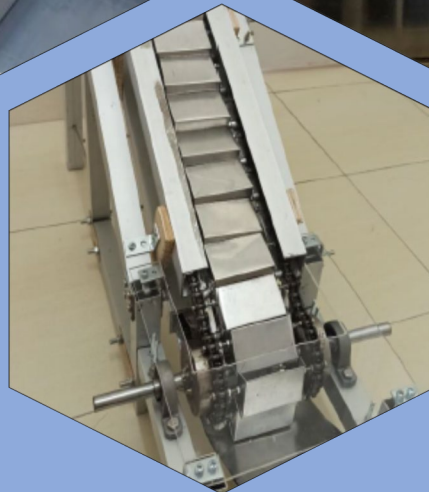


PROTOTYPE DESIGN COLLECTION

SERIES 1



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

First published, 30 September 2022

EDITORS:

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PUBLISHED BY:

Pusat Pengajian Kejuruteraan Mekanikal,
Universiti Teknologi MARA Cawangan Johor,
Kampus Pasir Gudang,
Jalan Purnama, Bandar Seri Alam,
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CHAPTER 53

Design and Fabrication of Motorized Bench Vice

Isyraf Zikry Bin Hafidzal and Nur Aini Sabrin Binti Manssor

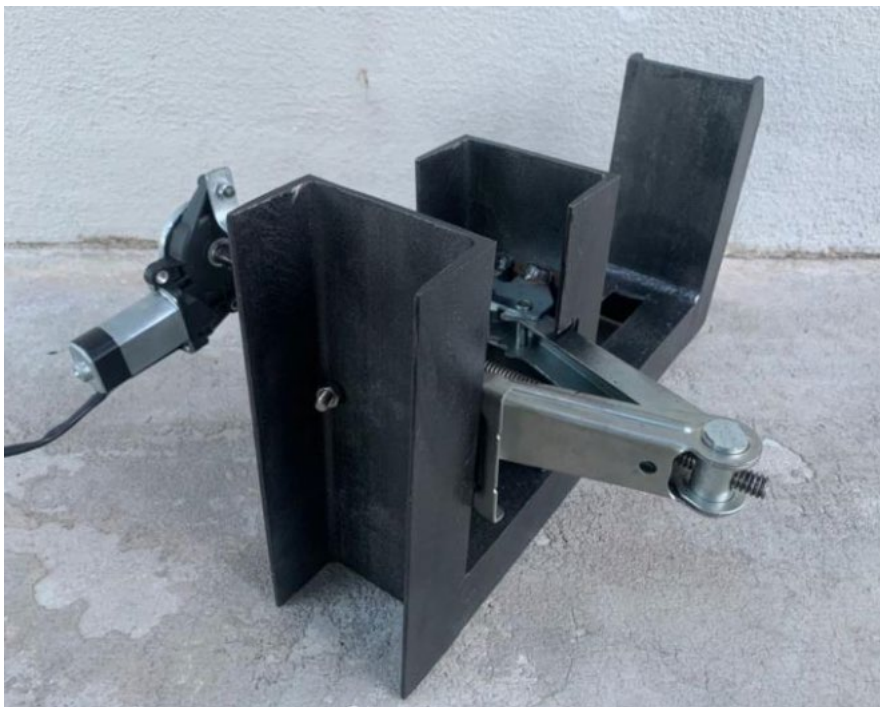
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PROJECT DESCRIPTION

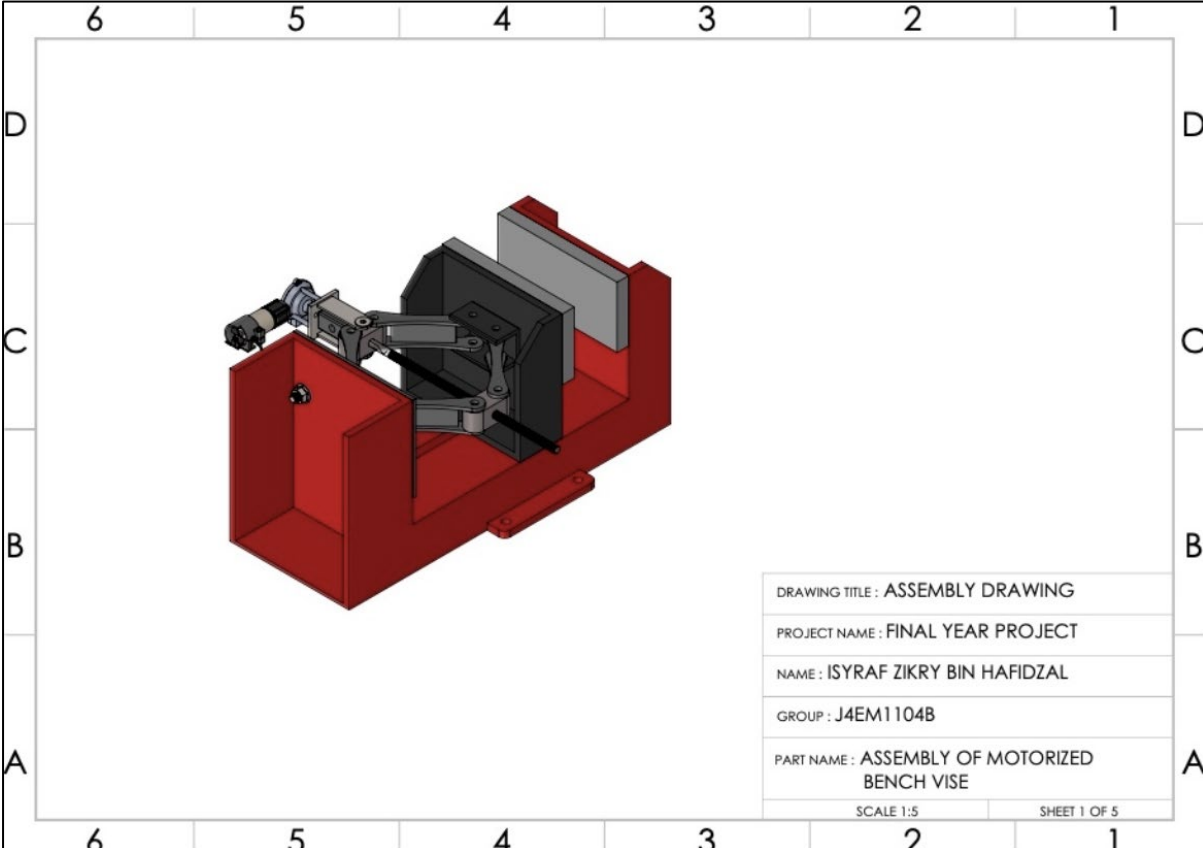
Vice is a tool that is commonly used in many manufacturing operations. To operate a vise, human effort is needed to open and tighten the vise jaws by rotating the handle in order to hold the workpiece securely. This caused a lot of effort required, as well as time consuming if there is a lot of workpiece to work on. Therefore, this fabrication of motorized bench vise gives a better experience for users than using a standard vise. Motorized bench vise is a motor operated bench vise that can clamp and hold workpiece securely by just pressing a switch. This project is designed to lower the effort and time required by using a power screw mechanism. It comes with a power switch that can control the tightness of the jaws depending on the size of the workpiece. Hence, this project discusses the best invention to replace the standard bench vise for a better work experience.

Keywords: *Bench vise*

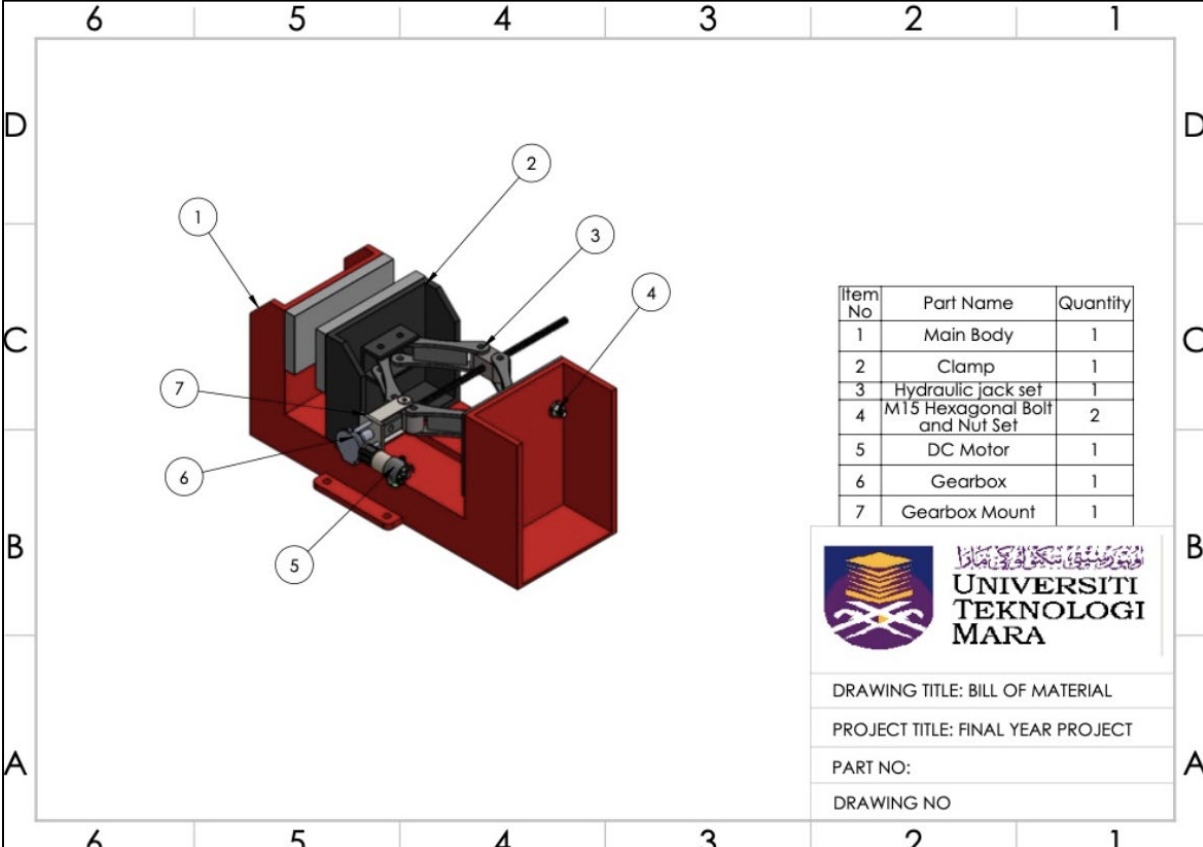
PROTOTYPE




DESIGN PARAMETER



DRAWING TITLE : ASSEMBLY DRAWING
PROJECT NAME : FINAL YEAR PROJECT
NAME : ISYRAF ZIKRY BIN HAFIDZAL
GROUP : J4EM1104B
PART NAME : ASSEMBLY OF MOTORIZED BENCH VISE
SCALE 1:5
SHEET 1 OF 5



Item No	Part Name	Quantity
1	Main Body	1
2	Clamp	1
3	Hydraulic jack set	1
4	M15 Hexagonal Bolt and Nut Set	2
5	DC Motor	1
6	Gearbox	1
7	Gearbox Mount	1



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MARA**

DRAWING TITLE: BILL OF MATERIAL
PROJECT TITLE: FINAL YEAR PROJECT
PART NO:
DRAWING NO