

Respirator Design

DISCLAIMER:

This is a open source design and the designers have no bearing on the end use of the product or manufacturing.

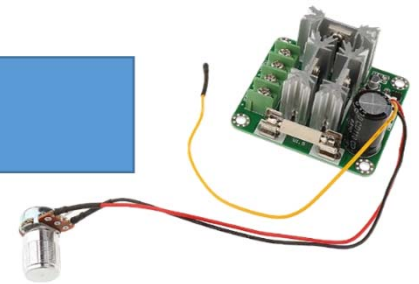
Ventilator Assembly: BOM

Item#	Description	Qty.
1	CRS/SS 3mm Thick Frame (Finish: Power coat for CRS)	1
2	CRS/SS 3mm Thick Frame (Finish: Power coat for CRS)	1
3	CRS/SS 3mm Thick Frame (Finish: Power coat for CRS)	1
4	Plastic Block Single piece-40mm THK or Multiple pieces	4
5	Arm, case harden steel, 5mm	2
6	Rack, Case harden steel, 6mm	1
7	Link plate, Case harden steel, 5mm	1
8	Motor Flange disc, SST , - wiper motor shaft end type match with flange center mtg. hole	1
9	Wiper Motor- 12v/24vDC , $\geq 5\text{Nm}$ Torque, <100rpm	1
10	Pin, SST,10mm dia,	2
11	Cir-clip, dia 9mm	4
12	Bush,SST, ID-10mm	4
13	Shoulder screw, M6, Shoulder dia 8mm, 8mmLG	2
14	Shoulder screw, M6, Shoulder dia 10mm, 8mmLG	2
15	Screw ,M6 ,90mmLG, with nut	4
16	Speed Control driver PCB	1
17	Speed regulator	1
18	Cover,1mm,CRS, Finish -PC	1
19	PCB, M-F Standoff-M3/M4, based on PCB mtg. hole size	4
20	M6, Screw, 15mm lg	8
21	Spacer,Steel,7mm lg, ID-6.2mm	4
22	CSK screw,M6, 6mm lg, Motor mounting	3

Ventilator Assembly: Tolerance table

Item#	Item#	Tolerance/Fit
12	1 & 2	Press fit
10	12 & 5	Sliding fit
13	7	Sliding/loss fit
14	2	Sliding/loss fit

Speed Regulator (Manual) - 6V-90V 10A - 15A DC Motor Speed Controller



The design requires a DC 12 volt 5 Amps Power supply. It can also work on a battery.

PART NUMBER : 50032642

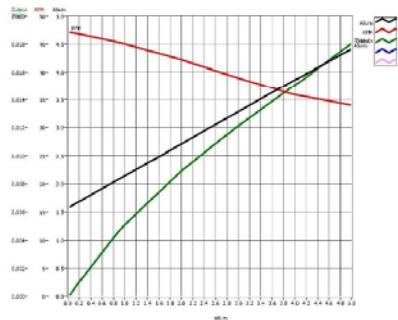
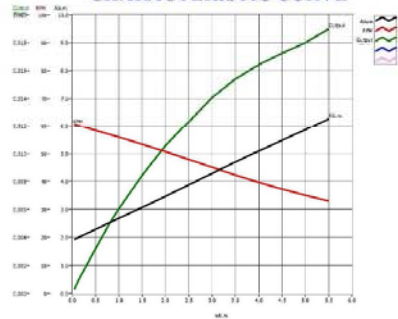
WIPER MOTORS

TECNICAL SPECIFICATIONS

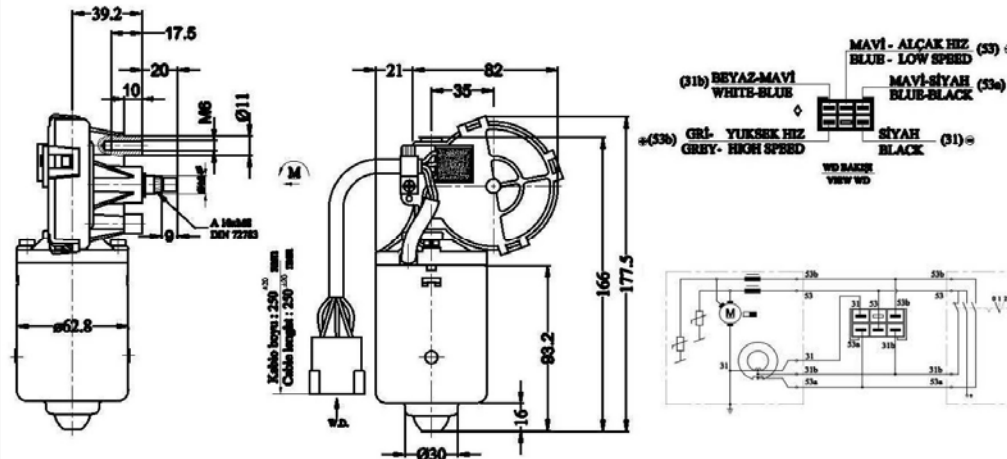
Operating Voltage	12V
Number Of Speed	2
Speed	rpm 55 / 42
Current	A 3.6 / 2.5
Torgue	Nm 2
Rotational Direction	C.C.W
IP Class	IP23



CHARACTERISTIC CURVE



DIMENSIONAL DRAWING



TVS - Lucas

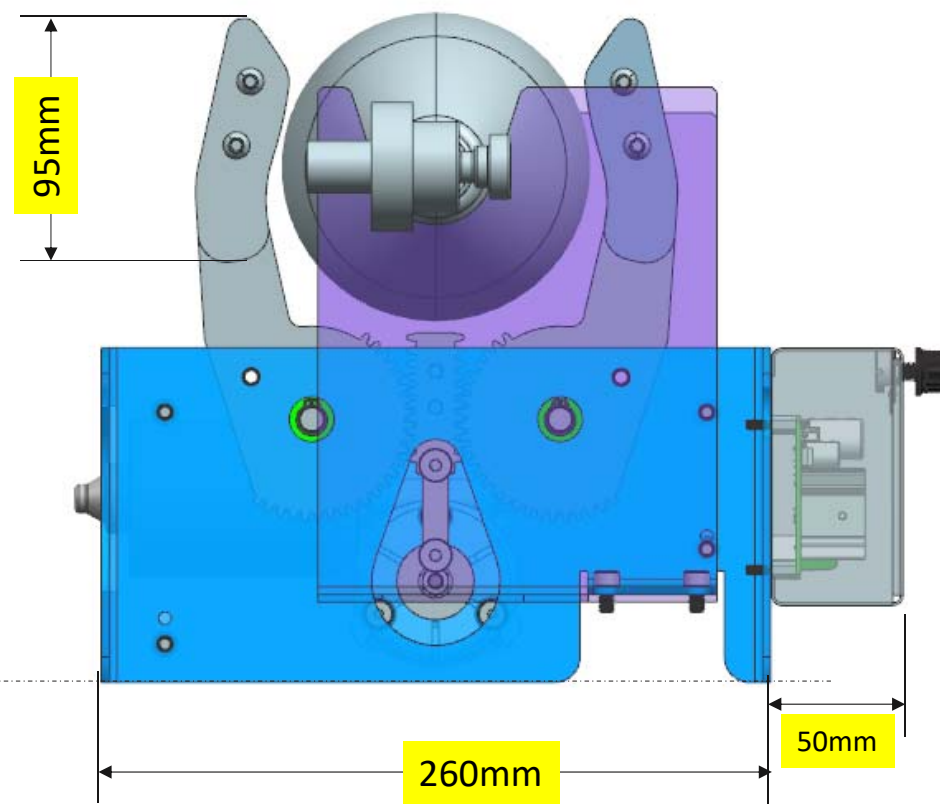
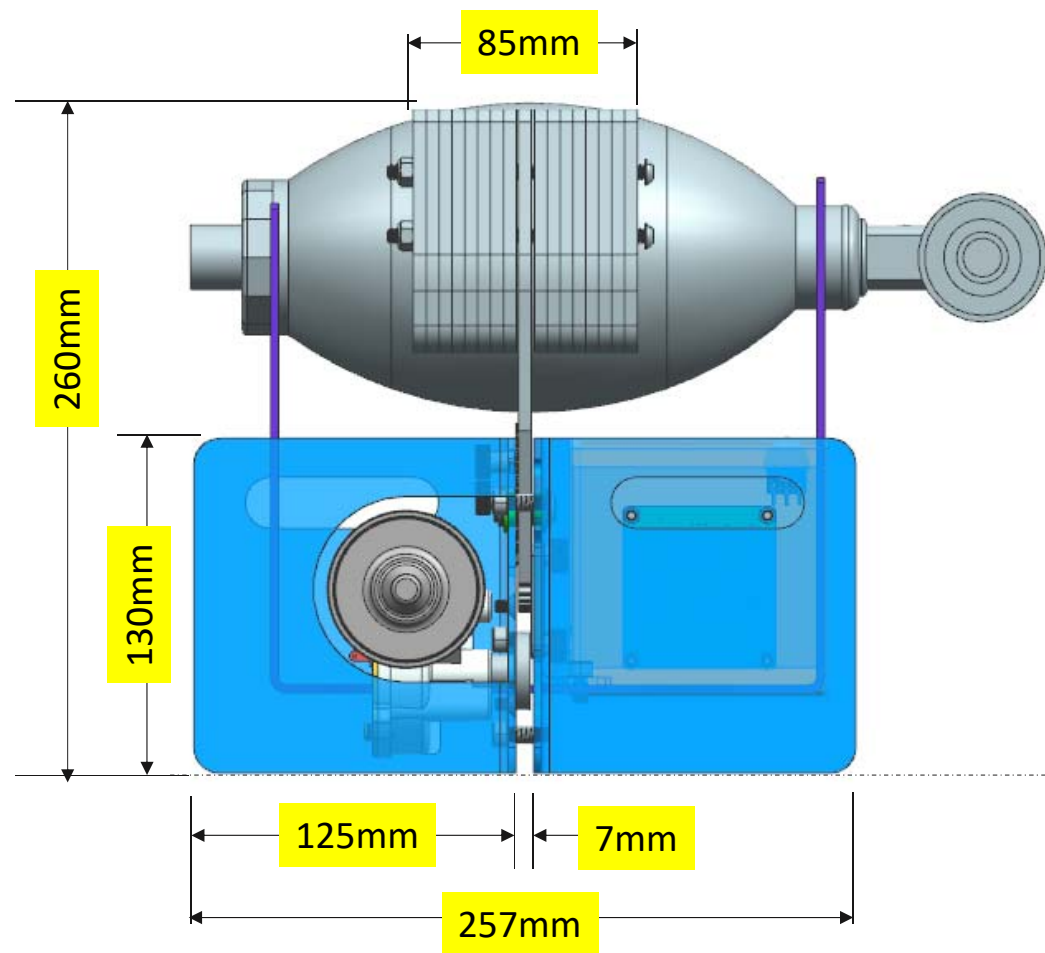
FRONT WIPER

25W60 (12V - 13.0 Nm)

55W60B (12V - 18.0 Nm)

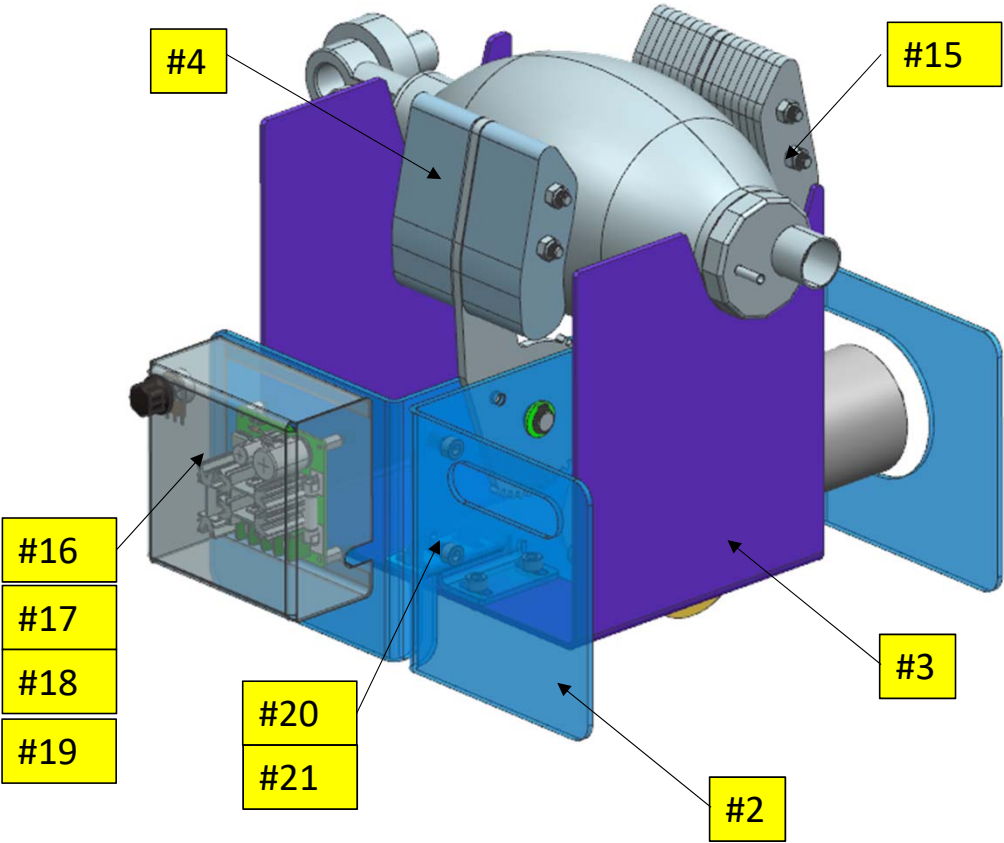
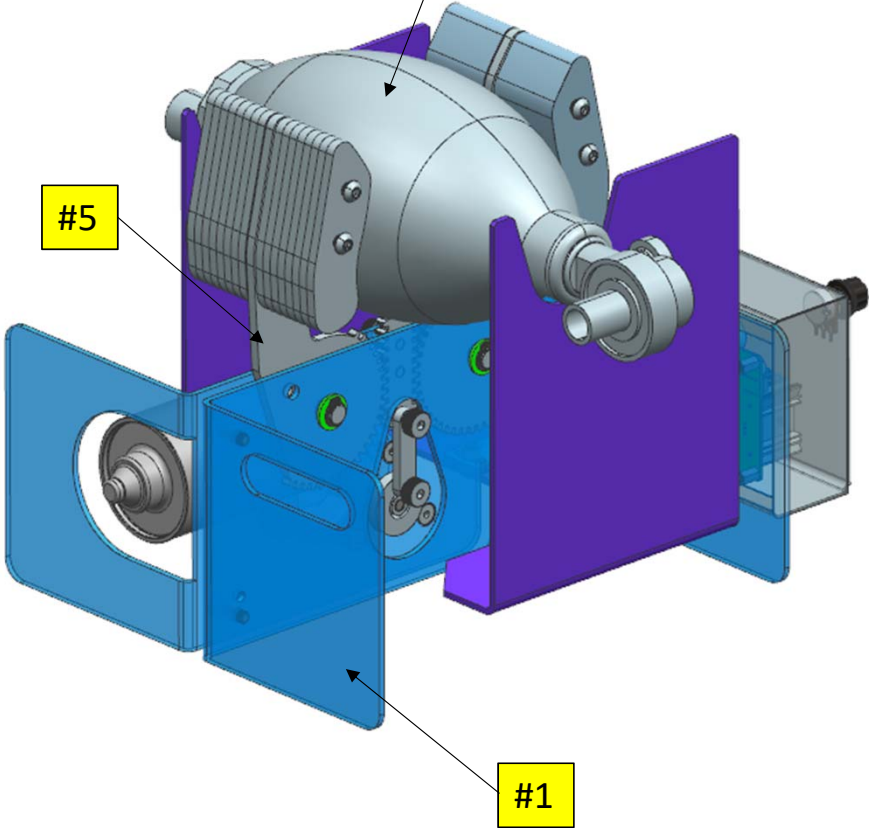
75W60 (12V - 23.0 Nm)

Ventilator Assembly

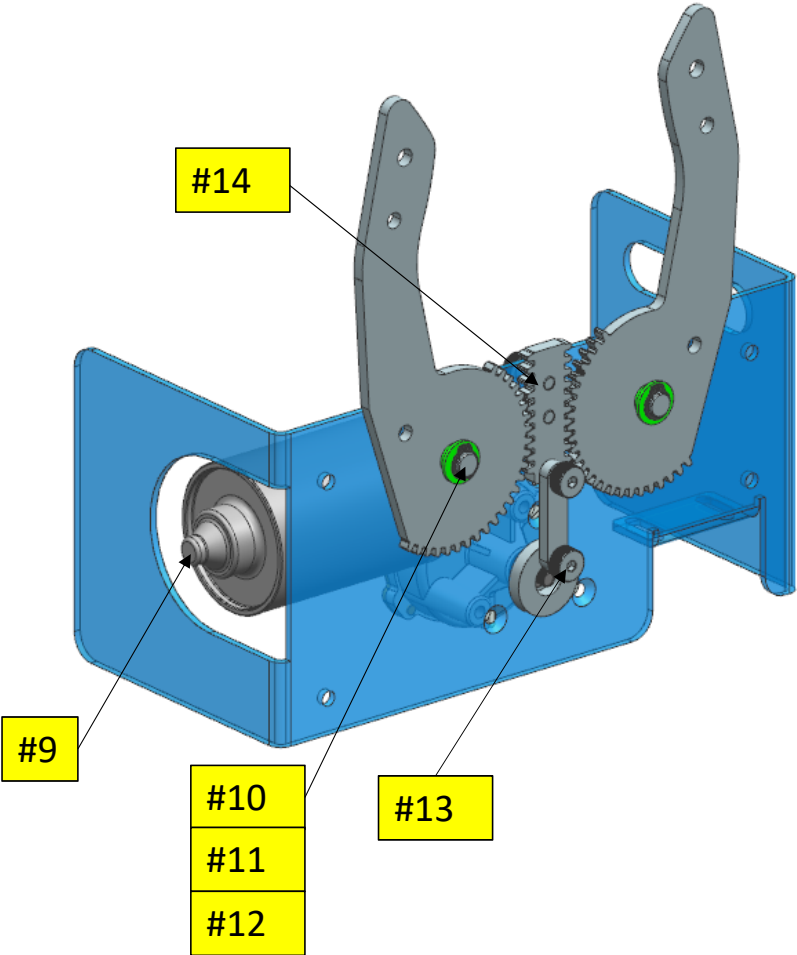
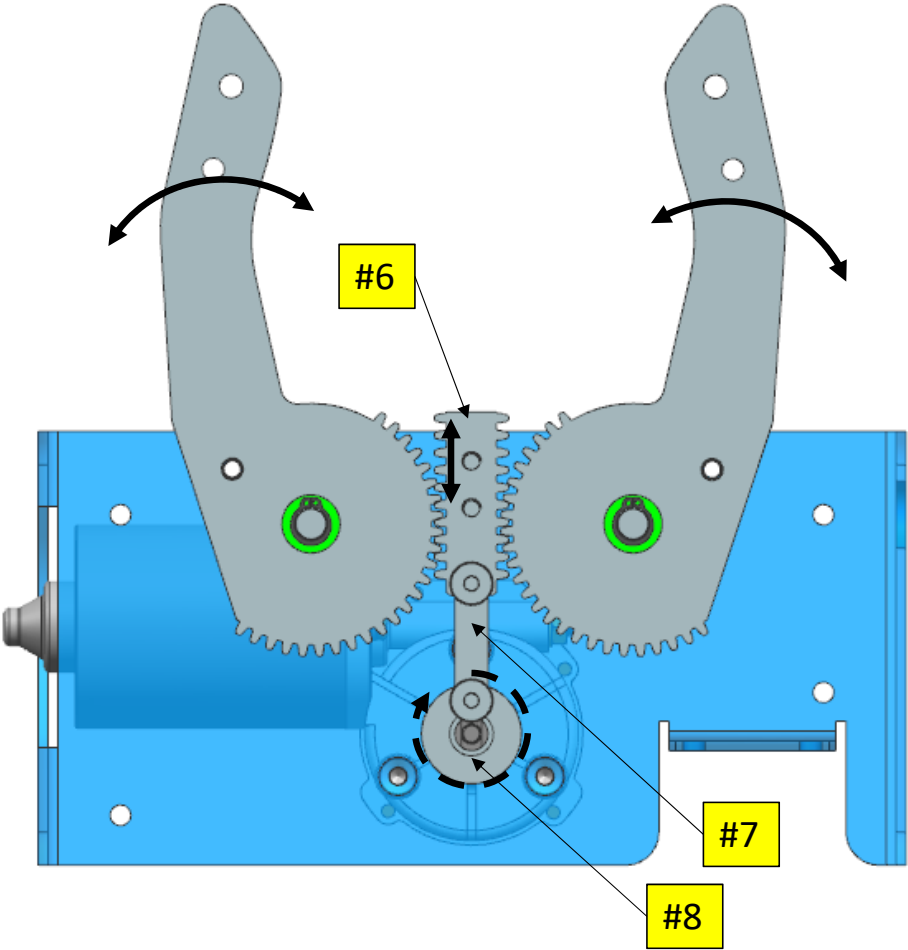


Ventilator Assembly

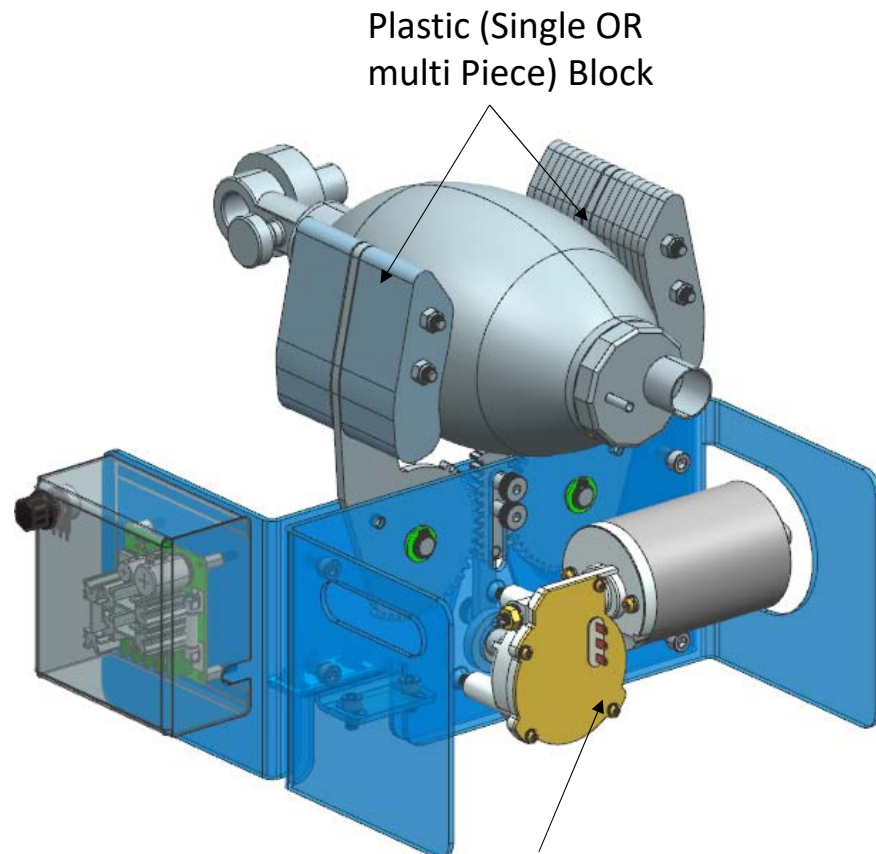
Ambu bag with Associated components—
should be procured separately



Ventilator Assembly- Linkage Mechanism

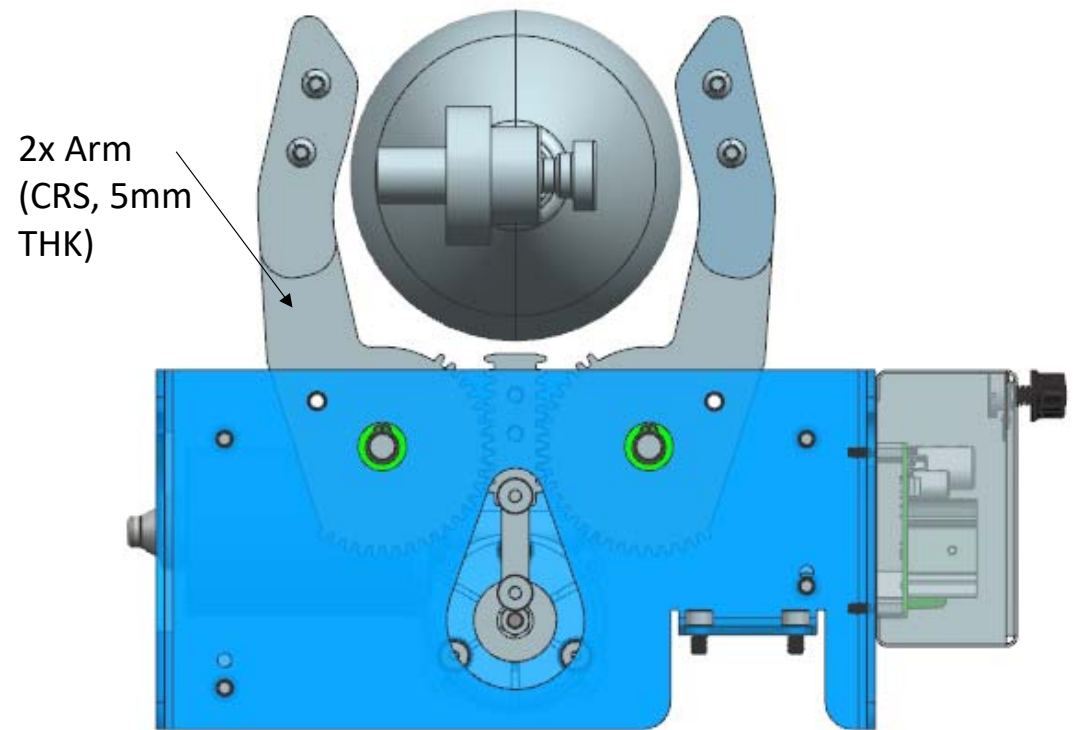


Ventilator Assembly

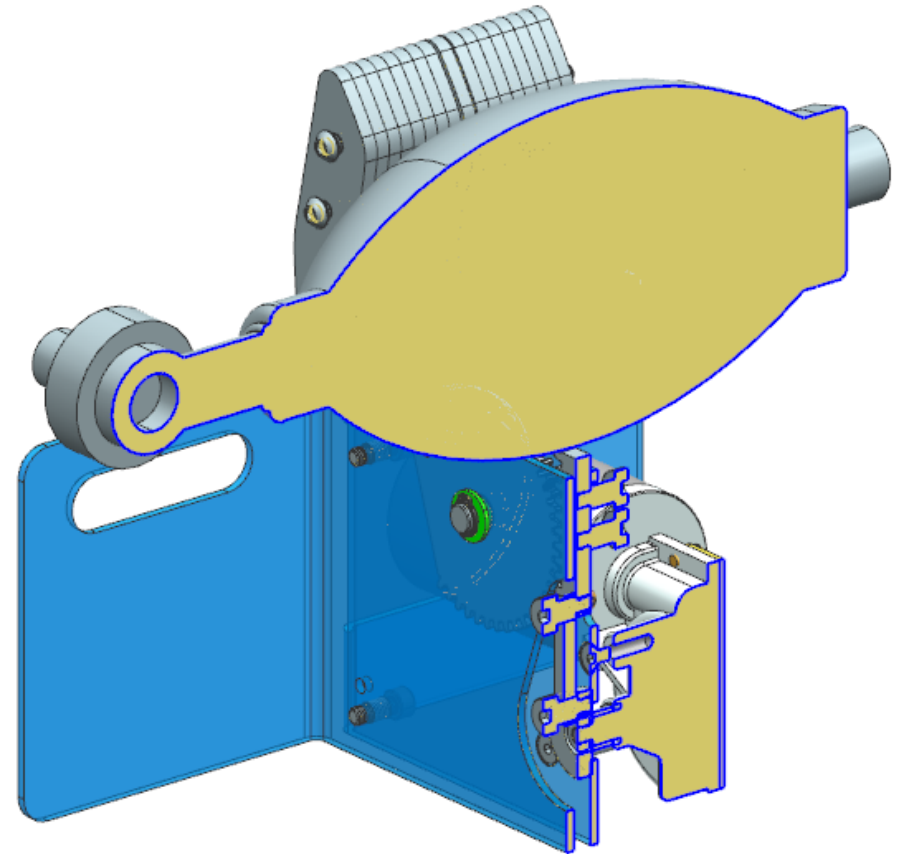
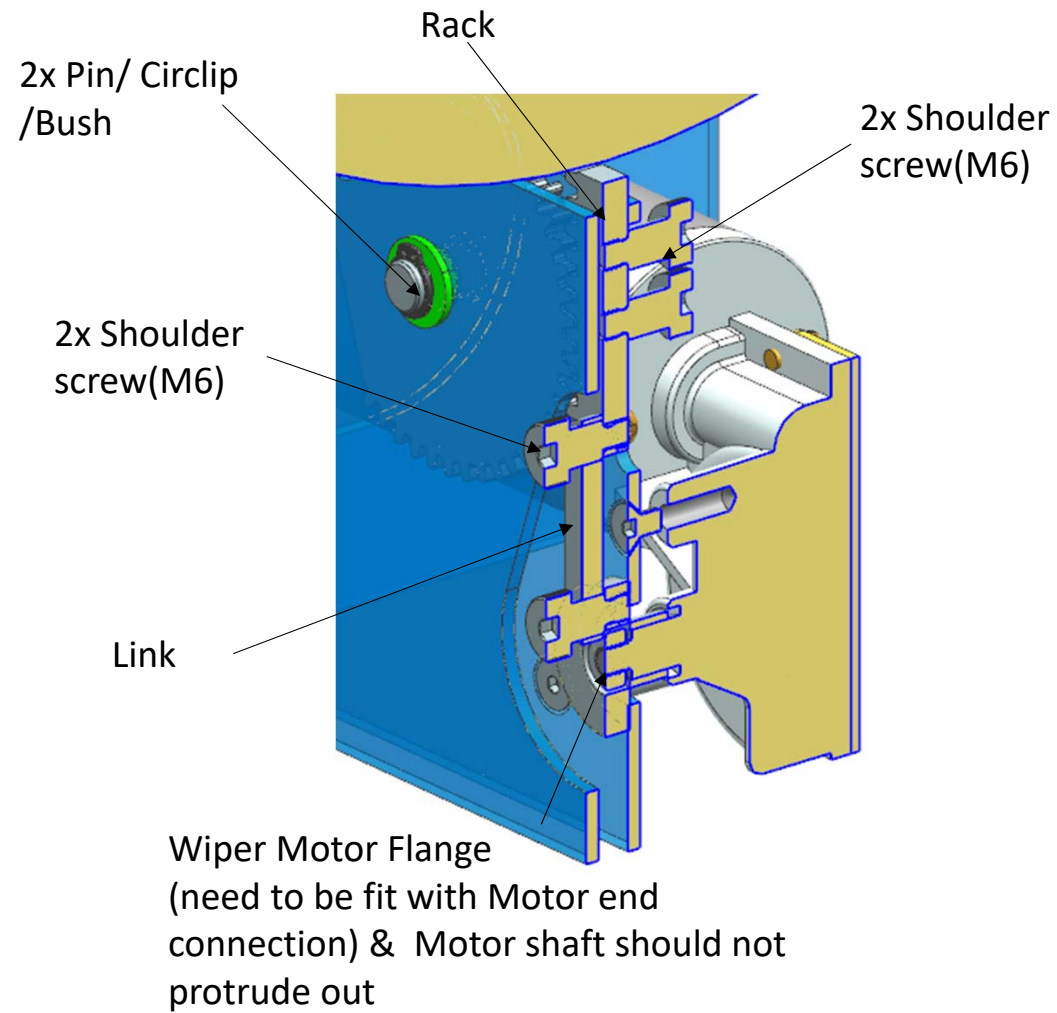


Windshield Wiper Motor TVS-Lucas was considered)
Connect to the highest speed option

(Ambu Bag holder Hidden)



Ventilator Assembly



Ventilator Assembly

