CURIOUS DISCOVERY

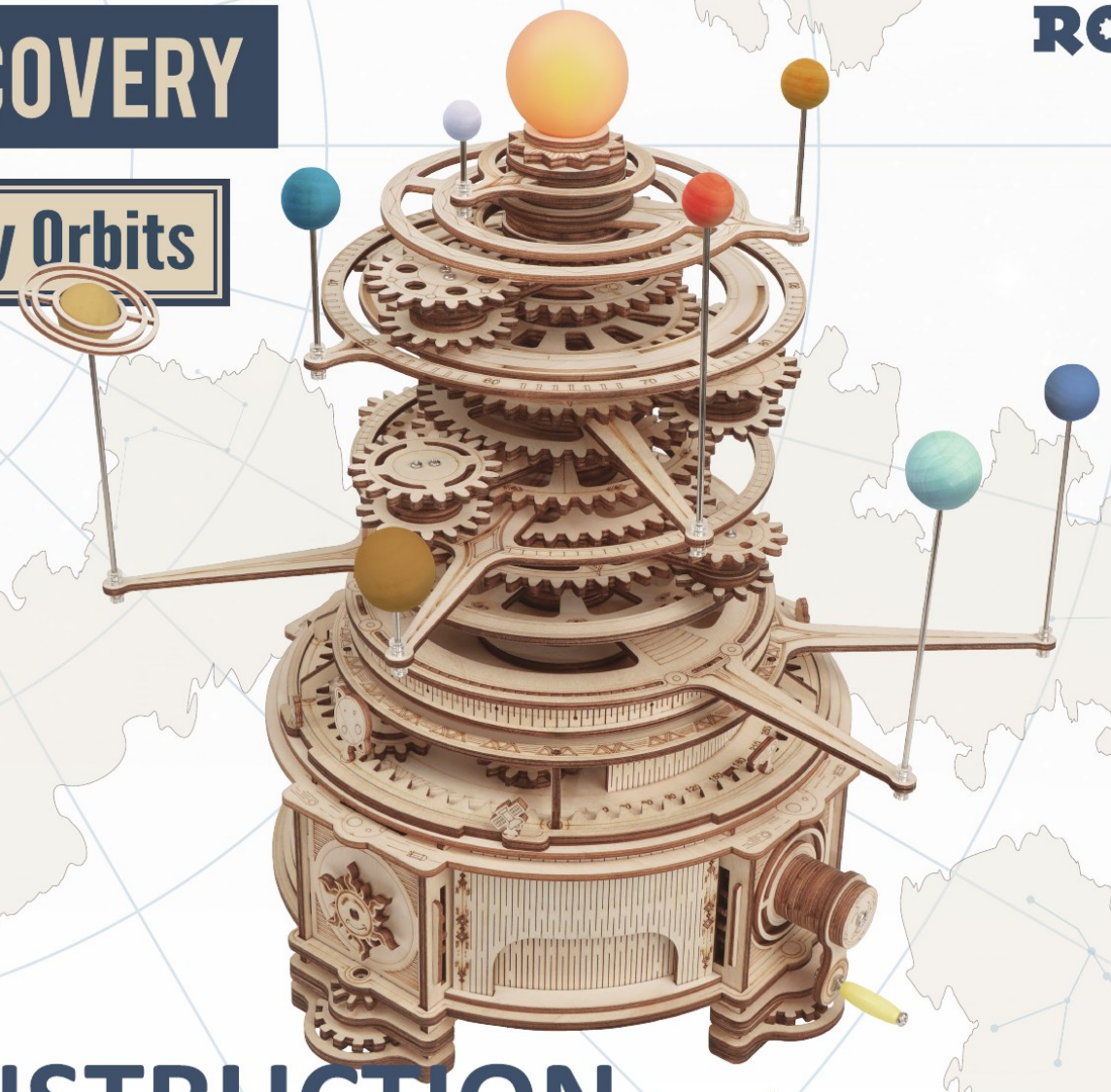
Solar System - Planetary Orbits

ROKR

Lighting Up The Sun

Shining On The Planets





ASSEMBLY INSTRUCTION

WARNING:

The product is for people who over 14 years old.
Kids should assemble under the guidance of adults.
The instruction must be retained since it contains important information.

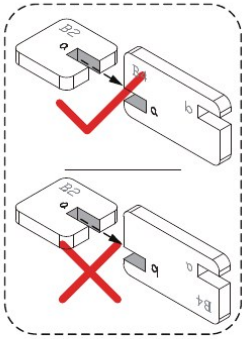
MAINTENANCE:

1. Keep the product away from the source of ignition and water to prevent any damage.
2. Don't use chemical reagents like alcohol, ammonia water to clean the product.
3. Use clean and soft fabric to clean the product if necessary.

Product Display

ATTENTION

1.**Take off the pieces** from the board according to each step **before assembling,** and place them properly in case of missing.
2.According to the instructions when you assemble all the pieces. **Keep properly the instructions and validated after assembly.**
3.Polish the parts with sand paper, **enhance aesthetic feeling** and gear lubrication.
4.**Repair with glue** prepared by yourself if the wooden pieces would be break.
5.There are letters on some parts as shown, **assemble them together with same letters.**
6.Scan the **QR code** with remind for assembly video.
7.There is a little different from several parts and the pictures on instruction, **subject to parts number.**
8.There are **spare parts** on wooden board.



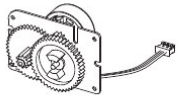
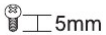
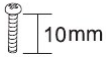
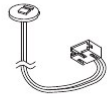
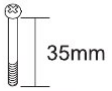
*CUSTOMER SERVICE

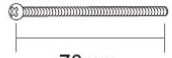
ROKR Facebook: @rokrofficial Email: service@robotime.com
Please contact us on Facebook or email if you have any questions.

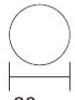
FAQ:

Problem	Cause	Solution
1.After the base is assembled, the manual rotation is not smooth (It may appear in the step in the left picture on Page 24).	1.The gear teeth are not waxed or unevenly waxed. 2.The turning handle is not placed in the proper position as shown in step 7 (right picture on Page 10). 3.The gear in step 1 (left picture on Page 4) is not properly assembled. 4.Gears that engage with each other are not placed in the proper position as shown (left picture on Page 19).	1.Please pay attention to the wax mark during assembly, and wax evenly to each tooth of the gears. The gears need to be removed and waxed again if the gears transmission not smoothly after assembly. 2.Adjust the gear in the rotating handle assembly in step 7 (right picture on Page 10) to fully engage. 3.Check whether the transparent shaft sleeves of the gear steel shaft are properly assembled as shown in step 1 (left picture on Page 4) . 4.Readjust the meshing gear (left picture on Page 19) to fully engage.
2.Meshing astrolabes don't rotate smoothly after assembly.	1.The teeth of the transmission gears above the base are unevenly waxed. 2.The gears are not meshed properly. 3.Some parts are tilted, e.g. part U or part Z (Page 39). 4.The lower end of the metal stick for assembling the planet is exposed too long to interfere with the operation of the gear.	1. Take the parts off, and wax each gear tooth evenly. 2. Reassemble parts as the steps to make sure the gears are fully engaged. 3. Observe if there are parts assembled inproperly to make it tilted, and if so, adjust the parts to the horizontal position. 4. If the lower end of the metal stick is too long, carefully remove and adjust it, please do not to break the connecting plywood parts.

Parts list (Suggest to put the parts in a box to prevent loss.)

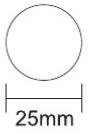
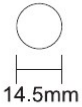
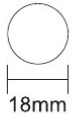
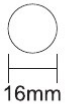
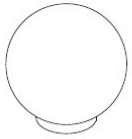
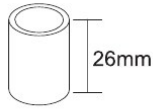
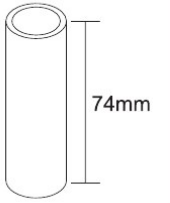
Item	Transparent Shaft Sleeve	Steel Shaft	Black Screwdriver	Motor	Black Screw	Screw	LED Light	Rocker	Handle	Square Nut
Item number	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Illustration					 M2*5	 M2*10		 M3*35		 M3
Quantity	41	1	1	1	4	6	1	1	1	4

Item	Lock Nut	Screw	Steel Shaft	Square Gasket Nut	Steel Shaft	Antiskid Gasket	Screw	Screw	Screw	Screw
Item number	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20
Illustration	 M3	 M3*55		 M3			 M3*70	 M2*20	 M2*25	 M2*22
Quantity	1	1	3	1	3	8	3	9	3	14

Item	Flat Gasket	Screw Nut	Elastic Washer	Steel Shaft	Steel Shaft	Steel Shaft	Steel Shaft	Light Blue Neptune	Pale blue Uranus	Light Yellow Saturn
Item number	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30
Illustration		M2								
Quantity	26	26	14	2	2	1	2	1	1	1

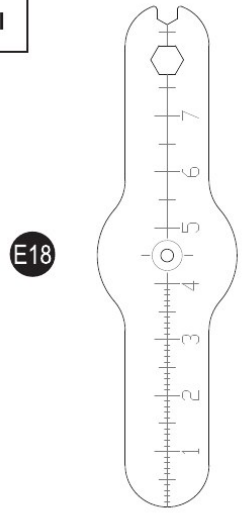
*Due to customs policy in international shipping,the wax and glue may not be included.Please prepare them yourself.

Parts list (Suggest to put the parts in a box to prevent loss.)

Item	Brown Jupiter	Orange Mars	Dark Blue Earth	Dark Yellow Venus	Grayish White Mercury	Transparent Gasket	Sun	Transparent Shaft Sleeve	Transparent Acrylic Tube
Item number	P31	P32	P33	P34	P35	P36	P37	P38	P39
Illustration									
Quantity	1	1	1	1	1	1	1	4	1

Item	Silicone Sleeve	Wax
Item number	P40	P41
Illustration		
Quantity	8	4

Tool



 Polish the gray parts with sandpaper

 Special attention in assembly

 Wax the gray parts with remind

 Ensure the connection of gears smoothly

 Ensure the connection of parts running smoothly.

 Flip-over assembling

 Printed side

 Complete 2 same parts

 Complete 4 same parts

 Remove the plastic film on surface

 Perspective conversion

 Blank side

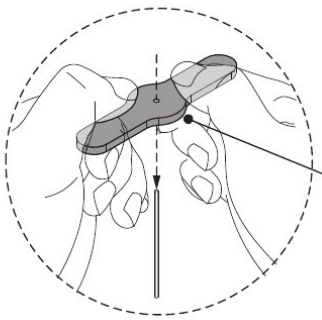
 Step 1

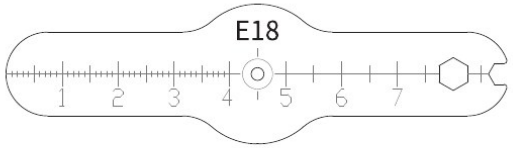
 Step 2

 Transversal

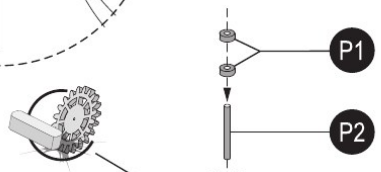
1

B14
E3
E18
E25
P1 x4
P2





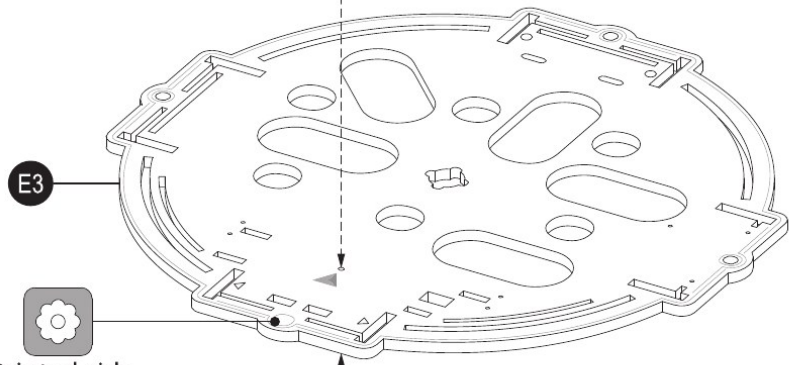
Make sure the indentation faces downward to press easily.



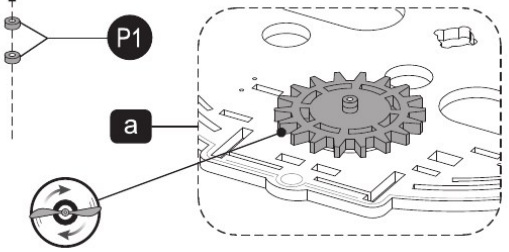
All gear teeth should be waxed.

P2 20mm 1:1

Flatten the shaft sleeves at both ends.



Printed side

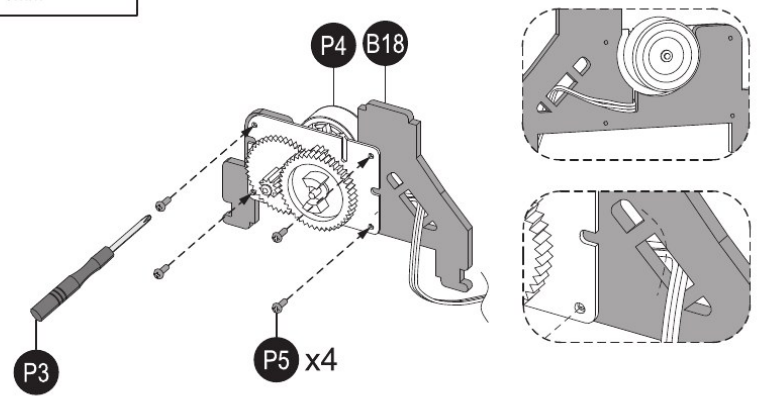


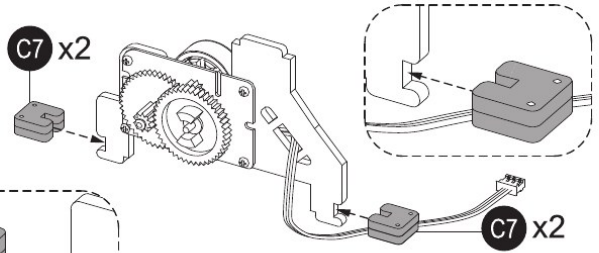
Ensure the connection of parts running smoothly.

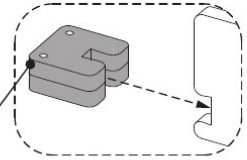
2

B18
C7 x4
P3
P4
P5 x4

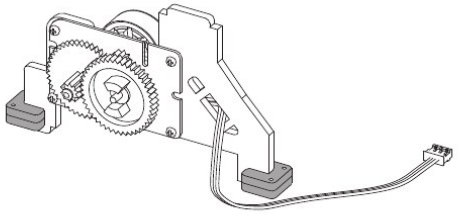
P5 x4 5mm 1:1







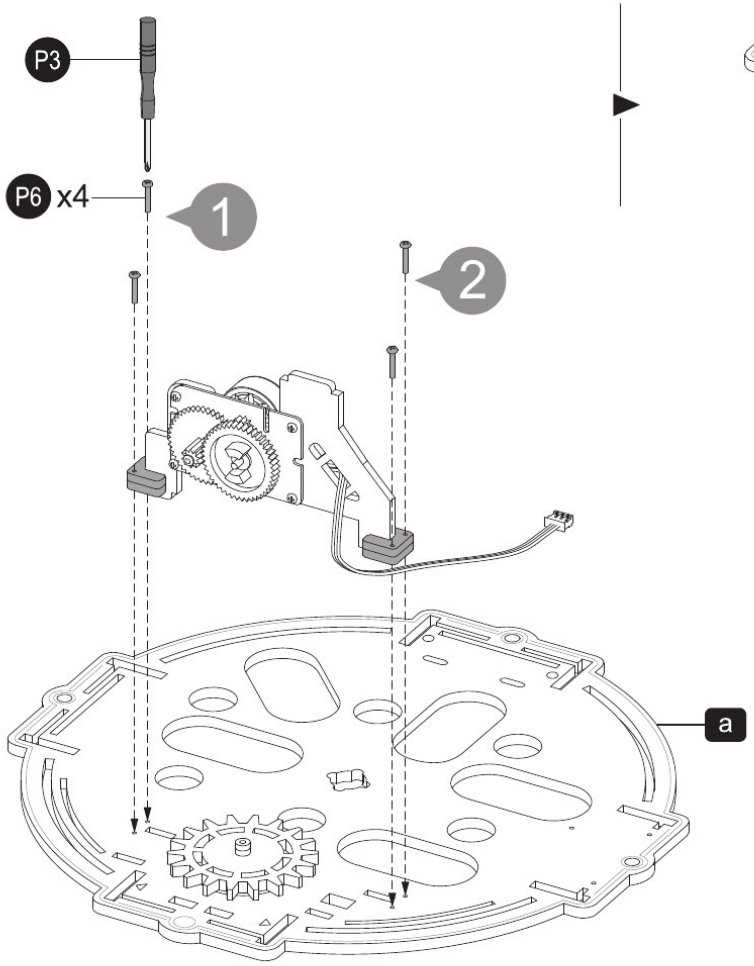
Align the holes of two same parts C7.

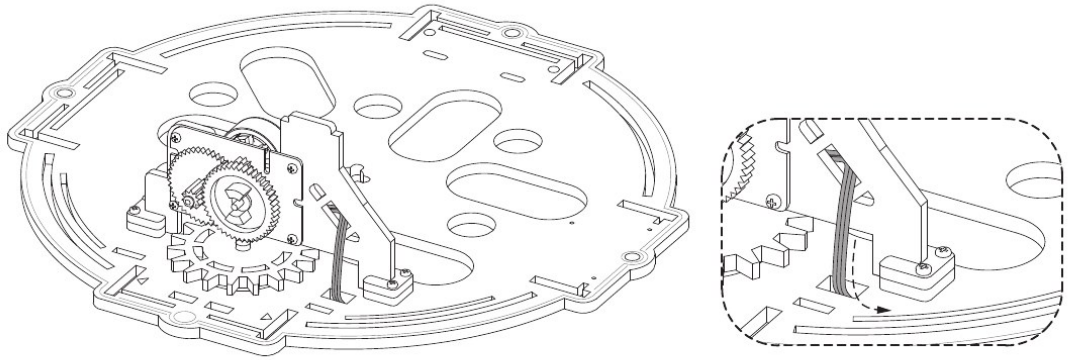


P3

P6 x4

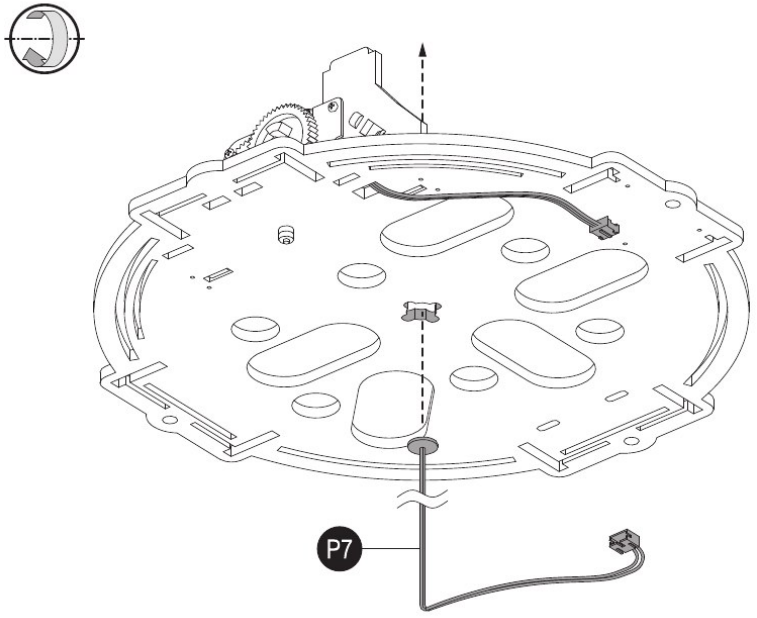
P6 x4 10mm 1:1





3

P7

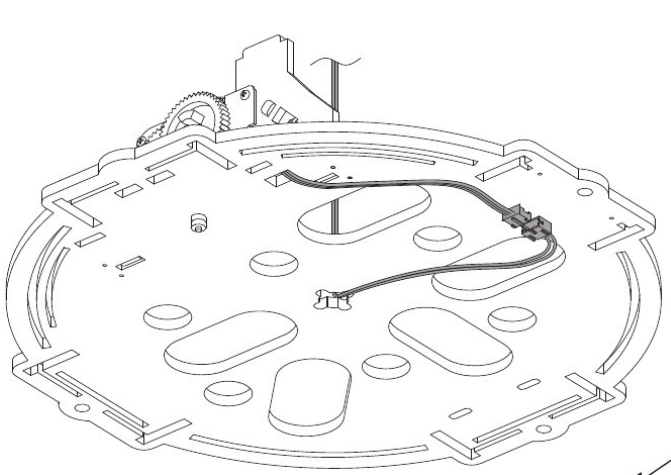


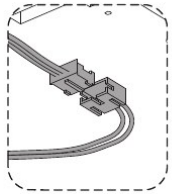
C15

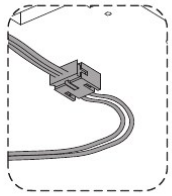
E18

E23

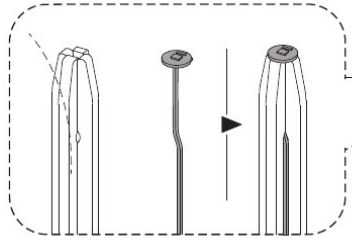
E24

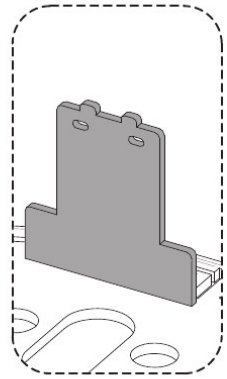


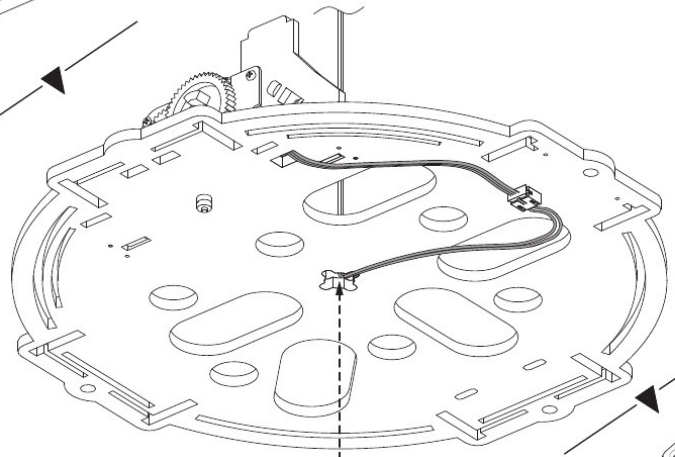


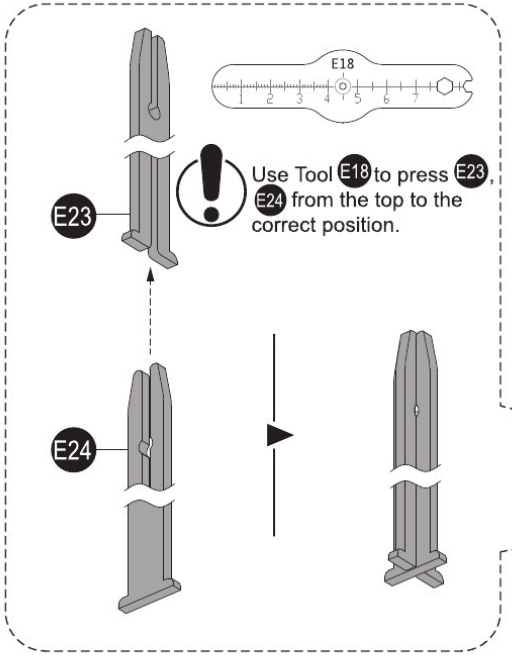


Notice the positive and negative direction of the interface when connecting terminals.

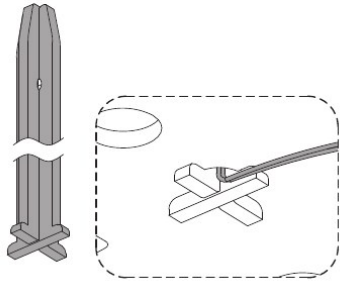








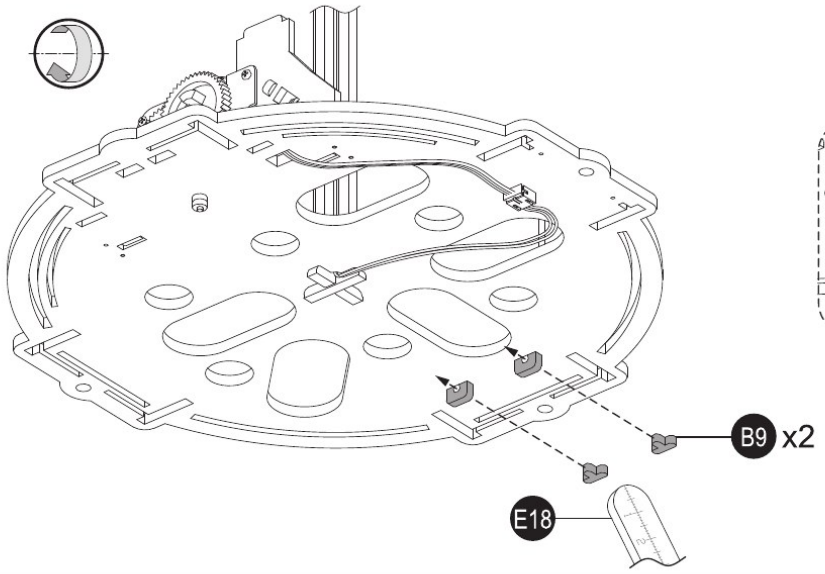
Use Tool E18 to press E23, E24 from the top to the correct position.



Rotate the gear to test if the light bead works.

B9 x2

E18



Use Tool E18 to press Part B9.

4

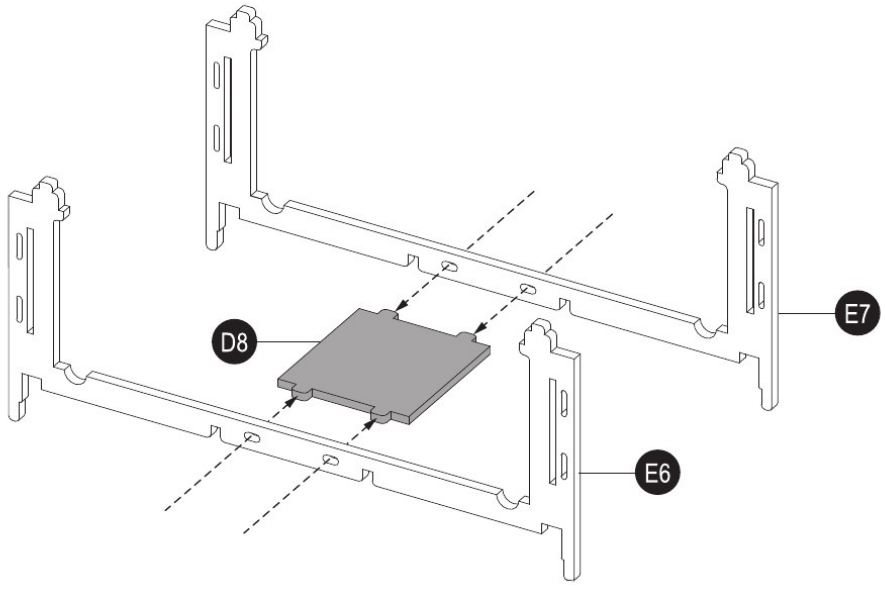
D8

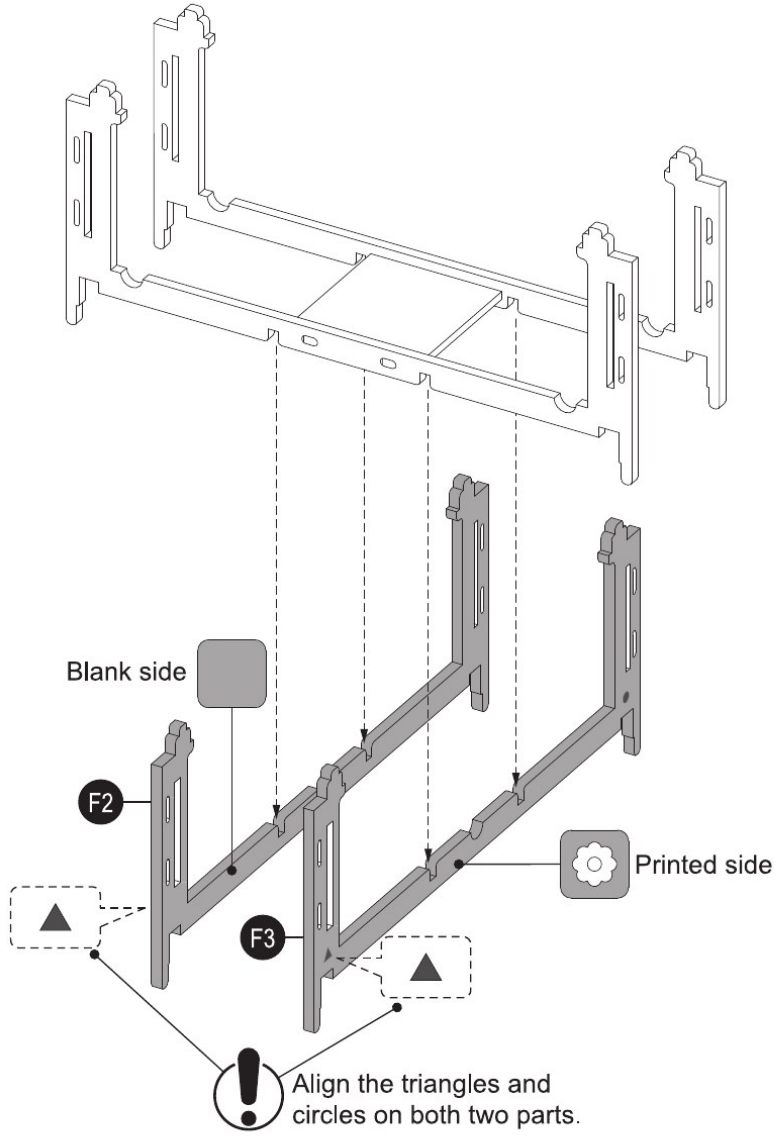
E6

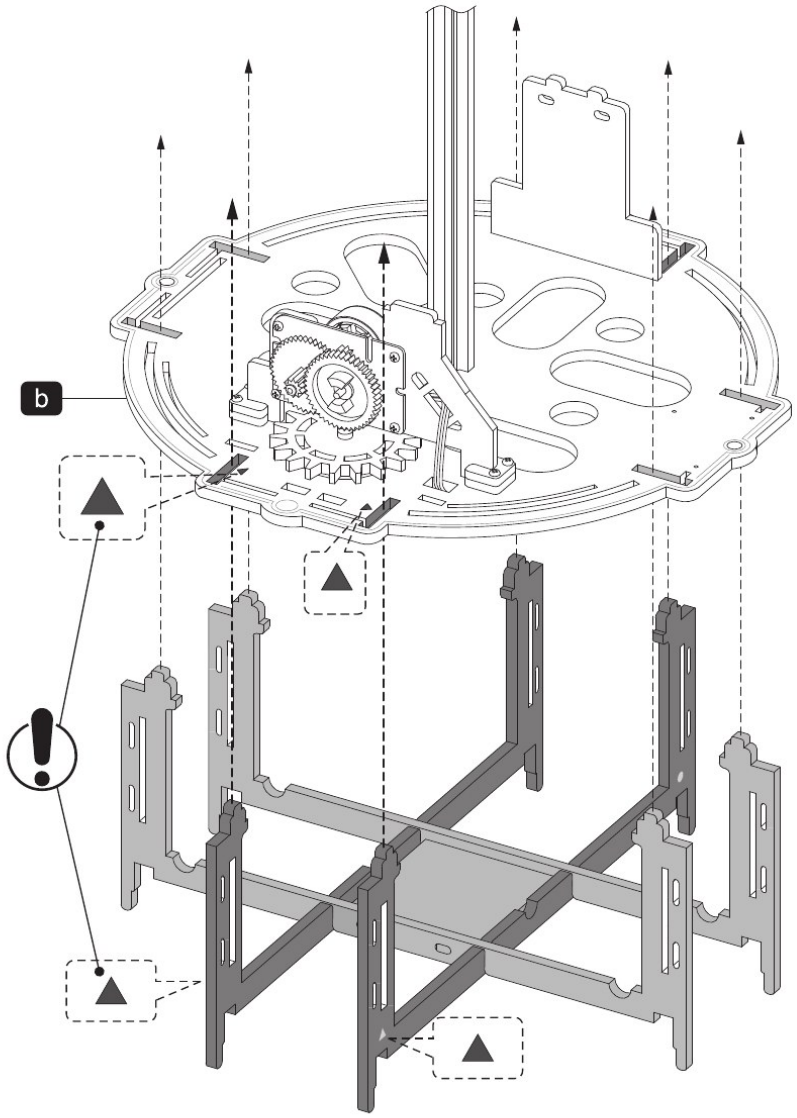
E7

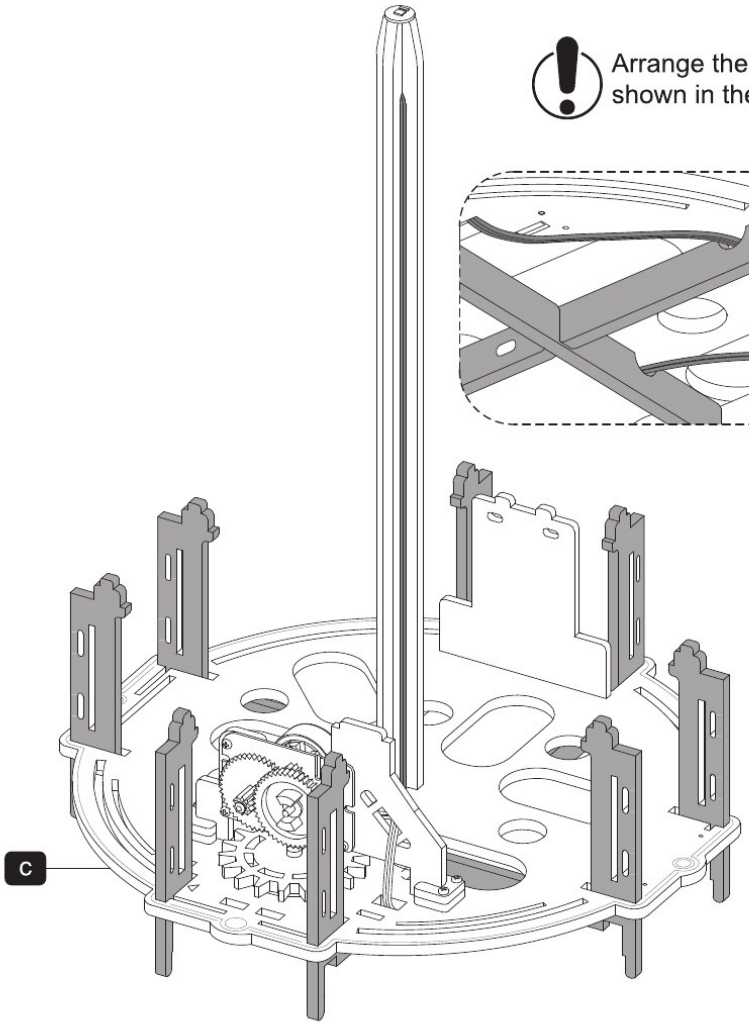
F2

F3

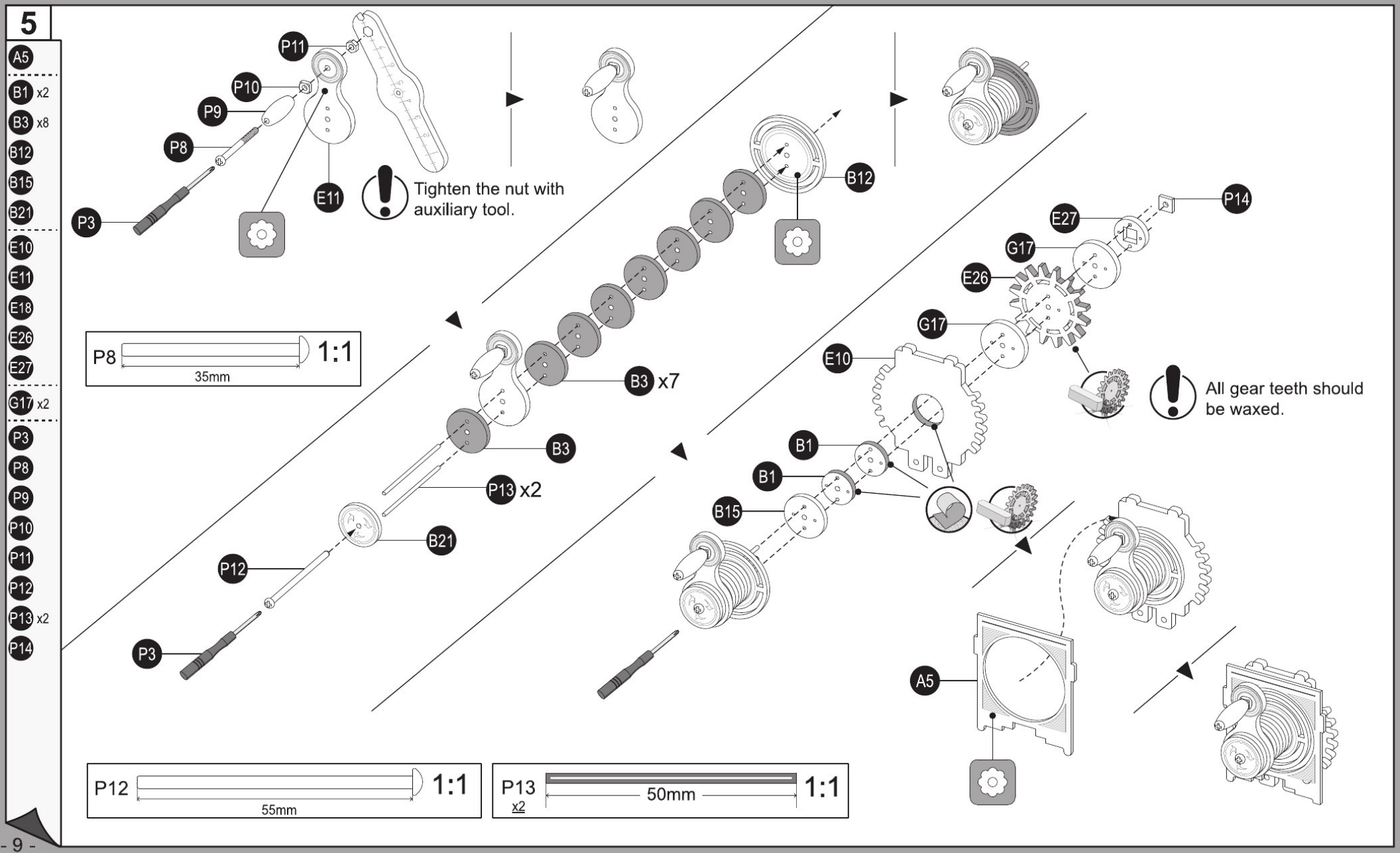








Arrange the wire as shown in the figure.

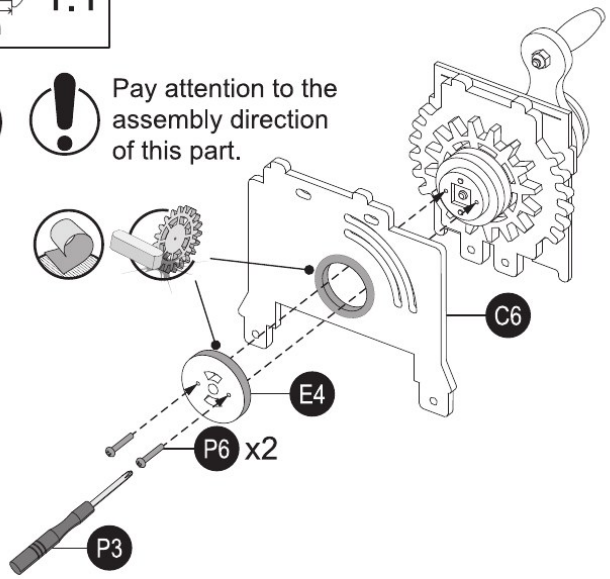

5
A5
B1 x2
B3 x8
B12
B15
B21
E10
E11
E18
E26
E27
G17 x2
P3
P8
P9
P10
P11
P12
P13 x2
P14
P11
P10
P9
P8
P3
E11
Tighten the nut with auxiliary tool.
B12
B3 x7
B3
P13 x2
B21
P12
P3
P8 1:1
35mm
E27
P14
G17
E26
G17
E10
All gear teeth should be waxed.
B1
B1
B15
A5
P12 1:1
55mm
P13 x2 1:1
50mm

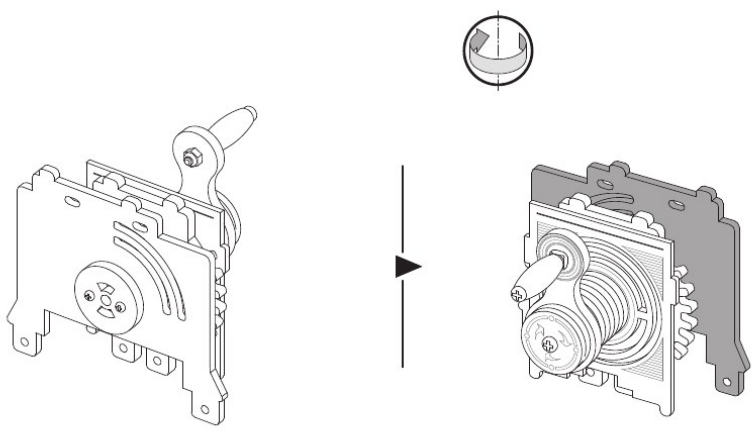
6

C6
E4
P3
P6 x2

P6 x2 10mm 1:1

Pay attention to the assembly direction of this part.

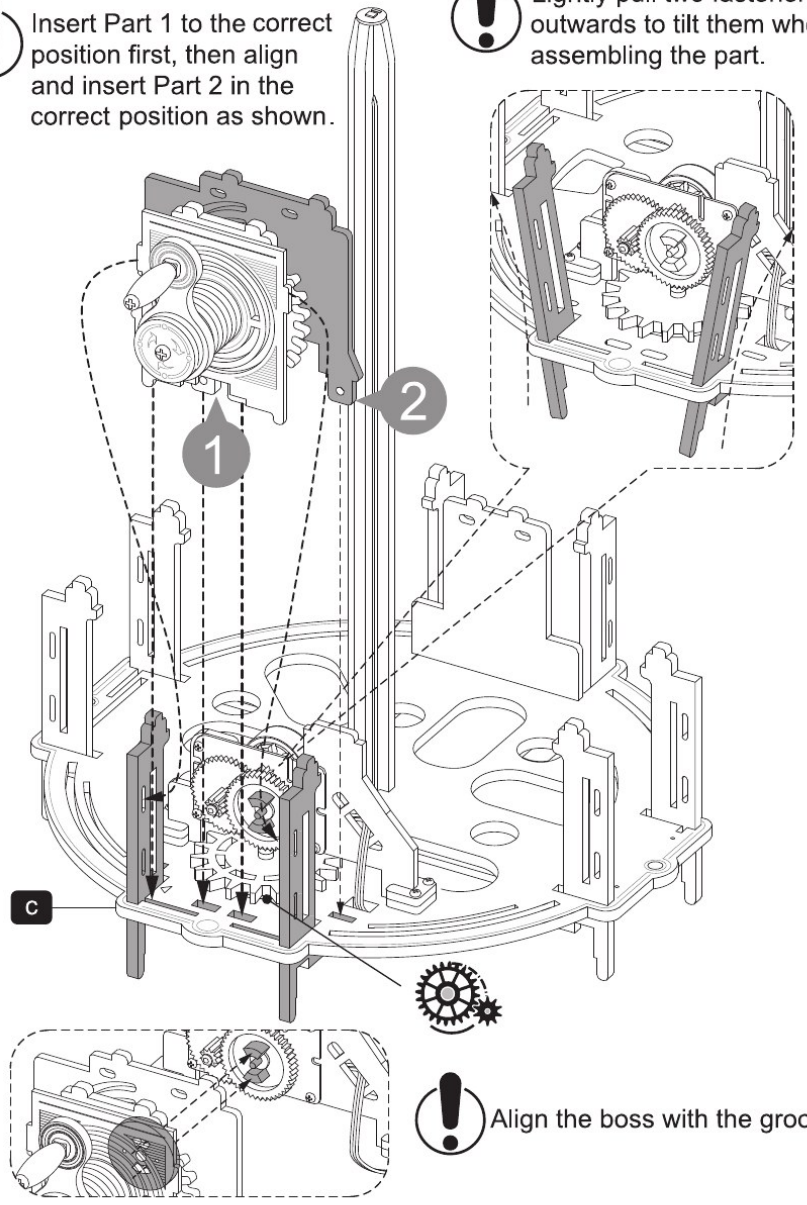




7

Insert Part 1 to the correct position first, then align and insert Part 2 in the correct position as shown.

Lightly pull two fasteners outwards to tilt them when assembling the part.



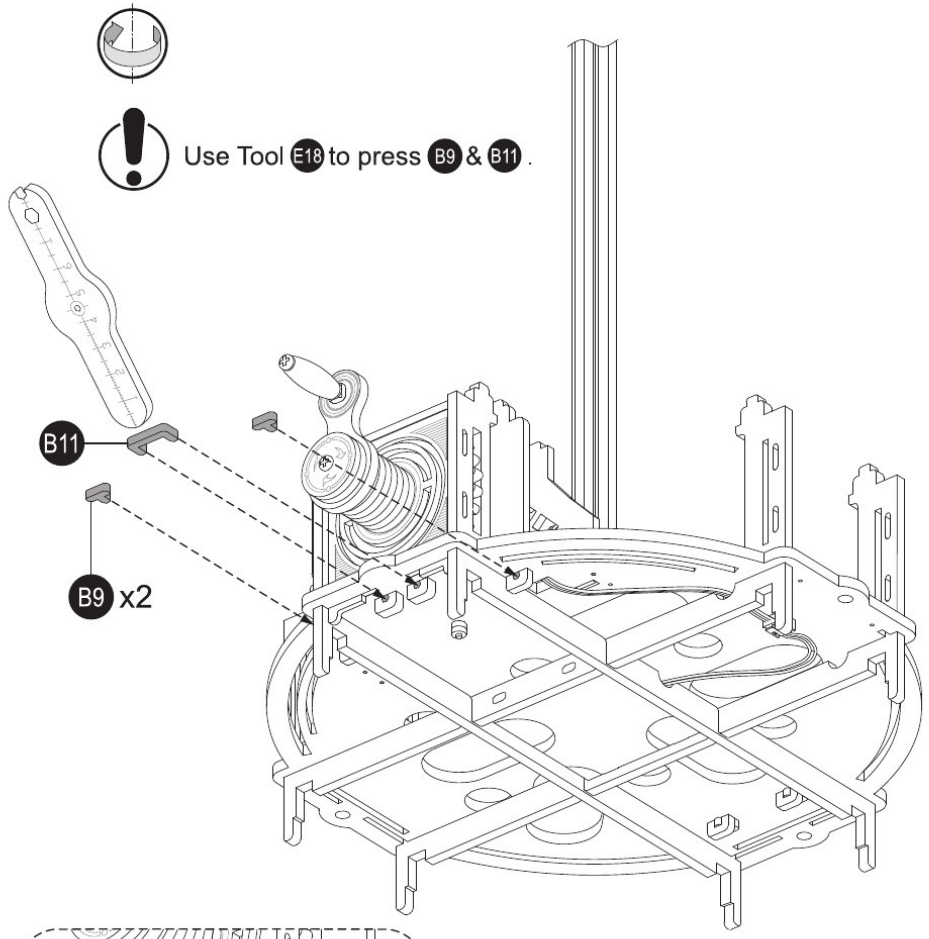
Align the boss with the grooves.

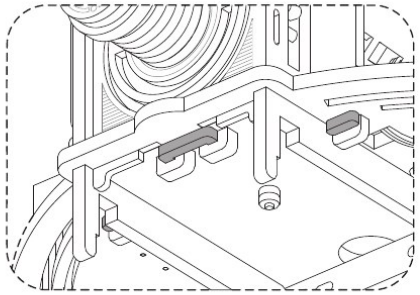
B9 x2

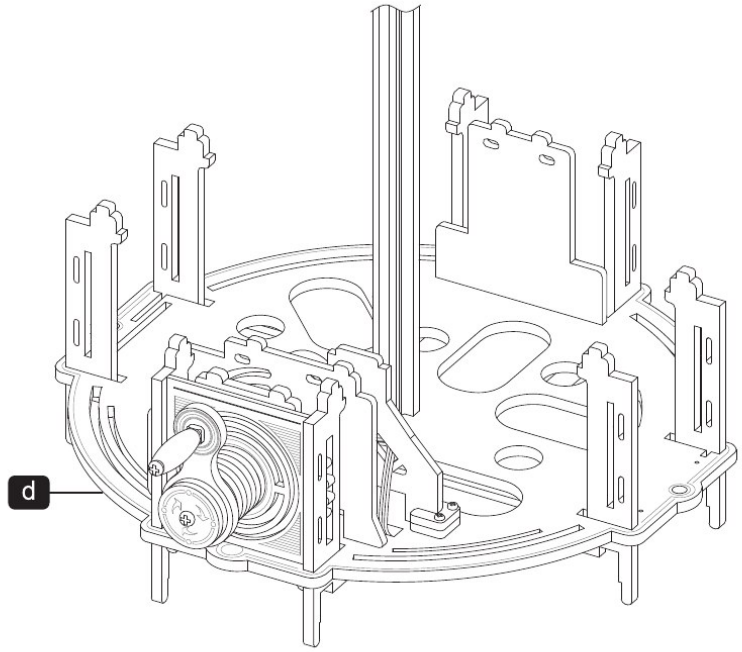
B11

E18

Use Tool E18 to press B9 & B11 .

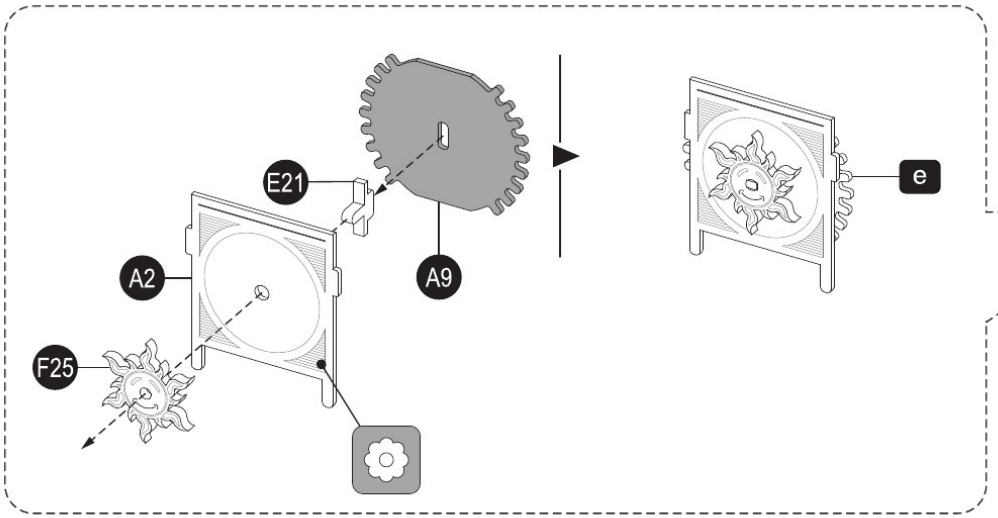


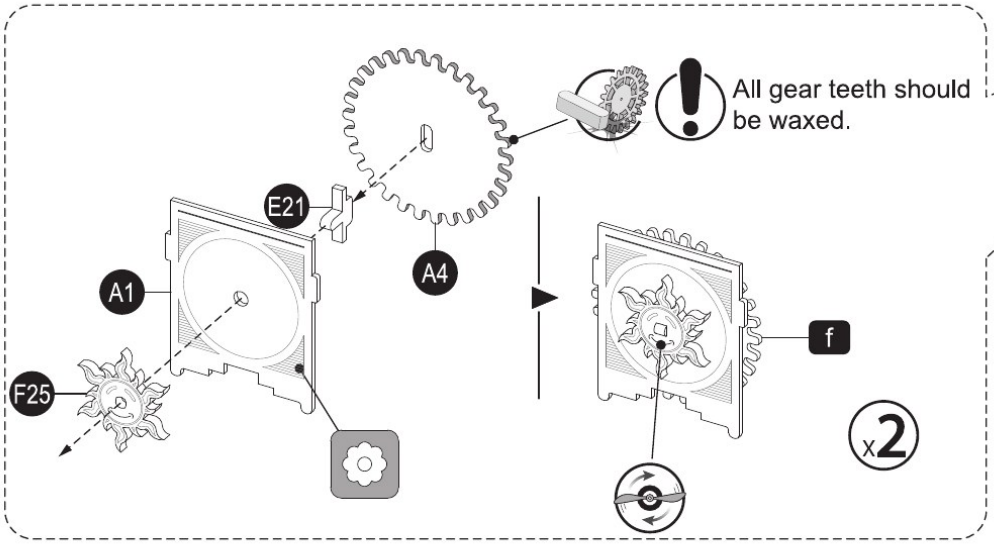


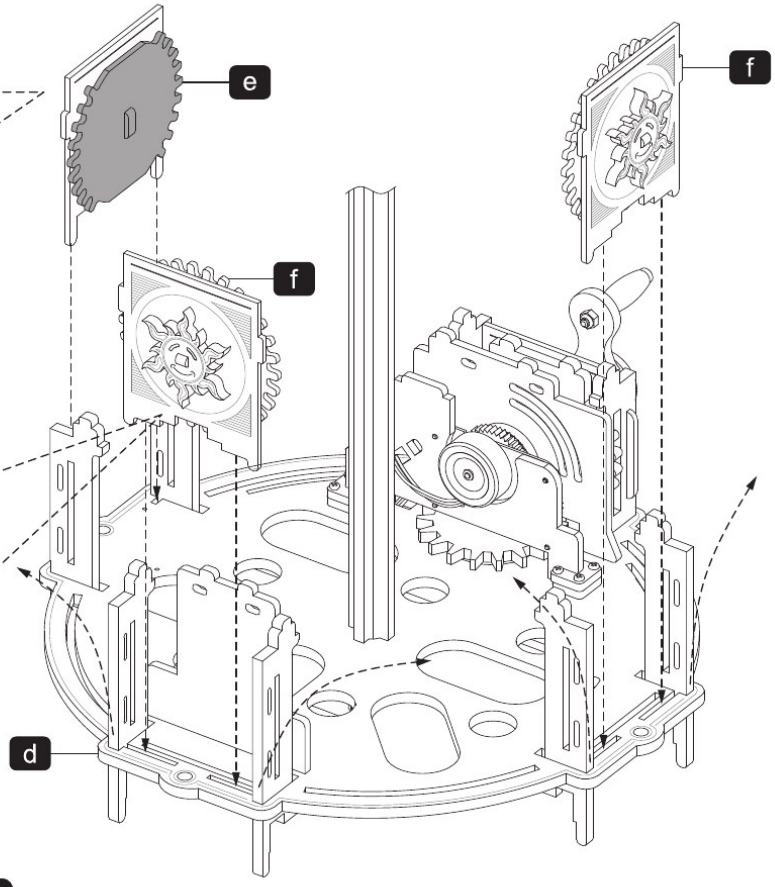


8

A1 x2
A2
A4 x2
A9
E21 x3
F25 x3



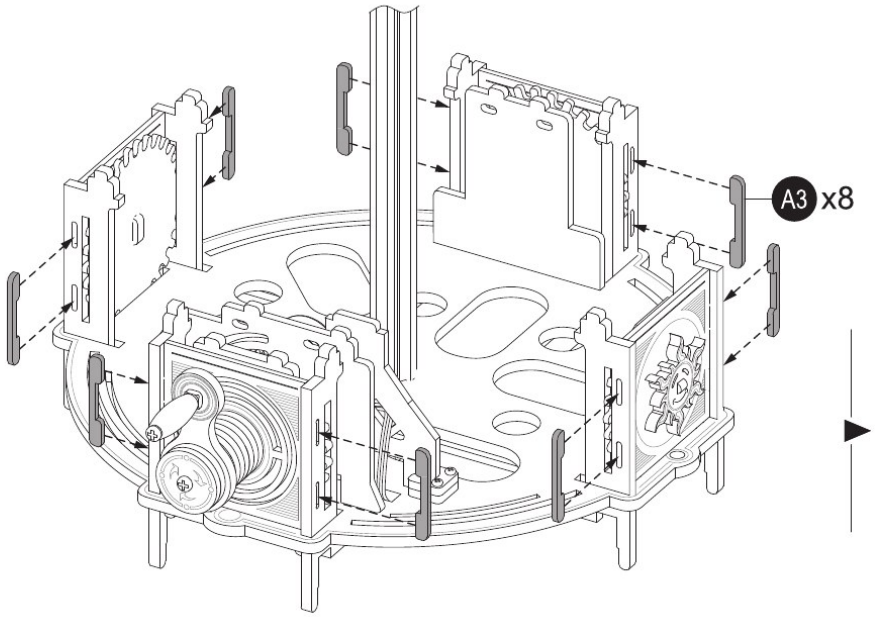


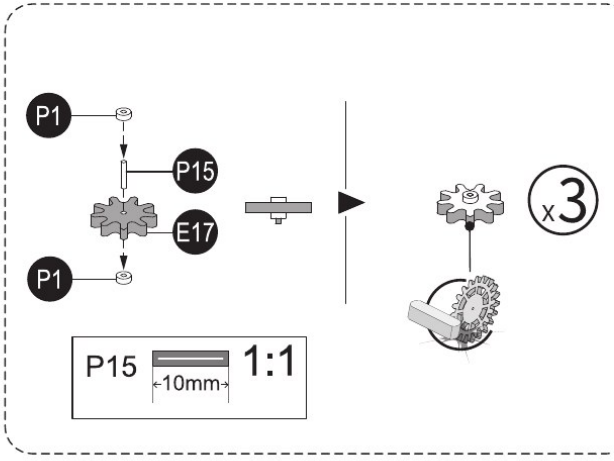


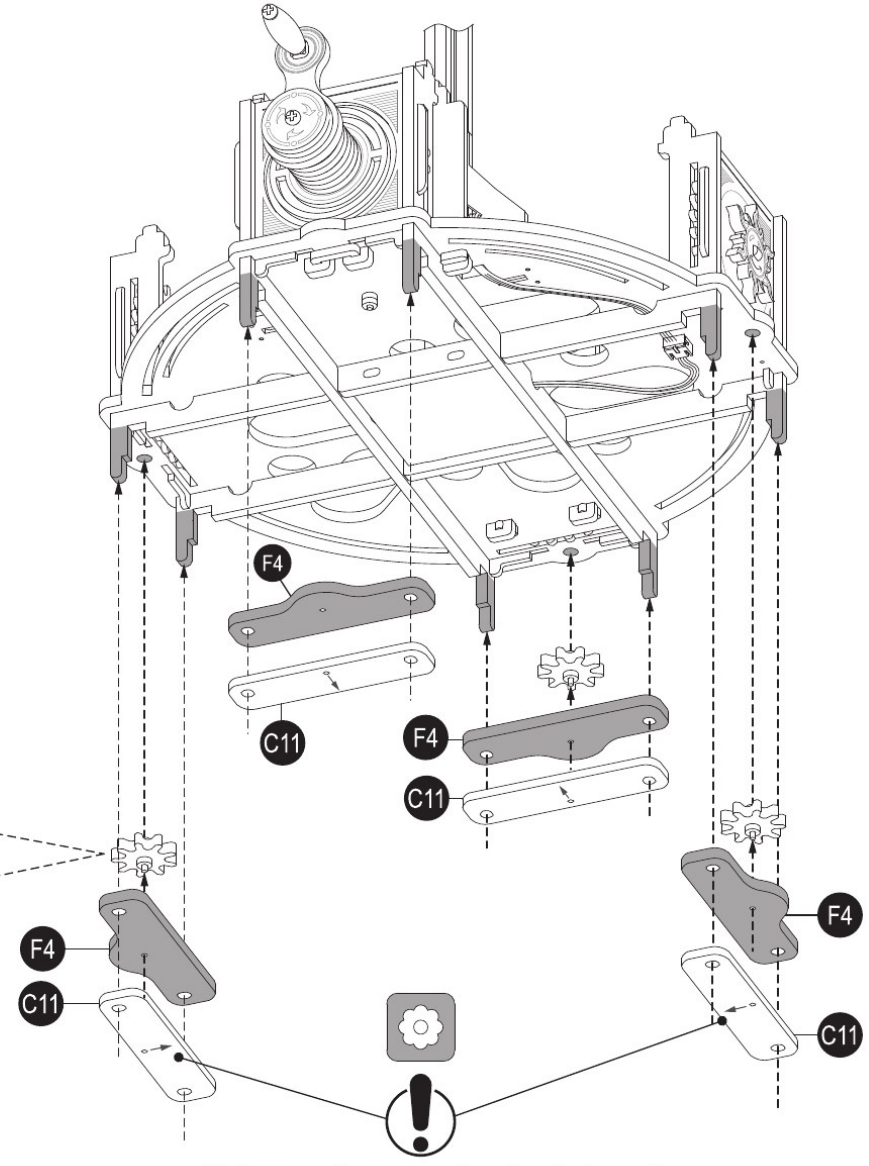
Lightly pull two fasteners outwards to tilt them when assembling the parts.

9

- A3 x8
- C11 x4
- E17 x3
- F4 x4
- P1 x6
- P15 x3







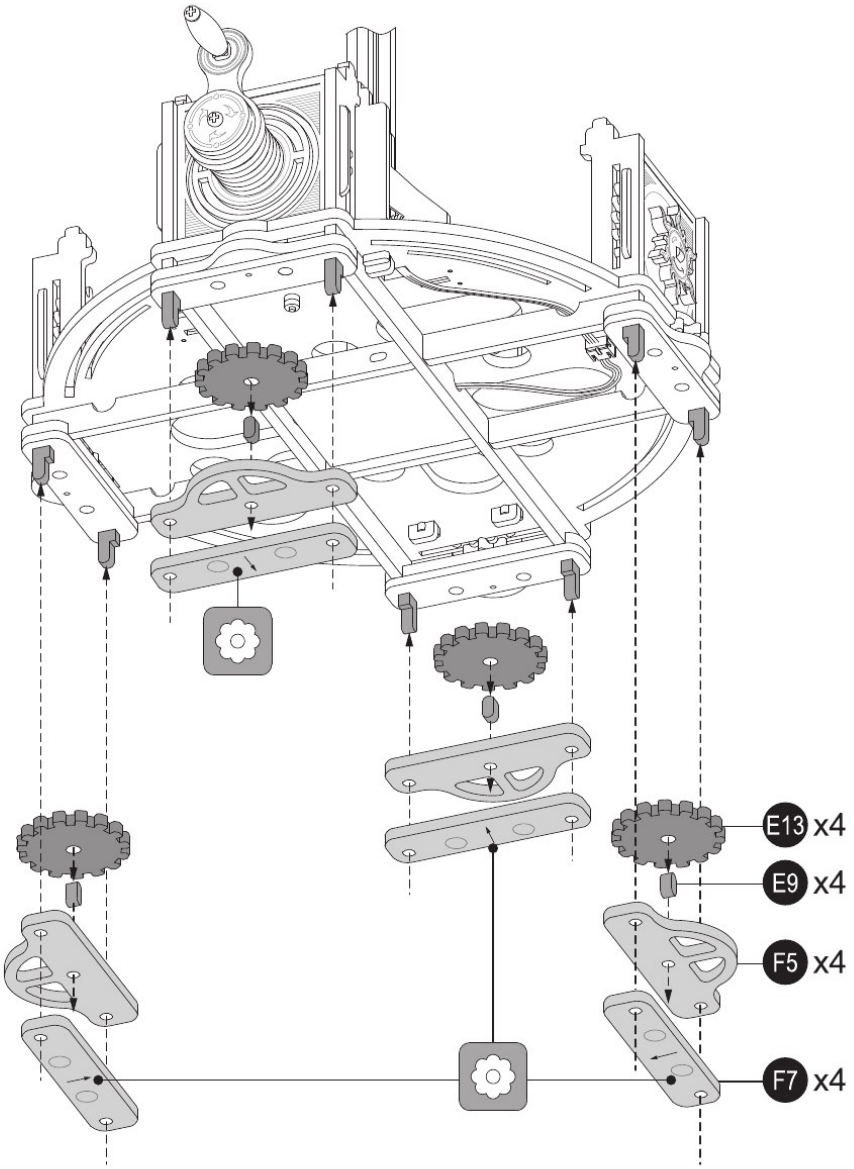
Make sure the arrow direction is inward.

E9 x4

E13 x4

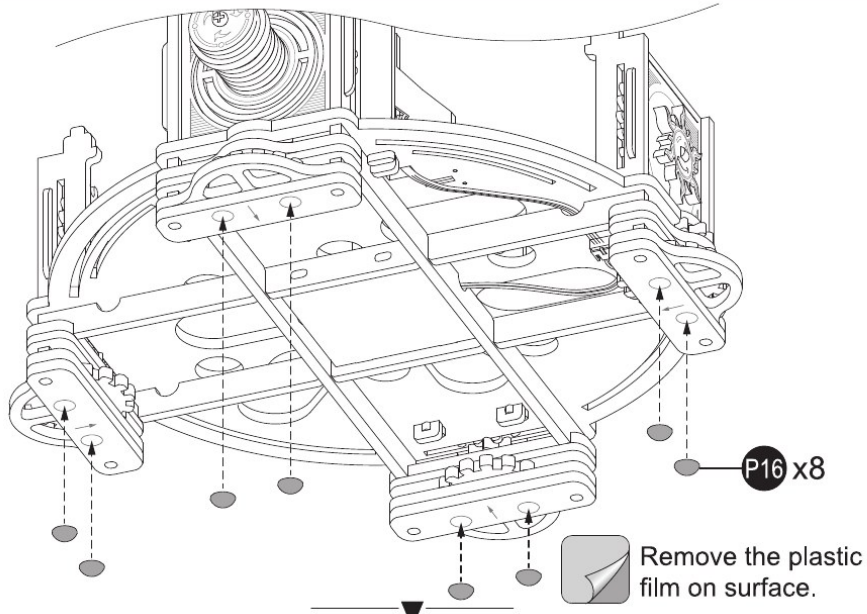
F5 x4

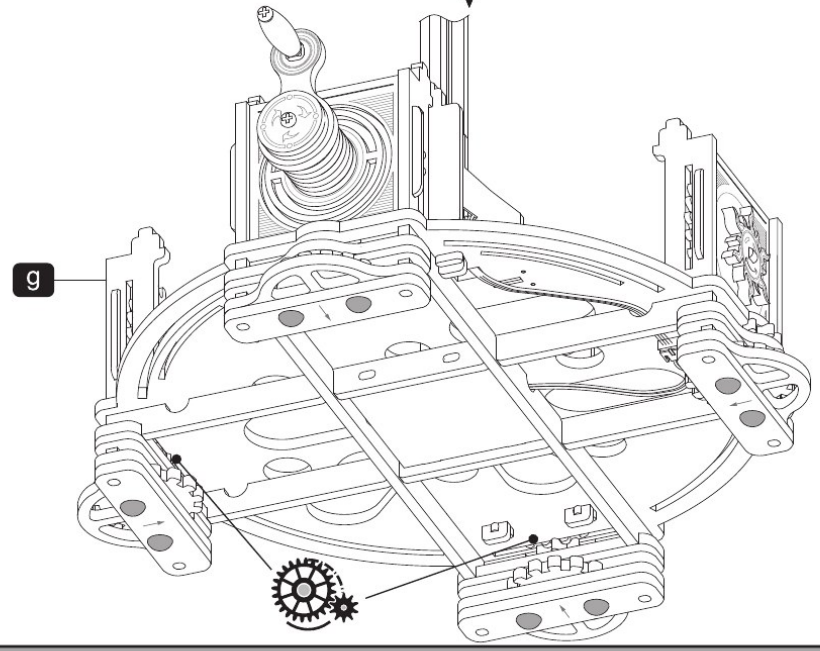
F7 x4



10

P16 x8





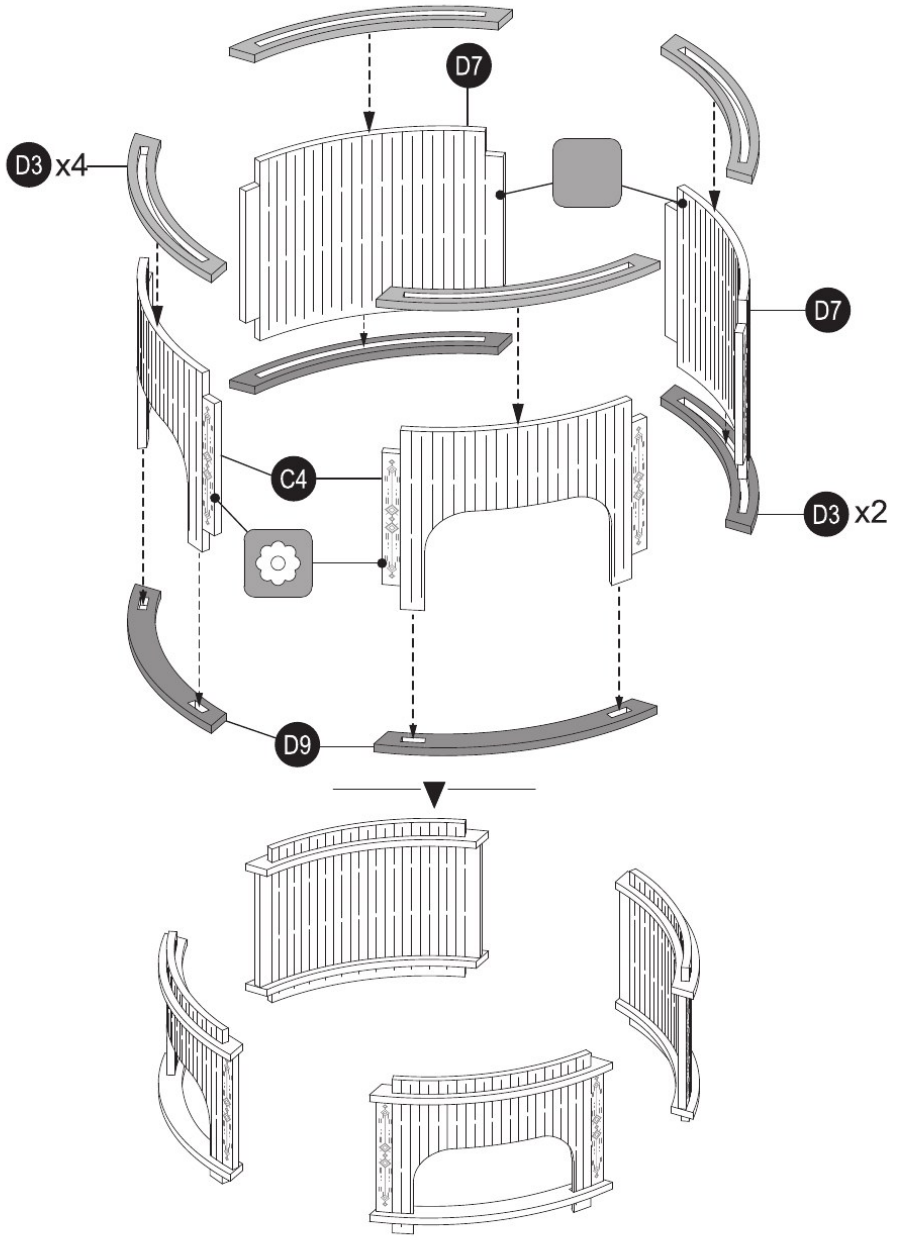
11

C4 x2

D3 x6

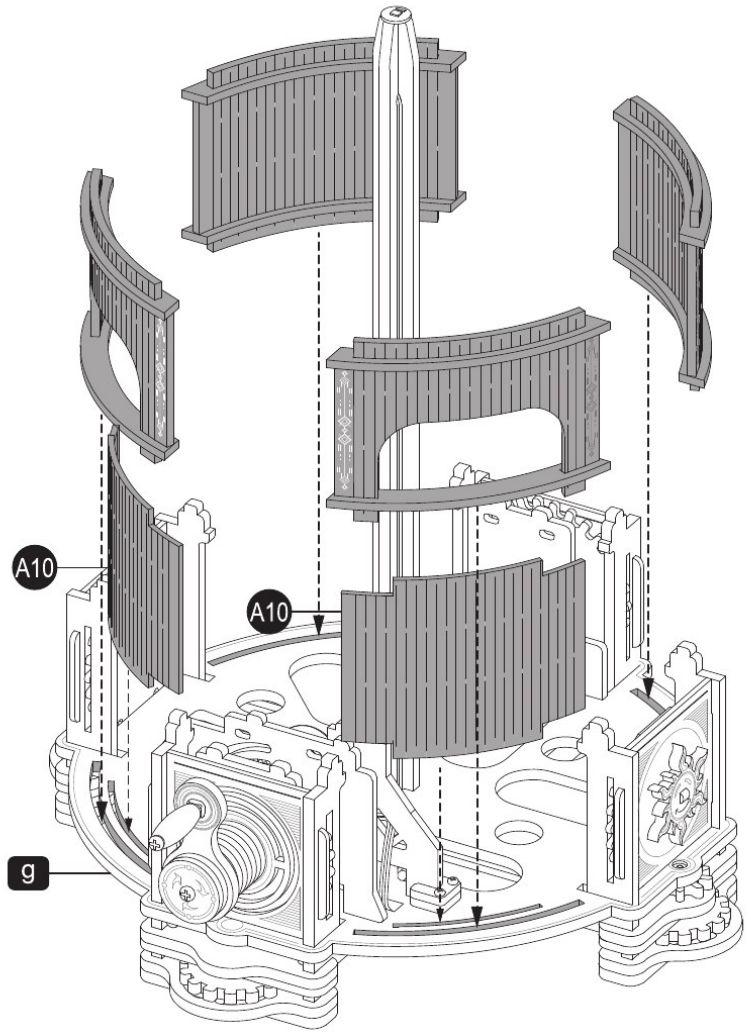
D7 x2

D9 x2

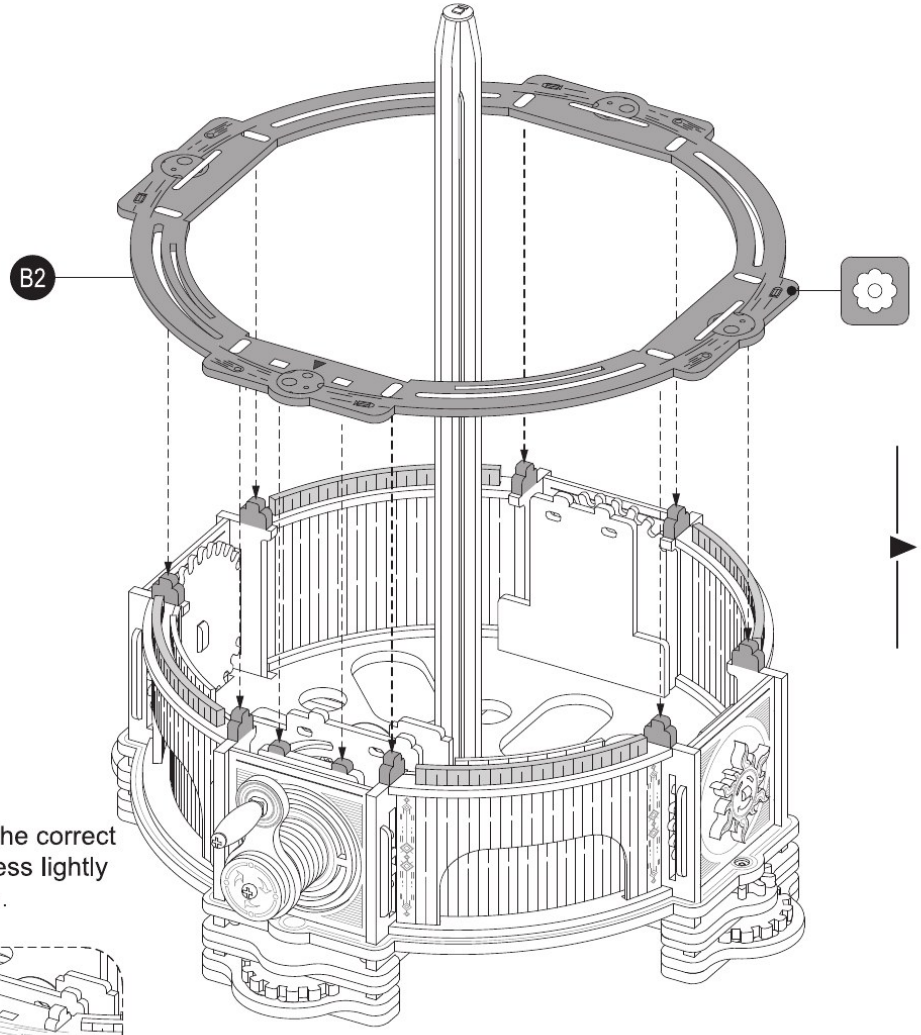


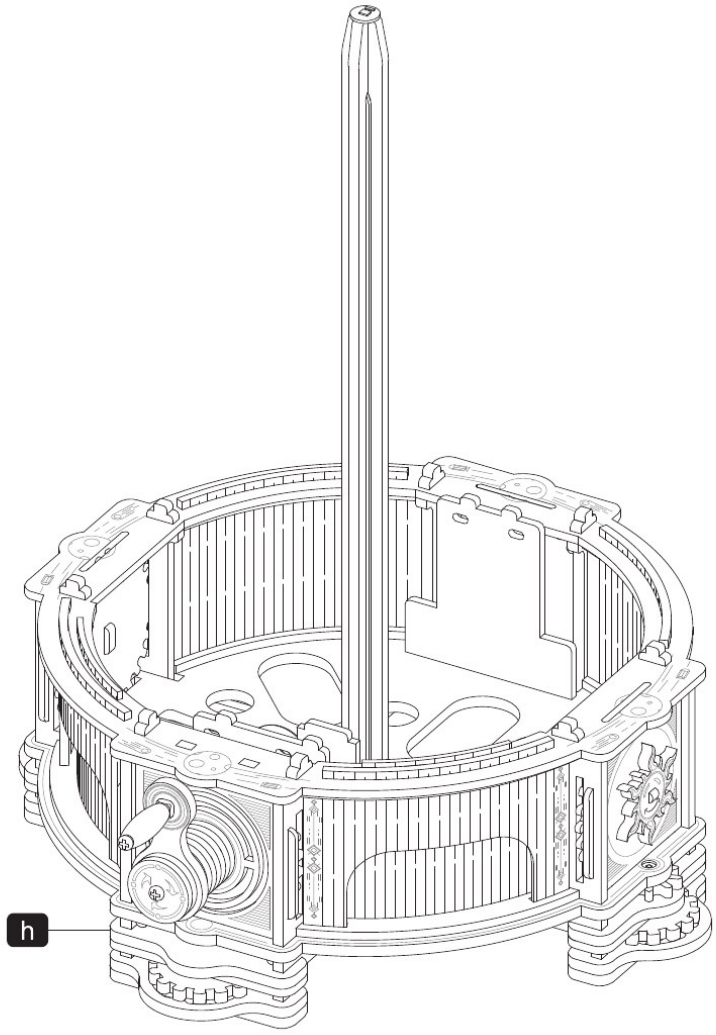
12

A10 x2

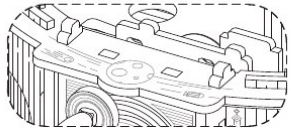


B2



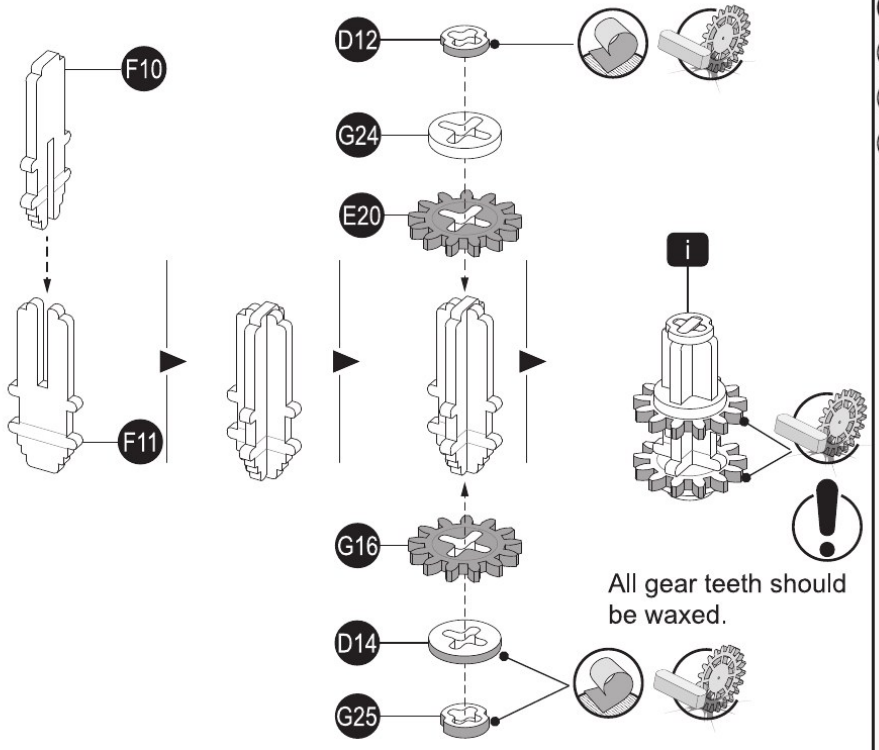


Insert B2 in the correct holes and press lightly to the bottom.



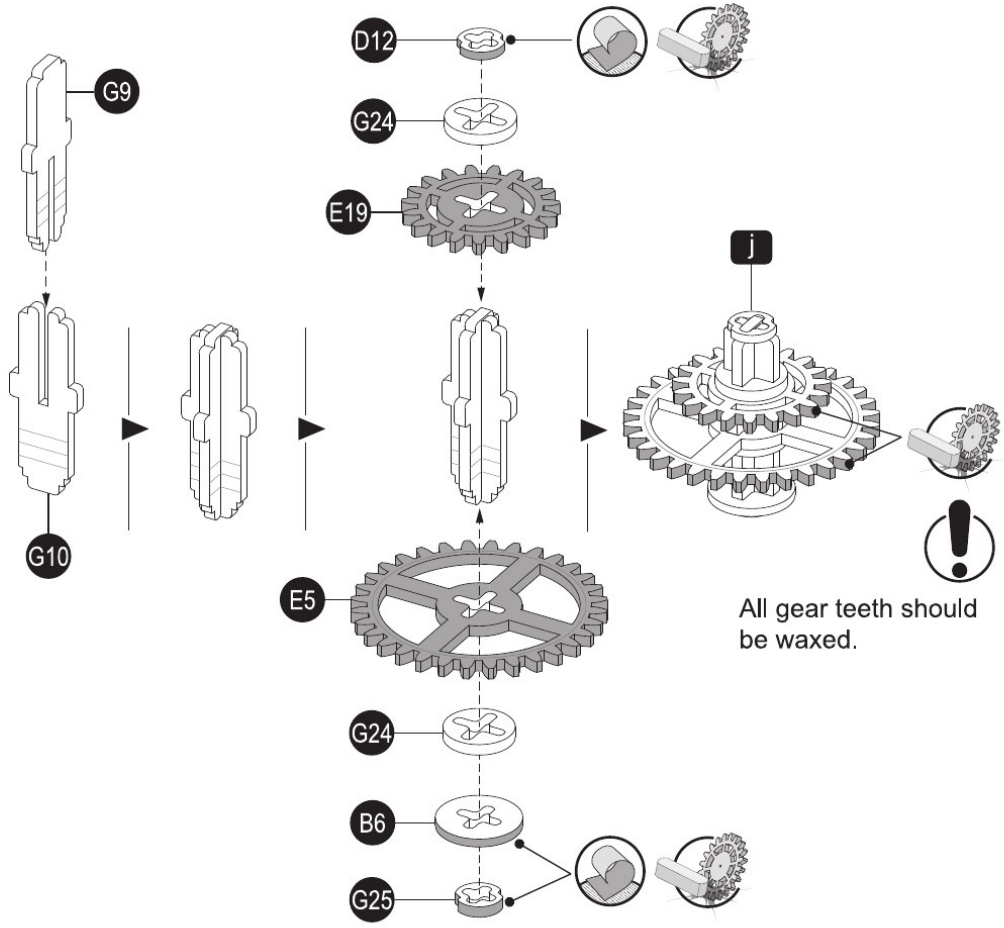
13

D12
D14
E20
F10
F11
G16
G24
G25



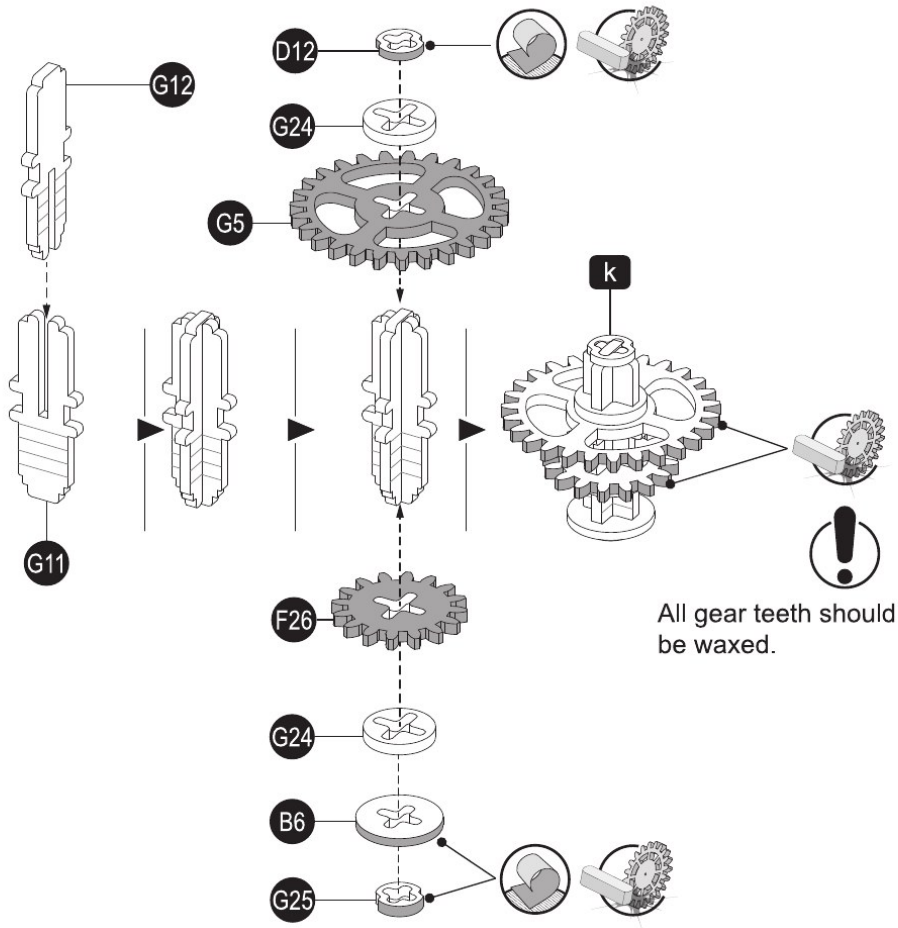
14

B6
D12
E5
E19
G9
G10
G24 x2
G25



15

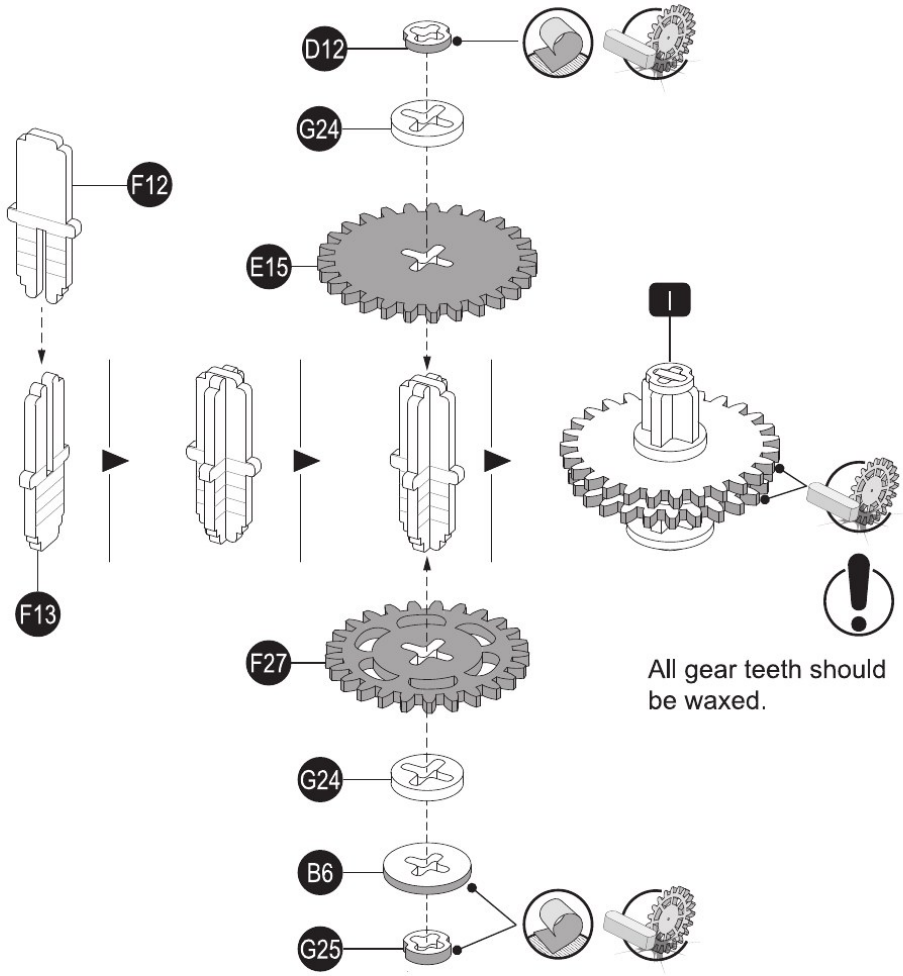
- B6
- D12
- F26
- G5
- G11
- G12
- G24 x2
- G25



All gear teeth should be waxed.

16

- B6
- D12
- E15
- F12
- F13
- F27
- G24 x2
- G25

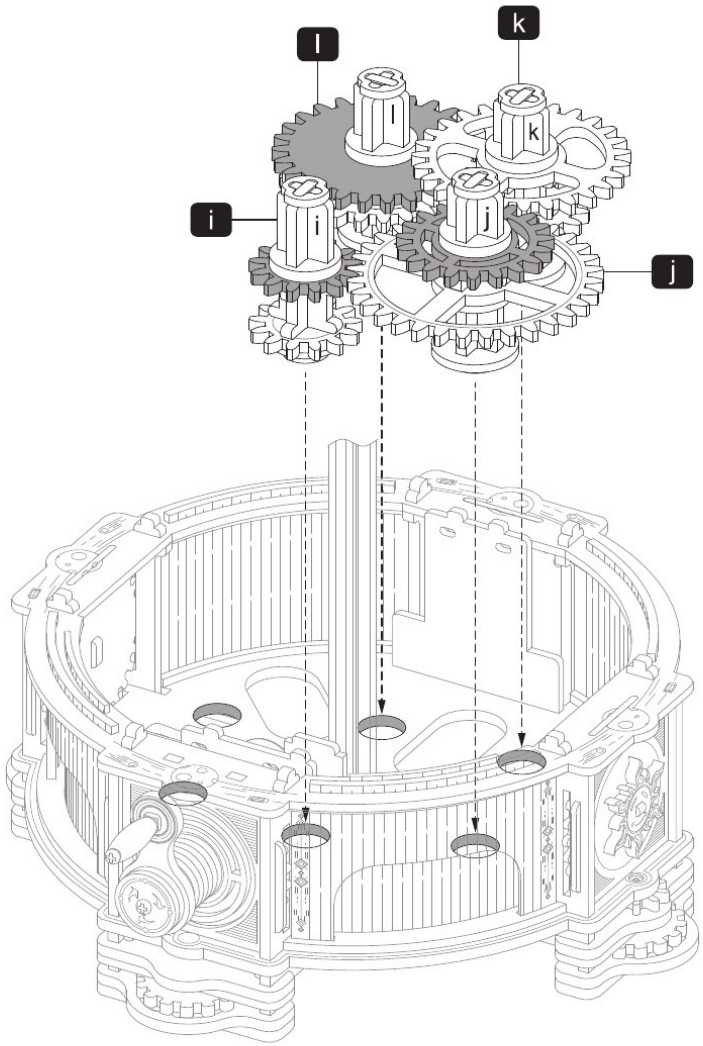


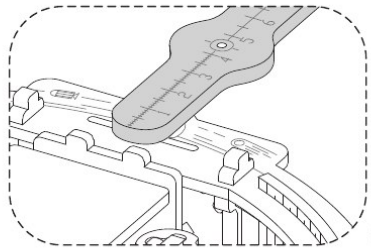
All gear teeth should be waxed.

D6

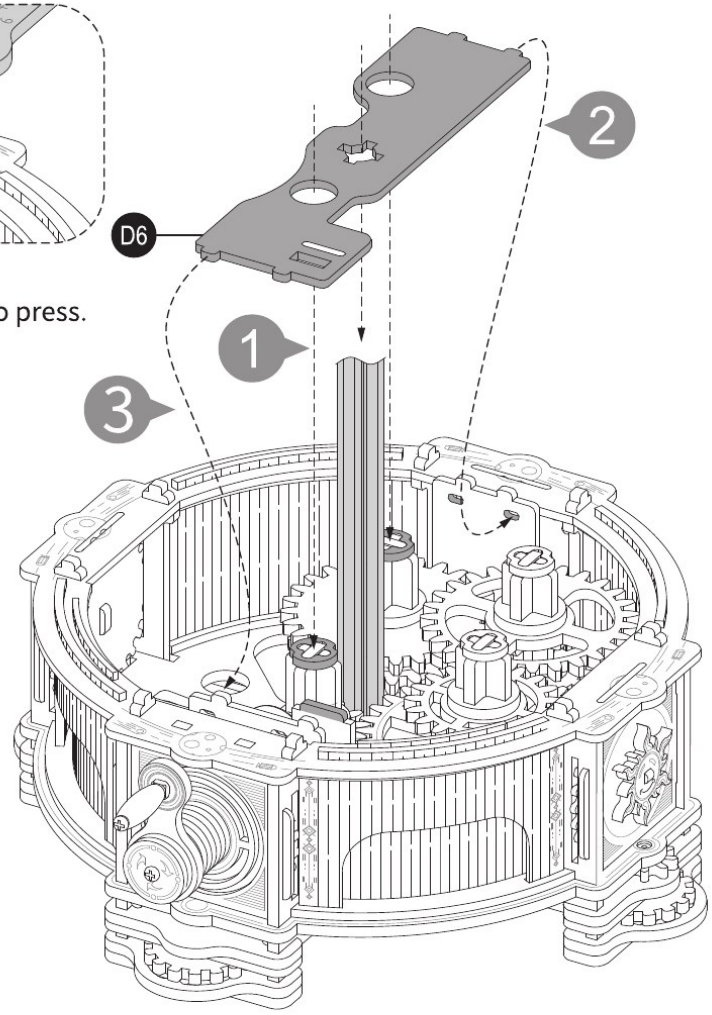
E18

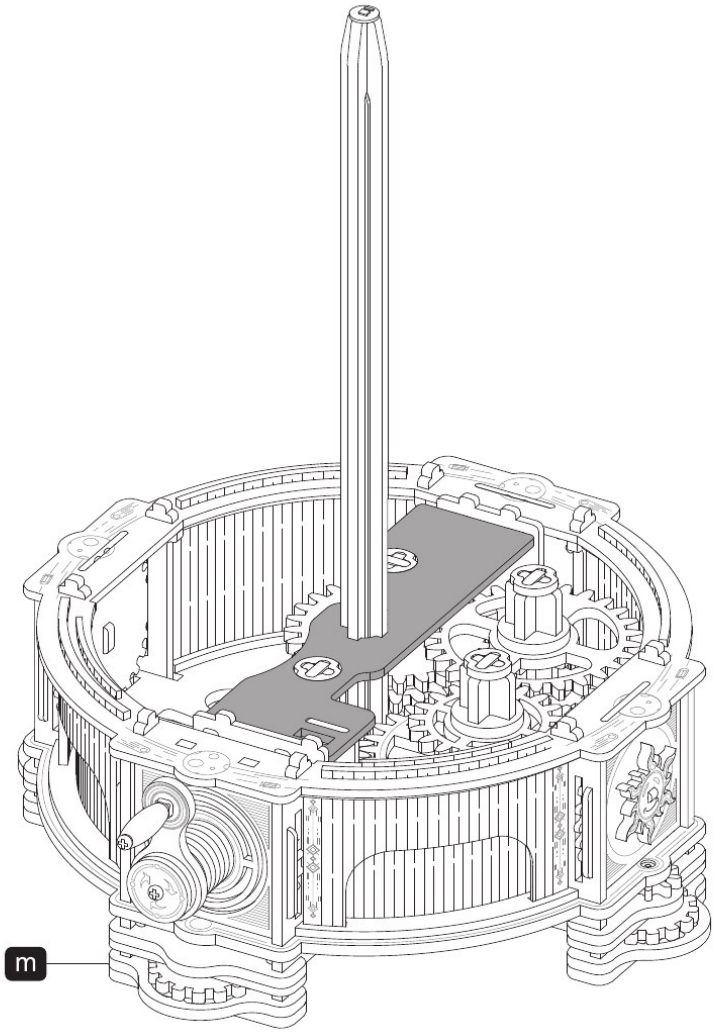
Make sure that the side with the indentation line is assembled downwards.





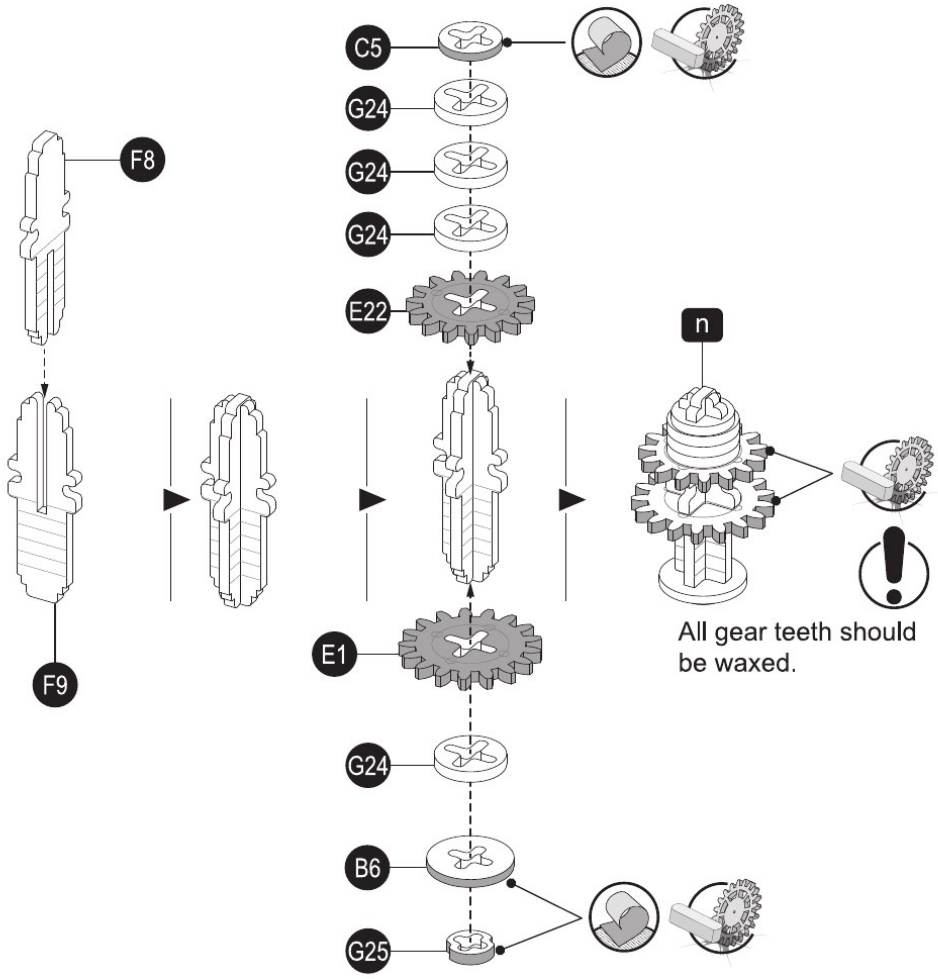
Use Tool E18 to press.





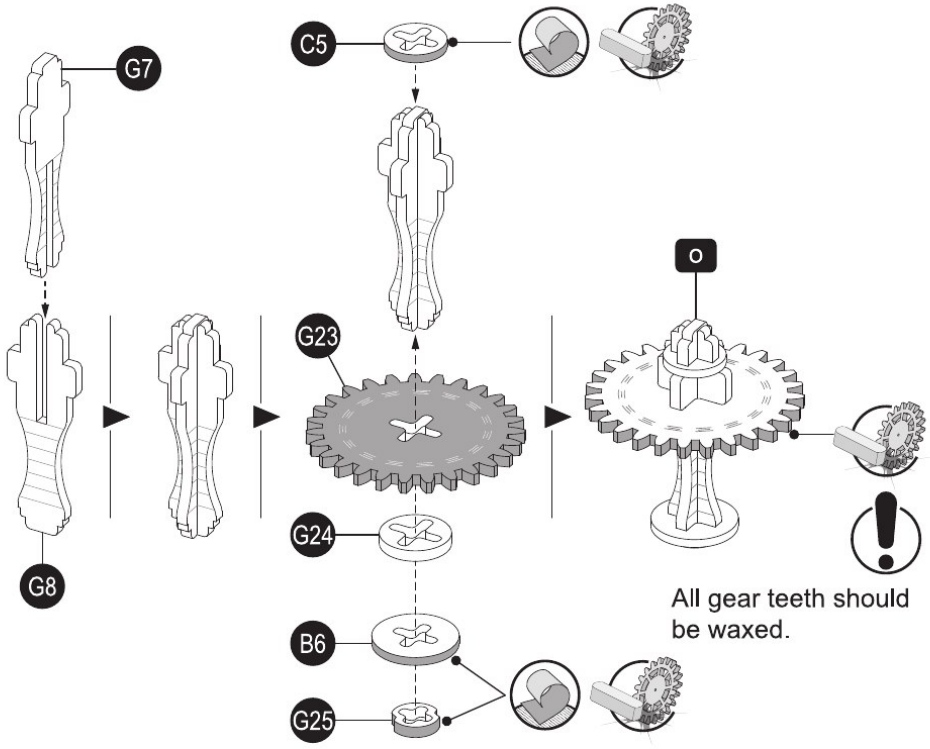
17

- B6
- C5
- E1
- E22
- F8
- F9
- G24 x4
- G25



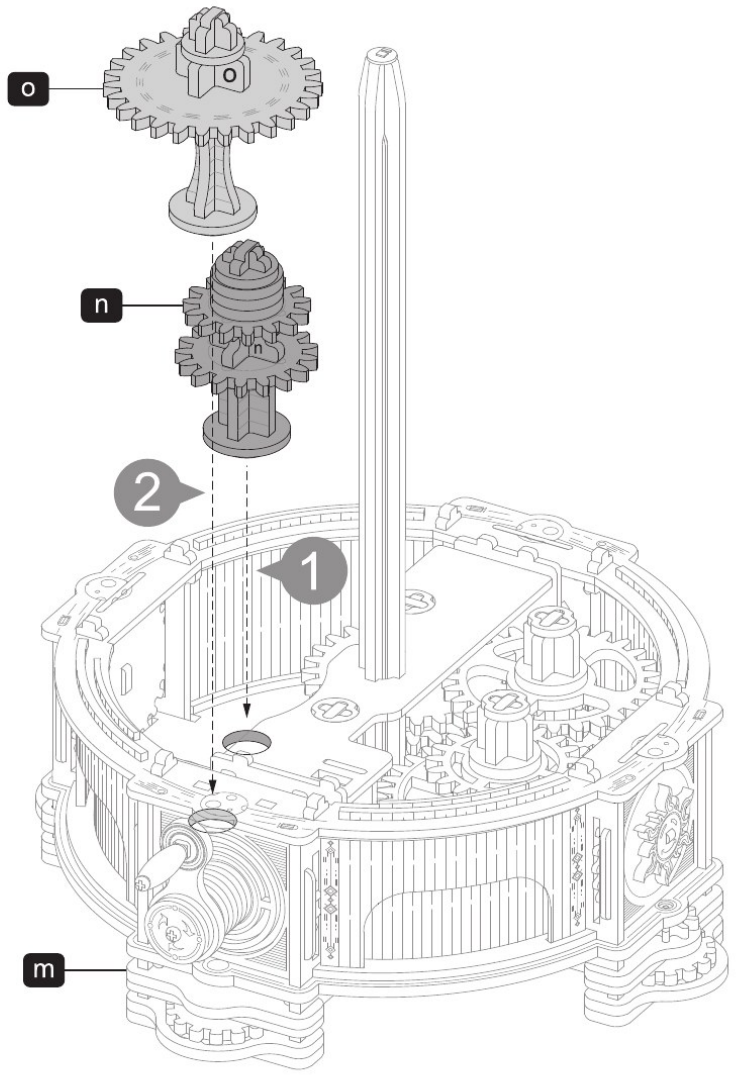
18

B6
C5
G7
G8
G23
G24
G25

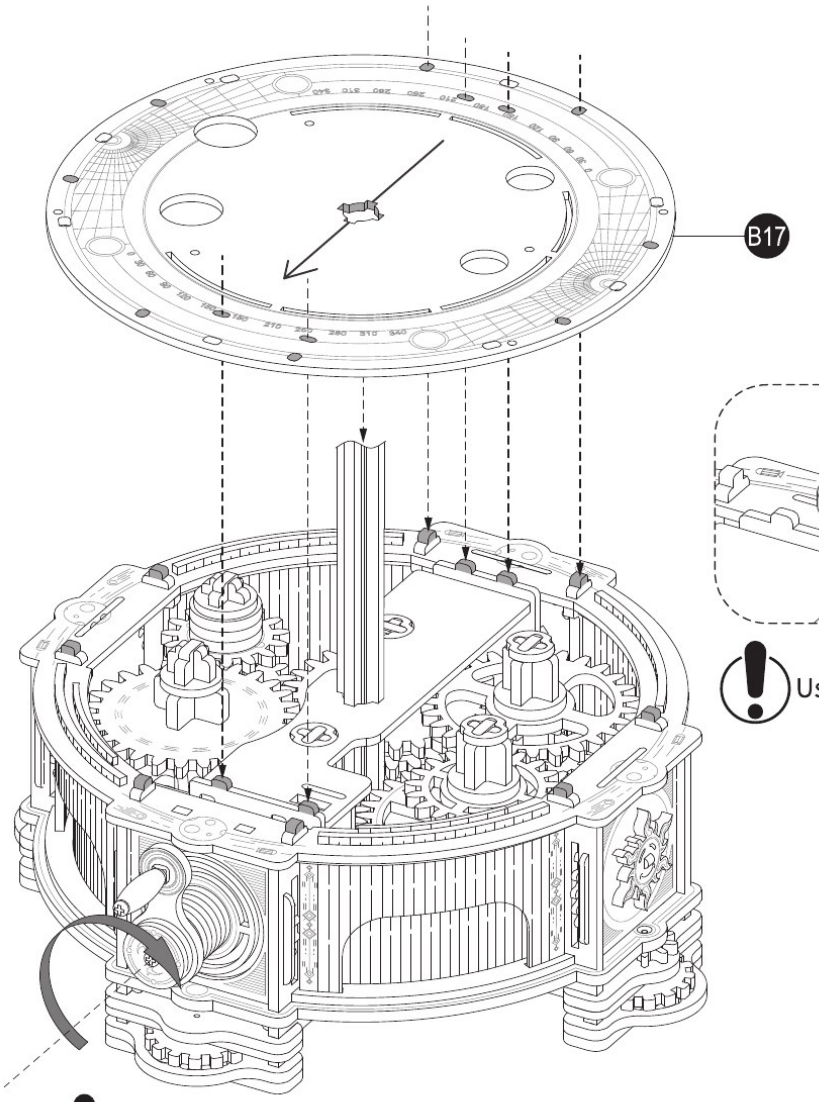


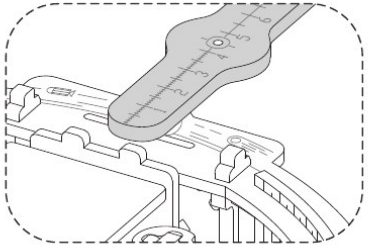
All gear teeth should be waxed.

19

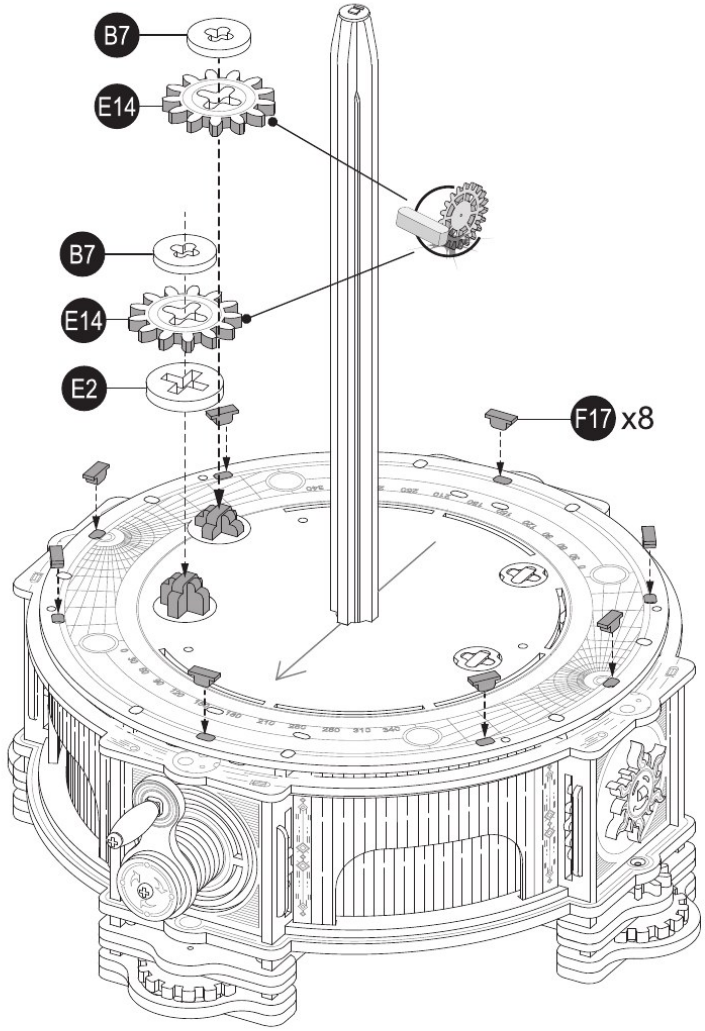


B7 x2
B17
E2
E14 x2
E18
F17 x8





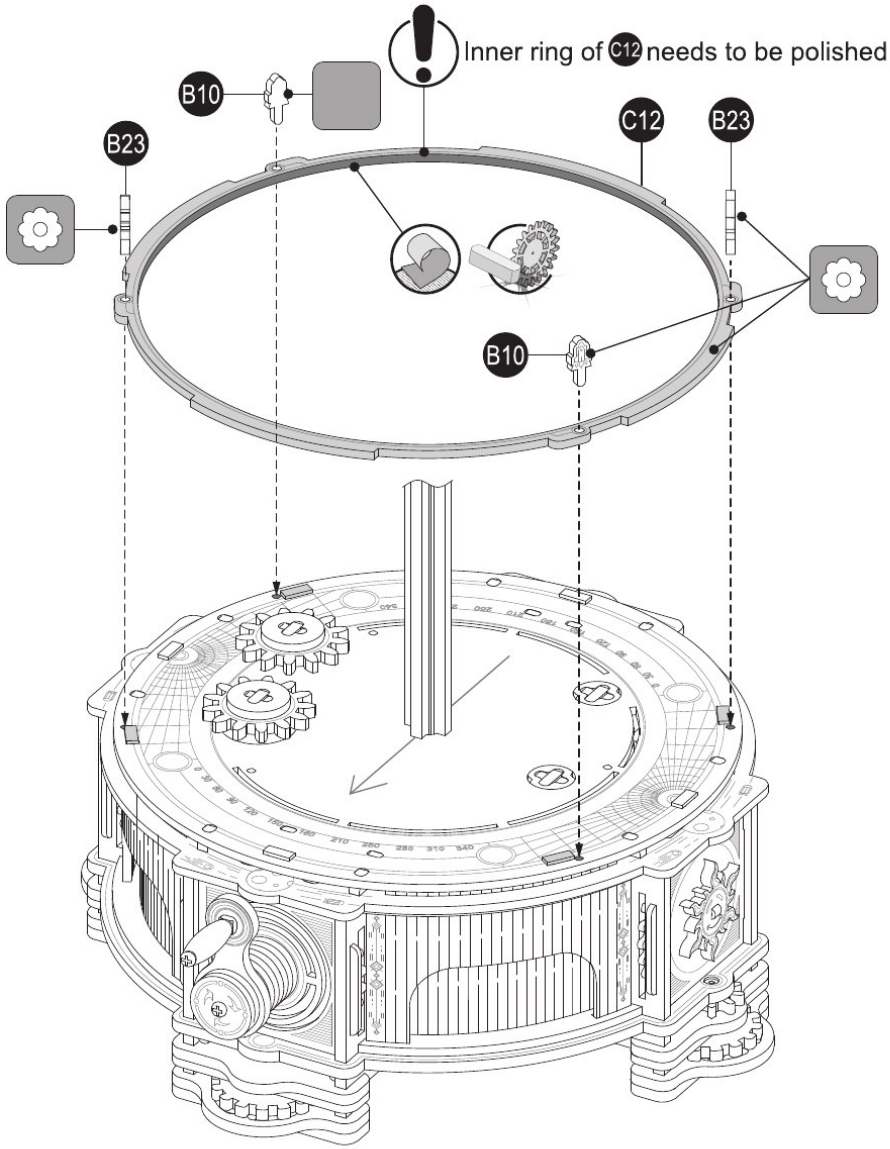
Use Tool E18 to press.

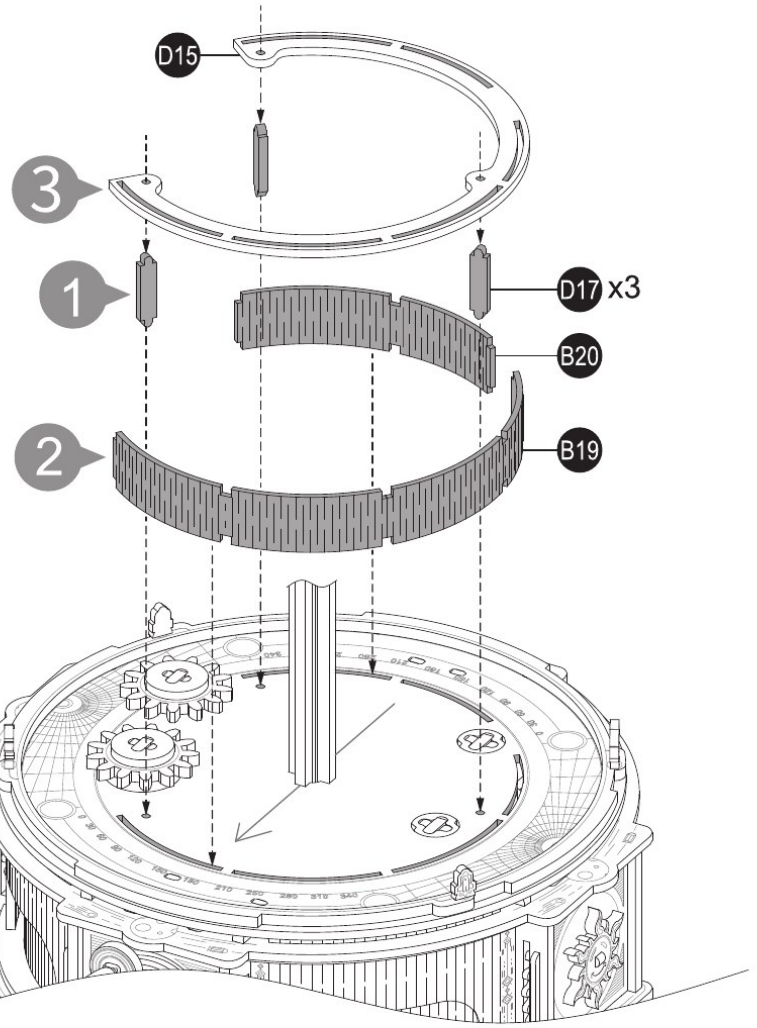


After assembly,test if the handle can rotate smoothly.

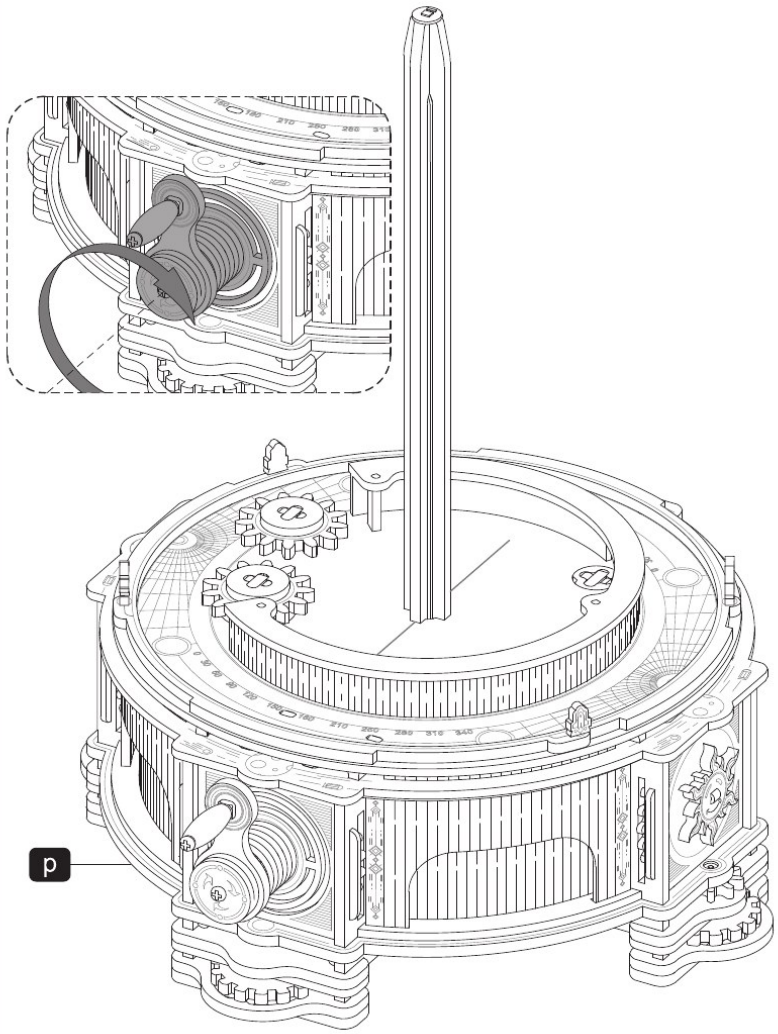
B10 x2
B19
B20
B23 x2
C12
D15
D17 x3

Inner ring of C12 needs to be polished with the sandpaper and waxed.



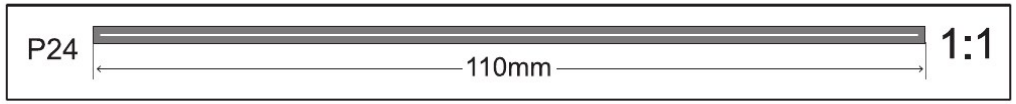


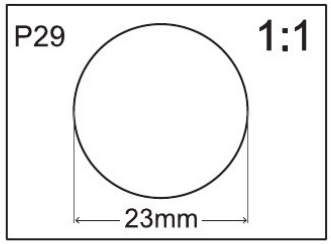
Test if the handle could rotate smoothly.
If not, please adjust the parts referring to Page 1.



20

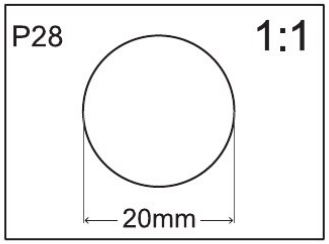
- A7 x3
- C14
- D16
- E18
- P1 x4
- P24
- P29
- P40

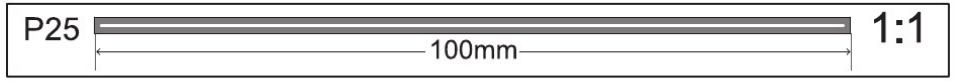




Align triangles and circles patterns and insert two parts into grooves.

B16
B22 x2
B24
C10
C13
D2 x6
E18
P1 x4
P25
P28
P40



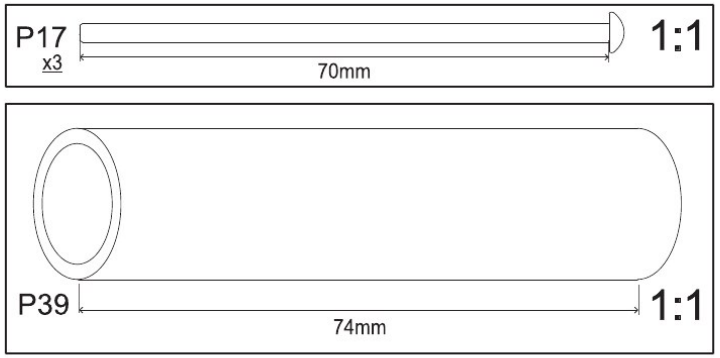


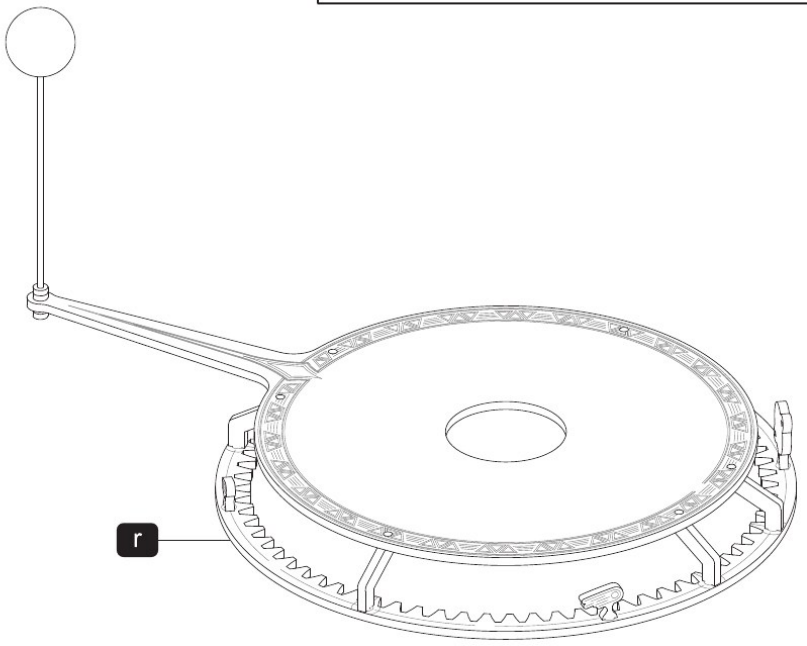
G13 x3

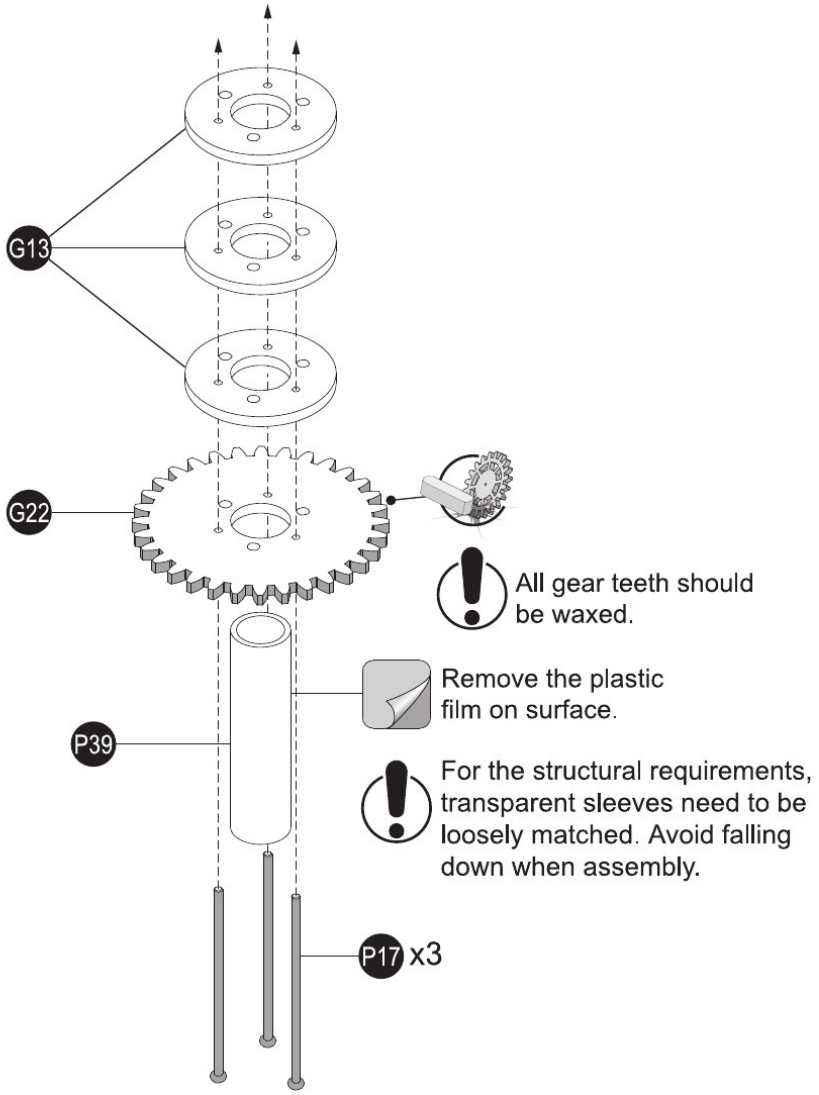
G22

P17 x3

P39





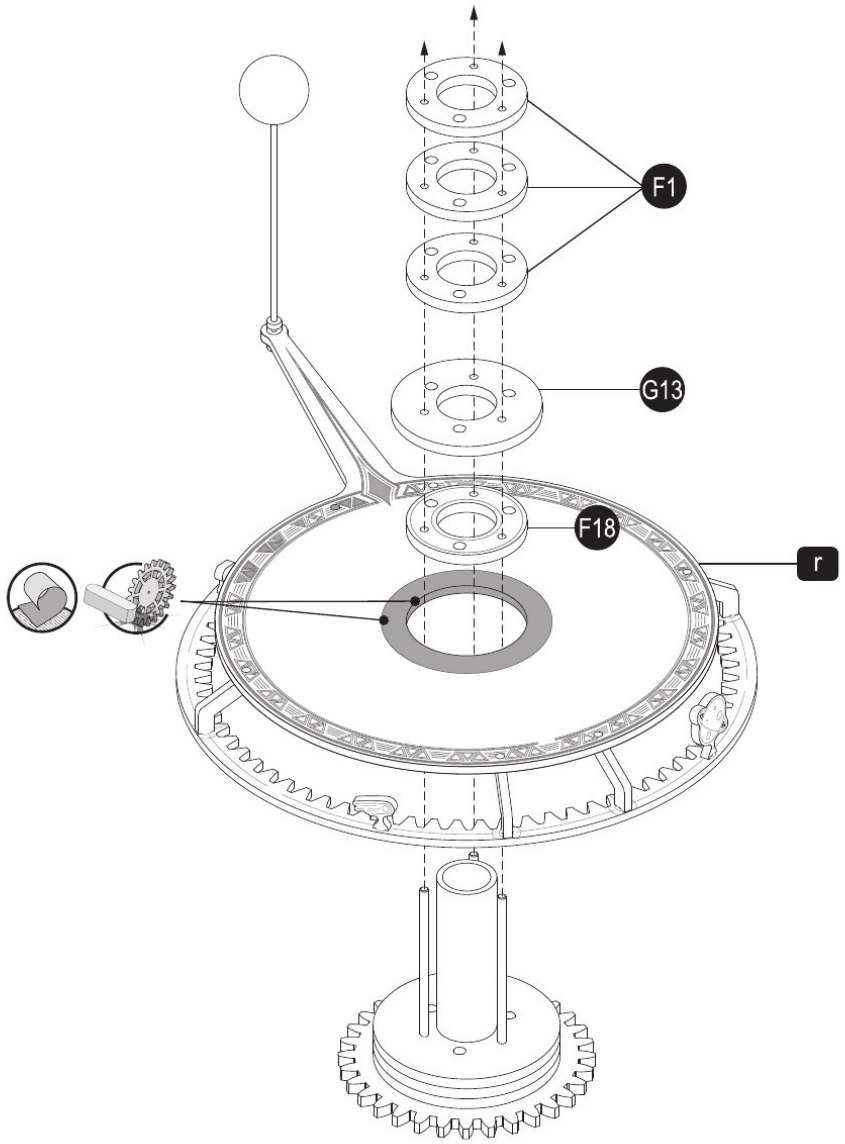


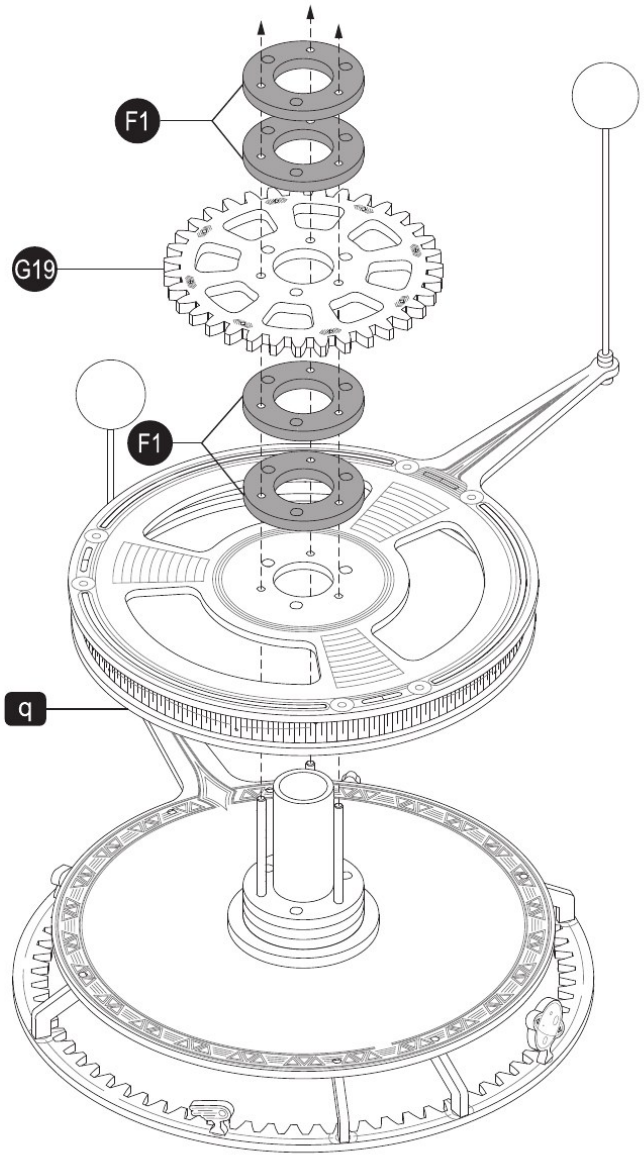
F1 x7

F18

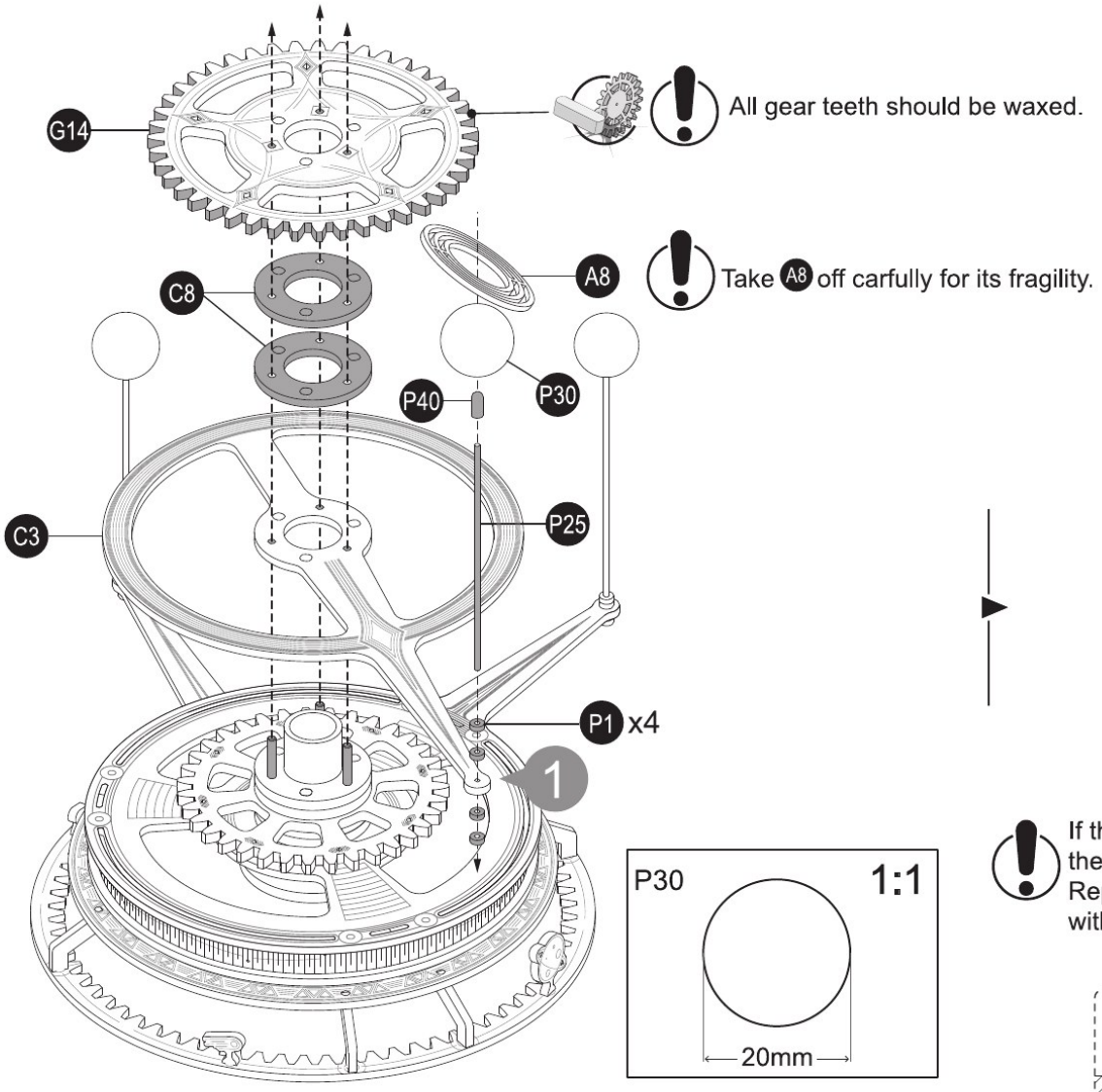
G13

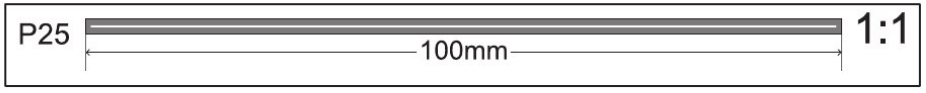
G19

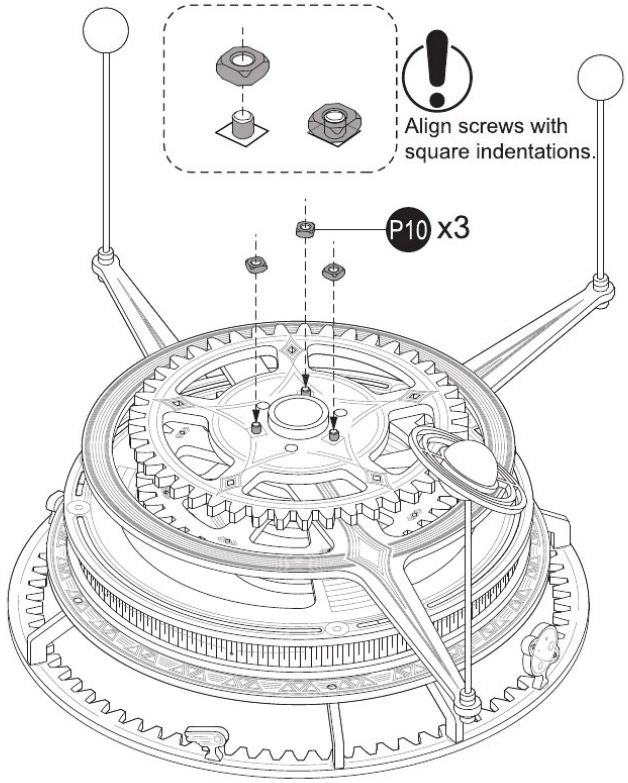




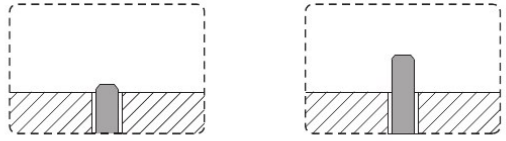
A8
C3
C8 x2
G14
P1 x4
P10 x3
P25
P30
P40







If the screw is placed as Picture a (too wide gap between boards), the nut will not be screwed.
Replace one of F1 in the previous step (right picture on Page 27) with C8. Make sure the screw is mounted as Picture b for nut assembly.



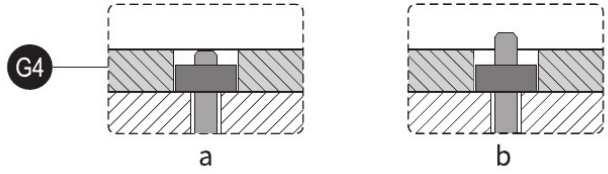
E9 x6

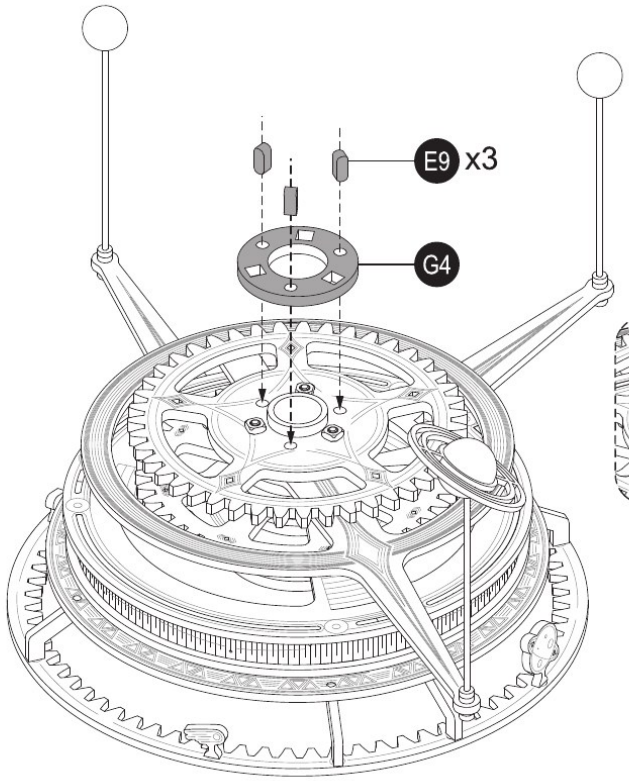
E18

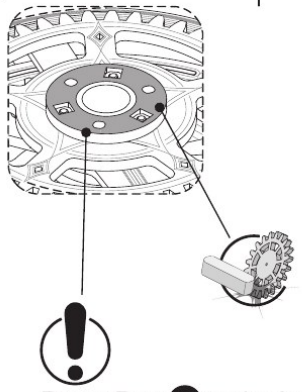
G4

G6

Please assemble Part G4 for testing before inserting Parts E9.
If Part G4 like Picture a means correct and go on assembling.
If the screw tail shows too long as Picture b, replace one of C8 in the previous step (left picture on Page 28) with F1.

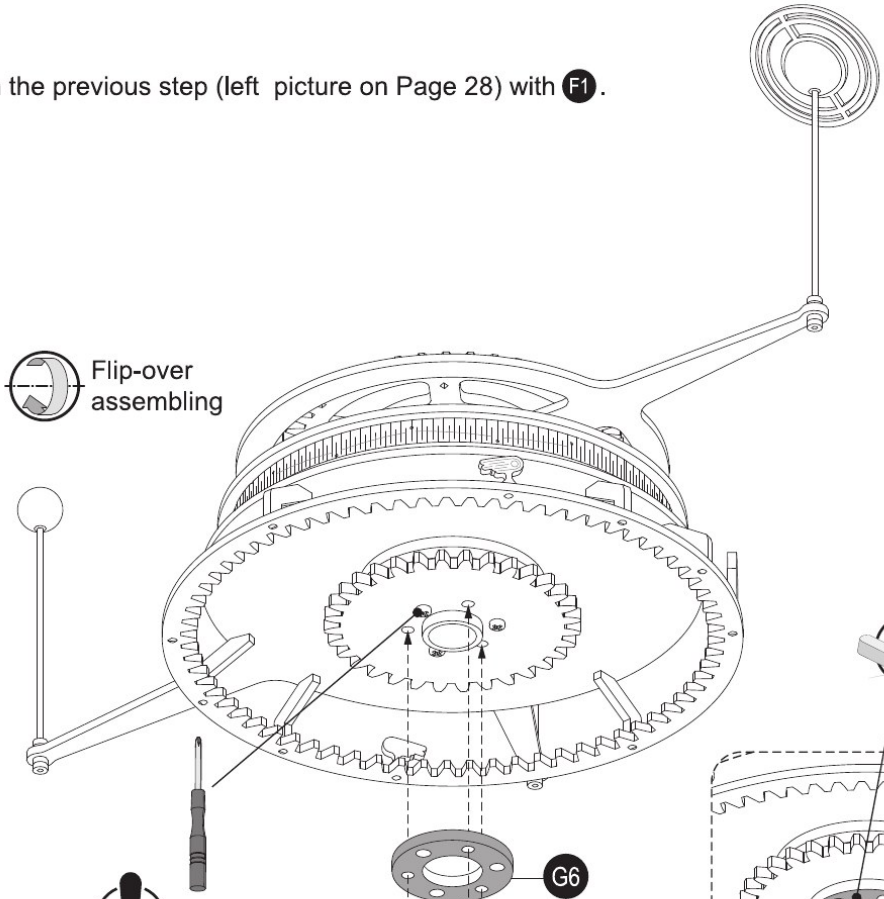




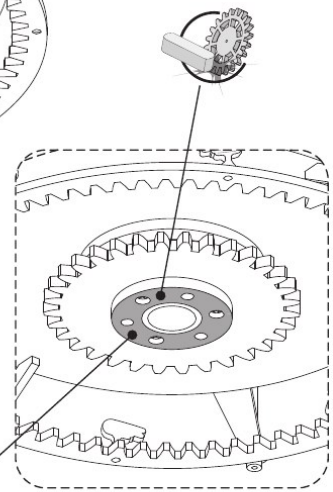


Press Part E9 to the bottom with Tool E18.

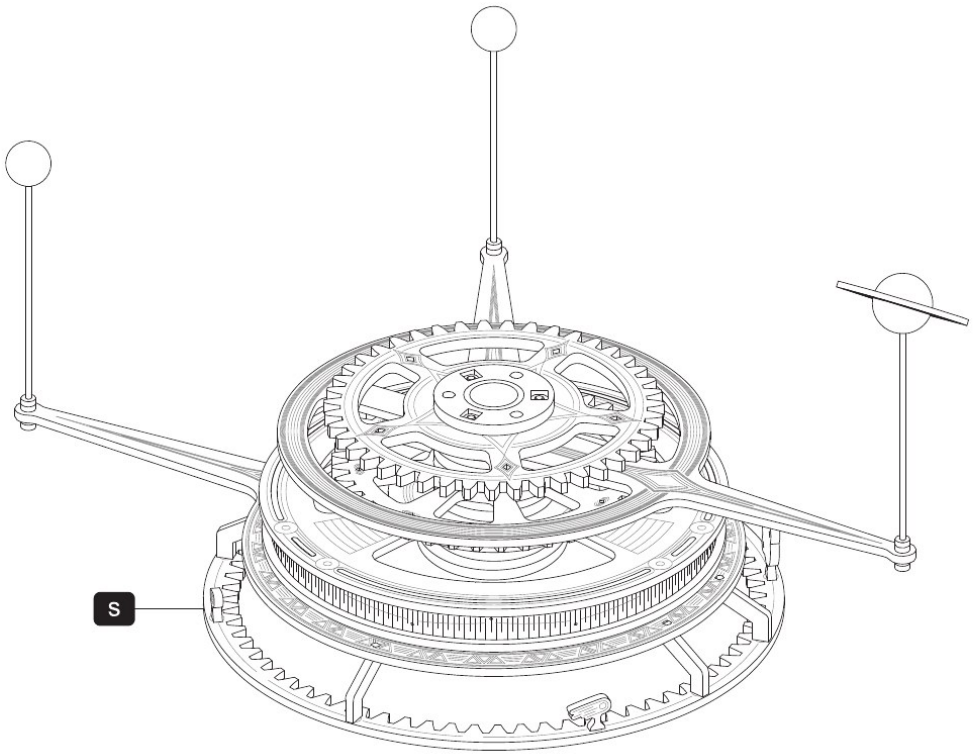
Flip-over assembling



Tighten with the screwdriver.

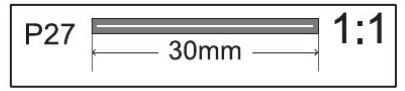


Press Part E9 to the bottom with Tool E18.



21

- D4
- F16 x2
- G2
- G15
- P1 x4
- P18 x3
- P27
- P31
- P38
- P40

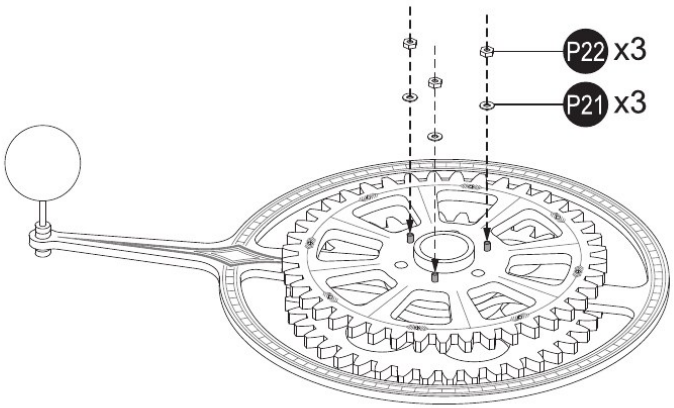


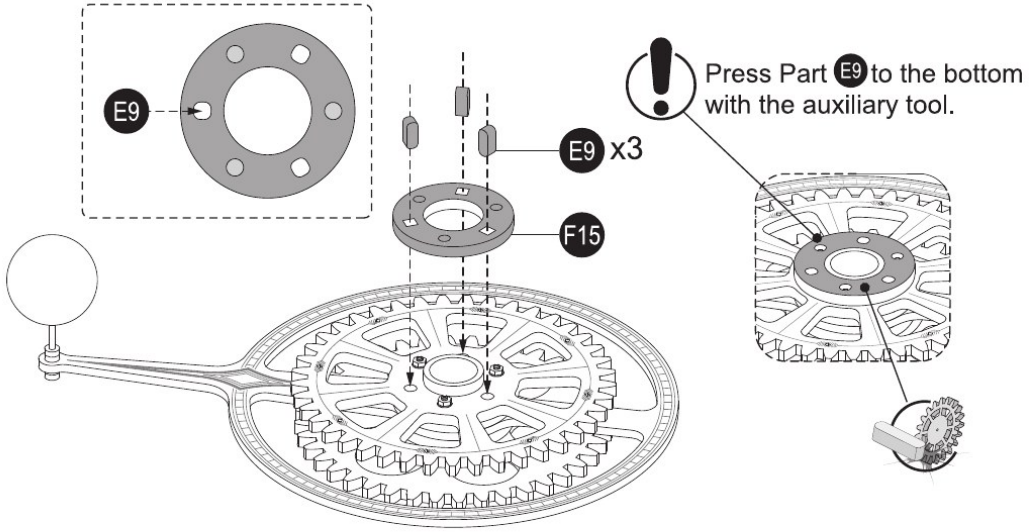
E9 x3

F15

P21 x3

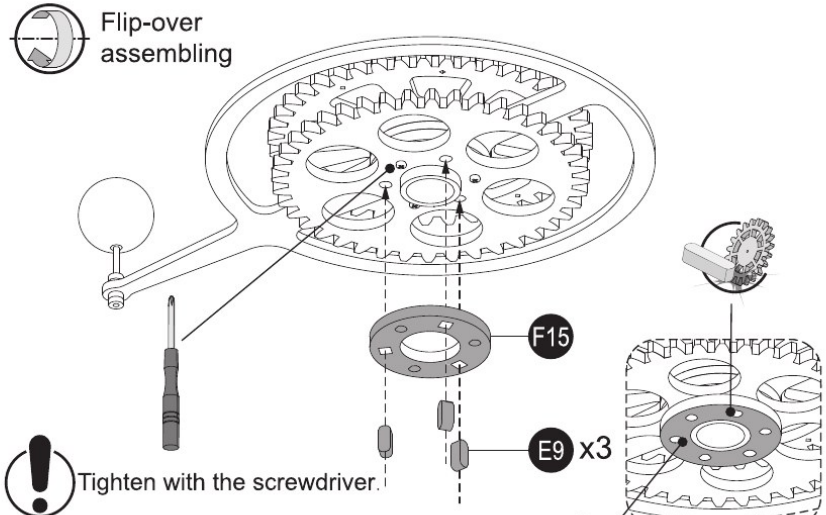
P22 x3

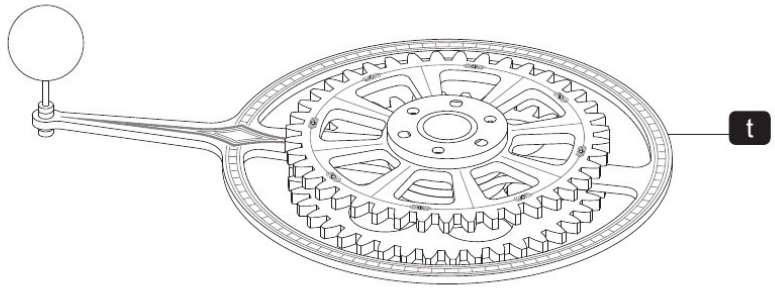




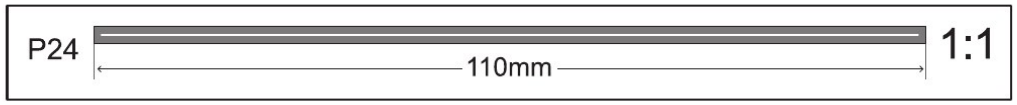
E9 x3

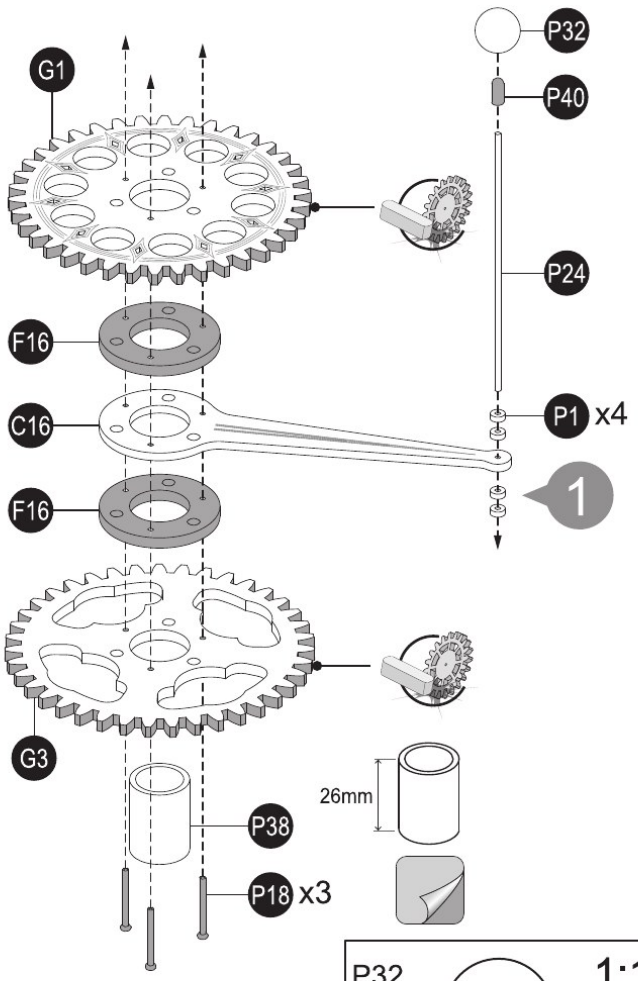
F15

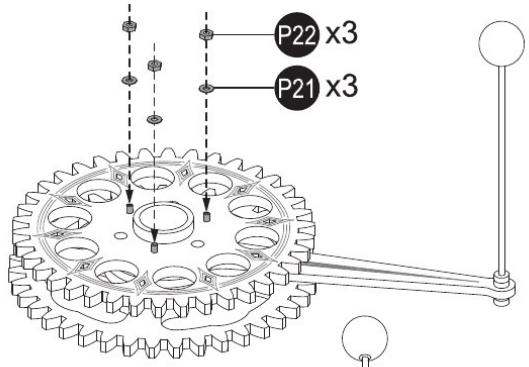


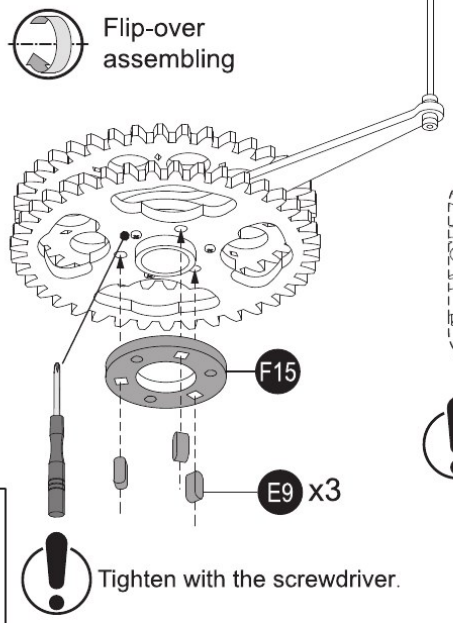


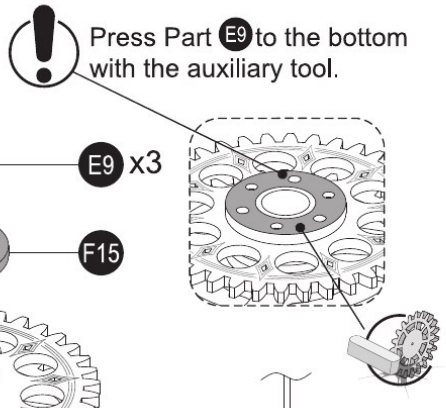
C16
E9 x6
F15 x2
F16 x2
G1
G3
P1 x4
P18 x3
P21 x3
P22 x3
P24
P32
P38
P40

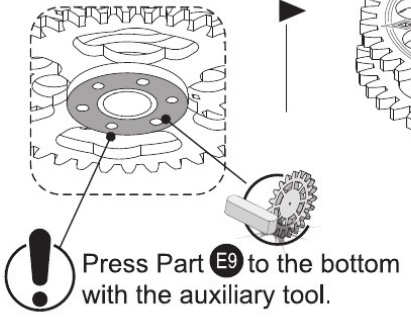


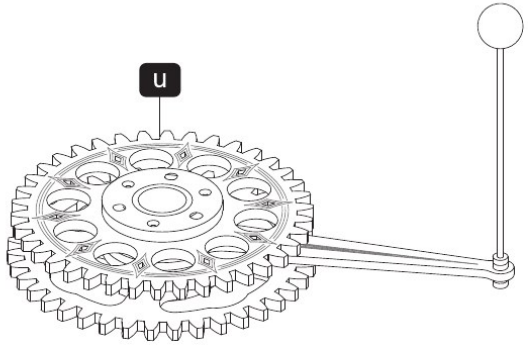




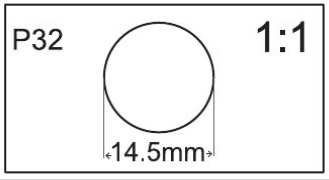












D10
E9 x6
F15 x2
F16 x2
G20
G21
P1 x4
P18 x3
P21 x3
P22 x3
P26
P33
P38
P40

P26 1:1
55mm

P33
P40
G21
P26
F16
P1 x4
1
D10
F16
G20
26mm
P38
P18 x3

P18 1:1
x3 20mm

P33 1:1
18mm

Flip-over assembling

Tighten with the screwdriver.

Press Part E9 to the bottom with the auxiliary tool.

P22 x3
P21 x3

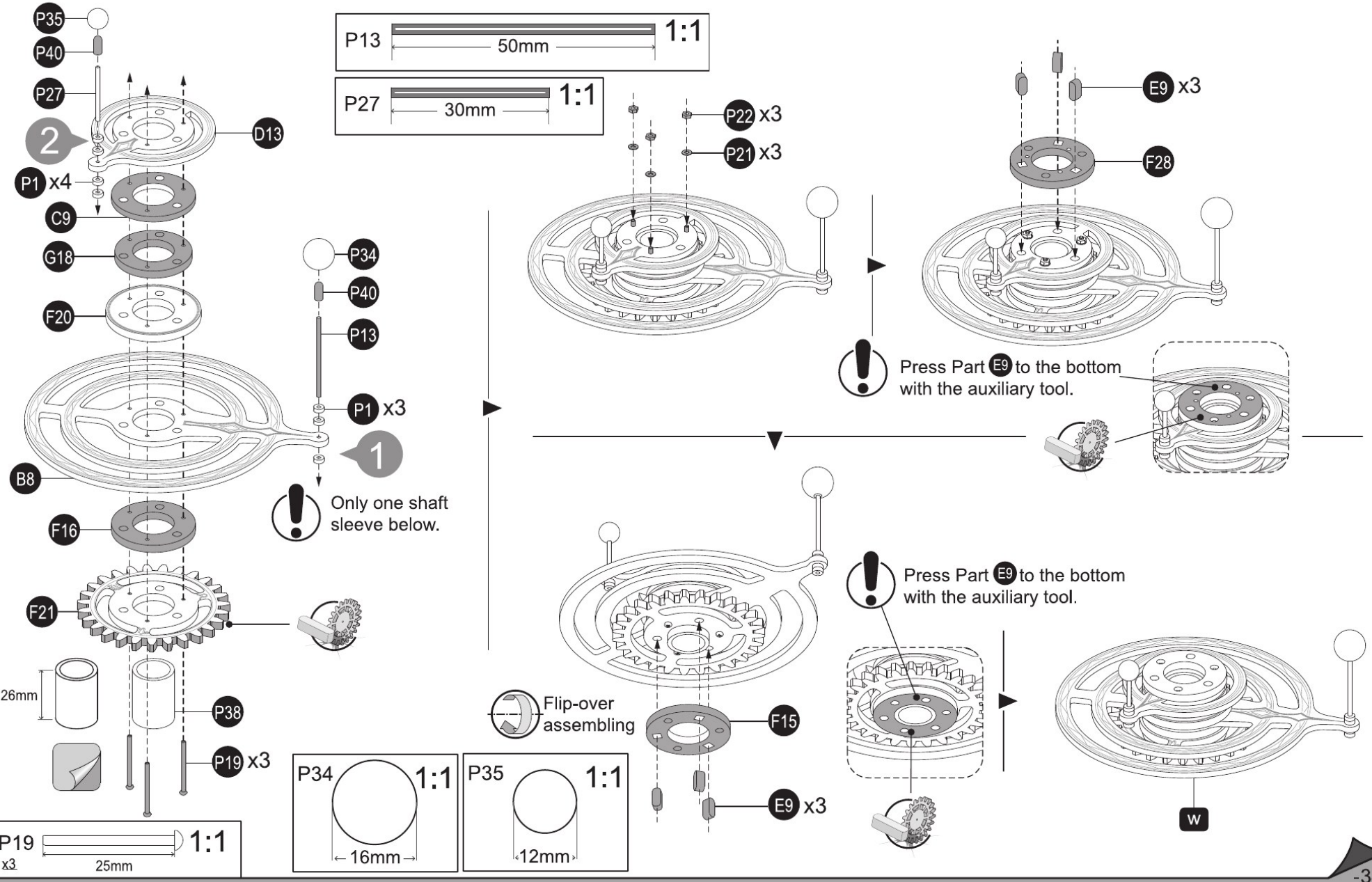
E9 x3
F15

F15
E9 x3

Press Part E9 to the bottom with the auxiliary tool.

V

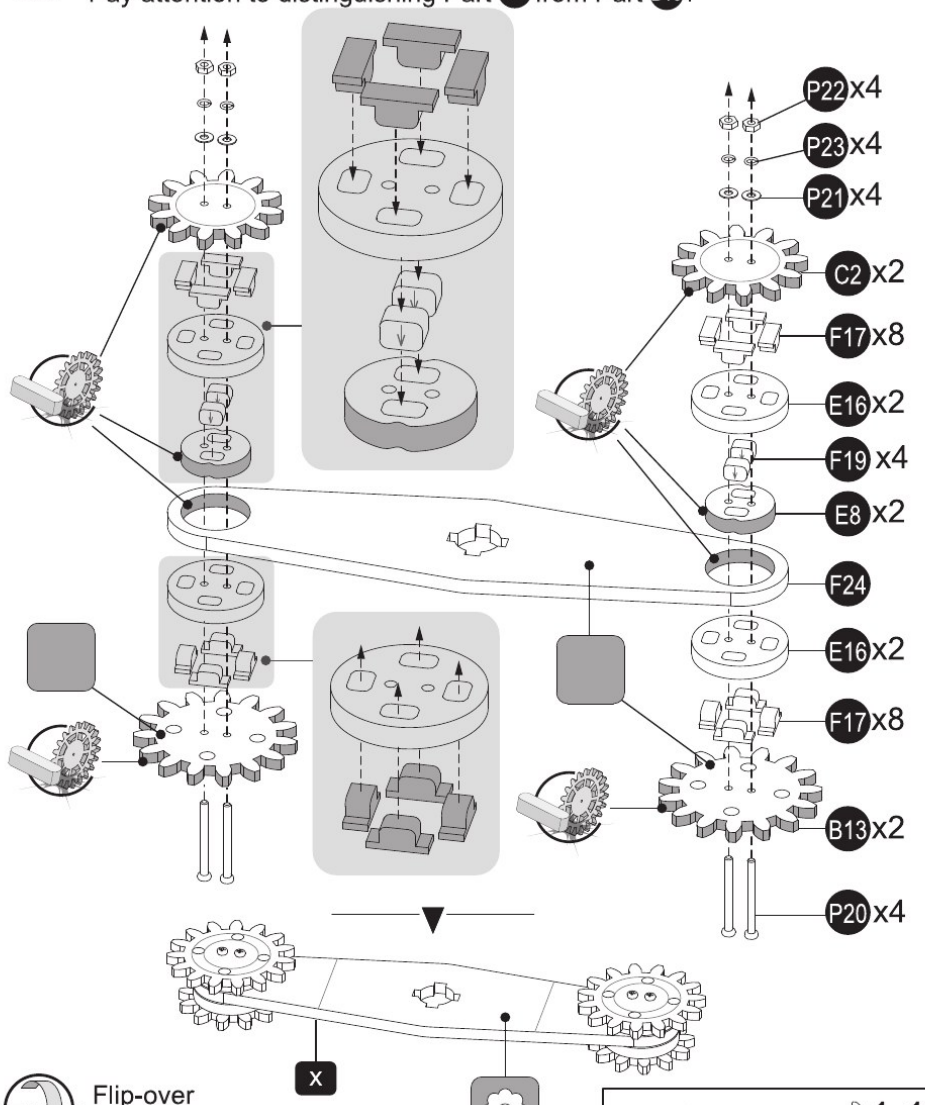
B8
C9
D13
E9 x6
F15
F16
F20
F21
F28
G18
P1 x7
P13
P19 x3
P21 x3
P22 x3
P27
P34
P35
P38
P40 x2



25

B13 x2
C2 x2
E8 x2
E16 x4
F17 x16
F19 x4
F24
P20 x4
P21 x4
P22 x4
P23 x4

All gear teeth need to be waxed.
Tighten the tail nut with Tool E18.
Pay attention to distinguishing Part C2 from Part B13.



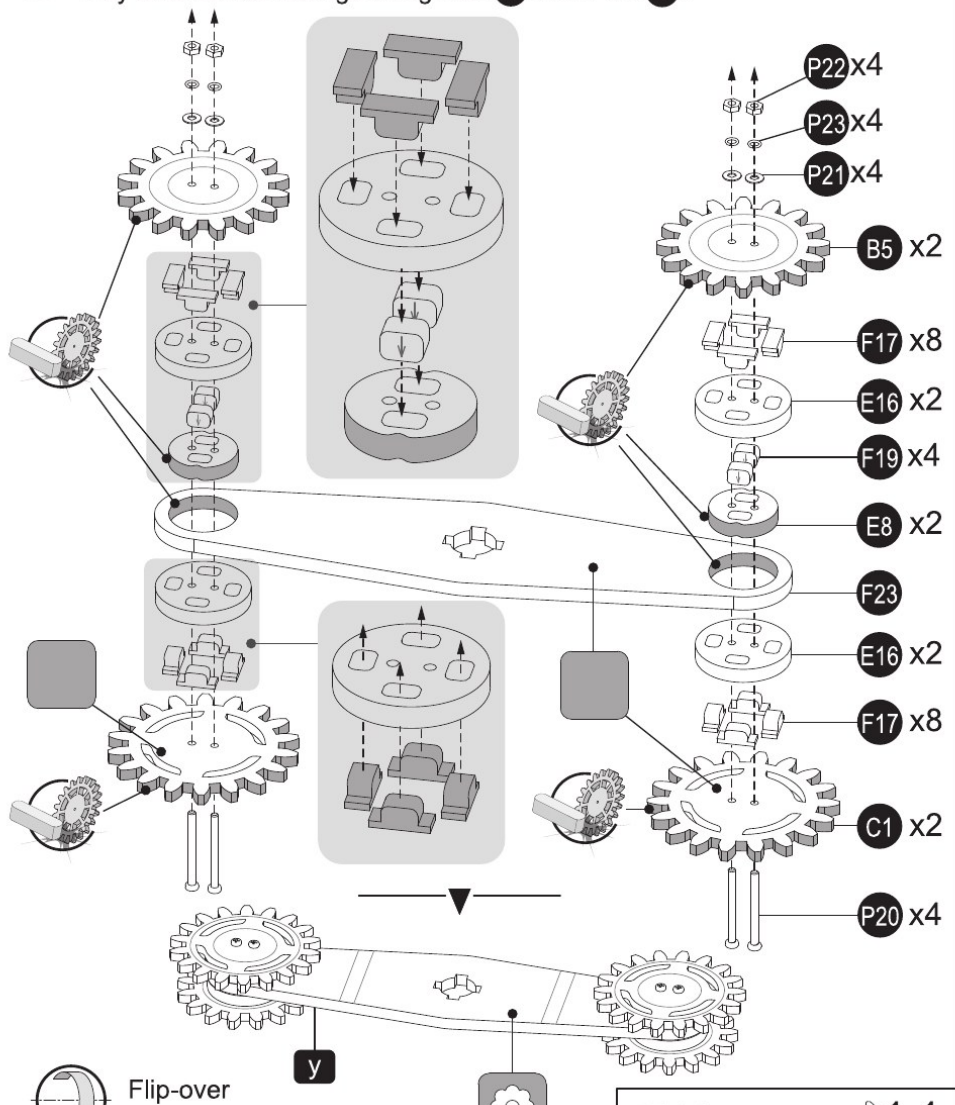
Flip-over assembling

P20 x4 22mm 1:1

26

B5 x2
C1 x2
E8 x2
E16 x4
F17 x16
F19 x4
F23
P20 x4
P21 x4
P22 x4
P23 x4

All gear teeth need to be waxed.
Tighten the tail nut with Tool E18.
Pay attention to distinguishing Part B5 from Part C1.



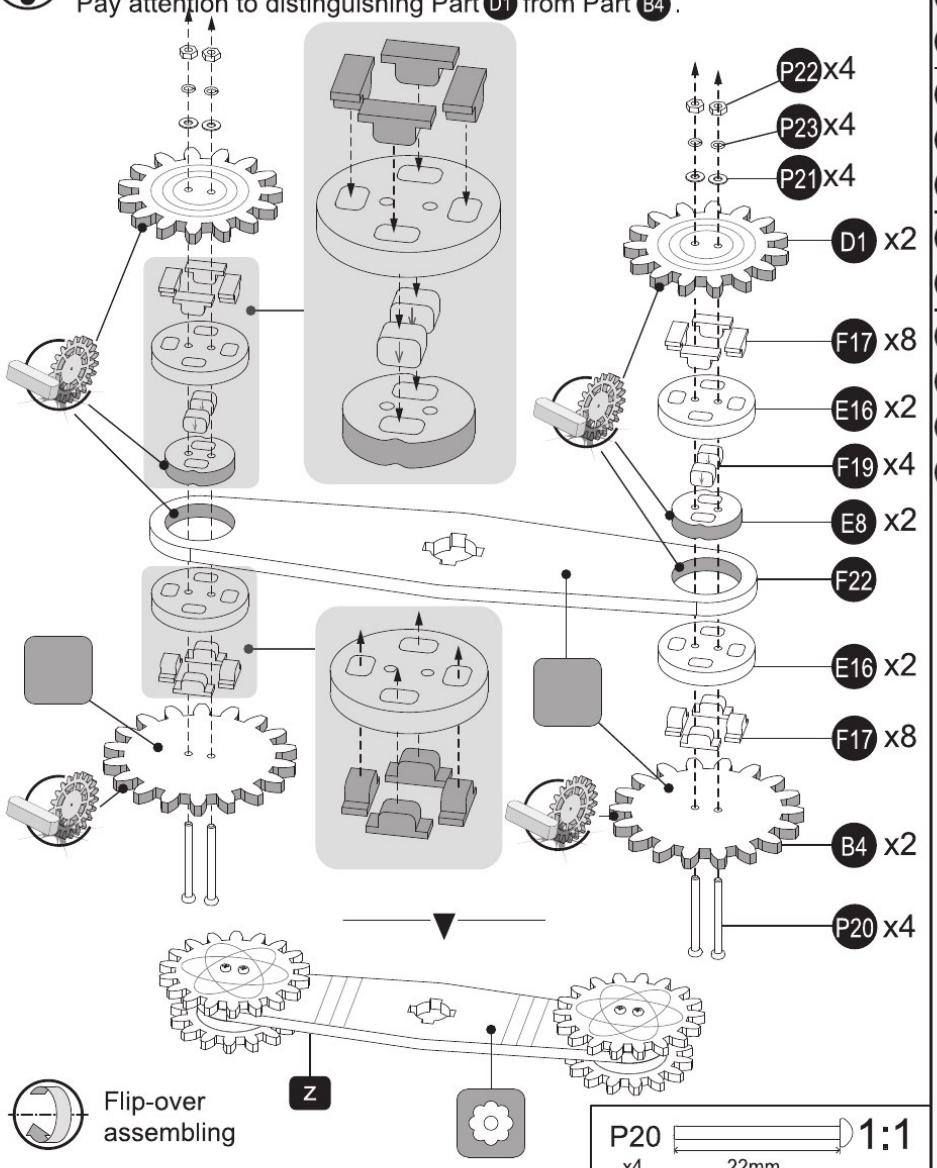
Flip-over assembling

P20 x4 22mm 1:1

27

B4 x2
D1 x2
E8 x2
E16 x4
F17 x16
F19 x4
F22
P20 x4
P21 x4
P22 x4
P23 x4

All gear teeth need to be waxed.
Tighten the tail nut with Tool E18.
Pay attention to distinguishing Part D1 from Part B4.

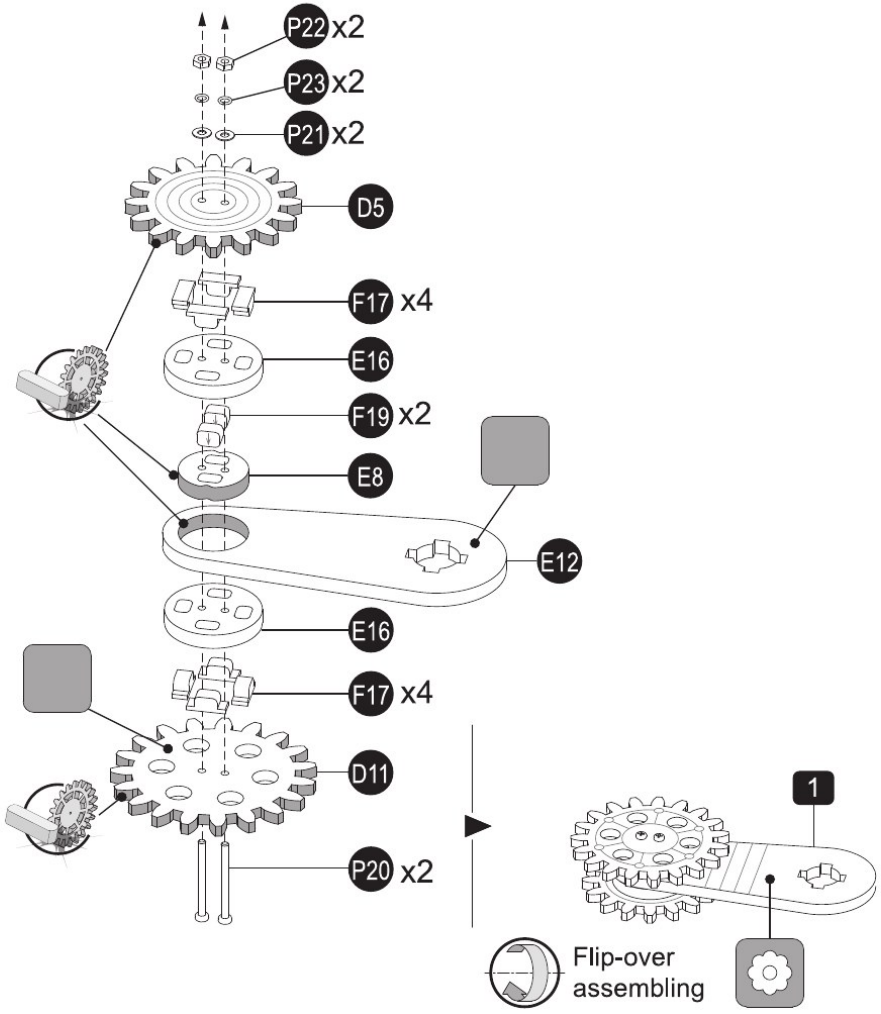


P20 x4 22mm 1:1

28

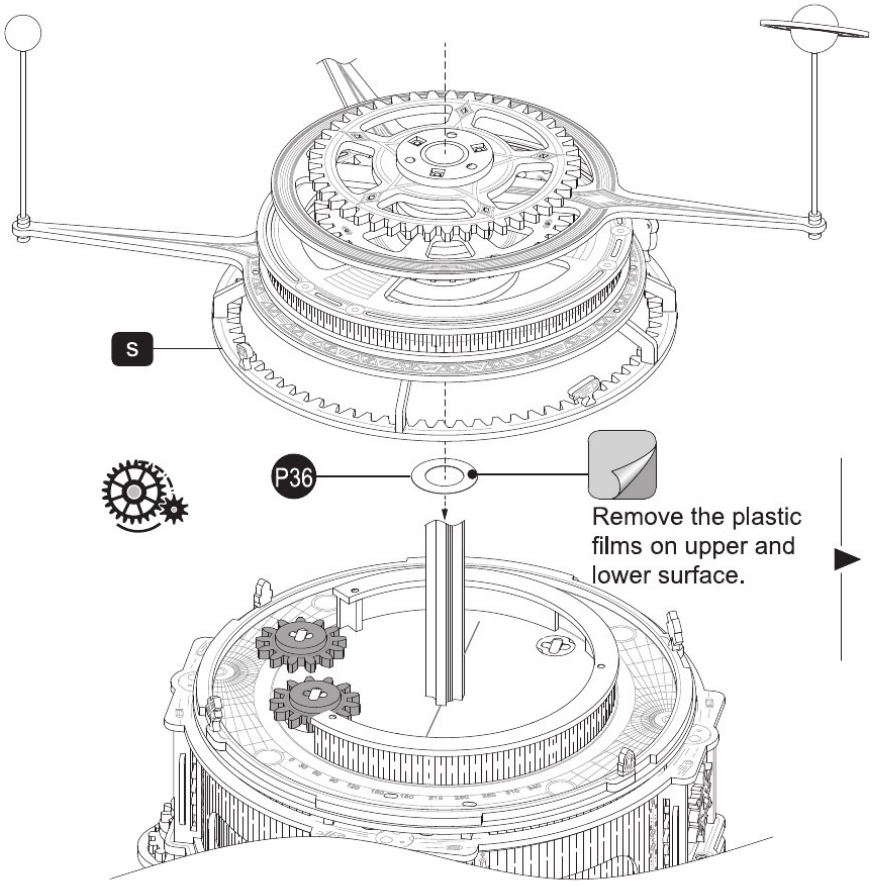
D5
D11
E8
E12
E16 x2
F17 x8
F19 x2
P20 x2
P21 x2
P22 x2
P23 x2

All gear teeth need to be waxed.
Tighten the tail nut with Tool E18.
Pay attention to distinguishing Part D5 from Part D11.



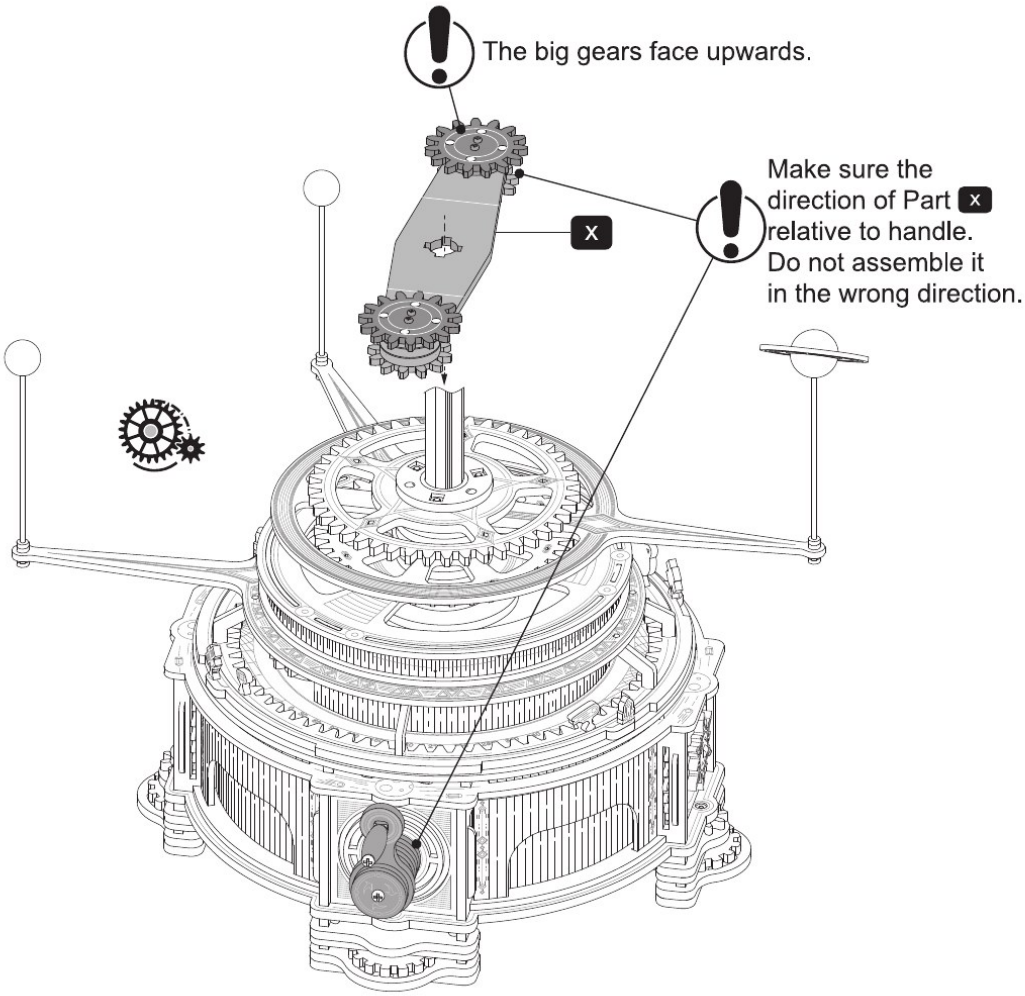
P20 x2 22mm 1:1

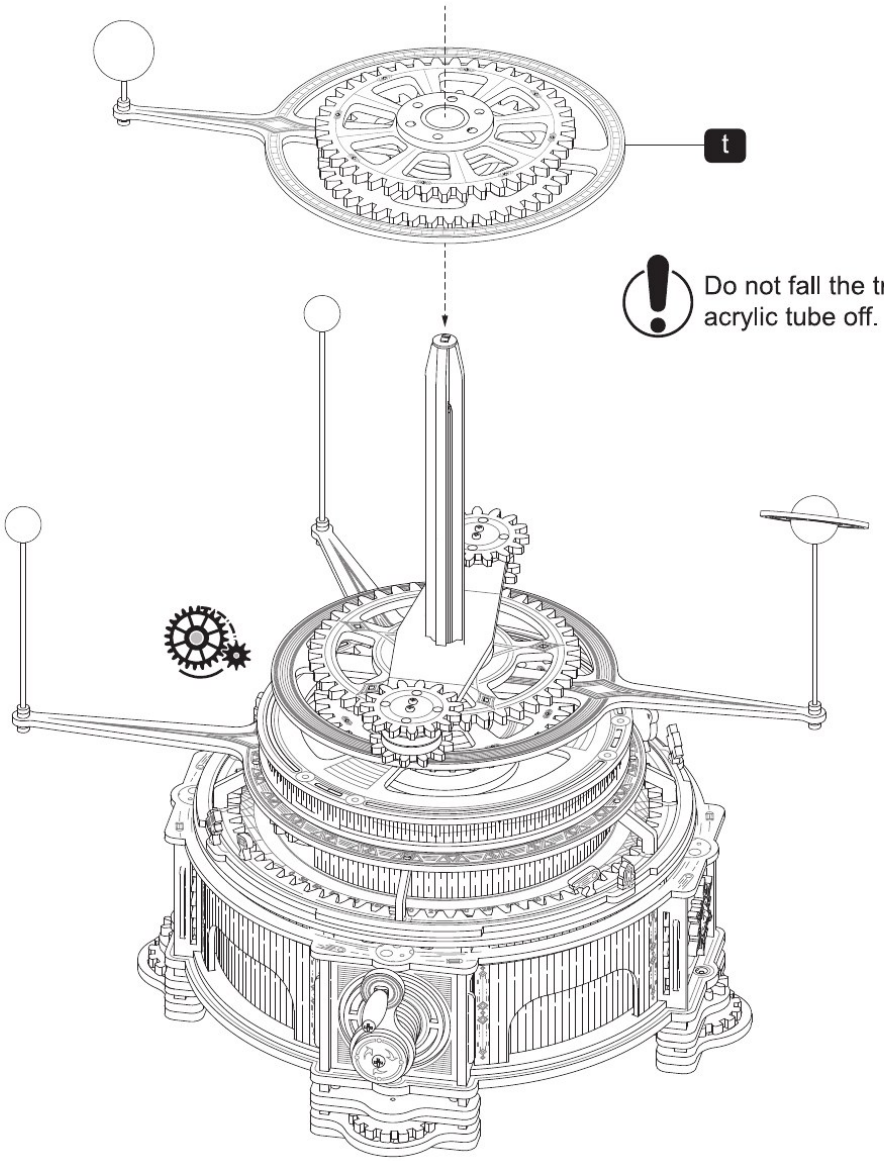
Do not fall the transparent acrylic tube off.

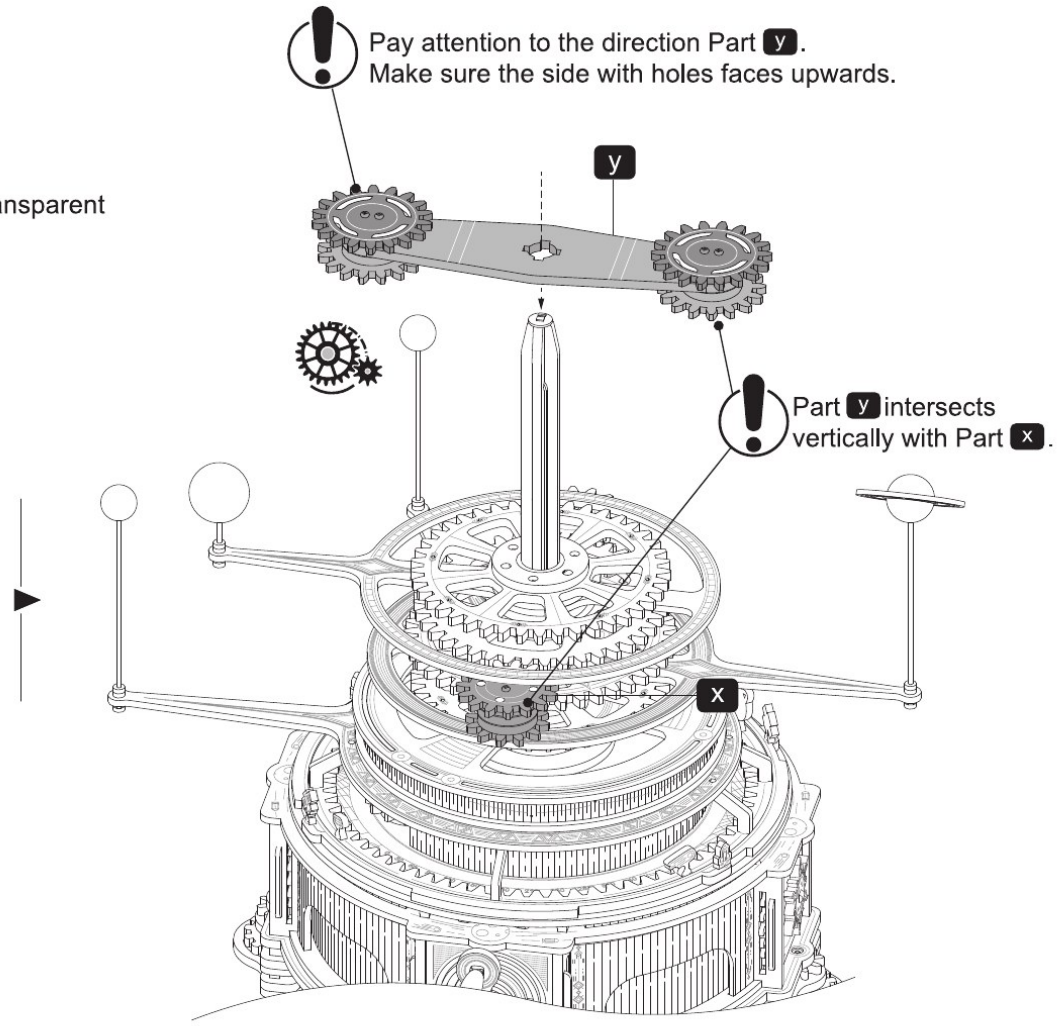


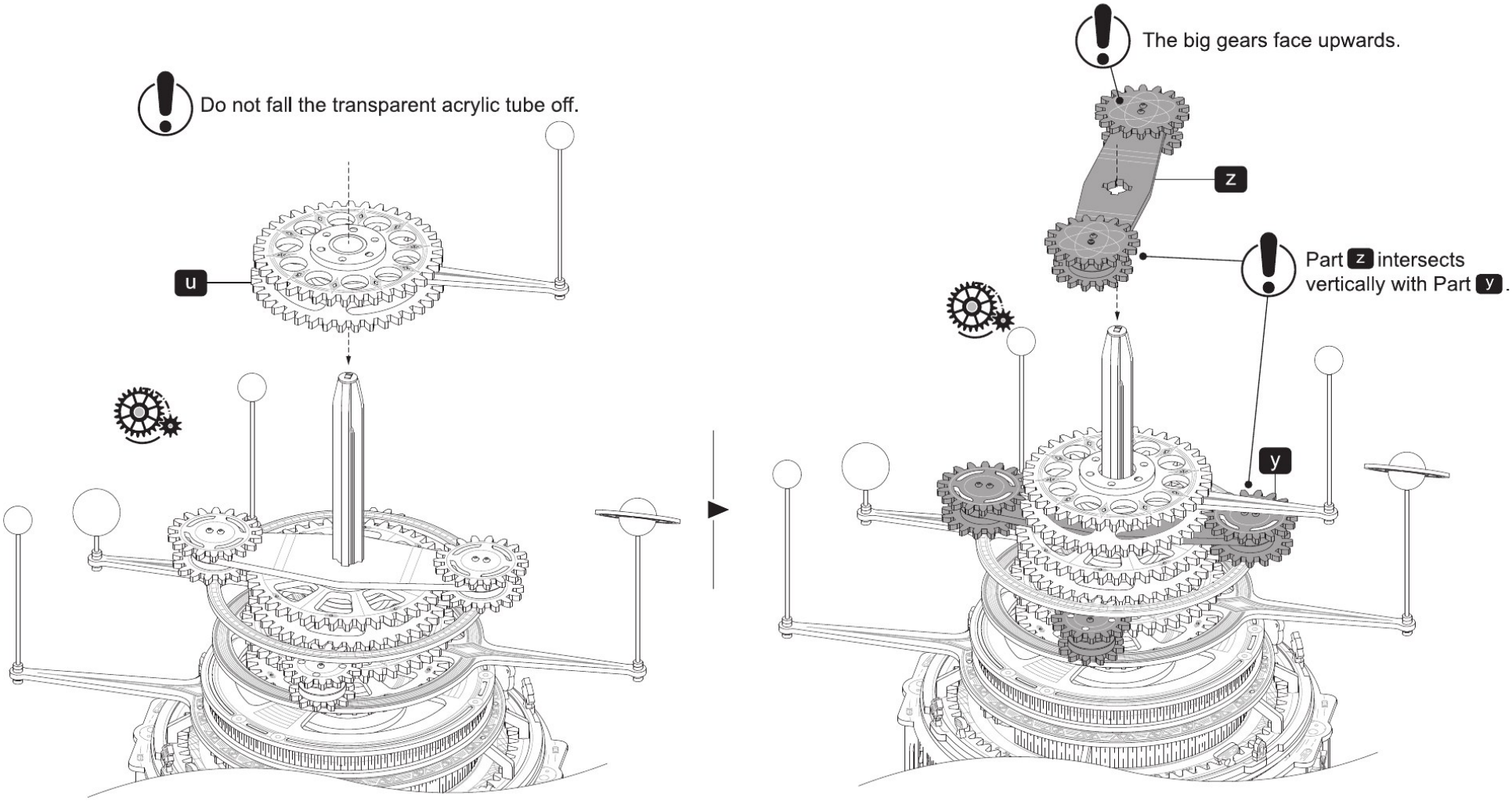
The big gears face upwards.

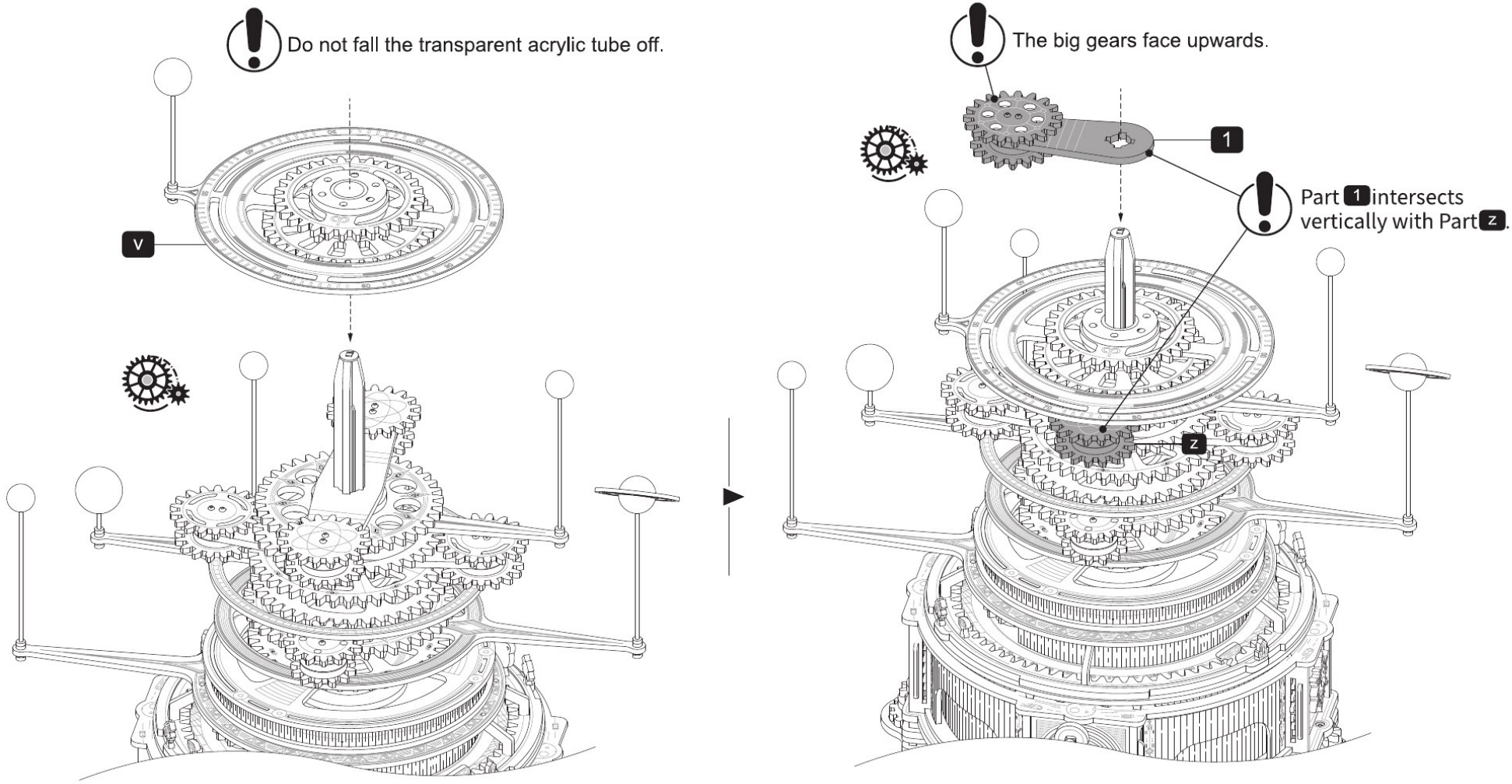
Make sure the direction of Part X relative to handle. Do not assemble it in the wrong direction.




t
Do not fall the transparent acrylic tube off.


Pay attention to the direction Part y.
Make sure the side with holes faces upwards.
y
Part y intersects vertically with Part x.
x


Do not fall the transparent acrylic tube off.
u
The big gears face upwards.
z
Part z intersects vertically with Part y.
y


Do not fall the transparent acrylic tube off.
V
The big gears face upwards.
1
Part 1 intersects vertically with Part Z.
Z

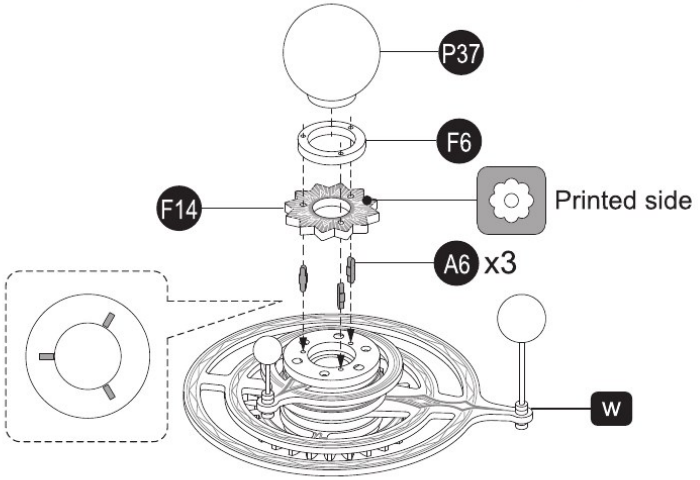
A6 x3

F6

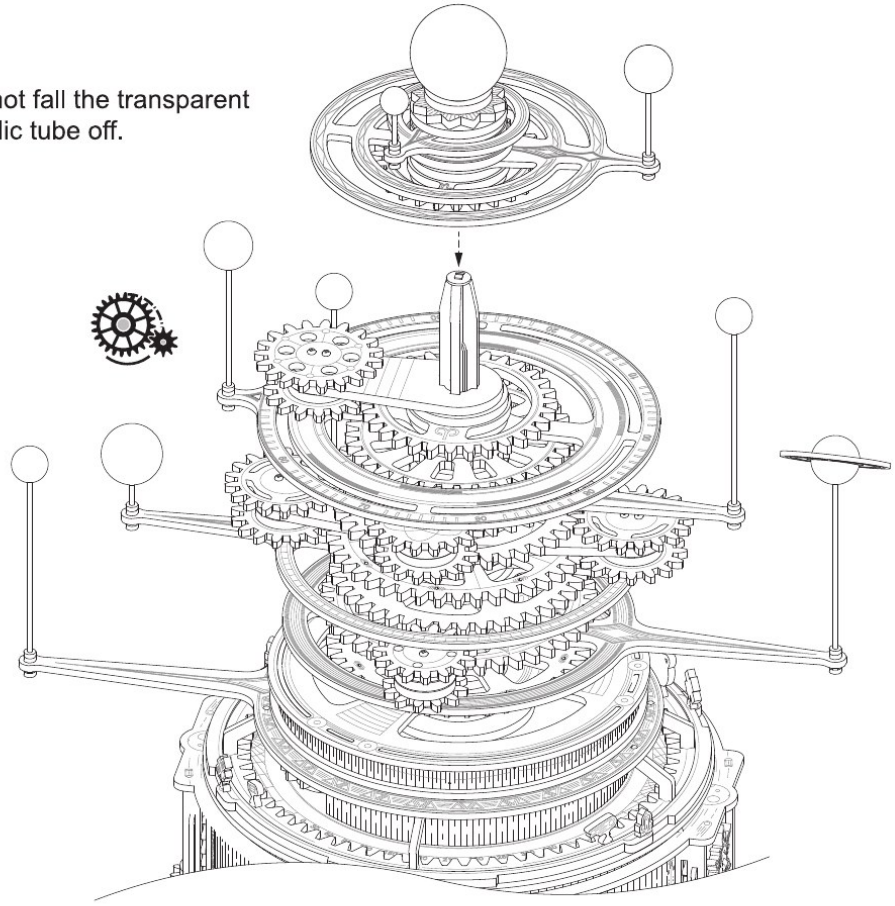
F14

P37

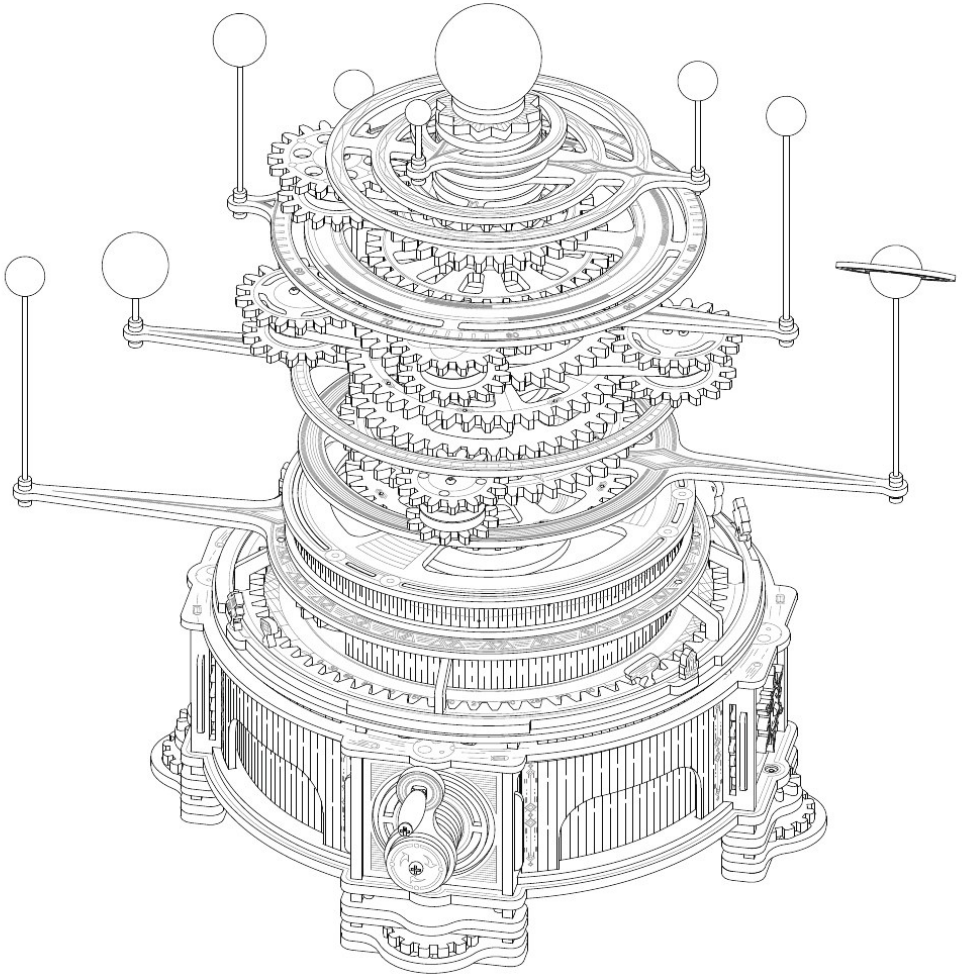
F6 has three different specifications from loose to tight:F6-a F6-b F6-c.
Choose and assemble one which is tightly fit for P37 .

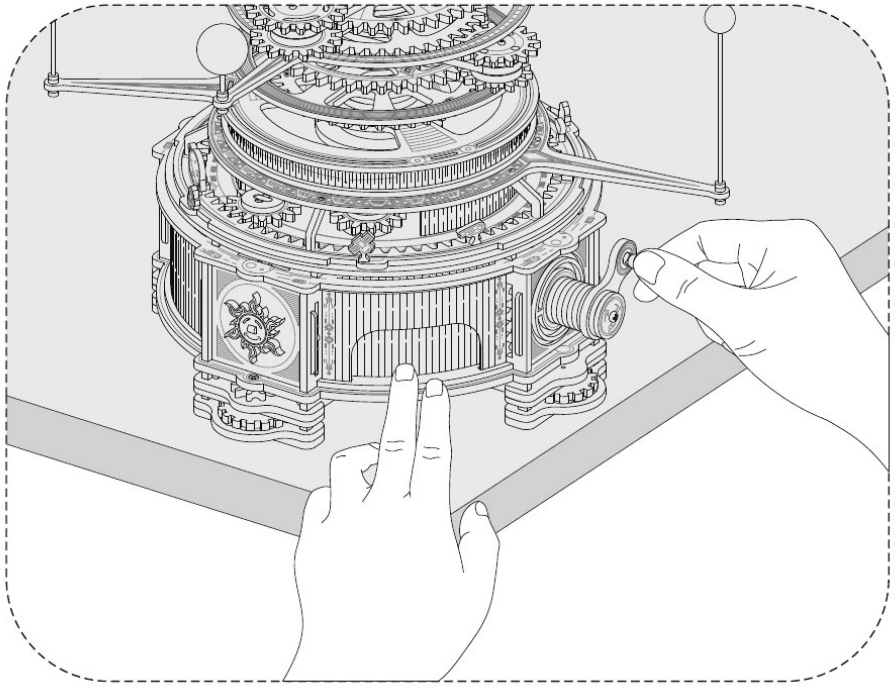


Do not fall the transparent acrylic tube off.



Try to rotate the handle after assembly .
If it is difficult to rotate, remove several layers to keep only one layer first and then rotate slowly.
After smooth rotation, assemble them layer by layer again until the whole layers could rotate smoothly.



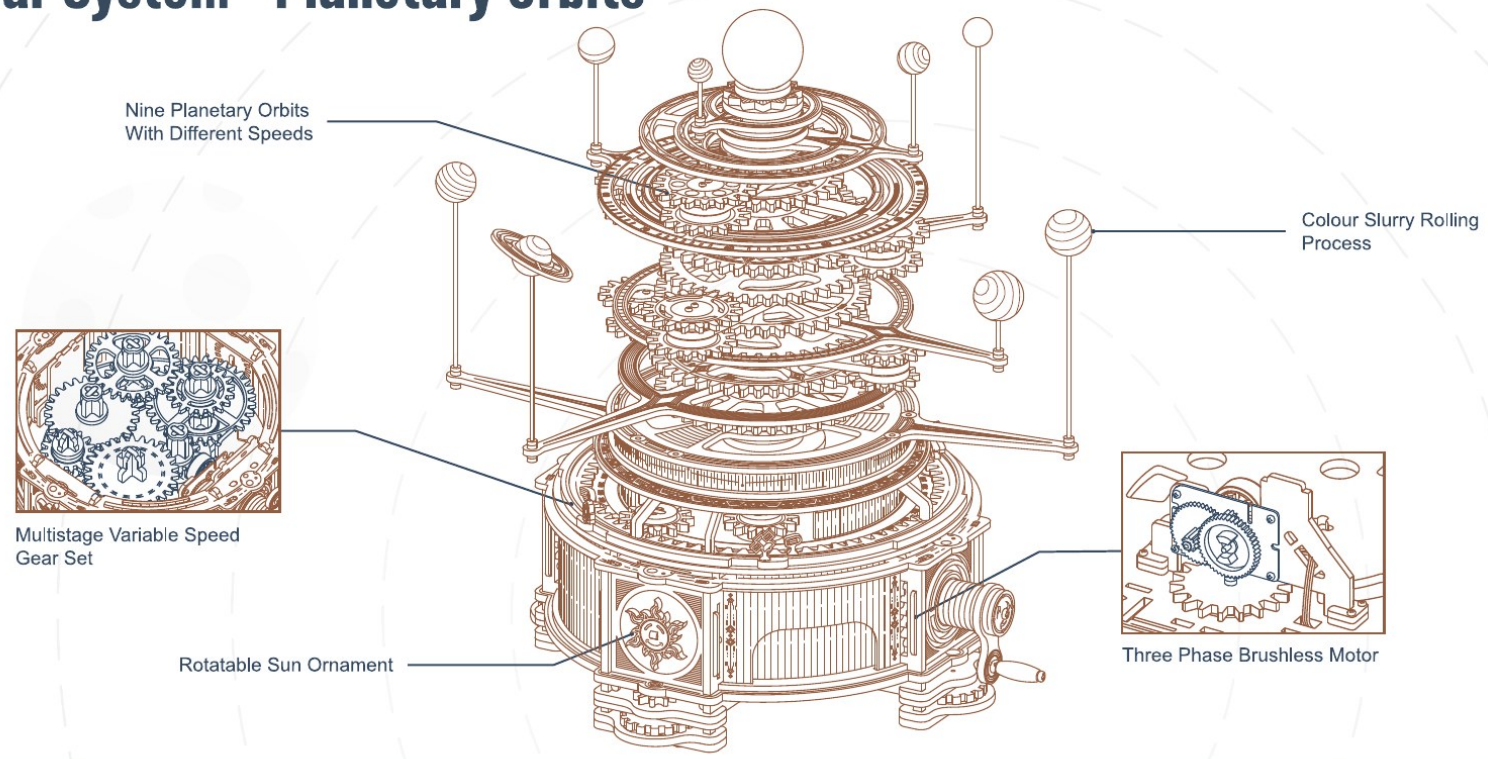


Tips:

For the needs of product appearance and ease of playing, some users can rotate the handle referring to the picture. Avoid colliding with the outermost planet and damaging parts during rotation.

Complete

ST001 Solar System - Planetary Orbits



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