

# PROTOTYPE DESIGN COLLECTION

## SERIES 1



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**e-ISBN: 978-967-0033-07-5**

First published, 30 September 2022

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**PUBLISHED BY:**

Pusat Pengajian Kejuruteraan Mekanikal,  
Universiti Teknologi MARA Cawangan Johor,  
Kampus Pasir Gudang,  
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## CHAPTER 97

### Design and Fabrication of a Fan Cleaning Machine

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#### PROJECT DESCRIPTION

Doing chores at home can sometimes be very time-consuming and tedious. One of the most common house chores is cleaning the fan. The conventional method of cleaning the fan blades can be very troublesome as it requires a ladder to reach the ceiling. This could lead to serious injury if the person is not careful when standing on the ladder. The dust and dirt from the fan can also cause an allergic reaction to the person doing the cleaning. This project involves the design and fabrication of an automatic fan cleaning device. The design phase involves sketching and evaluating conceptual designs, drawing the final design using Solidworks software. To fabricate the product, various fabrication processes were applied such as cutting, drilling, joining, and others. The result was a fan cleaning device that has an adjustable pole to help the user to reach the fan without having to use a ladder and a motorised brush to reduce energy spent when cleaning the fan. Fan cleaning can never be easier when using the product. Having a simple yet interesting design will make the product appealing to many homeowners when doing their chores.

**Keywords:** *Fan, cleaning, automatic, adjustable pole*

#### PROTOTYPE



**DESIGN PARAMETER**

ITEM NO.	PART NAME	DESCRIPTION	QTY.
1	Adjustable Pole	1500 mm x 25mm	1
2	Pipe Flange Joint	20mm	1
3	Cross Pipe Joint	20mm	1
4	Dust Body Pole	200mm x 20mm	4
5	Handle	260mm x 35mm x 35mm	1
6	Elbow Pipe Joint	90-degree, 20mm	2
7	Brush Body	130mm x 77mm x 50mm	1
8	DC Motor holder	44mm x 60mm x 34mm	2
9	DC Motor	57mm x 31mm	2
10	Shaft Coupler	25mm x 5mm x 3mm	2
11	Roller Brush	178mm x 50mm	2

  

<b>FAKULTI KEJURUTERAAN MEKANIKAL (FKM) UNIVERSITI TEKNOLOGI MARA (UiTM) JOHOR KAMPUS PASIR GUDANG</b>		
Course Name MEC 300 - FINAL YEAR PROJECT 2		
Group J4EM1105L		
Approved	Checked	Drawn BALQIS SAFIYYAH BINTI OTHAMAN
Drawing Title EXPLODED ASSEMBLY OF FAN CLEANING MACHINE		
Part Name -		
Part No. -		
Scale	1:10	Weight 1 KG
		Quantity -