

Roboarm Montage Anleitung

Einleitung

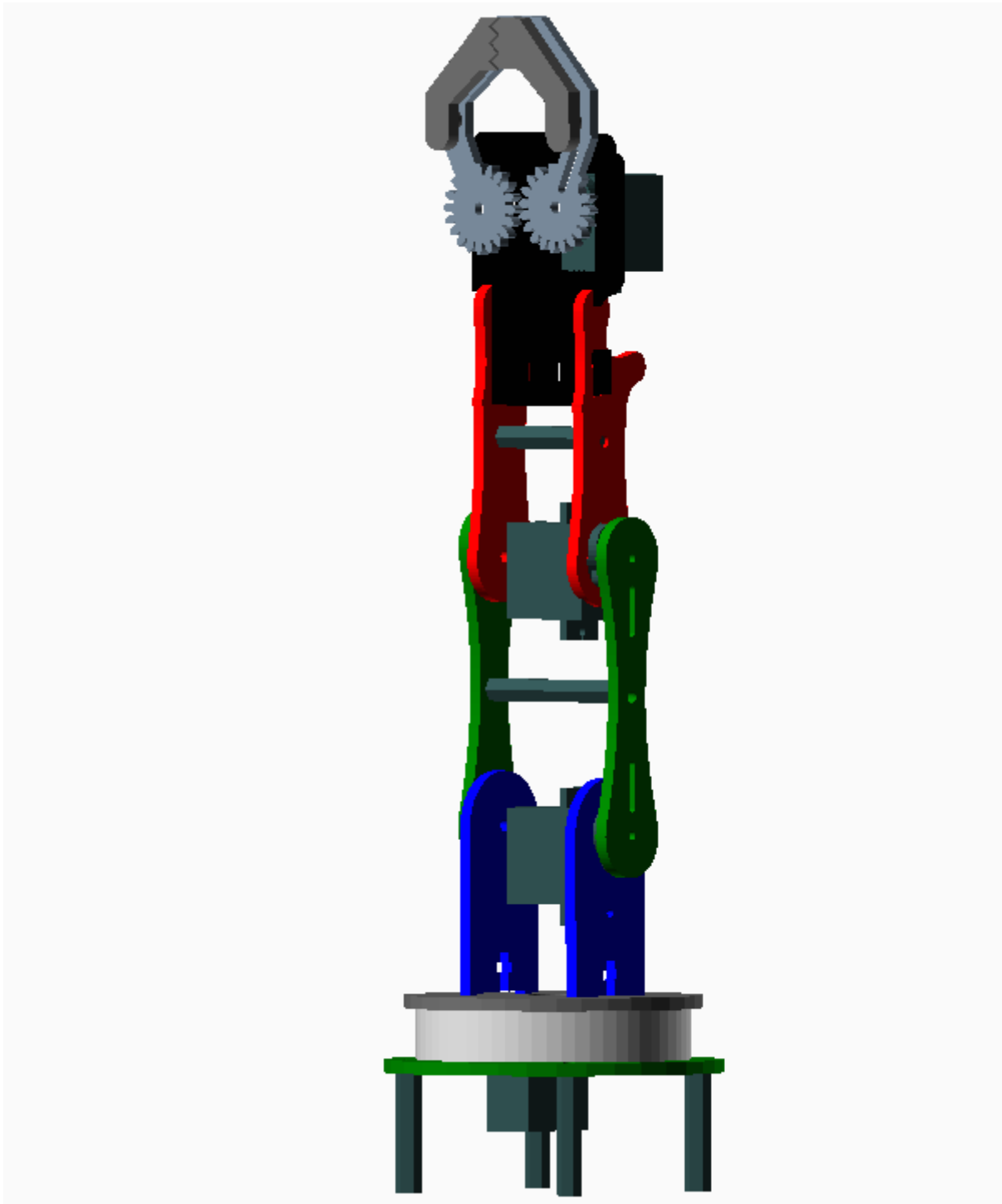
Diese Anleitung beschreibt den Aufbau eines Robo Arm aus 3mm Sperrholz mit einem Arduino NANO. Die Gelenke der Greifarme werden mit Servo-Motore angetrieben, die Ansteuerung erfolgt über einen Arduino NANO und vier Potis. Optional ist eine Ansteuerung über eine APP und die Drehwinkelanzeige mit einen OLED-Display möglich.

Stückliste

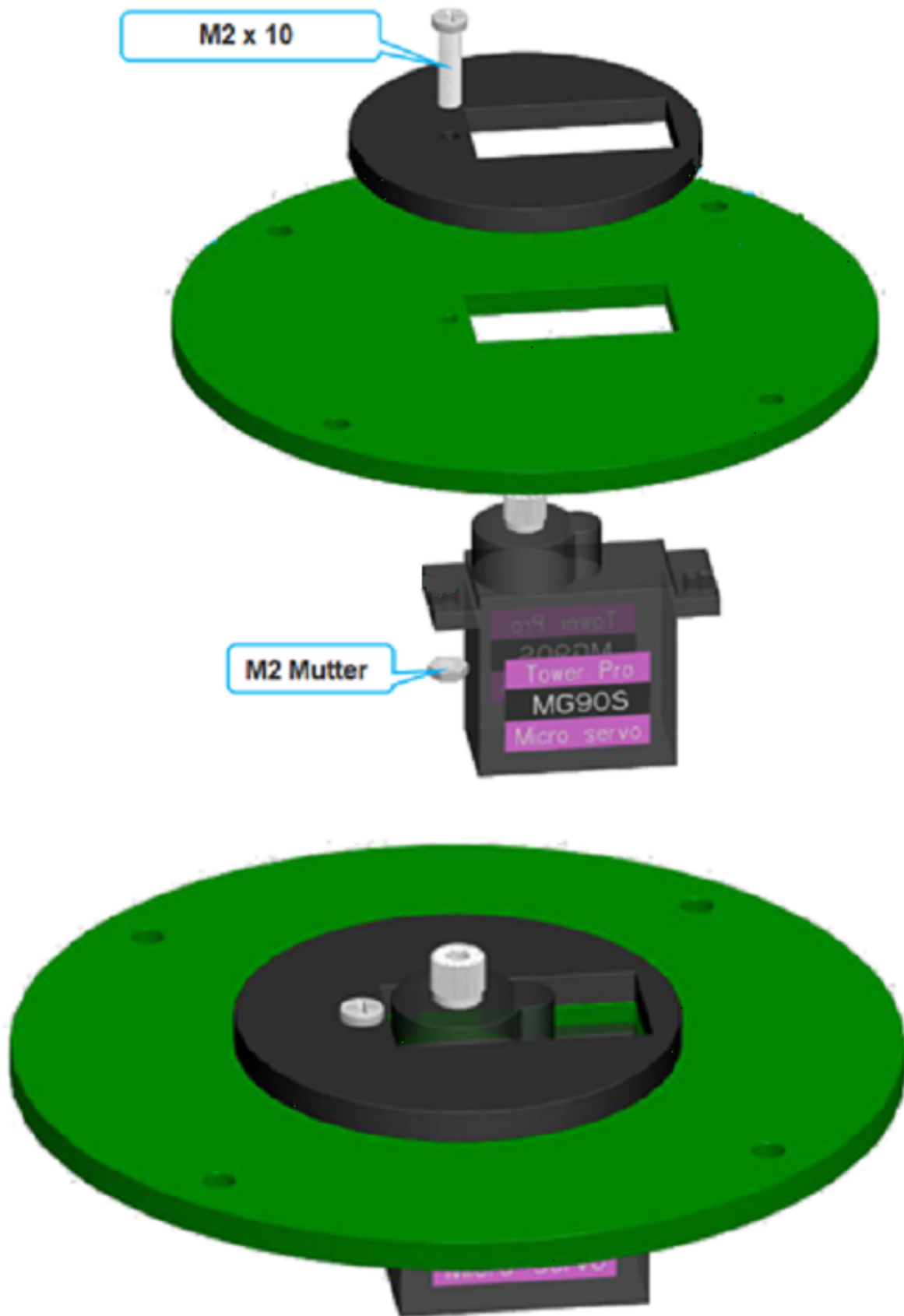
Das benötigen wir für den Robo Arm:

- 1 x Sperrholzplatte 3mm x 600x300
- 4 x Digital Servo mg996r Metallgetriebe
- 1 x Arduino NANO
- 1 x NANO Shield
- 4 x Potis 10k
- 1 x 50cm Litze
- 4 x Platinenstecker 3pol
- 1 x Steckenetzteil 5V, alternativ: 1x18650 Akku mit Case
- 5 x M2 x 10 Schrauben
- 5 x M2 Mutter
- 4 x M2,5 x 10 Schrauben
- 12 x M3 x 10 Schrauben
- 1 x M3 x 20 Schraube
- 5 x M3 Mutter
- 5 x M3 Mutter selbstsichernd
- 1 x M3 x 30 Abstandshalter
- 1 x M3 x 40 Abstandshalter

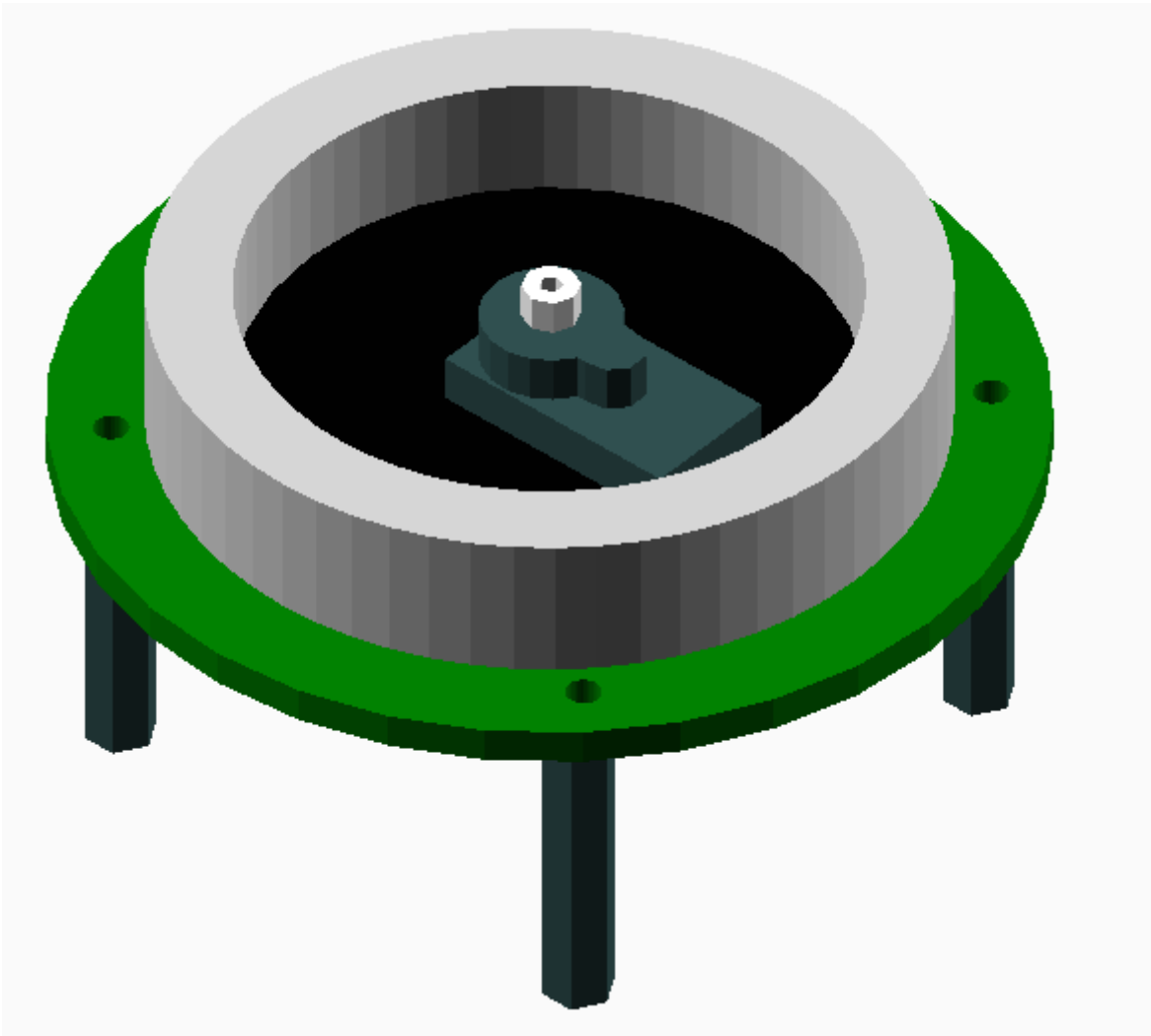
Robo Arm Montage - Gesamtansicht



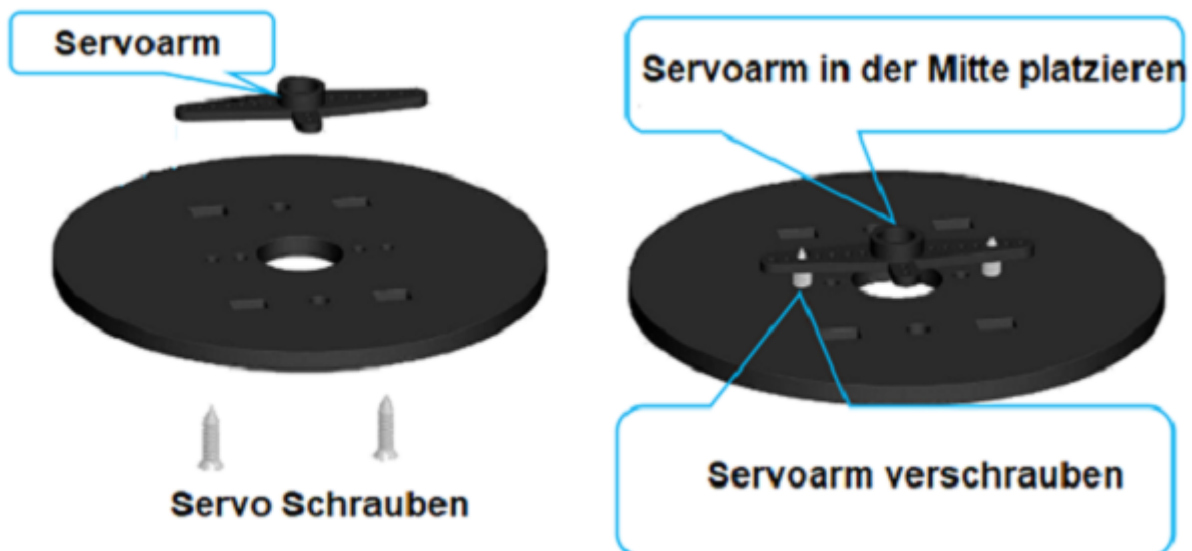
Drehteller Montage

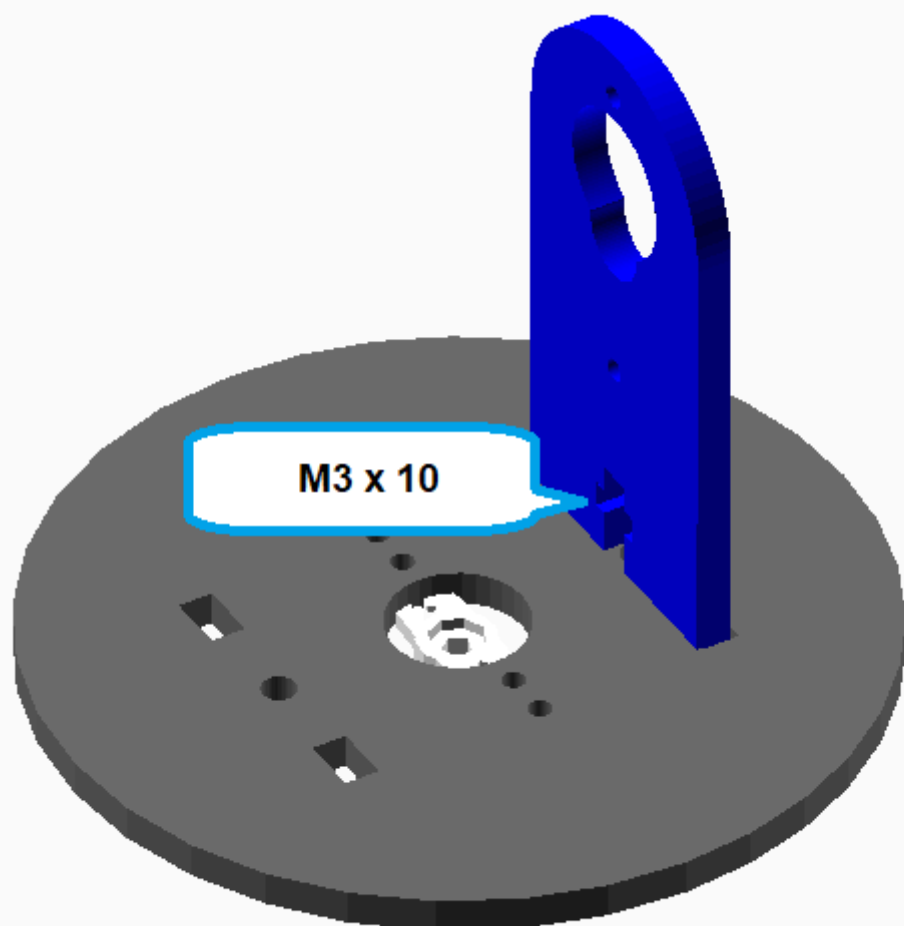


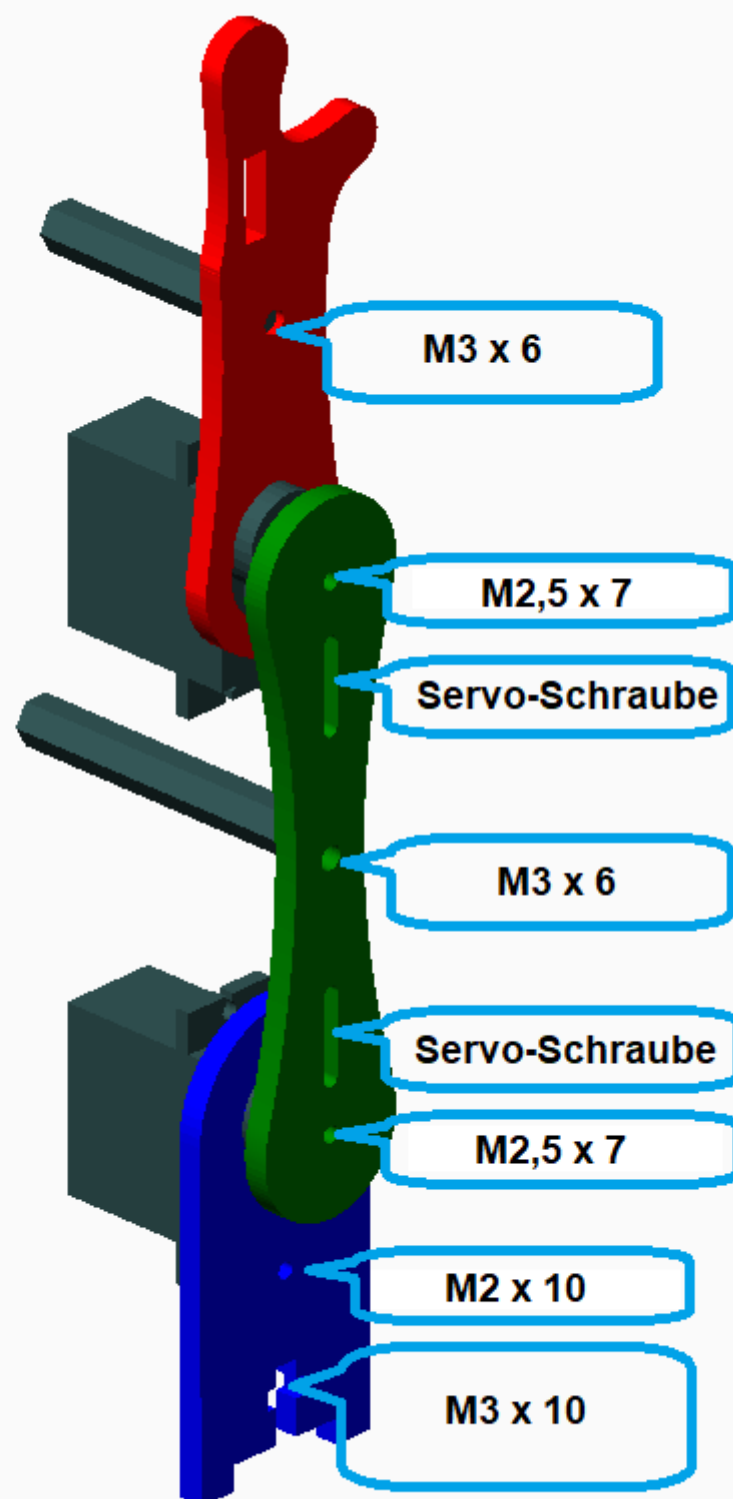
Axiallager Montage

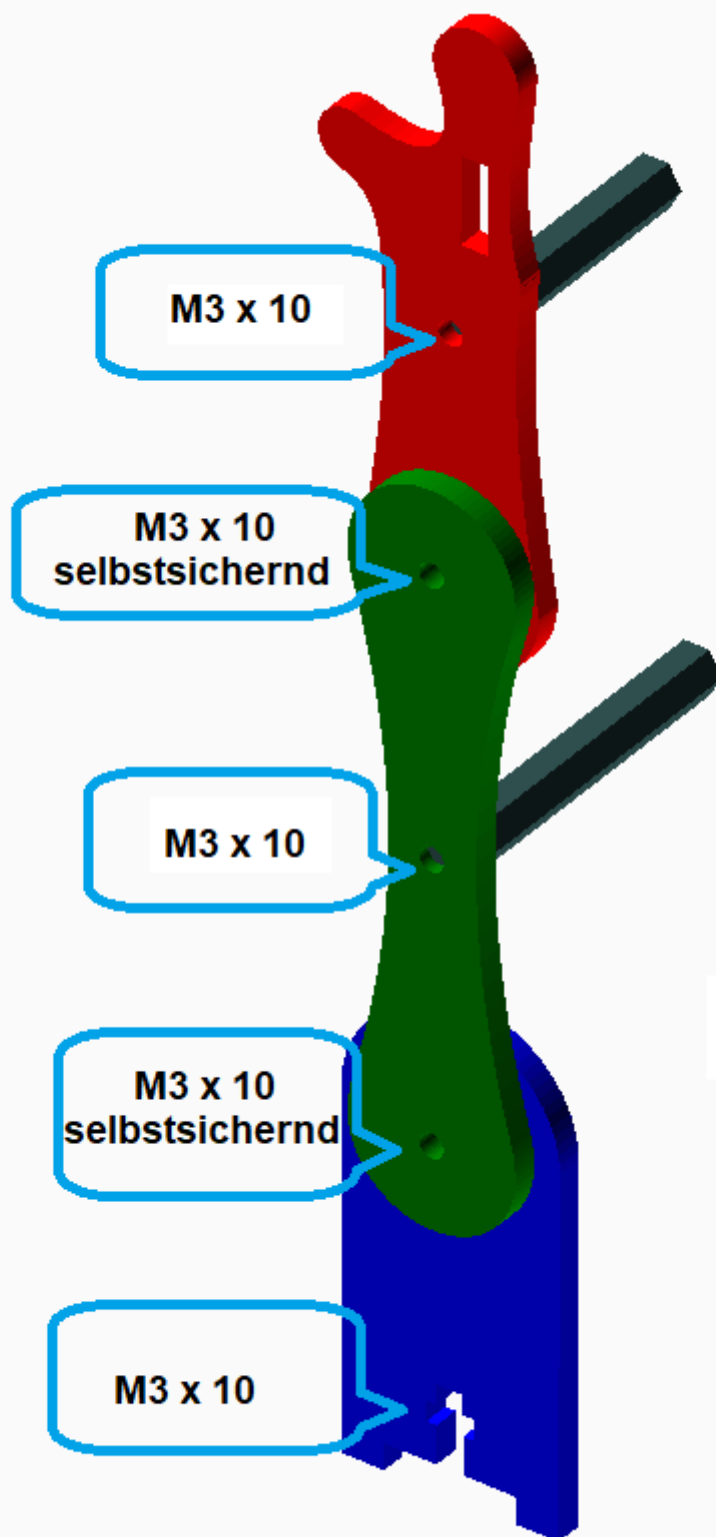


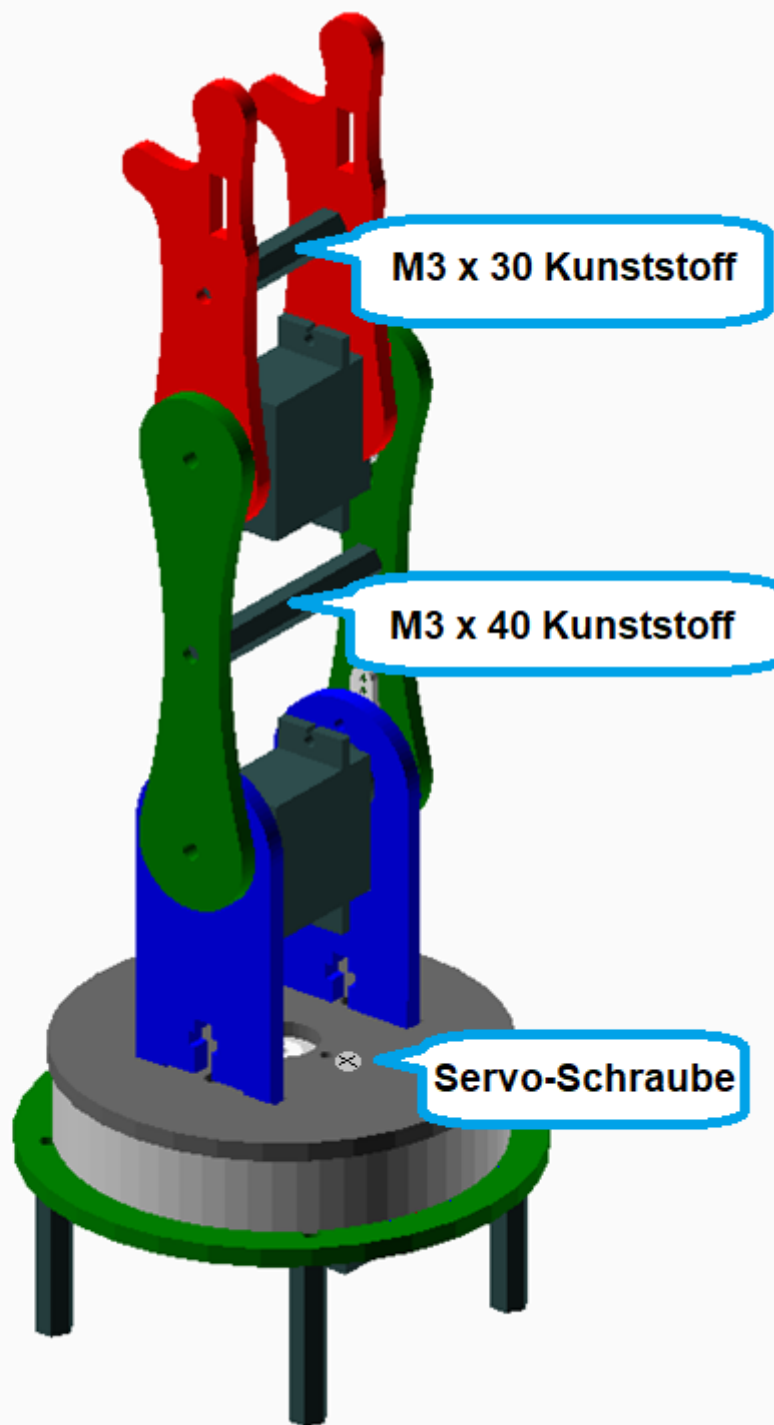
Gelenkarm Montage



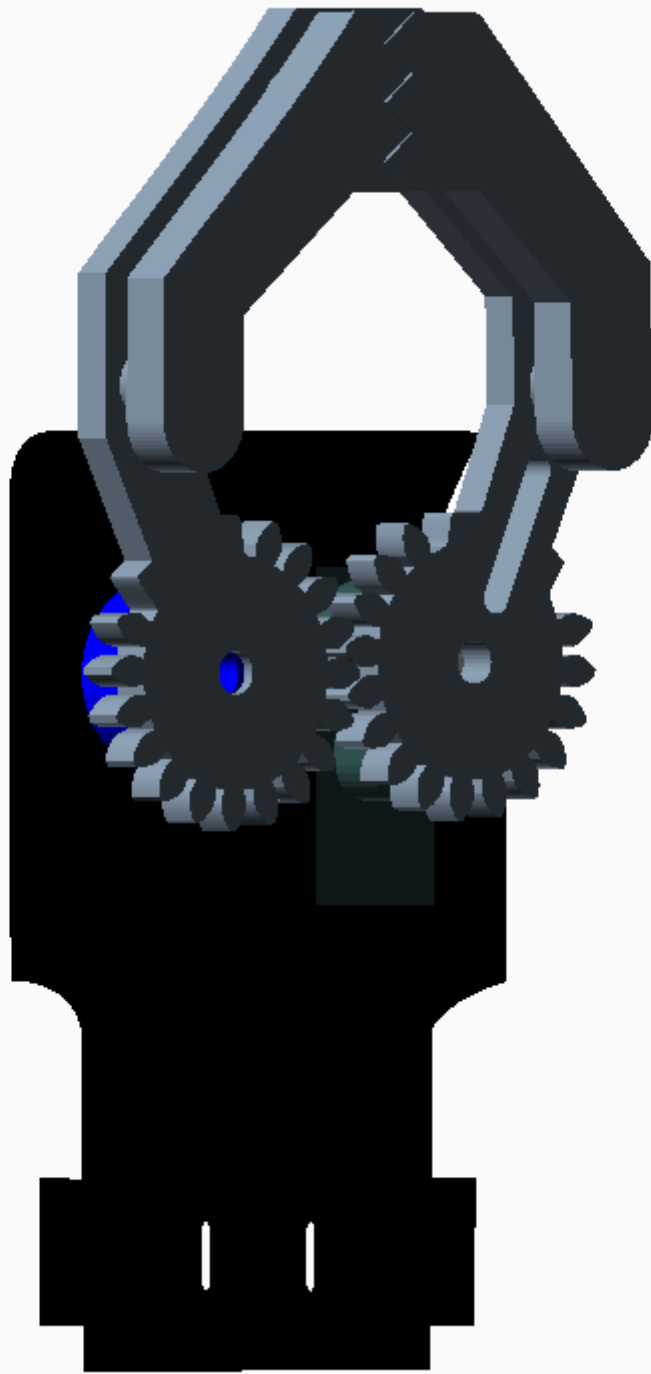


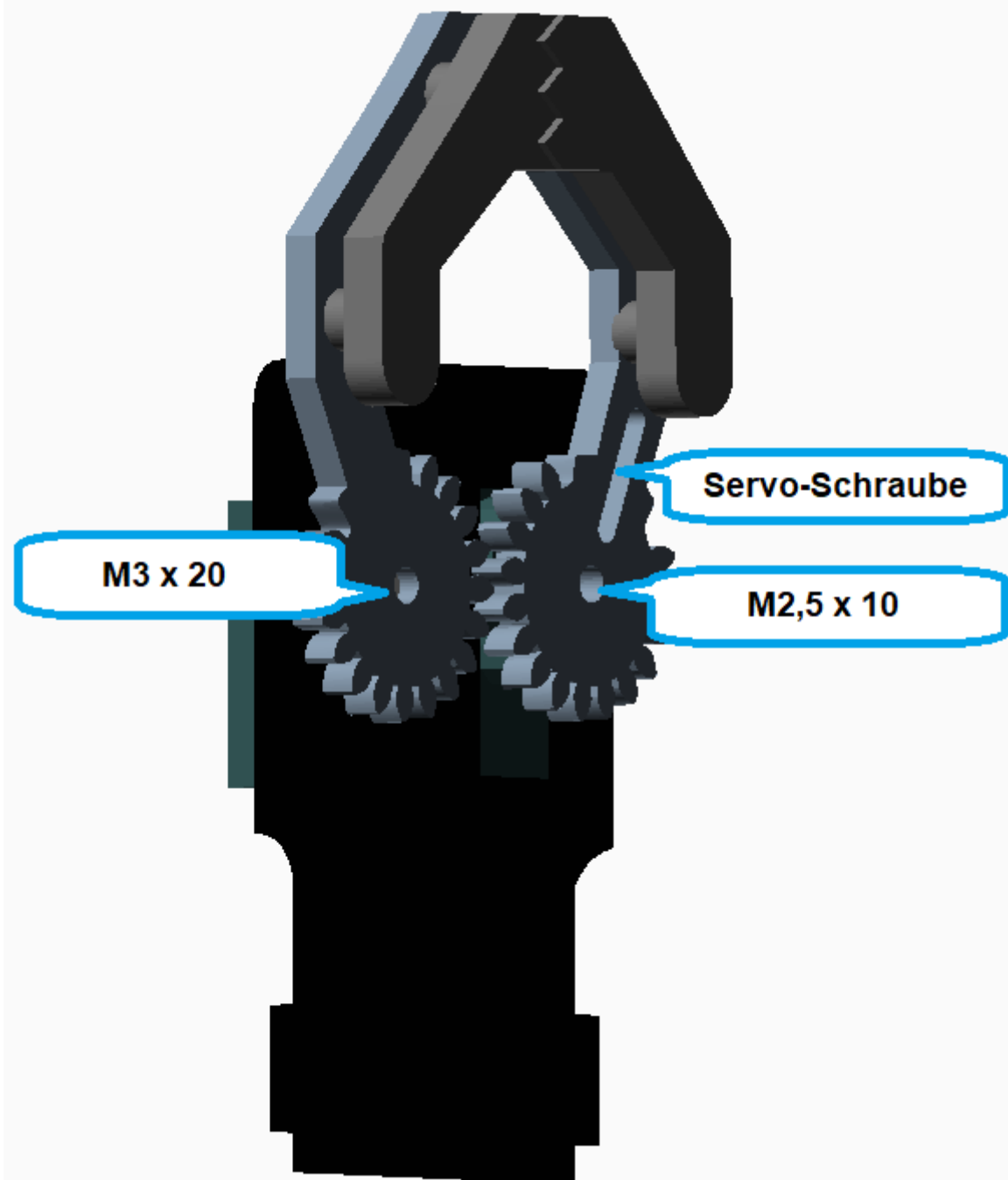


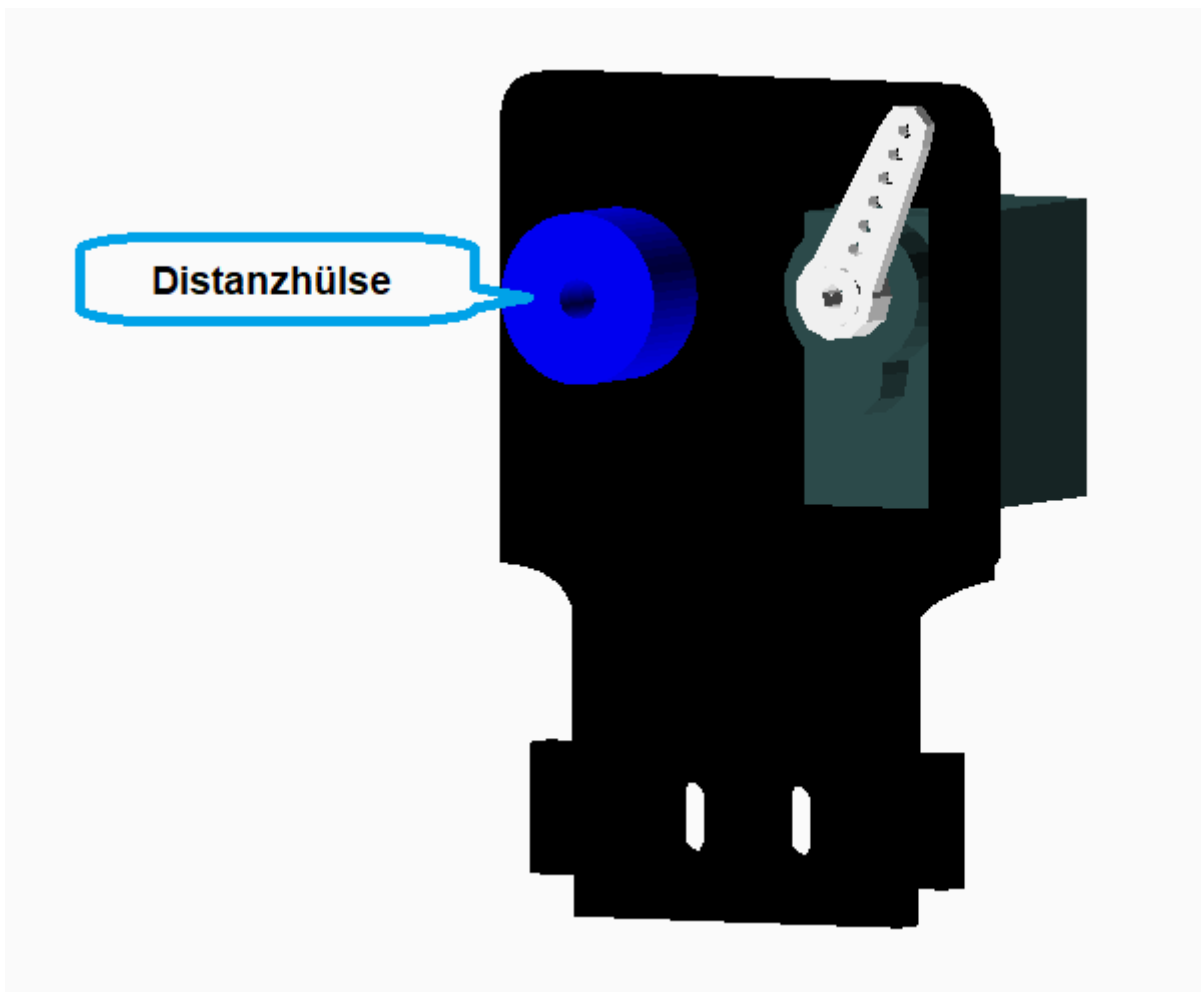
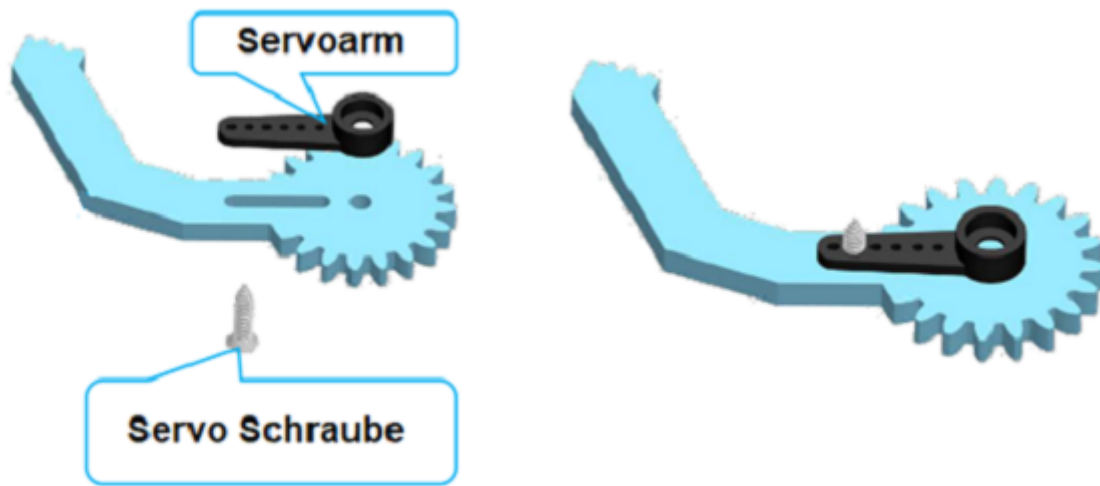


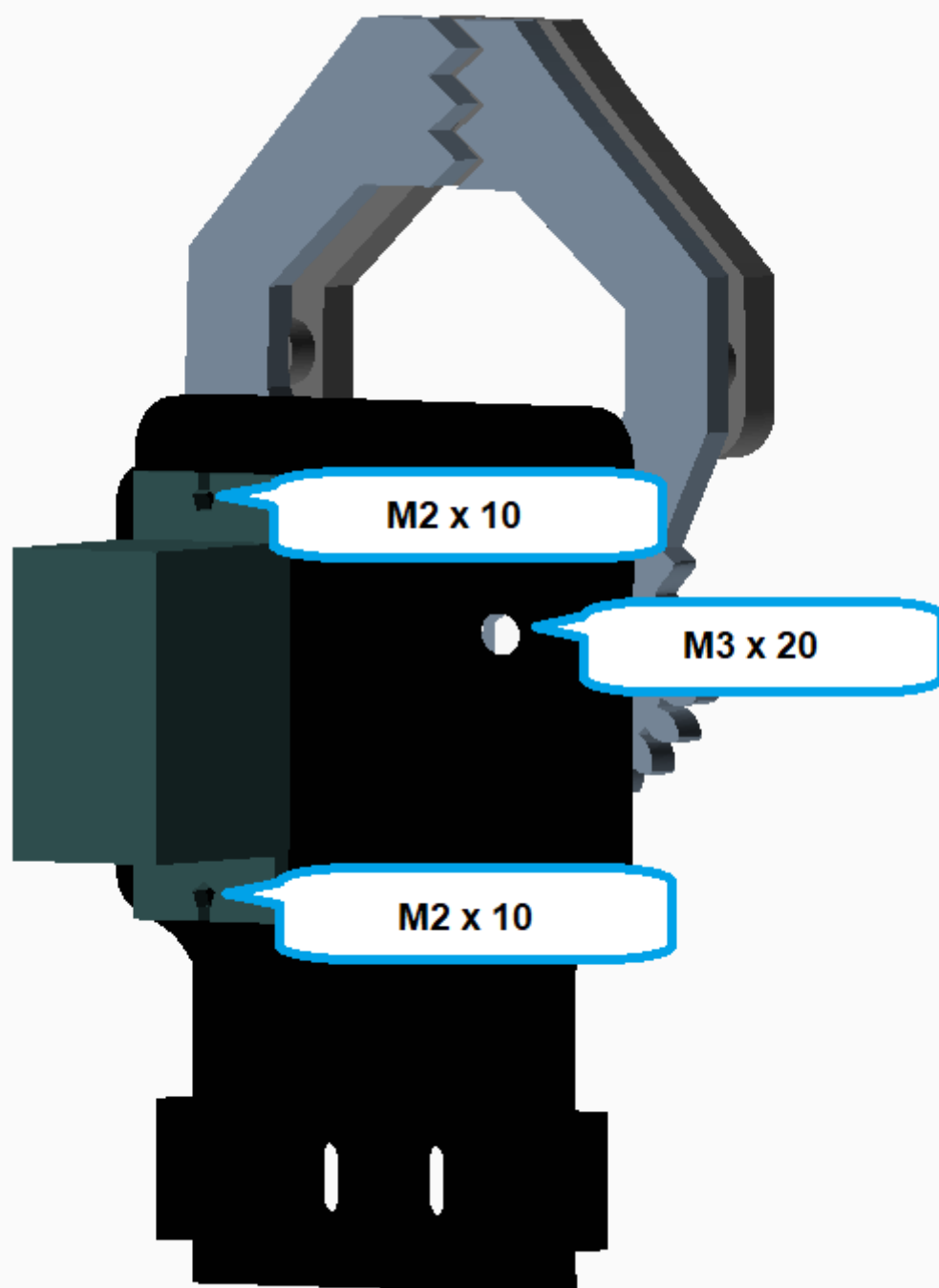


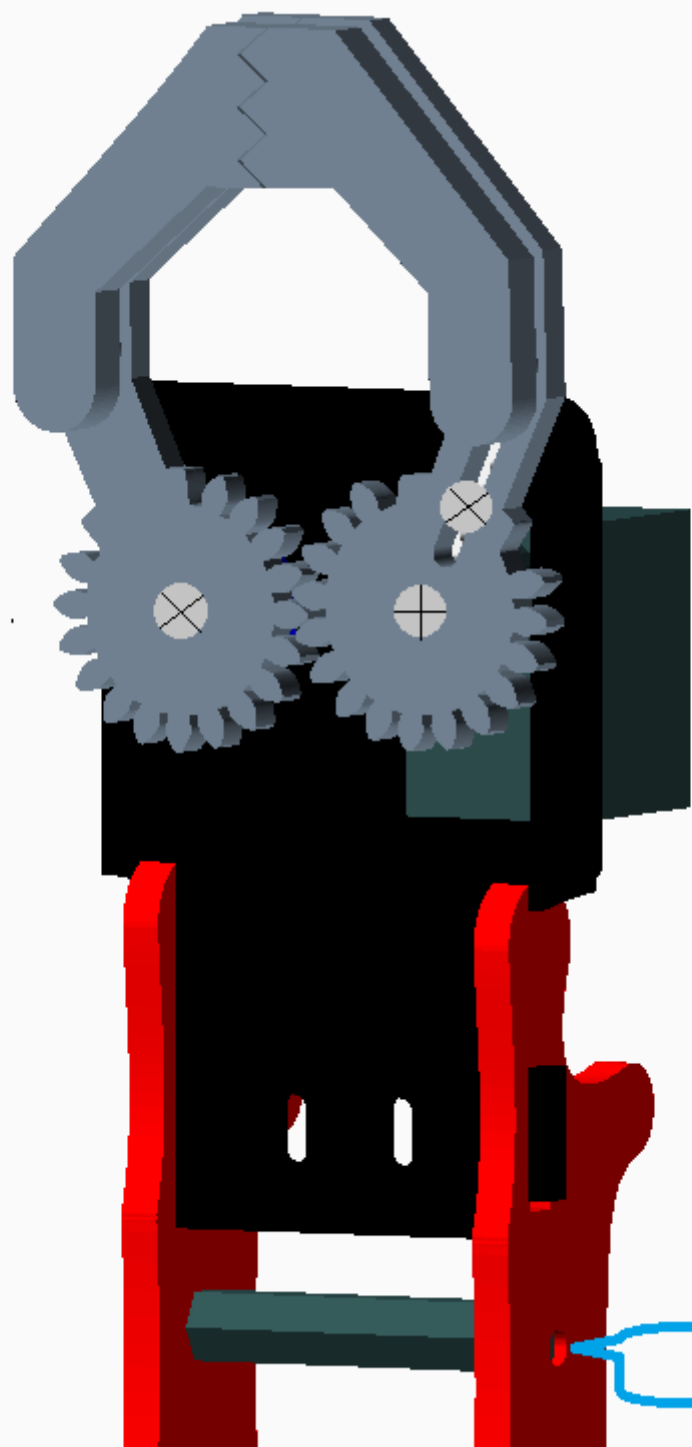
Greifer Montage



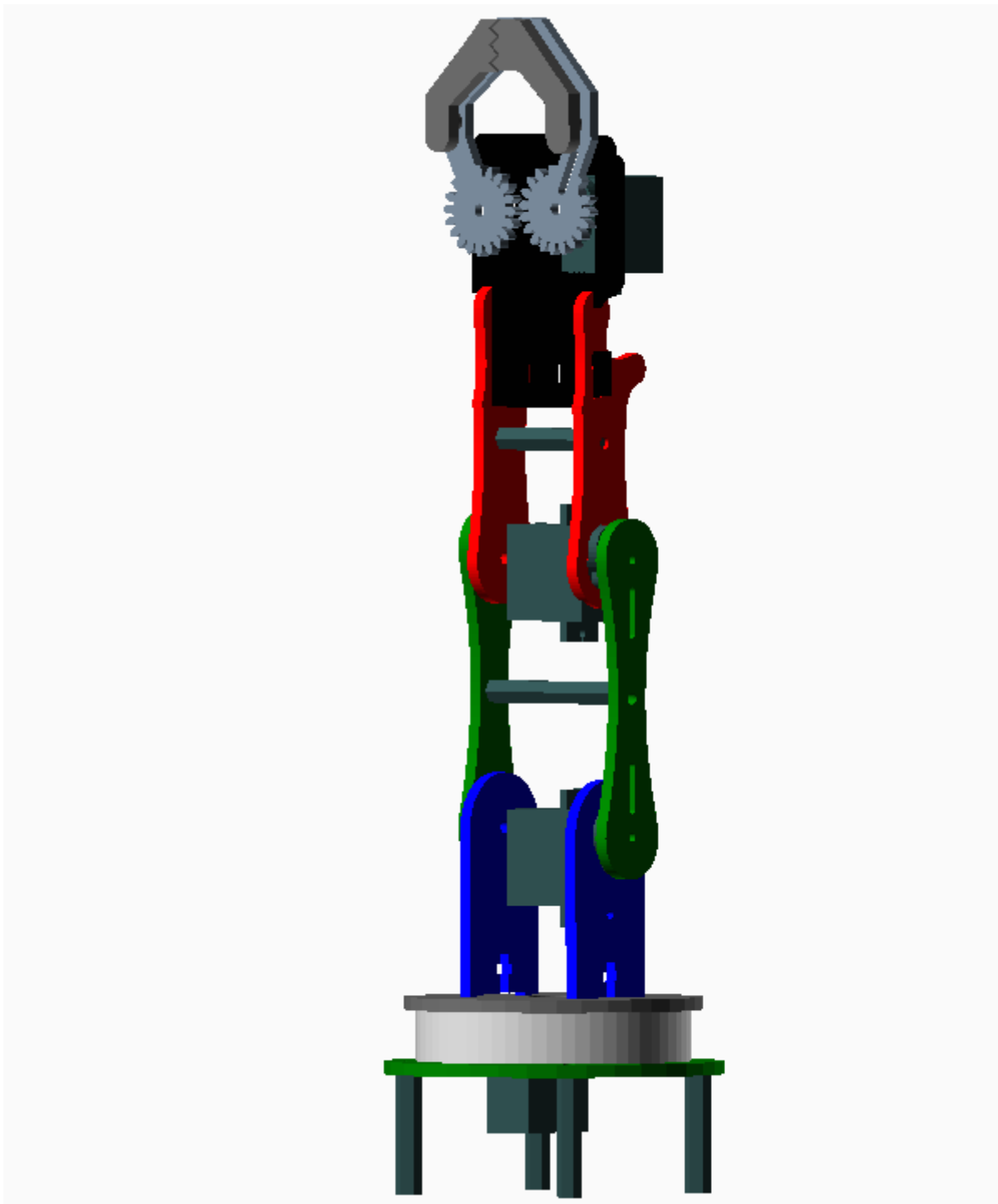




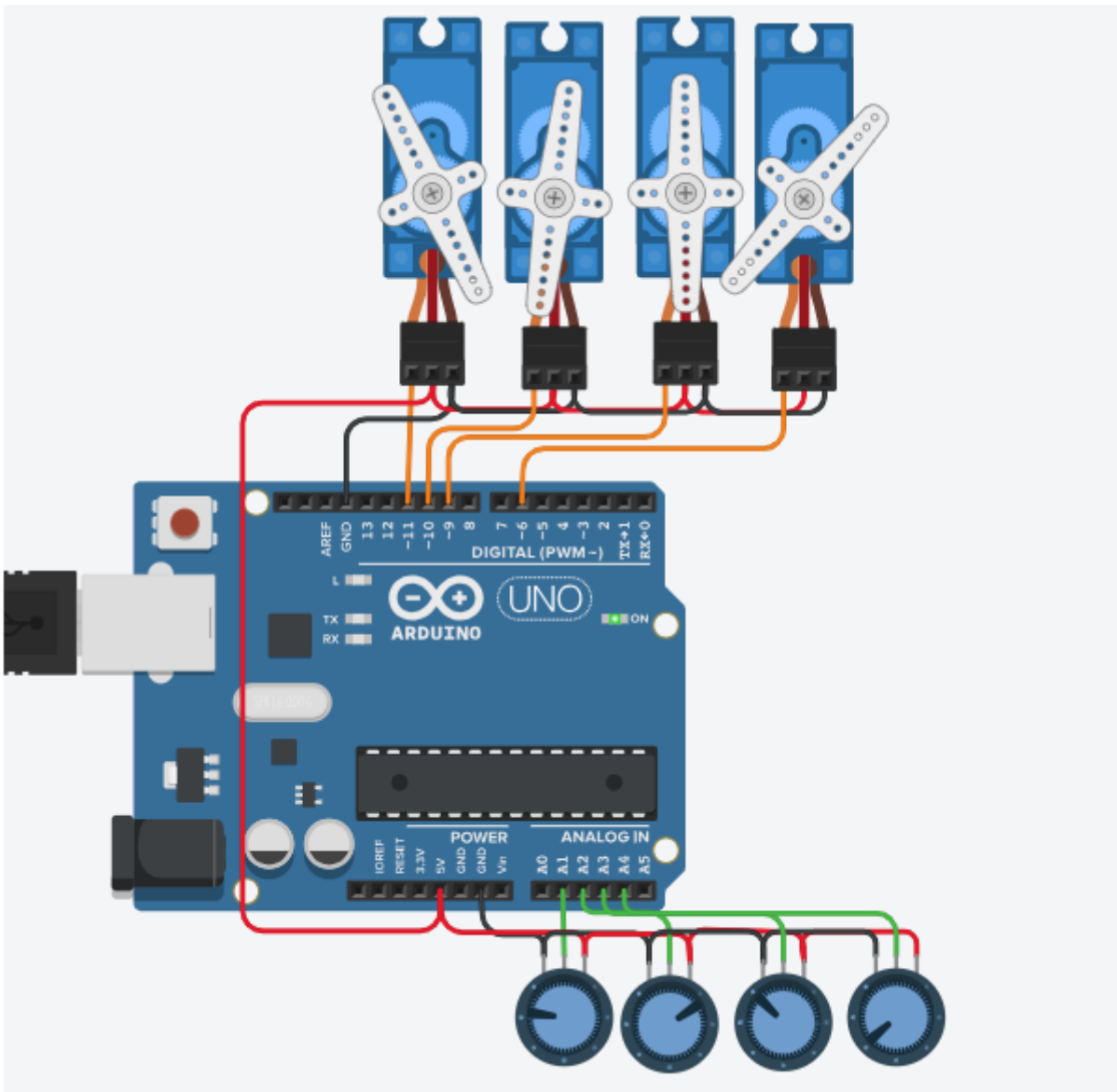




M3 x 10



Programmiere jetzt den Robo Arm in Tinkercad, teste dein Programm und lade dann das Programm in den Microcontroller



Robo Arm Programm

```
// C++ code
//
#include <Servo.h>

int Poti1 = 0;
int Winkel1 = 0;

int Poti2 = 0;
int Winkel2 = 0;

int Poti3 = 0;
```

```
int Winkel3 = 0;
```

```
int Poti4 = 0;
```

```
int Winkel4 = 0;
```

```
Servo servo_11;
```

```
Servo servo_10;
```

```
Servo servo_9;
```

```
Servo servo_6;
```

```
void setup()
```

```
{
```

```
  pinMode(A1, INPUT);
```

```
  servo_11.attach(11, 500, 2500);
```

```
  pinMode(A2, INPUT);
```

```
  servo_10.attach(10, 500, 2500);
```

```
  pinMode(A3, INPUT);
```

```
  servo_9.attach(9, 500, 2500);
```

```
  pinMode(A4, INPUT);
```

```
  servo_6.attach(6, 500, 2500);
```

```
}
```

```
void loop()
```

```
{
```

```
  Poti1 = analogRead(A1);
```

```
  Winkel1 = map(Poti1, 0, 1023, 0, 180);
```

```
  servo_11.write(Winkel1);
```

```
  Poti2 = analogRead(A2);
```

```
  Winkel2 = map(Poti2, 0, 1023, 0, 180);
```

```
  servo_10.write(Winkel2);
```

```
  Poti3 = analogRead(A3);
```

```
  Winkel3 = map(Poti3, 0, 1023, 0, 180);
```

```
  servo_9.write(Winkel3);
```



```
Poti4 = analogRead(A4);  
Winkel4 = map(Poti4, 0, 1023, 120, 180);  
servo_6.write(Winkel4);  
  
delay(50); // Wait for 50 millisecond(s)  
}
```

Fertig!

Version #1

Erstellt: 5 April 2025 21:55:36 von Joel Hatsch

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