

PROTOTYPE DESIGN COLLECTION

SERIES 1



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CHAPTER 42

Design, Analysis and Fabrication of Semi-Auto Cup Rinser

Muhammad Amar Zakwan Bin Anuar and Raja Muhammad Aslam Raja Arif

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PROJECT DESCRIPTION

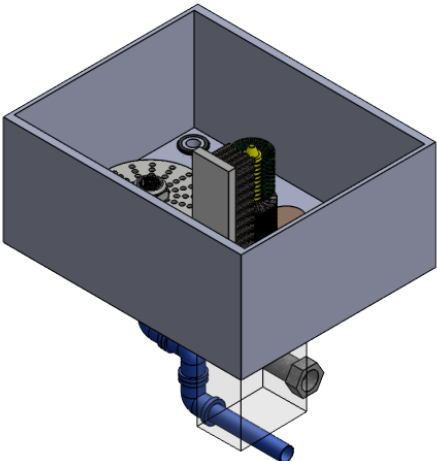
One of the main problems associated with house chores is washing the utensils, especially the drinking cups. It may easily slip and break while washing. This can cause stress among the users and sometimes might cause serious injury. To facilitate this problem, this project is performed. This publication will describe the design, analysis, and fabrication of a semi-auto cup rinser. The concept operation for this project is by utilising the water pressure and scrubbing method to rinse the cups. The main objective of this project is to fabricate a simple device that can easily help users to wash many cups in a safe manner. The material for the project is mainly from plastic and steel. Drilling, bending, and drawing were all the processes involved in the fabrication process. Finally, the SOLIDWORKS software is utilised to perform the analysis in terms of yield stress and factor of safety on the critical part of the product. The result from the demonstration showed that the product can facilitate the user to wash the drinking cups easier and safer. Furthermore, the product can be cleaned in a 360 degrees interior cup.


Keywords: *Cup rinse, automatic, house chores*

PROTOTYPE



DESIGN PARAMETER

6	5	4	3	2	1
D					D
C					C
B					B
A					A
6	5	4	3	2	1

FAKULTI KEJURUTERAAN MEKANIKA (FKM) UNIVERSITI TEKNOLOGI MARA (UITM) JOHOR KAMPUS PASIR GUDANG					
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Group		J4EM1105E			
Approved		Checked		Drawn	
				MEHJASIMAD AMAR ZAKWAN BIN ANGAR 02/01/2022	
Drawing Title ASSEMBLY OF SEMI-AUTO CUP RINSER					
Part Name -					
Part No. -					
Rev.	Scale	Projection	Weight	Sheet	
0	1:4		3.0kg	1/1	