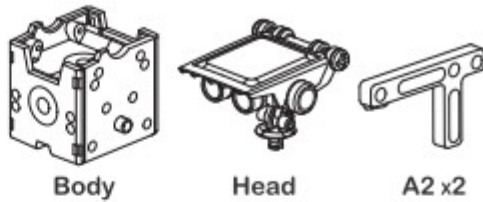


09 Crab-bot Assembly

Level 2

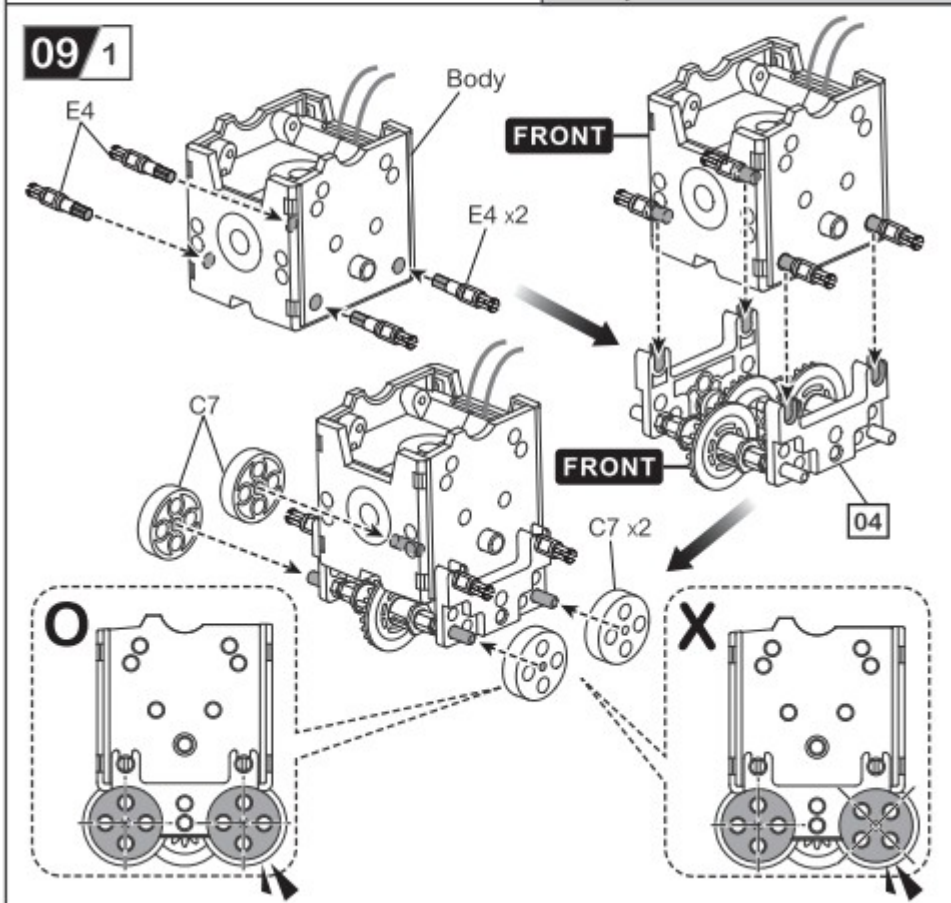
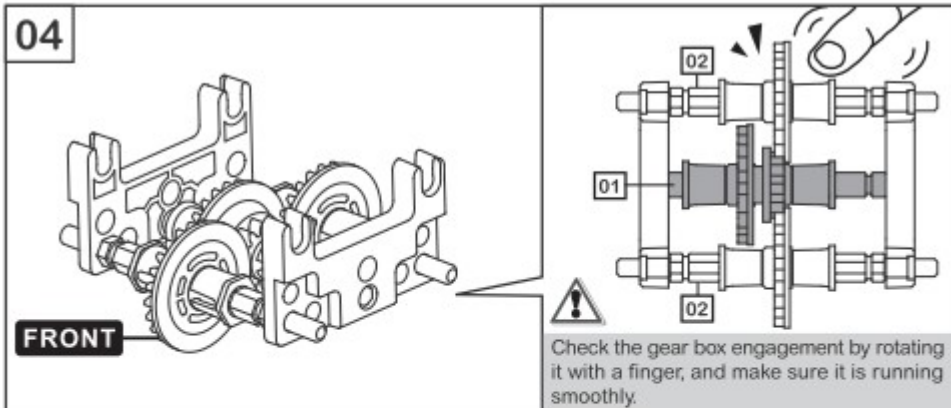


Prepare the below parts first before you assemble the "Crab-bot".



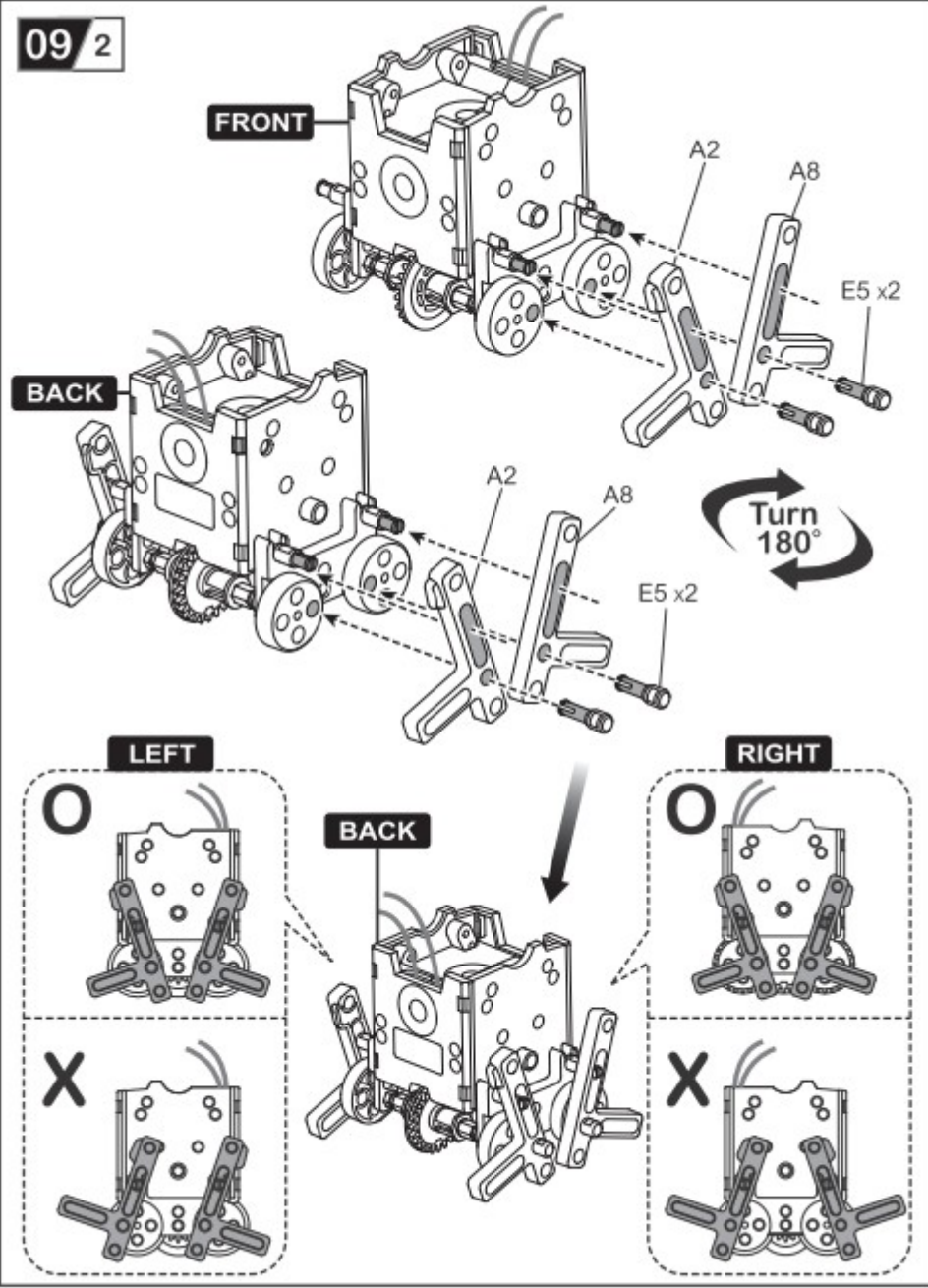
Bereid eerst de onderstaande onderdelen voor alvorens de "Crab-bot" te monteren.

Zorg ervoor dat alle assen tussen de panelen 4 & 4 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

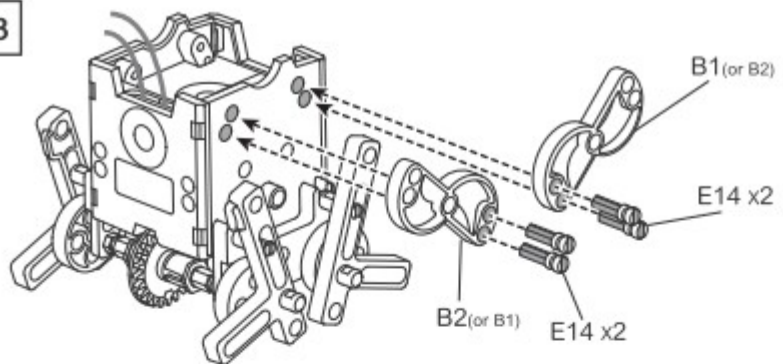


Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.

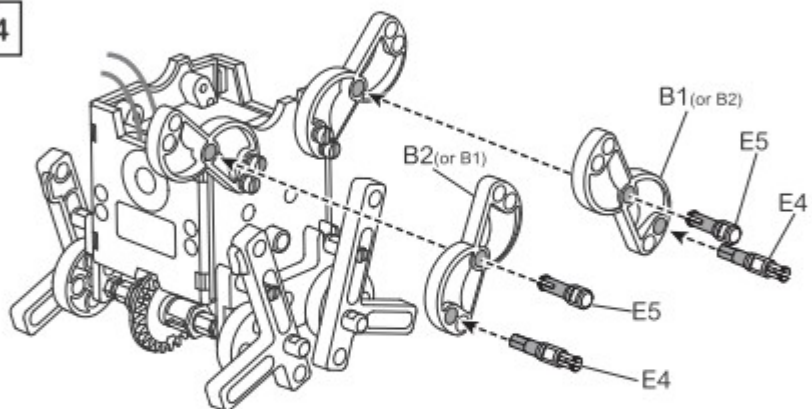
09/2



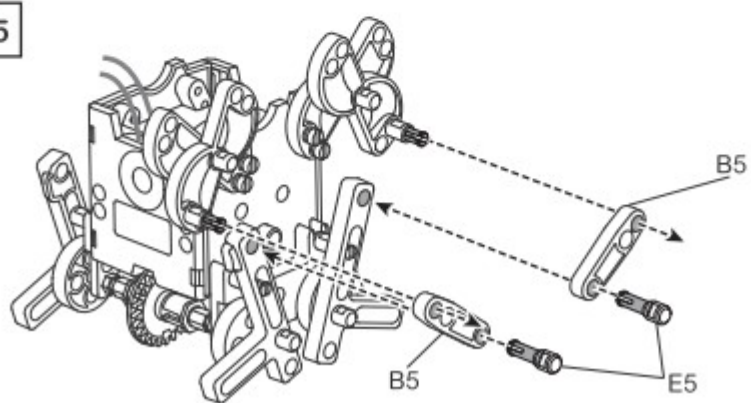
09/3

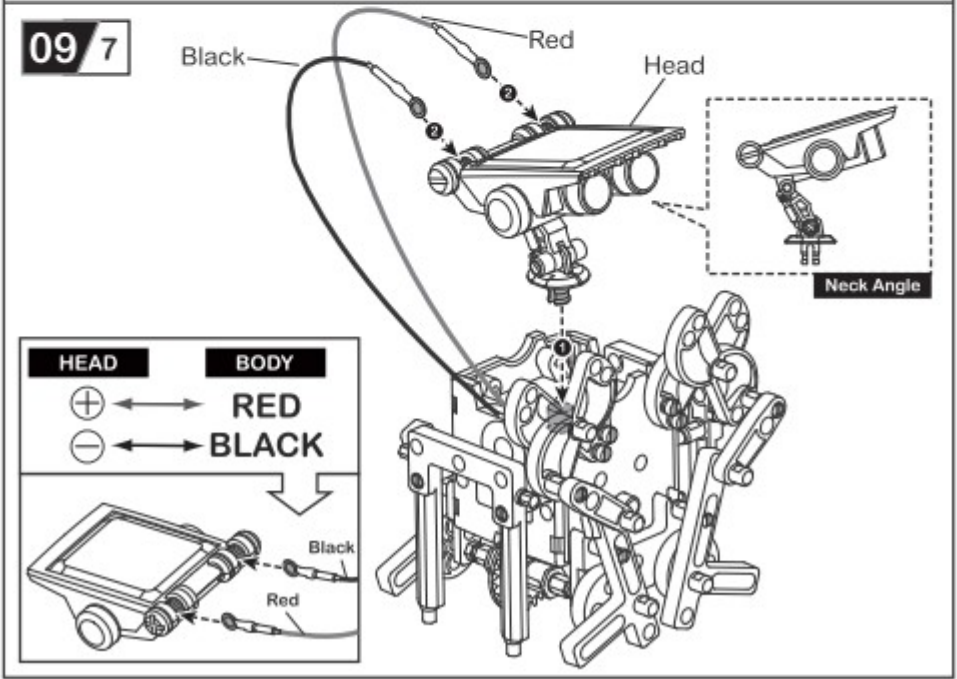
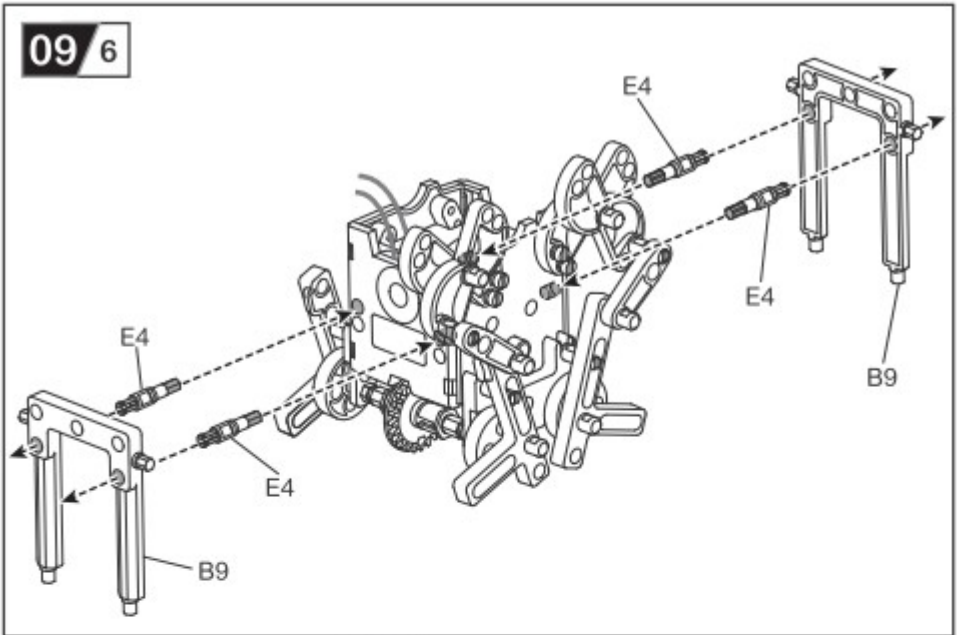


09/4



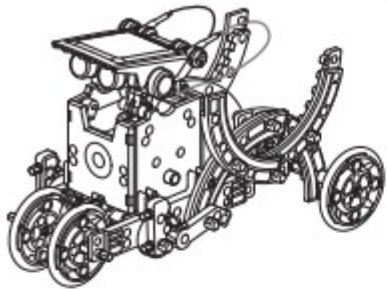
09/5





10 Slither-bot Assembly

Level 2



Prepare the below parts first before you assemble the "Slither-bot".



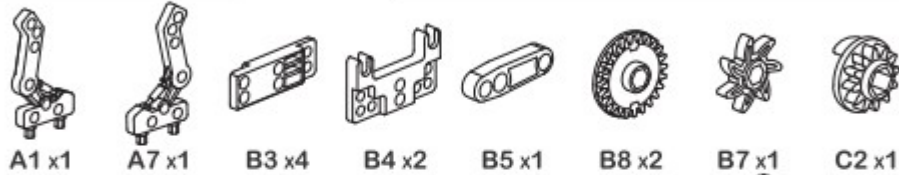
Body



Head



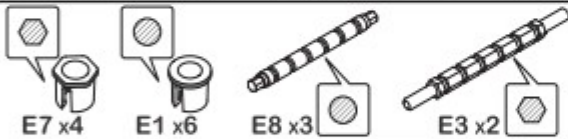
Wheel x4



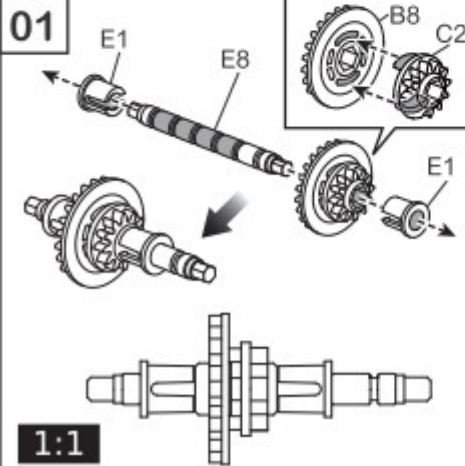
A1 x1 A7 x1 B3 x4 B4 x2 B5 x1 B8 x2 B7 x1 C2 x1



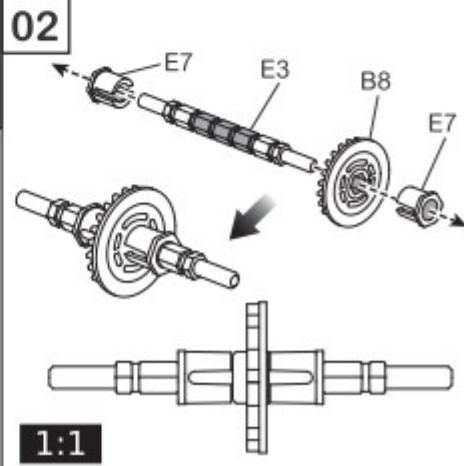
C1 x8 C6 x1 C7 x2 E6 x6 E5 x12 E10 x4 E9 x1 E12 x2



E7 x4 E1 x6 E8 x3 E3 x2

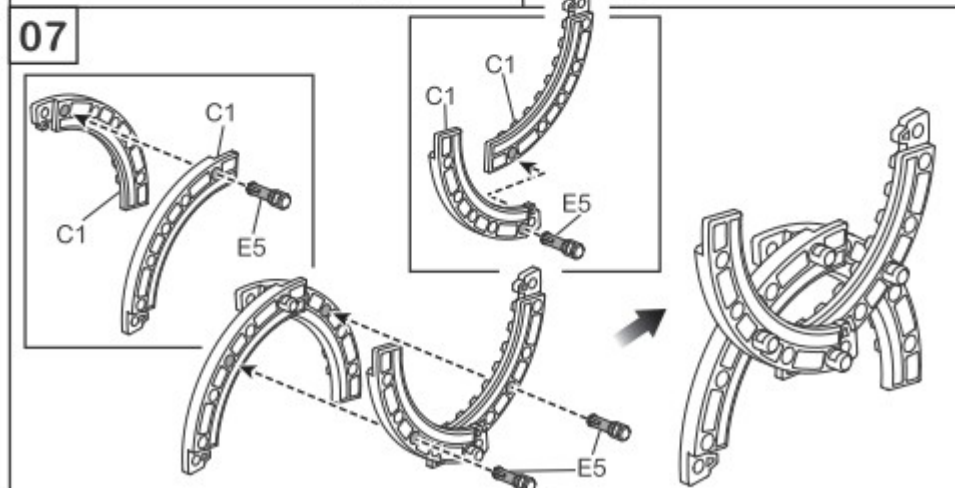
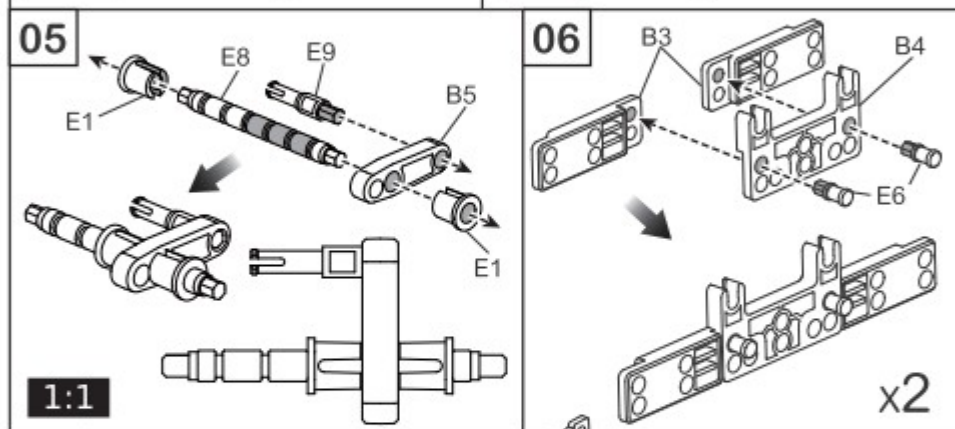
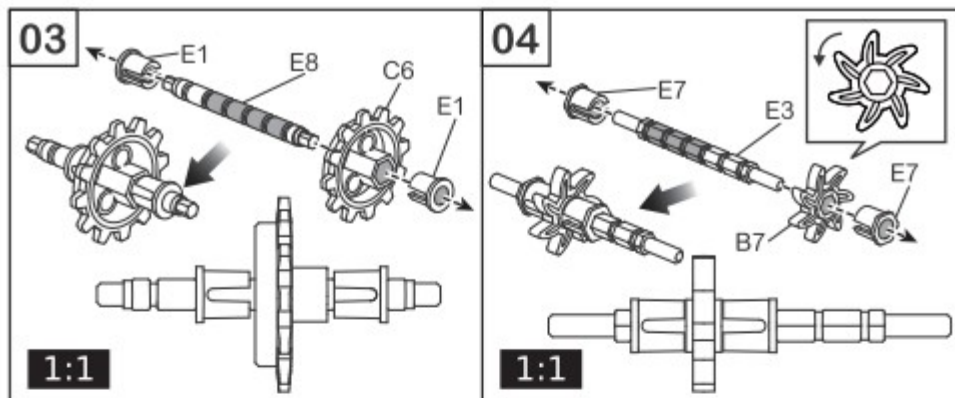


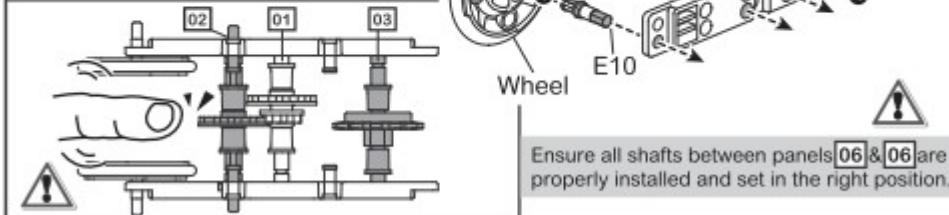
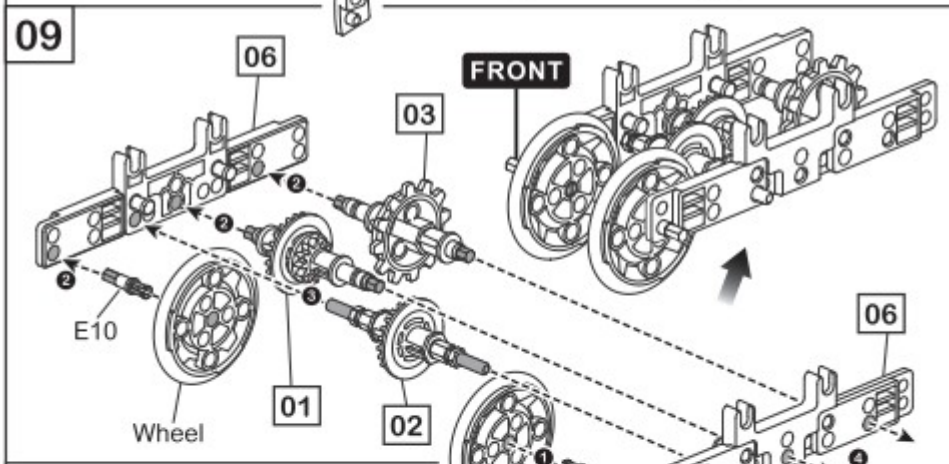
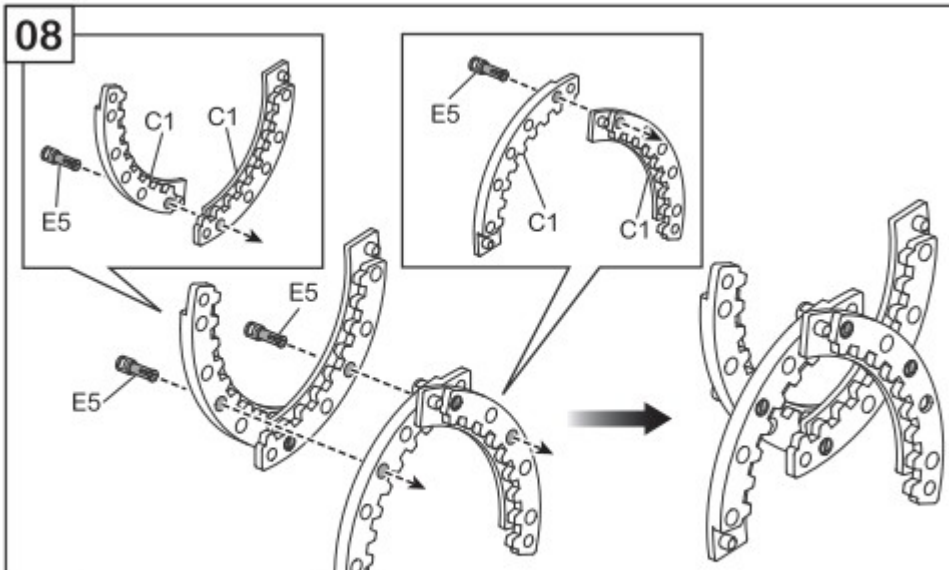
01
1:1



02
1:1

Bereid eerst de onderstaande onderdelen voor alvorens de "Slither-bot" te monteren.

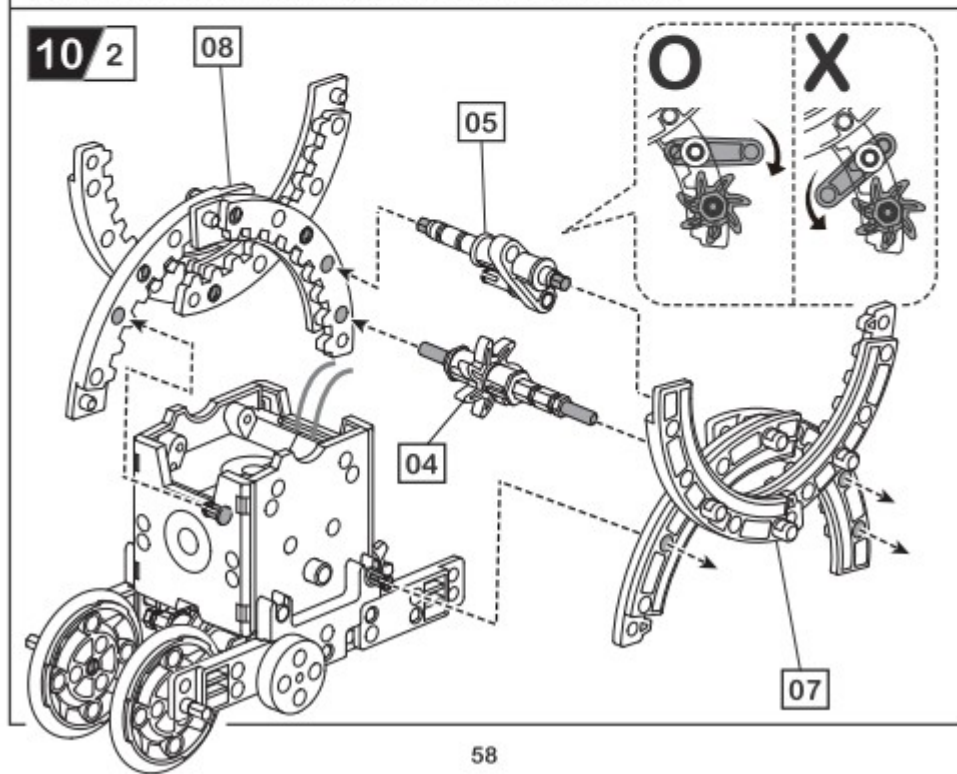
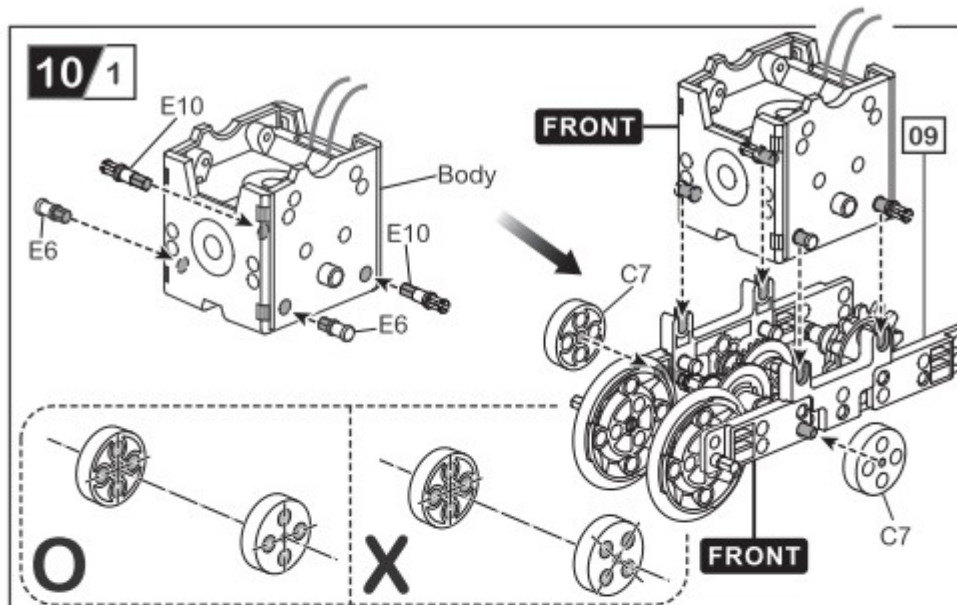


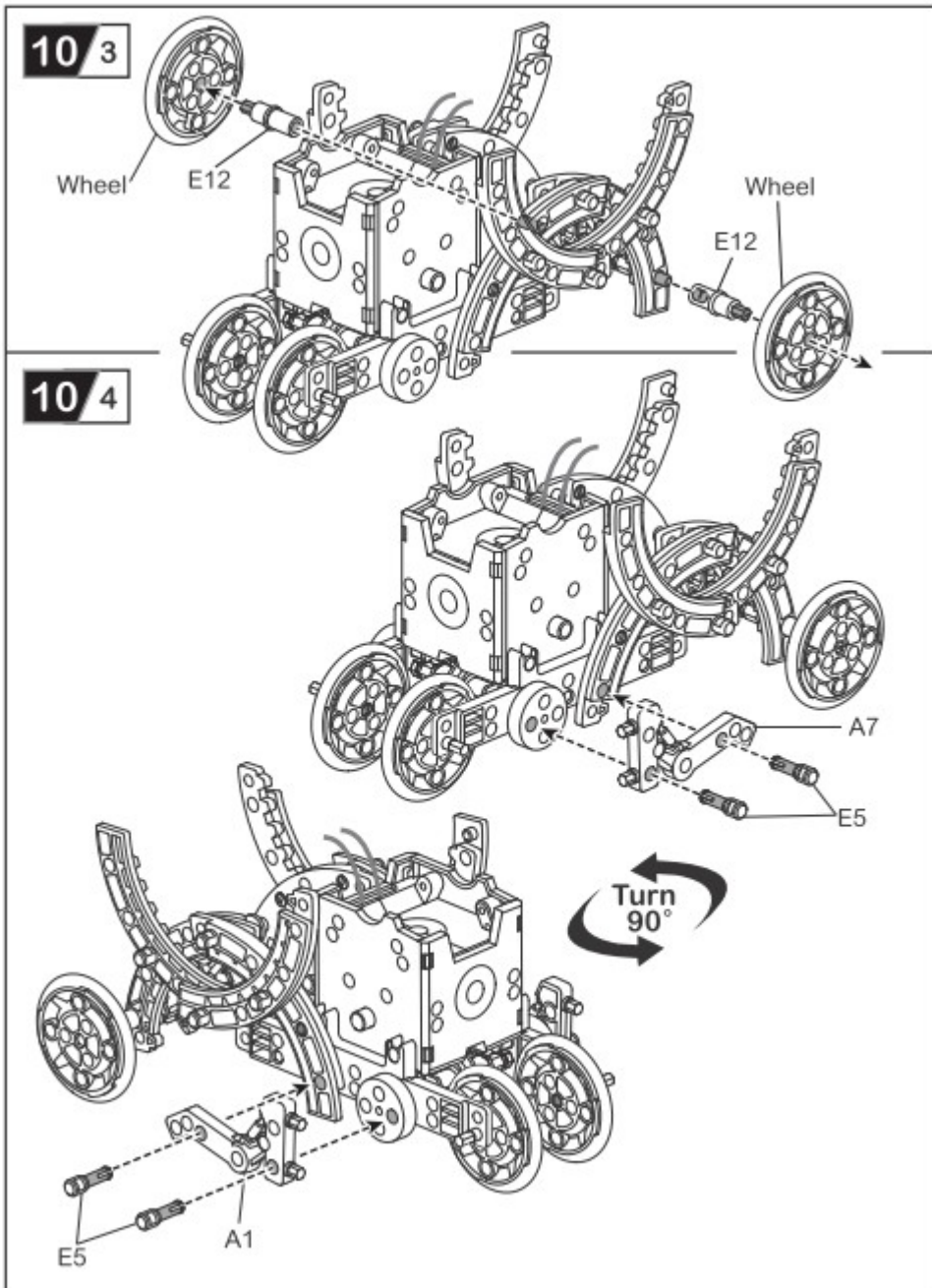


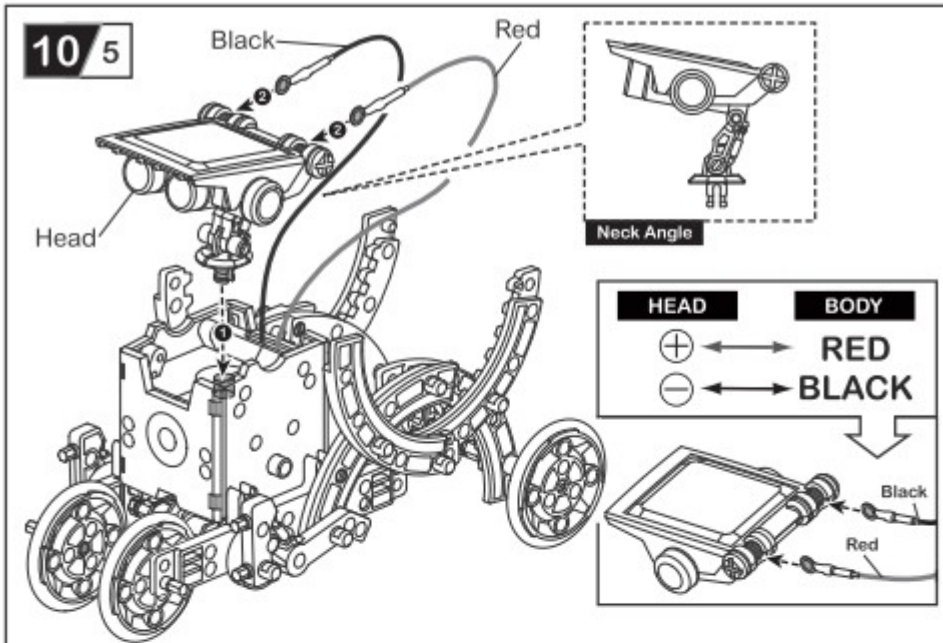
Check the gear box engagement by rotating it with a finger, and make sure it is running smoothly.

Zorg ervoor dat alle assen tussen de panelen 06 & 06 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.

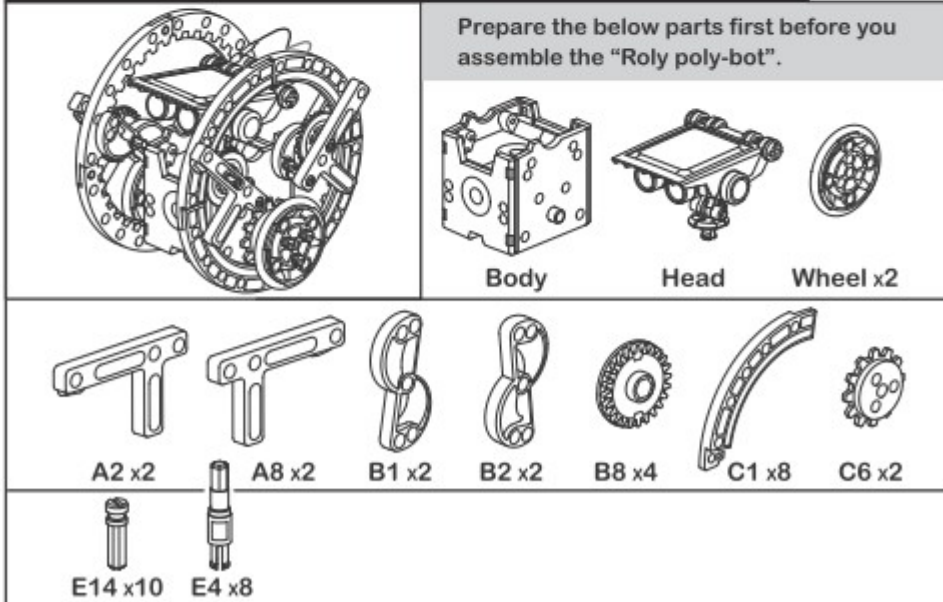






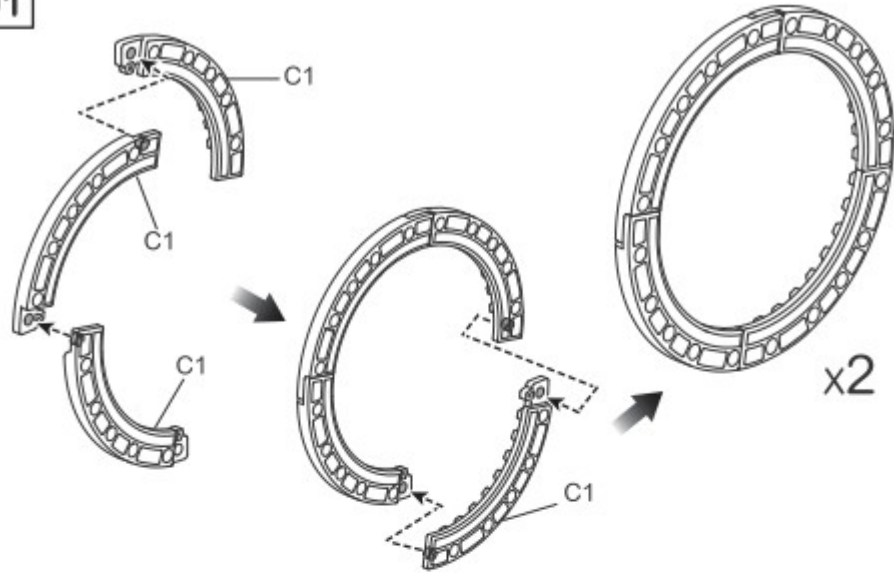
11 Roly poly-bot Assembly

Level 2

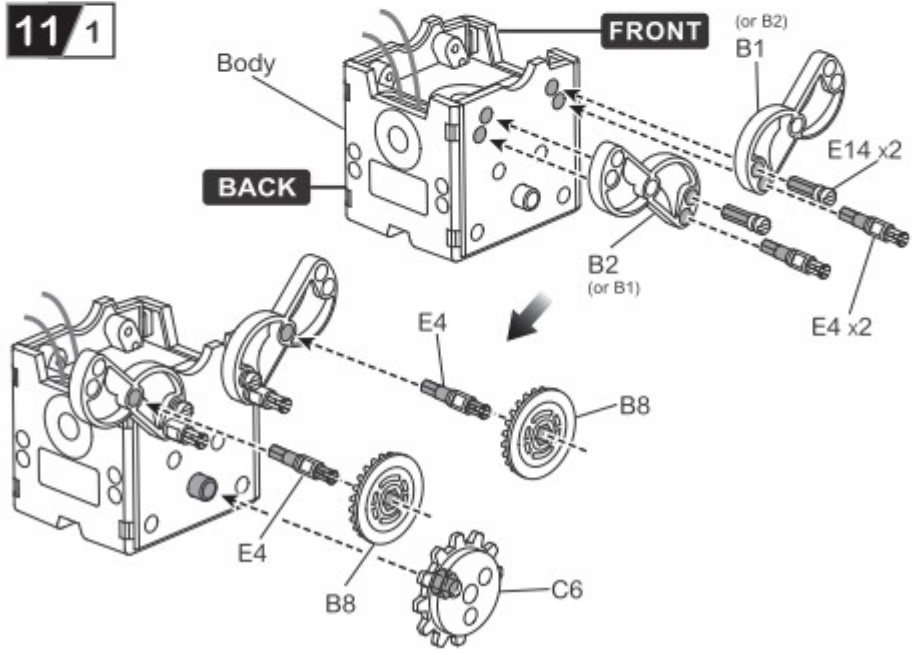


Bereid eerst de onderstaande onderdelen voor alvorens de "Roly poly-bot" te monteren.

01

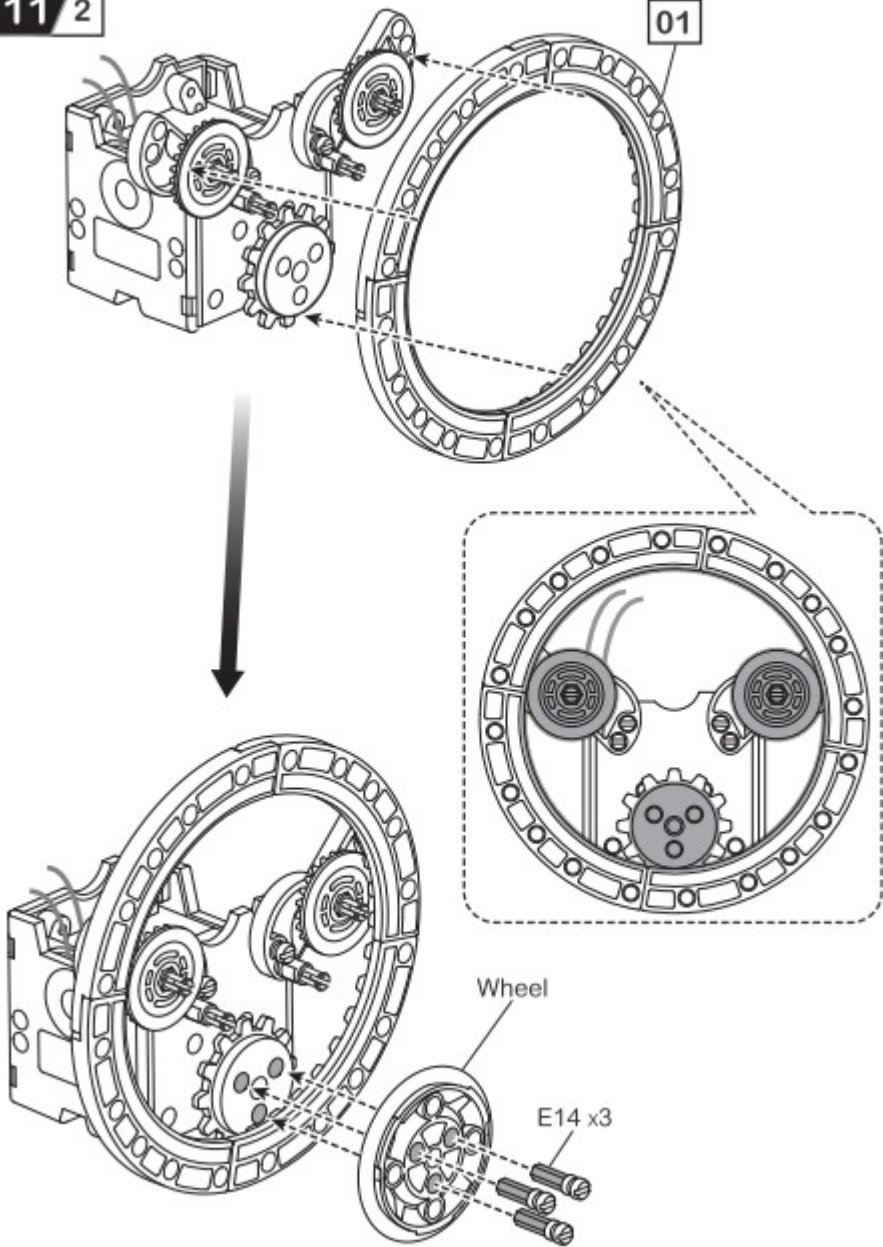


11 / 1

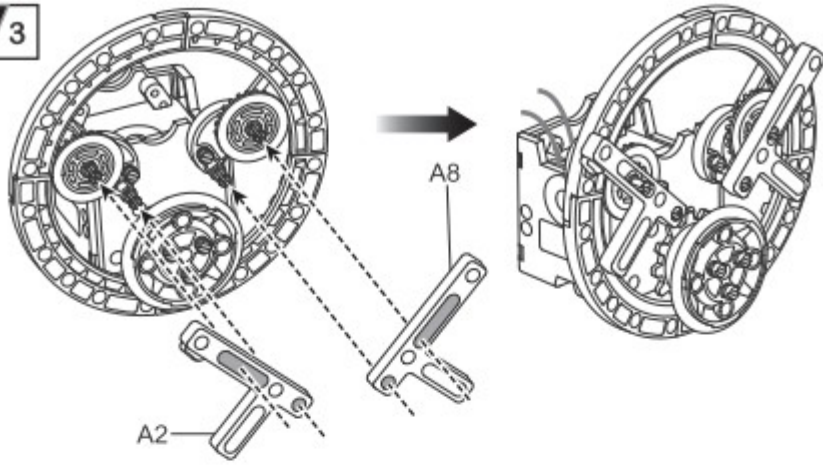


11/2

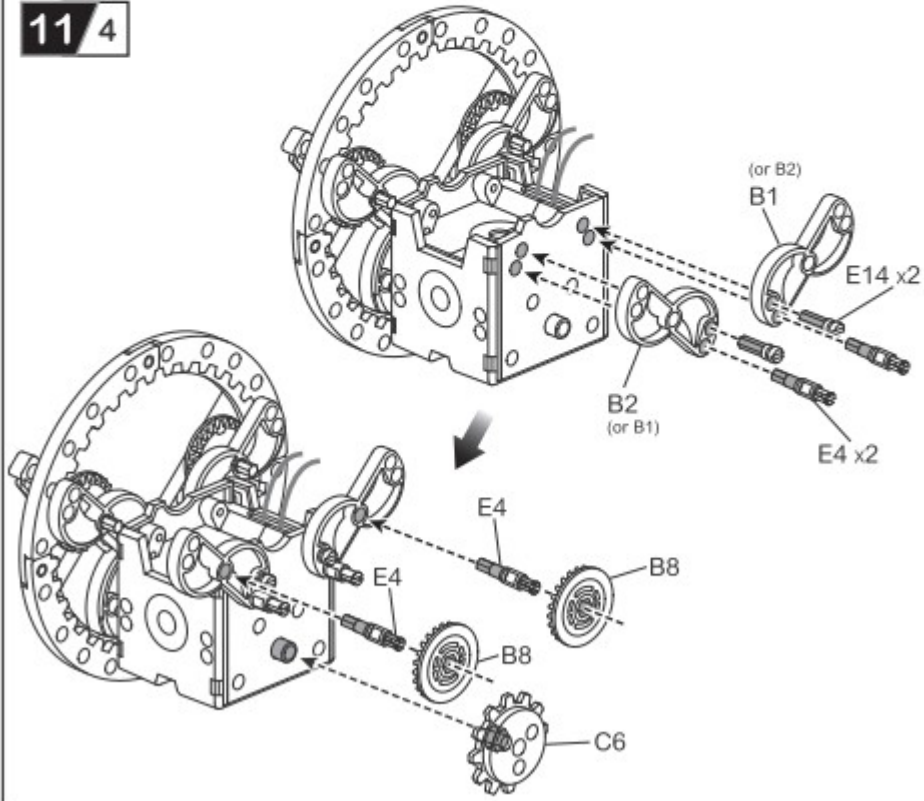
01



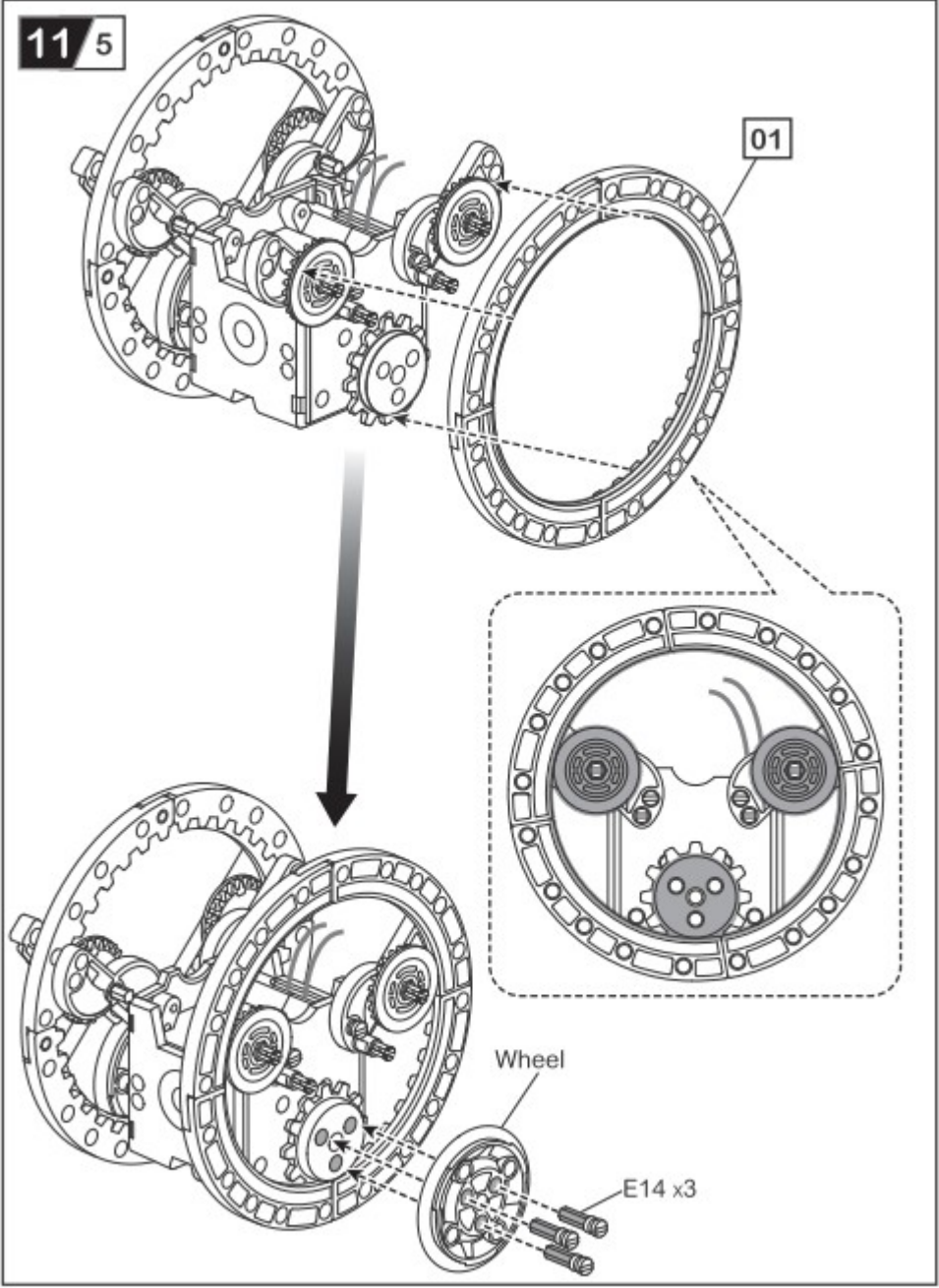
11/3

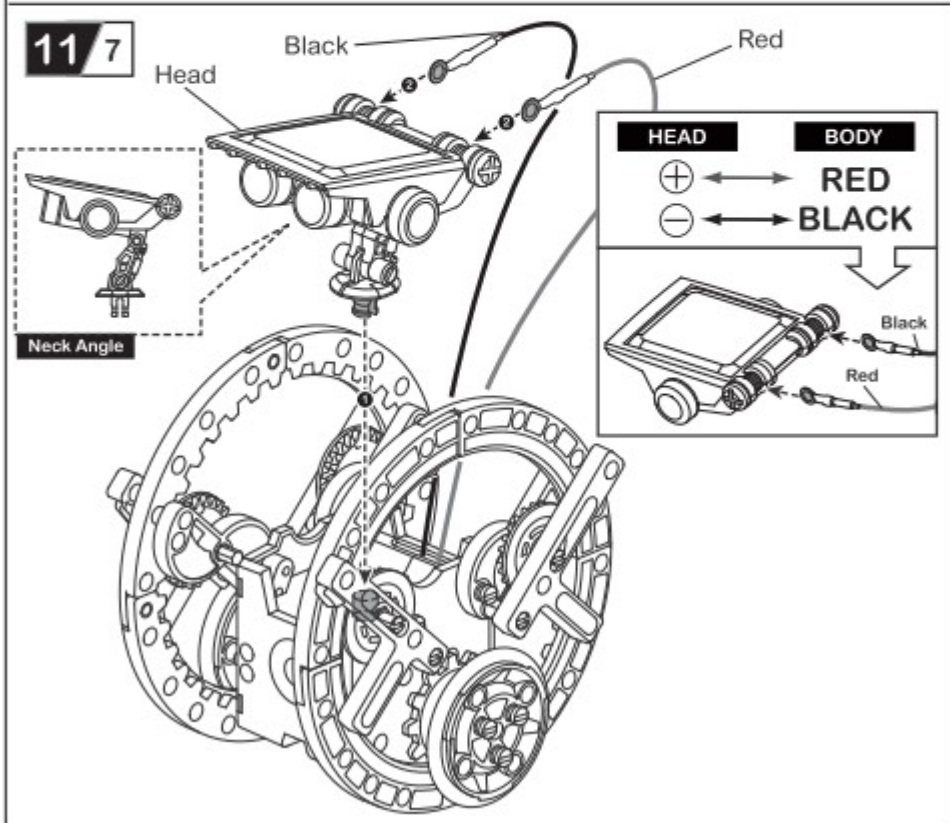
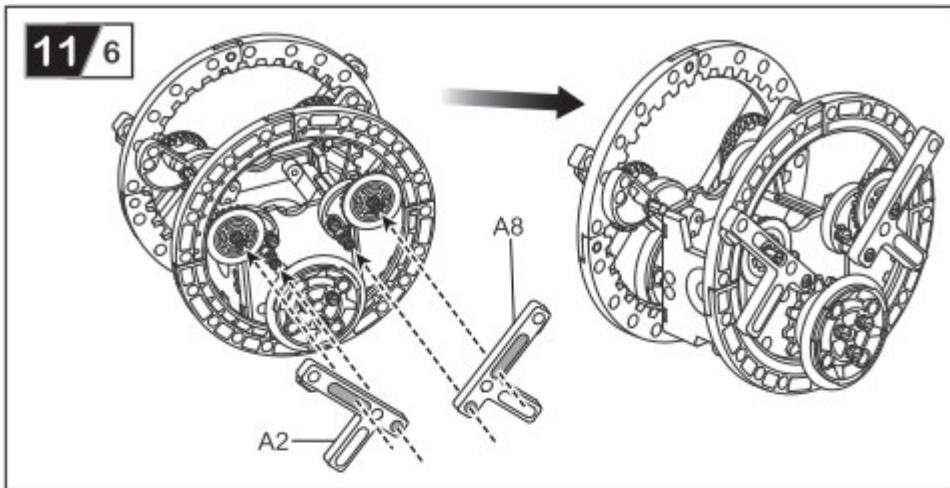


11/4



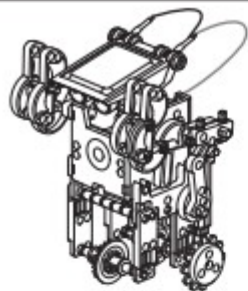
11 / 5



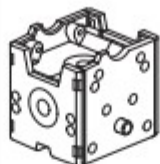


12 Boxer-bot Assembly

Level 2



Prepare the below parts first before you assemble the "Boxer-bot".



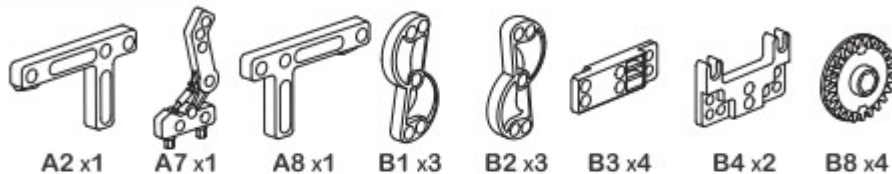
Body



Head



A1 x1



A2 x1

A7 x1

A8 x1

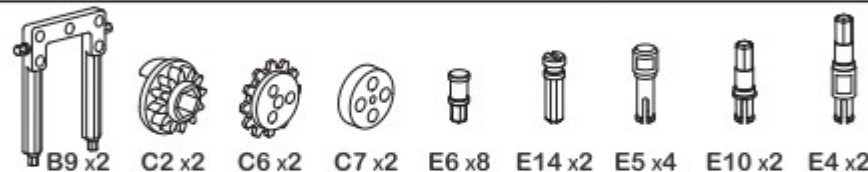
B1 x3

B2 x3

B3 x4

B4 x2

B8 x4



B9 x2

C2 x2

C6 x2

C7 x2

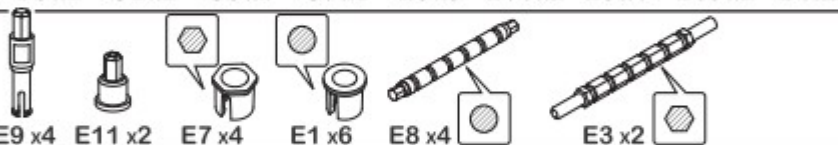
E6 x8

E14 x2

E5 x4

E10 x2

E4 x2



E9 x4

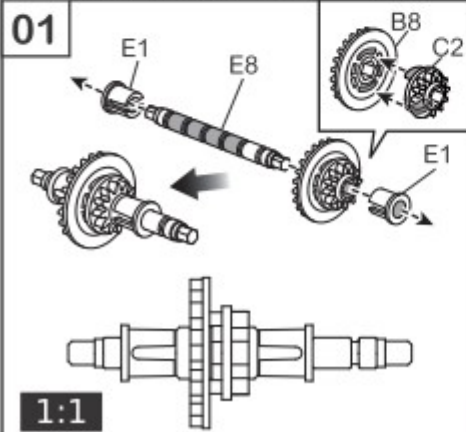
E11 x2

E7 x4

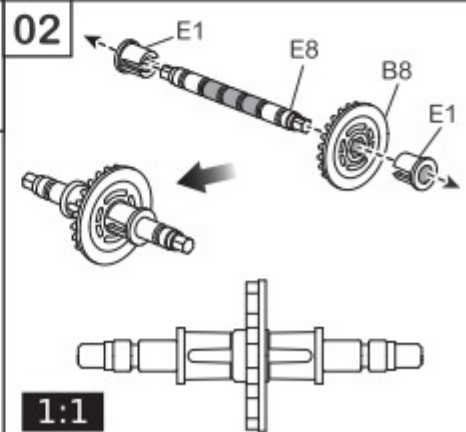
E1 x6

E8 x4

E3 x2

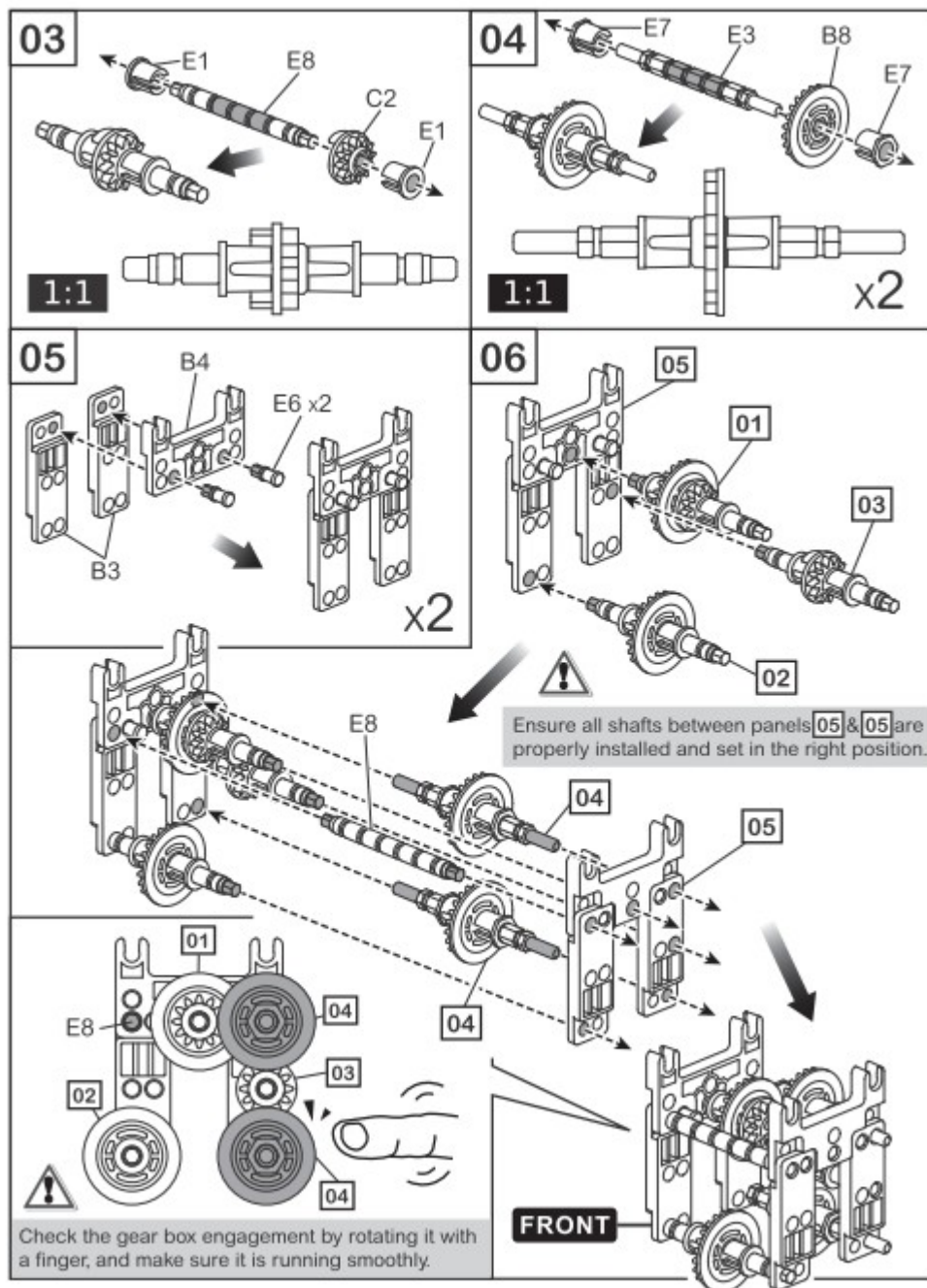


01



02

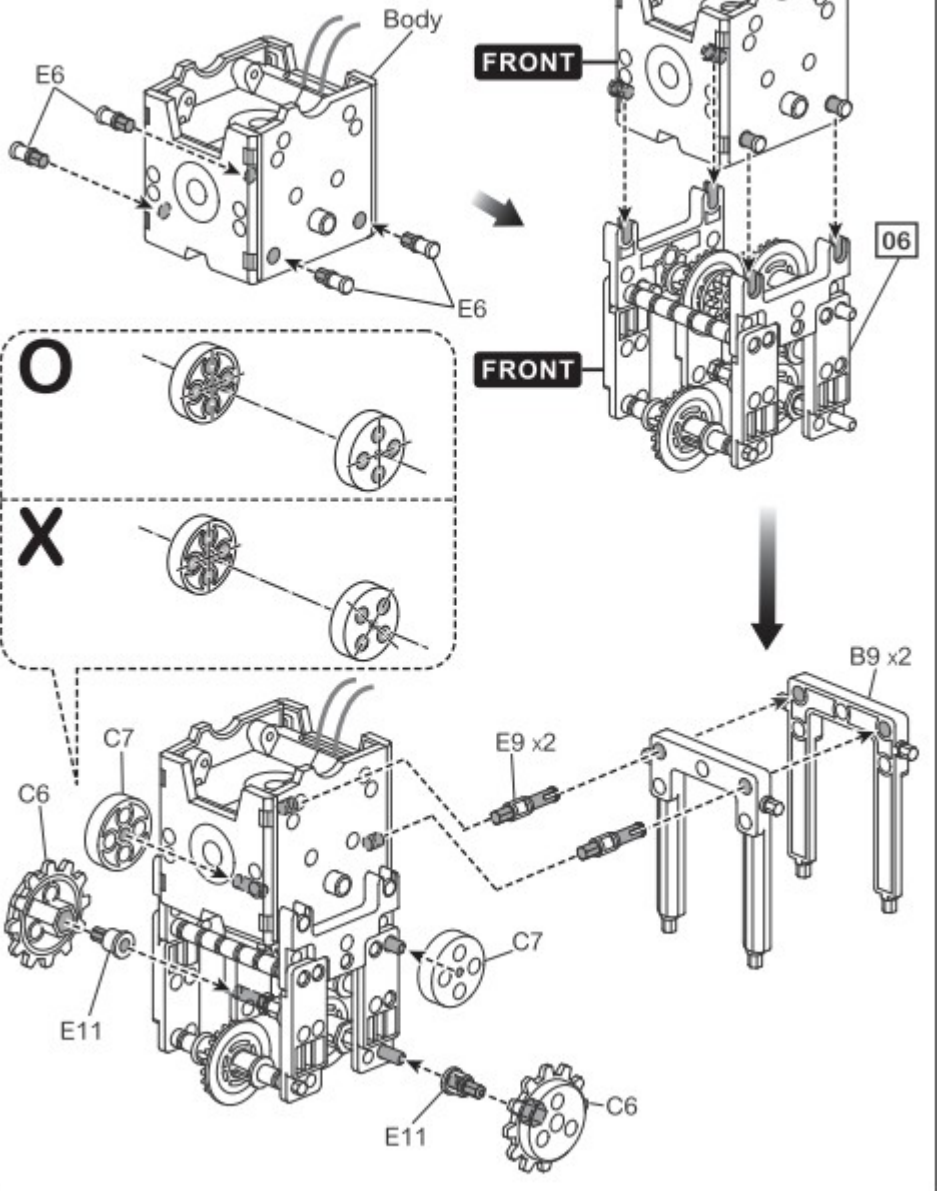
Bereid eerst de onderstaande onderdelen voor alvorens de "Boxer-bot" te monteren.



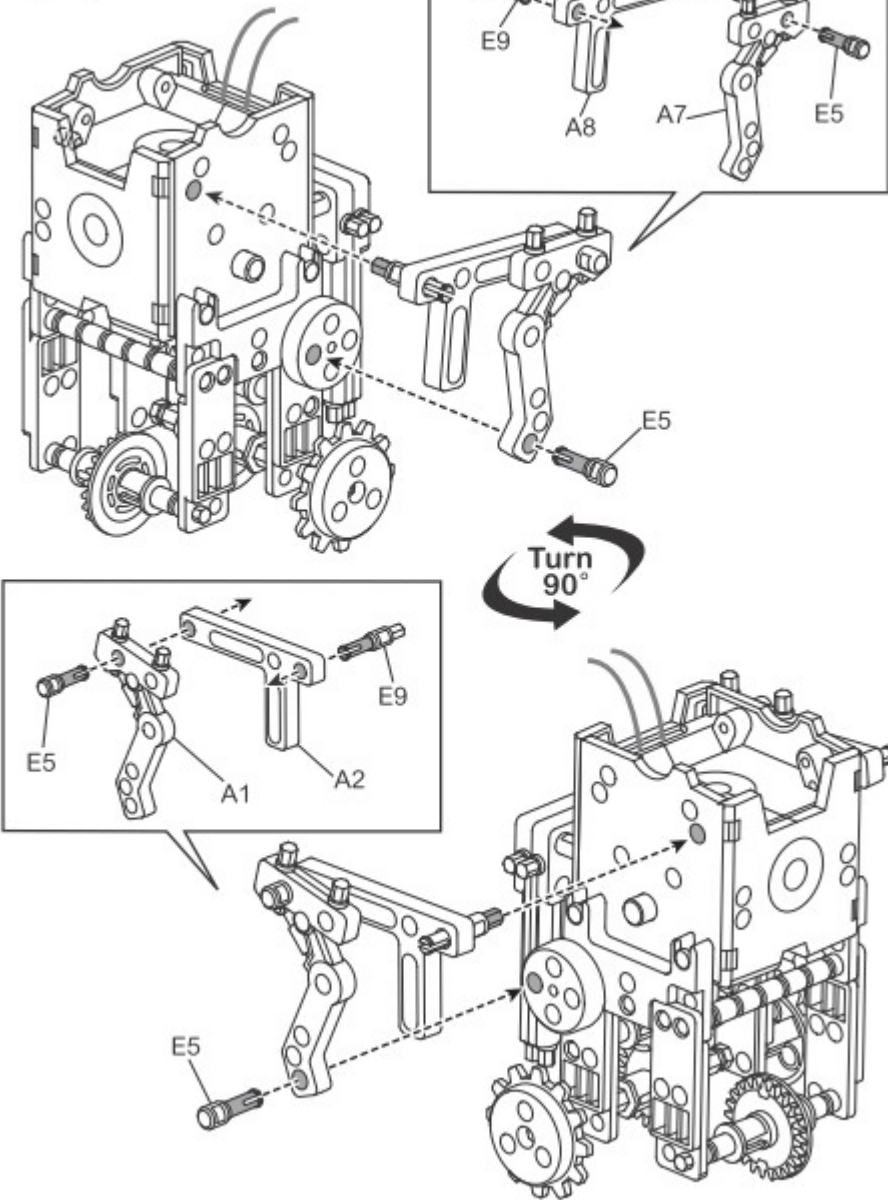
Zorg ervoor dat alle assen tussen de panelen 05 & 05 correct geïnstalleerd zijn en zich in de juiste positie bevinden.

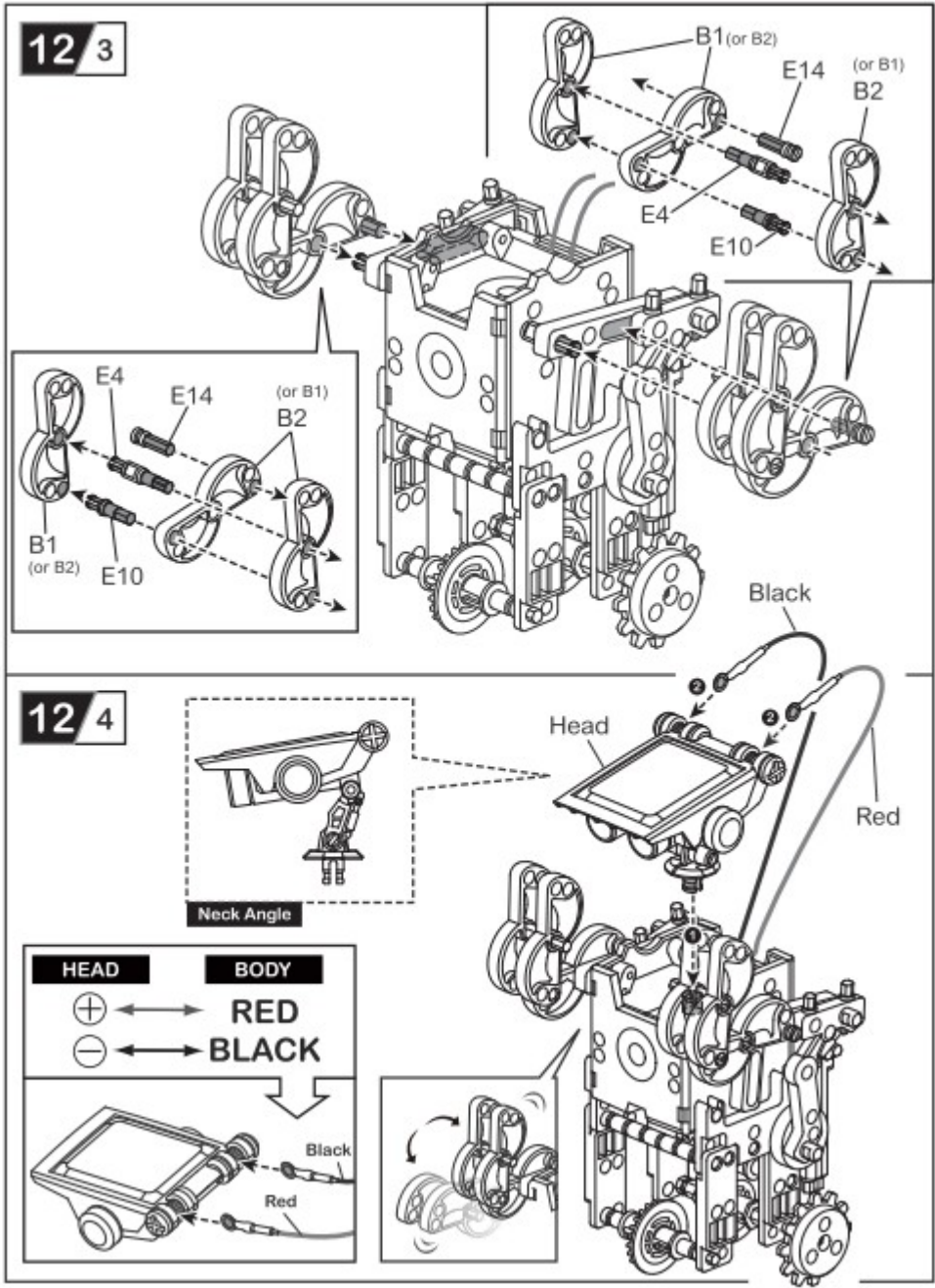
Controleer of de versnellingsbak grijpt door hem met een vinger te draaien. Zorg ervoor dat deze soepel loopt.

12/1



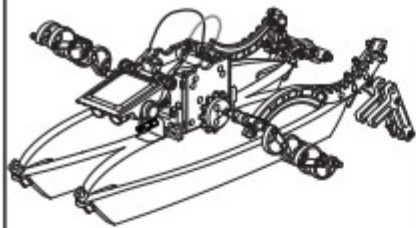
12/2





13 Surf-bot Assembly

Level 2



Prepare the below parts first before you assemble the "Surf-bot".



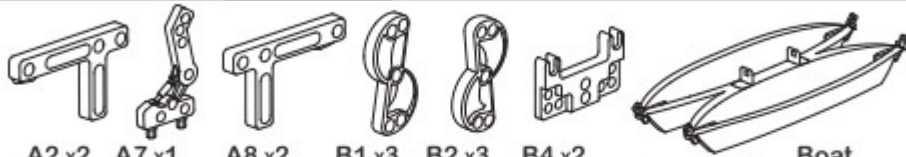
Body



Head



A1 x1



A2 x2

A7 x1

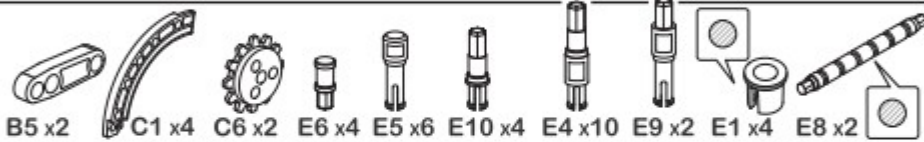
A8 x2

B1 x3

B2 x3

B4 x2

Boat



B5 x2

C1 x4

C6 x2

E6 x4

E5 x6

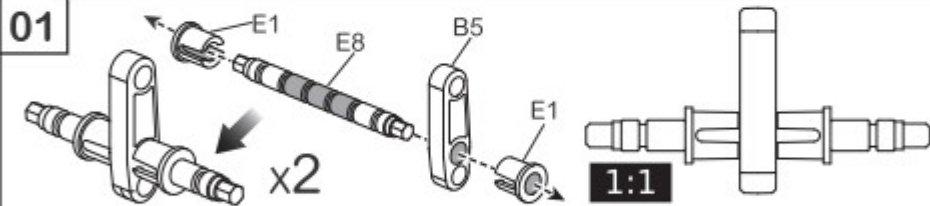
E10 x4

E4 x10

E9 x2

E1 x4

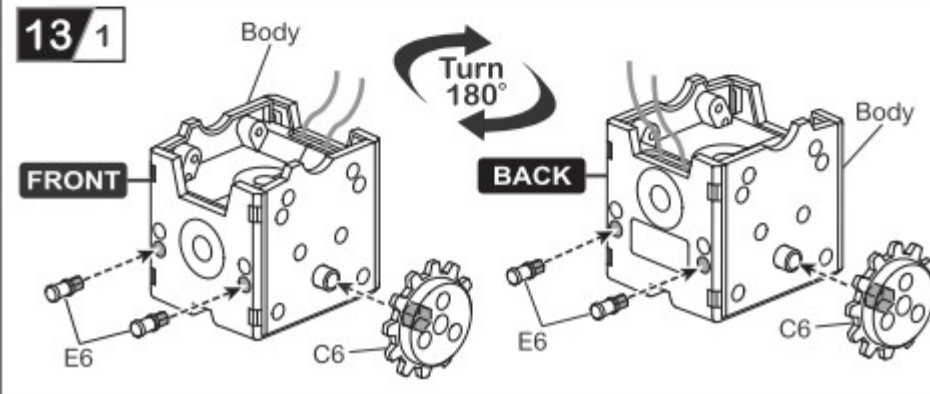
E8 x2



01

x2

1:1



13/1

Body

Turn 180°

FRONT

BACK

Body

E6

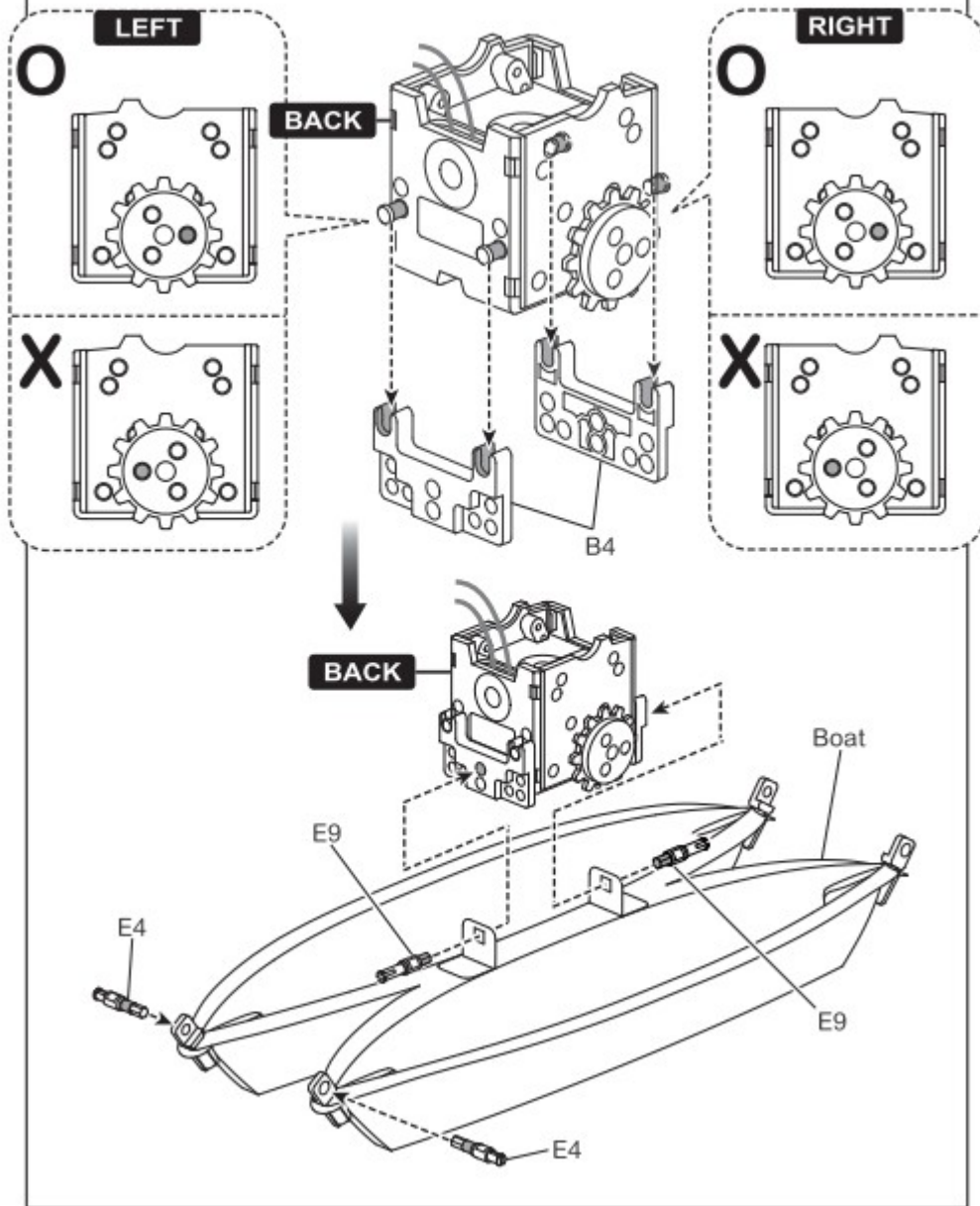
C6

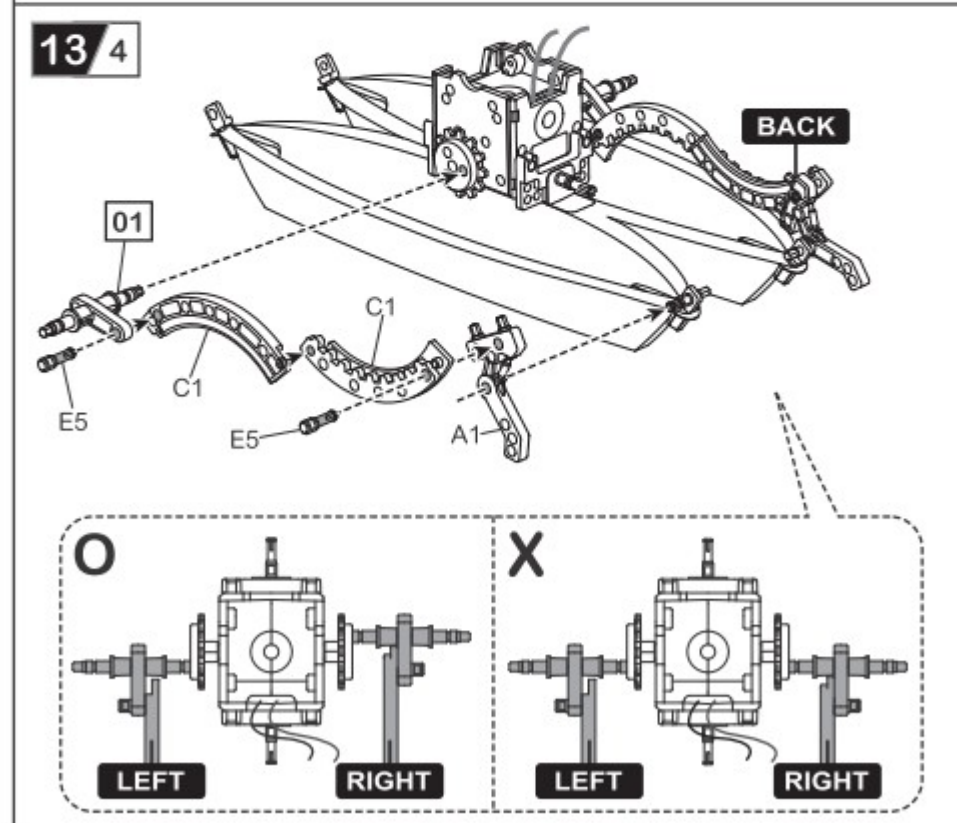
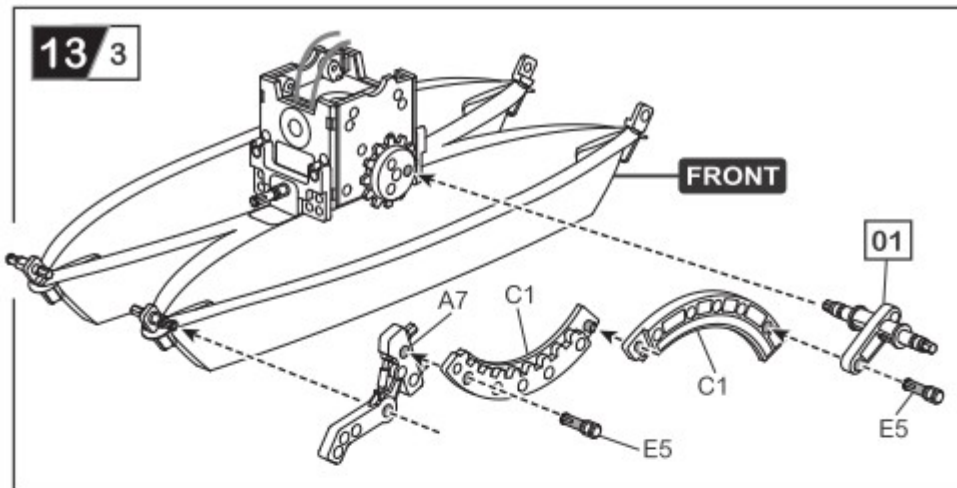
E6

C6

Bereid eerst de onderstaande onderdelen voor alvorens de "Surf-bot" te monteren.

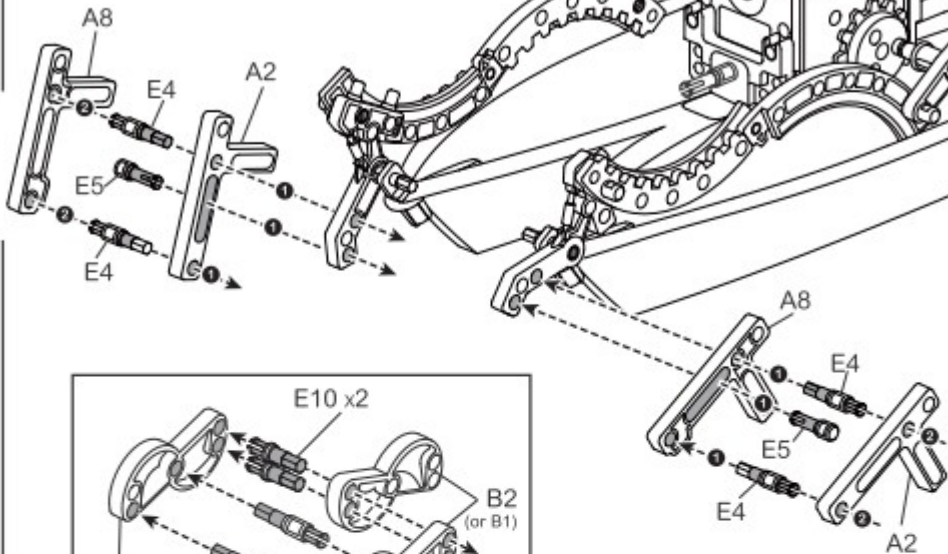
13/2





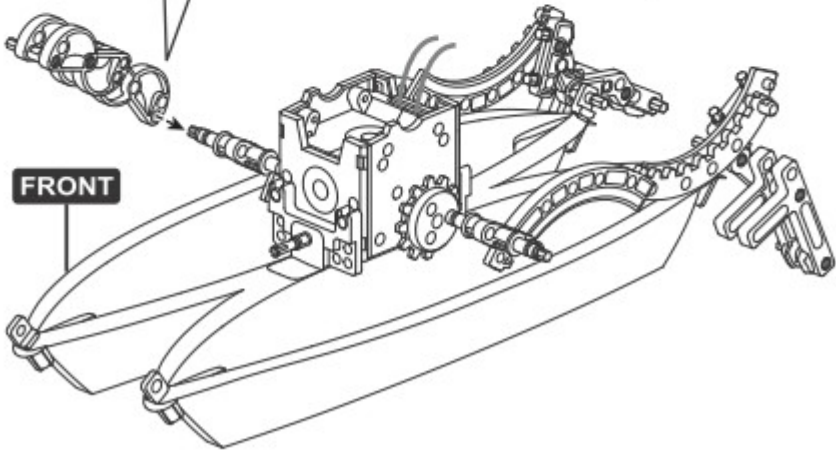
13 / 5

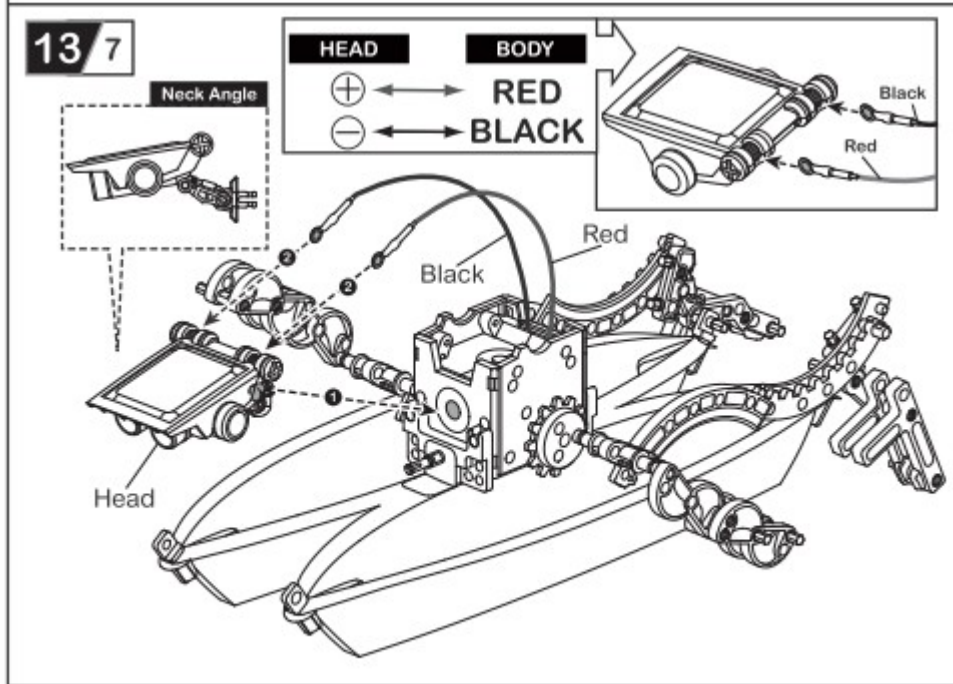
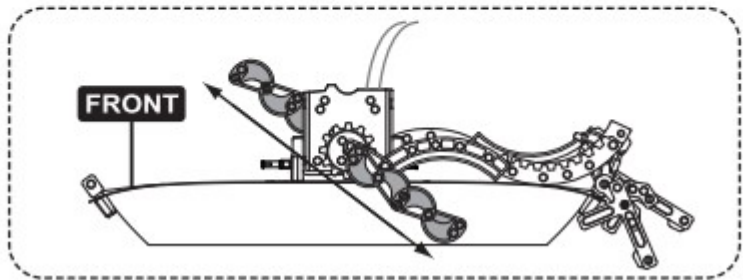
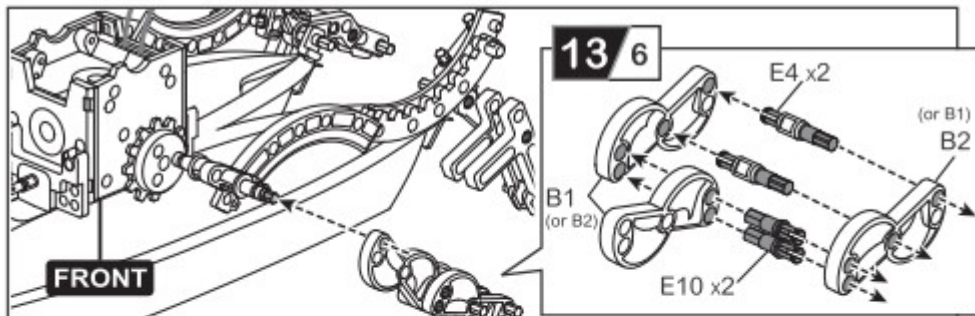
BACK



Turn
180°

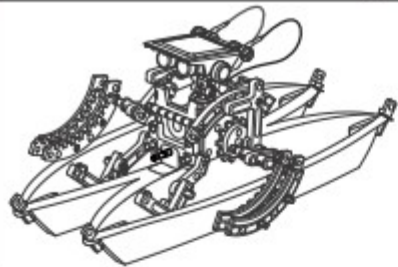
FRONT



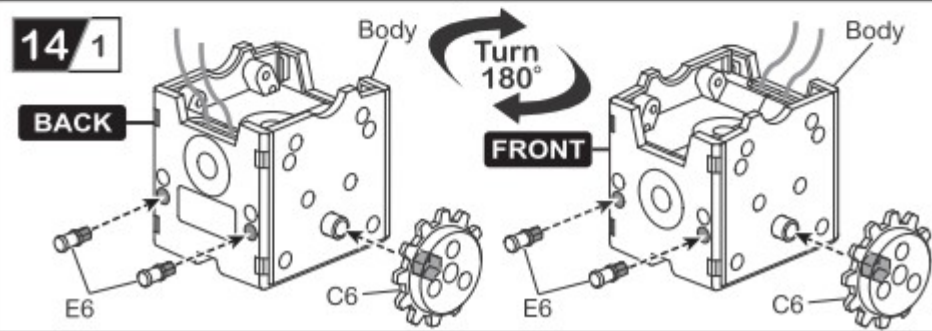
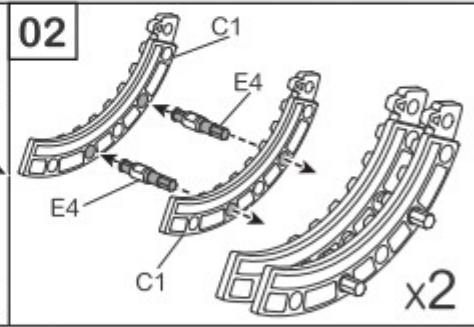
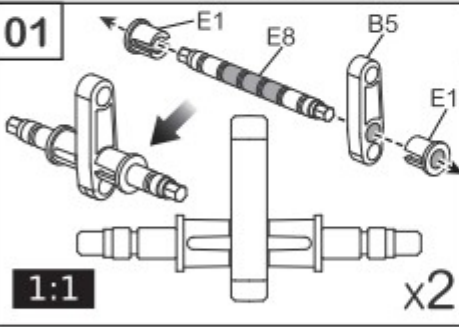
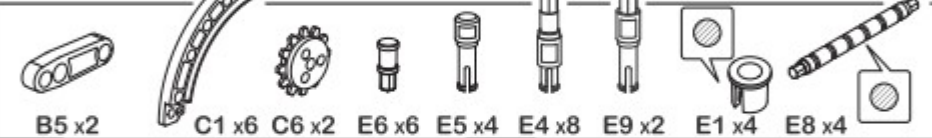
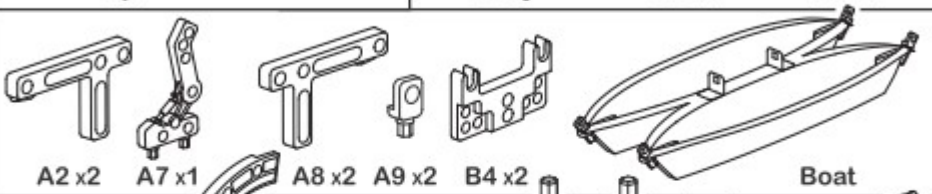
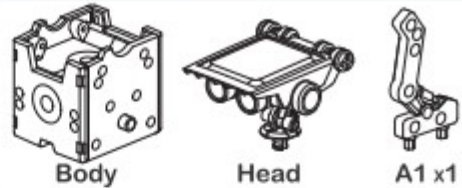


14 Row-bot Assembly

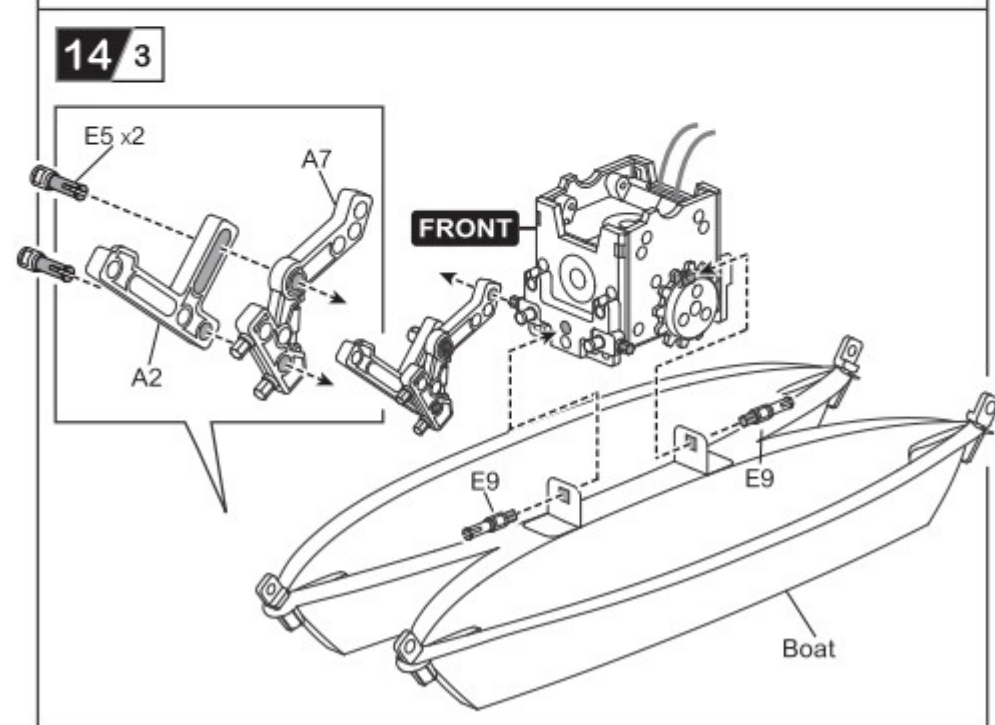
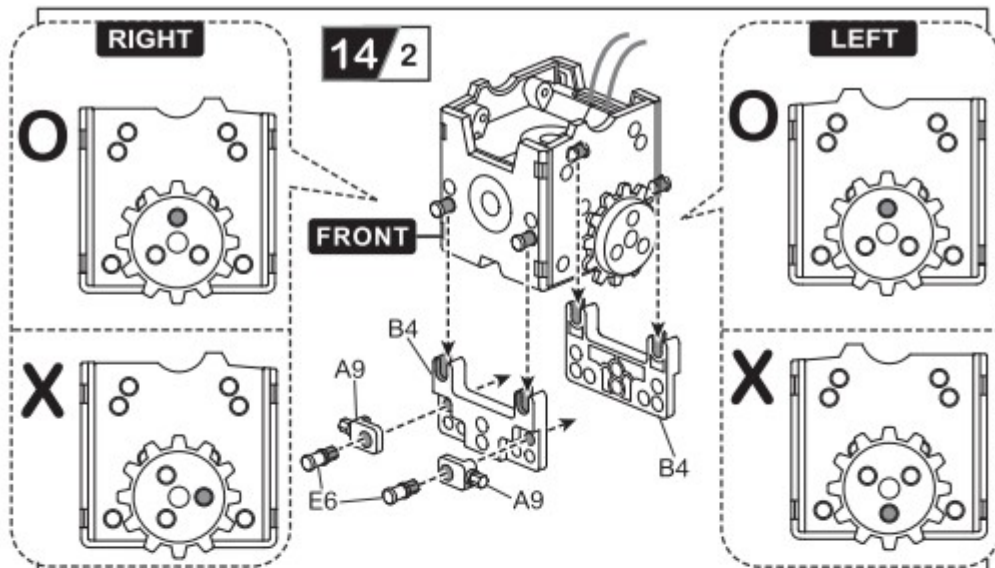
Level 2

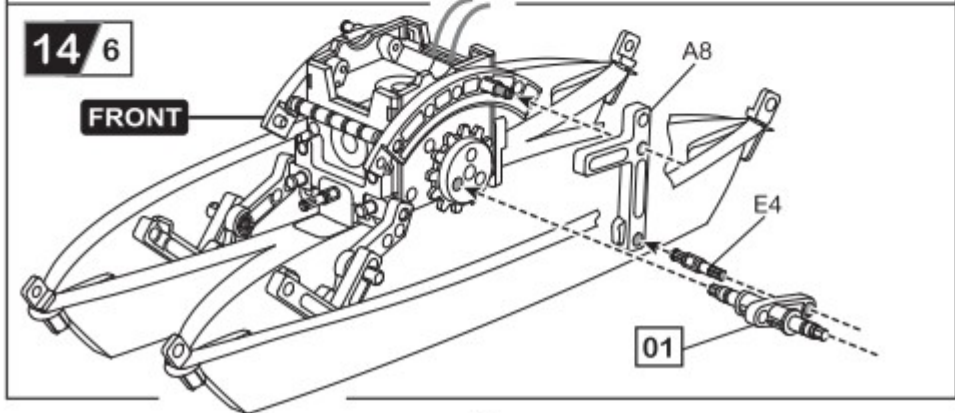
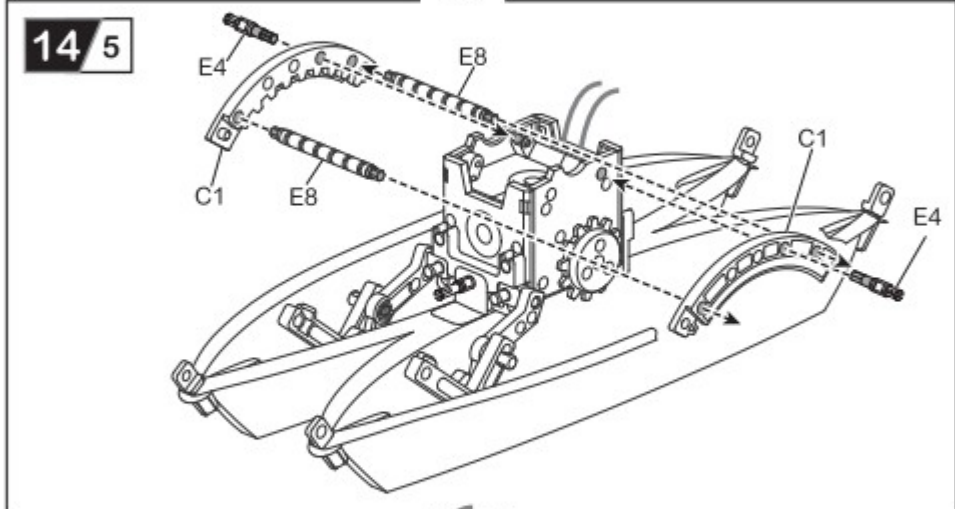
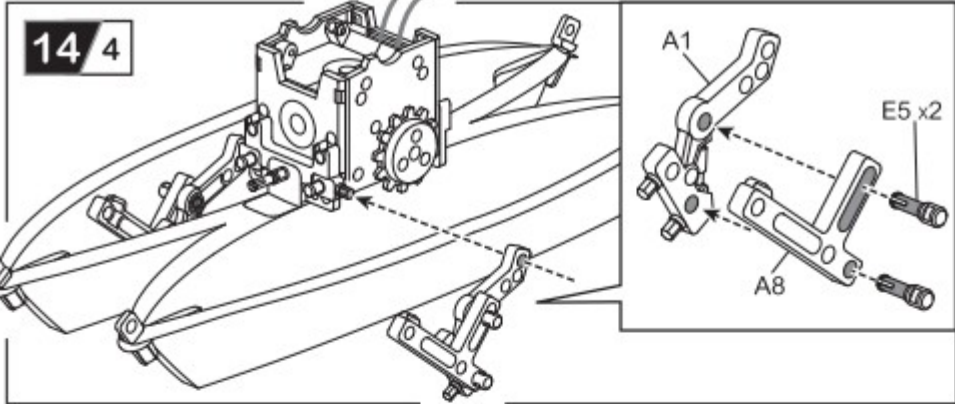


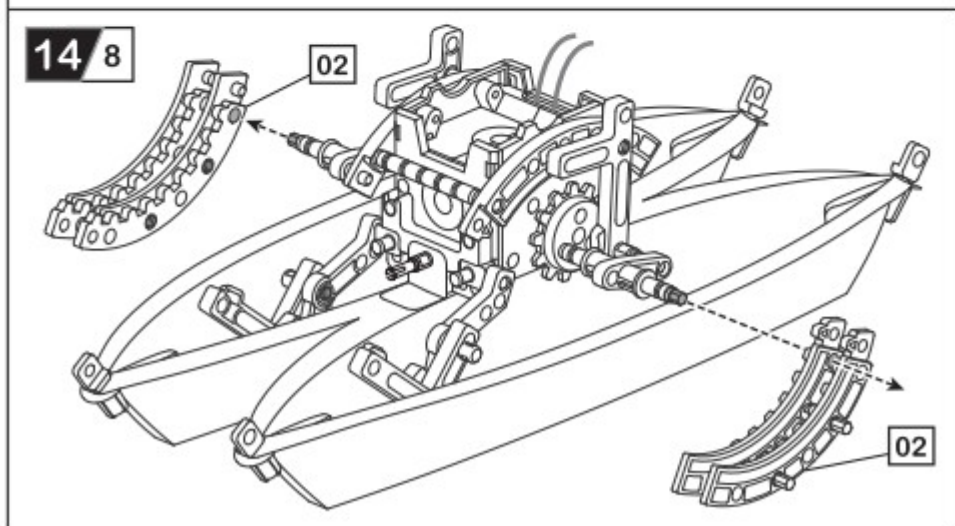
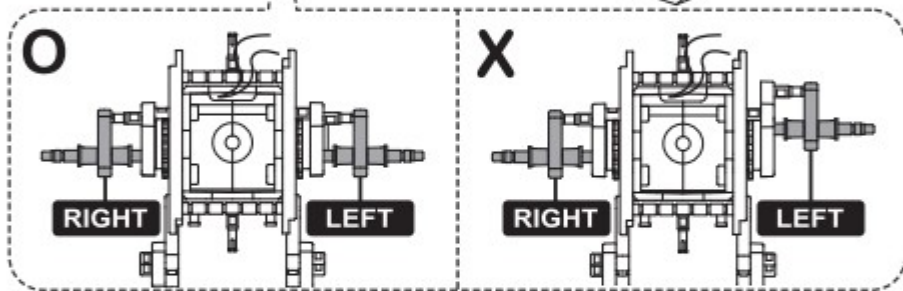
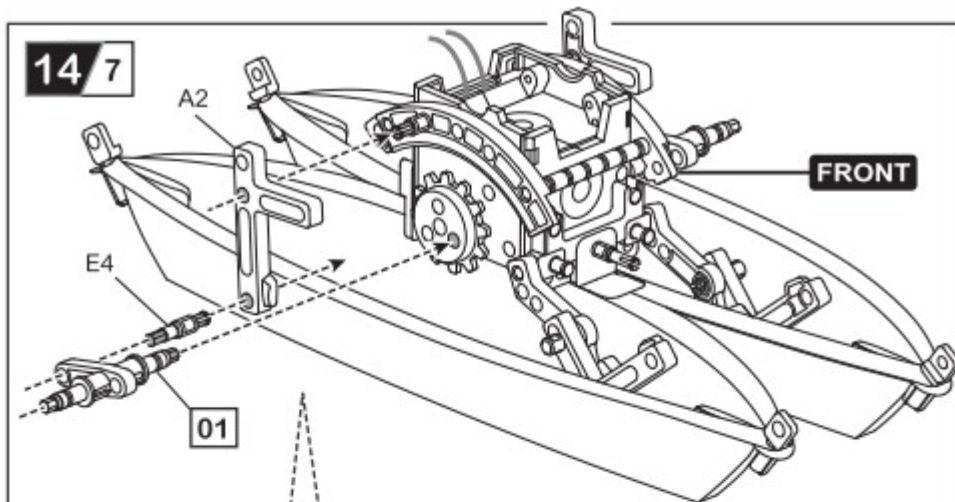
Prepare the below parts first before you assemble the "Row-bot".

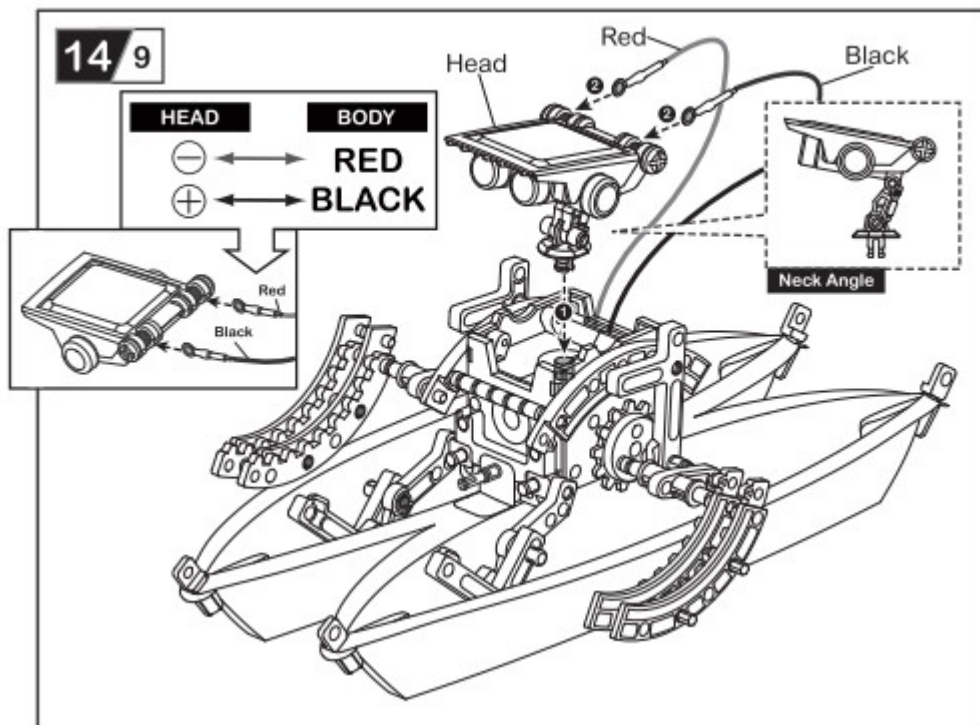


Bereid eerst de onderstaande onderdelen voor alvorens de "Row-bot" te monteren.









It's time to have some FUN !



1. Take outside under direct sunlight. Best results are obtained when operated on a sunny day.
2. For indoor fun, use a 50 watt halogen light. The product will not run on a cloudy day, shaded locations, indirect sunlight, or under a Fluorescent light.

Tijd om plezier te maken

1. Neem het product mee naar buiten in direct zonlicht. De beste resultaten worden verkregen bij gebruik op een zonnige dag.
2. Voor plezier binnenshuis, gebruik een 50 W halogeenlamp. Het product werkt niet op een bewolkte dag, in schaduwachtige omgevingen, bij indirect zonlicht of onder fluorescerend licht.

- 14 solar robots
- Educational
- Robotistic
- Mechanical
- Scientific & Fun

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14 in 1 EDUCATIONAL
SOLAR ROBOT KIT

4350006151