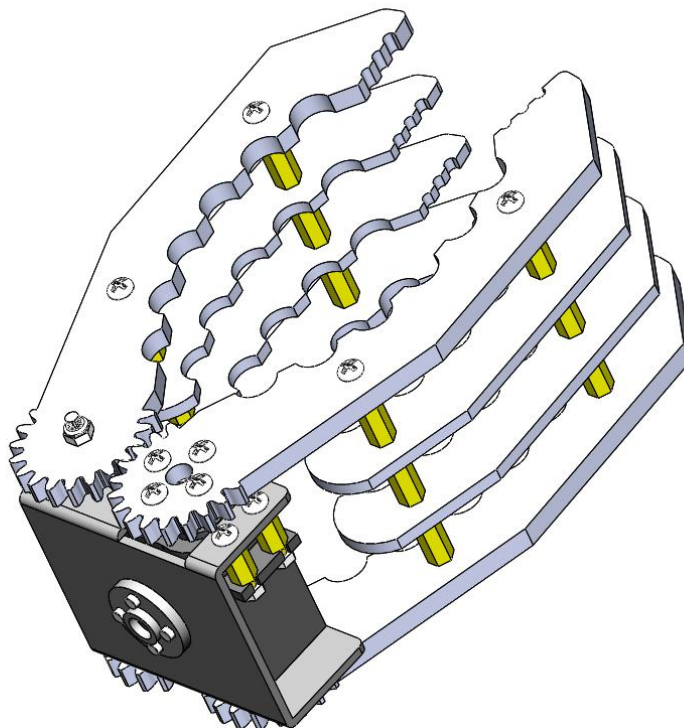


Assemble the Mechanical Robot Claw

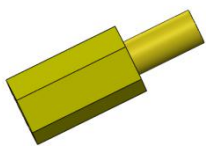
Table

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1. What's in the package



1.1 parts used to connect or fix

Picture	Category	Name	Quantity
	Screw	M3*6MM round head screw	12
	Self-locking nut	M3 Self-locking nut	5
	Screw	M3*8MM round head screw	14
	Screw	Nut M3	6
	copper pillar	M3*16 double-pass copper column	5
	copper pillar	M3*10+6 single-pass copper column	5

	copper pillar	M3*15+6 single-pass copper column	9
	holder	MG996R servo U-shaped holder	1
	Servo	MG996R servo	1
	Servo panel	T25-Servo panel	2
	Bearing	F619/3Z Bearing	1
	Acrylic	Acrylic structural component A	1
	Acrylic	Acrylic structural component B	2

	Acrylic	Acrylic structural component C	4
	Acrylic	Acrylic structural component D	1

1.3 Tool

Picture	Category	Name	Quantity
	wrench	M3 wrench	1
	screwdriver	M3 Phillips screwdriver	1

2. Precautions for assembly

2.1 Before assembling the servo to the servo holder, please make sure that the servo has been adjusted to 90 degrees.

Below is the code and connect circuit for Arduino UNO R3 to adjust the servo degrees.

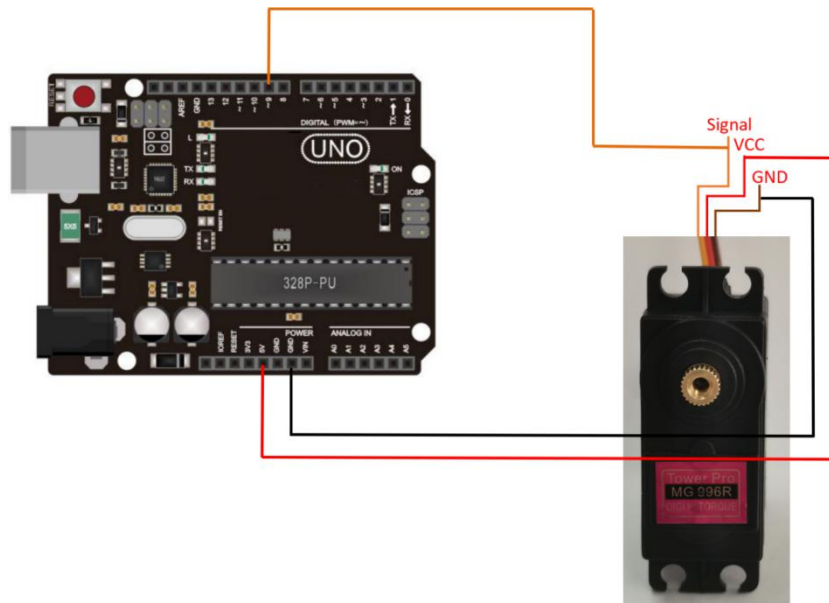
The code is placed in this path:

CKK0016-main\Tutorial\Arduino\Servo_90_ADJ

Code:

```
#include<Servo.h>
Servo myservo;  // Create a servo class

void setup() {
  myservo.attach(9);  //Set the servo control pin as D9
  delay(100);         //delay 100ms
}
////////////////////
void loop() {
  myservo.write(90);  //The servo is 90 degrees
  delay(1000);
}
```





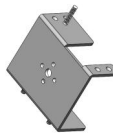

The corresponding connection relationship is shown in the table below:

UNO R3 PIN	MG996R Servo PIN
9	Signal
5v	VCC
GND	GND

3.Assembly

3.1 Assembly Steps

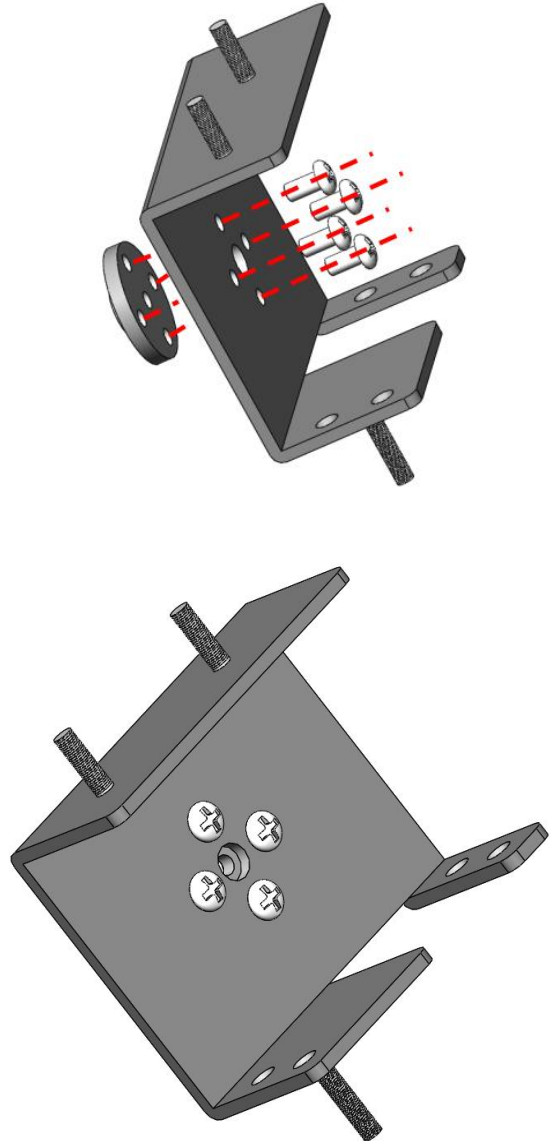
Note: Before assembling, we need to use a screwdriver to peel off the yellow protective paper of the black acrylic board;

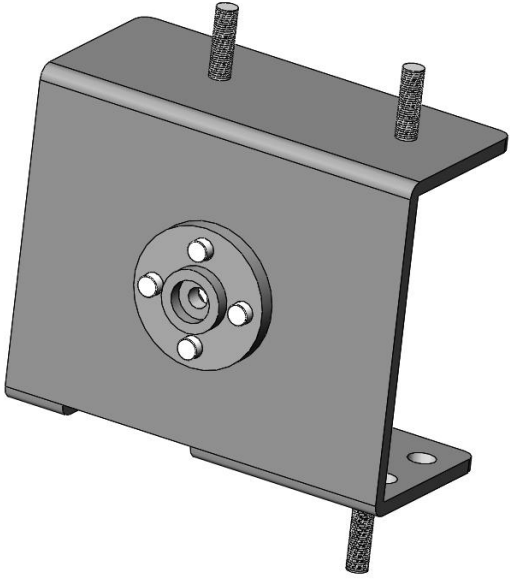


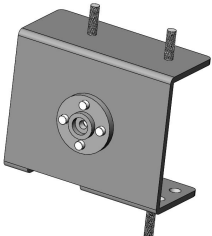

Step 1			Assembly of servo panel and U-shaped metal holder		Tool	M3 Phillips screwdriver
						
						wrench
						/
Parts List	Name	Quantity	Unit	Picture		
	Servo panel	1	PCS			
	U-shaped metal holder	1	PCS			
	M3*6 round head screw	4	PCS			
Detailed steps	Description			Installation Diagram		


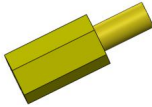

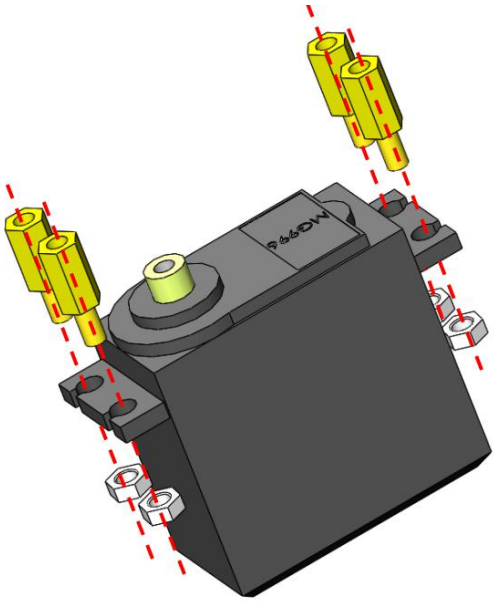
A

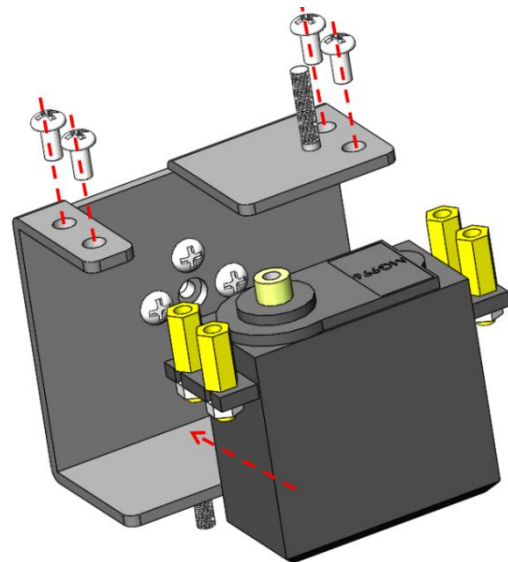
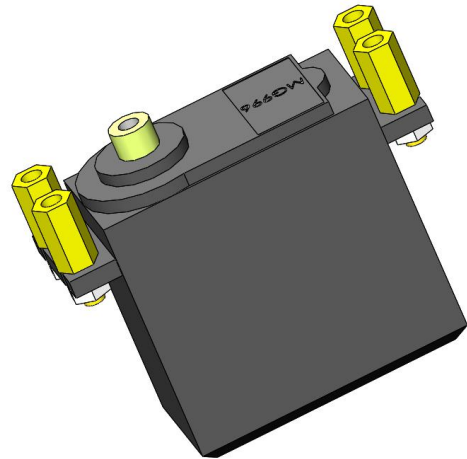
1. Using M3 * 6 round head screws to assemble the servo panel onto a U-shaped metal holder ;

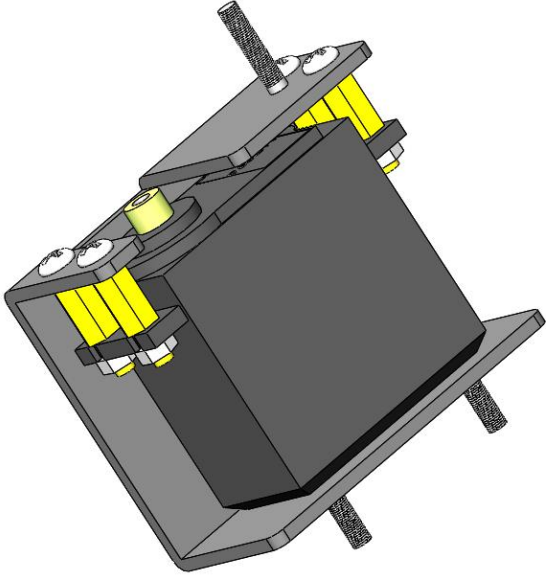


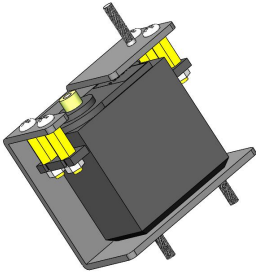

Attention: 1. Assembly direction of Servo panel; 2. After assembling the screws diagonally, tighten them with a screwdriver;

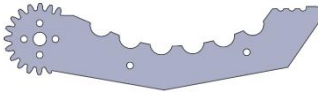
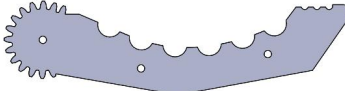






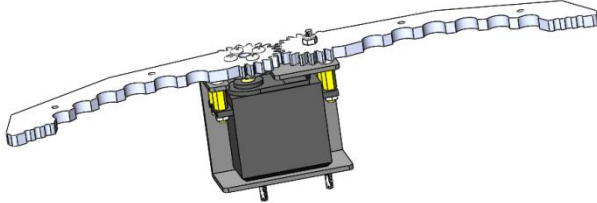
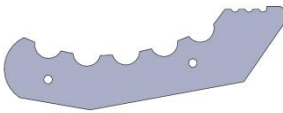
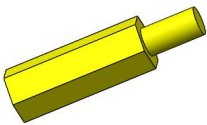

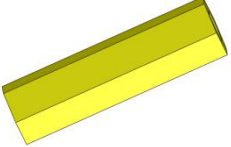
					
Step 2		Assemble the Servo		Tool	M3 Phillips screwdriver
					
					wrench
					
Part list	Name	Quantity	Unit	Picture	
	step1 structure	1	PCS		
	MG996R Servo	1	PCS		

	M3 screw nut	4	PCS	
	M3*10+6 single-pass copper column	4	PCS	
	M3*6 round head screw	4	PCS	
Detailed steps	Description			Installation Diagram
A	<p>1. Use M3 nuts to assemble M3 * 10+6 single-pass copper column onto the servo;</p> <p>Note that the M3 nut cannot be tightened for now;</p> <p>2. Use M3 * 6 round head screws to fix the semi-finished product completed in the previous step to the step1 structure , and tighten the nuts;</p>			



					
Step 3		Assembly of acrylic structural components A and B		Tool	M3 Phillips screwdriver
					
					wrench
					
Part list	Name	Quantity	Unit	Picture	
	step 2 structure	1	PCS		
	Bearing	1	PCS		

	Acrylic structural component A	1	PCS	
	Acrylic structural component B	1	PCS	
	Servo panel	1	PCS	
	M3 self-locking nut	1	PCS	
	M3*8round head screw	4	PCS	
	M3*6round head screw	1	PCS	
Detailed steps	Description		Installation Diagram	

Step 4			Assembly of acrylic structural component C		Tool	M3 Phillips screwdriver
Part list	Name	Quantity	Unit	Picture		
	Step 3 structure	1	PCS			
	acrylic structural component C	4	PCS			
	M3*15*6 single-pass copper column	8	PCS			
	M3*8 round head screw	4	PCS			
	M3*16 double-pass copper column	4	PCS			
Detailed steps	Description			Installation Diagram		

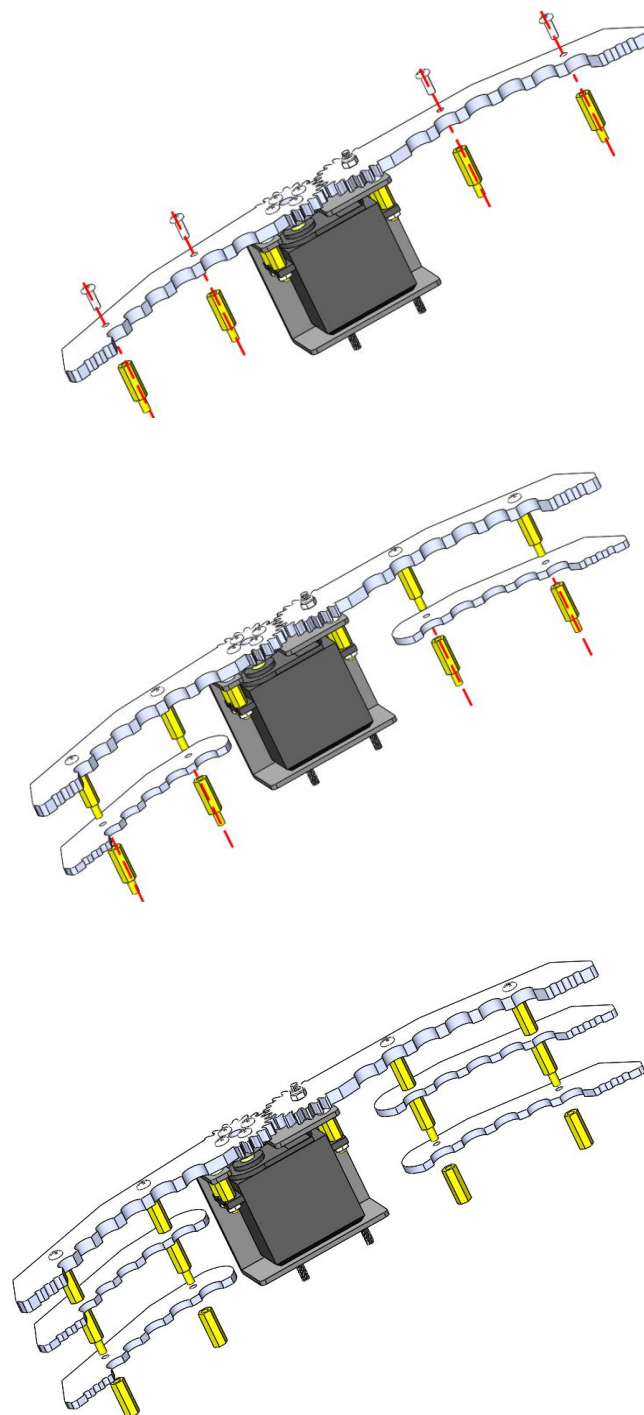
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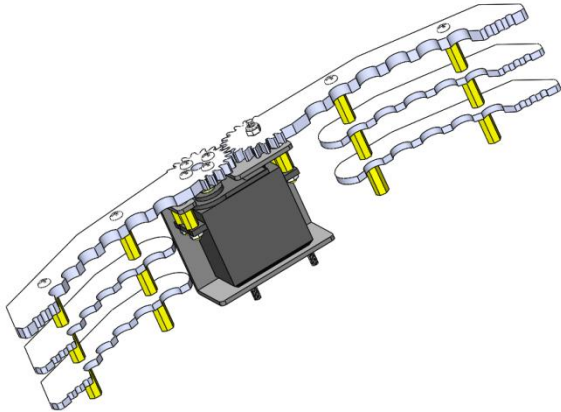


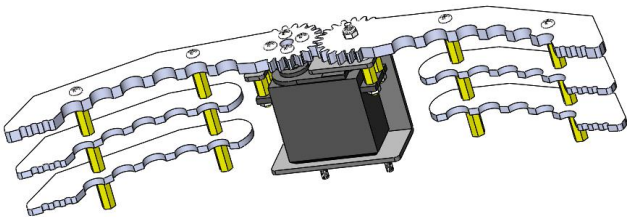
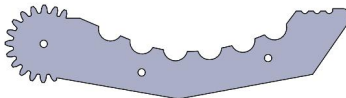

1. Use M3 * 8 round head screws to fix M3 * 15+6 single-pass copper columns in sequence in the assembly holes of acrylic structural component A and acrylic structural component B;



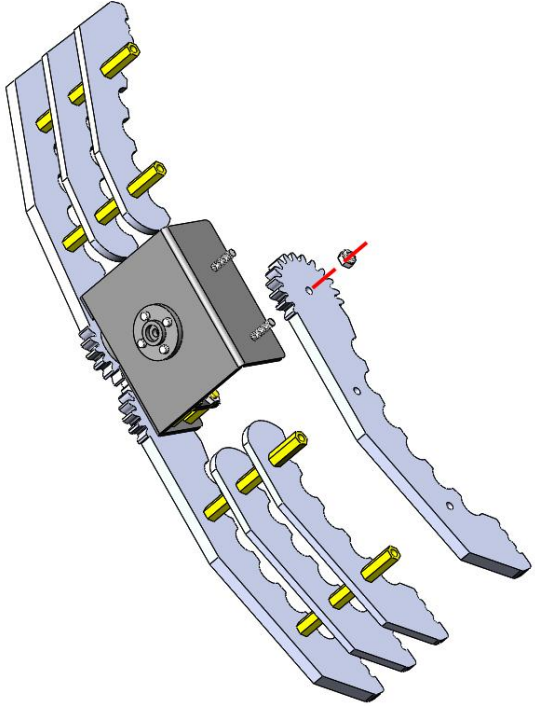
2. Fix the two structural components C with M3 * 15+6 single-pass copper columns;

3. Fix two acrylic structural components C with M3 * 16 double-pass copper columns;

Attention: Assembly direction of acrylic structural component C;

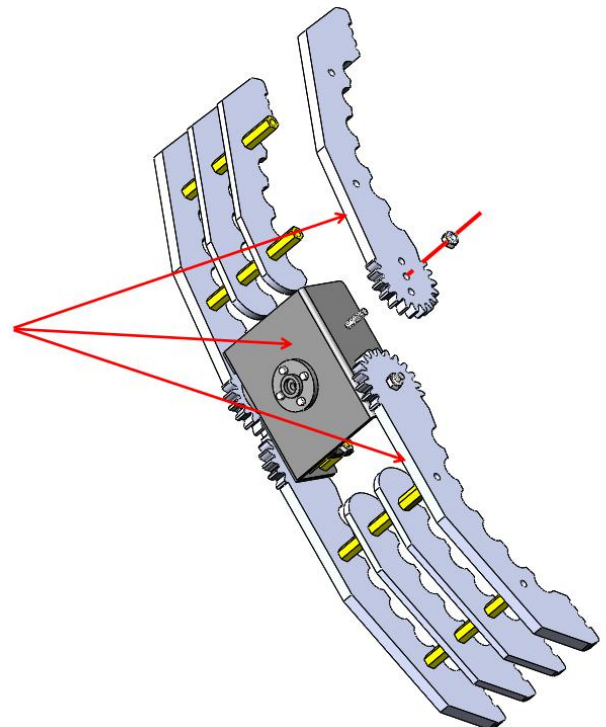
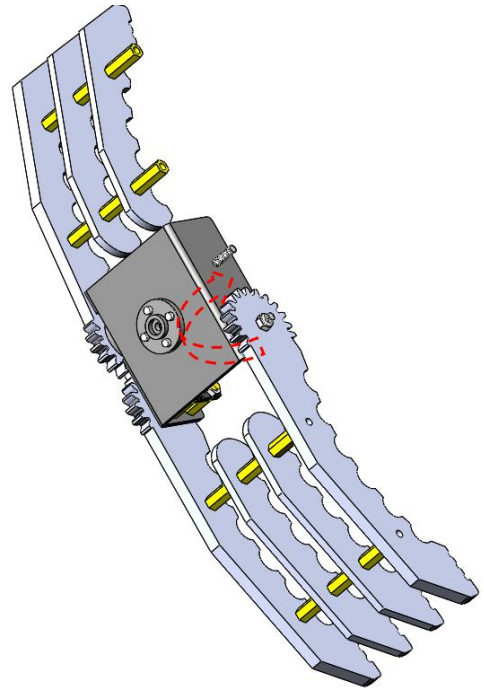


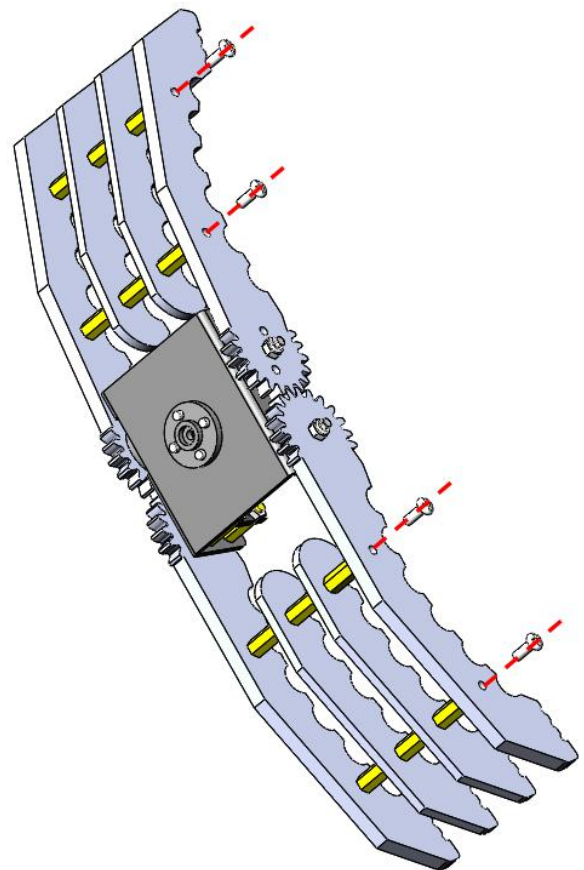
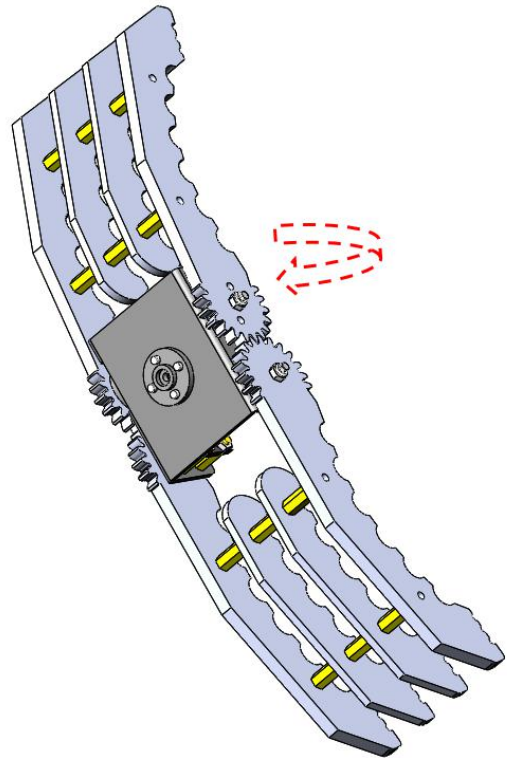
					
Step 5			Assembly of acrylic structural components B and D	Tool	M3 Phillips screwdriver
					
					wrench
					
Part list	Name	Quantity	Unit	Picture	
	step 4 structure	1	PCS		
	acrylic structural component B	1	PCS		
	acrylic structural component D	1	PCS		

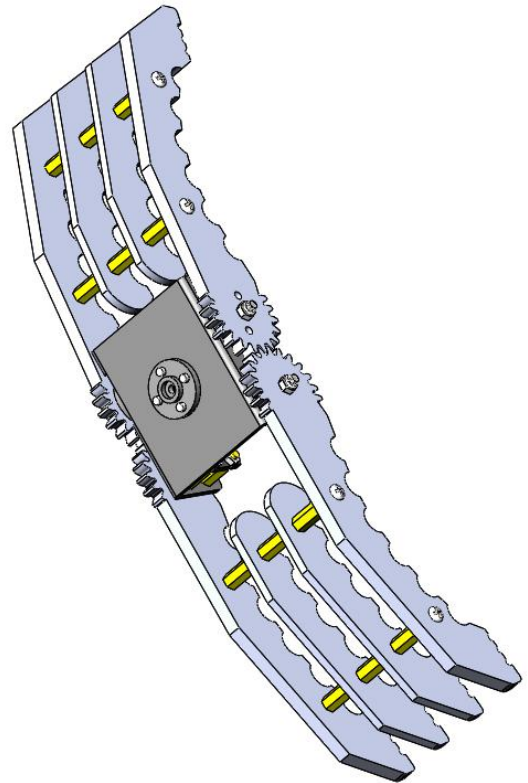
	M3 self-locking nut	2		
	M3*8 round head screw	4	PCS	
Detailed steps	Description			Installation Diagram
A	<p>1. Use M3 self-locking nuts to fix acrylic structural component B onto the screw of the U-shaped metal holder;</p> <p>Attention: The self-locking screw cannot be fixed firmly, and the acrylic structural component B can be manually and smoothly rotated;</p> <p>2. Rotate acrylic structural component B so that its side is parallel to the back of the U-shaped metal holder (the side where the Servo panel is assembled); Simultaneously, assemble the acrylic structural component D parallel to the back of the U-shaped metal holder and onto the U-shaped metal holder screw; (There may actually be degree deviation)</p> <p>3. Use M3 self-locking nuts to fix the acrylic structural component D onto the screw of the U-shaped metal holder;</p> <p>Attention: Manually rotate the</p>			

acrylic structural component D, and the gears of acrylic structural component D and acrylic structural component B will bite smoothly;

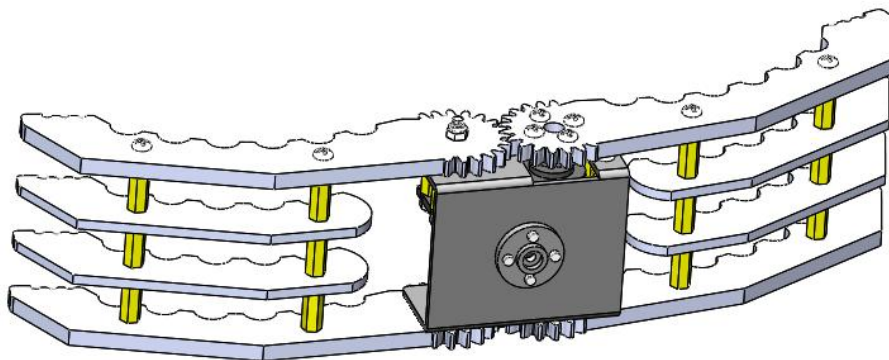
4. Use M3 * 8 round head screws to fix acrylic structural component D and acrylic structural component B to M3 * 16 copper columns respectively;

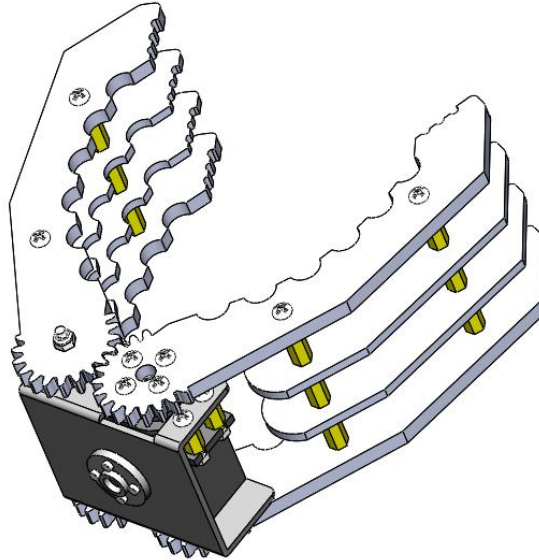






Congratulations, a fun mechanical claw assembly has been completed and you can start your exploration journey now.





3. Make your suggestion and get support

THANK YOU for reading this Assemble document!

If you find errors, omissions or you have suggestions and/or questions about this document, please feel free to contact us: cokoino@outlook.com

We will make every effort to make changes and correct errors as soon as feasibly possible and publish a revised version.

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