



# re:Mix by Open Funk\_BOM & Assembly Guide

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# Table of Contents

[Table of Contents](#)

[Introduction](#)

[BOM specification](#)

[Schematic](#)

[Control description](#)

[ON/OFF and speed control](#)

[Assembly Instructions](#)

# Introduction

Open Funk designs and locally manufactures open-source circular home electronics that do not compromise on performance, quality and style.

ReMix is our first product - a multifunctional kitchen mixer, smoothie maker and coffee grinder, with an outer casing made of recycled plastics and assembled in Germany.

It features a removable blender head and uses standard glass jars as containers:



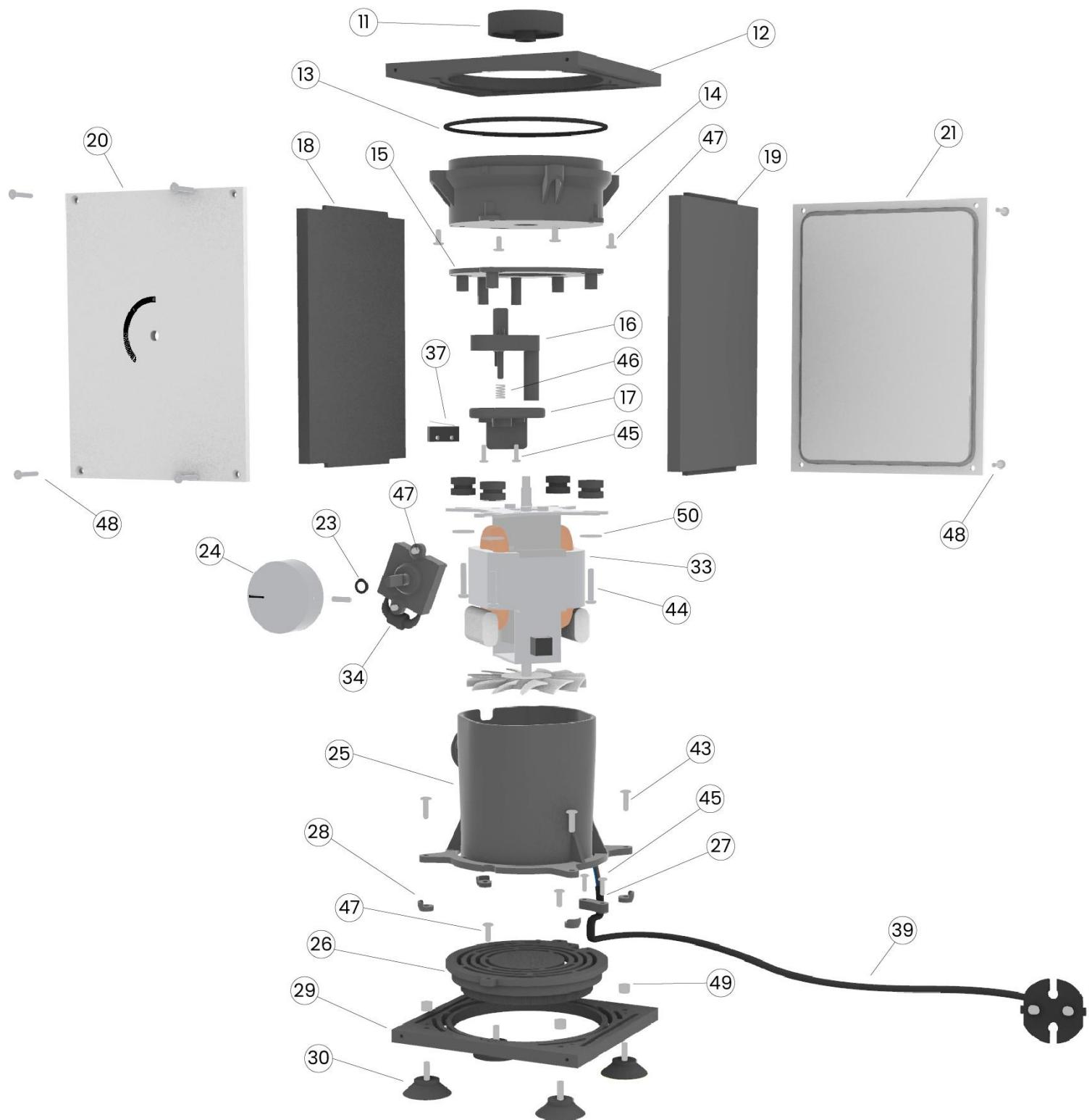
# BOM specification



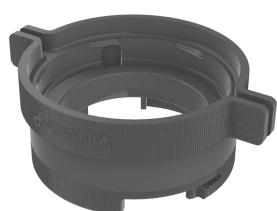
**Blender Head and Blade block:**

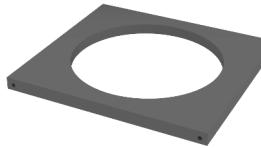


**Blender Enclosure:**



## Mechanical BOM:

#	3D view	Part name	Qty	Part size	Material & process	Part info
1		<b>Blade</b>	1	Blade: Ø max = 58 Height = 30  Shaft: Ø rod = 8 L = 35	Material: Stainless steel 304	Sourced as buy-in component in China
2		<b>Blade Seal</b>	1	Ø outer = 9 Height = 5	Material: Silicone Process: Injection molding Colour: Translucent	Sourced as buy-in component in China
3		<b>Head Seal</b>	1	Ø outer = 78.8 Height = 17.7	Material: Silicone Process: Compression molding Colour: Black	Custom-made part made in China
4		<b>Blender Head</b>	1	L = 124 W = 95 H = 45	Material: 3dk Engineering PLA Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
5		<b>Blade Base</b>	1	Ø outer = 75 Height = 28.2	Material: Stainless steel 304	Sourced as buy-in component in China
6		<b>Slide Bearing</b>	1	Ø outer = 13 Ø inner = 8 Height = 20	Material: Copper alloy	Sourced as buy-in component in China
7		<b>Jar Slider</b>	2	L = 24.2 W = 9.3 H = 10	Material: 3dk Engineering PLA Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>

8		<b>Stopper</b>	2	L = 27 W = 9.2 H = 13	Material: 3dk Engineering PLA Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
9		<b>Blade Locker</b>	1	$\varnothing$ outer = 80.8 Height = 8.4	Material: 3dk Engineering PLA Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
10		<b>Blade Gear</b>	1	$\varnothing$ outer = 33 Height = 11.5	Material: Silicone with zinc plated iron nut Process: Injection molding	Sourced as buy-in component in China
11		<b>Motor Gear</b>	1	$\varnothing$ outer = 41 Height = 18.3	Material: PA66+GF30% with copper nut Process: Injection molded	Sourced as buy-in component in China
12		<b>Top Panel</b>	1	L = 130 W = 120.4 H = 8 $\varnothing$ inner = 96.7	Material: Recycled HDPE Process 1: Thermopressed Process 2: CNC milled	CNC milled by us in Berlin with boards from <a href="#">Le Pavé®</a>
13		<b>Socket O-ring</b>	1	$\varnothing$ inner = 90 $\varnothing$ = 2.5	Material: Synthetic rubber Process: Injection molded Colour: Black	Sourced as buy-in component from Hug Technik Art. Nr.: <a href="#">42709500250</a>
14		<b>Casing Socket</b>	1	L = 106.3 W = 106.3 H = 33.7	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
15		<b>Motor Adaptor</b>	1	L = 102.6 W = 96.3 H = 20.4	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>

16		<b>Head Slider</b>	1	L = 45.7 W = 20.4 H = 56.5	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
17		<b>Switch Holder</b>	1	L = 50.2 W = 28.7 H = 25.9	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
18		<b>Left Panel</b>	1	L = 165.3 W = 120.4 H = 8	Material: Recycled HDPE Process 1: Thermopressed Process 2: CNC milled	CNC milled by us in Berlin with boards from <a href="#">Le Pavé®</a>
19		<b>Right Panel</b>	1	L = 165.3 W = 120.4 H = 8	Material: Recycled HDPE Process 1: Thermopressed Process 2: CNC milled	CNC milled by us in Berlin with boards from <a href="#">Le Pavé®</a>
20		<b>Front Panel</b>	1	L = 175 W = 130 H = 8	Material: Recycled HDPE Process 1: Thermopressed Process 2: CNC milled Process 3: Sticker	CNC milled by us in Berlin with boards from <a href="#">Le Pavé®</a>

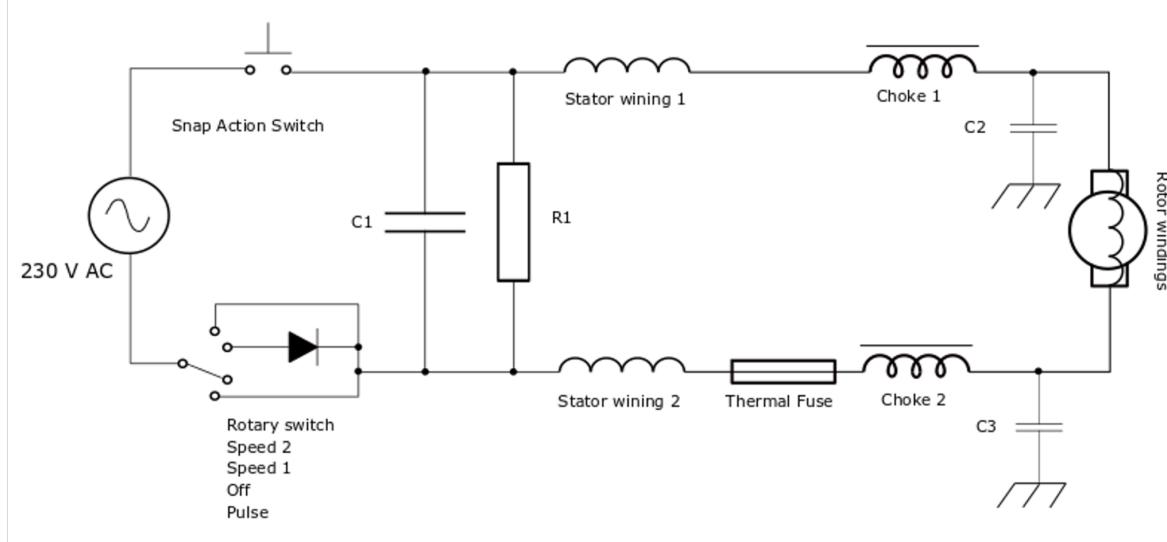
21		<b>Back Panel</b>	1	L = 175 W = 130 H = 8	Material: Recycled HDPE Process 1: Thermopressed Process 2: CNC milled	CNC milled by us in Berlin with boards from <a href="#">Le Pavé®</a>
23		<b>Switch O-ring</b>	1	Ø inner = 15.5 Ø o-ring = 1.5	Material: Synthetic rubber Process: Injection molded Colour: Black	Sourced as buy-in component from Hug Technik Art. Nr.: <a href="#">4300550150</a>
24		<b>Control Knob</b>	1	Ø outer = 37.8 H = 15.9	Material_cover: Aluminum Material_inner part: ABS	Sourced as buy-in component from <a href="#">OKW</a>
25		<b>Ventilation Pipe</b>	1	L = 113 W = 83.7 H = 92	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
26		<b>Ventilation Grid</b>	1	L = 113 W = 103.3 H = 18.5	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
27		<b>Cable Fixer</b>	1	L = 24.4 W = 8.6 H = 5	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>
28		<b>Pipe Spacer</b>	4	Ø outer = 10 Ø inner = 3.5 H = 6mm	Material: ASA (Prusament) Process: 3D printed (FDM) Colour: Black	3D printed by us in Berlin with <a href="#">Original Prusa i3 MK3S</a>

29		<b>Bottom Panel</b>	1	L = 130 W = 120.4 H = 8 Ø inner = 96.7	Material: Recycled HDPE Process 1: Thermopressed Process 2: CNC milled	
30		<b>Suction Feet</b>	4	Ø outer = 30 H = 20 M4 thread = 11	Material: Recycled TPE-V Colour: Black Specs: Saugnapf Ø 30mm mit Gewinde M4 (V2A) 11mm	Sourced as buy-in component from from <a href="#">Vakuplastic</a>
31		<b>Jar</b>	1	Ø mouth = 78 Ø body = 86 H = 125 V= 565 mL	Mouth type: TO82 Material: Glass	Sourced as buy-in component in Berlin from GläserUndFlaschen Art. Nr.: <a href="#">13460</a>  Any other TO82 type jars fits

## Electrical BOM:

#	Picture	Part name	Qty	Supplier name	Part info
33		<b>Motor</b>	1	JUNHUI ELECTRIC MANUFACTURE CO.LTD	Art. Nr.: 7635 Incl. below components: <ul style="list-style-type: none"><li>• blue capacitor X1</li><li>• heat protector 17AM1+PTC</li><li>• inductor 4X10 12UH 45 45</li><li>• yellow capacitor X2 224 275 +470K</li></ul>
34		<b>Rotary switch</b>		Shenzhen Towei Electrics Co., Ltd.	Art. Nr.: B3200-411GR
35		<b>Ferrule</b>	2	Vogt AG Verbindungstechnik	Art. Nr.: <a href="#">VT AEHI 0.75-100</a>
36		<b>Heat shrink tube</b>	1	Eisenacher elektroTECHNIK GmbH	Art. Nr.: <a href="#">SDB 3.2 TR</a> , 600V, 105°C Material: Polyolefine, transparent
37		<b>Micro switch</b>	1	OMRON	Art. Nr.: <a href="#">SS-10GL-3</a>
38		<b>Solder</b>	2	Felder Löttechnik	LZ FE CSN 1,0 25 Lötzinn bleifrei, Ø 1,0 mm, 250 g
39		<b>EU power cable</b>	1	Plastro Mayer GmbH	Art. Nr.: 0K4504302 Zuleitung H03VVH2-F2x0,75 schwarz 1400mm 110/K 1.S.Typ 110 Zentral-Konturenstecker 2.S. 300/ 5mm verzinnt

# Schematic



Component	Value
R1	1 MOhm
C1	0,22 µF
C2, C3	JY332M (X1 400VAC; Y2 300VAC)
Thermal Fuse	W 17AM1033A5
Choke	38 µH

# Control description

## ON/OFF and speed control



### OFF position

Knob is set at position O

### Speed 1

Turn knob clockwise to position I

The device turns ON and starts spinning at 50% max speed

### Speed 2

Turn knob clockwise to position II

The device starts spinning at max speed

### Funk mode

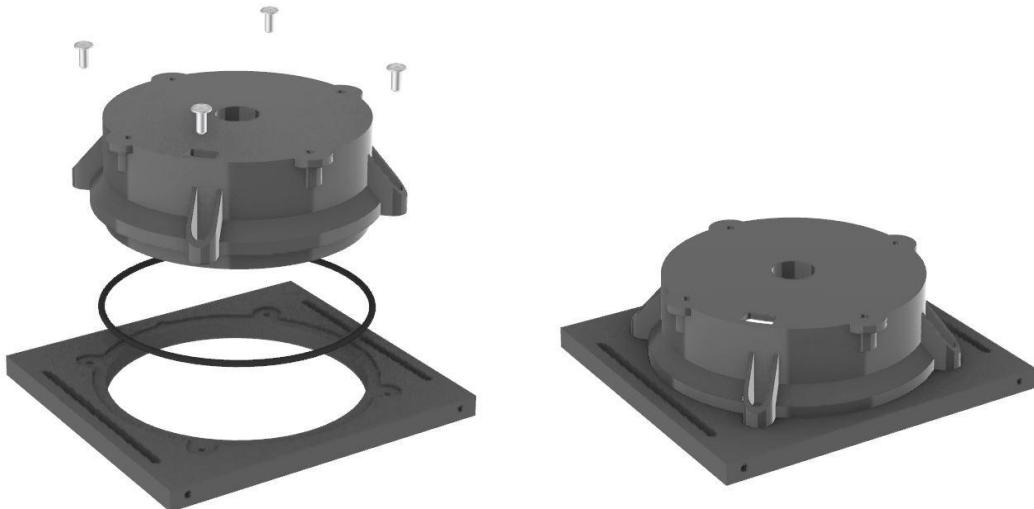
Turn knob counterclockwise to position F

The device starts spinning directly at max speed

# Assembly Instructions

Max torque for screwing: 0.25 Nm

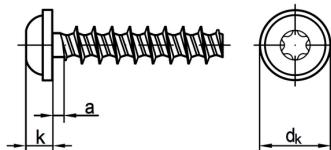
1.



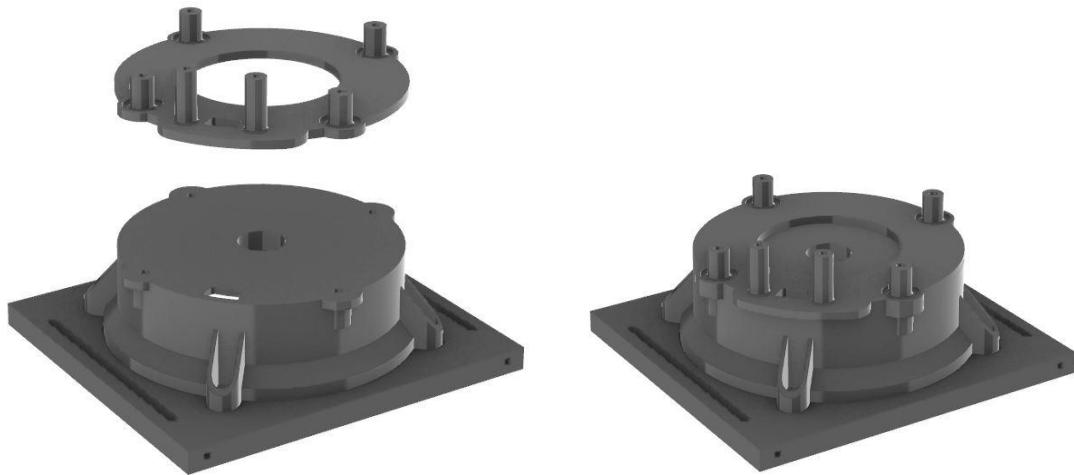
- Place the Socket O-ring into the groove of the Blender Socket
- Place the Blender Socket into the recess of the Top Panel
  - Make sure the positioner is aligned with its housing:



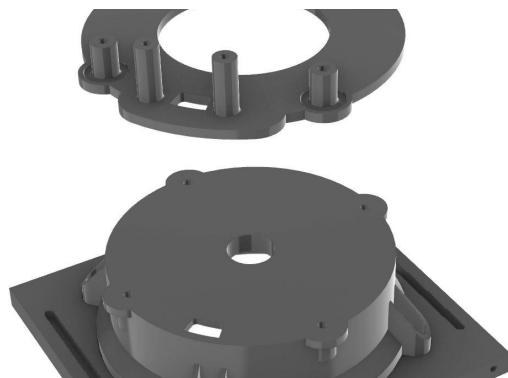
- Fix it with 4 torque screws 3.5 x 8mm (Art. Nr.: [1126103508](#))



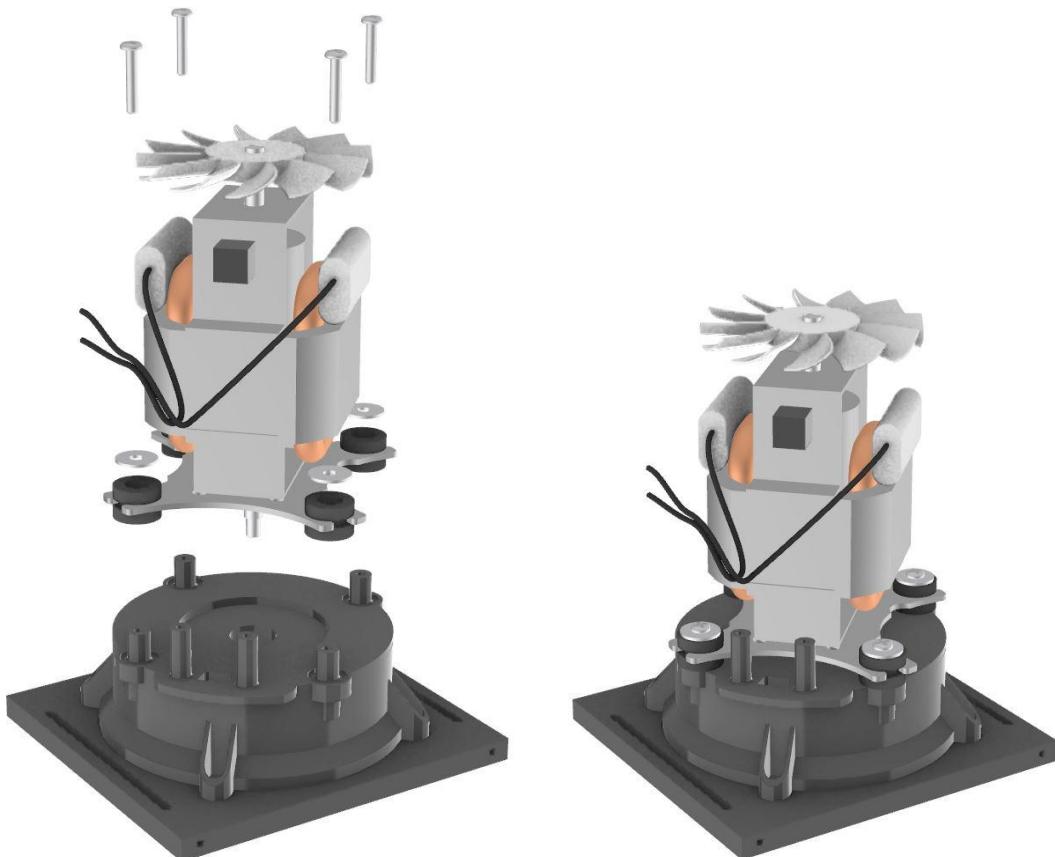
**2.**



- Place and screw the Motor Adaptor onto the Blender Socket
- Make sure the two rectangular holes are aligned:

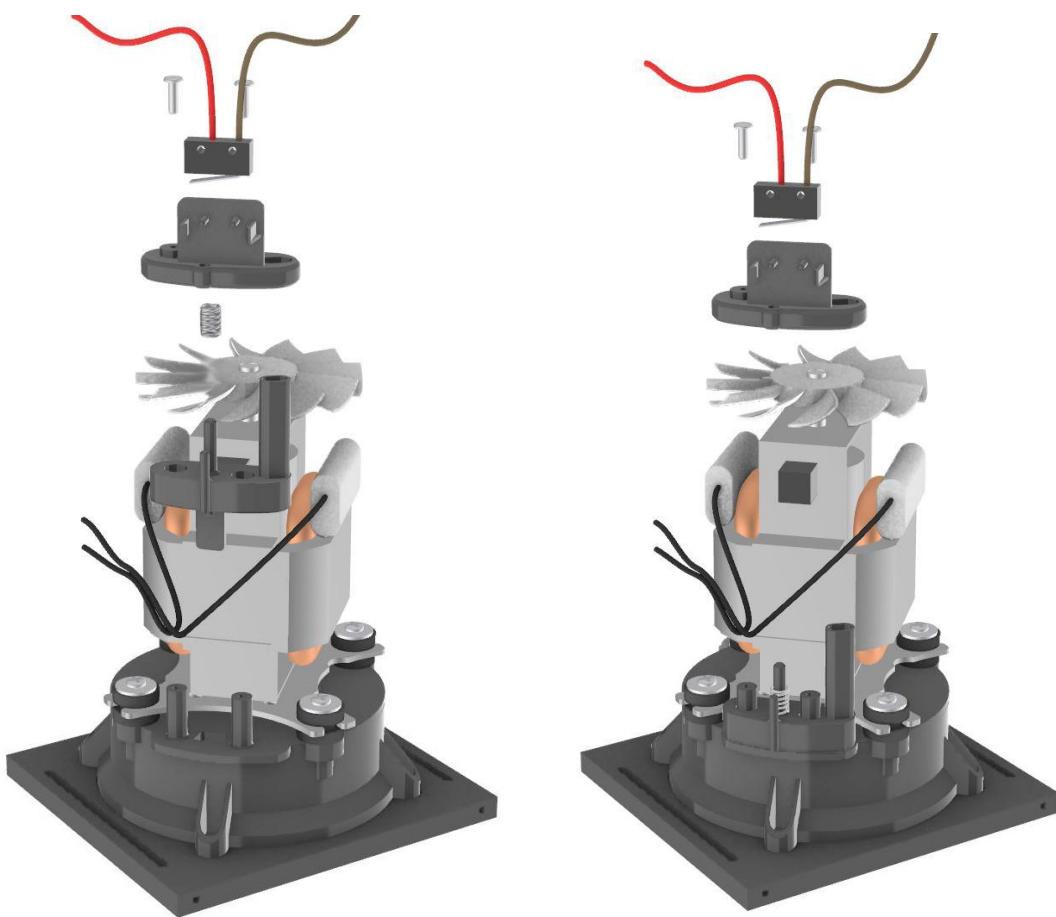


**3.**

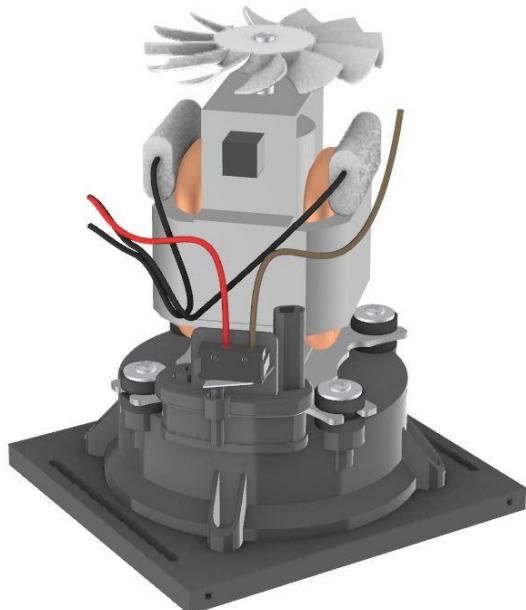


- Insert the Motor on top of the Motor Adaptor as shown as above, making sure the two black cables comes out toward the rectangular hole
- Place 4 big washers (Art. Nr.: [103280415](#)) on top of the motor rubber rings
- Fix the Motor to the Adaptor with 4 torque screws 3.5 x 20mm (Art. Nr.: [1212103520](#))

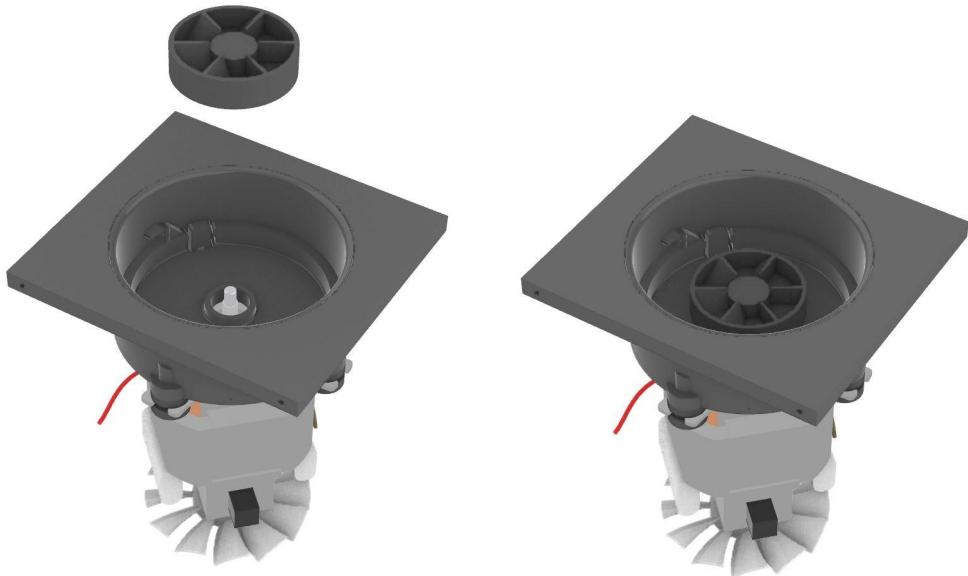
4.



- Place and snap-lock the Microswitch into the Switch Holder
- Place Spring 1 (Art. Nr.: [195062999790](#)) around the Head Slider pin
- Insert the Head Slider through the rectangular hole and the two screw towers
- Slide the Switch Holder through the two screw towers
- Fix it with 2 torque screws 3 x 10mm (Art. Nr.: [1126103010](#))

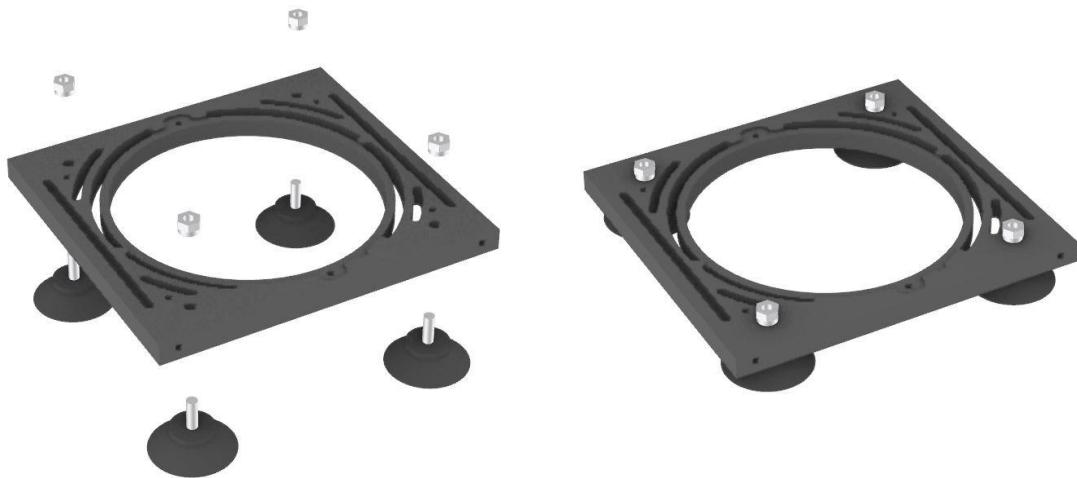


5.



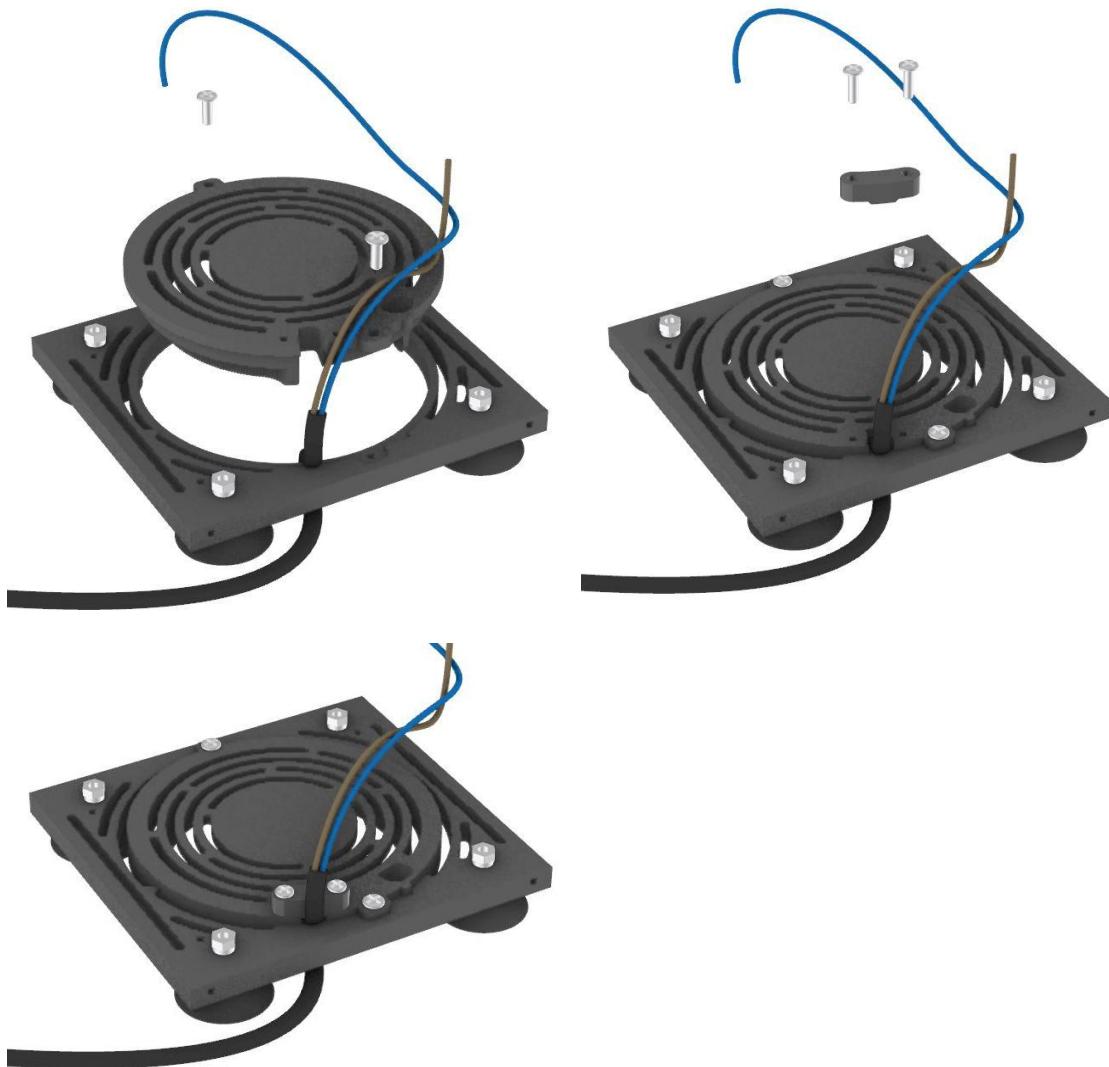
- Screw Motor Gear onto Motor Shaft in the Casing Socket
- The Gear is **left threaded**, so turn it counter-clockwise to fasten it
- To fixate the Motor shaft, place the fan blades in the palm of your hand

6.



- Place the bottom panel onto the 4 Suction Feet
- Fixate them with 4 DIN 985 stop nuts A2 M4 (Art. Nr.: [1016104](#))

7.



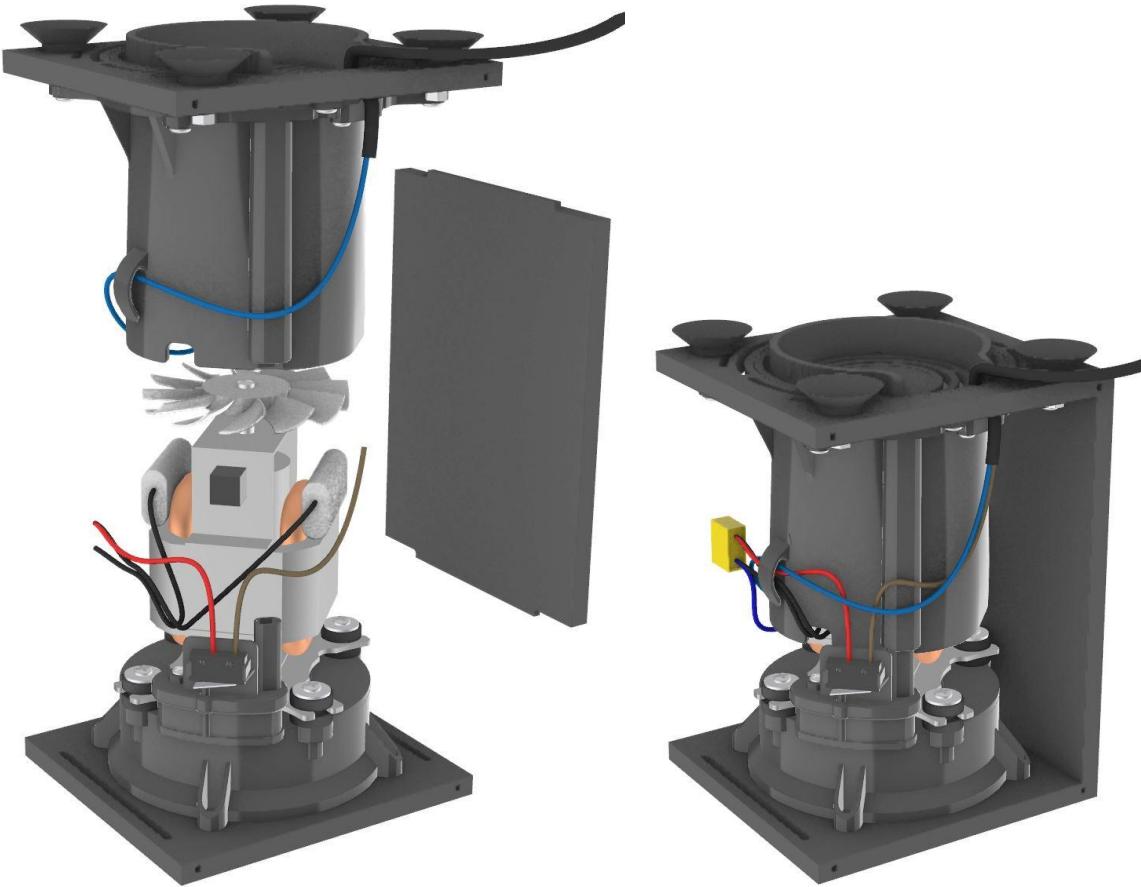
- Place the Ventilator Grid onto the Bottom Panel with the Electric Cord in the cutout
- The Ventilator Grid just sits in one direction on the Panel, the little tooth next to the cable cutout should sit firmly in its recess on the bottom panel
- Fix the Ventilator Grid to the Panel with 2 torque screws 3.5 x 8mm  
(Art. Nr.: [1126103508](#))
- Secure the Electric Cord with the Cable Fixer and 2 torque screws 3 x 10mm  
(Art. Nr.: [1126103010](#))

**8.**



- Lay the 4 Spacers onto the remaining screw holes and place the Ventilation Pipe on top of them
- The Cable Fixer should sit in the cutout of the Ventilation Pipe
- Fix the Ventilator Pipe to the Panel with 4 torque screws 3.5 x 12mm  
(Art. Nr.: [1126103512](#))

**9.**



- Flip the Bottom Panel up-side-down and slide the Ventilation Pipe around the motor
  - Make sure the draining pipe is aligned with the Head Slider pipe
- Interlock the Left Panel in between the Top Panel and Bottom Panel
- Place the different electric cables as shown on the pictures

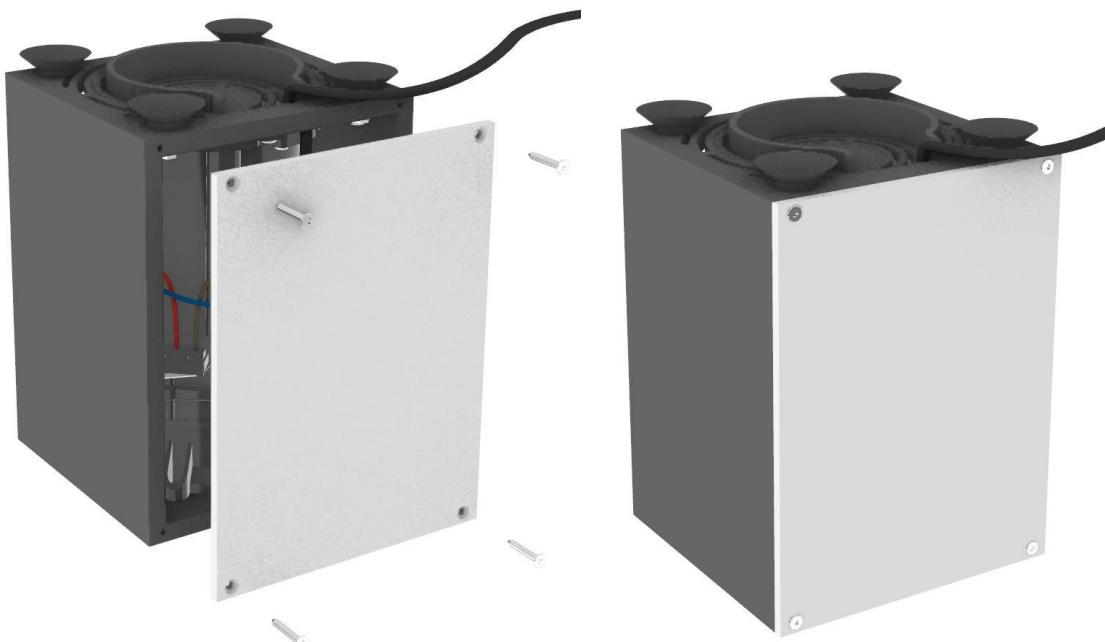


10.



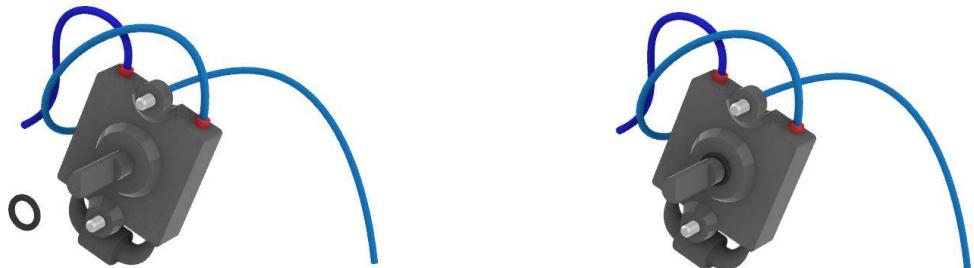
- Lift up the part with the suction feet to insert the other side panel
- The Tongues of the side panels should slip into the grooves in the top and bottom panels until they are flush with each other

11.



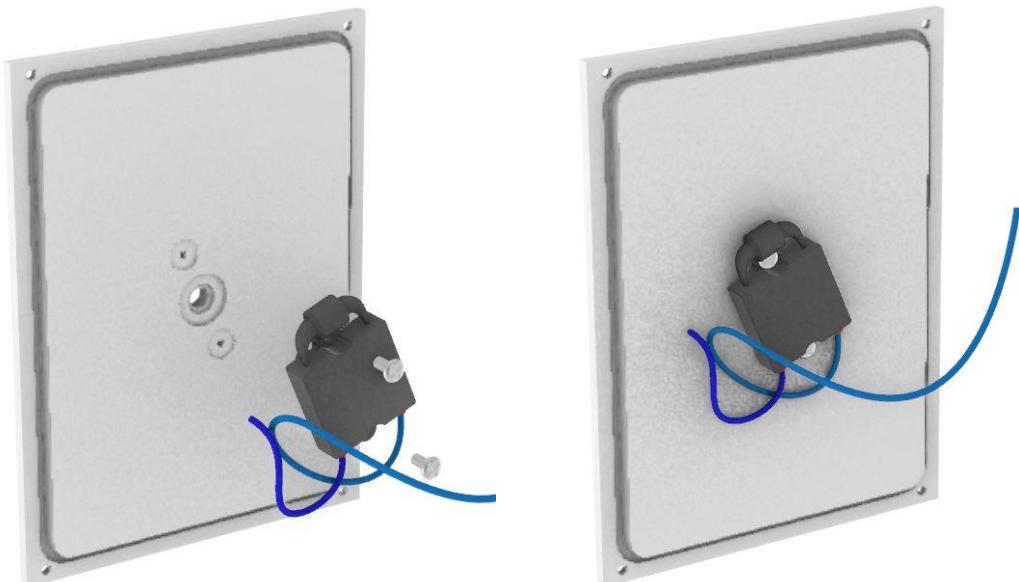
- Fixate the back panel onto the backside (where the micro switch is mounted) with 4 screws 4x16mm (Art. Nr.: [12112030016](#))
  - !! Make sure to not mount the back panel onto the frontside !!

12.



- Pull the small O-Ring (Art. Nr.: [4300550150](#)) over the Shaft of the Rotary switch

13.



- Fixate the Rotary Switch onto the backside of the Front Panel with 2 Torque Screws 3,5x8mm (Art. Nr.: [1126103508](#))
- Make sure to mount it in the right direction:
  - The sticker on the front side must be on the right side of the hole
  - The cables of the Rotary switch must be on the bottom of it
  - If done right, the sticker is next to the round side of the shaft

**14.**



- Fixate the Front Panel onto the Body with 4 screws 4x16mm  
(Art. Nr.: [12112030016](#))

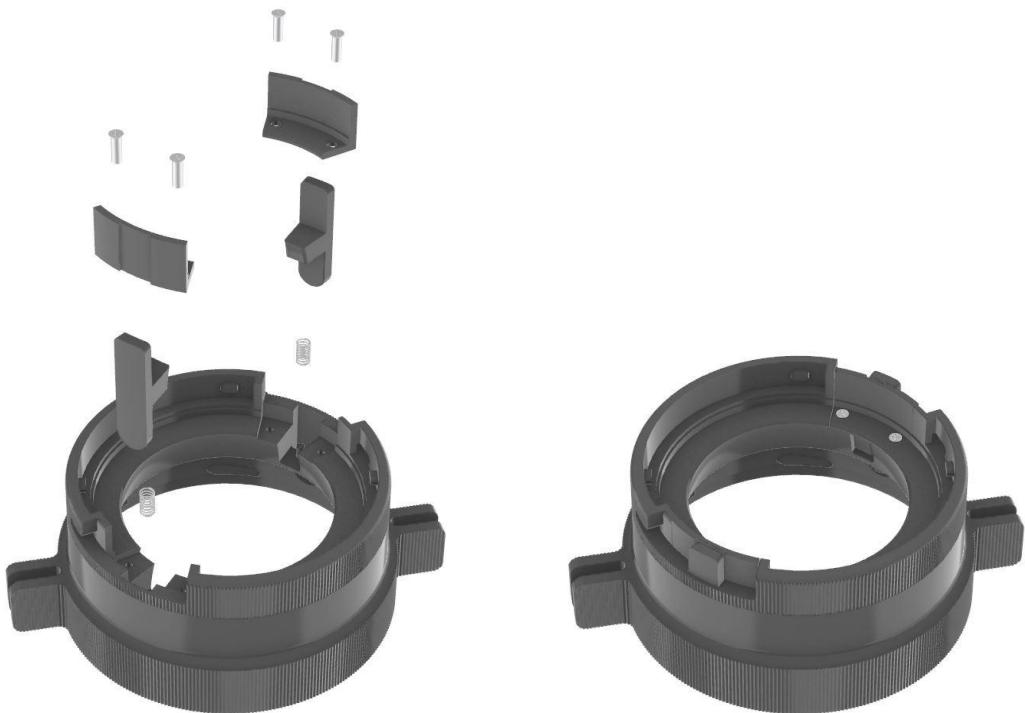
**15.**



- Press the Knob onto the Shaft - It should slide on it with just a slight resistance
- If it won't slide on, check if the set screw inside of the knob is not screwed too far

- Secure it by fastening the set screw through the side hole in the knob with a small flathead screwdriver

16.



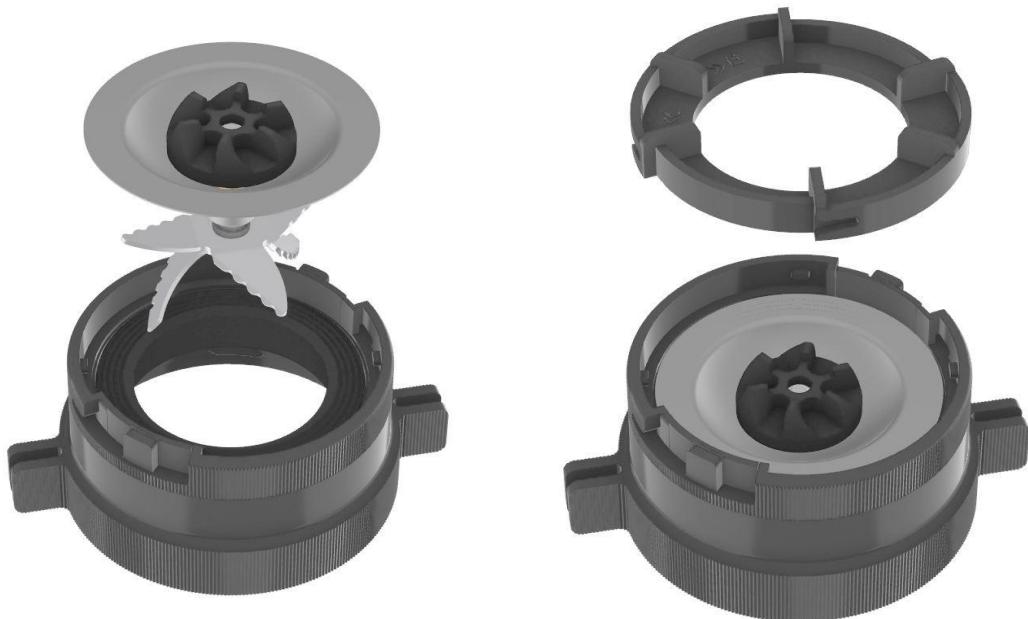
- Place the 2 Springs (Art. Nr.: [195062908481](#)) onto the pins in the bottom holes of the Blender Head and insert the jar sliders over them with the round end downwards
- Press them down with 1 of the Stoppers on each side and secure it
- with 2 screws 2.2x9.5mm (Art. Nr.: [1153522009](#))

**17.**



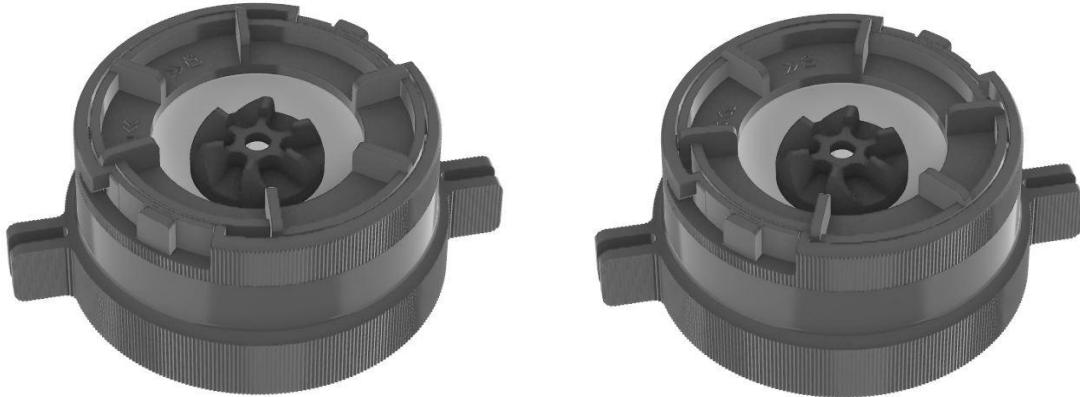
- Insert the Head Seal into the Blender Head
- Make sure the side with the thicker rings is on the bottom side of the blender head.
- If done wrong, it won't sit snugly as it does in the picture.

**18.**



- Lay the blade onto the bottom side of the Blender head and place the Blade Locker on it.

**19.**



- Press the Blade Locker down and turn it clockwise to lock the blade in place.

**20.**



- Twist the Blender Head clockwise onto the Jar mouth to lock and seal the Jar tightly
- For more Information, check the chapter “Locking of Blender Head” in this manual.

**21.**

Final assembly quality check:

- Plug the device to power outlet safety test station



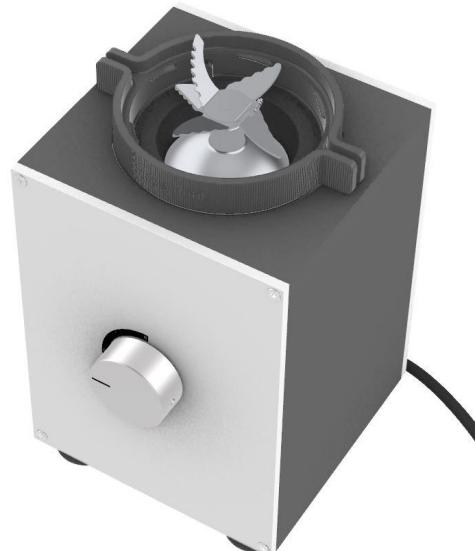
(A)

- Slide the Blender Head into the Housing Socket (A)
- Check no speed control function working on position A



(B)

- Twist and lock the Blender Head into the Housing Socket (B)
- Check all speed control functions working on position B



(C)

- Remove the Jar from the Blender Head (C)

- Check no speed control function working on position C  
**!! No hands shall be near the blades during this check !!**



- Remove the Blender Head from the Housing Socket

Ready to be further tested for quality assurance and packaged.